



City of Tacoma
Department of Public Works

SPECIFICATION NO. PW20-0193F

SOUTH 19TH AND CLAY HUNTINGTON

**Project No. PWK-G0034
State Aid Project No. HLP-PB19(005)**

Public Works Department

**SOUTH 19TH AND CLAY HUNTINGTON
PW20-0193F**

SPECIFICATIONS

Stamp and Signature Page

Division 1 and Front End



11/18/2020

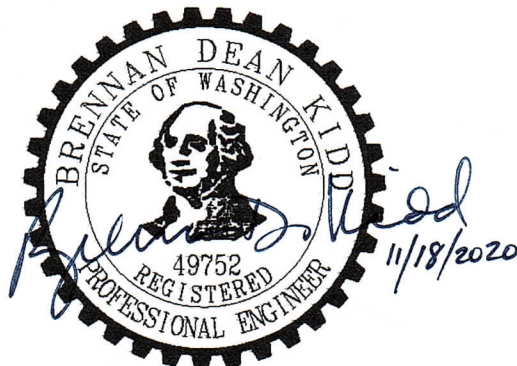
Division 2 through 9 (not including 8-20 and 9-29)



Wang, Brian

Digitally signed by Wang,
Brian
DN:
E=bwang@cityoftacoma.org,
CN=Wang, Brian, OU=Eng,
OU=Users, OU=PW, OU=GG,
OU=COT, DC=Tacoma,
DC=Id
Date: 2020.11.18
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Division 8-20 and 9-29



11/18/2020

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City of Tacoma
Public Works Engineering

REQUEST FOR BIDS PW20-0193F
South 19th and Clay Huntington

Submittal Deadline: 11:00 a.m., Pacific Time, Tuesday, January 26, 2021

Submittal Delivery: Sealed submittals will be received as follows:

By Email:

bids@cityoftacoma.org

Maximum file size: 35 MB. Multiple emails may be sent for each submittal

Bid Opening: Held virtually each Tuesday at 11 AM [via this link](#).

Submittals in response to a RFB will be recorded as received. As soon as possible on the day of submittal deadline, preliminary results will be posted to www.TacomaPurchasing.org.

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.

Project Scope: This Contract shall generally consist of traffic signal and traffic signal mast arm pole installation, asphalt paving, curb and gutter, curb ramps, catch basin replacements, sidewalk improvements, and pavement markings.

Estimate: \$547,780

Paid Leave and Minimum Wage: Effective February 1, 2016, the City of Tacoma requires all employers to provide paid leave and minimum wages, as set forth in Title 18 of the Tacoma Municipal Code. For more information visit www.cityoftacoma.org/employmentstandards.

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 Gail Himes at ghimes@cityoftacoma.org, or by calling her collect at 253-591-5785.

Federal 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 Doreen Klaaskate, Senior Buyer by email to dklaaskate@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.

SPECIAL REMINDER TO ALL BIDDERS

HEALTH & SAFETY: Be sure to comply with all City of Tacoma health and safety requirements.

1. This project has been deemed to be an essential project by the City of Tacoma and it is anticipated that the contract will be operational during the COVID-19 outbreak. Therefore the contractor shall complete a health and safety plan describing how the contractor will complete the work while combating the COVID-19 spread (social distancing practices) and what Personal Protective Equipment (PPE) will be in place.

PLEASE NOTE: Be sure you have complied with all specifications and requirements and have signed all required documents.

YOUR ATTENTION IS PARTICULARLY CALLED to the following forms, which must be executed in full before the bid is submitted:

1. **BID PROPOSAL:** The unit prices bid must be shown in the space provided. Check your computations for omissions and errors.
2. **SIGNATURE PAGE:** To be filled in and executed by a duly authorized officer or representative of the bidding entity. If the bidder is a subsidiary or doing business on behalf of another entity, so state, and provide the firm name under which business is hereby transacted.
3. **BID BOND:** The Bid Bond must be executed by the person legally authorized to sign the bid, and must be properly signed by the representatives of the surety company unless the bid is accompanied by a certified check. If Bid Bond is furnished, the form furnished by the City must be followed; no variations from the language thereof will be accepted. The amount of the Bid Bond must be not less than 5% of the total amount bid.
4. **CERTIFICATION OF COMPLIANCE WITH WAGE PAYMENT STATUTES:** Bidder shall complete this form in its entirety to ensure compliance with state legislation (SHB 2017).
5. **STATE RESPONSIBILITY AND RECIPROCAL BID PREFERENCE INFORMATION:** Bidder shall complete this form in its entirety to ensure compliance with state legislation (SHB 2010).
6. **EQUITY IN CONTRACTING (EIC) UTILIZATION FORM**

Bidders shall complete the Equity in Contracting Utilization Form in accordance with the City of Tacoma Equity in Contracting Regulations Manual and Chapter 1.07 of the City of Tacoma Municipal Code (TMC). This form shall be fully and accurately completed and returned with submission of the Bid and will be used to determine if the Bidder is in compliance with the EIC regulations and the TMC.

Bidders shall meet the percent sub-contracting requirements listed on the EIC Requirement Form to be considered responsive. Bidders unable to meet the percent sub-contracting requirements shall submit an Application of Waiver of EIC Requirements, the Equity in Contracting Utilization Form, and any required attachments with the Bid in accordance with the Equity in Contracting Regulations Manual located in PART III of these Specifications.

FAILURE TO COMPLETE AND SUBMIT EIC FORMS WITH THE BID SUBMITTAL PACKAGE MAY RESULT IN THE BID BEING DECLARED NON-RESPONSIVE AND REJECTED.

POST AWARD FORMS EXECUTED UPON AWARD:

- A. CONTRACT: Must be executed by the successful bidder.
- B. PAYMENT BOND TO THE CITY OF TACOMA: Must be executed by the successful bidder and his/her surety company.
- C. PERFORMANCE BOND TO THE CITY OF TACOMA: Must be executed by the successful bidder and his/her surety company.
- D. CERTIFICATE OF INSURANCE: Shall be submitted with all required endorsements.
- E. LEAP UTILIZATION PLAN: Shall be submitted at the Pre-Construction Meeting.
- F. GENERAL RELEASE.

CODE OF ETHICS: The successful bidder agrees that its violation of the City's Code of Ethics contained in TMC Chapter 1.46 shall constitute a breach of the contract subjecting the contract to termination.

LOCAL EMPLOYMENT AND APPRENTICESHIP TRAINING PROGRAM (LEAP):

The Local Employment and Apprenticeship Training Program (LEAP) has been adopted to counteract economic and social ills, which accompany high rates of unemployment within the City of Tacoma. The Tacoma City Council established the mandatory LEAP program for public works contracts pursuant to Ordinance No. 28520. The primary goal is to provide an opportunity for City of Tacoma residents and Tacoma Public Utilities ratepayers to enter apprenticeship programs, acquire skills, and perform work that will provide living wages.

LEAP Goals:

1. Local Employment Utilization Goal – Prime contractor is required to ensure that 15 percent of the labor hours worked on the project are performed by residents of the City of Tacoma or economically distressed areas of the Tacoma Public Utilities service area.
2. Apprentice Utilization Goal - Prime contractor is required to ensure that 15 percent of the labor hours worked on the project are performed by apprentices who reside in the Tacoma Public Utilities service area.

NOTE: The two goals can be satisfied concurrently if the prime contractor utilizes individuals who simultaneously meet the requirements of both goals, such as an apprentice who resides in an economically distressed area of the Tacoma Public Utilities service area.

**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 chapter 18.27 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 Small Business Enterprise and Local Employment and Apprenticeship 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.

PART I

BID PROPOSAL AND CONTRACT FORMS

B I D P R O P O S A L

SPECIFICATION NO. PW20-0193F

SOUTH 19TH AND CLAY HUNTINGTON

The undersigned hereby certifies that he/she has examined the location and construction details of work as outlined on the Plans and Specifications for Project No. **PWK-G0034** and has read and thoroughly understands the Plans and Specifications and contract governing the work embraced in this improvement and the method by which payment will be made for said work, and hereby proposes to undertake and complete the work embraced in this improvement in accordance with said Plans, Specifications and contract and at the following schedule of rates and prices.

NOTE:

1. Unit prices of all items, all extensions and total amount of bid should be shown. Show unit prices in figures only.
2. The notations below the item numbers refer to the specification section where information may be found regarding each contract item. These notations are intended only as a guide and are not warranted to refer to all specification sections where information may be found.

All bid items are sorted in the following groups:

Schedule A: Roadway, Bid Items R1 – R34

Schedule A: Roadway, Bid Items R1 – R34

<u>ITEM NO.</u>	<u>SPEC. NO.</u>	<u>ITEM DESCRIPTION</u>	<u>ESTIMATED QUANTITY</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
R1	1-05	Roadway Surveying	1 LS	Lump Sum	\$ _____
R2	1-07	SPCC Plan	1 LS	Lump Sum	\$ _____
R3	1-09	Mobilization	1 LS	Lump Sum	\$ _____
R4	1-10	Pedestrian Traffic Control	1 LS	Lump Sum	\$ _____
R5	1-10	Project Temporary Traffic Control	1 LS	Lump Sum	\$ _____

Contractor's Name: _____

Specification No. PW20-0193F

<u>ITEM NO.</u>	<u>SPEC. NO.</u>	<u>ITEM DESCRIPTION</u>	<u>ESTIMATED QUANTITY</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
R6	2-01	Clearing and Grubbing	1 LS	Lump Sum	\$ _____
R7	2-01	Certified Arborist	1 FORCE ACCOUNT	FORCE ACCOUNT	\$ 2500
R8	2-03	Roadway Excavation of Contaminated Material, Incl. Haul	30 CY	\$ _____	\$ _____
R9	2-17	Site Health and Safety Plan	1 LS	Lump Sum	\$ _____
R10	2-17	Site Health and Safety Officer	1 LS	Lump Sum	\$ _____
R11	2-14	Remove Existing Pavement, Type I, Class A	80 SY	\$ _____	\$ _____
R12	2-14	Remove Existing Pavement, Type I, Class C6	150 SY	\$ _____	\$ _____
R13	2-15	Remove Curb	180 LF	\$ _____	\$ _____
R14	2-17	Soil Management Plan	1 LS	Lump Sum	\$ _____
R15	4-04	Crushed Surfacing Top Course	10 TN	\$ _____	\$ _____
R16	4-04	Crushed Surfacing Base Course	12 TN	\$ _____	\$ _____
R17	5-04	Planing Bituminous Pavement	850 SY	\$ _____	\$ _____
R18	5-04	HMA CL 1/2" PG 58H-22, per ton	124 TN	\$ _____	\$ _____
R19	7-05	Adjust Existing Catch Basin, Furnish new Frame and Grate	2 EA	\$ _____	\$ _____
R20	7-05	Adjust Existing Valve Chamber to Grade	1 EA	\$ _____	\$ _____
R21	7-05	Adjust Existing Manhole Furnish New Frame and Cover	1 EA	\$ _____	\$ _____

Contractor's Name: _____

Specification No. PW20-0193F

<u>ITEM NO.</u>	<u>SPEC. NO.</u>	<u>ITEM DESCRIPTION</u>	<u>ESTIMATED QUANTITY</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
R22	8-01	Erosion Control	1 LS	Lump Sum	\$ _____
R23	8-01	Stormwater Pollution Prevention Plan (SWPPP)	1 LS	Lump Sum	\$ _____
R24	8-02	Site Restoration	1 LS	Lump Sum	\$ _____
R25	8-04	Cement Conc. Traffic Curb and Gutter	180 LF	\$ _____	\$ _____
R26	8-13	Poured Monument	1 EA	\$ _____	\$ _____
R27	8-14	Cement Conc. Sidewalk	45 SY	\$ _____	\$ _____
R28	8-14	Cement Conc. Curb Ramp	6 EA	\$ _____	\$ _____
R29	8-20	Traffic Signal System	1 LS	Lump Sum	\$ _____
R30	8-21	Permanent Signing	1 LS	Lump Sum	\$ _____
R31	8-22	Plastic Line	16 LF	\$ _____	\$ _____
R32	8-22	Plastic Crosswalk Line	375 SF	\$ _____	\$ _____
R33	8-22	Plastic Wide Lane Line	17 LF	\$ _____	\$ _____
R34	8-22	Plastic 12-Inch Stop Line	85 LF	\$ _____	\$ _____
		Roadway Base Bid Total (Bid Items No. R1 – R34)		\$ _____	(1)

TOTAL BASE BID (1) (Not Including Sales Tax)	\$ _____ (1)
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Contractor's Name: _____
Specification No. PW20-0193F
Page **3** of **4**

Proposal for Incorporating Recycled Materials into the Project

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

Proposed total percentage: _____ percent (%)

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

Bidder: _____

Signature of Authorized Official: _____

Date: _____

Contractor's Name: _____

Specification No. PW20-0193F

SIGNATURE PAGE

CITY OF TACOMA PUBLIC WORKS ENGINEERING

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. PW20-0193F South 19th and Clay Huntington

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

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

Address

Printed Name and Title

City, State, Zip

(Area Code) Telephone Number / Fax Number

E-Mail Address

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

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

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.

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 \$ _____



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 (**January 12, 2021**), 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.*

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

EIC REQUIREMENT FORM

EQUITY IN CONTRACTING REQUIREMENTS & PROCEDURES:

All bidders must complete and submit with their bid the following solicitation form contained in the bid submittal package:

City of Tacoma – EIC Utilization Form

IMPORTANT NOTE:

It is the bidder's responsibility to insure that the EIC-eligible subcontractor(s) listed on the EIC Utilization Form are currently certified by the City of Tacoma or the State of Washington's Office of Minority and Women Business Enterprises at the time of bid opening. This may be verified by contacting the EIC Office at 253-591-5075 between 8 AM and 5 PM, Monday through Friday. Please refer to the City of Tacoma EIC Provisions included elsewhere in these Special Provisions.

Equity in Contracting Requirements

Minority Business
Enterprise Requirement

8%

Women Business
Enterprise Requirement

7%

Small Business Enterprise
Requirement

14%

A list of EIC-eligible companies is available on the following web site addresses:

www.cityoftacoma.org/sbe
www.omwbe.diversitycompliance.com*

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

CCD/SBE: PW20-0193F
Date of Record: 10.6.2020

*For the OMWBE list, be sure to only look for businesses in Pierce, King, Lewis, Mason, and Grays Harbor counties.



City of Tacoma
Community & Economic Development
Office of Equity in Contracting
747 Market Street, Rm 900
Tacoma WA 98402
253-591-5075

EQUITY IN CONTRACTING UTILIZATION FORM

This form is to document **only** the EIC contractors or material suppliers that will be awarded a contract. This information will be used in calculating the **EVALUATED BID**. Additional forms may be used if needed.

- Prime contractors are encouraged to solicit bids from EIC approved firms.
- Be sure to include this form with your bid submittal in order to receive EIC credit.
- It is the prime contractor's responsibility to check the certification status of EIC contractors prior to the submittal deadline.

Bidder's Name: _____

Address: _____ City/State/Zip: _____

Spec. No. _____ Base Bid * \$ _____ **Complete company names and phone numbers are required to verify your EIC usage.**

a. Company Name and Telephone Number	b. MBE, WBE, or SBE (Write all that apply)	c. NAICS code(s)	d. Contractor Bid Amount (100%)	e. Material Supplier Bid Amount (20%)	f. Estimated MBE Usage Dollar Amount	g. Estimated WBE Usage Dollar Amount	h. Estimated SBE Usage Dollar Amount
i. MBE Utilization %	j. WBE Utilization %	k. SBE Utilization %					

By signing and submitting this form the bidder certifies that the EIC firms listed will be used on this project including all applicable change orders.

Type or Print Name of Responsible Officer / Title

Signature of Responsible Officer

Date

INSTRUCTIONS FOR COMPLETING EIC UTILIZATION FORM

The purpose of these instructions is to assist bidders in properly completing the EIC Utilization Form.

This form when submitted with your bid provides information to the City of Tacoma to accurately review and evaluate your proposed EIC usage.

1. * Base Bid is the prime contractor's bid, plus any alternates, additives and deductive selected by the City. Also, please refer to Items #10-12 below.
2. Column "a" – List all EIC companies that you will be awarding a contract to if you are the successful bidder.
3. Column "b" – Identify if this firm is being utilized as an MBE, WBE, or SBE. (Firms may count towards multiple requirements)
4. Column "c" – List the appropriate NAICS code for the scope of work, services, or materials/supplies for each contractor.
5. Column "d" – The bid amount must be indicated for **all** listed **EIC** that you plan on doing business with. This quote is the price that you and the contractor have negotiated prior to bid opening.
6. Column "e" – The bid amount must be indicated for **all** listed **EIC** that you plan on doing business with. This quote is the price that you and the material supplier have negotiated prior to bid opening.
8. Column "f" – Estimated MBE Usage Dollar Amount: For all MBE firms used, multiply the amount in Column "d" by 1.0 plus the amount in Column "e" by 0.20. Insert the total amount in this column.
9. Column "g" – Estimated WBE Usage Dollar Amount: For all WBE firms used, multiply the amount in Column "d" by 1.0 plus the amount in Column "e" by 0.20. Insert the total amount in this column.
10. Column "h" – Estimated SBE Usage Dollar Amount: For all MBE, WBE, or SBE firms used, Multiply the amount in Column "d" by 1.0 plus the amount in Column "e" by 0.20. Insert the total amount in this column.
11. Block "i" – The percent of actual MBE utilization calculated on the Base Bid only. (Divide the sum of Estimated MBE Usage Dollar Amount (Column "f") by your Base Bid (*) then multiply by 100 to get a percentage: \$ amounts from column "f" divided by Base Bid (*) x 100 = EIC usage as a percent of the Base Bid.)
12. Block "j" – The percent of actual WBE utilization calculated on the Base Bid only. (Divide the sum of Estimated WBE Usage Dollar Amount (Column "g") by your Base Bid (*) then multiply by 100 to get a percentage: \$ amounts from column "g" divided by Base Bid (*) x 100 = EIC usage as a percent of the Base Bid.)

13. Block "k" – The percent of actual SBE utilization calculated on the Base Bid only. (Divide the sum of Estimated SBE Usage Dollar Amount (Column "h") by your Base Bid (*) then multiply by 100 to get a percentage: \$ amounts from column "h" divided by Base Bid (*) x 100 = EIC usage as a percent of the Base Bid.)

It is the prime contractor's responsibility to check the status of EIC contractors prior to bid opening. Call the EIC Office at 253- 591-5075 for additional information.

CONTRACT

Resolution No.
Contract No.

This Contract is made and entered into effective this _____ day of ,20____, ("Effective Date") by and between the City of Tacoma, a Municipal Corporation of the State of Washington ("City"), and legal name of Supplier including type of business entity ("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. Enter Spec Number and Enter Spec Title together with all authorized addenda.
 2. Contractor's submittal dated Enter Submittal Date submitted in response to Specification No. Enter Spec Number and Enter Spec Title.

- II. The total price to be paid by City for Contracts full and complete performance hereunder may not exceed:
\$ _____, plus any applicable taxes.
- III. 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.
- IV. 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 of Tacoma will not accept price changes or pay additional fees when ePayables (Payment Plus) or credit card is used. The City, in its sole discretion, will determine the method of payment for this Contract.
- V. 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.
- VI. Contractor acknowledges, and by signing this Contract agrees, that the Indemnification provisions set forth in the controlling Contract Documents, including the Industrial Insurance immunity waiver (if applicable), are totally and fully part of this Contract and, within the context of the competitive bidding laws, have been mutually negotiated by the Parties hereto.
- VII. 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.
- VIII. 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, as of the Effective Date stated above, which shall be Effective Date for bonding purposes as applicable.

CITY OF TACOMA:

CONTRACTOR:

By:

By:

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

Director of Finance: _____

City Attorney (approved as to form): _____

Approved By: _____

Approved By: _____

Approved By: _____

Approved By: _____

Approved By: _____

Approved By: _____

Approved By: _____

Approved By: _____



PAYMENT BOND TO THE CITY OF TACOMA

Resolution No.
Bond No.

That we, the undersigned,

as principal, and _____
as a surety, are jointly and severally held and firmly bound to the CITY OF TACOMA, in the penal sum of,
\$ _____, 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. _____

Specification Title: _____

Contract No. _____

(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 waives 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.

Resolution No.
Bond No.
Specification No.
Contract No.

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.

Approved as to form:

Principal: Enter Vendor Legal Name

Deputy City Attorney

By: _____

Surety:

By: _____

Agent's Name: _____

Agent's Address: _____



PERFORMANCE BOND TO THE CITY OF TACOMA

Resolution No.
Bond No.

That we, the undersigned, _____

as principal, and _____

as a surety, are jointly and severally held and firmly bound to the CITY OF TACOMA, in the penal sum of

\$ _____, 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. _____

Specification Title: _____

Contract No. _____

(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.

Approved as to form:

Principal: Enter Vendor Legal Name

Deputy City Attorney

By: _____

Surety:

By: _____

Agent's Name: _____

Agent's Address: _____



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

PART II

SPECIAL PROVISIONS

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1 INTRODUCTION

2 (*****)

3
4 The following special provisions shall be used in conjunction with the "2020 Standard
5 Specifications for Road, Bridge and Municipal Construction" and "Standard Plans for
6 Road, Bridge, and Municipal Construction" as prepared by the Washington State
7 Department of Transportation (WSDOT). State Standard Specifications are available
8 through WSDOT, by calling (360) 705-7430, emailing engrpubs@wsdot.wa.gov, or may
9 be downloaded, free of charge, from this location on the WSDOT home page:
10 <http://www.wsdot.wa.gov/Publications/Manuals/M41-10.htm>

11
12 These Special Provisions are made up of both General Special Provisions (GSPs) from
13 various sources, which may have project-specific fill-ins; and project-specific Special
14 Provisions. Each Provision either supplements, modifies, or replaces the comparable
15 Standard Specification, or is a new Provision. The deletion, amendment, alteration, or
16 addition to any subsection or portion of the Standard Specifications is meant to pertain
17 only to that particular portion of the section, and in no way should it be interpreted that
18 the balance of the section does not apply.

19
20 The GSPs are labeled under the headers of each GSP, with the date of the GSP and its
21 source, as follows:

22
23 *(May 18, 2007 APWA GSP)*

24 *(August 7, 2006 WSDOT GSP)*

25 *(April 2, 2007 Tacoma GSP)*

26
27 The project specific Special Provisions are labeled under the headers of each Special
28 Provision as follows:

29 (*****)

30
31 Also incorporated into the Contract Documents by reference are:

- 32 1. *Manual on Uniform Traffic Control Devices for Streets and Highways*, currently
33 adopted edition, with Washington State modifications, if any
- 34 2. *Standard Plans for Road, Bridge and Municipal Construction*, WSDOT/APWA,
35 current edition
- 36 3. *Proposed Guidelines for Pedestrian Facilities in the Public Right-of-Way*, United
37 States Access Board, 2011

38
39 Contractor shall obtain copies of these publications, at Contractor's own expense.

40
41 (*****).

42
43 A pre-bid conference will not be held.

DESCRIPTION OF WORK

(***)**

This Contract shall generally consist of traffic signal and traffic signal mast arm pole installation, asphalt paving, curb and gutter, curb ramps, catch basin replacements, sidewalk improvements, and pavement markings.

END OF SECTION

1 **1-01 DEFINITIONS AND TERMS**

2
3 **1-01.3 Definitions**

4 **(January 4, 2016 APWA GSP)**

5
6 *Delete the heading Completion Dates and the three paragraphs that follow it, and*
7 *replace them with the following:*

8
9 **Dates**

10 ***Bid Opening Date***

11 The date on which the Contracting Agency publicly opens and reads the Bids.

12 ***Award Date***

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

15 ***Contract Execution Date***

16 The date the Contracting Agency officially binds the Agency to the Contract.

17 ***Notice to Proceed Date***

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

19 ***Substantial Completion Date***

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

25 ***Physical Completion Date***

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

29 ***Completion Date***

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

34 ***Final Acceptance Date***

35 The date on which the Contracting Agency accepts the Work as complete.

36
37 *Supplement this Section with the following:*

38
39 All references in the Standard Specifications, Amendments, or WSDOT General Special
40 Provisions, to the terms "Department of Transportation", "Washington State
41 Transportation Commission", "Commission", "Secretary of Transportation", "Secretary",
42 "Headquarters", and "State Treasurer" shall be revised to read "Contracting Agency".

43
44 All references to the terms "State" or "state" shall be revised to read "Contracting
45 Agency" unless the reference is to an administrative agency of the State of Washington,
46 a State statute or regulation, or the context reasonably indicates otherwise.

1 All references to "State Materials Laboratory" shall be revised to read "Contracting
2 Agency designated location".

3
4 All references to "final contract voucher certification" shall be interpreted to mean the
5 Contracting Agency form(s) by which final payment is authorized, and final completion
6 and acceptance granted.

7
8 **Additive**

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

12
13 **Alternate**

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

17
18 **Business Day**

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

21
22 **Contract Bond**

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

26
27 **Contract Documents**

28 See definition for "Contract".

29
30 **Contract Time**

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

33
34 **Notice of Award**

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

37
38 **Notice to Proceed**

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

42
43 **Traffic**

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

46
47 *This section is supplemented with the following:*
48 **(April 15, 2020 Tacoma GSP)**

49
50 All references to the acronym UDBE" shall be revised to read "DBE/EIC".
51

1 All references in the Standard Specifications to the term "Proposal Bond" shall be
2 revised to read "Bid Bond."

3
4 **Base Bid**

5 The summation of Bid Item amounts (extensions) in the Bid Forms, excluding Additives,
6 Alternates, Deductives, Force Accounts, and taxes collected separately pursuant to
7 Section 1-07.2.

8
9 **Calendar Day**

10 The time period of 24 hours measured from midnight to the next midnight, including
11 weekends and holidays.

12
13 **Change Order**

14 A written order to the Contractor, issued by the Contracting Agency after execution of
15 the contract, authorizing an addition, deletion, or other revision in the Work, within the
16 scope of the Contract Documents, and establishing the basis of payment and time
17 adjustments, if any, for the Work affected by the change.

18
19 **Day**

20 Unless otherwise specified, a calendar day.

21
22 **Deductive**

23 A supplemental unit of work or group of Bid Items, identified separately in the Bid, which
24 may, at the discretion of the Contract Agency, be deducted from the Base Bid should the
25 Contract Agency choose not to Award the total Base Bid.

26
27 **Grand Total Price**

28 The Grand Total Price of the Contract will include the Base Bid, Additives, Alternates,
29 Deductives, Force Accounts, and taxes collected separately pursuant to Section 1-07.2.

30
31 **Standard Specifications**

32 Divisions One through Nine of the specified edition of the WSDOT "Standard
33 Specifications for Road, Bridge, and Municipal Construction."

34
35
36 **END OF SECTION**
37
38

1 **1-02 BID PROCEDURES AND CONDITIONS**

2
3 **1-02.1 Prequalification of Bidders**

4 *Delete this section and replace it with the following:*

5
6 **1-02.1 Qualifications of Bidder**
7 **(January 24, 2011 APWA GSP)**

8
9 Before award of a public works contract, a bidder must meet at least the minimum
10 qualifications of RCW 39.04.350(1) to be considered a responsible bidder and qualified
11 to be awarded a public works project.

12
13 **1-02.2 Plans and Specifications**
14 **(June 27, 2011 APWA GSP)**

15 *Delete this section and replace it with the following:*

16
17 Information as to where Bid Documents can be obtained or reviewed can be found in the
18 Call for Bids (Advertisement for Bids) for the work.

19
20 After award of the contract, plans and specifications will be issued to the Contractor at
21 no cost as detailed below:

22

To Prime Contractor	No. of Sets	Basis of Distribution
Reduced plans (11" x 17")	6	Furnished automatically upon award.
Contract Provisions	6	Furnished automatically upon award.
Large plans (e.g., 22" x 34")	2	Furnished only upon request.

23
24 Additional plans and Contract Provisions may be obtained by the Contractor from the
25 source stated in the Call for Bids, at the Contractor's own expense.

26
27 **1-02.4(1) General**
28 **(August 15, 2016 APWA GSP Option B)**

29
30 *The first sentence of the fourth to last paragraph is revised to read:*

31
32 Any prospective Bidder desiring an explanation or interpretation of the Bid Documents,
33 shall request the explanation or interpretation in writing by close of business 6 business
34 days preceding the bid opening to allow a written reply to reach all prospective Bidders
35 before the submission of their Bids.

1-02.5 Proposal Forms
(July 31, 2017 APWA GSP)

Delete this section and replace it with the following:

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

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

1-02.6 Preparation of Proposal
(July 11, 2018 APWA GSP)

Supplement the second paragraph with the following:

4. If a minimum bid amount has been established for any item, the unit or lump sum price must equal or exceed the minimum amount stated.
5. Any correction to a bid made by interlineation, alteration, or erasure, shall be initialed by the signer of the bid.

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

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

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

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

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

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

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

5
6 *The fourth paragraph is revised to read:*
7 **(October 18, 2013 Tacoma GSP)**

8
9 The bidder shall submit the following completed forms:
10 City of Tacoma – Equity in Contracting Utilization Form

11
12 *Add the following new section:*

13
14 **1-02.6(1) Recycled Materials Proposal**
15 **(January 4, 2016 APWA GSP)**

16
17 The Bidder shall submit with the Bid, its proposal for incorporating recycled materials
18 into the project, using the form provided in the Contract Provisions.

19
20 **1-02.7 Bid Deposit**
21 **(April 1, 2012 Tacoma GSP)**

22 *Delete this section and replace it with the following:*

23
24 A deposit of at least 5 percent of the total Bid shall accompany each Bid. This deposit
25 may be cash, certified check, cashier's check, or a proposal bond (Surety bond). Any
26 proposal bond shall be on a form acceptable to the Contracting Agency and shall be
27 signed by the Bidder and the Surety. A proposal bond shall not be conditioned in any
28 way to modify the minimum 5 percent required. The Surety shall: (1) be registered with
29 the Washington State Insurance Commissioner, and (2) appear on the current
30 Authorized Insurance List in the State of Washington published by the Office of the
31 Insurance Commissioner.

32
33 The failure to furnish a Bid deposit of a minimum of 5 percent shall make the Bid
34 nonresponsive and shall cause the Bid to be rejected by the Contracting Agency.

35
36 If a Bid Bond is furnished, the form furnished by the Contracting Agency must be
37 followed. No variations from the language thereof will be accepted.

38
39 If submitting your bid electronically, a scanned version of the original bid bond must
40 accompany your electronic bid submittal. The original bid bond shall be sent to the
41 Contracting Agency and postmarked no later than the day of bid opening. **Original bid**
42 **bonds will be delivered to:**

43
44 **City of Tacoma Procurement & Payables Division**
45 **Tacoma Public Utilities**
46 **PO Box 11007**
47 **Tacoma, WA 98411-0007**
48
49

1-02.9 Delivery of Proposal

Delete this section and replace it with the following:

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:

- DBE Written Confirmation Document from each DBE firm listed on the Bidder's completed DBE Utilization Certification (WSDOT 272-056)
- Good Faith Effort (GFE) Documentation
- DBE Bid Item Breakdown (WSDOT 272-054)
- DBE 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.

If submitted after the Bid Proposal is due, the document(s) must be submitted via email to bids@cityoftacoma.org, with "Supplemental Information" noted in the subject line. All other information required to be submitted with the Bid Proposal must be submitted with the Bid Proposal itself, at the time stated in the Call for Bids.

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

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

1-02.10 Withdrawing, Revising, or Supplementing Proposal

Delete this section, and replace it with the following:

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 (***)**

The first paragraph of this section shall be deleted and replaced with the following:

Proposals will be opened and publicly read via webcast at the time indicated in the call for Bids unless the Bid opening has been delayed or canceled.

This public bid opening will be held via webinar. Please use the link below or on the Request for Bids page to join the webinar:

<https://us02web.zoom.us/j/83250498294>

Preliminary and final bid results are posted at www.TacomaPurchasing.org

1-02.13 Irregular Proposals (October 18, 2013 Tacoma GSP)

Delete this section and replace it with the following:

1. A proposal will be considered irregular and will be rejected if:
 - a. The Bidder is not prequalified when so required;
 - b. The authorized proposal form furnished by the Contracting Agency is not used or is altered;
 - c. The completed proposal form contains any unauthorized additions, deletions, alternate Bids, or conditions;
 - d. The Bidder adds provisions reserving the right to reject or accept the award, or enter into the Contract;
 - e. A price per unit cannot be determined from the Bid Proposal;
 - f. The Proposal form is not properly executed;
 - g. The Bidder fails to submit or properly complete a Subcontractor list, if applicable, as required in Section 1-02.6;
 - h. The bidder fails to submit or properly complete the "City of Tacoma – EIC Utilization Form" as required in Section 1-02.6;
 - i. The Bid Proposal does not constitute a definite and unqualified offer to meet the material terms of the Bid invitation; or

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

1-02.14 Disqualification of Bidders

(*****)

Delete this section and replace it with the following:

A Bidder will be deemed not responsible if:

- the Bidder does not meet the mandatory bidder responsibility criteria in RCW 39.04.350(1), as amended; or
- evidence of collusion exists with any other Bidder or potential Bidder. Participants in collusion will be restricted from submitting further bids; or
- the Bidder, in the opinion of the Contracting Agency, is not qualified for the work or to the full extent of the bid, or to the extent that the bid exceeds the authorized prequalification amount as may have been determined by a prequalification of the Bidder; or
- an unsatisfactory performance record exists based on past or current Contracting Agency work or for work done for others, as judged from the standpoint of conduct of the work; workmanship; or progress; affirmative action; equal employment opportunity practices; termination for cause; or Disadvantaged Business Enterprise, Minority Business Enterprise, or Women's Business Enterprise utilization; or
- there is uncompleted work (Contracting Agency or otherwise) which in the opinion of the Contracting Agency might hinder or prevent the prompt completion of the work bid upon; or
- the Bidder failed to settle bills for labor or materials on past or current contracts, unless there are extenuating circumstances acceptable to the Contracting Agency; or
- the Bidder has failed to complete a written public contract or has been convicted of a crime arising from a previous public contract, unless there are extenuating circumstances acceptable to the Contracting Agency; or
- the Bidder is unable, financially or otherwise, to perform the work, in the opinion of the Contracting Agency; or
- there are any other reasons deemed proper by the Contracting Agency; or
- the Bidder fails to meet the Project-specific supplemental bidder responsibility criteria listed in the Special Reminder to Bidders; or
- The bidder fails to meet the EIC requirements as described in Section 1-02.6.

As evidence that the Bidder meets the bidder responsibility criteria above, the apparent two lowest Bidders must submit to the Contracting Agency within 24 hours of the bid submittal deadline, documentation (sufficient in the sole judgment of the Contracting

Agency) demonstrating compliance with all applicable responsibility criteria, including all documentation specifically listed in the supplemental criteria. The Contracting Agency reserves the right to request such documentation from other Bidders as well, and to request further documentation as needed to assess bidder responsibility.

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

If the Contracting Agency determines the Bidder does not meet the bidder responsibility criteria above and is therefore not a responsible Bidder, the Contracting Agency shall notify the Bidder in writing, with the reasons for its determination. If the Bidder disagrees with this determination, it may appeal the determination within 24 hours of receipt of the Contracting Agency's determination by presenting its appeal to the Contracting Agency. The Contracting Agency will consider the appeal before issuing its final determination. If the final determination affirms that the Bidder is not responsible, the Contracting Agency will not execute a contract with any other Bidder until at least two business days after the Bidder determined to be not responsible has received the final determination.

1-02.15 Pre Award Information (August 14, 2013 APWA GSP)

Revise this section to read:

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

1. A complete statement of the origin, composition, and manufacture of any or all materials to be used,
2. Samples of these materials for quality and fitness tests,
3. A progress schedule (in a form the Contracting Agency requires) showing the order of and time required for the various phases of the work,
4. A breakdown of costs assigned to any bid item,
5. Attendance at a conference with the Engineer or representatives of the Engineer,
6. Obtain, and furnish a copy of, a business license to do business in the city or county where the work is located.
7. Any other information or action taken that is deemed necessary to ensure that the bidder is the lowest responsible bidder.

END OF SECTION

1 **1-03 AWARD AND EXECUTION OF CONTRACT**

2
3 **1-03.1 Consideration of Bids**
4 **(January 23, 2006 APWA GSP)**

5 *Revise the first paragraph to read:*

6
7 After opening and reading proposals, the Contracting Agency will check them for
8 correctness of extensions of the prices per unit and the total price. If a discrepancy
9 exists between the price per unit and the extended amount of any bid item, the price per
10 unit will control. If a minimum bid amount has been established for any item and the
11 bidder's unit or lump sum price is less than the minimum specified amount, the
12 Contracting Agency will unilaterally revise the unit or lump sum price, to the minimum
13 specified amount and recalculate the extension. The total of extensions, corrected
14 where necessary, including sales taxes where applicable and such additives and/or
15 alternates as selected by the Contracting Agency, will be used by the Contracting
16 Agency for award purposes and to fix the Awarded Contract Price amount and the
17 amount of the contract bond.

18
19 **1-03.1(1) Identical Bid Totals**
20 **(January 4, 2016 APWA GSP)**

21 *Revise this section to read:*

22
23 After opening Bids, if two or more lowest responsive Bid totals are exactly equal, then
24 the tie-breaker will be the Bidder with an equal lowest bid, that proposed to use the
25 highest percentage of recycled materials in the Project, per the form submitted with the
26 Bid Proposal. If those percentages are also exactly equal, then the tie-breaker will be
27 determined by drawing as follows: Two or more slips of paper will be marked as follows:
28 one marked "Winner" and the other(s) marked "unsuccessful". The slips will be folded to
29 make the marking unseen. The slips will be placed inside a box. One authorized
30 representative of each Bidder shall draw a slip from the box. Bidders shall draw in
31 alphabetic order by the name of the firm as registered with the Washington State
32 Department of Licensing. The slips shall be unfolded and the firm with the slip marked
33 "Winner" will be determined to be the successful Bidder and eligible for Award of the
34 Contract. Only those Bidders who submitted a Bid total that is exactly equal to the lowest
35 responsive Bid, and with a proposed recycled materials percentage that is exactly equal
36 to the highest proposed recycled materials amount, are eligible to draw.

37
38 **1-03.2 Award of Contract**
39 **(March 27, 2003 Tacoma GSP)**

40
41 All references to 45 calendar days shall be revised to read 60 calendar days.

42
43 **1-03.3 Execution of Contract**
44 **(October 1, 2005 APWA GSP)**

45 *Revise this section to read:*

46
47 Copies of the Contract Provisions, including the unsigned Form of Contract, will be
48 available for signature by the successful bidder on the first business day following
49 award. The number of copies to be executed by the Contractor will be determined by the
50 Contracting Agency.

1 Within 10 calendar days after the award date, the successful bidder shall return the
2 signed Contracting Agency-prepared contract, an insurance certification as required by
3 Section 1-07.18, and a satisfactory bond as required by law and Section 1-03.4. Before
4 execution of the contract by the Contracting Agency, the successful bidder shall provide
5 any pre-award information the Contracting Agency may require under Section 1-02.15.
6

7 Until the Contracting Agency executes a contract, no proposal shall bind the Contracting
8 Agency nor shall any work begin within the project limits or within Contracting Agency-
9 furnished sites. The Contractor shall bear all risks for any work begun outside such
10 areas and for any materials ordered before the contract is executed by the Contracting
11 Agency.
12

13 If the bidder experiences circumstances beyond their control that prevents return of the
14 contract documents within the calendar days after the award date stated above, the
15 Contracting Agency may grant up to a maximum of 10 additional calendar days for
16 return of the documents, provided the Contracting Agency deems the circumstances
17 warrant it.
18

19 **1-03.4 Contract Bond**
20 **(July 23, 2015 APWA GSP)**

21 *Delete the first paragraph and replace it with the following:*
22

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

- 27 1. Be on Contracting Agency-furnished form(s);
- 28 2. Be signed by an approved surety (or sureties) that:
 - 29 a. Is registered with the Washington State Insurance Commissioner, and
 - 30 b. Appears on the current Authorized Insurance List in the State of Washington
31 published by the Office of the Insurance Commissioner,
- 32 3. Guarantee that the Contractor will perform and comply with all obligations, duties,
33 and conditions under the Contract, including but not limited to the duty and
34 obligation to indemnify, defend, and protect the Contracting Agency against all
35 losses and claims related directly or indirectly from any failure:
 - 36 a. Of the Contractor (or any of the employees, subcontractors, or lower tier
37 subcontractors of the Contractor) to faithfully perform and comply with all
38 contract obligations, conditions, and duties, or
 - 39 b. Of the Contractor (or the subcontractors or lower tier subcontractors of the
40 Contractor) to pay all laborers, mechanics, subcontractors, lower tier
41 subcontractors, material person, or any other person who provides supplies
42 or provisions for carrying out the work;
- 43 4. Be conditioned upon the payment of taxes, increases, and penalties incurred on
44 the project under titles 50, 51, and 82 RCW; and
- 45 5. Be accompanied by a power of attorney for the Surety's officer empowered to
46 sign the bond; and
- 47 6. Be signed by an officer of the Contractor empowered to sign official statements
48 (sole proprietor or partner). If the Contractor is a corporation, the bond(s) must be
49 signed by the president or vice president, unless accompanied by written proof of

1 the authority of the individual signing the bond(s) to bind the corporation (i.e.,
2 corporate resolution, power of attorney, or a letter to such effect signed by the
3 president or vice president).
4

5 **1-03.5 Failure to Execute Contract**
6 **(October 18, 2013 Tacoma GSP)**

7 *The first sentence is revised to read:*
8

9 Failure to return the insurance certification and bond with the signed contract as required
10 in Section 1-03.3, or failure to provide Equity in Contracting (EIC) information if required
11 in the contract, or failure or refusal to sign the Contract, or failure to register as a
12 contractor in the state of Washington shall result in forfeiture of the bid bond or deposit
13 of this Bidder.
14

15 **END OF SECTION**
16

1 **1-04 SCOPE OF THE WORK**

2
3 **1-04.2 Coordination of Contract Documents, Plans, Special Provisions,**
4 **Specifications, and Addenda**
5 **(March 13, 2012 APWA GSP)**

6 *Revise the second paragraph to read:*

7
8 Any inconsistency in the parts of the contract shall be resolved by following this order of
9 precedence (e.g., 1 presiding over 2, 2 over 3, 3 over 4, and so forth):

- 10 1. Addenda,
11 2. Proposal Form,
12 3. Special Provisions,
13 4. Contract Plans,
14 5. Amendments to the Standard Specifications,
15 6. Standard Specifications,
16 7. Contracting Agency's Standard Plans or Details (if any), and
17 8. WSDOT Standard Plans for Road, Bridge, and Municipal Construction.

18
19
20
21 **END OF SECTION**
22
23

1 **1-05 CONTROL OF WORK**

2
3 **1-05.3 Working Drawings**
4 **(January 13, 2011 Tacoma GSP)**

5 *This section is deleted in its entirety and replaced with the following:*

6
7 **1-05.3 Submittals**

8
9 The Contractor shall not install materials or equipment, which require submittals, until
10 reviewed by the Contracting Agency.

11
12 The Contractor shall submit four (4) copies to the Engineer of all submittals required by
13 the Contract Documents, unless otherwise required in these Special Provisions. This
14 includes, but is not limited to:

- 15 1. Shop Drawings/Plans
- 16 2. Product Data
- 17 3. Samples
- 18 4. Reports
- 19 5. Material Submittals (Ref. 1-06)
- 20 6. Progress Schedules (Ref. 1-08.3)
- 21 7. Guarantees/Warranties (Ref. 1-05.10)

22
23 The Engineer will return one (1) copy to the Contractor.

24
25 **1-05.3(1) Submittal Schedule**

26
27 In conformance with section 1-08.3, the progress schedule shall be submitted and
28 reviewed prior to commencing any work.

29
30 No claim will be allowed for damages or extension of time resulting from rejection of a
31 submittal or the requirement of resubmittals as outlined by this section.

32
33 The Engineer's review will be completed as quickly as possible, but may require up to
34 ten (10) working days from the date the submittals or resubmittals are received until they
35 are sent to the Contractor. If more than ten (10) working days are required for the
36 Engineer's review of any individual submittal or resubmittal, an extension of time will be
37 considered in accordance with Section 1-08.8.

38
39 **1-05.3(2) Submittal Procedures**

40
41 Contractor submittals shall be in accordance with the following:

42
43 The Contractor shall thoroughly review each submittal for dimensions, quantities, and
44 details of the material or item shown. The Contractor shall review each submittal and
45 note any errors, omissions, or deviations with the Contract Documents. The Contractor
46 shall accept full responsibility for the completeness of each submittal.

47
48 Each submittal shall have a unique number assigned to it, and the transmittals shall be
49 sequentially numbered. The numbering of resubmittals shall meet the requirements of
50 Section 1-05.3(4). On each page, indicate the page number, and total number of pages
51 in each submittal.

Each submittal shall indicate the intended use of the item in the work. When catalog pages are submitted, applicable items shall be clearly identified. The current revision, issue number, and data shall be indicated on all drawings and other descriptive data.

Each submittal should be transmitted with the "Submittal Transmittal Form" found at the end of this section. Upon request, an electronic copy of the Submittal Transmittal Form will be made available to the Contractor.

In lieu of utilizing the Submittal Transmittal Form, the Contractor may display the following information on each submittal, in a clear space on the front of the submittal:

1. Project Name: South 19th and Clay Huntington
2. Project Specification Number: PW20-0193F
3. Project No: PWK-G0034
4. Submittal Date
5. Description of Submittal
6. Sequential, unique submittal number.
7. Related Specification Section and/or plan sheet
8. The following statement: "This document has been detail-checked for accuracy of content and for compliance with the Contract documents. The information contained herein has been fully coordinated with all involved Subcontractors."
9. Printed or typed name and signature of Contractor.

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

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

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

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

1-05.3(3) Engineer's Review of Submittals

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

Review of a separate item does not constitute review of an assembly in which the item functions.

1 When the submittal or resubmittal is marked "REVIEWED", or "REVIEWED WITH
2 COMMENTS", no additional copies need to be furnished. The Contractor shall comply
3 with any comments on the return submittal.
4

5 **1-05.3(4) Resubmittals**

6

7 When a submittal is marked "AMEND AND RESUBMIT" or "REJECTED, SEE
8 REMARKS," the Contractor shall make the corrections as noted and instructed by the
9 Engineer and resubmit four (4) copies. The Contractor shall not install material or
10 equipment that has received a review status of "AMEND AND RESUBMIT" or
11 REJECTED, SEE REMARKS".
12

13 When corrected copies are resubmitted, the Contractor shall in writing direct specific
14 attention to all revisions and shall list separately any revision made other than those
15 called for by the Engineer on previous submittals. Resubmittals shall bear the number of
16 the original submittal followed by a letter (A, B, etc.) to indicate the sequence of the
17 resubmittal.
18

19 The Contractor shall revise returned submittals as required and resubmit until final
20 review is obtained.
21

22 The Contractor shall verify that all exceptions previously noted by the Engineer have
23 been accounted for.
24

25 **1-05.3(5) Submittal Requirements by Section**

26

27 The following is a summary of submittal requirements. This summary is not inclusive of
28 all submittal requirements. The Contractor shall review each individual section in the
29 applicable provisions or specifications, as noted below, for specific requirements.
30

Section	Description
1-06.1	Proposed Material Sources
1-06.1(2)	Request for Approval of Material
1-06.3	Manufacturer's Certificate of Compliance
1-07.15	Temporary Water Pollution/Erosion Control Plan
1-07.15(1)	Spill Prevention, Control and Countermeasures (SPCC) Plan
1-07.16(1)	Property Owner Notification
1-08.3(2)	Progress Schedule
1-09.6	Equipment Rental Rates and Equipment Watch Sheets
1-09.9	Schedule Of Values
1-10.2	Traffic Control Plan
2-07.3(1)	Hydrant Permit
4-04	Crushed Surfacing Top Course
4-04	Crushed Surfacing Base Course
5-04	Asphalt Mix Design Certification
5-05	Concrete Mix Design
7-05	Castings
7-17	Pipe materials
8-01.3(1)A	Stormwater Pollution Prevention Plan (SWPPP)

1-05.4 Conformity With and Deviations from Plans and Stakes

(*****)

This section is supplemented with the following:

All surveying for this project shall be the responsibility of the Contractor.

Section 1-05.4 is supplemented with the following:

(August 7, 2017, WSDOT GSP)

Contractor Surveying - Roadway

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

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

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

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

5
6 The meaning of words and terms used in this provision shall be as listed in "Definitions
7 of Surveying and Associated Terms" current edition, published by the American
8 Congress on Surveying and Mapping and the American Society of Civil Engineers.

9
10 The survey work shall include but not be limited to the following:

- 11
12 1. Verify the primary horizontal and vertical control furnished by the Contracting
13 Agency, and expand into secondary control by adding stakes and hubs as well
14 as additional survey control needed for the project. Provide descriptions of
15 secondary control to the Contracting Agency. The description shall include
16 coordinates and elevations of all secondary control points.
17
- 18 2. Establish, the centerlines of all alignments, by placing hubs, stakes, or marks
19 on centerline or on offsets to centerline at all curve points (PCs, PTs, and PIs)
20 and at points on the alignments spaced no further than 50 feet.
21
- 22 3. Establish clearing limits, placing stakes at all angle points and at intermediate
23 points not more than 50 feet apart. The clearing and grubbing limits shall be 5
24 feet beyond the toe of a fill and 10 feet beyond the top of a cut unless
25 otherwise shown in the Plans.
26
- 27 4. Establish grading limits, placing slope stakes at centerline increments not more
28 than 50 feet apart. Establish offset reference to all slope stakes. If Global
29 Positioning Satellite (GPS) Machine Controls are used to provide grade control,
30 then slope stakes may be omitted at the discretion of the Contractor
31
- 32 5. Establish the horizontal and vertical location of all drainage features, placing
33 offset stakes to all drainage structures and to pipes at a horizontal interval not
34 greater than 25 feet.
35
- 36 6. Establish roadbed and surfacing elevations by placing stakes at the top of
37 subgrade and at the top of each course of surfacing. Subgrade and surfacing
38 stakes shall be set at horizontal intervals not greater than 50 feet in tangent
39 sections, 25 feet in curve sections with a radius less than 300 feet, and at 10-
40 foot intervals in intersection radii with a radius less than 10 feet. Transversely,
41 stakes shall be placed at all locations where the roadway slope changes and at
42 additional points such that the transverse spacing of stakes is not more than 12
43 feet. If GPS Machine Controls are used to provide grade control, then roadbed
44 and surfacing stakes may be omitted at the discretion of the Contractor.
45
- 46 7. Establish intermediate elevation benchmarks as needed to check work
47 throughout the project.
48
- 49 8. Provide references for paving pins at 25-foot intervals or provide simultaneous
50 surveying to establish location and elevation of paving pins as they are being
51 placed.

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

5
6 10. Contractor shall determine if changes are needed to the profiles or roadway
7 sections shown in the Contract Plans in order to achieve proper smoothness
8 and drainage where matching into existing features, such as a smooth
9 transition from new pavement to existing pavement. The Contractor shall
10 submit these changes to the Engineer for review and approval 10 days prior to
11 the beginning of work.

12
13 The Contractor shall provide the Contracting Agency copies of any calculations and
14 staking data when requested by the Engineer.

15
16 To facilitate the establishment of these lines and elevations, the Contracting Agency will
17 provide the Contractor with primary survey control information consisting of descriptions
18 of two primary control points used for the horizontal and vertical control, and descriptions
19 of two additional primary control points for every additional three miles of project length.
20 Primary control points will be described by reference to the project alignment and the
21 coordinate system and elevation datum utilized by the project. In addition, the
22 Contracting Agency will supply horizontal coordinates for the beginning and ending
23 points and for each Point of Intersection (PI) on each alignment included in the project.

24
25 The Contractor shall ensure a surveying accuracy within the following tolerances:
26

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

47 The Contracting Agency may spot-check the Contractor's surveying. These spot checks
48 will not change the requirements for normal checking by the Contractor.
49

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

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

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

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

Payment

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

"Roadway Surveying", lump sum.

The lump sum contract price for "Roadway Surveying" shall be full pay for all labor, equipment, materials, and supervision utilized to perform the Work specified, including any resurveying, checking, correction of errors, replacement of missing or damaged stakes, and coordination efforts.

Add the following new sub-sections:

1-05.4(2) Bridge and Structure Surveys (October 1, 2005 APWA GSP)

For all structural work such as bridges and retaining walls, the Contractor shall retain as a part of Contractor's organization an experienced team of surveyors.

The Contractor shall provide all surveys required to complete the structure, except the following primary survey control which will be provided by the Engineer:

1. Centerline or offsets to centerline of the structure.
2. Stations of abutments and pier centerlines.
3. A sufficient number of bench marks for levels to enable the Contractor to set grades at reasonably short distances.
4. Monuments and control points as shown in the Plans.

The Contractor shall establish all secondary survey controls, both horizontal and vertical, as necessary to assure proper placement of all project elements based on the primary control points provided by the Engineer. Survey work shall be within the following tolerances:

Stationing	+.01 foot
Alignment	+.01 foot (between successive points)
Superstructure Elevations	+.01 foot (from plan elevations)
Substructure Elevations	+.05 foot (from plan elevations)

1 During the progress of the work, the Contractor shall make available to the Engineer all
2 field books including survey information, footing elevations, cross sections and
3 quantities.

4
5 The Contractor shall be fully responsible for the close coordination of field locations and
6 measurements with appropriate dimensions of structural members being fabricated.

7
8 **1-05.7 Removal of Defective and Unauthorized Work**
9 **(October 1, 2005 APWA GSP)**

10 *Supplement this section with the following:*

11
12 If the Contractor fails to remedy defective or unauthorized work within the time specified
13 in a written notice from the Engineer, or fails to perform any part of the work required by
14 the Contract Documents, the Engineer may correct and remedy such work as may be
15 identified in the written notice, with Contracting Agency forces or by such other means
16 as the Contracting Agency may deem necessary.

17
18 If the Contractor fails to comply with a written order to remedy what the Engineer
19 determines to be an emergency situation, the Engineer may have the defective and
20 unauthorized work corrected immediately, have the rejected work removed and
21 replaced, or have work the Contractor refuses to perform completed by using
22 Contracting Agency or other forces. An emergency situation is any situation when, in the
23 opinion of the Engineer, a delay in its remedy could be potentially unsafe, or might cause
24 serious risk of loss or damage to the public.

25
26 Direct or indirect costs incurred by the Contracting Agency attributable to correcting and
27 remedying defective or unauthorized work, or work the Contractor failed or refused to
28 perform, shall be paid by the Contractor. Payment will be deducted by the Engineer from
29 monies due, or to become due, the Contractor. Such direct and indirect costs shall
30 include in particular, but without limitation, compensation for additional professional
31 services required, and costs for repair and replacement of work of others destroyed or
32 damaged by correction, removal, or replacement of the Contractor's unauthorized work.

33
34 No adjustment in Contract time or compensation will be allowed because of the delay in
35 the performance of the work attributable to the exercise of the Contracting Agency's
36 rights provided by this Section.

37
38 The rights exercised under the provisions of this section shall not diminish the
39 Contracting Agency's right to pursue any other avenue for additional remedy or
40 damages with respect to the Contractor's failure to perform the work as required.

41
42 **1-05.11 Final Inspection**

43 *Delete this section and replace it with the following:*

44
45 **1-05.11 Final Inspections and Operational Testing**
46 **(October 1, 2005 APWA GSP)**

47
48 **1-05.11(1) Substantial Completion Date**

49
50 When the Contractor considers the work to be substantially complete, the Contractor
51 shall so notify the Engineer and request the Engineer establish the Substantial

1 Completion Date. The Contractor's request shall list the specific items of work that
2 remain to be completed in order to reach physical completion. The Engineer will
3 schedule an inspection of the work with the Contractor to determine the status of
4 completion. The Engineer may also establish the Substantial Completion Date
5 unilaterally.

6
7 If, after this inspection, the Engineer concurs with the Contractor that the work is
8 substantially complete and ready for its intended use, the Engineer, by written notice to
9 the Contractor, will set the Substantial Completion Date. If, after this inspection the
10 Engineer does not consider the work substantially complete and ready for its intended
11 use, the Engineer will, by written notice, so notify the Contractor giving the reasons
12 therefore.

13
14 Upon receipt of written notice concurring in or denying substantial completion, whichever
15 is applicable, the Contractor shall pursue vigorously, diligently and without unauthorized
16 interruption, the work necessary to reach Substantial and Physical Completion. The
17 Contractor shall provide the Engineer with a revised schedule indicating when the
18 Contractor expects to reach substantial and physical completion of the work.

19
20 The above process shall be repeated until the Engineer establishes the Substantial
21 Completion Date and the Contractor considers the work physically complete and ready
22 for final inspection.

23 24 **1-05.11(2) Final Inspection and Physical Completion Date**

25
26 When the Contractor considers the work physically complete and ready for final
27 inspection, the Contractor by written notice, shall request the Engineer to schedule a
28 final inspection. The Engineer will set a date for final inspection. The Engineer and the
29 Contractor will then make a final inspection and the Engineer will notify the Contractor in
30 writing of all particulars in which the final inspection reveals the work incomplete or
31 unacceptable. The Contractor shall immediately take such corrective measures as are
32 necessary to remedy the listed deficiencies. Corrective work shall be pursued vigorously,
33 diligently, and without interruption until physical completion of the listed deficiencies.
34 This process will continue until the Engineer is satisfied the listed deficiencies have been
35 corrected.

36
37 If action to correct the listed deficiencies is not initiated within 7 days after receipt of the
38 written notice listing the deficiencies, the Engineer may, upon written notice to the
39 Contractor, take whatever steps are necessary to correct those deficiencies pursuant to
40 Section 1-05.7.

41
42 The Contractor will not be allowed an extension of Contract time because of a delay in
43 the performance of the work attributable to the exercise of the Engineer's right
44 hereunder.

45
46 Upon correction of all deficiencies, the Engineer will notify the Contractor and the
47 Contracting Agency, in writing, of the date upon which the work was considered
48 physically complete. That date shall constitute the Physical Completion Date of the
49 Contract, but shall not imply acceptance of the work or that all the obligations of the
50 Contractor under the contract have been fulfilled.

1 **1-05.11(3) Operational Testing**

2
3 It is the intent of the Contracting Agency to have at the Physical Completion Date a
4 complete and operable system. Therefore when the work involves the installation of
5 machinery or other mechanical equipment; street lighting, electrical distribution or signal
6 systems; irrigation systems; buildings; or other similar work it may be desirable for the
7 Engineer to have the Contractor operate and test the work for a period of time after final
8 inspection but prior to the physical completion date. Whenever items of work are listed in
9 the Contract Provisions for operational testing they shall be fully tested under operating
10 conditions for the time period specified to ensure their acceptability prior to the Physical
11 Completion Date. During and following the test period, the Contractor shall correct any
12 items of workmanship, materials, or equipment which prove faulty, or that are not in first
13 class operating condition. Equipment, electrical controls, meters, or other devices and
14 equipment to be tested during this period shall be tested under the observation of the
15 Engineer, so that the Engineer may determine their suitability for the purpose for which
16 they were installed. The Physical Completion Date cannot be established until testing
17 and corrections have been completed to the satisfaction of the Engineer.

18
19 The costs for power, gas, labor, material, supplies, and everything else needed to
20 successfully complete operational testing, shall be included in the unit Contract prices
21 related to the system being tested, unless specifically set forth otherwise in the proposal.

22
23 Operational and test periods, when required by the Engineer, shall not affect a
24 manufacturer's guaranties or warranties furnished under the terms of the Contract.

25
26 *Add the following new section:*

27
28 **1-05.12(1) One-Year Guarantee Period**
29 **(March 8, 2013 APWA GSP)**

30
31 The Contractor shall return to the project and repair or replace all defects in
32 workmanship and material discovered within one year after Final Acceptance of the
33 Work. The Contractor shall start work to remedy any such defects within 7 calendar
34 days of receiving Contracting Agency's written notice of a defect, and shall complete
35 such work within the time stated in the Contracting Agency's notice. In case of an
36 emergency, where damage may result from delay or where loss of services may result,
37 such corrections may be made by the Contracting Agency's own forces or another
38 Contractor, in which case the cost of corrections shall be paid by the Contractor. In the
39 event the Contractor does not accomplish corrections within the time specified, the work
40 will be otherwise accomplished and the cost of same shall be paid by the Contractor.

41
42 When corrections of defects are made, the Contractor shall then be responsible for
43 correcting all defects in workmanship and materials in the corrected work for one year
44 after acceptance of the corrections by Contracting Agency.

45
46 This guarantee is supplemental to and does not limit or affect the requirements that the
47 Contractor's work comply with the requirements of the Contract or any other legal rights
48 or remedies of the Contracting Agency.

1 **1-05.13 Superintendents, Labor and Equipment of Contractor**
2 **(August 14, 2013 APWA GSP)**

3
4 *Delete the sixth and seventh paragraphs of this section.*

5
6 **1-05.15 Method of Serving Notices**
7 **(March 25, 2009 APWA GSP)**

8 *Revise the second paragraph to read:*

9
10 All correspondence from the Contractor shall be directed to the Engineer. All
11 correspondence from the Contractor constituting any notification, notice of protest, notice
12 of dispute, or other correspondence constituting notification required to be furnished
13 under the Contract, must be in paper format, hand delivered or sent via mail delivery
14 service to the Engineer's office. Electronic copies such as e-mails or electronically
15 delivered copies of correspondence will not constitute such notice and will not comply
16 with the requirements of the Contract.

17
18 *Add the following new section:*

19
20 **1-05.16 Water and Power**
21 **(October 1, 2005 APWA GSP)**

22
23 The Contractor shall make necessary arrangements, and shall bear the costs for power
24 and water necessary for the performance of the work, unless the Contract includes
25 power and water as a pay item.
26
27
28

SUBMITTAL TRANSMITTAL FORM

South 19th and Clay Huntington
Project Number: PWK-G0034
Specification No: PW20-0193F

ATTN: Construction Division Date: _____

Submittal Number _____

Specification Number _____ Bid Item No. _____

Submittal Description _____

We are sending you:

Copies	Date	Page	Description

Transmitted: ☐ Submittals (Product Data) for information only.
☐ Submittals for review and comment.

Remarks: _____

Certify Either A or B:

- ☐ A. This document has been detail-checked for accuracy of content and for compliance with the Contract documents **(no exceptions)**. The information contained herein has been fully coordinated with all involved Subcontractors.
- ☐ B. This document has been detail-checked for accuracy of content and for compliance with the Contract documents **except for the attached deviations**. The information contained herein has been fully coordinated with all involved Subcontractors.

Certified By: _____
Signature

END OF SECTION

1 **1-06 CONTROL OF MATERIAL**

2
3 **1-06.1 Approval of Materials Prior To Use**
4 **(September 15, 2010 Tacoma GSP)**

5 *The first sentence is revised to read:*

6
7 All materials and equipment shall be submitted for review in accordance with section 1-
8 05.3 of these special provisions.

9
10 For aggregates, the Contractor shall notify the Engineer of all proposed aggregates.
11 The Contractor shall use the Aggregate Source Approval (ASA) Database.

12
13 All equipment, materials, and articles incorporated into the permanent Work:

- 14
15 A. Shall be new, unless the Special Provisions or Standard Specifications permit
16 otherwise;
17 B. Shall meet the requirements of the Contract and be approved by the Engineer;
18 C. May be inspected or tested at any time during their preparation and use; and
19 D. Shall not be used in the Work if they become unfit after being previously
20 approved.

21
22 **1-06.1(1) Qualified Products List (QPL)**

23 *This section is revised in its entirety to read:*

24
25 QPL's are not accepted by the City.

26
27 **1-06.1(2) Request for Approval of Material (RAM)**

28 *This section is deleted in its entirety:*

29
30 **1-06.6 Recycled Materials**
31 **(January 4, 2016 APWA GSP)**

32
33 *Delete this section, including its subsections, and replace it with the following:*

34
35 The Contractor shall make their best effort to utilize recycled materials in the
36 construction of the project. Approval of such material use shall be as detailed elsewhere
37 in the Standard Specifications.

38
39 Prior to Physical Completion the Contractor shall report the quantity of recycled
40 materials that were utilized in the construction of the project for each of the items listed
41 in Section 9-03.21. The report shall include hot mix asphalt, recycled concrete
42 aggregate, recycled glass, steel furnace slag and other recycled materials (e.g.
43 utilization of on-site material and aggregates from concrete returned to the supplier).
44 The Contractor's report shall be provided on DOT form 350-075 Recycled Materials
45 Reporting.

46
47 **END OF SECTION**

1 **1-07 LEGAL RELATIONS AND RESPONSIBILITIES TO THE PUBLIC**

2
3 **1-07.1 Laws to be Observed**
4 **(October 1, 2005 APWA GSP)**

5 *Supplement this section with the following:*

6
7 In cases of conflict between different safety regulations, the more stringent regulation
8 shall apply.

9
10 The Washington State Department of Labor and Industries shall be the sole and
11 paramount administrative agency responsible for the administration of the provisions of
12 the Washington Industrial Safety and Health Act of 1973 (WISHA).

13
14 The Contractor shall maintain at the project site office, or other well known place at the
15 project site, all articles necessary for providing first aid to the injured. The Contractor
16 shall establish, publish, and make known to all employees, procedures for ensuring
17 immediate removal to a hospital, or doctor's care, persons, including employees, who
18 may have been injured on the project site. Employees should not be permitted to work
19 on the project site before the Contractor has established and made known procedures
20 for removal of injured persons to a hospital or a doctor's care.

21
22 The Contractor shall have sole responsibility for the safety, efficiency, and adequacy of
23 the Contractor's plant, appliances, and methods, and for any damage or injury resulting
24 from their failure, or improper maintenance, use, or operation. The Contractor shall be
25 solely and completely responsible for the conditions of the project site, including safety
26 for all persons and property in the performance of the work. This requirement shall
27 apply continuously, and not be limited to normal working hours. The required or implied
28 duty of the Engineer to conduct construction review of the Contractor's performance
29 does not, and shall not, be intended to include review and adequacy of the Contractor's
30 safety measures in, on, or near the project site.

31
32 *Section 1-07.1 is supplemented with the following:*

33
34 (May 13, 2020)

35 In response to COVID-19, the Contractor shall prepare a project specific COVID-19
36 health and safety plan (CHSP) in conformance with Section 1-07.4(2) as supplemented
37 in these specifications, COVID-19 Health and Safety Plan (CHSP).

38
39 **1-07.2 State Taxes**
40 **(January 6, 2015 TACOMA GSP)**

41 *Supplement this section with the following:*

42
43 Washington State Department of Revenue Rules 170 and 171 shall apply as shown in
44 the Proposal and per Section 1-07.2 of the WSDOT and APWA Standard Specifications
45 for Road, Bridge, and Municipal Construction.

46
47 **1-07.4 Sanitation**
48
49
50

1 **1-07.4(2) Health Hazards**

2 *Section 1-07.4(2) is supplemented with the following:*

3 **(May 13, 2020)**

4 **COVID-19 Health and Safety Plan (CHSP)**

5 The Contractor shall prepare a project specific COVID-19 health and safety plan
6 (CHSP). The CHSP shall be prepared and submitted as a Type 2 Working Drawing prior
7 to beginning physical Work. The CHSP shall be based on the most current State and
8 Federal requirements. If the State or Federal requirements are revised, the CHSP shall
9 be updated as necessary to conform to the current requirements.

10
11 The Contractor shall update and resubmit the CHSP as the work progresses and new
12 activities appear on the look ahead schedule required under Section 1-
13 08.3(2)D. If the conditions change on the project, or a particular activity, the Contractor
14 shall update and resubmit the CHSP. Work on any activity shall cease if conditions
15 prevent full compliance with the CHSP.

16
17 The CHSP shall address the health and safety of all people associated with the project
18 including State workers in the field, Contractor personnel, consultants, project staff,
19 subcontractors, suppliers and anyone on the project site, staging areas, or yards.

20 **COVID-19 Health and Safety Plan (CHSP) Inspection**

21
22 The Contractor shall grant full and unrestricted access to the Engineer for CHSP
23 Inspections. The Engineer (or designee) will conduct periodic compliance inspections on
24 the project site, staging areas, or yards to verify that any ongoing work activity is
25 following the CHSP plan. If the Engineer becomes aware of a noncompliance incident
26 either through a site inspection or other means, the Contractor will be notified
27 immediately (within 1 hour). The Contractor shall immediately remedy the
28 noncompliance incident or suspend all or part of the associated work activity. The
29 Contractor shall satisfy the Engineer that the noncompliance incident has been corrected
30 before the suspension will end.

31
32 **1-07.9 Wages**

33
34 **1-07.9(5) Required Documents**

35 **(March 1, 2004 Tacoma GSP)**

36 *The first sentence of the third paragraph is revised to read:*

37
38 Weekly certified payrolls shall be submitted for the Contractor and all lower tier
39 subcontractors or agents.

40
41 *This section is supplemented with the following:*

42
43 Where fringe benefits are paid in cash, certified payrolls shall include the fringe benefit
44 dollar amount paid to each employee for each employee classification.

45
46 Where fringe benefits are paid into approved plans, funds, or programs, the amount of
47 the fringe benefits shall be identified in the "Benefit Distribution" section of the Certified
48 Payroll Affirmation form.

1 **1-07.15 Temporary Water Pollution/Erosion Control**
2 **(March 23, 2010 Tacoma GSP)**

3 *This section is supplemented with the following:*
4

5 Stormwater or dewatering water that has come in contact with concrete rubble, concrete
6 pours, or cement treated soils shall be maintained to pH 8.5 or less before it is allowed
7 to enter waters of the State or the City stormwater system. If pH exceeds 8.5, the
8 Contractor shall immediately discontinue work and initiate treatment according to the
9 plan to lower the pH. Work may resume, with treatment, once the pH of the stormwater
10 is 8.5 or less or it can be demonstrated that the runoff will not reach surface waters or
11 the City stormwater system.
12

13 High pH process water shall not be discharged to waters of the State or the City
14 stormwater system. Unless specific measures are identified in the Special Provisions,
15 high pH water may be infiltrated, dispersed in vegetation or compost, or discharged to a
16 sanitary sewer system. Disposal shall be in accordance with the City of Tacoma Surface
17 Water Management Manual or to City wastewater system with proper approval. Water
18 being infiltrated or dispersed shall have no chance of discharging directly to waters of
19 the State or the City stormwater system, including wetlands or conveyances that
20 indirectly lead to waters of the State. High pH process water shall be treated to within a
21 range of 6.5 to 8.5 pH units prior to infiltration to ensure the discharge does not cause a
22 violation of groundwater quality standards. If water is discharged to the sanitary sewer,
23 the Contractor shall provide a copy of permits and requirements for placing the material
24 into a sanitary sewer system prior to beginning the work. Process water may be
25 collected and disposed of by the Contractor off the project site. The Contractor shall
26 provide a copy of the permit for an approved waste site for the disposal of the process
27 water prior to the start of work that generates the process water. A Special Approved
28 Discharge permit shall be required for all discharges to the sanitary sewer system.
29

30 **1-07.15(1) Spill Prevention, Control and Countermeasures Plan**
31 **(February 9, 2011 Tacoma GSP)**

32 *This section is revised to read:*
33

34 The Contractor shall prepare a project-specific spill prevention, control, and
35 countermeasures plan (SPCC Plan) that will be used for the duration of the project. The
36 Contractor shall submit the plan to the Project Engineer no later than the date of the
37 preconstruction conference. No on-site construction activities may commence until the
38 Contracting Agency accepts an SPCC Plan for the project.
39

40 The SPCC Plan shall address all fuels, petroleum products, hazardous materials, and
41 other materials as defined in Chapter 447 of the WSDOT Environmental Procedures
42 Manual (M 31-11). Occupational safety and health requirements that may pertain to
43 SPCC Plan implementation are contained in, but not limited to, WAC 296-824 and WAC
44 296-843.
45

46 **Implementation Requirements**

47 The SPCC Plan shall be updated by the Contractor throughout project construction so
48 that the written plan reflects actual site conditions and practices. The Contractor shall
49 update the SPCC Plan at least annually and maintain a copy of the updated SPCC Plan
50 on the project site. All project employees shall be trained in spill prevention and
51 containment, and they shall know where the SPCC Plan and spill response kits are
52 located and have immediate access to them.

1 If hazardous materials are encountered or spilled during construction, the Contractor
2 shall do everything possible to control and contain the material until appropriate
3 measures can be taken. The Contractor shall supply and maintain spill response kits of
4 appropriate size within close proximity to hazardous materials and equipment.
5 The Contractor shall implement the spill prevention measures identified in the SPCC
6 Plan before performing any of the following:

- 7
- 8 1. Placing materials or equipment in staging or storage areas.
- 9
- 10 2. Refueling, washing, or maintaining equipment.
- 11
- 12 3. Stockpiling contaminated materials.
- 13

14 **SPCC Plan Element Requirements**

15 The SPCC Plan shall set forth the following information in the following order:

- 16
- 17 1. Responsible Personnel
18 Identify the name(s), title(s), and contact information, including a 24/7 emergency
19 contact number, for the personnel responsible for implementing and updating the
20 plan, including all spill responders.
21
- 22 2. Spill Reporting
23 List the names and telephone numbers of the Federal, State, and local agencies
24 the Contractor shall notify in the event of a spill. The City of Tacoma contact will
25 be the Wastewater Treatment Plant Operations number at 253.591.5595 and the
26 City Source Control Spill Response number at 253.502.2222.
27
- 28 3. Project and Site Information
29 Describe the following items:
30 a. The project Work.
31 b. The site location and boundaries.
32 c. The drainage pathways from the site, including both stormwater and sanitary
33 conveyance pathways.
34 d. Nearby waterways and sensitive areas and their distances from the site.
35
- 36 4. Potential Spill Sources
37 Describe each of the following for all potentially hazardous materials brought or
38 generated on-site (including materials used for equipment operation, refueling,
39 maintenance, or cleaning):
40 a. Name of material and its intended use.
41 b. Estimated maximum amount on-site at any one time.
42 c. Location(s) (including any equipment used below the ordinary high water line)
43 where the material will be staged, used, and stored and the distance(s) from
44 nearby waterways and sensitive areas.
45 d. Decontamination location and procedure for equipment that comes into
46 contact with the material.
47 e. Disposal procedures.
48 f. Include a Material Safety Data Sheet (MSDS) for each potentially hazardous
49 material.
50
51
52

- 1 5. Pre-Existing Contamination
2 Describe any pre-existing contamination and contaminant sources (such as
3 buried pipes or tanks) in the project area that are described in the Contract
4 documents. Identify equipment and work practices that will be used to prevent
5 the release of contamination.
6
- 7 6. Spill Prevention and Response Training
8 Describe how and when all personnel (including refueling Contractors and
9 Subcontractors) will be trained in spill prevention, containment, and response in
10 accordance with the Plan. Describe how and when all spill responders will be
11 trained in accordance with WAC 296-824.
12
- 13 7. Spill Prevention
14 Describe the following items:
15
- 16 g. Spill response kit contents and location(s).
 - 17 h. Security measures for potential spill sources.
 - 18 i. Secondary containment practices and structures for all containers to handle
19 the maximum volume of potential spill of hazardous materials.
 - 20 j. Methods used to prevent stormwater from contacting hazardous materials.
 - 21 k. Site inspection procedures and frequency.
 - 22 l. Equipment and structure maintenance practices.
 - 23 m. Daily inspection and cleanup procedures that ensure all equipment used
24 below the ordinary high water line is free of all external petroleum-based
25 products.
 - 26 n. Refueling procedures for equipment that cannot be moved from below the
27 ordinary high water line.
28
- 29 8. Spill Response
30 Outline the response procedures the Contractor will follow for each scenario
31 listed below. Include a description of the actions the Contractor shall take and the
32 specific on-site spill response equipment that shall be used to assess the spill,
33 secure the area, contain and eliminate the spill source, and clean up and dispose
34 of spilled and contaminated material.
35
- 36 Response procedures shall be outlined in the Spill Response section and shall
37 include notification to the City of Tacoma Wastewater Treatment Plant
38 Operations number at 253.591.5595 and the City Source Control Spill Response
39 number at 253.502.2222.
40
- 41 a. A spill of each type of hazardous material at each location identified in 4,
42 above.
 - 43 b. Stormwater that has come into contact with hazardous materials.
 - 44 c. Drainage pathways from the site, including both stormwater and sanitary
45 conveyance pathways.
 - 46 d. A release or spill of any unknown pre-existing contamination and contaminant
47 sources (such as buried pipes or tanks) encountered during project Work.
 - 48 e. A spill occurring during Work with equipment used below the ordinary high
49 water line.
50
- 51 If the Contractor will use a Subcontractor for spill response, provide contact
52 information for the Subcontractor under item 1 (above), identify when the

Subcontractor will be used, and describe actions the Contractor shall take while waiting for the Subcontractor to respond.

9. Project Site Map

Provide a map showing the following items:

- a. Site location and boundaries.
- b. Site access roads.
- c. Drainage pathways from the site.
- d. Nearby waterways and sensitive areas.
- e. Hazardous materials, equipment, and decontamination areas identified in 4, above.
- f. Pre-existing contamination or contaminant sources described in 5, above.
- g. Spill prevention and response equipment described in 7 and 8, above.

10. Spill Report Forms

Provide a copy of the spill report form(s) that the Contractor will use in the event of a release or spill.

Payment

Payment will be made in accordance with Section 1-04.1 for the following Bid item when it is included in the Proposal:

“SPCC Plan,” lump sum.

When the written SPCC Plan is accepted by the Contracting Agency, the Contractor shall receive 50-percent of the lump sum Contract price for the plan.

The remaining 50-percent of the lump sum price will be paid after the materials and equipment called for in the plan are mobilized to the project.

The lump sum payment for “SPCC Plan” shall be full pay for:

1. All costs associated with creating the accepted SPCC Plan.
2. All costs associated with providing and maintaining the on-site spill prevention equipment described in the accepted SPCC Plan.
3. All costs associated with providing and maintaining the on-site standby spill response equipment and materials described in the accepted SPCC Plan.
4. All costs associated with implementing the spill prevention measures identified in the accepted SPCC Plan.
5. All costs associated with updating the SPCC Plan as required by this Specification.

As to other costs associated with releases or spills, the Contractor may request payment as provided for in the Contract. No payment shall be made if the release or spill was caused by or resulted from the Contractor’s operations, negligence, or omissions.

1 **1-07.16 Protection and Restoration of Property**

2
3 **1-07.16(1) Private/Public Property**
4 **(January 13, 2011 Tacoma GSP)**

5 *This section is supplemented with the following:*

6
7 Stockpiling in City of Tacoma right-of-way or on existing or new improvements shall not
8 occur unless approved by the Engineer. All stockpile sites shall be restored to as good
9 or better condition.

10
11 The Contractor shall contact all property owners and tenants in the vicinity of this project,
12 via newsletter/mailling, a minimum of one (1) week prior to start of construction. The
13 Contractor shall submit a draft of the property owner notification prior to posting/mailling.

14
15 The newsletter/mailling shall advise the owners and tenants of the construction schedule
16 and indicate the Contractor's name, contact person, and telephone numbers.

17
18 **1-07.17 Utilities and Similar Facilities**

19 **(*****)**

20 *The first paragraph is supplemented with the following:*

21
22 Public and private utilities or their Contractors will furnish all work necessary to adjust,
23 relocate, replace, or construct their facilities unless otherwise provided for in the Plans or
24 these Special Provisions. Such adjustment, relocations, replacement, or construction
25 will be done within the time for performance of this project. The Contractor shall
26 coordinate their work with such adjustment, relocation, or replacement of utility work.
27 This may require the Contractor to phase their work in a manner that will allow for the
28 utility work.

29
30 The Contractor shall coordinate their work with all utilities and other organizations, which
31 have to adjust or revise their facilities within the project area. These may include, but
32 are not limited to:

- 33
34
 - City of Tacoma Light Division, Contact: Kevin Kelley, phone: (253) 502-8229
 - 35 • City of Tacoma Water Division, Contact: Kimberly Baard, phone: (253) 396-3317
 - 36 • City of Tacoma Traffic Division, Signal/Streetlight Shop, phone: (253) 591-5287
 - 37 • CLICK! Network, Contact: Ken Mathes, phone: (253) 502-8851
 - 38 • Puget Sound Energy, Contact: Mike Klapperich, Electric, phone: (253) 313-3790
 - 39 • OR Amber Uhls, Gas, phone: 253-476-6137 (office), 425-495-1062 (cell)
 - 40 • CenturyLink, Contact: Eric Charity, phone: (206) 733-8871
 - 41 • Comcast, Contact: Todd Gallant, phone: (253) 878-4955
 - 42 • AT&T Broadband Information Services, Contact: Dan McGeough, phone: (425)
 - 43 896-9830
 - 44 • Level 3 Communications, Level3NetworkRelocations@Level3.com
 - 45 • One-Number Locator Service "One Call System" telephone **1-800-424-5555**
 - 46 • Verizon, Contact: David Lacombe, phone: (206) 305-5366
 - 47 • MCI Metro Utility, Contact: Brad Landis, phone: (425) 229-3123

48
49

1 If the Contractor plans to excavate or trench within ten (10) feet of any utility pole or
2 other electric or water utility structure owned by the City of Tacoma, the Contractor shall
3 contact the City of Tacoma, Department of Public Utilities, Field Coordinator, telephone
4 number 502-8044, and arrange for an inspection before proceeding. The Contractor
5 shall perform, at the Contractor's expense, such additional work as is required to protect
6 the pole or structure from subsidence. The Contractor may be directed to suspend work
7 at the site of any such excavation until such utility structures are adequately protected.

8
9 Garbage, recycling, and yard waste pick up within the project limits is on various days
10 and the Contractor should check the website
11 <http://www.govme.com/Common/govME/MyTacoma/CollectionCalendar.aspx> and
12 coordinate their work appropriately.

13 14 **1-07.18 Public Liability and Property Damage Insurance**

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

16 17 **1-07.18 Insurance** 18 **(December 17, 2019 Tacoma GSP)**

19
20 During the course and performance of the services herein specified, the contractor will
21 maintain the insurance coverage in the amounts and in the manner specified in the City
22 of Tacoma Insurance Requirements as is applicable to the services and deliverables
23 provided under this contract. The City of Tacoma Insurance Requirements document is
24 fully incorporated herein by reference.

25
26 Failure by the City to identify a deficiency in the insurance documentation provided by
27 the Contractor or failure of the City to demand verification of coverage or compliance by
28 the Contractor with these insurance requirements shall not be construed as a waiver of
29 the Contractor's obligation to maintain such insurance.

30 31 **1-07.23 Public Convenience and Safety**

32 33 **1-07.23(1) Construction Under Traffic** 34 **(May 2, 2017 APWA GSP)**

35
36 *Revise the third sentence of the second paragraph to read:*

37
38 Accessibility to existing or temporary pedestrian push buttons shall not be impaired; if
39 approved by the Contracting Agency activating pedestrian recall timing or other
40 accommodation may be allowed during construction.

41 42 **1-07.23(1) Construction under Traffic** 43 **(March 1, 2004 Tacoma GSP)**

44 *This section is supplemented with the following:*

45
46 The following special traffic requirements shall be adhered to during all phases of
47 construction.
48

- i. South 19th Street (arterial) and Clay Huntington Way shall remain fully open to vehicular and pedestrian traffic at all times.

EXCEPTION:

1. Non-arterial classified roadways are permitted to be closed to traffic so long as local access to properties and businesses is accommodated in the following scenarios:
 - During construction working hours (i.e., weekdays 7 AM to 7 PM) when arrangements in advance have been made through coordination between the requestor, the contractor, and the City;
 - During construction working hours when special (event)/emergency access is needed;
 - During construction working hours when emergency services needs to use the roadway;
 - During construction working hours when passage through/along the work area is the only means to access an intersecting road and/or adjacent property; and
 - During non-construction hours (i.e., all other hours other than the working hours).
 - So long as the closure conforms with other restrictions/conditions as listed herein.
2. During non-construction hours, the project area shall be left in a state that permits on-street parking (as was allowable prior to project start) so long as the permitted parking does not hamper the flow of traffic, temporary traffic control, and/or safety.
3. Spotters to assist pedestrians through or around the work zone must be available when called for in the Traffic Control Plans and/or when deemed necessary for safe traffic operations by the City.
4. Any demolition, or closure of pedestrian accessibility, at a given corner of an intersection must be limited to that given corner, with the remaining three corners at the intersection (at a minimum) being used to facilitate a pedestrian detour, until full accessibility or an accessible connection with at least one other corner can be re-established. Any temporary pedestrian access path/route that may be employed shall provide equivalent to, or better, accessibility than the unavailable path/route in accordance with the Americans with Disabilities Act and the Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way (PROWAG).
5. Project work areas adjacent to or intersecting arterial streets (as identified above) shall not hinder the safety or traffic operations of the arterial street such that two-way vehicular traffic cannot be maintained at all times (which can include parking restrictions to allow for the roadway space needed), unless otherwise excepted herein. If the work occurring on an arterial street cannot practicably be completed while maintaining two-way traffic, then a detour must be established using an alternate arterial route to be submitted for review and approval by the City. In either case, an intersection specific traffic control plan must be developed for arterial streets intersecting one

another and submitted for City review and approval at least 10 working days in advance of the work commencing.

Intersection specific allowances/restrictions are as follows:

Full occupation/closure of a curb lane in a given direction of South 19th Street or other roadway within the project limits, in association with a work zone with active construction occurring within it, is permitted if all of the following conditions are met and reflected in a traffic control plan submitted at least fifteen (15) working days in advance of beginning work and approved by the City:

1. Closure is only in effect from 7:00 AM until 3:00 PM weekdays in the westbound direction of South 19th Street; see below for exception.
 - a. Exception: a continuous curb lane closure not to exceed 72 hours would be permitted for any pouring of, and subsequent curing, of any concrete elements if their extent would encroach upon the minimum allowable travel way/travel lane.
2. Closure is only in effect from 9:00 AM until 4:00 PM weekdays in the eastbound direction of South 19th Street; see below for exception.
 - a. Exception: a continuous curb lane closure not to exceed 72 hours would be permitted for any pouring of, and subsequent curing, of any concrete elements if their extent would encroach upon the minimum allowable travel way/travel lane.
3. Work zone curb lane closures in each direction of South 19th Street could be permitted adjacent to one another if the traffic control plan shows proper and safe control of vehicular and pedestrian traffic.
4. Work zone curb lane closures (and associated work zone that may impact the adjacent sidewalk) cannot cause a lack of continuity of the pedestrian access route at a given intersection, or disrupt the continuity of the pedestrian access route through the project area as a whole, and/or require an excessive need for pedestrians to cross roadways at legal crosswalks in order to travel along South 19th Street.
5. Lane closures at/near intersection corners that also preclude use of the sidewalk and/or pedestrian ramps shall allow for pedestrian passage to and through the corner (in a direction, or directions, commensurate with work zone allowances) through existing conditions or temporarily established conditions meeting or exceeding the level of accessibility that existed prior to the project.
6. Lane closures determined to be in the area of, or along the access route to/from, Cheney Stadium and/or Foss High School during arrival and departure periods associated with events at either site will not be permitted.
7. Portable Changeable Message Signs (PCMS) must be established at least seven (7) days in advance of work starting to advise traveling public of upcoming work and lane closures/restrictions at beginning of work zone corridor/segment.

Partial encroachment into a curb lane in a given direction of South 19th Street or other roadway within the project limits, in association with an active or inactive work zone (i.e., non-working hours), is permitted if all of the following conditions

are met and reflected in a traffic control plan submitted at least fifteen (15) working days in advance of beginning work and approved by the City:

1. The resulting width of the adjacent curb lane, and any other affected lanes, are at least 10 feet wide (clear distance from stripe to temporary traffic control device) and preferably 11 feet wide.
2. Pedestrian access route to/through the work zone area and project area as a whole meet the same expectations as identified previously for a full curb lane closure.
3. The temporary traffic control devices defining the encroachment shall be affixed with Type C steady burn lights for conspicuity in low-light/night-time conditions.

If not in effect concurrently with any other lane closures, temporary closures of non-curb lanes in a given direction of South 19th Street or other roadway within the project limits, in association with a work zone with active construction occurring within it, is permitted if all of the following conditions are met and reflected in a traffic control plan submitted at least fifteen (15) working days in advance of beginning work and approved by the City:

1. From 7:00 AM until 3:00 PM weekdays in the westbound direction of South 19th Street; exceptions exist (see below).
 - a. Exception: Extended hours, including evening/night-time/weekend working hours (with pre-approved City noise variance application), will be considered to support selective project work elements (e.g., roadway grinding and paving operations) if supporting information is supplied to show how the additional allowance would help mitigate overall impact to the traveling public.
2. From 9:00 AM until 4:00 PM weekdays in the eastbound direction of South 19th Street; exceptions exist (see below).
 - a. Exception: Extended hours, including evening/night-time/weekend working hours (with pre-approved City noise variance application), will be considered to support selective project work elements (e.g., roadway grinding and paving operations) if supporting information is supplied to show how the additional allowance would help mitigate overall impact to the traveling public.
3. Two-way traffic in independent lanes is maintained at all times on South 19th Street and any intersecting arterial roadways; non-arterial roadways may be closed to through traffic if shown to be necessary for the work element/project and any access impacts are resolved/mitigated at least a week in advance.
4. Lane closures determined to be in the area of, or along the access route to/from, Cheney Stadium and/or Foss High School during arrival and departure periods associated with events at the sites will not be permitted.

If work is occurring within the functional area of a signalized intersection and/or the temporary traffic controls adversely affect the operation of the signalized intersection, then Uniform Police Officer control of the intersection/intersection approaches will be required for the duration of time of the affected state of the intersection's functional area. Based on Police requirements, the associated traffic control plan may require modification to adhere to Police control protocols.

Before the beginning of any work within the project area, two (2) Portable Changeable Message Signs (PCMS) are required to be in place at/near the work site at least seven (7) days before construction begins, and can be removed thereafter with the establishment of the applicable traffic control plan and controls. The general locations are as followings: South 19th Street (eastbound) near Mullen Street and South 19th Street (westbound) west of Stevens/Tyler Street.

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

Curb ramp closures are subject to the following restrictions:

One corner can be closed at a time, unless an alternate route within the area of the intersection or nearby extents is provided.

Provide a spotter for pedestrians 15 minutes prior to and 5 minutes after the first bell, and 5 minutes prior to and 15 minutes after the dismissal bell.

To minimize the disruption to access to adjacent properties, and to Pierce Transit operations, the lane closure area shall be limited to that area of active work and necessary for appropriate lane closure tapers. The Contractor shall stage work to maintain legal access to and egress from all properties at all times.

A safe pedestrian access shall be provided at all times through the project area. All lane closures shall be coordinated with the adjacent businesses, school/school district, other contractors working within the project vicinity, local transit agencies and the City.

Where, in the opinion of the Engineer, parking is a hazard to through traffic or to the construction work, parking may be restricted either entirely or during the time when it creates a hazard. Signs for restricting parking shall be approved by the City and placed by the Contractor at least twenty-four (24) hours in advance for residential property, and at least forty-eight (48) hours in advance for commercial property. The Contractor shall be responsible for and shall maintain all such signs. The replacement of signs restricting parking shall be as approved by the Engineer.

The Contractor shall notify all property owners and tenants of detours, street and alley closures, or other restrictions that may interfere with their access. Notification shall be at least twenty-four (24) hours in advance for residential property, and at least forty-eight (48) hours in advance for commercial/school property.

Emergency traffic, such as police, fire, and disaster units, shall be provided access at all times. In addition, the Contractor shall coordinate Contractor activities with all disposal firms and transit bus service that may be operating in the project area.

If street closures or lane restrictions, not provided for in the Specifications, are allowed subsequent to award of the contract, an equitable adjustment of the Contract amount shall be negotiated.

It is the intent of the Contract to effectively prevent the deposition of debris on streets in areas of public traffic or where such debris may be transported into a drainage

1 system. When construction operations are such that debris from the work is deposited
2 on the streets, the Contractor shall, at a minimum, remove on a daily basis any deposits
3 or debris which may accumulate on the roadway surface. Should daily removal be
4 insufficient to keep the streets clean, the Contractor shall perform removal operations on
5 a more frequent basis. If the Engineer determines that a more frequent cleaning is
6 impractical or if the Contractor fails to keep the streets free from deposits and debris
7 resulting from the work, the Contractor shall, upon order of the Engineer, provide
8 facilities for and remove all deposits from the tires or between wheels before trucks or
9 other equipment will be allowed to travel over paved streets. Should the Contractor fail
10 or refuse to clean the streets in question, or the trucks or equipment in question, the
11 Engineer may order the work suspended at the Contractor's risk until compliance with
12 Contractor's obligations is assured, or the Engineer may order the streets in question
13 cleaned by others and such costs incurred by the City in achieving compliance with
14 these contract requirements, including cleaning of the streets, shall be deducted from
15 moneys due or to become due the Contractor on monthly estimate. The Contractor shall
16 have no claim for delay or additional costs should the Engineer choose to suspend the
17 Contractor's work until compliance is achieved.

18
19 *The sixth paragraph of this section is supplemented with the following:*

20
21 Trenches backfilled with CDF shall be protected from traffic with steel plates. The plates
22 shall remain in place for 24-hours after placement of the CDF or until CDF is compacted
23 or hardened to prevent rutting by construction equipment or traffic.

24
25 **1-07.23(2) Construction and Maintenance of Detours**
26 **(April 1, 2018 Tacoma GSP)**

27 *This section is supplemented with the following:*

28
29 Detour signing during any allowed road closures shall be in accordance with Detour
30 Plans, when included in the Contract Documents. When plans are not included in the
31 Contract Documents, the Contractor shall submit plans for detours in accordance with
32 the "Manual on Uniform Traffic Control Devices (MUTCD)". In addition, where the
33 Contractor believes an alternate plan will safely and adequately maintain vehicular and
34 pedestrian traffic, the Contractor may submit alternate plans to those for traffic control
35 and detours required by MUTCD or contract documents. Such alternate plans must
36 comply with the MUTCD and shall be in writing and submitted to the Engineer at least
37 fifteen (15) days in advance of their intended use. In general, detouring of arterial traffic
38 must be accomplished on streets designated as City Arterials. Detouring of arterial
39 traffic on non-arterial streets will not be allowed. The acceptance of any alternate plan
40 shall be entirely at the discretion of the Engineer and the Contractor shall have no claim
41 by reason of a plan being rejected or modified, nor shall there be any additional payment
42 by reason of using a substitute plan.

43
44 The Contractor shall notify the Engineer three (3) working days in advance of
45 implementation of any street closures/detours allowed under the Contract. Advance
46 notice signing shall be placed a minimum of three (3) working days prior to
47 implementation of any street closure/detour.

1 A minimum of three (3) working days prior to any street closure, the Contractor shall
2 notify all entities below:

3		
4	Tacoma Fire Dept.	(253-591-5775)
5	Tacoma Police Dept.	(253-591-5932)
6	LESA Communications Center	(253-798-4721 - Opt.#2)
7	Tacoma Public Schools Transportation Office	(253-571-1853)
8	Pierce Transit	(253-581-8001)
9	Tacoma Environmental Services Solid Waste	(253-591-5544)
10	Tacoma Public Works Engineering Division	(253-591-5500)
11	Tacoma Public Works Streets and Grounds	(253-591-5495)
12		

13 **1-07.24 Rights of Way**
14 **(July 23, 2015 APWA GSP)**

15
16 *Delete this section and replace it with the following:*

17
18 Street Right of Way lines, limits of easements, and limits of construction permits are
19 indicated in the Plans. The Contractor's construction activities shall be confined within
20 these limits, unless arrangements for use of private property are made.

21
22 Generally, the Contracting Agency will have obtained, prior to bid opening, all rights of
23 way and easements, both permanent and temporary, necessary for carrying out the
24 work. Exceptions to this are noted in the Bid Documents or will be brought to the
25 Contractor's attention by a duly issued Addendum.

26
27 Whenever any of the work is accomplished on or through property other than public
28 Right of Way, the Contractor shall meet and fulfill all covenants and stipulations of any
29 easement agreement obtained by the Contracting Agency from the owner of the private
30 property. Copies of the easement agreements may be included in the Contract
31 Provisions or made available to the Contractor as soon as practical after they have been
32 obtained by the Engineer.

33
34 Whenever easements or rights of entry have not been acquired prior to advertising,
35 these areas are so noted in the Plans. The Contractor shall not proceed with any portion
36 of the work in areas where right of way, easements or rights of entry have not been
37 acquired until the Engineer certifies to the Contractor that the right of way or easement is
38 available or that the right of entry has been received. If the Contractor is delayed due to
39 acts of omission on the part of the Contracting Agency in obtaining easements, rights of
40 entry or right of way, the Contractor will be entitled to an extension of time. The
41 Contractor agrees that such delay shall not be a breach of contract.

42
43 Each property owner shall be given 48 hours notice prior to entry by the Contractor.
44 This includes entry onto easements and private property where private improvements
45 must be adjusted.

46
47 The Contractor shall be responsible for providing, without expense or liability to the
48 Contracting Agency, any additional land and access thereto that the Contractor may
49 desire for temporary construction facilities, storage of materials, or other Contractor
50 needs. However, before using any private property, whether adjoining the work or not,
51 the Contractor shall file with the Engineer a written permission of the private property

1 owner, and, upon vacating the premises, a written release from the property owner of
2 each property disturbed or otherwise interfered with by reasons of construction pursued
3 under this contract. The statement shall be signed by the private property owner, or
4 proper authority acting for the owner of the private property affected, stating that
5 permission has been granted to use the property and all necessary permits have been
6 obtained or, in the case of a release, that the restoration of the property has been
7 satisfactorily accomplished. The statement shall include the parcel number, address,
8 and date of signature. Written releases must be filed with the Engineer before the
9 Completion Date will be established.

10
11
12 **END OF SECTION**
13
14

1 **1-08 PROSECUTION AND PROGRESS**

2
3 *Add the following new section:*

4 **1-08.0 Preliminary Matters**
5 **(May 25, 2006 APWA GSP)**

6
7 **1-08.0(1) Preconstruction Conference**
8 **(October 10, 2008 APWA GSP)**
9

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

- 13 • To review the initial progress schedule;
- 14 • To establish a working understanding among the various parties associated or
15 affected by the work;
- 16 • To establish and review procedures for progress payment, notifications,
17 approvals, submittals, etc.;
- 18 • To establish normal working hours for the work;
- 19 • To review safety standards and traffic control; and
- 20 • To discuss such other related items as may be pertinent to the work.

21
22 The Contractor shall prepare and submit at the preconstruction conference the following:

- 23 • A breakdown of all lump sum items;
- 24 • A preliminary schedule of working drawing submittals; and
- 25 • A list of material sources for approval if applicable.

26
27 *Add the following new section:*

28
29 **1-08.0(2) Hours of Work**
30 **(March 3, 2008 Tacoma GSP)**
31

32 Except in the case of emergency or unless otherwise approved by the Contracting
33 Agency, the normal straight time working hours for the contract shall be any consecutive
34 8-hour period between 7:00 a.m. and 6:00 p.m. of a working day with a maximum 1-hour
35 lunch break and a 5-day work week. The normal straight time 8-hour working period for
36 the contract shall be established at the preconstruction conference or prior to the
37 Contractor commencing the work.

38
39 If a Contractor desires to perform work on holidays, Saturdays, Sundays, or before 7:00
40 a.m. or after 6:00 p.m. on any day, the Contractor shall apply in writing to the Engineer
41 for permission to work such times. Permission to work longer than an 8-hour period
42 between 7:00 a.m. and 6:00 p.m. is not required. Such requests shall be submitted to
43 the Engineer no later than noon on the working day prior to the day for which the
44 Contractor is requesting permission to work.

45
46 Permission to work between the hours of 9:00 p.m. and 7:00 a.m. during weekdays and
47 between the hours of 9:00 p.m. and 9:00 a.m. on weekends or holidays may also be
48 subject to noise control requirements. Approval to continue work during these hours
49 may be revoked at any time the Contractor exceeds the Contracting Agency's noise
50 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 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; personnel from the Contracting Agency's material testing lab; inspectors; and other Contracting Agency employees when in the opinion of the Engineer, such work necessitates their presence.

Add the following new section:

**1-08.0(3) Reimbursement for Overtime Work of Contracting Agency Employees
(September 29, 2009 Tacoma GSP)**

Where the Contractor elects to work on a Saturday, Sunday, or holiday, or longer than an 8-hour work shift on a regular working day, as defined in the Standard Specifications, such work shall be considered as overtime work. On all such overtime work, city staff may be required at the discretion of the Engineer. In such case, the Contracting Agency may deduct from amounts due or to become due to the Contractor for the costs in excess of the straight-time costs for employees of the Contracting Agency required to work overtime hours.

The Contractor by these specifications does hereby authorize the Engineer to deduct such costs from the amount due or to become due to the Contractor.

**1-08.1 Subcontracting - D/M/WBE Reporting
(September 29, 2009 Tacoma GSP)**

The eighth paragraph is revised to read:

On all projects funded with Contracting Agency funds only, the Contractor shall certify to the actual amounts paid Disadvantaged, Minority, or Women's Business Enterprise firms that were used as subcontractors, lower tier subcontractors, manufacturers, regular dealers, or service providers on the contract. This certification shall be submitted to the Engineer, on the form provided by the Engineer, 20 calendar days after physical completion of the contract.

**1-08.1 Subcontracting
(May 17, 2018 APWA GSP, Option B)**

Delete the eighth paragraph.

Revise the ninth paragraph to read:

1 The Contractor shall comply with the requirements of RCW 39.04.250, 39.76.011,
2 39.76.020, and 39.76.040, in particular regarding prompt payment to Subcontractors.
3 Whenever the Contractor withholds payment to a Subcontractor for any reason including
4 disputed amounts, the Contractor shall provide notice within 10 calendar days to the
5 Subcontractor with a copy to the Contracting Agency identifying the reason for the
6 withholding and a clear description of what the Subcontractor must do to have the
7 withholding released. Retainage withheld by the Contractor prior to completion of the
8 Subcontractors work is exempt from reporting as a payment withheld and is not included
9 in the withheld amount. The Contracting Agency's copy of the notice to Subcontractor for
10 deferred payments shall be submitted to the Engineer concurrently with notification to
11 the Subcontractor.

13 **1-08.4 Prosecution of Work**

14 *Delete this section and replace it with the following:*

16 **1-08.4 Notice to Proceed and Prosecution of Work** 17 **(July 23, 2015 APWA GSP)**

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

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

37 **1-08.5 Time for Completion** 38 **(March 16, 2016 Tacoma GSP)**

39 *Revise the third and fourth paragraphs to read:*

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

43 Each working day shall be charged to the contract as it occurs, until the contract work is
44 physically complete. If substantial completion has been granted and all the authorized
45 working days have been used, charging of working days will cease. Each week the
46 Engineer will provide the Contractor a statement that shows the number of working days:
47 (1) charged to the contract the week before; (2) specified for the physical completion of
48 the contract; and (3) remaining for the physical completion of the contract. The
49 statement will also show the nonworking days and any partial or whole day the Engineer
50 declares as unworkable. Within 10 calendar days after the date of each statement, the
51 Contractor shall file a written protest of any alleged discrepancies in it. To be considered

1 by the Engineer, the protest shall be in sufficient detail to enable the Engineer to
2 ascertain the basis and amount of time disputed. By not filing such detailed protest in
3 that period, the Contractor shall be deemed as having accepted the statement as
4 correct. If the Contractor is approved to work 10 hours a day and 4 days a week (a 4-10
5 schedule) and the fifth day of the week in which a 4-10 shift is worked would ordinarily
6 be charged as a working day then the fifth day of that week will be charged as a working
7 day whether or not the Contractor works on that day.

8
9 *Revise the sixth paragraph to read:*

10
11 The Engineer will give the Contractor written notice of the completion date of the
12 contract after all the Contractor's obligations under the contract have been performed by
13 the Contractor. The following events must occur before the Completion Date can be
14 established:

- 15 1. The physical work on the project must be complete; and
- 16 2. The Contractor must furnish all documentation required by the contract and
17 required by law, to allow the Contracting Agency to process final acceptance of
18 the contract. The following documents must be received by the Project Engineer
19 prior to establishing a completion date:
 - 20 a. Certified Payrolls (per Section 1-07.9(5)).
 - 21 b. Material Acceptance Certification Documents
 - 22 c. Reports of Amounts Credited as EIC Participation, as required by the
23 Contract Provisions.
 - 24 d. Final Contract Voucher Certification
 - 25 e. Copies of the approved "Affidavit of Prevailing Wages Paid" for the Contractor
26 and all Subcontractors
 - 27 f. Property owner releases per Section 1-07.24

28
29 *This section is supplemented with the following:*

30 **(March 1, 2004 Tacoma GSP)**

31
32 This project shall be physically completed within **30 Working Days**.

33
34 **1-08.9 Liquidated Damages**

35 **(August 14, 2013 APWA GSP)**

36 *Revise the fourth paragraph to read:*

37
38 When the Contract Work has progressed to Substantial Completion as defined in the
39 Contract, the Engineer may determine that the work is Substantially Complete. The
40 Engineer will notify the Contractor in writing of the Substantial Completion Date. For
41 overruns in Contract time occurring after the date so established, the formula for
42 liquidated damages shown above will not apply. For overruns in Contract time occurring
43 after the Substantial Completion Date, liquidated damages shall be assessed on the
44 basis of direct engineering and related costs assignable to the project until the actual
45 Physical Completion Date of all the Contract Work. The Contractor shall complete the
46 remaining Work as promptly as possible. Upon request by the Project Engineer, the
47 Contractor shall furnish a written schedule for completing the physical Work on the
48 Contract.

49
50
51 **END OF SECTION**

1 **1-09 MEASUREMENT AND PAYMENT**

2
3 **1-09.2(1) General Requirements for Weighing Equipment**
4 **(July 23, 2015 APWA GSP, Option 2)**

5
6 *Revise item 4 of the fifth paragraph to read:*

- 7
8 4. Test results and scale weight records for each day's hauling operations are
9 provided to the Engineer daily. Reporting shall utilize WSDOT form 422-027,
10 Scaleman's Daily Report, unless the printed ticket contains the same information
11 that is on the Scaleman's Daily Report Form. The scale operator must provide
12 AM and/or PM tare weights for each truck on the printed ticket.
13

14 **1-09.6 Force Account**
15 **(October 10, 2008 APWA GSP)**

16 *Supplement this Section with the following:*

17
18 The Contracting Agency has estimated and included in the Proposal, dollar amounts for
19 all items to be paid per force account, only to provide a common proposal for Bidders.
20 All such dollar amounts are to become a part of Contractor's total bid. However, the
21 Contracting Agency does not warrant expressly or by implication, that the actual amount
22 of work will correspond with those estimates. Payment will be made on the basis of the
23 amount of work actually authorized by Engineer.
24

25 **(January 13, 2011 Tacoma GSP)**

26 *Item #3 of this Section is supplemented with the following:*

27
28 The Contractor shall submit a comprehensive summary list of all equipment anticipated
29 to be used on the project and their associated AGC/WSDOT Equipment Rental Rates.
30 The list shall include the contractor's equipment number, make, model, year, operation
31 rate, standby rate, applicable attachments and any other applicable information
32 necessary to determine the applicable rates in accordance with this section. In addition,
33 the contractor shall submit an Equipment Watch rate sheet (www.equipmentwatch.com)
34 for each piece of equipment in the summary list. Access to the Equipment Watch web
35 site is available at the City's Construction Management Office.
36

37 **1-09.9 Payments**
38 **(March 13, 2012 APWA GSP)**

39
40 *Delete the first four paragraphs and replace them with the following:*

41
42 The basis of payment will be the actual quantities of Work performed according to the
43 Contract and as specified for payment.
44

45 The Contractor shall submit a breakdown of the cost of lump sum bid items at the
46 Preconstruction Conference, to enable the Project Engineer to determine the Work
47 performed on a monthly basis. A breakdown is not required for lump sum items that
48 include a basis for incremental payments as part of the respective Specification. Absent
49 a lump sum breakdown, the Project Engineer will make a determination based on
50 information available. The Project Engineer's determination of the cost of work shall be
51 final.
52

1 Progress payments for completed work and material on hand will be based upon
2 progress estimates prepared by the Engineer. A progress estimate cutoff date will be
3 established at the preconstruction conference.
4

5 The initial progress estimate will be made not later than 30 days after the Contractor
6 commences the work, and successive progress estimates will be made every month
7 thereafter until the Completion Date. Progress estimates made during progress of the
8 work are tentative, and made only for the purpose of determining progress payments.
9 The progress estimates are subject to change at any time prior to the calculation of the
10 final payment.
11

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

- 13 1. Unit Price Items in the Bid Form — the approximate quantity of acceptable
14 units of work completed multiplied by the unit price.
- 15 2. Lump Sum Items in the Bid Form — based on the approved Contractor's lump
16 sum breakdown for that item, or absent such a breakdown, based on the
17 Engineer's determination.
- 18 3. Materials on Hand — 100 percent of invoiced cost of material delivered to Job
19 site or other storage area approved by the Engineer.
- 20 4. Change Orders — entitlement for approved extra cost or completed extra work
21 as determined by the Engineer.
22

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

- 24 1. Retainage per Section 1-09.9(1), on non FHWA-funded projects;
- 25 2. The amount of progress payments previously made; and
- 26 3. Funds withheld by the Contracting Agency for disbursement in accordance
27 with the Contract Documents.
28

29 Progress payments for work performed shall not be evidence of acceptable performance
30 or an admission by the Contracting Agency that any work has been satisfactorily
31 completed. The determination of payments under the contract will be final in accordance
32 with Section 1-05.1.
33

34 *This section is supplemented with the following:*
35 **(January 6, 2015 Tacoma GSP)**
36

37 Breakdowns of all lump sum items shall be provided for all lump sum items and shall
38 include all costs for labor, equipment, materials, and taxes (as applicable) associated
39 with the lump sum item. Washington State Department of Revenue Rules 170 and 171
40 apply to lump sum items per Section 1-07.2 of the WSDOT State Amendments to the
41 Standard Specifications.
42

43 Stockpiled Material - The point of acceptance of stockpiled material for payment and
44 quality shall be at the time of incorporation into the contract.
45

46 **1-09.9(1) Retainage**
47 **(May 10, 2006 Tacoma GSP)**
48

49 *The fourth paragraph is supplemented with the following:*

- 50 • A "General Release to the City of Tacoma" is on file with the Contracting Agency.
- 51 • A release has been obtained from the City of Tacoma's City Clerk's Office.
52

1 **1-09.13(3)A Administration of Arbitration**
2 **(October 1, 2005 APWA GSP)**

3 *Revise the third paragraph to read:*

4
5 The Contracting Agency and the Contractor mutually agree to be bound by the decision
6 of the arbitrator, and judgment upon the award rendered by the arbitrator may be
7 entered in the Superior Court of the county in which the Contracting Agency's
8 headquarters are located. The decision of the arbitrator and the specific basis for the
9 decision shall be in writing. The arbitrator shall use the contract as a basis for decisions.

10
11 **END OF SECTION**
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1 **1-10 TEMPORARY TRAFFIC CONTROL**

2
3 **1-10.1 General**

4 **(April 7, 2014, WSDOT GSP)**

5 *Section 1-10.1 is supplemented with the following:*

6
7 **Temporary Pedestrian Access**

8 **(*****)**

9 All pedestrian access paths shall be maintained per Proposed Accessibility Guidelines
10 for Pedestrian Facilities in the Public Right-of-Way (PROWAG) and Specification
11 Sections 1-07.23, and 1-10. The Contractor shall submit the proposed material type for
12 "Temporary Pedestrian Access" to the Engineer for approval prior to construction. The
13 Contractor shall maintain each pedestrian access and make repairs as directed for the
14 duration of the construction, until the sidewalk and entry ways are finished at each
15 respective location.

16
17 **1-10.1(2) Description**

18 **(July 22, 2019 Tacoma GSP)**

19 *The first sentence of the fourth paragraph is revised to read:*

20
21 The Contractor shall keep lanes, on-ramps, and off-ramps open to traffic at all times
22 except when Work requires closure(s) that have been requested and approved in
23 accordance with section 1-10.2(2).

24
25 *The third sentence of the fourth paragraph is revised to read:*

26
27 Approved lane and ramp closures shall be for the minimum time required to complete
28 the Work.

29
30 *This section is supplemented with the following:*

31
32 Only uniformed off-duty police officers shall be used to control traffic when it is
33 necessary to override or provide traffic control at signalized intersections. Off-duty City
34 of Tacoma Police Department officers are preferred within the jurisdiction of the Tacoma
35 PD, and the Contractor shall grant the Tacoma PD the "first right of refusal" by
36 contacting the Tacoma PD first as stated below.

37
38 The City will make all necessary temporary adjustments to existing traffic signals and
39 traffic signal activators.

40
41 Existing signs shall not be removed until the Contractor has provided for temporary
42 measures sufficient to safeguard and direct traffic after existing signs have been
43 removed. Preservation of temporary traffic control and street name signs shall be the
44 sole responsibility of the Contractor.

45
46 As the work progresses and permits, temporarily relocated and/or removed traffic signs
47 shall be reset in their permanent location. Permanent signs and other traffic control
48 devices damaged or lost by the Contractor shall be replaced or repaired at the
49 Contractor's expense.

1 **Traffic Control Management**

2 **1-10.2(1) General**

3 **(January 3, 2017)**

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

5
6 Only training with WSDOT TCS card and WSDOT training curriculum is recognized in
7 the State of Washington. The Traffic Control Supervisor shall be certified by one of the
8 following:

9
10 The Northwest Laborers-Employers Training Trust
11 27055 Ohio Ave.
12 Kingston, WA 98346
13 (360) 297-3035

14
15 Evergreen Safety Council
16 12545 135th Ave. NE
17 Kirkland, WA 98034-8709
18 1-800-521-0778

19
20 The American Traffic Safety Services Association
21 15 Riverside Parkway, Suite 100
22 Fredericksburg, Virginia 22406-1022
23 Training Dept. Toll Free (877) 642-4637
24 Phone: (540) 368-1701

25
26 **1-10.3 Traffic Control Labor, Procedures, and Devices**

27
28 **1-10.3(1) Traffic Control Labor**

29 *The first paragraph is revised to read:*

30
31 The Contractor shall furnish all personnel for flagging and spotting, for the execution of all
32 procedures related to temporary traffic control and for the setup, maintenance and removal
33 of all temporary traffic control devices and construction signs necessary to control
34 vehicular, bicycle, and pedestrian traffic during construction operations.

35
36 **1-10.3(1)A Flaggers**

37 *This heading is revised to read:*

38
39 **1-10.3(1)A Flaggers and Spotters**

40 **(*****)**

41
42 *This section is supplemented with the following:*

43
44 The Contractor shall provide a spotter where needed and when indicated on the plans
45 and/or with these Specifications. The spotters sole duties are as follows: the spotter shall
46 walk ahead of the construction vehicle in the direction of vehicle travel to insure no student,
47 school employee, school visitors, or other pedestrians are in the path of vehicle travel, as
48 well as exclusively assisting with the navigation of pedestrians through, around, adjacent
49 to, and/or through the work zone or adjoining traffic control areas as indicated in the traffic
50 control plans or as directed to do so on-site. In the course of these responsibilities, the
51 spotter shall signal the vehicle to stop should a student, school employee, visitor, or other
52 pedestrian be in the immediate path of the vehicle. The vehicle shall remain stopped under
53 the direction of the spotter until all pedestrians are out of the immediate path of the vehicle

1 Spotters shall assist pedestrians through the construction zone as needed.

2
3 **1-10.3(1)B Other Traffic Control Labor**

4 *This section is revised to read:*

5
6 In addition to flagging duties, the Contractor shall provide personnel for all other traffic
7 control procedures required by the construction operations and for the labor and
8 equipment to install, maintain, and remove any traffic control devices shown on Traffic
9 Control Plans.

10
11 **1-10.3(2) Traffic Control Procedures**

12 *Section 1-10.3(2) is supplemented with the following:*

13
14 **1-10.3(2)F Uniformed City of Tacoma Police Officer for Traffic Signal Override**

15
16 When construction operations are such that an existing traffic signal is required to be
17 overridden to allow for traffic control measures, the signal shall be overridden only by a
18 uniformed off-duty police officer. Use of uniformed off-duty police officers shall be used
19 only when approved by the City

20
21 All off-duty officers shall be commissioned within the State of Washington.

22
23 Tacoma Police Department officers shall be the first choice for traffic control that
24 overrides any traffic signal within the jurisdiction of the City of Tacoma PD. The
25 Contractor shall first contact Tacoma Police Department, Special Events Sergeant, to
26 schedule police officers for the specified traffic control duty.

27
28 Tacoma Police Department
29 Special Events Sergeant
30 (253) 591-5932

31 TacomaPoliceEvents@ci.tacoma.wa.us

32
33 All costs associated with the use of uniformed off-duty police officers shall be included in
34 the lump sum price for, "Project Temporary Traffic Control".

35
36 The Contractor shall request officers at least 48 hours in advance for scheduling, unless
37 an exception is approved by the Engineer.

38
39 The Contractor shall immediately notify the Engineer in writing if Tacoma PD cannot supply
40 officers for the requested date(s). The Contractor shall include the written response from
41 Tacoma PD and state the preference to either postpone the affected Work or request
42 officers from other State of Washington jurisdictions. Using officers from other jurisdictions
43 must be approved by the Engineer.

44
45 The Contractor will not be compensated for any off-duty officers from other jurisdictions
46 performing traffic control without prior approval from the Engineer, and the Contracting
47 Agency may stop work in accordance with Section 1-08.6, "Suspension of Work".

48
49 **1-10.3(3)A Construction Signs**
50 **(January 11, 2006 Tacoma GSP)**

51 *The fifth paragraph is revised to read:*

1 Signs, posts, or supports that are lost, stolen, damaged, destroyed, or which the
2 Engineer deems to be unacceptable while their use is required on the project shall be
3 replaced by the Contractor at their expense.

4 5 **1-10.3(3)C Portable Changeable Message Sign**

6 **(*****)**

7 *This section is supplemented with the following:*

8
9 Portable Changeable Message Signs shall be required on arterials streets where
10 construction occurs for durations longer than seven (7) calendar days. Signs shall be
11 solar charged and programmable. Signs shall be provided a minimum of seven (7)
12 calendar days prior to construction and can be removed thereafter with the
13 establishment of the applicable traffic control plan and controls. Signs shall be provided
14 on each end of the arterial street construction zone notifying oncoming traffic of the
15 construction conditions. All costs associated with providing and maintain the signs for
16 the required duration shall be included in the proposal item, "Project Temporary Traffic
17 Control", per lump sum

18
19 **(*****)**

20 To prevent hacker from getting access to the Portable Change Message Signs (PCMS),
21 the contractor is required to change the default password and to take other appropriate
22 measures for field access to message control features on the PCMS. In addition, the
23 contractor shall verify the PCMS control box, if any, is secured and locked from tampering
24 during the daily review of the work zone set up and conditions of the traffic control devices.

25
26 *Section 1-10.3(3) is supplemented with the following:*

27 28 **1-10.4 Measurement**

29 30 **1-10.4(3) Reinstating Unit Items with Lump Sum Traffic Control**

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

32
33 **(August 2, 2004)**

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

37
38 ***

39 "Pedestrian Traffic Control", per lump sum

40
41 ***

42 **1-10.5 Payment**

43 44 **1-10.5(2) Item Bids with Lump Sum for Incidentals**

45 **(*****)**

46
47 *The Bid Item "Pedestrian Traffic Control" lump sum, is supplemented with the following:*

48
49 All costs incurred for "Temporary Pedestrian Access" and "Spotters" shall be included in
50 the price per lump sum for "Pedestrian Traffic Control", according to Section 1-10.

51
52 **END OF SECTION**

1 **2-01 CLEARING, GRUBBING, AND ROADSIDE CLEANUP**
2 **(March 17, 2016 Tacoma GSP)**
3

4 **2-01.1 Description**

5 *The first sentence of the first paragraph is revised to read:*

6 The Contractor shall clear, grub, and cleanup those areas contained within the "Clearing
7 & Grubbing" limits indicated on the Plans.

8
9 *This section is supplemented with the following:*

10
11 Trees, stumps, shrubs, and brush located outside the Clearing & Grubbing limits shall be
12 considered as part of "Clearing and Grubbing" when identified for removal on the Plans.

13
14 **2-01.2 Disposal of Usable Material and Debris**

15 *The second paragraph is revised to read:*

16
17 The Contractor shall dispose of all debris in accordance with Section 2-01.2(2).
18

19 **2-01.3(1) Clearing**

20 *This section is revised to read:*
21

- 22 1. Fell trees only within the area to be cleared as shown on the Plans.
- 23 2. Close-cut parallel to the slope of the ground all stumps to be left in the
24 cleared area outside the slope stakes.
- 25 3. Close cut all stumps that will be buried by fills 5-feet or less in depth.
- 26 4. Follow these requirements for all stumps that will be buried by fills deeper
27 than 5-feet from the top, side, or end surface of the embankment or any
28 structure and are in a location that will not be terraced as described in
29 Section 2-03.3(14):
 - 30 a. Close-cut stumps under 18-inches in diameter.
 - 31 b. Trim stumps that exceed 18-inches in diameter to no more than 12-
32 inches above original ground level.
- 33 5. Leave standing any trees or native growth indicated by the Engineer.
- 34 6. Trim all trees to be left standing to the height specified by the Engineer and
35 certified Arborist, with a minimum height of eight (8) feet above sidewalk and
36 fourteen (14) feet above the roadway surface. Neatly cut all limbs close to
37 the tree trunk. All tree trimming must be done by or under the direction of a
38 certified Arborist.
- 39 7. Thin clumps of native growth as the Engineer may direct.
- 40 8. Protect, by fencing if necessary, all trees or native growth from any damage
41 caused by construction operations in accordance with Standard Plans LS-08
42 through LS-11.
- 43 9. Trim all shrubs and brush which covers sidewalks, curb, curb and gutter, and
44 curb ramps to a minimum of four inches from the edge of sidewalk or as
45 directed by the Engineer or Certified Arborist.
- 46 10. Remove and dispose of, or relocate the following existing features where
47 necessary within the project limits or as indicated on the Plans:
 - 48 a. Cement concrete gutter boxes.
 - 49 b. Large rocks used for the purpose of landscaping or as a barrier when
50 inside the paving limits.

- c. Wood curbs, logs, railroad ties, and other timber used for landscaping when inside the paving limits.
 - d. All types of fence.
 - e. Bollards inside the paving area and not designated to remain.
 - f. Relocate Eco Blocks to a location outside of the paving limits.
11. Perform all work as required by the certified Arborist Reports to protect, remove, trim, prune roots or limbs, and any other works detailed in the Arborist Reports. This includes all labor, time, and materials for this work.
 12. Remove trees as indicated on the plans or as directed by the Engineer or certified Arborist. The tree removal shall include stump grinding to eight inches below final grade and removal of roots according to the Plans and Specifications, and as directed by the Engineer and certified Arborist, such that a new tree can be planted in the same area.
 13. All stumps identified for stump grinding or as directed by the Engineer or certified Arborist shall be ground to eight inches below final grade.

2-01.3(2) Grubbing

Item e is revised to read:

Upon which embankments will be placed, except stumps may be close-cut or trimmed as allowed in Section 2-01.3(1) item 4.

Add the following sections:

2-01.3(5) Certified Arborist

The Contractor shall provide a certified Arborist on site to assess and provide Arborist Reports for all work within the Tree Protection Zone of a tree in accordance with the Urban Forestry Manual and the Tacoma Municipal Code 13.06.502. All work done in the critical root zone shall be in compliance with the Arborist Report provided by the certified Arborist or under the direction of the certified Arborist.

The certified Arborist shall be on site to assess and provide direction for all tree trimming, limb or root pruning of greater than 4 inches, and tree removals as specified in the Plans or other tree work as directed by the Engineer.

The Arborist shall be certified by the International Society of Arboriculture (ISA).

2-01.3(5) Definition of Vegetation

A "tree" is defined as any self-supporting, woody perennial plant having a main stem (trunk) and which normally attains a height of at least ten (10) feet at maturity, usually with one (1) main stem or trunk and many branches.

A "shrub" is defined as any woody perennial plant which normally attains a height of less than ten (10) feet at maturity and which can be construed to have some landscape value.

"Brush" is defined as any perennial vegetation which normally attains a height of ten (10) feet or less at maturity, which is not maintained as part of a landscape feature, which is "volunteer" growth or which exists in a naturalized state. Examples include but are not limited to stands of blackberries and scotch broom.

1 **2-01.3(5) Tree and Stump Classifications**

2
3 Trees shall be classified by the measured diameter at a point four and one-half (4-½)
4 feet above average ground level. Trees that have several stems at the four and one-half
5 (4-½) foot height will be considered a tree clump. The largest diameter single stem will
6 be measured and will dictate the class rating. Only the largest, single stem in the clump
7 will be utilized for measurement and payment.

8
9 Stumps shall be classified by the measured diameter at the highest point of the stump
10 above the average ground level or a point four and one-half (4-1/2) feet above the
11 average ground level, whichever is less.

12
13 Trees and stumps will be classified as follows:

14

15 Less than 4 inches	Class 0
16 4 inches up to but not including 12 inches	Class I
17 12 inches up to but not including 24 inches	Class II
18 24 inches up to and including 42 inches	Class III
19 Greater than 42 inches (Tree height greater than 30 feet)	Class IV
20 Greater than 42 inches (Tree height of 30 feet or less)	Class V

21

22 *This section is added:*

23 **2-01.3(1)A Tree Protection**

24
25 Trees not marked for removal or in clearing and grubbing limits shall be protected in
26 accordance with the city of Tacoma standard landscape plans. Protection activities shall
27 include, but are not limited to, use of straight edge buckets for excavation, hand digging
28 where necessary, clean cutting roots that need removal, root shaving, installing wire
29 mesh and fencing, protecting cut roots.

30
31 **2-01.4 Measurement**

32 *This section is supplemented with the following:*

33
34 No specific unit of measurement shall apply to the force account item "Certified Arborist".

35
36 **2-01.5 Payment**

37 *This section is supplemented with the following:*

38
39 "Certified Arborist", force account

40
41 The lump sum contract price for "Certified Arborist" shall be full pay for all labor,
42 materials, and equipment to provide a certified Arborist on site prior to and during
43 construction to perform all tree assessments, provide tree assessment reports, direct
44 and assess all tree trimming, root and limb pruning, tree removals or other tree works as
45 directed by the Engineer or Specifications not included in other bid items. No extra
46 payment shall be made for any delays in construction schedule to provide a certified
47 Arborist and comply with the certified Arborists assessments and reports.

48
49 **END OF SECTION**

1 **2-02 REMOVAL OF STRUCTURES AND OBSTRUCTIONS**
2 **(December 9, 2005 Tacoma GSP)**

3
4 **2-02.3(3) Removal of Pavement, Sidewalks, and Curbs**
5 *This section is deleted.*

6
7 *Section 2-02.3 is supplemented with the following:*

8
9
10
11 **END OF SECTION**
12
13

1 **2-03 ROADWAY EXCAVATION AND EMBANKMENT**
2 **(August 14, 2019 Tacoma GSP)**

3
4 **2-03.1 Description**

5 *The last sentence of the first paragraph is deleted.*
6

7 **2-03.3 Construction Requirements**

8
9 *This section is supplemented with the following:*

10
11 All material excavated in the Plans are contaminated and shall be hauled to LRI Landfill,
12 located at 30919 Meridian Street East, Graham, WA or an approved licensed solid waste
13 disposal facility.
14

15 **2-03.3(5) Slope Treatment**

16 *This section is deleted.*
17

18 **2-03.3(19) Removal of Pavement, Sidewalks, Curbs, and Gutters**

19 *This section is deleted.*
20

21 **2-03.5 Payment**

22 *This section is supplemented with the following:*
23

24 "Roadway Excavation of Contaminated Material, Incl. Haul", per cubic yard.

25
26 The unit Contract price per cubic yard for "Roadway Excavation of Contaminated
27 Material, Incl. Haul" shall be full compensation for all costs incurred for excavating,
28 loading, placing, disposal and haul to LRI or other approved facility.
29

30
31 **END OF SECTION**
32

1 **2-06 SUBGRADE PREPARATION**
2 **(September 20, 2018 Tacoma GSP)**

3
4 **2-06.3 Construction Requirements**

5 *This section is supplemented with the following:*

6
7 **Subgrade Repair for Subgrade Not Constructed Under Same Contract**

8 Upon removal of pavement, the Contractor and City Inspector shall walk the subgrade
9 surface to determine and delineate any subgrade areas that need to be repaired. Any
10 Subgrade areas that require repair, from the initial walkthrough, shall be determined
11 solely by the City Inspector. Any initial subgrade repairs shall be paid for according to
12 Section 2-06.5(2). Subgrade repair shall be performed in accordance with Section 2-06
13 and immediately after it has been determined and delineated. In order to minimize
14 damage to the subgrade, the Contractor is encouraged to minimize pavement removal
15 during the work.

16
17 **Subgrade Maintenance and Protection**

18 Immediately after the contractor constructs the subgrade or completes initial subgrade
19 repair to the City's satisfaction, the contractor shall maintain and protect the subgrade.
20 Any defects or damage of the subgrade thereafter shall be repaired or replaced
21 according to Section 2-06, at the Contractor's expense before placement of any
22 succeeding courses or pavement. Maintenance and protection of the subgrade shall be
23 the responsibility of the Contractor. The Contractor shall be required to take
24 precautionary measures to prevent damage by heavy loads or equipment, as well as
25 from inclement weather.

26
27 The Contractor and City Inspector should walk the exposed subgrade on a daily basis to
28 determine if there is damage to the subgrade. Any Subgrade areas that require repair
29 according to this section shall be determined solely by the City Inspector.

30
31 **2-06.5 Measurement and Payment**

32 *This section is supplemented with the following:*

33
34 Subgrade Maintenance and Protection shall be paid by lump sum and shall apply to all
35 subgrade.

36
37 "Subgrade Maintenance and Protection", per lump sum

38
39 The lump sum price for "Subgrade Maintenance and Protection" shall be full pay for all
40 material, labor, and equipment for implementation of subgrade maintenance and
41 protection, as determined by the City Inspector.

42
43 If the contractor fails to protect the subgrade so that additional subgrade repairs are
44 required as determined by the City Inspector, then the city shall not owe payment for
45 these additional subgrade repairs in accordance with Section 2-06.3.

46
47 **2-06.5(2) Subgrade Not Constructed Under Same Contract**

48 *Item 5 under this section is deleted.*

49
50
51 **END OF SECTION**

1 **2-07 WATERING**
2 **(August 3, 2009 Tacoma GSP)**
3

4 **2-07.3 Construction Requirements**

5 *The last sentence of the first paragraph is revised to read:*
6

7 The Engineer may direct that the Contractor apply water during non-working hours such
8 as evenings, weekends, or recognized holidays.
9

10 *Section 2-07.3 is supplemented with the following:*
11

12 **2-07.3(1) Water Supplied from Hydrants**
13

14 There is no guarantee that all fire hydrants will be available for use for cleaning, lining, or
15 any other construction activities associated with this project. Prior to construction
16 activities, it shall be the Contractor's responsibility to verify which hydrants will be
17 available by contacting Tacoma Water. The Contractor shall use only those hydrants
18 designated by Tacoma Water.
19

20 Water supplied from hydrants governed by Tacoma Water shall be used in strict
21 compliance with the "Operating Procedures for the use of Water Division Hydrants"
22 available at the Tacoma Water Permit Counter.
23

24 The Contractor shall obtain a Hydrant Permit prior to start of work by contacting the
25 Water Permit Counter at (253) 502-8247, 2nd floor, Tacoma Public Utilities,
26 Administrative Building, 3628 South 35th Street, Tacoma, WA 98409. A copy of the
27 approved Hydrant Permit shall be submitted to the Engineer.
28

29 Contractor personnel shall be in possession of a valid Tacoma Public Utilities Hydrant
30 Certification Card prior to obtaining a permit. If necessary, contractor personnel shall
31 undergo training to receive the required certification. Contact the Water Permit Counter
32 to set up training as necessary.
33

34
35 **END OF SECTION**
36

1 **2-09 STRUCTURE EXCAVATION**
2 **(March 17, 2016 Tacoma GSP)**
3

4 **2-09.4 Measurement**

5 *This section is supplemented with the following:*
6

7 **Longitudinal Limits.** For all storm and sanitary sewers, the longitudinal measurement
8 will be from center of manhole to center of manhole or to the inside face of catch basins
9 and similar type structures.

10
11 *The fourth paragraph is revised to read:*
12

13 There will be no specific unit of measure for the excavation required for manholes, catch
14 basins, grate inlets, and drop inlets.
15

16 **2-09.5 Payment**

17 *The pay item for "Structure Excavation Class B" is supplemented with the following:*
18

19 "Structure Excavation Class B", per cubic yard.
20

21 The unit Contract price for "Structure Excavation Class B" shall be full payment for all
22 excavation, removal of water; storing, protecting and re-handling of suitable backfill
23 material; backfilling of the trench, compaction of backfill, and all other work necessary for
24 the construction of the sewer trench.
25

26
27 **END OF SECTION**
28
29

2-14 PAVEMENT REMOVAL
(March 17, 2003 Tacoma GSP)

2-14.1 Description

The Work described in this section includes the removal and disposal of pavement surfaces identified on the Plans or as marked in the field.

2-14.2 Pavement Classification

Removal of pavement will be according to type and class based on composition and thickness, as defined below:

Type I	Pavement removal where all or portions of the existing pavement is being removed in conjunction with street construction or any other removal not described below for Type II or Type III.
Type II	Pavement removal required for the placing of utilities at greater and varying depths, such as sewers.
Type III	Pavement removal required for narrow and shallow utility cuts in order to install light cables, conduits and similar shallow utilities.
Class A2	Class A2 pavement removal shall apply to the removal of asphalt concrete, bituminous road surfacing, multiple lift bituminous surface treatments or any combination of these components having an average thickness of two inches or less.
Class A4	Class A4 pavement removal shall apply to the removal of asphalt concrete, bituminous road surfacing, multiple lift bituminous surface treatments or any combination of these components having an average thickness between two inches and four inches.
Class A8	Class A8 pavement removal shall apply to the removal of asphalt concrete, bituminous road surfacing, multiple lift bituminous surface treatments or any combination of these components having an average thickness between four inches and eight inches.
Class C6	Class C6 pavement removal shall apply to all non-reinforced cement concrete pavements or slabs having an average thickness of six inches or less. After the curbs and pavement have been constructed, the Contractor may be required to remove additional sidewalk necessary to provide proper connections and grades, as determined by the Engineer.
Class C12	Class C12 pavement removal shall apply to all non-reinforced cement concrete pavements or slabs having an average thickness of between 6 inches and 12 inches.
Class CA	Class CA pavement removal shall apply to all pavements that have a wearing surface of asphalt concrete upon a cement concrete

pavement or, cement concrete base, and for which the total combined thickness of the pavement averages between six inches and twelve inches.

Class H

Class H pavement removal shall apply to early type pavement of a cement concrete base with a brick or cobblestone surface and potentially an additional layer of asphalt concrete pavement for which the total combined thickness of the pavement averages between ten inches and twenty inches.

2-14.3 Construction Requirements

All final meetlines shall be sawcut.

Where monolithic cement concrete pavement and curb are being removed, the curb removal shall be considered as pavement removal, and the measurement for payment will be to the back of the curb.

The removal of existing street improvements shall be conducted in such a manner as not to damage utilities and any portion of the improvement that is to remain in place. Any deviation in this matter will obligate the Contractor, at no expense to the Contracting Agency, to repair, replace, or otherwise make proper restoration to the satisfaction of the Engineer.

In the event a pavement averages more than the maximum thickness specified for its class, an additional payment will be made to cover the extra thickness removed by a proportional conversion into additional square yards.

2-14.4 Measurement

Pavement removal will be measured per square yard.

Type I pavement removal will be measured in its original position through the use of survey techniques.

2-14.5 Payment

Payment will be made in accordance with Section 1-04.1.

“Remove Existing Pavement, Type ____ Class____”, per square yard

All costs associated with saw cutting meet lines shall be included in the unit Contract price for pavement removal.

“Remove Existing Pavement, Type ____ Class A”, per square yard

The unit Contract price for “Remove Existing Pavement, Type ____ Class A” shall include all costs for removing pavements of Class A2, Class A4, and Class A8.

END OF SECTION

1 **2-15 CURB AND CURB AND GUTTER REMOVAL**
2 **(March 17, 2003 Tacoma GSP)**

3
4 **2-15.1 Description**

5
6 The Work described in this section includes the complete removal and disposal of curbs
7 and curb and gutter identified on the Plans or as marked in the field.

8
9 **2-15.2 Curb Classification**

10
11 Removal of curb and/or curb and gutter will be based on composition, as defined below:

12
13 **Integral Curb** - Integral curb shall consist of curb that is constructed monolithic with the
14 adjacent cement concrete pavement.

15
16 **Curb** - Curb may consist of cement concrete curb, granite curb, or any other
17 combination of rigid material that extends below the pavement surface elevation.

18
19 **Extruded/Precast Curb** - Extruded or precast curb may consist of asphalt or concrete
20 extruded or precast curb that is installed on a pavement surface.

21
22 **Curb and Gutter** - Curb and gutter may be cement concrete, or a cement concrete curb
23 with a brick gutter on a cement concrete base, or other combination of rigid material.

24
25 **2-15.3 Construction Requirements**

26
27 Integral curb removal shall consist of the removal of the curb and the integral base
28 section under the curb. The removal shall be accomplished by sawcutting along the
29 face of the curb.

30
31 The removal of the curb and/or curb and gutter shall be conducted in such a manner as
32 not to damage utilities and any portion of the improvement that is to remain in place.
33 Any deviation in this matter will obligate the Contractor, at no expense to the Contracting
34 Agency, to repair, replace, or otherwise make proper restoration to the satisfaction of the
35 Engineer.

36
37 **2-15.4 Measurement**

38
39 Curb and curb and gutter removal will be measured per linear foot.

40
41 **2-15.5 Payment**

42
43 Payment will be made in accordance with Section 1-04.1.

44
45 "Remove Curb", per linear foot.

46
47 The unit Contract price per linear foot for "Remove Curb" shall be full pay for all labor,
48 material, and equipment required for the removal and disposal of all existing curb and
49 curb types, such as extruded curb, integral curb, curb, curb and gutter as specified in
50 this section. This includes all saw cutting, wheel trenching, hydro hammering, chipping,
51 grinding, and all other work required to remove the curb in accordance with this section

1 and the Plans. No additional payment will be made for additional cuts, and no additional
2 payment will be made for varying types of curb/curb and gutter and shall be included in
3 the unit contract bid price. All costs associated with saw cutting necessary for the
4 removal of curb and/or curb and gutter shall be included in the unit Contract price for
5 removal.

6
7 **END OF SECTION**
8
9

1 **2-16 REMOVAL OF CATCH BASINS, MANHOLES, CURB INLETS, ETC.**
2 **(March 17, 2003 Tacoma GSP)**

3
4 **2-16.1 Description**

5
6 The Work described in this section includes the complete removal and disposal of catch
7 basins, manholes, and curb inlets as identified on the Plans.

8
9 **2-16.2 Vacant**

10
11 **2-16.3 Construction Requirements**

12
13 Where the structures are removed, the excavation shall be backfilled with native material
14 if deemed suitable by the Engineer or imported backfill material.

15
16 Material determined by the Engineer to be unsuitable at the time of excavation shall be
17 removed and replaced with imported backfill material. Payment will be made at the unit
18 contract price of the item in the proposal, or as extra work under Section 1-04.4 if not
19 included as an item in the proposal.

20
21 All pipe openings shall be plugged in accordance with 7-08.3(4).

22
23 The removal of the structures shall be conducted in such a manner as not to damage
24 utilities and any portion of the improvement that is to remain in place. Any deviation in
25 this matter will obligate the Contractor, at no expense to the Contracting Agency, to
26 repair, replace, or otherwise make proper restoration to the satisfaction of the Engineer.

27
28 **2-16.4 Measurement**

29
30 The removal of catch basins, manholes, and curb inlets will be measured per each.

31
32 **2-16.5 Payment**

33
34 Payment will be made in accordance with Section 1-04.1.

35
36 "Remove Catch Basin", per each

37
38 "Remove Manhole", per each

39
40 "Remove Curb Inlet", per each

41
42 All costs associated with the placement and compaction of the backfill material shall be
43 included in the unit Contract price for removal.

44
45
46 **END OF SECTION**
47

1 **2-17 CONTROL AND MANAGEMENT OF CONTAMINATED MATERIALS IN**
2 **TACOMA SMELTER PLUME**
3 **(June 3, 2014 Tacoma GSP)**
4

5 **2-17.1 Description**
6

7 **2-17.1(1) General**
8

9 Contaminated soils with concentrations of arsenic (As) and lead (Pb) exceeding the
10 levels listed in the Washington State Models Toxics Control Act (MTCA) cleanup
11 regulations (Chapter 173-340 WAC) have been encountered on the project site. The
12 Contractor shall operate within and meet all applicable laws and regulations associated
13 with working with regulated materials encountered during excavation activities. The
14 Contractor is notified of the existence of cleanup standards for site soils developed
15 according to the MTCA.
16

17 The Contractor is advised to review the applicable Washington Administrative Codes
18 (WAC), Washington Department of Ecology (DOE), Washington State Department of
19 Health (DOH), MTCA and Asarco Reports.
20

21 Websites for further information:
22

23 WAC: <http://apps.leg.wa.gov/wac/> (Title 173-303 & 173-340)
24

25 DOH: <http://www.doh.wa.gov/>
26

27 DOE: <http://www.ecy.wa.gov/>
28

29 MTCA: <http://www.ecy.wa.gov/pubs/9406.pdf>
30

31 Public Health Seattle and King County:
32 <http://www.kingcounty.gov/healthservices/health/ehs/toxic/ArsenicLead.aspx>
33

34 Pierce County Health Department:
35 <http://www.tpchd.org/index.php>
36

37 Environmental Protection Agency, Asarco Smelter Cleanup:
38 <http://www.epa.gov/region10>
39

40 Agency for Toxics Substances and Disease Registry, Facts on Arsenic:
41 <http://www.atsdr.cdc.gov/tfacts2.html>
42

43 Centers for Disease Control, Facts on Lead:
44 <http://www.cdc.gov/nceh/lead/publications/1997/factlead.htm>
45

46 Department of Health, Drinking Water:
47 <http://www.doh.wa.gov/ehp/dw>
48
49

1 **2-17.1(2) Site Description**

2
3 **2-17.1(2)A Historical Land Use**

4
5 The Tacoma smelter opened in 1890 as a lead smelter. Asarco purchased it in 1905
6 and converted it to copper smelting in 1912. The smelter operated for nearly 100 years,
7 closing in 1986. The smelter specialized in processing ores with high arsenic
8 concentrations.

9
10 The smelter used a 562 foot smokestack. The chemicals in the smoke from the stack
11 were carried out by the wind, and settled to the ground over a 1,000 square mile area.
12 Much of the soil in King and Pierce Counties has been contaminated with arsenic and
13 lead. Arsenic is a human carcinogen, and lead can cause development disabilities. The
14 Department of Ecology and state and local health departments are concerned about
15 potential health risks to people exposed to the contamination.

16
17 **2-17.1(2)B Soil Descriptions and Soil Quality**

18
19 Subsurface conditions at the site shall be explored at all curb and gutter excavation
20 locations as shown on the Plans or as directed by the Engineer. Details regarding the
21 subsurface exploration, geotechnical laboratory testing, and summary logs of the
22 explorations shall be submitted to the Engineer.

23
24 The shall test the soils collected from the geotechnical borings in the project for arsenic
25 and lead.

26
27 **2-17.1(3) Soil Management**

28
29 The Contractor shall load this contaminated material directly into trucks and dispose of it
30 as contaminated material at LRI Landfill, located at 30919 Meridian Street East,
31 Graham, WA or a licensed solid waste disposal facility. A Waste Disposal Authorization
32 (WDA) for LRI will be supplied to the Contractor at the beginning of the Construction
33 Activities. The Contractor shall follow all provisions of the WDA.

34
35 The remaining excavated material outside of these limits is not considered
36 contaminated. This material may be used for backfill in this project if suitable in
37 accordance with these Specifications.

38
39 **2-17.1(4) Submittals**

40
41 This paragraph lists submittals required for this project area. Other submittals will be as
42 required.

- 43 1. **Health and Safety Plan** – Section 2-17.2(2).
44 2. **Resume of Site Health and Safety Officer** – Section 2-17.2(3).
45 3. **Manifest Package and Supporting Analytical Data** – Section 2-17.3(2)D
46 4. **Soil Management Plan** – Section 2-17.2(5)
47 5. **Contractor and/or Subcontractor Environmental Qualifications**
48
49
50

2-17.2 Health and Safety

The Contractor shall be responsible for the health and safety conditions at the job site related to the regulated substances. This includes the health and safety of workers and public during work and non-working hours. The Contractor shall inform all workers and visitors of the potential for exposure to regulated materials. The Contractor shall follow regulatory procedures to prevent the release of contamination.

Contaminated material excavated during the project is considered solid waste. The Contractor's Health and Safety Plan shall specify training requirements for the site, including 24, 48, or 80 hour training OSHA training as referenced in WAC 296 843 20010, if applicable. The Contractor shall be responsible for all training costs.

2-17.2(1) Health and Safety Laws and Regulations

For all work conducted within the limits of this project site, the Contractor shall ensure compliance with all applicable health and safety provisions for hazardous waste operations, including requirements of the Federal Occupation Safety and Health Act of 1970 (OSHA) and all amendments, including 29 CFR Part 1910, WAC 296-843, as well as any other applicable regulations. Failure to be thoroughly familiar with applicable health and safety provisions shall not relieve the Contractor of the responsibility to fully comply with all laws and regulations.

2-17.2(2) Site Health and Safety Plan

The Site Health and Safety Plan shall be prepared in accordance with WAC 173-340-810. The Contractor shall develop a written Site Health and Safety Plan to be used for the duration of the project. The plan shall incorporate all required city, county, state, and federal health and safety provisions. The plan shall be submitted to the City within ten (10) working days after execution of the contract. The Contractor is advised that the City will review the Site Health and Safety Plan, but the Contractor is solely responsible for ensuring that the Site Health and Safety Plan is implemented in accordance with the regulatory requirements. At least one copy of the plan shall be maintained at the work site. A properly qualified individual shall be assigned to serve as the Site Health and Safety Officer, authorized to supervise and enforce compliance with the plan. The Health and Safety Officer shall be responsible for monitoring the work area for health hazards including sampling of the air, soil, and water as required to ensure worker safety.

All provisions of the Site Health and Safety Plan shall apply to the Contractor, Subcontractors, and all other visitors to the site. Approved Subcontractors may elect to develop a site-specific plan, but this shall not relieve the Contractor of the requirements and responsibilities described herein. The terms and provisions of a Subcontractor's site-specific plan shall meet or exceed the Contractor's plan and shall be submitted to the City or its agents prior to the Subcontractor commencing work.

The Site Health and Safety Plan shall comply with all applicable regulations and shall include, but not be limited to:

1. A list of chemical hazards and physical hazards, allowable OSHA exposure levels, threshold limit values, and all other regulatory exposure levels.
2. If 24, 48, or 80 hour training is required by the Site Health and Safety Plan, then the Contractor shall provide a list of all persons, by work category/type, who will be trained. Photocopies of the employee's training certificates shall be submitted to the Contracting Agency.
3. Engineering controls, work practices, personnel and equipment decontamination procedures, and types of personal protective equipment to be used.
4. A list of safety and monitoring equipment to be kept at the job site and its storage location. A record of monitoring equipment calibration shall be maintained.
5. A list of required health and safety information to be documented.
6. An emergency evacuation plan for immediate removal to the nearest hospital or doctor's care for any person who may be injured on the job site. It shall include evacuation routes to medical treatment and emergency telephone numbers for hospitals, ambulances, police and fire departments, poison control, and the City of Tacoma.

In the event the Health and Safety Plan is determined by a regulatory agency to be inadequate to protect the employees and the public, then the Plan shall be modified by the Contractor at the Contractor's sole expense.

2-17.2(3) Site Health and Safety Officer

The Contractor shall appoint a Site Health and Safety Officer for the project. The Health and Safety Officer must meet the requirements contained in 29 CFR Part 1910 and Chapter 296-62 WAC and who is qualified by experience and training in hazardous waste operations in accordance with other applicable laws, regulations, and requirements of this Section. The Site Health and Safety Officer shall be qualified and authorized to monitor, supervise, and enforce safety compliance with the Site Health and Safety Plan. A resume of the Site Health and Safety Officer's qualifications shall be submitted to the City for review within five (5) working days of receiving the Notice to Proceed. The Site Health and Safety Officer shall be on site at all times when work operations involve excavation and trenching or at other times when the potential for encountering hazardous substances exists as identified as contaminated soil in the Plans and Section 2-17.

The Contractor shall be solely responsible for identification and monitoring of air (gases), soil, dust, and groundwater with chemical constituents that could pose health and safety concerns to site personnel. The Contractor shall provide for the protection of safety and health of all workers and other authorized persons, including the City and its agents at the jobsite from exposure to potentially hazardous substances.

1 The Contractor shall be solely responsible for ensuring that all necessary monitoring
2 equipment, protective clothing, and other supplies and equipment up to the appropriate
3 level of protection as defined by WISHA, OSHA, and other applicable guidelines are
4 available to implement the plan. No work shall take place in areas where hazardous
5 substances may potentially be present unless the Site Health and Safety Officer is
6 present and monitoring site conditions.

7
8 The Contractor, through the Site Health and Safety Officer, shall not permit any
9 employee, in the performance of the Contract, to work under conditions which are
10 hazardous to the employee. Should violations of the safety and health requirements be
11 called to the Site Health and Safety Officer's attention by the City, its agent, or any
12 authorized representative of a regulator agency, then the Contractor shall immediately
13 correct the identified conditions.

14 15 **2-17.2(4) Contractor Safety Equipment**

16
17 The Contractor shall maintain, at the job site, first-aid and safety equipment applicable to
18 the work as prescribed by the governing safety authorities. All required safety
19 equipment shall be kept in fully operational condition for the duration of the contract.

20
21 All personnel shall be trained in the use of the appropriate safety equipment that would
22 be utilized during the course of their work. The Site Health and Safety Officer shall
23 ascertain that the safety equipment is being used when appropriate and/or required.

24 25 **2-17.2(5) Soil Management Plan**

26
27 The Contractor shall submit a detailed plan for management of all excavated soils. The
28 plan shall include excavation, loading, and transporting procedures, dust control
29 procedures, and disposal of contaminated soils.

30 31 **2-17.3 Construction Requirements**

32
33 Construction activities at the site will generate excess soils and possible groundwater
34 associated with the installation of underground utilities. The Contractor shall fully
35 develop and implement a program in accordance with the Health and Safety Plan to
36 ensure worker health and safety and to minimize disruption to construction due to site
37 contamination.

38 39 **2-17.3(1) Notification**

40
41 The Contractor shall notify the Contracting Agency, in writing, at least ten (10) working
42 days prior to the date that excavation operations are to begin and identify the limits of
43 that excavation. Excavation and sampling shall not take place without a designated
44 representative from the Contracting Agency on site.

45 46 **2-17.3(2) Transportation**

2-17.3(2)A General

The Contractor shall provide all equipment, personnel, and materials necessary to load and transport waste materials, including contaminated soils and debris, for off-site treatment and/or disposal in accordance with federal, state, and local regulations.

2-17.3(2)B Control of Waste Material

Vehicles used by the Contractor to transport waste materials shall be properly designed, equipped, and maintained to prevent the loss of materials during transport. The following requirements shall be met for all vehicles transporting waste materials from the site:

1. No soil from the site shall adhere to the outside of the surface of the vehicle (including tires and undercarriage).
2. No liquids shall be leaking or dripping from the vehicles.
3. Any and all waste materials shall be covered with tarpaulin or otherwise completely enclosed to prevent loss of materials from the vehicle during transport.

If leaking or dripping from transport vehicles occurs, the Contracting Agency may direct the Contractor to use liners or other means to prevent dripping and leaking. The Contractor shall implement such measures, as directed by the Contracting Agency, at the Contractor's sole expense.

2-17.3(2)C Street Sweeping

The Contractor shall sweep those streets within the project when truck traffic carries soil from the site into the street. Street sweeping shall be conducted in such a way as to not generate visible dust. Material collected from street sweeping shall be disposed of in a legal manner at an off-site location and be included in the street cleaning bid item.

2-17.3(2)D Transportation and Shipping Requirements

The Contractor shall be responsible for obtaining permits and authorizations necessary to use the selected haul routes. The Contractor shall use United States DOT regulations, 49 CFR 172.101 to identify proper shipping names for each hazardous material (including Dangerous Waste) to be shipped off site. Proper shipping names shall be submitted to the Contracting Agency in the form of draft shipping documents for review and comment.

The Contractor shall ensure that each shipment of material sent off site is accompanied by the appropriate shipping documents. The Contractor shall prepare a bill of lading for each shipment of regulated material which does not require a hazardous waste manifest. The bill of lading shall satisfy the requirements of United States DOT regulations, 49 CFR 172 Subpart C and any applicable state or local law or regulation, and shall be submitted to the Contracting Agency for review. The Contractor shall be responsible for completing the shipping documents and obtaining the signatures of the Contracting Agency as needed.

1 **2-17.3(3) Off-site Treatment and Disposal**

2
3 The Contractor shall provide documentation of legal disposition including trip tickets and
4 Certificates of Disposal.

5
6 **2-17.4 Measurement**

7
8 No specific measurement shall apply to the lump sum item of Site Health and Safety
9 Plan, Site Health and Safety Officer, and Soil Management Plan.

10 "Soil Sample and Testing" shall be measured per each location tested.

11
12 **2-17.5 Payment**

13
14 Payment will be made in accordance with Section 1-04.1 for each of the following Bid
15 Items that are included in the Proposal:

16
17 "Site Health and Safety Plan", per lump sum.

18
19 "Site Health and Safety Officer", per lump sum.

20
21 "Soil Management Plan", per lump sum.

22
23 Health and safety training, safety equipment and practices, dust control, efficiency
24 losses to other Contract items caused by handling contaminated materials, and other
25 Work required to comply with this specification not specifically identified in a Bid item
26 shall be considered incidental to the work to comply with this Section and all costs
27 therefore shall be included in the Contract prices for the payment items involved and
28 included in the Proposal.

29
30 "Soil Sample and Testing", per each.

31
32 The unit Contract price for "Soil Sample and Testing", per each shall be full pay for all
33 costs associated with obtaining a soil sample and testing the sample as defined in this
34 Section.

35
36
37 **END OF SECTION**
38
39

1 **3-04 ACCEPTANCE OF AGGREGATE**
2 **(April 1, 2012 Tacoma GSP)**
3

4 **3-04.1 Description**

5 *The first and third paragraphs are deleted.*
6

7 *The fourth paragraph is revised to read:*
8

9 Nonstatistical evaluation will be used for the acceptance of aggregate materials.
10

11 **3-04.3(1) General**

12 *The first sentence is revised to read:*
13

14 For the purpose of acceptance sampling and testing, all test results obtained for a
15 material type will be evaluated collectively.
16

17 **3-04.3(4) Testing Results**

18 *This section is replaced with the following:*
19

20 The results of all acceptance testing will be provided by the City's Project Engineer
21 within 3 working day of testing.
22

23 **3-04.3(6) Statistical Evaluation**

24 *This section is deleted:*
25
26
27

28 **END OF SECTION**
29
30

1
2 **4-04 BALLAST AND CRUSHED SURFACING**
3 **(March 17, 2003 Tacoma GSP)**
4

5 **4-04.5 Payment**

6 *This section is supplemented with the following:*
7

8 All costs for labor, equipment, and materials required to furnish, place, and compact the
9 crushed surfacing top course for all asphalt concrete approaches and non-paved
10 approaches shall be included in the unit Contract price for "Crushed Surfacing Top
11 Course", per ton.
12

13
14 **END OF SECTION**
15
16

1 **5-04 HOT MIX ASPHALT**
2 **(April 1, 2018 Tacoma GSP)**

3
4 *This Section is revised according to the following overriding provisions:*

5
6 Nonstatistical or test point evaluation shall be the method for HMA compaction
7 acceptance for all HMA pavement, except where visual or commercial evaluation is
8 specified. Visual evaluation shall be considered synonymous with commercial
9 evaluation. The Contracting Agency will not be required to perform any acceptance by
10 statistical evaluation.

11
12 All references to “statistical” are revised to read “nonstatistical”, and “nonstatistical”
13 evaluation shall be considered synonymous with “test point” evaluation. Thus, all
14 Specifications for test procedures, methods, construction requirements, and
15 requirements for evaluation and acceptance shall apply to the Work with the following
16 exceptions:

- 17 • The Contracting Agency shall not be required to perform statistical analysis of
18 any acceptance test results.
- 19 • Quantities for sublots and lots shall be as determined by the Engineer. If test
20 results are found not to be within specification requirements, additional testing
21 as needed to determine a CPF may be performed.
- 22 • The Contracting Agency shall not be required to make price adjustments based
23 on pay factors and composite pay factors.

24
25 **5-04.2 Materials**

26
27 **5-04.2(1) How to Get an HMA Mix Design on the QPL**
28 **(April 1, 2018 Tacoma GSP)**

29 *For Subsection 5-04.2(1) the term “Contracting Agency” is revised to read “WSDOT”.*

30
31 **5-04.2(2) Mix Design – Obtaining Project Approval**
32 **(April 1, 2018 Tacoma GSP)**

33 *This section is revised to read:*

34
35 The Contactor shall submit each HMA mix design to the Contracting Agency on WSDOT
36 Form 350-042. The Contractor shall provide a mix design based upon 3 million ESAL's.

37
38 No paving shall begin prior to the HMA mix design acceptance by the Engineer for the
39 Job Mix Formula (JMF) that will be used for the same paving. The Contracting Agency
40 will evaluate HMA mix design submittals according to Visual Evaluation per Table 1.
41 The mix design will be the initial JMF for the class of HMA. The Contractor may request
42 a change in the JMF. Any adjustments to the JMF will require the approval of the
43 Project Engineer and must be made in accordance with Section 9-03.8(7).

44
45 Mix designs for HMA shall have the aggregate structure and asphalt binder content
46 determined in accordance with WSDOT Standard Operating Procedure 732 and meet
47 the requirements of Sections 9-03.8(2) and 9-03.8(6). The Contractor shall determine
48 anti-strip additive requirements for the HMA and submit laboratory test data for anti-
49 stripping and rutting in accordance with the following options:

- 50 • Hamburg Wheel track Test and Section 9-03.8(2), or

- Tensile Strength Ratio (TSR) Test per AASHTO T 283, or
- Previous WSDOT Lab mix design verification test data and stripping evaluation, per the Engineer's discretion and as stated below.

With the HMA mix design submittal the Contractor shall provide one of the following mix design verification certifications for Contracting Agency review:

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

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

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

For the use of Commercial HMA, the Contractor shall select a class of HMA and design level of Equivalent Single Axle Loads (ESAL's) appropriate for the required use. Commercial HMA can be accepted by a Contractor certificate of compliance letter stating the material meets the HMA requirements defined in the Contract.

5-04.2(2)B Using HMA Additives (April 1, 2018 Tacoma GSP)

This section is revised to read:

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

- Do not use additives that reduce the mixing temperature in the production of High RAP/Any RAS mixtures.
- Before using additives, obtain the Engineer's approval using WSDOT Form 350-076 to describe the proposed additive and process.

5-04.3 Construction Requirements

5-04.3(2) Paving Under Traffic (April 1, 2018 Tacoma GSP)

1 *The second paragraph is supplemented with the following:*

2
3 No traffic shall be allowed on any newly placed pavement without the approval of the
4 Engineer.

5
6 **5-04.3(3)C Pavers**

7 **(April 1, 2018 Tacoma GSP)**

8 *The second paragraph is deleted.*

9
10 **5-04.3(3)D Material Transfer Device or Material Transfer Vehicle**

11 **(April 1, 2018 Tacoma GSP)**

12 *The first paragraph is revised to read:*

13
14 A Material Transfer Device/Vehicle (MTD/V) shall not be used unless specific paving
15 areas are specified below. A MTD/V shall only be used according to this special
16 provision for the following paving areas:

17
18 None

19
20 **5-04.3(4)C Pavement Repair**

21 **(April 1, 2018 Tacoma GSP)**

22 *This section is revised to read:*

23
24 Pavement repair shall be in accordance with the City of Tacoma Right-of-Way
25 Restoration Policy found at:

26
27 https://www.cityoftacoma.org/government/city_departments/public_works/right-of-way

28
29 Pavement repair consists of asphalt concrete saw-cutting, removing asphalt concrete
30 pavement, removing crushed surfacing and subgrade, and installing Construction
31 Geotextile for Separation, placing crushed surfacing top course over the Construction
32 Geotextile, and HMA in accordance with the Contract or as directed by the Engineer.

33
34 Pavement repair excavation may also be performed by the use of a milling machine of a
35 type that has operated successfully on work comparable with that to be done under the
36 Contract and shall be approved by the Engineer prior to use. If a milling machine is
37 used for excavation, the excavation shall be as directed by the Engineer.

38
39 In all types of excavation, after the removal of the asphalt, the base material will be
40 evaluated by the Engineer to determine if it is suitable. If the base is determined not to
41 be suitable, the Contractor shall remove the base material and restore the sub-grade in
42 accordance with Section 2-06 and the Plans, regardless of the method used for
43 excavation.

44
45 Payment for pavement repair shall be by the unit Bid prices according to the Contract for
46 all materials, labor, and equipment required to complete the pavement repair. Items not
47 included in the Proposal shall be paid for according to Section 1-04.1(2).

1 **5-04.3(6) Mixing**

2 **(April 1, 2018 Tacoma GSP)**

3 *The first paragraph is revised to read:*

4
5 The asphalt supplier shall add anti-stripping additive to the liquid asphalt prior to
6 shipment to the asphalt mixing plant. The Contractor shall submit the anti-stripping
7 additive amount and the manufacturer's certification, together with the HMA mix design
8 submittal in accordance with Section 5-04.2. Paving shall not begin before the anti-
9 stripping additive submittal is accepted by the Engineer.

10
11 **5-04.3(9) HMA Mixture Acceptance**

12 **(April 1, 2018 Tacoma GSP)**

13 *The first paragraph is revised to read:*

14
15 The Contracting Agency will evaluate the HMA mixture by nonstatistical or visual
16 evaluation as determined from the criteria in Table 7 or as determined by the Engineer.

17
18 **5-04.3(9)A Test Sections**

19 **(April 1, 2018 Tacoma GSP)**

20 *The first paragraph is revised to read:*

21
22 At the start of paving, if requested by the Contractor, a compaction test section shall be
23 constructed as directed by the Engineer to determine the compactibility of the mix
24 design. Compactibility shall be based on the ability of the mix to attain the specified
25 minimum density (91 percent of the maximum density determined by WSDOT SOP 729,
26 and FOP for AASHTO T 209).

27
28 Following determination of compactibility, the Contractor is responsible for the control of
29 the compaction effort. If the Contractor does not request a test section, the mix will be
30 considered compactible. See also Section 5-04.3(10)C2.

31
32 The Contractor shall also construct a test section when requested by the Engineer. Test
33 sections that are in complete compliance with the requirements of Section 5-04 can be
34 incorporated into the Work, and shall be included in the quantities for related Bid Items;
35 otherwise, the Contractor shall remove the defective pavement in failed test sections as
36 determined by the Engineer and at no cost to the Contracting Agency. The Contracting
37 Agency will only pay for HMA pavement that is accepted and incorporated into the
38 project at the discretion of the Engineer. See also Section 5-04.3(10)C2.

39
40 *The second paragraph is revised to read:*

41
42 The purpose of a test section is to determine whether or not the Contractor's mix design
43 and production processes will produce HMA meeting the Contract requirements related
44 to mixture. Construct HMA mixture test sections at the beginning of paving, using at
45 least 100 tons and a maximum of 800 tons or as specified by the Engineer. Each test
46 section shall be constructed in one continuous operation.

**5-04.3(9)B Mixture Acceptance – Statistical Evaluation
(April 1, 2018 Tacoma GSP)**

The title of this section is revised to read:

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

**5-04.3(9)B1 Mixture Statistical Evaluation – Lots and Sublots
(April 1, 2018 Tacoma GSP)**

The title of this section is revised to read:

5-04.3(9)B1 Mixture Nonstatistical Evaluation – Lots and Sublots

This section is revised to read:

For HMA in a structural application, sampling and testing for total project quantities less than 400 tons is at the discretion of the engineer. For HMA used in a structural application and with a total project quantity less than 800 tons but more than 400 tons, a minimum of one acceptance test shall be performed:

- i. If test results are found to be within specification requirements, additional testing will be at the engineer's discretion.
- ii. If test results are found not to be within specification requirements, additional testing as needed to determine a CPF shall be performed.
- iii. 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.
- iv. 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)E Mixture Acceptance – Notification of Acceptance Test Results
(April 1, 2018 Tacoma GSP)**

The first and second paragraphs of this section are revised to read:

The Contracting Agency will endeavor to provide written notification (via email to the Contractor's designee) of acceptance test results 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.

- 1
2 3. The Contractor shall make no claim for untimely notification by the
3 Contracting Agency of the Contracting Agency's test results (or statistical
4 analysis thereof).
5

6 **5-04.3(10)B HMA Compaction - Cyclic Density**
7 **(April 1, 2018 Tacoma GSP)**

8 *This section is deleted.*
9

10 **5-04.3(10)C1 HMA Compaction Statistical Evaluation – Lots and Sublots**
11 **(April 1, 2018 Tacoma GSP)**

12 *This section is deleted.*
13

14 **5-04.3(10)C2 HMA Compaction Statistical Evaluation – Acceptance Testing**
15 **(April 1, 2018 Tacoma GSP)**

16 *The title of this section is revised to read:*

17 **5-04.3(10)C2 HMA Compaction Nonstatistical Evaluation – Acceptance Testing**

18 *The second paragraph is revised to read:*
19

20 Compaction tests will be performed at a minimum of 5 various locations, as determined
21 by the Engineer, for each 400 tons placed. The locations will be determined by the
22 stratified random sampling procedure conforming to WSDOT Test Method T 716. For an
23 area in progress with a CPF less than 0.75, a new compaction sequence will begin at
24 the Contractor's request after the Project Engineer is satisfied that material conforming
25 to the Specifications can be produced. The Compaction Test Procedures will be
26 provided to the Contractor by the Contracting Agency at the Pre-Construction
27 Conference or a Pre-Paving Meeting, prior to the placement of HMA material on site.
28

29 *This section is supplemented with the following:*
30

31 Cores may be used as an addition to the nuclear density gauge tests. When cores are
32 taken by the Engineer at the request of the Contractor, the request shall be made by
33 noon of the first working day following placement of the mix. The Engineer shall be
34 reimbursed for the coring expenses.
35

36 The Engineer will inform the Contractor of field compaction test results as work is being
37 performed. Formal Test Report(s) will be provided to the Contractor within 3 Working
38 Days.
39

40 HMA for preleveling shall be compacted to the satisfaction of the Engineer.
41

42 **5-04.4 Measurement**
43 **(April 1, 2018 Tacoma GSP)**

44 *The first paragraph is revised to read:*
45

46 HMA CI. ____ PG ____, HMA for ____ CI. ____ PG ____, and Commercial HMA will be measured
47 by the ton in accordance with Section 1-09.2, with no deduction being made for the
48 weight of asphalt binder, blending sand, mineral filler, anti-stripping additive, or any other
49 component of the mixture; and the measurement shall include asphalt wedge curbs and
50 thickened edges in accordance with the Plans or as directed by the Engineer. If the

Contractor elects to remove and replace mix as allowed in Section 5-04.3(11), the material removed will not be measured.

The second paragraph is revised to read:

No specific unit of measure will apply to roadway cores, which shall be included in the measurements for the HMA items that are included in the Proposal.

This section is supplemented with the following:

HMA for Approach Cl. ___ PG 58H-22 shall be measured per square yard of finished driveway and approach.

No specific unit of measure will apply to anti-stripping additive, which shall be included in the measurements for the HMA items that are included in the Proposal.

5-04.5 Payment

(April 1, 2018 Tacoma GSP)

Pay items for "Job Mix Compliance Price Adjustment" and "Compaction Price Adjustment" are deleted.

The following pay items for HMA are revised to read:

"HMA Cl. ___ PG ___", per ton.

"HMA for ___ Cl. ___ PG ___", per ton.

The unit Contract price per ton for "HMA Cl. ___ PG ___" and "HMA for ___ Cl. ___ PG ___" shall be full payment for all costs incurred to carry out the requirements of Section 5-04, including coring and testing, and shall include anti-stripping additive, asphalt wedge curbs, thickened edges, curb drains, and connection to existing drains in accordance with the Contract. Any costs that are already included in other Bid items in the Proposal shall not be included in the unit Contract prices per ton for these HMA Bid items.

The pay item "HMA for Approach Cl. ___PG___" is revised to read:

"HMA for Approach Cl. ___PG 58H-22", per square yard.

The unit Contract price per square yard for "HMA for Approach Cl. ___PG 58H-22" shall be full payment for all costs incurred to carry out the requirements of Section 5-04, including anti-stripping additive; and shall include asphalt wedge curbs, thickened edges, curb drains, and connection to existing drains in accordance with the Contract. Any costs that are already included in other Bid items in the Proposal shall not be included in the unit Contract price per square yard for this HMA Bid item. The Contractor shall also include all costs associated with excavating for driveways and approach, including haul and disposal in the unit Contract price per square yard for "HMA for Approach Cl. ___ PG 58H-22", regardless of the depth.

This section is supplemented with the following:

"HMA Cl. ___ PG ___ for Pavement Patch", per ton.

1 The unit Contract price for pavement patch shall be full pay for all labor, equipment, and
2 materials required to complete the patching of the street, including joints, where
3 required, and removal of temporary base.

4
5 "Cold Plant Mix for Temporary Pavement Patch", per ton.

6
7 The unit Contract price for "Cold Plant Mix for Temporary Pavement Patch" shall be full
8 pay for all labor, equipment, and materials required to furnish and install; maintain; and
9 remove and dispose of the temporary patch.

10
11 Temporary pavement patches placed between October 1st and March 31st shall be HMA
12 Cl. 1/2" PG 58H-22.

13
14 **END OF SECTION**
15
16

1
2 **7-04 STORM SEWERS**
3 **(March 17, 2003 Tacoma GSP)**
4

5 *This section is deleted. The requirements of Section 7-17 shall apply to storm sewers.*
6

7
8 **END OF SECTION**
9
10
11

1 **7-05 MANHOLES, INLETS, CATCH BASINS, AND DRYWELLS**
2 **(March 23, 2010 Tacoma GSP)**

3
4 **7-05.1 Description**

5 *This section is supplemented with the following:*

6
7 All references to sanitary sewers shall be construed to also mean storm sewers.

8
9 **7-05.3 Construction Requirements**

10 *The first sentence of the eleventh paragraph is revised to read:*

11
12 A flexible pipe-to-manhole connector shall be used in all connections of rigid and
13 thermoplastic pipes to **new** precast concrete manholes to provide a watertight joint
14 between the pipe and the manhole, unless otherwise directed by the Engineer. The
15 connector shall be "Kor-N-Seal" with "Wedge Korband" (Type I or II as required for pipe
16 diameter), manufactured by NPC, Inc., Milford, New Hampshire, or Engineer approved
17 equal. The connectors shall be installed in accordance with the manufacturer's
18 recommendations.

19
20 **7-05.3(1) Adjusting Manholes and Catch Basins to Grade**

21 *This section is revised to read:*

22
23 **7-05.3(1) Adjusting Utility Structures to Grade**

24
25 Where shown in the Plans or where directed by the Engineer, utility structures shall be
26 adjusted to grade as staked or as otherwise designated by the Engineer.

27
28 The materials and methods of construction shall conform to the requirements specified
29 in Section 7-05.3 and Standard Plan No. SU-25. The finished structure shall conform to
30 the requirements of the standard plan for the specific structure.

31
32 Water valves shall be provided by Tacoma Water. The Contractor shall coordinate with
33 the Engineer and Tacoma Water to acquire the water valves to be adjusted as shown in
34 the Plans.

35
36
37 **7-05.3(3) Connections to Existing Manholes**

38 *The first sentence is revised to read:*

39
40 The Contractor shall inspect the existing manholes in the field to verify invert elevations
41 and the scope of work necessary to make the connection(s) prior to construction.

42
43 **7-05.4 Measurement**

44 *The sixth paragraph is revised to read:*

45
46 Connections to existing structures will be measured per each.

47
48 *This section is supplemented with the following:*

49
50 Reconnecting existing sewer pipes to new manhole structures will be measured per
51 each.

1
2 Manholes with Cast-in-Place Base will be measured per each.

3
4 Catch Basin Type 2 __ in excess of 10 feet in height will be measured per linear foot for
5 each additional foot of height over 10 feet. Measurement will be the distance from the
6 flow line of the outlet pipe to the top of the manhole ring measured to the nearest foot.

7
8 **7-05.5 Payment**

9 *The first paragraph is supplemented with the following:*

10
11 The unit Contract price for "Manhole_____" shall be full pay for all work required to
12 furnish and install the new manhole to finished grade, including, but not limited to,
13 excavating for, furnishing backfill, compaction of backfill, connection of new pipe(s),
14 channeling, covers, frames, ladders, steps, and handholds, as applicable per Standard
15 Plans.

16
17 The unit Contract price for "Catch Basin_____" shall be full pay for all work required to
18 furnish and install the new catch basin to finished grade, including, but not limited to,
19 excavating for, furnishing backfill, compaction of backfill, connection of new pipe(s),
20 frame, cover, as applicable per Standard Plans.

21
22 *The pay item for "Drop Manhole Connection" is revised to read:*

23
24 "Drop Manhole Connection, ____-Inch Diam.", per each.

25
26 *The pay item for "Connection to Drainage Structure" is revised to read:*

27
28 "Connect New Sewer Pipe ____-In. Diam. to Existing Structure", per each

29
30 *This section is supplemented with the following:*

31
32 "Reconnect Existing Sewer Pipe, ____-In. Diam., to New Structure", per each.

33
34 The unit Contract price per each shall be full pay for all labor, equipment and materials
35 necessary to reconnect the existing sewer pipe to the new structure as specified in
36 Section 7-05.3.

37
38 "Adjust Existing Catch Basin, Furnish New Frame and Grate", per each

39
40 The unit Contract price per each for "Adjust Existing Catch Basin, Furnish New Frame
41 and Grate" shall be full pay for all costs associated with adjusting the frame and grate to
42 finished grade, including but not limited to, excavating, furnish and place backfill,
43 furnishing and installing the new frame and grate, compacting, surfacing, and
44 restoration.

45
46 "Adjust Existing Manhole, Furnish New Frame and Cover", per each

47
48 The unit Contract price per each for "Adjust Existing Manhole, Furnish New Frame and
49 Cover" shall be full pay for all costs associated with adjusting the frame and cover to
50 finished grade, including but not limited to, excavating, furnish and place backfill,

1 furnishing and installing the new frame and cover, compacting, surfacing, and
2 restoration.

3
4 "Adjust Existing Valve Chamber to Grade", per each

5
6 The unit Contract price per each for "Adjust Existing Valve Chamber to Grade" shall be
7 full pay for all costs associated with the adjusting the valve chamber to finished grade,
8 including but not limited to, excavating, furnish and place backfill, compacting, surfacing,
9 and restoration.

10
11 "Manhole ____-In. Diam. Type ____, with Cast-in-Place Base", per each.

12
13 The unit Contract price per each for "Manhole ____-In. Diam. Type ____, with Cast-in-
14 Place Base" shall be full pay for all labor, equipment and materials required to furnish,
15 excavate for, furnish and place backfill, compact, and install to finished grade the new
16 manhole with a cast-in-place base, including, but not limited to, insuring proper support
17 of existing main, channeling, connection of new pipe, covers, frames, ladders, steps, and
18 handholds, as applicable per Standard Plans

19
20 "Catch Basin Type 2 Additional Height, ____ In. Diam.", per linear foot.

21
22
23 **END OF SECTION**
24

1
2 **7-07 CLEANING EXISTING DRAINAGE STRUCTURES**
3 **(March 23, 2010 Tacoma GSP)**
4

5 **7-07.3 Construction Requirements**

6 *Item three of paragraph two is revised to read:*
7

- 8 3. If sediment and water from structures does not meet the conditions described in
9 1 or 2 above, the Contractor shall collect and dispose of all water used and all
10 debris generated in cleaning operations. No cleaning water or debris shall be
11 flushed downstream beyond the limits of the work.
12

13
14 **END OF SECTION**
15
16

1 **7-08 GENERAL PIPE INSTALLATION REQUIREMENTS**
2 **(September 20, 2018 Tacoma GSP)**

3
4 **7-08.3 Construction Requirements**

5
6 *This section is supplemented with the following:*

7
8 Material excavated in areas labeled on the Plans as contaminated shall be hauled to LRI
9 Landfill, located at 30919 Meridian Street East, Graham, WA or an approved licensed
10 solid waste disposal facility per Section 2-17 and 7-17 of these Specifications.

11
12 **7-08.3(1)A Trenches**

13 *The tenth paragraph of this section is deleted. All dewatering requirements are found*
14 *in section 8-01.3(1)C.*

15
16 **7-08.3(1)C Bedding the Pipe**

17 *This section is supplemented with the following:*

18
19 Pipe bedding for sanitary and storm sewers shall be in accordance with City of Tacoma
20 Standard Plan No. SU-16.

21
22 **7-08.3(2)F Plugs and Connections**

23 *This section is supplemented with the following:*

24
25 Rigid Couplings, manufactured by Romac Industries, Inc., or Engineer approved equal,
26 shall be used at any pipe joint in which bell and spigot or fused joints are not
27 used. Flexible couplings are not permitted, except for side sewer installation.

28
29 **7-08.3(2)G Jointing of Dissimilar Pipe**

30 *This section is revised to read:*

31
32 Dissimilar pipe shall be joined by use of rigid couplings manufactured by Romac
33 Industries, Inc., or Engineer approved equal, except for side sewer installation.

34
35 **7-08.3(3) Backfilling**

36 *The second paragraph is revised to read:*

37
38 Pipe zone bedding and trench backfill shall be in accordance with City of Tacoma
39 Standard Plan No. SU-16. (Pipe zone backfill shall meet the requirements of Section 9-
40 03.9(3) for Crushed Surfacing Top Course. Backfill above pipe zone and extra
41 excavation area backfill material shall meet the requirements of Section 9-03.12(2),
42 Gravel Backfill for Walls.) Recycled concrete shall not be used for pipe zone bedding,
43 pipe zone backfill, backfill above pipe zone, and extra excavation area backfill.

44 *The fourth paragraph is revised to read:*

45
46 Backfill above the pipe zone shall be accomplished in such a manner that the pipe will
47 not be shifted out of position nor damaged by impact or overloading. If pipe is being
48 placed in a new embankment, backfill above the pipe zone shall be placed in
49 accordance with Section 2-03.3(14)C. If pipe is being placed under existing paved
50 areas, or roadways, backfill above the pipe zone shall be placed in horizontal layers no
51 more than 12-inches thick and compacted to 95-percent maximum density. If pipe is

1 being placed in non-traffic areas, backfill above the pipe zone shall be placed in
2 horizontal layers no more than 12-inches thick and compacted to 85-percent maximum
3 density. All compaction shall be in accordance with the Compaction Control Test of
4 Section 2-03.3(14)D. Material excavated from the trench shall be used for backfill above
5 the pipe zone, except that organic material, frozen lumps, wood, rocks, or pavement
6 chunks larger than 6-inches in maximum dimension shall not be used. Material
7 determined by the Engineer to be unsuitable for backfill at the time of excavation shall be
8 removed and replaced with imported backfill material meeting the requirements of
9 Section 9-03.12(2). Material determined to be suitable for backfill at the time of
10 excavation shall be stockpiled and used for backfill material. If the stockpiled material
11 becomes unsuitable, the Contractor shall furnish suitable material in an amount equal to
12 that, which became unsuitable, at no expense to the Contracting Agency.

13
14 *Section 7-08.3 is supplemented with the following:*

15 **7-08.3(5) Temporary Bypass Pumping**

16
17 It shall be the Contractor's responsibility to maintain operation of the existing storm
18 and/or sanitary sewer systems throughout the duration of the project without any
19 interruption of sewer service. The Contractor shall divert all flows around each segment
20 of the pipe designated for replacement. This diversion shall consist of redirecting flow
21 from an upstream manhole and discharging it to a manhole downstream of the
22 replacement operation. This can be accomplished via a combination of pumping and/or
23 gravity flow. After the pipe replacement work is completed and accepted by the City,
24 flow shall be returned to the reconstructed storm or sanitary sewer. The area affected
25 by the bypass operation shall be fully restored.

26
27 Bypass pumping shall be scheduled for continuous operation with back-up equipment
28 available at all times for periods of maintenance and refueling or failure of the primary
29 bypass pump(s) or diversion system. If the Contractor's operation requires bypass
30 pumping at night, he/she must provide monitoring personnel at all times to ensure the
31 system remains functional.

32
33 Bypass pumping shall be done in such a manner as not to damage private or public
34 property, or create a nuisance or public menace. The pumped sewage or stormwater
35 shall be in enclosed hoses or pipes that are adequately protected from traffic, and shall
36 be redirected into the appropriate sewer system. The discharge of storm water to
37 private property, city streets, sidewalks, sanitary sewer, or any location other than an
38 approved storm sewer is prohibited. The discharge of sewage to private property, city
39 streets, sidewalks, storm sewer, or any location other than an approved sanitary sewer
40 is prohibited. The Contractor shall be liable for all cleanup, damages, and resultant fines
41 should the Contractor's operation cause any backups, overflows, or property damage.
42 The Contractor's bypass operation shall be sized to handle, at a minimum, the full pipe
43 capacity in each subject line removed from service. If flow conditions are greater than
44 full pipe, the Contractor may elect to wait for flow conditions to subside prior to removing
45 the subject line from service. Working days may be adjusted per Specification 1-08.5.
46 Once the Contractor removes a section of line from service he/she is responsible to
47 bypass any and all flow in the system during construction, even in the event the system
48 surcharges and exceeds the full pipe capacity, until the line is returned to service.
49
50

1 The Contractor shall submit a Bypass Pumping Plan in accordance with Section 1-05.
2 The Contractor's plan for bypass pumping shall be reviewed by the City before the
3 Contractor will be allowed to commence bypass pumping. The review of the bypassing
4 system and equipment by the Engineer shall in no way relieve the Contractor of his
5 responsibility and public liability.

6
7 The Contractor shall use hard pipe to bypass sewers 12-inches in diameter or greater.
8 The Contractor shall not block any driveways or intersections, but shall bury the pipe to
9 allow continuous access through intersections and driveways.

10
11 The Contractor may use lay-flat hose to bypass storm and sanitary sewers that are less
12 than 12 inches in diameter. The Contractor shall ensure that sewage spills do not occur
13 with the use of lay flat hoses. If sewage spills occur, the Contractor will be required to
14 use hard pipe for all sanitary sewers.

15 16 **7-08.3(6) Abandon Existing Pipe**

17
18 If construction of the new sewer pipe does not result in the removal of the existing pipe
19 due to differing alignments, then the existing pipe shall be abandoned in place as shown
20 in the Plans. The Contractor shall plug all pipe branches, stubs, or other open ends of
21 the pipe to be abandoned and fill with CDF. The Contractor shall submit a Pipe
22 Abandonment Plan in accordance with Section 1-05.3 describing the proposed methods
23 for filling the pipes with CDF, specifically addressing how the pipes will be filled in a
24 manner that will prevent air pockets from being left in the abandoned pipe. The CDF mix
25 design shall meet the requirements of Section 2-09.3(1)E.

26
27 If the pipes to be abandoned are removed and disposed of during construction of the
28 new sewers, all costs for the removal and disposal shall be included in the unit contract
29 price for "Structure Excavation, Class B," at per cubic yard.

30 31 **7-08.4 Measurement**

32 *This section is supplemented with the following:*

33
34 No specific measurement shall apply to the lump sum item "Temporary ____ Sewer
35 Bypass".

36
37 No specific measurement shall apply to the lump sum item "Temporary ____ Sewer
38 Bypass Plan".

39
40 Abandonment of existing sewer pipes will be measured by the cubic yard of CDF
41 necessary to fill the existing pipes.

42 43 **7-08.5 Payment**

44 *This section is supplemented with the following:*

45
46 "Temporary ____ Sewer Bypass", per lump sum.

47
48 The lump sum Contract prices for "Temporary ____ Sewer Bypass" shall be full payment
49 for labor, equipment, and materials, including but not limited to, personnel, fuel,
50 monitoring, power, pumps, piping, barricades, emergency stand-by equipment,
51 trenching, surface restoration costs, and all other work necessary to maintain

1 uninterrupted storm and sanitary sewer services by bypassing the applicable sewer
2 system flows.

3
4 "Temporary ____ Sewer Bypass Plan", per lump sum

5
6 The lump sum Contract price for "Temporary ____ Sewer Bypass Plan" shall be full pay
7 for all costs, including but not limited to, preparing, submitting, revising, and resubmitting
8 revisions for the Temporary Bypass Plan.

9
10 "CDF for Pipe Abandonment", per cubic yard.

11
12 The unit Contract price for "CDF for Pipe Abandonment" shall be full payment for all
13 labor, materials, and equipment necessary to abandon the sewer pipes.

14
15
16 **END OF SECTION**
17
18

1 **7-17 SANITARY SEWERS**
2 **(March 4, 2014 Tacoma GSP)**

3
4 **7-17.1 Description**

5 *This section is supplemented with the following:*

6
7 All references to sanitary sewer shall also mean storm sewers.

8
9 **7-17.2 Materials**

10 *The first paragraph is revised to read:*

11
12 Pipe materials used for storm and sanitary sewers shall be as shown on plans. All
13 references to PVC shall mean Solid Wall PVC Sewer Pipe. Profile Wall PVC will not be
14 permitted.

15
16 *This section is supplemented with the following:*

17
18 Polyvinyl Chloride (PVC) Pressure Pipe (4-inches and over) 9-30.1(5)A
19

20 **7-17.3 Construction Requirements**

21
22 *This section is supplemented with the following:*

23
24 Material excavated in areas labeled on the Plans as contaminated shall be hauled to LRI
25 Landfill, located at 30919 Meridian Street East, Graham, WA or an approved licensed
26 solid waste disposal facility per Section 2-17 of these Specifications.

27
28 **7-17.3(2)A General**

29 *The first paragraph is revised to read:*

30
31 Sewers and appurtenances shall be cleaned and tested after backfilling by either
32 exfiltration or low-pressure air method at the option of the Contractor, except where the
33 ground water table is such that the Engineer may require the infiltration test.

34
35 **7-17.3(2)H Television Inspection**

36 *The first sentence is revised to read:*

37
38 The Contracting Agency will video inspect all sanitary and storm sewers prior to paving
39 where paving occurs over sewers, or prior to final acceptance.

40
41 **7-17.4 Measurement**

42 *This section is supplemented with the following:*

43
44 Removal and replacement of unsuitable, contaminated and non-contaminated, backfill
45 material will be determined by the cubic yard in place, based on a neat line
46 measurement per this Section and Section 2-09. Any removal and replacement of
47 unsuitable material outside neat line measurement shall be incidental to the Bid item.

48
49 **Horizontal Limits:** The horizontal limits shall be as defined in Section 2-09.4.

50
51 **Longitudinal Limits:** The longitudinal limits shall be as defined in Section 2-09.4.

Lower Limits: The lower limits shall be the top of the pipe zone as shown on Standard Plan No. SU-16.

Upper Limits: The upper limits shall be the subgrade elevation of the proposed roadway section or pavement patch section.

All costs associated with the disposal of material located above the upper limits shall be included in the unit contract price for other items of work, unless a proposal item is included for this specific item of work.

Pipe zone limits are as defined in Standard Plan SU-16.

7-17.5 Payment

The first paragraph is supplemented with the following:

“PVC Storm Sewer Pipe ____ In. Diam.”, per linear foot.

The second paragraph is revised to read:

The unit Contract price per linear foot for sewer pipe of the kind and size specified shall be full pay for the furnishing, hauling, and assembling in place the complete installation, including but not limited to, disposal of material excavated within the pipe zone, furnishing and installing pipe bedding and backfill material within the pipe zone, and all wyes, tees, special fitting, joint materials, and other appurtenances necessary for the completion of the installation to the required line and grade, unless proposal items are included for these specific items of work.

The pay item “Removal and Replacement of Unsuitable Material” is revised to read:

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

The unit Contract price per cubic yard for “Removal and Replacement of Unsuitable Material” shall be full pay for all work required to haul and dispose of the unsuitable material as specified in Section 7-08.3(1)A and the furnishing of suitable backfill material as specified in Section 7-08.3(3).

For the purpose of providing a common proposal for bidders, the proposal quantity for “Removal and Replacement of Unsuitable Material” is based on removal and replacement of all backfill material.

This section is supplemented with the following:

“Removal and Replacement of Unsuitable Contaminated Material, Incl. Haul”, per cubic yard.

The unit Contract price per cubic yard for “Removal and Replacement of Unsuitable Contaminated Material, Incl. Haul” shall be full pay for all work required to haul to LRI or other approved facility, disposal of the unsuitable material as specified in Section 7-08.3(1)A, including disposal fees, and the furnishing of suitable backfill material as specified in Section 7-08.3(3).

1
2 "Pipe Zone Contaminated Material Haul and Disposal", per cubic yard.

3
4 The unit Contract price per cubic yard for "Pipe Zone Contaminated Material Haul and
5 Disposal" shall be full pay for all work required to haul and dispose of the pipe zone
6 material as defined on Standard Plan SU-16, including disposal fees.

7
8
9 **END OF SECTION**
10

1 **8-01 EROSION CONTROL AND WATER POLLUTION CONTROL**
2 **(April 1, 2018 Tacoma GSP)**
3

4 **8-01.1 Description**

5 *This section is supplemented with the following:*
6

7 The City of Tacoma Stormwater Management Manual is available on the City's website
8 at www.cityoftacoma.org/stormwatermanual.
9

10 **8-01.3(1) General**
11

12 **8-01.3(1)A Submittals**

13 *This section is revised to read:*
14

15 The Contractor shall prepare and implement a project-specific Construction Stormwater
16 Pollution Prevention Plan (SWPPP) in accordance with the City of Tacoma Stormwater
17 Management Manual (SWMM), Volume 2. The SWPPP is a document that describes
18 the potential for pollution problems on a construction site and explains and illustrates the
19 measures to be taken on the construction site to control those problems.
20

21 The Construction SWPPP shall be prepared as a stand-alone document consisting of
22 two sections: Section 1) Construction SWPPP Narrative and Section 2) Temporary
23 Erosion and Sediment Control (TESC) Plans.
24

25 The Contracting Agency has prepared the Construction Stormwater Pollution Prevention
26 Plan Checklist to aid the Contractor in development of the SWPPP. This checklist
27 provides the Contractor with a tool to determine if all the major items are included in the
28 Construction SWPPP and on the TESC Plans and can be found in Volume 2, Chapter 2
29 of the SWMM. Contractors are encouraged to complete and submit this checklist with
30 the Construction SWPPP.
31

32 The Department of Ecology has prepared a SWPPP template that can be used for
33 projects in the City of Tacoma. The template can be found on Ecology's website at:
34 <http://www.ecy.wa.gov/programs/wq/stormwater/construction/resourcesguidance.html>.
35 The Contractor developing the SWPPP must ensure that all references are appropriate
36 for the City of Tacoma.
37

38 The SWPPP is considered a "living" document that shall be revised to account for
39 additional erosion control/pollution prevention BMPs as they become necessary and are
40 implemented in the field during project construction. A copy of the most current SWPPP
41 and TESC Plan shall remain on-site at all times and an additional copy shall be
42 forwarded to the Engineer. At the Contractor's preference, revisions to the SWPPP and
43 TESC Plan may be forwarded to the Engineer rather than submitting a complete
44 document. Revisions to the SWPPP and TESC Plan may be kept on-site in a file along
45 with the original SWPPP document.
46

47 The Contractor shall provide Stormwater Pollution Prevention Plan inspection reports or
48 forms per 8-01.3(1) B to the Project Engineer no later than the end of the next working
49 day following the inspection.
50
51
52

1 **8-01.3(1)B Erosion and Sediment Control (ESC) Lead**

2 *This section is revised to read:*

3
4 The Contractor shall identify the ESC Lead at the Preconstruction Meeting and the
5 contact information for the ESC Lead shall be added to the Stormwater Pollution
6 Prevention Plan (SWPPP) Report and the Temporary Erosion and Sediment Control
7 (TESC) Plan Sheet. The ESC Lead shall maintain, for the life of the contract, a current
8 Certified Erosion and Sediment Control Lead (CESCL) certificate or maintain a current
9 Certified Professional in Erosion and Sediment Control (CPESC) certificate from a
10 course approved by the Washington State Department of Ecology. The CESCL or
11 CPESC shall be listed on the Emergency Contact List required under Section 1-
12 05.13(1).

13
14 The CESCL or CPESC shall direct implementation of the measures identified in the
15 SWPPP and as shown on the TESC plan. Implementation shall include, but is not
16 limited to the following:

- 17
18 4. Installing and maintaining all temporary erosion and sediment control Best
19 Management Practices (BMPs) included in the SWPPP and as shown on the
20 TESC plan. Damaged or inadequate BMPs shall be corrected as needed to
21 assure continued performance of their intended function in accordance with
22 BMP specifications and Permit requirements.
- 23 5. Performing monitoring as required by the NPDES Construction Stormwater
24 General Permit.
- 25 6. Inspecting all on-site erosion and sediment control BMPs at least once every
26 calendar week and within 24 hours of any discharge from the site. A SWPPP
27 Inspection report or form shall be prepared for each inspection and shall be
28 included in the SWPPP file. A copy of each SWPPP Inspection report or
29 form shall be submitted to the Engineer no later than the end of the next
30 working day following the inspection. The report or form shall include, but not
31 be limited to the following:
- 32 a. When, where, and how BMPs were installed, maintained, modified,
33 and removed.
 - 34 b. Observations of BMP effectiveness and proper placement.
 - 35 c. Recommendations for improving future BMP performance with
36 upgraded or replacement BMPs when inspections reveal SWPPP
37 inadequacies.
 - 38 d. Approximate amount of precipitation since last inspection and when
39 last inspection was performed.
- 40 7. Updating and maintaining a SWPPP file on site that includes, but is not
41 limited to the following:
- 42 a. SWPPP Inspection Reports or Forms.
 - 43 b. SWPPP narrative.
 - 44 c. National Pollutant Discharge Elimination System Construction
45 Stormwater General Permit (Notice of Intent).
 - 46 d. All documentation and correspondence related to the NPDES
47 Construction Stormwater General Permit.
 - 48 e. Other applicable permits.
- 49

50 Upon request, the file shall be provided to the Engineer for review.
51

8-01.3(2) Seeding, Fertilizing, and Mulching

8-01.3(2)A1 Seeding

The first paragraph is supplemented with the following:

The depth of cultivation shall be 3 inches.

8-01.3(2)B Seeding and Fertilizing

The first paragraph is supplemented with the following:

All seeding areas shall be seeded with the following mix:

Type of Seed	% by Weight
Dwarf Tall Fescue	45
Dwarf Perennial Rye	30
Red Fescue	20
Colonial Bentgrass	5

The rate of application shall be per the supplier's recommendation.

Seeding fertilizer shall be per supplier's recommendation for hydroseed application.

The fourth paragraph is supplemented with the following:

Seed shall be distributed uniformly over the designated area. Half of the seed shall be sown with the sower moving in one direction, and the remainder with the sower moving at right angles to the first sowing.

8-01.3(2)D Mulching

The first paragraph is supplemented with the following:

Mulch shall be applied per supplier recommendation or BMPs C120 & 121 per the City of Tacoma Surface Water Management Manual. The contractor shall re-apply mulch to protect exposed soil and seeded areas from erosion.

8-01.3(2)E Tackifiers

This section is supplemented with the following:

The Contractor shall follow the requirements of the City of Tacoma Surface Water Management Manual BMP C230 for using tackifiers with hydro-seeding and supplier's recommendations.

8-01.3(7) Stabilized Construction Entrance

The third paragraph is revised to read:

When the contract requires a wheel wash in conjunction with the stabilized entrance, the details for the wheel wash and the method for containing and treating the sediment-laden runoff shall be included as part of the SWPPP and TESC Plan.

8-01.3(8) Street Cleaning

The third paragraph is revised to read:

Street washing with water shall not be permitted.

1 **8-01.3(9)D Inlet Protection**

2 *Replace the third paragraph of this section with the following:*

3
4 When the depth of accumulated sediment and debris reaches approximately 1/3 the
5 height of an internal device or 1/3 the height of the external device (or less when so
6 specified by the manufacturer), or as designated by the Engineer, the sediment and
7 debris shall be removed and disposed of per SWMM BMP C220 or as specified on the
8 Plans or within the SWPPP.

9
10 *The section is supplemented with the following:*

11
12 Only bag-type filters are allowed for use in the public right of way.

13
14 **8-01.3(10) Wattles**

15 *The fifth and sixth sentences are revised to read:*

16
17 On gradually sloped or clay-type soils trenches shall be 3 to 5 inches deep. On loose
18 soils, in high rainfall areas, or on steep slopes, trenches shall be 3 to 5 inches deep, or
19 1/2 to 2/3 the thickness of the wattle.

20
21 **8-01.4 Measurement**

22 *The third paragraph is revised to read:*

23 Check dams will be measured by the linear foot along the ground line of the completed
24 check dam. No additional measurement will be made for check dams that are required
25 to be rehabilitated or replaced due to wear.

26
27 *This section is supplemented with the following:*

28
29 No specific unit of measurement shall apply to the lump sum item "Stormwater Pollution
30 Prevention Plan (SWPPP)".

31
32 No specific unit of measurement shall apply to the lump sum item "Dewatering Plan".

33
34 No specific unit of measurement shall apply to the lump sum item "NPDES Construction
35 Stormwater General Permit".

36
37 *Add the following new sections:*

38
39 **8-01.4(1) Lump Sum Bid for Project (No Unit Items)**

40
41 When the bid Proposal contains the item "Erosion/Water Pollution Control", there will be
42 no measurement of unit items for Work defined by Section 8-01.4 except as described in
43 Section 8-01.4(2). Also, except as described in Section 8-01.4(2), all of Sections 8-01.4
44 and 8-01.5 are deleted.

45 **8-01.4(2) Reinstating Unit Items with Lump Sum Erosion/Water Pollution Control**

46
47 The Contract Provisions may establish the project as lump sum, in accordance with
48 section 8-01.4(1) and also include one or more of the items included above in section 8-
49 01.4. When that occurs, the corresponding measurement provision in Section 8-01.4 is
50 not deleted and the Work under that item will be measured as specified.

1 The bid proposal contains the item "Erosion/Water Pollution Control," lump sum and the
2 additional erosion control items listed below. The provisions of Section 8-01.4(1),
3 Section 8-01.4(2), and Section 8-01.5(2) shall apply.

4
5 No specific unit of measurement shall apply to the lump sum item "Stormwater Pollution
6 Prevention Plan (SWPPP)".

7
8 No specific unit of measurement shall apply to the lump sum item "NPDES Construction
9 Stormwater General Permit".

10 11 **8-01.5 Payment**

12
13 *This section is supplemented with the following:*

14
15 Where removal of erosion control BMPs is directed by the Engineer according to 8-
16 01.3(16) or according to these specification and the plans, removal shall be included in
17 the lump sum or unit cost for these respective BMPs.

18
19 "Erosion Control", per lump sum. The lump sum contract price for "Erosion Control" shall
20 be full pay for all cost for labor, equipment, and materials to perform all work associated
21 with erosion control. Work shall include, but shall not be limited to, furnishing, purchase
22 and delivery or required materials, installation and maintenance of temporary erosion
23 and sediment control measures, and all costs incurred by the Contractor in performing
24 the Contract Work defined in Section 8-01, except for unit bid items in Section 8-01
25 when these are included in the bid proposal. It is the Contractor's responsibility to
26 maintain, repair, and replace any and all erosion control measures as required to
27 maintain compliance with the NPDES Construction Stormwater General Permit and
28 Tacoma Municipal Code 12.08 for the entire duration of the Project.

29
30 Where removal of erosion control BMPs is directed by the engineer according to 8-
31 01.3(16) or according to these specifications and the plans, removal shall be included in
32 the lump sum or unit cost for these respective BMPs.

33
34 "Stormwater Pollution Prevention Plan (SWPPP)", per lump sum. The lump sum
35 contract price for "Stormwater Pollution Prevention Plan (SWPPP)" shall be full pay for
36 all costs, including but not limited to, preparing, submitting, revising, and resubmitting
37 revisions for the Stormwater Pollution Prevention Plan.

38
39 "NPDES Construction Stormwater General Permit", per lump sum. The lump sum
40 contract price for "NPDES Construction Stormwater General Permit" shall be full pay for
41 all costs, including but not limited to, transfer of coverage, sampling, monitoring,
42 reporting, coordinating, inspecting, materials and labor, and all fees and any other
43 expenses necessary to fully comply with the requirements of the Permit up to and
44 including termination of the Permit and completion of the Work The lump sum price shall
45 also include all costs necessary to supply the City of Tacoma with all information as
46 necessary to ensure compliance with the permit.

47
48 **END OF SECTION**

1 **8-02 ROADSIDE RESTORATION**
2 **(April 1, 2018 Tacoma GSP)**

3
4 **8-02.3 Construction Requirements**

5
6 **8-02.3(5) Planting Area Preparation**

7 *This section is supplemented with the following:*

8
9 All grades shall be maintained in the areas to be planted in a true and even condition.
10 The contractor shall be careful not to disturb any of the existing or cut slopes. Where
11 final grades have not been established, the areas shall be finish graded and all surfaces
12 left in an even and compacted condition. The finished grade shall be such that after
13 planting, the grade shall be flush with adjoining surfaces; positive drainage shall also be
14 maintained.

15
16 **8-02.3(6) Soil Amendments**

17 *This section is supplemented with the following:*

18
19 Recycled/compost material in accordance with Section 9-14.4(8) shall be blended with
20 the specified topsoil at a ratio of 1/1 by volume.

21
22 **8-02.3(9) Pruning, Staking, Guying and Wrapping**

23 *This section is supplemented with the following:*

24
25 Crossed or rubbing branches shall be removed providing the natural shape of the tree is
26 preserved. Under no circumstances shall pruning be done prior to inspection and
27 approval of plants by the Engineer and Certified Arborist, in accordance with Section 2-
28 01. All cuts shall be made flush with the parent stem leaving no stubs. Pruning cuts
29 shall be made in a manner to favor the earliest possible covering of the wound by callus
30 growth. Cuts that produce large wounds and weaken the tree will not be acceptable.

31
32 Top growth removal to compensate for root loss shall not exceed one-third (1/3) of the
33 top growth unless otherwise specified or directed by the Engineer and certified Arborist.
34 Cuts created 3/4 inch in diameter shall be treated with an approved tree wound dressing.
35 All pruning shall produce a clean cut without bruising or tearing the bark and shall be in
36 living wood where the wood can properly heal over.

37
38 Evergreens shall not be pruned, except to remove injured branches. The use of pole
39 shears and/or hedge shears for pruning deciduous and evergreen trees will not be
40 permitted. All trimmings and other debris left over from the planting operations shall be
41 collected and disposed of off the site.

42
43 All evergreen trees and deciduous trees over 15 feet in height shall be guyed with three
44 wires or cables.

45
46 All deciduous and evergreen trees shall be staked the same day of planting.

47
48 All tree trimming and limb and root pruning shall be done in accordance with the
49 Certified Arborist in section 2-01.

1 **8-02.3(11) Bark or Wood Chip Mulch**

2 *The third sentence of the first paragraph is revised to read:*

3
4 Mulch shall be feathered to plant material trunks, stems, canes, or root collars, and level
5 with the top of junction and valve boxes, curbs and pavement edges.

6
7 *This section is supplemented with the following:*

8
9 Bark or wood chip mulch in accordance with Section 9-14.4(3) shall be applied to a
10 depth of 3 inches at the location indicated on the Plans or as directed by the Engineer.

11
12 **8-02.3(13) Plant Establishment**

13 *This section is revised to read:*

14
15 The Contractor shall maintain the planting areas and all plants planted within the project
16 limits to ensure the resumption and continued growth of the planted material until
17 physical completion of the contract.

18
19 Maintenance shall include, but not be limited to, labor and materials necessary for
20 removal of foreign, dead, or rejected plant material, maintaining a weed-free condition,
21 and the replacement of all unsatisfactory plant material planted under the contract.

22
23 Planting dates for replacement plant material will be approved by the Engineer.

24
25 The Contractor shall meet with the Engineer for the purpose of joint inspection of the
26 project once installation has been completed and thereafter on a periodic "as needed"
27 basis as determined by the Engineer, until the physical completion date of the contract.

28
29 All conditions unsatisfactory to the Engineer shall be corrected by the Contractor within a
30 ten-day period immediately following the inspection. Failure to comply with corrective
31 steps as outlined by the Engineer shall constitute justification of the Contracting Agency
32 to take corrective steps and to deduct all costs thereof from any monies due the
33 Contractor.

34
35 The Contractor shall replace all plants stolen or damaged by the acts of others until the
36 physical completion date of the contract.

37
38 **8-02.3(14) Plant Replacement**

39 *This section is revised to read:*

40
41 The Contractor shall provide the Contracting Agency a one (1) year non pro-rated, full
42 labor and materials warranty for all planted material. The warranty shall cause the
43 Contractor to remove and replace all rejected plant material during the warranty period.
44 The warranty period shall begin at the date of physical completion of the contract and
45 end one calendar year from that date.

46
47 The Contractor shall be responsible for growing or providing enough plants for
48 replacement of all plant material rejected during the warranty period. All rejected plant
49 material shall be replaced at dates approved by the Engineer.

1 All replacement plants shall be of the same species and quality as the plants they
2 replace. Plants may vary in size reflecting one season of growth should the Contractor
3 elect to hold plant material under nursery conditions for an additional year to serve as
4 replacement plants.

5
6 Replacement plants will be subject to the original warranty provision as stated above.
7

8 **8-02.3(16) Lawn Installation**

9 10 **8-02.3(16)A Lawn Installation**

11
12 *The second paragraph is revised to read:*

13
14 See Section 8-01.3(2) for seed type and rate of application.

15
16 *The third paragraph is supplemented with the following:*

17
18 Where no irrigation system is to be installed, the lawn shall be placed during the
19 following period only:

20
21 March 1st – June 30th
22 September 1st - October 25
23

24 *The fourth paragraph is revised to read:*

25 The Contractor shall use sodding for lawn installation at no additional expense to the
26 Contracting Agency. Seeding in lieu of sodding will not be allowed, unless otherwise
27 approved by the Engineer.

28
29 *The fifth paragraph is supplemented with the following:*

30
31 Topsoil shall be amended and tilled in accordance with BMP L613 as shown in City of
32 Tacoma Standard Plan GSI-01.
33

34 *The sixth paragraph is supplemented with the following:*

35 On sloped areas, the sod strips shall be laid perpendicular to the flow of water.
36

37 **8-02.3(16)B Lawn Establishment**

38 *This section is supplemented with the following:*

39
40 Lawn that is replaced shall be of the same mixture and grade as the surviving lawn.
41

42 The lawn shall be established prior to September 9th, unless otherwise approved by the
43 Engineer.
44

45 **8-02.3(17) Site Restoration**

46
47 During the construction of the roadway or HMA overlay, curb ramp construction, curb
48 and gutter construction, driveway entrance, and sidewalk construction; the Contractor
49 shall replace in kind, including but not limited to: any lawn, topsoil, plants, wood chip
50 mulch, garden walls, rockery, or irrigation heads/pipes, affected by the work unless
51 otherwise specified in the Plans or as directed by the Engineer. The limits of site

restoration shall be the same as the clearing and grubbing limits, specified in the Plans as "Site Restoration Daylight Line". Each location of work shall be graded to a smooth and even surface, matching existing grades. Grading shall be accomplished to blend the new work with the existing ground lines and to maintain natural drainage courses. Restoration of grass areas shall be by sod unless otherwise specified by the Engineer and shall be done in accordance with section 8-01. Hand seeding will not be allowed.

"Site Restoration" shall also include any landscaping items defined in the Plans and Specifications including but not limited to grass sod/seed, soil amendments, planting area preparation, grading, cultivating, planting, mulching, site clean-up, and water as necessary.

The Contractor shall amend soils in accordance with these special provisions. In addition, landscaping items not included in specific bid items shall be included under "Site Restoration", lump sum. All excess materials shall be removed from the site.

8-02.4 Measurement

The first paragraph is revised to read:

Topsoil, mulch and soil amendments will be measured by the cubic yard in the haul conveyance at the point of delivery.

The seventh paragraph is revised to read:

Compost will be measured by the cubic yard in the haul conveyance at the point of delivery.

This section is supplemented with the following:

Irrigation water used to establish vegetation will be considered included in the cost of plants.

No specific unit of measure will be applied to the lump sum bid item Site Restoration.

8-02.5 Payment

The pay item for "Plant Selection" is revised to read

The pay item for "Plant Selection" is revised to read

"Plant Selection", per each.

Payment for "Plant Selection" shall be full pay for all materials, labor, tools, equipment and supplies necessary for weed control within planting areas, planting area preparation, fine grading, planting, root barrier, root barrier installation, tree watering bags, mulch, sod, cultivating, and clean-up for the particular items called for in the Plans until the physical completion date of the contract. A one (1) year plant warranty shall be included in the unit contract price. This bid item includes all tree species as shown in the Plans, or as directed by the Engineer, there will be no extra payment for planting a plant species specified in the Plans.

1 *This section is revised to read:*

2

3 “Site Restoration”, per lump sum.

4

5 The lump sum payment for “Site Restoration” shall be full pay for all materials, labor,
6 tools, equipment, and supplies necessary for restoration of the job site and any
7 landscape items according to the Plans and Specifications, including but not limited to
8 replacement of irrigation appurtenances, grass sod/seed, planting area preparation, soil
9 amendment, grading, cultivating, planting, mulching, cleanup, and water necessary to
10 complete the site restoration, as specified.

11

12

13

14

END OF SECTION

1 **8-03 IRRIGATION SYSTEM**
2 **(April 1, 2018 Tacoma GSP)**
3

4 **8-03.3 Construction Requirements**

5 *The third paragraph is supplemented with the following:*
6

7 All electrical work from the electrical source to the controller junction box must be
8 completed by a licensed electrical contractor
9

10 **8-03.3(5) Installation**

11 *The first sentence of the second paragraph is revised to read:*
12

13 Final position of turf heads shall be level or ½ inch below finished grade measured from
14 the top of the sprinkler.
15

16 *The fourth paragraph is revised to read:*
17

18 Final position of valve boxes, capped sleeves, and quick coupler valves shall be level
19 with the finished grade or mulch.
20

21 *This section is supplemented with the following:*
22

23 The Contractor shall advise the Engineer at least 24 hours before pressure tests are to
24 be conducted.
25

26 A zone diagram shall be posted in the controller to facilitate the selection of the valves to
27 be operated.
28

29
30 **END OF SECTION**
31
32

1 **8-04 CURBS, GUTTERS, AND SPILLWAYS**
2 **(April 1, 2018 Tacoma GSP)**

3
4 **8-04.3(1) Cement Concrete Curbs, Gutters, and Spillways**

5 *The first paragraph is revised to read:*

6
7 Cement concrete curb, curb and gutters, gutters, and spillways shall be constructed
8 with air entrained concrete Class 3000 conforming to the requirements of Section 6-02.

9
10 *Section 8-04.3(1) Cement Concrete Curbs, Gutters, and Spillways is supplemented with*
11 *the following:*

12
13 **8-04.3(1)C Integral Cement Concrete Curb**

14
15 When integral curb is being constructed with the pavement, fresh concrete for the
16 integral curb shall be placed at such time as will enable the top section of the curb to be
17 consolidated, finished, and bonded to the pavement slab while the concrete is plastic.

18
19 Where curb is not being placed integral with the pavement slab, reinforcing steel dowels
20 shall be placed in the base section for the curb in accordance with the standard drawing.

21
22 *Section 8-04.3 Construction Requirements is supplemented with the following:*

23
24 **8-04.3(6) Cold Weather Work**

25
26 The following additional requirements for placing concrete shall be in effect from
27 November 1 to April 1:

- 28
29
 - The Engineer shall be notified at least 24 hours prior to placement of concrete.
 - All concrete placement shall be completed no later than 2:00 p.m. each day.
 - Where forms have been placed and the subgrade has been subjected to frost, no
32 concrete shall be placed until the ground is completely thawed. At that time, the
33 forms shall be adjusted and subgrade repaired as determined by the Engineer.

34
35 **8-04.5 Payment**

36 *This section is supplemented with the following:*

37
38 "Integral Cement Conc. Traffic Curb", per linear foot
39 "Extruded Curb Type _____", per linear foot.

40
41
42 **END OF SECTION**
43
44
45

1 **8-06 CEMENT CONCRETE DRIVEWAY ENTRANCES**
2 **(April 1, 2018 Tacoma GSP)**
3

4 **8-06.3 Construction Requirements**

5 *The first paragraph is revised to read:*
6

7 Cement concrete driveway approaches shall be constructed with air entrained concrete
8 Class 3000 conforming to the requirements of Section 6-02 or Portland Cement
9 Concrete Pavement conforming to the requirements of Section 5-05.

10
11 *This section is supplemented with the following sub-section:*
12

13 **8-06.3(1) Cold Weather Work**
14

15 The following additional requirements for placing concrete shall be in effect from
16 November 1 to April 1:
17

- 18 • The Engineer shall be notified at least 24 hours prior to placement of concrete.
- 19 • All concrete placement shall be completed no later than 2:00 p.m. each day.
- 20 • Where forms have been placed and the subgrade has been subjected to frost, no
21 concrete shall be placed until the ground is completely thawed. At that time, the
22 forms shall be adjusted and subgrade repaired as determined by the Engineer.
23

24 **8-06.5 Payment**

25 *The third paragraph is revised to read:*
26

27 Excavation required for the construction of the driveway entrance shall be paid for under
28 the unit Contract price for "Roadway Excavation, Incl. Haul" when included in the
29 Proposal. Otherwise, the Contractor shall include all costs associated with excavating,
30 including haul and disposal, regardless of the depth in the unit Contract price for
31 "Cement Conc. Driveway Entrance Type___".
32
33

34 **END OF SECTION**
35
36

1 **8-13 MONUMENT CASES**
2 **(March 17, 2003 Tacoma GSP)**

3
4 *This section is revised to read:*

5
6 **8-13 MONUMENTS**

7
8 **8-13.1 Description**

9
10 This Work shall consist of constructing monuments in accordance with the Standard
11 Plan and these Specifications, in conformity with the lines and locations shown in the
12 Plans or as staked by the Engineer.

13
14 **8-13.2 Materials**

15
16 Concrete shall be Class 3000 in accordance with the requirements of Section 6-02.
17 'Ready Mix' bag concrete shall not be used.

18
19 Bronze markers will be supplied by the Contracting Agency on City funded projects.

20
21 **8-13.3 Construction Requirements**

22
23 The Contractor shall construct the poured monument in accordance with the City of
24 Tacoma Standard Plan SU-01.

25
26 **8-13.4 Measurement**

27
28 Measurement of the poured monument will be per each.

29
30 **8-13.5 Payment**

31
32 Payment will be made in accordance with Section 1-04.1.

33
34 "Poured Monument", per each.

35
36 The unit Contract price per each for "Poured Monument" shall be full pay for all labor,
37 equipment, and materials required to furnish and install the monument, including the
38 removal of existing monuments and necessary pavement removal to accommodate the
39 installation in accordance with the standard plan and specifications.

40
41
42 **END OF SECTION**
43
44

1 **8-14 CEMENT CONCRETE SIDEWALKS**
2 **(March 23, 2010 Tacoma GSP)**

3
4 **8-14.3 Construction Requirements**

5
6 **8-14.3(3) Placing and Finishing Concrete**

7 *The fourth paragraph is revised to read:*

8
9 Curb ramps shall be of the type specified in the Plans. The detectable warning pattern
10 shall have the truncated dome shape shown in the Standard Plans.

11
12 **8-14.3(4) Curing**

13 *The second sentence is revised to read:*

14
15 Curing shall be in accordance with Section 5-05.3(13).

16
17 *Section 8-14 is supplemented with the following:*

18
19 **8-14.3(20) Cold Weather Work**

20
21 The following additional requirements for placing concrete shall be in effect from
22 November 1 to April 1:

- 23
24
 - The Engineer shall be notified at least 24 hours prior to placement of concrete.
 - 25 • All concrete placement shall be completed no later than 2:00 p.m. each day.
 - 26 • Where forms have been placed and the subgrade has been subjected to frost, no
 - 27 concrete shall be placed until the ground is completely thawed. At that time, the
 - 28 forms shall be adjusted and subgrade repaired as determined by the Engineer.

29
30 **8-14.3(21) Thickened Edge for Sidewalk**

31
32 Thickened edge shall be constructed in accordance with the standard plan.

33
34 **8-14.5 Payment**

35 *The pay item "Cement Conc. Sidewalk" is supplemented with the following:*

36
37 All additional costs related to the construction of thickened edges shall be included in the
38 unit contract cost for "Cement Conc. Sidewalk".

39
40 *The fourth and fifth paragraph are revised to read:*

41
42 "Cement Conc. Curb Ramp", per each

43
44 The unit Contract price per each for "Cement Conc. Curb Ramp" shall be full pay for
45 installing the curb ramp, regardless of type, including all pedestrian curbs, wings,
46 transitions, flares, ramps and landings, and the "Detectable Warning Surface". The
47 Contractor shall include all costs associated with excavating or excavating contaminated
48 material, including haul and disposal to an appropriate location, regardless of the depth
49 in the unit contract price for "Cement Conc. Curb Ramp".

1 *The sixth paragraph is revised to read:*

2
3 Excavation required for the construction of the sidewalk shall be paid for under the unit
4 contract price for "Roadway Excavation, Incl. Haul" when included in the proposal.
5 Otherwise, the Contractor shall include all costs associated with excavating, including
6 haul and disposal, regardless of the depth in the unit contract price for "Cement Conc.
7 Sidewalk" and/or "Cement Conc. Curb Ramp".

8
9
10 **END OF SECTION**
11
12

1 **8-20 ILLUMINATION, TRAFFIC SIGNAL SYSTEMS, AND ELECTRICAL**
2 **(August 6, 2020 Tacoma GSP)**

3
4 **8-20.1(3) Permitting and Inspections**

5 *The third paragraph is revised to read:*

6
7 All new services require a Tacoma Public Utilities Permit and inspection by Tacoma
8 Power. All work on the load side of the service will be inspected by the Signal and
9 Streetlight Shop Inspector.

10
11 **8-20.2 Materials**

12 *This section is supplemented with the following:*

13
14 The Contractor shall warranty all electrical and mechanical equipment described in this
15 section for satisfactory in service operation for one year following project acceptance.
16 Warranty shall include troubleshooting, labor, materials and all other costs to bring the
17 equipment to a satisfactory level of service. Normal maintenance is not included in the
18 warranty.

19
20 **8-20.2(1) Equipment List and Drawings**

21 *This section is revised to read:*

22
23 Within 20 days following execution of the Contract, the Contractor shall submit to
24 the Engineer a completed "Request for Approval of Material" that describes the material
25 proposed for use to fulfill the Plans and Specifications.

26
27 The Contractor shall submit Type 2 Working Drawings consisting of supplemental data,
28 sample articles, or both, of the material proposed for use. Supplemental
29 data includes such items as catalog cuts, product Specifications, shop drawings, wiring
30 diagrams, etc.

31
32 The Contractor shall submit Type 2 Working Drawings consisting of the following
33 information for each different type of luminaire required on the Contract:

- 34
35 1. Isocandela diagrams showing vertical light distribution, vertical control limits,
36 and lateral light distribution classification.
37 2. Details showing the lamp socket positions with respect to lamp and refractor
38 for each light distribution type. This requires that the Contracting Agency
39 know what the light pattern available are and the light distribution.

40
41 Additional submittals for proposed alternate LED Roadway Luminaires shall be in
42 conformance with section 9-29.10.

43
44 The Contractor shall submit for approval Type 3E Working Drawings in accordance with
45 [Section 1-05.3](#) for each type of light standard and each type of signal standard called for
46 on this project.

47
48 The Engineer's acceptance of any submitted documentation shall in no way relieve the
49 Contractor from compliance with the safety and performance requirements as specified
50 herein.

Submittals required shall include but not be limited to the following:

1. A Type 2 Working Drawing consisting of a material staging plan, should the Contractor propose Contracting Agency-owned property for staging areas.
2. A Type 2 Working Drawing consisting of a cable vault installation plan showing the exact proposed installation location by Roadway station, offset and the scheduled sequence for each cable vault installation.
3. A Type 2E Working Drawing consisting of a pit plan, for each boring pit, depicting the protection of traffic and pedestrians, pit dimensions, shoring, bracing, struts, walers, sheet piles, conduit skids, and means of attachment, casing type, and casing size.
4. A Type 2E Working Drawing consisting of a boring plan depicting the boring system and entire support system.

8-20.3 Construction Requirements

8-20.3(1) General

This section is supplemented with the following:

The Contractor shall call 24 hours prior for inspection before covering any underground conduit, prior to installing any detection loops, or placing concrete for foundations. For inspections, notify Traffic Signal/Streetlighting at (253) 591-5287.

Work shall be sequenced such that after the new signal is placed in operation, the Contractor shall remove any equipment not required for the operation of the new signal. The Contractor shall remove the old vehicle and pedestrian signal heads immediately after the new system is operational.

For new signals, the contractor shall provide a Portable Message Change Sign in each direction and operate the PMCS for one week before, and one week after activating the new signal. This work shall be paid for in accordance with Section 1-10.

Uniformed police officers shall be provided by the Contractor to direct traffic at any time the signal is not in normal operation. This work shall be paid for in accordance with Section 1-10.

The following existing and temporary equipment shall be deconstructed/removed by the Contractor and delivered to the City of Tacoma Signal/Streetlight Shop located at 3401A South Orchard Street. Care shall be exercised in removing and salvaging the equipment. Any equipment damaged during removal, hauling, and stockpiling shall be repaired or replaced by the Contractor at no expense to the City.

- All signal heads and mounting hardware
- Flashing beacons, and flasher control panel
- Steel poles, mast arms, and hardware
- Aluminum poles, mast arms, and hardware
- Controller cabinets and all internal hardware and wiring
- Vehicle detection systems, including video, microwave, and infrared systems, and associated hardware
- All Opticom equipment or other preemption and priority equipment.
- LED luminaries, LED retrofit kits, and LED lamps

- Ornamental/Decorative fixtures and poles/posts
- Pedestrian signals, poles, and pushbuttons.
- Signs, brackets, and hardware
- Locking junction box security lids, security bolts, and all other wire theft deterrent security hardware

All other equipment shall be removed of and disposed of by the Contractor, including but not limited to the following:

- Wood poles
- All wiring outside of the controller cabinet
- Loops
- Non-LED cobra-head fixtures

8-20.3(4) Foundations

This section is supplemented with the following:

Breakaway Base Connection brackets for pedestrian pushbutton poles (Type PPB) shall be installed with the flanges parallel to the traveled way, as shown on WSDOT standard plan J-20.15-03.

Anchor bolts for streetlight standards and for strain poles shall extend a minimum of two threads and a maximum of six threads above the top heavy-hex-nut. A minimum of three threads shall remain between bottom of the leveling hex-nut and the top of the foundation.

Foundations shall be excavated using an auger and poured against undisturbed material unless otherwise approved by the Engineer. Vacuum excavation should be used where there is a possibility of conflict with utilities or other facilities.

Forming the foundation with galvanized culvert pipe or similar forming methods will only be allowed when soil conditions or other factors make this method of construction necessary and is approved by the Engineer. Biodegradable forming tubes shall be fully removed from the cured concrete prior to backfilling. When using culvert or tubes, the following backfill requirements will apply. The area between the form and undisturbed material shall be filled with CDF. For lightly loaded installations and only with the approval of the Engineer, Crushed Surfacing Top Course meeting the requirements of Section 9-03.9(3) may be used. Placement shall be in accordance with Section 2-09.3(1)E and shall be backfilled and compacted in the presence of the Engineer.

8-20.3(5) Conduit

8-20.3(5)A General

This section is supplemented with the following:

Unless otherwise specified in the plans and specifications, standard conduit sizes shall be as follows:

- Underground Streetlight Conduit: 2 inch diameter
- Pole Riser Service Installations: 1-1/2 inch diameter
- Traffic Signal Conduit: 3 inch diameter
- Traffic Signal Communication: 3 inch diameter
- All other conduit: 2 inch diameter, unless otherwise specified.

As soon as the mandrel has been pulled through, both ends of the conduit shall be sealed in an approved manner. Location wire, in conformance with 9-29.3(2)A4 and Pull Tape, in conformance with 9-29.1(10), shall be installed in all empty conduits. At least three (3) feet of the location wire and pull tape shall be neatly coiled and secured to the conduit in the same manner as is shown in Washington State Department of Transportation Standard Plan J-28.70-01, Details A and B.

8-20.3(5)B Conduit Type

This section is supplemented with the following:

Conduit under driveways and other vehicular access ways shall be Schedule 80 high-density polyethylene (HDPE), Schedule 80 PVC, or rigid metal conduit (RMC)

Conduit installed in a joint trench, with power, and that is installed a minimum of 36-inches from finished grade may utilize Schedule 40 PVC in lieu of Schedule 80 PVC. This allowance shall not be construed to permit the use of dissimilar materials in a single run.

Pole riser conduit material types shall be in accordance with applicable City of Tacoma standard plans.

8-20.3(5)D Conduit Placement

This Section is supplemented with the following:

Conduit terminating in pole foundations shall extend to 3 inches below the handhole.

Conduit terminating in controller foundations shall terminate 1 inch above the foundation.

8-20.3(5)E1 Open Trenching

Subsection 5 is revised to read:

5. Trenches located within the paved roadway shall be backfilled with 3 inches of sand over the conduit, followed by material meeting the requirements of Section 9-03.12(3). Compaction shall be in conformance with Section 2-09.3(1)E. All street cuts shall be repaired in accordance with the standard plans.

This section is supplemented with the following new Subsections:

7. Where multiple conduit are installed in the same trench, the trench shall be of sufficient width to accommodate all conduit, with a minimum 3-inch separation between each conduit, and a minimum clearance of 1-inch on the sides of the trench. When conduit is laid horizontal to one another, the conduit shall be laid at the same elevation, parallel with one another. When conduit is laid vertically in the same trench, conduit spacers shall be used to maintain the 3-inch separation. Spacers shall be installed in accordance with the manufacturer's recommendations for conduit of that size and type. Additional spacers shall be required where the supported conduit is sagging more than 20% of the nominal diameter of the conduit.
8. In all conduit trenches, metallic, detectable, utility warning tape shall be placed at twelve (12) inches below final grade.

8-20.3(6) Junction Boxes, Cable Vaults, and Pull boxes

This section is supplemented with the following:

Unless otherwise specified in the plans, or as otherwise directed by the engineer, all junction boxes exposed to vehicular traffic shall be Heavy-Duty. Field adjustment of junction boxes, which cause junction boxes to be installed within an intersection radius and within four feet of the curb face may be required to be Heavy-Duty. Final placement and type of all junction boxes within an intersection shall be as directed by the Engineer.

Adjacent junction boxes shall be separated by a minimum of three-inches.

Concrete meeting the requirements of 6-02.3(2)B shall be placed surrounding all junction boxes except as otherwise provided for below. Concrete shall be flush with the top of the junction box and the adjacent improvements. Concrete shall be cast in place. Junction boxes shall be secured with the concrete border as follows:

1. When the junction box is located within a concrete or asphalt section and is located a minimum of 12-inches from the edge of the section, a concrete border will not be required.
2. Where junction boxes are located within 12-inches from the edge of the concrete or asphalt section, the junction box shall be secured on all sides with a minimum 12-inch wide, 6-inch deep concrete section. Concrete shall be finished in the same manner as the adjacent concrete where applicable.
3. Where junction boxes are located within a planter strip, a landscaped area, or other non-hardened surface, the junction box shall be bordered on all sides with a minimum 6-inch wide, 12-inch deep concrete section flush with the top of the junction box.

When setting a new junction box on an existing streetlight circuit where no equipment ground is present, a non-conductive junction box and lid shall be utilized.

8-20.3(7) Messenger Cable, Fittings

The second paragraph of this section is deleted.

This section is supplemented with the following:

Cable ties shall be used to neatly secure the signal cable to the span wire at 10-inch centers and shall be tightened at top. Excess tie material shall be completely cut off. The signal control cable shall be below the span wire and shall be straight with no twisting or spiraling.

A minimum 5% sag shall be provided in the span wire when fully loaded with all vehicular signal heads, unless otherwise directed by the Engineer.

8-20.3(8) Wiring

The third paragraph is revised to read:

All splices in underground illumination circuits, induction loop circuits, and magnetometer circuits shall be installed at junction boxes. The only splice allowed in an induction loop circuit shall be the shielded cable to loop wire splice. The only splice allowed in a magnetometer circuit shall be the probe lead-in cable to the magnetometer cable splice.

1 Induction loop splices and magnetometer splices shall be heat shrink type with moisture
2 blocking material, sized for the conductors. Magnetometer and induction loop splices
3 shall be soldered. The end of the sheathing shall be sealed with a heat shrink insulator.

4
5 *The fourth paragraph is revised to read:*

6
7 Signal wiring shall be in conformance with the following:

- 8
9
- 10 1. All termination for traffic signal control systems shall be in accordance with
11 City of Tacoma Standard Plan TS-15.
 - 12 2. All signal wiring shall be 14 gauge 5-conductor or 12 gauge 2-conductor
13 stranded copper wire unless otherwise shown in the plans.
 - 14 3. For 5-section heads, 2-5c-14 gauge conductors shall be utilized.
 - 15 4. 5c wire shall not be split between high voltage and low voltage. Where a
16 pedestrian head and a pedestrian push button share a common pole, a
17 separate 2c shall be pulled in for the push button.
 - 18 5. A single 5c may be split between two pedestrian heads on a common pole
19 with a jumper across the neutral.
 - 20 6. Opticom and detection wiring shall be per manufacturer's recommendations.

21 Field wiring of the cabinet shall be done by City of Tacoma Signal Electricians after all
22 wiring has been pulled into the cabinet and properly labeled with a temporary label
23 consisting of white electricians tape with permanent marker. The Contractor shall
24 provide a detailed description/key of all temporary labeling. The cabinet and labeling
25 shall be inspected by the Signal/Streetlight inspector prior to cabinet wiring. The
26 Contractor shall allow five working days for City Electricians to field wire the cabinet after
27 the inspection is complete. Improper or incorrect labeling requiring additional effort by
28 the City may result in additional time required by City forces to wire the cabinet.

29
30 *The fifth paragraph is revised to read:*

31
32 Splices and taps on underground and overhead circuits shall be made with solderless
33 crimp connectors, installed with an approved tool designed for the purpose, to securely
34 join the wires both mechanically and electrically. Splices and taps will be sealed in
35 accordance with this section.

36
37 *The seventh paragraph is revised to read:*

38
39 Aerial illumination splices shall be taped with thermoplastic electrical insulating tape
40 equivalent to the original wire insulation rating and thickness. It shall be well lapped over
41 the original insulation.

42
43 *The eighth paragraph is revised to read:*

44
45 All splices in junction boxes and pole handholes shall be taped and sealed with an
46 electrical coating. Tape splice insulation shall consist of thermoplastic electrical
47 insulating tape equivalent to the original wire insulation rating and thickness. It shall be
48 well lapped over the original insulation and moisture resistant electrical coating shall be
49 applied and allowed to dry. Two layers of thermoplastic tape will then be applied,
50 followed by a second layer of moisture resistant electrical coating.

1 *The ninth paragraph is revised to read:*

2
3 Illumination cable in light standards shall be #10 AWG USE or "Pole and Bracket" cable,
4 as specified in Section 9-29.3(2)D of the Standard Specifications.
5

6 *The tenth paragraph is revised to read:*

7 Fifteen (15) feet of slack cable shall be provided at the controller end of all cables
8 terminating in the controller cabinet. A minimum of three (3) feet of slack cable shall be
9 left at all strain poles and junction boxes.
10

11 **8-20.3(10) Service, Transformer, and Intelligent Transportation System (ITS)**
12 **Cabinets**

13 *The second, third, and fifth paragraphs are deleted.*
14

15 **8-20.3(13) Illumination Systems**
16

17 **8-20.3(13)A Light Standards**

18 *The sixth, seventh, and eighth paragraphs (regarding pole identification numbers) are*
19 *deleted.*
20

21 *This section is supplemented with the following:*
22

23 Conventional Base installation shall conform to the following:
24

25 The light standards shall be assembled and mounted complete on foundations perfectly
26 straight and in good alignment. Proper leveling of the standards shall be accomplished
27 by means of four leveling nuts that are to be employed with the anchor bolts. Standards
28 shall be plumb within 1/50-inch per foot.
29

30 Luminaires shall be securely attached to the mast arm in a straight and level position.
31 The luminaires shall be installed at a specified number of degrees from level if directed
32 by the Engineer. After the poles are plumbed, grout shall be neatly placed between the
33 pole base and the concrete. The Contractor shall form a 1/2-inch diameter weep hole in
34 the grout. The nuts and bolts required for this foundation shall be furnished by the
35 Contractor.
36

37 All above grade signal and streetlight infrastructure, including streetlight standards,
38 traffic signal poles, push-button poles, cabinets, and enclosures, shall not be installed
39 closer than three (3) feet from face of curb to the nearest part of the pole or structure
40 and no closer than five (5) feet from fire hydrants and utility poles.
41

42 **8-20.3(13)C Luminaires**

43 *This section is supplemented with the following:*
44

45 All luminaires supplied by the project shall be identified with a green "H-1" label on the
46 bottom of the luminaire. H-1 labels can be obtained at the Signal and Streetlight shop or
47 through the Signal and Streetlight Inspector.
48

49 **8-20.3(14) Signal Systems**
50

51 **8-20.3(14)A Signal Controllers**

52 *This section is revised to read:*
53

1 The fully wired control cabinet, the controller, the MMU, and detection hardware for the
2 cabinet shall be delivered to the City of Tacoma Traffic Signal Shop for configuration,
3 programming, testing, and certification prior to installation. At the Contractor's request,
4 the City will off load the equipment. The Contractor shall notify the City 24 hours in
5 advance of the equipment delivery.

6
7 A minimum of two weeks shall be required for the City to configure and test the cabinet
8 and controller for each intersection. If multiple cabinets and controllers are delivered,
9 the Contractor shall identify the sequence for configuration and allow one additional
10 week for each additional cabinet and controller delivered.

11
12 The Contractor shall be responsible for transporting the controller cabinet from the
13 Signal/Streetlight Shop site to the jobsite, and for installation of the cabinet and all field
14 wiring. Field wiring shall be performed in accordance with 8-20.3(8) and as directed by
15 City of Tacoma Signal and Streetlight personnel in the field.

16 17 **8-20.3(14)B Signal Heads**

18 *This section is supplemented with the following:*

19
20 For span wire installation, the red indications shall be leveled to within 1 inch for each
21 direction as approved by the City. The height to the bottom of the lowest head shall be
22 17 feet, plus or minus 3 inches. Height to the bottom of the lowest four-section or five-
23 section head shall be a minimum of 16 feet-3 inches, plus or minus 3 inches.

24
25 For span wire installation, the signal stem (drop pipe) shall be 1 to 3 feet long unless
26 otherwise approved by the Engineer.

27 28 **8-20.3(14)C Induction Loop Vehicle Detectors**

29 *Subsections 2, 4, 9, and 10 are deleted.*

30 31 **8-20.3(14)E Signal Standards**

32 *This section is supplemented with the following:*

33
34 Unless otherwise shown in the plans, a terminal cabinet shall be installed on all new
35 traffic signal strain poles and traffic signal mast arm standards. Where modifications to
36 existing signal systems include replacement, addition, or modifications to existing signal
37 head wiring, a terminal cabinet shall be added to the existing strain pole or mast arm
38 standard.

39
40 For strain poles and mast arm poles supporting signal indications for one leg of the
41 intersection, an 8" deep, 16" high, and 12" wide terminal cabinet shall be installed. For
42 strain poles and mast arm poles supporting signal indications for two or more legs of the
43 intersection an 8" deep, 24" high, and 18" wide terminal cabinet shall be installed.

44
45 Terminal cabinets shall be in conformance with 9-29.25.

46
47 *Section 8-20.3(14) is supplemented with the following new section:*

48 49 **8-20.3(14)F Thermal, Microwave, Fish-Eye, and LED Optical Vehicle Detection**

50
51 A representative from the City of Tacoma Signal and Streetlight operations shop shall be
52 on site during all work within the signal cabinet. The Contractor shall notify the Engineer
53 two working days in advance of work within the cabinet.

1 The Contractor shall install and test the detection system in accordance with the
2 manufacturer's recommendations and these special provisions. Detection units shall be
3 mounted and all cabling shall be in accordance with the manufacture's
4 recommendations. The installation shall include all field equipment as well as all
5 equipment required in the controller cabinet.

6
7 Detection unit locations as shown on the plans are approximate. Detection units shall be
8 mounted at a sufficient height to prevent occlusion from cross traffic. Detection units
9 shall be field adjusted as directed by the Engineer and equipment manufacturer for
10 maximum coverage. A factory-certified representative of the equipment manufacturer
11 shall inspect and provide a written verification that the installation has been performed in
12 accordance with the manufacturers requirements.

13
14 The factory-certified representative of the equipment manufacturer shall supervise all
15 testing of the equipment and shall provide written documentation showing acceptance of
16 the testing and verification that the system is a complete, fully functional system.

17
18 All equipment shall be warranted against manufacturing defects in materials and
19 workmanship for a period of 3 years from the date of signal turn-on.

20 21 **8-20.3(17)B "As Built" Plans**

22 *This section is supplemented with the following:*

23
24 These drawings shall show the routing of all underground conduits. The locations of the
25 conduit shall be dimensioned with a precision and accuracy of 1 foot.

26 27 **8-20.4 Measurement**

28 *This section is revised to read:*

29
30 No specific measurement shall apply to the lump sum item "Traffic Signal System".

31 32 **8-20.5 Payment**

33 *This section is supplemented with the following:*

34
35 "Traffic Signal System", lump sum.

36
37 The lump sum Contract price for "Traffic Signal System" shall be full pay for the
38 construction of the complete signal and electrical system (may include mast arm poles,
39 signal mast arms, luminaire pole, luminaire bracket arm, luminaires, APS pushbuttons,
40 pushbutton and signal posts, signal and pedestrian heads, signage, traffic signal cabinet
41 and controller equipment, video detection, emergency pre-emption, conduits, junction
42 boxes), modifications to the existing system, as shown in the Plans, and herein
43 specified, including excavation, backfilling, concrete foundations, conduit, wiring,
44 restoring facilities destroyed or damaged during construction, salvaging existing
45 materials, and for making all require tests. All additional materials and labor, not shown
46 in the Plans or called for herein and which are required to complete the electrical
47 system, shall be included in the lump sum Contract price.

48
49 **END OF SECTION**

1 **8-22 PAVEMENT MARKING**
2 **(April 1, 2018 Tacoma GSP)**
3

4 **8-22.1 Description**

5 *This section is supplemented with the following:*
6

7 **Sharrow Pavement Marking**

8 Sharrow pavement marking shall be provided at locations identified in the plans. Refer
9 to City of Tacoma Standard Plan CH-11 and/or other details specified within these plans
10 and specifications. The product shall be a durable, color stable, non-slip surface.
11

12 **8-22.2 Materials**

13 *This section is supplemented with the following:*
14

15 All legends and arrows including "Plastic Arrow", "Plastic Sharrow Symbol", and "Plastic
16 Letter" markings shall be a Preformed retro-reflective thermoplastic pavement marking
17 material incorporating a pre-applied bead coating that can be adhered to asphalt,
18 concrete and Portland Cement Concrete pavements by means of heat fusion. All
19 "Plastic Chevron", "Plastic Crosswalk Line", and "Plastic 12-inch Stop Line" shall be hot
20 applied thermoplastic. The applied markings shall be very durable, oil and grease
21 impervious, and provide immediate and continuing retro-reflectivity meeting the
22 requirements of Section 9-34.3(2).
23

24 **8-22.3 Construction Requirements**

25
26 **8-22.3(3)E Installation**

27 *This section is supplemented with the following for applying Type B material:*
28

29 **Effective Performance Life:** When properly applied, in accordance with manufacturer's
30 instructions, the preformed marking materials shall be neat and durable. The markings
31 shall remain skid resistant and show no lifting, shrinkage, tearing, roll back, or other
32 signs of poor adhesion.
33

34 **Packaging:** The flexible preformed marking material, for use as transverse or bike
35 symbols as well as legends, shall be available in flat form material up to a maximum of 2
36 foot width by 4 foot length. The material shall be packed in suitable cartons clearly
37 labeled for ease of identifying the contents. Packaging shall not use plastic liners within
38 to separate material from itself. Product packaging shall identify part number and mil
39 thickness.
40

41 **Material Replacement Provisions:** Any properly applied preformed marking materials
42 that shall smear or soften independent of pavement movement or condition within a
43 period of one year from date of application shall be replaced by the supplier.
44

45 **Installation:** The preformed marking materials shall be applied in accordance with the
46 manufacturer's recommendations on clean and dry surfaces. New Portland concrete
47 cement surfaces must be sandblasted to entirely remove curing compound. Marking
48 configuration shall be in accordance with the "Manual on Uniform Traffic Control
49 Devices," where applicable.
50

1 **New Surfaces:** Preformed marking materials specified for newly paved asphalt road
2 surfaces shall be capable of being applied as the original permanent marking on the day
3 the surface is paved.

4
5 **Fusion:** The preformed marking materials shall be fusible to the pavement by means of
6 a propane torch recommended by the manufacturer.

7
8 **Technical Services:** The supplier shall provide technical services as may be required.

9
10 **8-22.3(4) Tolerances for Lines**

11 *The allowable tolerance for "Length of Line" is revised to read:*

12
13 **Length of Line:** The longitudinal accumulative error within a 32-foot length of skip
14 stripe shall not exceed plus or minus 1 inch.

15
16 **8-22.4 Measurement**

17 *The last sentence of the sixth paragraph is revised to read:*

18
19 Crosswalk lines will be measured by the linear foot of marking installed.

20
21 Plastic 12-inch stop lines will be measured by the linear foot of marking installed.

22
23 *This section is supplemented with the following:*

24
25 Green Durable Products will be measured by the square foot of marking area installed.

26
27 Plastic Sharrow Symbols will be measured by each typical sharrow symbol installed.

28
29 **8-22.5 Payment**

30 *This section is supplemented with the following:*

31
32 "Plastic 12-inch Stop Line", per linear foot.

33
34 "Plastic Sharrow Symbol", per each.

35
36 "Remove Paint Line", per linear foot.

37
38 "Remove Pavement Markings", per lump sum

39
40 The lump sum cost for Remove Pavement Markings, shall include all costs to remove all
41 traffic markings as specified in Section 8-22.

42
43 **END OF SECTION**
44

9-03 AGGREGATES
(September 20, 2018 Tacoma GSP)

9-03.1 Aggregates for Portland Cement Concrete

9-03.1(1) General Requirements
(June 16, 2016 Tacoma GSP)

The seventh paragraph is deleted

9-03.6 Vacant
(Jun 16, 2016 Tacoma GSP)

This section, including the title, is revised to read:

9-03.6 Aggregates for Asphalt Treated Base (ATB)

9-03.6(1) General Requirements

Aggregates for asphalt treated base shall be manufactured from ledge rock, talus, or gravel, in accordance with the provisions of Section 3-01 that meet the following test requirements:

Los Angeles Wear, 500 Rev. 30% max.
Degradation Factor 15 min.

9-03.6(2) Grading

Aggregates for asphalt treated base shall meet the following requirements for grading:

Sieve Size	Percent Passing
2"	100
1/2"	56-100
No. 4	32-72
No. 10	22-57
No. 40	8-32
No. 200	2.0-9.0

All percentages are by weight.

9-03.6(3) Test Requirements

When the aggregates are combined within the limits set forth in Section 9-03.6(2) and mixed in the laboratory with the designated grade of asphalt, the mixture shall be capable of meeting the following test values:

% of Theoretical Maximum Specific Gravity (GMM) (approximate)	93@
100 gyrations	
AASHTO T324, WSDOT TM T718 or ASTM D3625	Pass
(Acceptable anti-strip evaluation tests)	

The sand equivalent value of the mineral aggregate for asphalt treated base (ATB) shall not be less than 35.

9-03.8 Aggregates for Hot Mix Asphalt

(March 9, 2016 APWA GSP)

Supplement section 9-03.8 with the following:

Aggregates for Porous Hot Mix Asphalt/Porous Warm Mix Asphalt (PHMA/PWMA) General Requirements

Aggregates for Porous Hot Mix Asphalt (PHMA) or Porous Warm Mix Asphalt (PWMA) shall be manufactured from ledge rock, talus, or gravel, in accordance with the provisions of Section 3-01 that meet the following test requirements:

Los Angeles Wear, 500 Rev. 30% max.

Degradation Factor 15 min.

Grading

Aggregates for PHMA/PWMA shall meet the following requirements for grading:

Sieve Size	Percent Passing*
¾" square	100
½" square	90 - 100
⅜" square	55 - 90
U.S. No. 4	10 - 40
U.S. No. 8	0 - 20
U.S. No. 40	0 - 13
U.S. No. 200	0 - 5

* All percentages are by weight.

The aggregate for PHMA/PWMA shall consist of crushed stone with a percent fracture greater than 90% on two faces on the No. 4 sieve and above, and shall be tested in accordance with the field operating procedures for AASHTO T 335.

9-03.12 Gravel Backfill

Add the following new Section:

9-03.12(10) Pea Gravel

(September 20, 2018 Tacoma GSP)

Sieve Size	Percent Passing*
¾" square	100
⅜" square	95-100
U.S. No. 8	0 - 10
U.S. No. 200	0 - 3

Sand Equivalent 35 Minimum

* All percentages are by weight

1 **9-03.21 Recycled Material**

2
3 **9-03.21(1) General Requirements**
4 **(Jun 16, 2016 Tacoma GSP)**

5 *This section is supplemented with the following:*

6
7 Recycled materials will only be permitted upon approval of the Engineer. Recycled
8 concrete shall not be permitted for use as pipe zone backfill, backfill above pipe zone,
9 and extra excavation area backfill material.

10
11
12 **END OF SECTION**
13

1 **9-28 SIGNING MATERIALS AND FABRICATION**
2 **(April 1, 2012 Tacoma GSP)**
3

4 **9-28.1 General**

5 *The second sentence of the first paragraph is hereby revised to read:*
6

7 Permanent signs which measure 36 inches or less on a side and are to be mounted on a
8 single post shall be constructed of single 0.080-inch aluminum panels.
9

10 *The third sentence of the first paragraph is hereby revised to read:*
11

12 Sign overlay panels shall be 0.050-inch aluminum panels.
13

14 *This section is amended with the following:*
15

16 Submittal of signing-related materials for approval shall include sign layouts depicting
17 sign type, content depiction, size, color, and any other pertinent characteristics to allow
18 confirmation of applicability to the project.
19

20 **9-28.9 Fiberglass Reinforced Plastic Signs**

21 *This section is deleted in its entirety.*
22
23

24 **END OF SECTION**
25
26

1 **9-29 ILLUMINATION, SIGNALS, ELECTRICAL**
2 **(August 6, 2020 Tacoma GSP)**

3
4 **9-29.1(6) Detectable Underground Warning Tape**

5 *This section is supplemented with the following:*

6
7 For electrical circuits detectable underground warning tape shall be high visibility red,
8 with continuous legend of "Caution Electric Line Buried Below" or equal. The warning
9 tape shall be polyethylene with a metallic backing. The polyethylene shall be a minimum
10 3 inches wide, 4 mils thick.

11
12 **9-29.2 Junction Boxes, Cable Vaults and Pull Boxes**

13
14 Unless otherwise specified, all junction boxes containing illumination and signal control
15 cable shall be Type 1, Standard Duty with alternate 2 locking lid per state standard plan
16 J-40.10-02.

17
18 Unless otherwise specified, all junction boxes containing interconnect cabling shall be
19 Type 2, Standard Duty with alternate 2 locking lid per state standard plan J-40.10-02.

20
21 **9-29.2(4) Cover Markings**

22 *The second paragraph of this section is revised to read:*

23
24 Covers shall be marked or embossed with "LT" for boxes containing illumination circuits.
25 Covers shall be marked or embossed with "TS" for boxes containing traffic signal circuits

26
27
28 **9-29.3 Fiber Optic Cable, Electrical Conductors, and Cable**

29 *This section is supplemented with the following:*

30
31 Where not otherwise specified, all wiring shall meet standard of the industry for the
32 application employed. Wiring shall be consistent with manufacturers' recommendations
33 and meet all applicable codes.

34
35 **9-29.3(1) Fiber Optic Cable**

36 *This section is supplemented with the following:*

37
38 Unless otherwise specified, all fiber optic trunk communication lines (lines between
39 intersections) shall be 24 count singlemode fiber optic cable. Fiber Optic cables
40 connecting the Fiber Optic Termination Panel in the signal cabinet to the Fiber Optic
41 Splice Closure in the signal communications junction box shall be 6 count singlemode
42 fiber optic cable.

43 *This section is supplemented with the following New Sections:*

44
45 **9-29.3(1)C Fiber Optic Splice Closures**

46
47 Unless otherwise specified, all fiber optic splice closures located in junction boxes shall
48 be AFL LightGuard 150 Sealed Fiber Optic Splice Closures. One AFL LL-2450 Splice
49 Tray shall be provided with each splice closure.

1 **9-29.3(1)D Fiber Optic Termination Box**

2
3 Unless otherwise specified, all fiber optic termination boxes located in signal cabinets
4 shall be Fibertronics FOTB-6-12.

5
6 One coupler/adaptor shall be provided and installed in the fiber optic termination box.
7 Coupler shall be a female LC duplex to female LC duplex coupler designed for
8 installation in a standard 12.8mm x 9.3mm adaptor port. Coupler color shall be blue,
9 consistent with singlemode OS2 installations. Coupler shall be installed in the last (right
10 most) adaptor port of the termination box and secured with 2 M2x6mm Philips head
11 screws.

12
13 Two pre-terminated patch cables shall be provided, one 1-foot (0.3m) in length, and one
14 6 feet (2m) in length. Patch cables shall be LC duplex singlemode OS2 9/125 fiber
15 patch cables and rated for indoor/outdoor use. Patch cables shall have a yellow colored
16 3mm diameter jacket, and blue LC duplex connectors, consistent with singlemode OS2
17 installations.

18
19 **9-29.3(2)A Single Conductor**

20
21 **9-29.3(2)A1 Single Conductor Current Carrying**

22 *This section is supplementing with the following:*

23
24 Service connections shall be stranded copper size AWG #6 USE unless otherwise
25 shown in the plans. Black conductor insulation shall be used for the service and the
26 neutral conductor shall be white. Color tape marking shall not be acceptable for the
27 neutral conductor.

28
29 **9-29.3(2)A2 Grounding Electrode Conductor**

30 *This section is supplemented with the following:*

31
32 Grounding electrode conductor shall be minimum #8 AWG unless otherwise shown in
33 the plans. When the ground is pulled through a conduit, the wire shall be insulated.
34 Color tape marking shall not be acceptable for marking the ground.

35
36 **9-29.3(2)A3 Equipment Grounding and Bonding Conductors**

37 *This section is supplemented with the following:*

38
39 Equipment grounding shall be minimum #8 AWG unless otherwise shown in the plans.
40 When the ground is pulled through a conduit, the wire shall be insulated. Color tape
41 marking shall not be acceptable for marking the ground.

42
43 **9-29.3(2)B Multi-Conductor Cable**

44 *This section is supplemented with the following:*

45
46 Two-conductor through 10-conductor unshielded signal control cable, shall have
47 stranded copper conductors, size AWG 14, and shall conform to International Municipal
48 Signal Association (IMSA) signal cable 20-1.

1 **9-29.3(2) Twisted Pair Communication Cable**

2 *This section is revised to read:*

3
4 The cable for interconnect for underground installation shall be IMSA 40-2 #19 AWG 6
5 twisted pair, shielded, PE outer jacket or IMSA 40-4 #19 AWG 6 twisted pair, figure 8,
6 shielded, PE outer jacket for overhead installation.

7
8 **9-29.4 Messenger Cable, Fittings**

9 *This section is supplemented with the following:*

10
11 Messenger cable shall be 5/16-inch, seven-wire strand messenger cables conforming to
12 ASTM A 475, extra-high strength grade, 11,200 lbs. min. breaking strength, Class B
13 galvanized.

14
15 All guy eye anchor rods shall be double-hub type.

16
17 Weatherheads shall be clamp-on type PVC. Where used for signal or flashing beacon
18 conductors, the center of the wire entrance shall be cut or machined out to a large
19 diameter to accommodate entry of multi-conductors. All edges shall be smoothed to
20 avoid chaffing.

21
22 All miscellaneous nuts, bolts, washers and fittings shall be stainless steel or brass
23 unless otherwise noted.

24
25 All metal line hardware shall be hot-dipped galvanized in conformance with the
26 requirements of ASTM Designation A-153. All eyebolts shall be thimble eye design cast
27 or welded to form a solid eye.

28
29 5-strand, class B galvanized steel, pretwisted guy strand dead ends, high strength cable
30 conforming to ASTM Designation A-475, shall be utilized at all span wire terminations.
31 1/2" rope wire thimbles shall be required where span wire connects to all poles or bull
32 rings, except where thimble eye bolts are used. Span wire shall normally be installed
33 directly pole to pole, unless otherwise directed or specified.

34
35 Strain insulators shall be installed where connecting to wood poles. Where span wire is
36 connected to a steel or concrete pole, insulators shall not be installed. Strain insulators
37 shall be wet process, porcelain, conforming to EEI-NEMA Class 54-2 standards for
38 12,000-pound ultimate strength and shall be installed 9 feet from the pole.

39
40 **9-29.6 Light and Signal Standards**

41 *This section is supplemented with the following:*

42
43 All light and signal standards shall be fixed base.

44
45 The head of the handhold security bolt shall be flush with the face of plate. The face
46 plate of the handhole shall be flush with pole.

1 **9-29.6(5) Foundation Hardware**

2 *This section is supplemented with the following:*

3 All pedestrian pushbutton poles (Type PPB) shall be installed utilizing a Breakaway
4 Base Connection system in conformance with WSDOT standard plan J-20.15-03.
5 Bracket shall be sized to accommodate a standard push button pole with an outside
6 diameter of 3.5-inches. Anchor bolt receivers shall be installed at 2-3/4-inch by 7-15/16
7 inch on center.

8
9 *Section 9-29.6 is supplemented with the following new section:*

10
11 **9-29.6(6) City of Tacoma Universal Pole**

12
13 Unless otherwise specified, light standards and strain poles shall be in conformance with
14 the following City of Tacoma standard design.

15
16 **Strength**

17 Each pole and mast arm shall have adequate strength for the designated luminaire with
18 1.8 safety factor for maximum combined stresses using 90 mph isotach (117 mph gusts)
19 per AASHTO specifications for structure supports for highway luminaires. Design shall
20 be based on total loading of 50 pounds and EPA of 2.0 square feet.

21
22 **Standard Bolt Spacing**

23 30 Foot poles -- Baseplate shall accommodate 1 inch anchor bolts. The bolt circle shall
24 be between 11 inches and 13 inches.

25 40 Foot Poles -- Baseplate shall accommodate 1 inch anchor bolts. The bolt circle shall
26 be between 12.5 inches and 14.5 inches.

27
28 **9-29.6(6)A Steel Strain Poles**

29
30 Each pole shall be of tapered round or octagonal construction.

31
32 CLASS 1 POLE: Design for dead load tensions up to 1500 pounds

33 CLASS 2 POLE: Design for dead load tensions up to 2600 pounds

34
35 Class 1 poles shall have a minimum base diameter of 12-inches for octagonal poles and
36 12-1/4-inches for round poles. Poles shall have a minimum wall thickness of 0.3125-
37 inches. Anchor bolts shall be 1-1/2-inch by 60-inches and shall have a spacing of 11-
38 5/16-inches on center, on the square. It is the responsibility of the pole manufacturer to
39 maintain proper clearance between the pole shaft and nuts for the anchor bolts.

40
41 Class 2 poles shall have a minimum base diameter of 13-1/2-inches for octagonal poles
42 and 14-inches for round poles. Poles shall have a minimum wall thickness of 0.375-
43 inches. Anchor bolts shall be 2-inch by 66-inches and shall have a spacing of 12-3/4-
44 inches on center, on the square. It is the responsibility of the pole manufacturer to
45 maintain proper clearance between the pole shaft and nuts for the anchor bolts

46
47 Poles shall be of single-ply construction. Multiple-ply poles shall not be allowed.

48
49 Each pole shall be of tapered round or octagonal construction. Pole taper shall be in the
50 range of 0.13 to 0.14 in/ft.

1 A base plate and top casting shall be securely attached to each pole. The attachment of
2 the base plate to the pole shall be a welded connection sufficient to develop the full
3 strength of the pole. The base plate shall have four (4) holes which will sufficiently
4 accommodate the specified anchor bolts for the pole class.

5
6 Pole shall be of sufficient strength to allow for the span wire to be installed to sag an
7 amount equal to 5% of the span length.

8
9 The maximum acceptable deflection, at 30 feet above the base, is 5 inches. The
10 specified deflection shall be at a loading condition of 1,500 pounds horizontal pull at 30
11 feet above the base for Class 1 Poles. For Class 2 Poles, the loading condition shall be
12 2,600 pounds horizontal pull at 30 feet above the base.

13
14 Structural material shall be zinc-coated by a "hot-dip" process in accordance with ASTM
15 A123 and the final coating shall measure 0.0039 inch or more in thickness as
16 determined by a magnetic thickness gauge. All tapped holes shall be chased after
17 galvanizing. Hardware shall be coated in accordance with ASTM A307.

18
19 The finished pole shall be reasonably straight and free from injurious defects. If
20 galvanizing is damaged, the maximum area to be repaired is defined in accordance with
21 ASTM A123 Section 4.6. The maximum area to be repaired in the field shall be
22 determined in advance by the Engineer. Repair areas damaged during construction,
23 handling, transport or installation by one of the approved methods in accordance with
24 ASTM A780 whenever damage exceeds 3/16 inches in width. Minimum thickness for
25 repair shall measure 0.0039 inches.

26
27 The company shall furnish the purchaser with template prints showing spacing and size
28 of holes in base for the anchor rods.

29
30 The material shall carry the manufacturer's standard guarantee against any defect in
31 material or workmanship for a minimum period of one year following the date of
32 installation. The Contractor shall submit mil test reports for all steel used in the
33 manufacturing of strain poles and pedestals.

34
35 The Contractor shall submit a Certificate of Compliance with ASTM Standards and
36 Specifications for galvanizing. The certificate, signed by the galvanizer, shall detail
37 galvanizing process and testing procedure to determine that galvanizing meets minimum
38 thickness specified.

39
40 The contractor shall submit welder certification. Welders must be certified to AWS
41 standards.

42
43 Each pole shall include the following:

- 44 1. One (1) rain-tight pole cap.
- 45 2. One (1) 4-inch by 6-1/2-inch handhole at base end with cover plate opposite
46 to mast arm.
- 47 3. Anchor bolts shall be hot dipped galvanized steel with two (2) galvanized nuts
48 and two (2) washers for each bolt. Only 12-inches of threaded end of the
49 bolts must be galvanized. 1-1/2-inch diameter bolts shall have 8-inches of
50 top thread and 2-inch diameter bolts shall have 10-inches of top thread.

4. Anchor bolts shall have threaded bottom ends to receive an anchor plate and nut. The nut shall be tack-welded to the anchor plate. Anchor plates for 1-1/2-inch diameter anchor bolts shall be 4-inch square by 1-inch thick. Anchor plates for 2-inch diameter anchor bolts shall be 6-inch square by 1-inch thick
5. One (1) adjustable strain clamp to be mountable between 26 to 28 feet above the base. Clamp shall provide facility to attach span wire at four-quarter points.
6. Provisions for mounting a mast arm of specified length. All poles shall be supplied with one mast arm mounting flange. The centerline of the flange shall be approximately 6 inches below the top of 38-foot poles and 24 inches below the top of 30-foot poles. The flanges shall conform with the detail drawing included in the Special Provisions. Poles ordered without mast arms but with provisions for a later addition of a mast arm shall be provided with a metal cover and gasket to protect the opening being provided. The cover shall be bolted to the pole using the holes provided for fastening the mast arm.
7. One (1) two-inch coupling to receive clamp-on type aluminum weatherhead positioned at 27 feet, and no more than 45° from the location of the mast arm, unless otherwise specified.
8. One (1) 1-1/4-inch coupling for wire inlet located directly opposite the mast arm.
9. One (1) grounding lug-hole in lip of handhole for 1/2-NC brass bolt.

9-29.6(6)B Luminaire Mast Arms

Each mast arm shall have sufficient strength with a 1.8 safety factor to support a 70-pound luminaire on an 18-foot mast arm per the latest AASHTO Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals.

Material and workmanship shall conform to the best commercial standards of the industry.

The mast arm and its fastening shall be constructed of steel conforming to Section 9-29.6

Each mast arm shall support a ballast-in-head luminaire and shall provide a luminaire mounting height of approximately two (2) feet above the strain pole mounting flange.

The mast arm shall provide a horizontal extension from the center of the pole to the center of the luminaire as shown in the Plans.

The mast arm shall be of tapered construction. The luminaire end of the mast arm shall not exceed 2.375 inches O.D. for a minimum distance of 8 inches. The outside arm diameter at the pole flange shall not exceed 5.88 inches.

The mast arm shall be capable of being fastened to the mast arm mounting flange dimensioned in the detail drawing. All mounting bolt heads shall clear the weld.

9-29.10 Luminaires

This section is supplemented with the following:

Unless otherwise shown in the plans all new luminaires shall be Light Emitting Diode (LED) fixtures conforming to these specifications.

Cobra-head style luminaires and other overhead fixtures, such as shoebox style fixtures, shall be provided with utility labels. Ornamental post top fixtures shall not have utility labels. Utility labels for LED fixtures shall be green and show actual total system wattage.

9-29.10(1) Conventional Roadway Luminaires

This section is replaced in its entirety with the following:

All Conventional Roadway Luminaires shall be LED meeting the following requirements:

1. Applicable Standards:
 - a. American National Standards Institute (ANSI) C78 and C136
 - b. Electrical and Electronics Engineers (IEEE) C62
 - c. Illuminating Engineering Society of North America (IESNA or IES)
 - d. Underwriters Laboratories (UL)
2. General:
 - a. Luminaire shall be UL Listed
 - b. Luminaire shall be listed as a Qualified Product on one of the following lists:
 - i. Energy Star
 - ii. Design Lights Consortium
 - iii. Lighting Design Lab
 - c. LED light source and driver shall be compliant with the requirements of the European Union (EU) Restriction of Hazardous Substances (RoHS) Directive.
 - d. Luminaire shall have an external label per ANSI C136.15.
 - e. Luminaire shall have an internal label per ANSI C136.22.
3. Luminaire Performance:
 - a. Operating Temperature Range: -4 F to +122 F
 - b. Correlated Color Temperature: (CCT)
 - i. Residential- 3000K Nominal
 - ii. Arterials - 4000K Nominal
 - c. Calculated Lumen Maintenance Factor (LMF): 100,000 hours or more (L70 at 25°C/77°F) in accordance with IESNA TM-21 and IESNA LM-80
 - d. Color Rendering Index (CRI) : >70
 - e. Light Distribution per IES Handbook: Best fit to meet design criteria
 - f. Minimum Efficacy: 80 Lumens/Watt
4. Power Supply and Driver Performance:
 - a. Input Voltage: Auto-sensing 120 to 277 VAC 50/60HZ
 - b. Power factor: >0.90
 - c. Drive current maximum of 1.0A
 - d. Total harmonics distortion at full power at specified voltage: <20%
 - e. Surge Suppression Protection 10kV Minimum (IEEE/ANSI C62.41.2)
 - f. Replaceable surge module

- g. Interference FCC 47 CFR part 15/18, Class A
- h. Driver life >100,000 hours
- i. Dimming: 0-10V DC
- 5. Lighting and Dimming Controls:
 - a. The luminaire shall be provided with a 7-pin terminal locking type photoelectric control mounting receptacle in accordance with ANSI C136.10 and ANSI C136.41.
 - b. Photocell receptacle dimming contacts shall be factory connected to driver dimming leads (violet and gray) per ANSI C136.41.
- 6. Luminaire Housing and Door:
 - a. The luminaire housing shall be cast or extruded aluminum. All hardware shall be stainless steel.
 - b. Cast housing components shall have a light gray polyester powder coat finish. Extruded components shall be anodized. Finish shall meet the requirements of ANSI C57.31, latest revision.
 - c. The power-door shall be fabricated from either aluminum or a UV resistant polymer.
 - d. The door shall be easily removable and shall allow for tool-less entry.
- 7. Slipfitter and Vibration Resistance:
 - a. Slipfitter shall be capable of accepting a 1-1/4" through 2" IP pipe tenon (1-5/8" to 2-3/8" OD) with maximum allowable insertion lengths of 7-1/2" and 10" respectively in accordance with Table 2 of ANSI C136.3, latest revision.
 - b. The Slipfitter shall have provisions for clamping the luminaire securely to the tenon and for leveling $\pm 5^\circ$ with respect to horizontal.
 - c. Luminaire shall be certified to ANSI C136.31 3G bridge and overpass vibration standards with 4-bolt configurations.
- 8. Ingress Protection:
 - a. The luminaire components shall have minimum moisture rating as specified in IEC 60529, with the ability to shed water from inside the housing(weep holes), and designed to minimize water collection and icing.
 - b. Internal Components: IP66
 - c. Enclosure: IP65
- 9. Terminal and Grounding Block:
 - a. Components shall be pre-wired to the terminal board requiring only supply power connections to clearly identified terminals.
 - b. The terminal board shall be located so that there is adequate tool-less access to accommodate user wearing electrical gloves to connect the supply leads.
- 10. Manufacturer Warranty:
 - a. 10 Year Minimum including power driver and LED chips.

9-29.10(1)A Luminaire Classifications

The City of Tacoma has established five (5) classes of LED Conventional Roadway with specific design criteria to ensure long-term lighting continuity. Luminaires are divided into classes based on function, typical use and historical High Intensity Discharge (HID) equivalents. Current classes are 100WEQ, 200WEQ, 250WEQ, 400WEQ, and RES-45. Each conventional luminaire installed shall meet the design criteria of one of these five luminaires.

1 Design assumptions and criteria listed for each luminaire classification may not reflect
2 the actual conditions on the project. The design assumptions and criteria identified are
3 only to be utilized to determine luminaire equivalency, such that another luminaire
4 meeting the same criteria can be used to replace a failed unit without a complete
5 redesign of the entire system.

6
7 Equivalence will be determined as follows:

- 8 1. The City of Tacoma will use Lighting Analysts AGI32 lighting software
9 program for determination of equivalence using the design assumptions and
10 criteria identified for each class of luminaire.
- 11 2. The roadway optimizer will be used to evaluate the performance criteria in all
12 cases, except for the Res-45 class luminaire, where model view will be
13 utilized to calculate the photometrics.
- 14 3. Proposed fixtures may not be tilted, rolled, or spun to meet the criteria.
- 15 4. All calculations shall be to the 100th. Rounding will not be permitted.
- 16 5. A copy of the published IES photometric file and BUG (Backlight, Uplight, and
17 Glare) Rating shall be provided as a part of product submittal.
- 18 6. It is recognized that there are an infinite number of design variables and it is
19 not practical to create a published IES photometric file and BUG rating for
20 each combination. In those cases where the wattage is reduced to meet the
21 design criteria, the base IES photometric file for the higher wattage
22 configuration shall be used as follows:
 - 23 a. Where no IES photometric file exists for the specific configuration, all
24 information required to allow the City to duplicate the results and
25 assure that the fixture meets the criteria must be provided.
 - 26 b. When reducing the system wattage, the BUG rating of the base IES
27 photometric file must be utilized, but may be scaled based on IES LM-
28 79.
 - 29 c. For modified fixtures, the City may require that a representative fixture
30 be provided prior to acceptance. The City reserves the right to have
31 an independent NVLAP approved lab perform an IES LM-79 report for
32 verification of the output for the submitted fixture. A 10 percent margin
33 of error will be allowed in the analysis and comparison of the actual
34 test results. Failure to meet the photometrics within the allowance
35 may be cause for rejection.

36
37 Full design assumptions and design criteria for each of the five luminaire classes can be
38 found at the end of this section. Excessive glare or light trespass onto private property is
39 not acceptable. Typical usage for luminaire classes:

- 40 • 100WEQ Luminaires are typically installed along residential roadways at a
41 height of 25 to 30 feet. 100WEQ Luminaires have a long and narrow light
42 distribution to fit a typical residential road.
- 43 • 200WEQ Luminaires are typically installed along local classified arterial
44 roadways and along arterials with lower pedestrian conflicts. 200WEQ
45 Luminaires are typically installed at a height of 30 feet and will have a slightly
46 wider distribution to cover the additional width.
- 47 • 250WEQ Luminaires are typically installed along collector to minor classified
48 arterial roadways. 250WEQ Luminaires can be installed at a height of 30 feet
49 or 40 feet depending on pedestrian conflict level, road width, and lighting
50 levels required.

- 400WEQ Luminaires are typically installed along principal classified arterial roadways or areas where a higher pedestrian conflict exists. 400WEQ Luminaires are typically installed at a height of 40 feet, often installed on both sides of the roadway, in a staggered pattern to adequately light the full roadway width.
- RES-45 Luminaires are typically installed at residential street intersections or for cul-de-sacs. For residential intersections, these lights are typically installed on one corner of the intersection at a 45 degree angle to the traveled ways. The light distribution is designed to provide illumination for the intersection, but not create unacceptable light trespass on adjacent properties.

Refer to Appendix C – Standard Luminaire Design Criteria for luminaire design criteria. Contractor may submit pre-approved 400WEQ LED luminaire – Leotek, Catalog number GCM2-40H-MV-NW-2R-GY-1A-4B-WL-PCR7 for installation.

9-29.11 Control Equipment

9-29.11(2) Photoelectric Controls

This section is revised to read:

The photoelectric control shall be the twistlock type and the light sensitive element shall be a solid state photo diode. The control shall be designed to turn on at 2.6 foot-candles (+/- 20%) and turn off at 2.6 foot-candles (+/- 20%). The lighting control shall not drift by more than 1 per cent over a 10-year period.

The output control relay shall be electro-mechanical. The time delay for both turn on and turn off shall be a minimum of one second and maximum of 5 seconds. The output relay shall be rated 1000 watts incandescent or 15 amps inductive load. The contacts shall be normally closed.

The lighting control shall have a built in metal oxide varistor (MOV) rated a minimum of 160 joules for lightning and transient protection. The control shall also have secondary zener diode and transient filter. The relay shall be suitable for operation on 240 volt, 60 hertz electrical circuits.

Dimensions shall conform to ANSI specifications for twistlock photocells.

9-29.12 Electrical Splice Materials

9-29.12(1) Illumination Circuit Splices

This section is revised to read:

Splices and taps shall be made with solderless crimp connectors on underground and overhead circuits to securely join the wires both mechanically and electrically. Splices shall be sealed in accordance with 8-20.3(8).

Thermoplastic Electrical Insulating Tape

Electrical tape shall be made by the same manufacturer and compatible with the electrical coating utilized to form a complete system that both insulates and protects the splice. Electrical tape shall be based on polyvinyl chloride (PVC) and/or its copolymers

1 and have a rubber-based, pressure-sensitive adhesive. The tape shall have a voltage
2 rating of 600V (UL510). The tape shall be 7 mils thick, and be UL Listed and marked per
3 UL Standard 510 as "Flame Retardant, Cold and Weather Resistant." The tape shall be
4 resistant to abrasion, moisture, alkalies, acids, corrosion, and varying weather
5 conditions, including ultraviolet exposure. The tape must be applicable at temperatures
6 ranging from 0°F through 100°F (–18°C through 38°C) without loss of physical
7 properties. The tape shall have an operating temperature up to 220°F (105°C). The tape
8 shall be classified for use in outdoor environments. The tape shall be compatible with
9 synthetic cable insulations, jackets and splicing compounds. The tape will remain stable
10 and will not telescope more than 0.1 inches when maintained at temperatures below
11 120°F (50°C).

12 **Moisture Resistant Electrical Coating**

13 Electrical Coating shall be made by the same manufacturer and compatible with the vinyl
14 electrical tape utilized to form a complete system that both insulates and protects the
15 splice. Electrical Coating shall seal and bond the tape and be suitable for direct burial,
16 direct water immersion, and above ground applications. Electrical coating shall be
17 flexible when dry. Electrical coating shall consist of the solvents Acetone, Methyl Ethyl
18 Ketone and Toluene and shall contain synthetic rubber and resin solids.

19 **9-29.12(2) Traffic Signal Splice Material**

20 *This section is revised to read:*

21 Induction loop splices and magnetometer splices shall include an uninsulated barrel-type
22 crimped connector capable of being soldered. The insulating material shall be a heat
23 shrink type meeting requirements of 9-29.

24 **9-29.13 Control Cabinet Assemblies**

25 *This section is revised to read:*

26 The Traffic Controller Cabinet Assembly shall be completely wired and tested to Section
27 5 Terminals and Facilities of the NEMA TS2 Specification, unless modified by these
28 specifications.

29 Cabinets shall be compatible with both Siemens M50 and M60 series controllers.

30 The following submittals will be required for the review and approval by the City prior to
31 fabrication and wiring:

- 32 1. Proposed cabinet layout diagram including shelving/rack locations. In addition,
33 detailed diagrams shall be provided for the left side, right side, and back panels.
34 Drawings shall be clearly labeled and dimensioned.
- 35 2. Proposed cabinet wiring diagram shall be submitted for the review and approval
36 by the City. Wiring of cabinets shall not commence prior to City approval of the
37 cabinet wiring plan.

38 All submittal comments shall be incorporated into a final set of prints and each cabinet
39 shall be furnished to three (3) complete sets of cabinet prints. All cabinet wiring, and
40 layout shall come on (1) E1 size sheet, multiple pages shall not be allowed. Upon
41 request (1) CDROM or USB flash drive with AutoCAD v2018 cabinet drawing for the
42 cabinet wiring.

1 **9-29.13(1) Traffic Control Cabinets**

2 Each Traffic Controller Cabinet shall meet the following general operating requirements:

- 3 1. The wired cabinet facility shall use the latest technology applicable meeting the
4 requirements identified by these specifications.
- 5 2. The cabinet shall be designed for 16 channel operation using dual load switches.
6 Load switches 1-4 shall be vehicle phases 1-8; load switches 5-6 shall be
7 pedestrian phases 2, 4, 6, 8; load switches 7-8 shall be overlaps A, B, C, & D. All
8 load switches shall be routed through a transfer relay.
- 9 3. The cabinet shall be wired for (32) channels of detection and (4) channels of
10 Opticom™ preemption.
- 11 4. The use of PC boards shall not be allowed except in detector racks and SDLC
12 interface panels. With the exception of detection racks, the use of plug and play
13 modules shall not be allowed
- 14 5. All cabinet 120VAC wires shall be 18AWG or greater, including controller "A" and
15 MMU "A & B" cables.
- 16 6. All welds shall be free from burrs, cracks, blowholes or other irregularities.
- 17 7. The cabinet shall be UL listed.

18
19 **9-29.13(1)A Cabinet Enclosures**

20 All Cabinet enclosures shall meet the following requirements:

- 21 1. Controller cabinets that are not designated in the project plans and specifications
22 as UPS Controller Cabinets shall be sized in accordance with NEMA P44
23 Controller Cabinet standards.
- 24 2. The cabinet shall meet NEMA 3R rating for enclosures.
- 25 3. The cabinet shall be fabricated from 0.125" minimum thickness 5052 H32 ASTM
26 B209 aluminum alloy and be of clean cut design and appearance. The Cabinet
27 shall be supplied with a natural mill finish inside and out, unless otherwise
28 specified.
- 29 4. All exterior seams shall be manufactured with a neatly formed continuous weld
30 construction.
- 31 5. All external fasteners shall be stainless steel. Interior cabinet welds shall be
32 continuous for all lap and butt welds. Intermittent welds or silicone adhesive shall
33 not be accepted in place of a weld for weather-tight penetrations. Pop rivets
34 shall not be allowed on any external surface.
- 35 6. The cabinet shall be designed for mounting on a concrete pad with anchor bolts
36 and typical flanges inside the cabinet. The cabinet base shall have continuously
37 welded interior mounting reinforcement plates with the same anchor bolt-hole
38 pattern as the footprint dimensions.
- 39 7. Unless otherwise approved by the Engineer, there shall be a minimum ten (10)
40 inch vertical clearance above the front half portion of the base area to provide a
41 clearance for conduit and cable entering the cabinet.
- 42 8. The cabinet shall be double-flanged where it contacts cabinet doors.

9. The top of the cabinet shall be sloped down 1" towards the rear to facilitate water runoff. The roof shall be sloped at a 90° angle at the front of the cabinet. Lesser slope angles are not allowed.

10. The cabinet shall be equipped with "C" channel rails welded to the interior of the cabinet such that panels may be mounted to the interior of the cabinet without drilling through the outer cabinet. The "C" channel rails shall be sufficient in strength to accommodate planned and reasonably anticipated future equipment needs. At a minimum, the cabinet shall have (2) welded on the back wall, and (4) welded on each side wall with (2) pairs on 8-inch centers. The side and back wall C channel rails shall run the entire usable height of the cabinet walls. Adjustable rails are not allowed.

11. The cabinet shall come with lifting ears affixed to the upper exterior of the cabinet. The lifting ears shall utilize only one bolt such that the ears can be reoriented.

9-29.13(1)A1 Cabinet Enclosures for UPS Systems

Controller cabinets that are designated in the project plans and specifications as UPS Controller Cabinets shall be 70" high x 44" width x 25.5" depth (nominal dimensions) and meet the footprint dimensions as specified in Section 7.3, table 7-1 of NEMA TS2 standards for a Type P cabinet.

UPS Controller Cabinet enclosures shall meet all applicable requirements of Section 9-29.13(1)A and shall meet the following additional requirements:

1. The controller cabinet shall have (2) separate compartments. A Main compartment and a Battery Backup System (BBS) compartment.
2. The main compartment shall be accessible from the front door and shall house the cabinet load facilities and electronics. The Battery Backup System (BBS) compartment shall be accessible from the side door and shall contain the UPS system batteries.
3. The cabinet shall be designed such that when the UPS system inverter and ATS assembly are mounted in the BBS compartment, they shall be fully accessible when the front door is open.

9-29.13(1)B Cabinet Doors and Locks

Cabinet Doors and Locks shall conform to the following:

1. A hinged door shall be provided on the front of the cabinet permitting complete access to the cabinet and the equipment to be contained therein.
2. Cabinet doors shall be mounted with single continuous stainless steel piano hinges that run the length of the door. The hinges shall be attached via stainless steel tamper resistant bolts.
3. Closed-cell, neoprene gaskets shall be bonded to the inside of cabinet doors. The gaskets shall cover all areas where the doors contact the double flanged cabinet housing exterior and be thick enough to provide a watertight seal.
4. Bearing rollers shall be applied to ends of door latches to discourage metal-on-metal surfaces from rubbing.

1 5. All lock assemblies shall be positioned such that the door handle does not cause
2 interference with the key when opening the door.

3 6. A complete set of keys shall be supplied providing access to all doors, including
4 the front cabinet door, the cabinet side door (where applicable), the police door
5 and the generator receptacle door.

6 The front cabinet door shall meet the following additional requirements:

7 1. The front door of the cabinet shall be equipped with a universal lock bracket.
8 The lock core shall be a green construction core as noted in section 9-29.25.

9 2. A stiffener plate shall be welded to the inside of the front door to prevent flexing.

10 3. The front door shall have a two-position, three-point door stop that
11 accommodates open-angles at 90°, 125°, and 150°.

12 4. The front door handle shall be ¾" round stock stainless steel bar. Door handle
13 mechanisms shall be interchangeable and field replaceable.

14 A side door on UPS Controller Cabinets shall be provided for accessing the BBS
15 compartment. The cabinet side door shall meet the following additional requirements:

16 1. The side door shall be one piece construction without any recessed
17 compartments.

18 2. The side door shall have a three-position, two-point door stop that
19 accommodates open-angles at roughly 80°, 100°, and 120°.

20 3. The side door shall use a recessed hexagonal socket in lieu of a door handle.

21
22 **9-29.13(1)C Recessed Compartments**

23 The front door shall contain (2) flush mount locking recessed compartments. The upper
24 compartment shall house a police door and the lower compartment shall house a
25 generator bypass receptacle.

26 1. The welds for the police compartment and the generator receptacle compartment
27 shall be done on the outside of the front door.

28 2. The police door compartment shall come with a conventional police lock.

29 3. The generator bypass receptacle compartment shall have an integrated door
30 slide mechanism that allows the door to be closed and locked after a generator
31 has been connected to the internal receptacle.

32 4. The generator bypass receptacle compartment shall be equipped with a
33 universal lock bracket. The lock core shall be a Green construction core as noted
34 in section 9-29.25.

35 5. The locking generator bypass compartment will be used to connect a generator
36 for operating the cabinet during loss of service line power. The generator
37 compartment shall be capable of being closed and locked while a generator is
38 connected. The mechanism for allowing generator cable access, while the
39 compartment is closed, shall be an integral part of the generator bypass door, via
40 a sliding panel that will normally be in the closed position.

41

1 **9-29.13(1)D Cabinet Ventilation**

2 Cabinet ventilation shall be provided as follows:

- 3 1. A louvered air entrance shall be located at the bottom of the front cabinet door.
- 4 2. For UPS Cabinets, a louvered air entrance shall also be provided at the bottom
5 of the side cabinet door.
- 6 3. Louvered air entrances shall satisfy NEMA rod entry test requirements for 3R
7 ventilated enclosures. The baffle panel that holds the fan assemblies shall be
8 sealed on the interior of the cabinet.
- 9 4. The cabinet shall come with (2) three-stage, multi-ply progressive density
10 polyester, disposable air filter; and the filter performance shall conform to listed
11 UL 900 Class 2 and shall conform to ASHRAE Standard 52.1. The filter shall be
12 secured to entrance on main door by two (2) horizontally-mounted restraints.
- 13 5. The cabinet shall be provided with two (2) finger safe fans mounted on the right
14 and left sides of the cabinet plenum, and shall be thermostatically controlled.
15 Fans shall have a rating of 100 CFM and the thermostat setting to allow variable
16 turn-on between 90 degrees and 140 degrees Fahrenheit. The fan motor shall
17 use ball-bearings. This unit shall be fitted with an electrical noise suppressor.
18 The safe touch thermostat and power terminal block(s) shall be din rail mounted
19 on the cabinet plenum.

20
21 **9-29.13(1)E Cabinet Shelving**

22 Cabinet Shelving shall be provided as follows:

- 23 1. The cabinet shall have two (2) aluminum 0.75-inch shelves that span the width of
24 the cabinet. Shelves shall be double beveled 10" deep and reinforced with
25 welded V channel, fabricated from 5052-H32 0.125-inch thick aluminum with
26 double flanged edges rolled front to back. Slotted holes shall be inserted every
27 7" for the purpose of tying off wire bundles.
- 28 2. A slide-out computer shelf 16" length by 12" width by 2" depth shall be installed
29 underneath the bottom equipment shelf. The shelf shall be mounted just left of
30 center so that controller cables will not interfere with the operation of the shelf
31 when equipment is installed. The computer shelf shall have a hinged cover that
32 opens from the front and shall be powder-coated black. The computer shelf shall
33 be fully retractable under the bottom equipment shelf. When fully extended, the
34 computer shelf shall hold a minimum of 50lbs and shall automatically secure in
35 place, mechanically, with a tool-less release mechanism.
- 36 3. For UPS Controller Cabinets, the BBS compartment shall come with (1) 14.25" x
37 7.75" flanged shelf designed to hold the batteries. In the UPS configuration, the
38 main cabinet shall come with a third shelf that runs the entire width of the cabinet
39 above the BBS compartment.
- 40 4. The cabinet shall have one (1) aluminum 0.75 inch shelf measuring 20.90 inches
41 wide by 10.75 inches deep next to the load bay and mounted 9.25 inches from
42 the bottom of the cabinet. Shelf shall be double beveled and reinforced with
43 welded V channel, fabricated from 5052-H32 0.125-thick aluminum with double
44 flanged edges rolled from front to back.

9-29.13(2) Wiring

All wiring within the cabinet shall be neat and firm. All cabinet wire shall be amply rated for the function intended and shall include the use of terminal and suitable identification labels.

Connectors and harnesses shall be provided as defined in the latest NEMA TS 2 standard. Connector A & B shall be supplied for the monitor unit. In addition, the cabinet shall be wired with a standard 55-pin NEMA TS 1 Connector A.

Wire for harnesses shall conform to MIL-W-16878E Type B, and shall be rated to 600 volt, 105 degree Celsius. Wire shall be 22 gage, 19 strand. Wires shall be connected to the heads in the form of crimp-pinned connections. Solder lugs shall not be allowed. Connectors shall conform to MIL-C-26482 Series 1. Cables shall be covered with nylon expandable sleeving. Spiral wrap shall not be used. Termination points of the harnesses shall be accessible to the technician without requiring the back panel to be dropped. Unused harness wires shall be tied to the furthest location on the front of the back panel and shall be capped off.

Wires other than harnesses for the monitor and controller shall be THHN, rated at 600 volt, 105 degree Celsius, and shall be a minimum of 22 AWG.

Non insulated connectors shall be utilized for all connections to the Detector Input Terminal Strip.

9-29.13(3) Electrical Design

9-29.13(3)A Load Bay

The design of the load-bay shall conform to NEMA TS2 Section 5, Terminals and Facilities, unless modified herein. The load bay shall be the termination point for the controller unit (CU) CU 55-pin TS1 MSA cable, the (MMU) MSA & B cables, bus interface units (BIU) 1 and 2, and field terminal facilities. The terminal facilities layout shall be arranged in a manner that allows all equipment in the cabinet and all screw terminals to be readily accessible by maintenance personnel.

The load bay shall be fully wired and meet the following requirements:

1. The load bay assembly shall be constructed of smooth finished aluminum, with a minimum nominal thickness of 0.125 inches (1/8 inch). The dimensions shall not exceed a maximum height of 16 inches and a maximum width of 18 inches including wiring bundles. The load bay assembly shall be mounted between 7-inches and 9-inches above the bottom of the cabinet.
2. The load bay assembly (panel) shall be hinged and capable of folding down to allow full access to all back-panel wiring. All solder terminals shall be accessible when the load bay is rolled down. The assembly shall be able to roll down without requiring other components, cables, or switches to be removed. The panel shall be constructed, and wiring shall have sufficient slack, such that folding down the back panel shall not interfere with the operation of the traffic signal while in service.

- (1) All wire shall enter the lower edge of the panel to facilitate folding down back panel. The controller (CU) and malfunction management

- 1 (MMU) cables shall be routed through the back of the load-bay so that
2 they will not be subject to damage during load-bay roll down.
- 3 (2) The load bay shall be designed so that all other cabinet screw
4 terminals are accessible without removing cabinet electronics.
- 5 (3) The panel shall be able to be fully secured when in its upright position.
- 6 (4) The top of the load-bay panel shall attach directly to "C" channel and
7 detach without the use of tools or hardware for roll down purposes.
- 8 (5) The load bay shall be balanced such that it will not roll down when the
9 top of the load bay is detached from the "C" channel, even when fully
10 loaded with BIU's, load switches, flasher, and flash transfer relays.
- 11 3. The load-bay facility shall be wired for 16 channels.
 - 12 (1) Load switch(s) 1-4 shall be vehicle phases 1-8
 - 13 (2) Load switch(s) 5 & 6 shall be pedestrian phases 2, 4, 6, & 8
 - 14 (3) Load switches 7 & 8 shall be overlaps A, B, C & D
 - 15 (4) Load switches 1-4 & 7-8 shall be routed through a flash transfer relay.
- 16 4. The following sockets will be provided:
 - 17 (1) Minimum eight (8) dual load switch sockets spaced 1.25 inches on
18 center.
 - 19 (2) Eight (8) flash transfer relay sockets designed to utilize high density
20 flash transfer relays.
 - 21 (3) One (1) dual flasher socket.
- 22 5. Load Resistors shall be provided on a back right side panel. See section 9-
23 29.13(3)B for more information.
- 24 6. All load switches and flasher shall be supported by a bracket extending at
25 least ½ the length of the load switch.
- 26 7. Controller Unit (CU) Wiring: Wiring the 55-pin TS1 MSA cable shall be
27 soldered to backside of a load bay screw-type terminal strip. All controller
28 pins functions shall be terminated.
- 29 8. Wiring for one (1) Type-16 MMU shall be soldered to backside of a screw
30 type terminal strip. Any used MMU functions shall be accessible from a
31 screw terminal.
- 32 9. Two (2) bus interface rack slots for BIU's 1 and 2 shall be part of the main
33 panel. The main panel BIU rack shall be located in the top left corner of the
34 load-bay placed horizontally and shall accommodate half width BIU's.
- 35 10. BIU wire connections to the PCB shall be via two (2) 34 pin connectors.
36 These connections shall have locking latches. BIU wires shall be soldered to
37 the backside of a screw terminal. The load-bay shall have one (1) 120VAC
38 relay socket.
- 39 11. The load bay shall have one (1) relay that drops the +24VDC to load switches
40 when the cabinet is in flash.

12. The load-bay shall be silkscreened on both sides. Silkscreen shall be numbers and functions on the front side, and numbers only on the back side. The back side shall have label oriented so that labels are upright when the load bay is rolled down.
 13. The field terminals shall be as follows:
Red: 1R, 2R, 3R, 4R, 5R, 6R, 7R, 8R, 2DW, 4DW, 6DW, 8DW, AR, BR, CR, DR
Yellow: 1Y, 2Y, 3Y, 4Y, 5Y, 6Y, 7Y, 8Y, 2CL, 4CL, 6CL, 8CL, AY, BY, CY, DY
Green: 1G, 2G, 3G, 4G, 5G, 6G, 7G, 8G, 2W, 4W, 6W, 8W, AG, BG, CG, DG
 14. Field wiring terminations shall be per channel across the bottom of the load-bay. Each channel shall have 3 terminations corresponding to the appropriate phase Green/walk, Yellow/Ped clearance and Red/Don't Walk. Default wiring shall be left to right vehicle phases 1-8, pedestrian phases 2, 4, 6, 8 and overlap channels A, B, C, and D following the order of the load switches. Field terminals shall be #10 screw terminal and be rated for 600V.
 15. The cabinet shall be wired to flash for all channels. Flashing operation shall alternate between the flasher circuits 1 and 3 (channels 1, 3, 5, 7, 9, 11, 13, & 15) and circuits 2 and 4 (channels 2, 4, 6, 8, 10, 12, 14, & 16). Changing a channel from one circuit from one channel to another shall be possible through the front of the load bay without tools.
 16. Flash programming shall be either red, yellow, or no flash by changing the programmed connector on the front of the load bay. The cabinet shall be supplied with overlaps phases programmed to red flash and pedestrian phases programmed to no flash.
 17. The intersection shall be capable of being placed in flashing operation by the conflict monitor, remote input, internal controller time clock and door switch. Remote and internal controller time clock flash shall be in accordance with MUTCD flash. Conflict flash shall be all-red.
 18. All spare circuits shall be wired and terminated on a terminal strip and shown on the wiring diagram.
 19. All cable wires shall be terminated. No tie-off of unused terminals will be allowed.
- All wiring shall conform to NEMA TS2 Section 5.2.5 Table 5-1. Conductors shall conform to military specification MIL-W-16878E, electrical insulated high heat wire, type B. Conductors #14 or larger shall be permitted to be UL type THHN. Main Panel wiring shall conform to the following colors and minimum wire sizes:
- | | |
|-----------------------------------|--------------------------------|
| Vehicle green load switch output | 16 gauge brown |
| Vehicle yellow load switch output | 16 gauge yellow |
| Vehicle red load switch output | 16 gauge red |
| Pedestrian Clearance load switch | 16 gauge yellow |
| Vehicle green load switch input | 22 gauge brown |
| Vehicle yellow load switch input | 22 gauge yellow |
| Vehicle red load switch input | 22 gauge red |
| Pedestrian Clearance input | 22 gauge yellow |
| Logic Ground | 18 gauge white with red tracer |

1	+24V DC	18 gauge red with white tracer
2	+12V DC	18 gauge pink
3	AC+ Line	14 gauge black
4	AC- Line	14 gauge white
5	Earth Ground	16 gauge green
6	AC line (load bay)	16 gauge black
7	AC neutral (load bay)	16 gauge white
8		
9	Controller A Cables – AC+	18 gauge black
10	Controller A Cables – AC-	18 gauge white
11	Controller A Cables – Earth Ground	18 gauge green
12	Controller A Cables – All other cables	22 gauge blue
13		
14	MMU A & B Cables – AC+	18 gauge black
15	MMU A & B Cables – AC-	18 gauge white
16	MMU A & B Cables – Earth Ground	18 gauge green
17	MMU A & B Cables – Start Delay Relay	
18	Common	18 gauge black
19	Normally Open	18 gauge black
20	Normally Closed	18 gauge black
21	MMU A & B Cables – All other cables	22 gauge orange

Two (2) conductors will supply alternating current (AC) power to the load switch sockets. The load switch sockets shall be supplied 1-4 and 5-8 by each conductor.

The field terminal blocks shall have a screw Type No. 10 post capable of accepting no less than 3 No. 12 AWG wires fitted with spade connectors. Four (4) 12-position terminal blocks shall be provided in a single row across the bottom of the main panel. Spade lugs from internal cabinet wiring are not allowed on field terminal screws.

There shall be a plug-in bridge with (16) 3 position panel mount sockets and (16) two position plugs with screw terminals located below the flash transfer relays. These connections shall operate the flash programming between flash circuit 1 & 3 or 2 & 4. It shall be changeable from the front of the load-bay.

All load switches, flasher, and flash transfer relay sockets shall be marked and mounted with screws. Rivets and clip-mounting is unacceptable.

The power terminal blocks shall have a screw Type No. 10 post capable of accepting no less than 3 No. 12 AWG wires fitted with spade connectors. One (1) 12-position terminal blocks shall be provided vertically on the right side of the load bay. The placement of the power terminal block on any other panel shall not be allowed.

Wire size 16 AWG or smaller at solder joints shall be hooked or looped around the eyelet or terminal block post prior to soldering to ensure circuit integrity. All wires shall have lugs or terminal fittings when not soldered. Lap joint/tack on soldering is not acceptable. All soldered connections shall be made with 60/40 solder and non-corrosive, non-conductive flux. All wiring shall be run neatly and shall use mechanical clamps and conductors shall not be spliced between terminations. Cables shall be sleeved in braided nylon mesh and wires shall not be exposed.

1 All wires terminated behind the main panel or on the back side of other panels shall be
2 SOLDERED. No pressure or solder-less connectors shall be used. Printed circuit boards
3 shall not be allowed.

5 **9-29.13(3)B Side Panels**

6 Side panels shall be mounted on "C" channels as specified herein. All panels shall be
7 smooth finished aluminum sufficient in size and thickness for the intended purpose and
8 anticipated equipment required. Side panels shall be no smaller than 16 gauge and no
9 larger than 12 gauge. Side panels shall be mounted no closer than 13" from the rear of
10 the cabinet and no closer than 2" from bottom of cabinet.

11
12 The Back Left (BKLT) side panel(s) shall contain the following:

- 13 1. BKLT/PSIP – Power Supply Interface Panel
 - 14 a. 12-position, double row, high barrier block with #8/32 slotted brass
 - 15 screws
 - 16 b. See Section 9-29.13(3)B1 for additional requirements
- 17 2. BKLT/SDLC – SDLC Interface Panel
 - 18 a. 12-port SDLC terminal
 - 19 b. See Section 9-29.13(3)B2 for additional requirements
- 20 3. Additional blank panels are not required for vacant space in the back left of
21 the cabinet.

22
23 The Front Left (FRLT) side panel(s) shall contain the following:

- 24 1. FRLT/VDIP – Video Detection Interface Panel
 - 25 a. See Section 9-29.13(3)B3 for requirements
- 26 2. FRLT/DP – Detection Panel
 - 27 a. Vehicle Detection: 64-position, double row, din mounted, screw type
 - 28 terminal block.
 - 29 b. Emergency Vehicle Preemption: 12-position, double row, din
 - 30 mounted, screw type terminal block
 - 31 c. Pedestrian Detection: 8-position, double row, high barrier block with
 - 32 #8/32 slotted brass screws
 - 33 d. Pedestrian Returns: Two (2) 8-position, single row, high barrier block,
 - 34 with #8/32 slotted brass screws
 - 35 e. Isolated Neutral Buss: 24-position, standard copper grounding buss
 - 36 bar suitable for #14 through #4 cu.
 - 37 f. Ground Buss: 16-position (minimum), standard copper grounding
 - 38 buss bar suitable for #14 through #4 cu.
 - 39 g. See Section 9-29.13(3)B4 for additional requirements
- 40 3. Blank aluminum spare panels shall be installed in the available space on the
41 front left side of the cabinet.

42
43 The Back Right (BKRT) side panel(s) shall contain the following:

- 44 1. BKRT/PS - Power strip convenience outlets as identified by these
45 specifications. Reference 9-29.13(3)C and 9-29.13(3)B5.
- 46 2. BKRT/SLP – Supplemental Load Panel
 - 47 a. Din-Mounted thirty-two (32) position disconnect screw type terminal
 - 48 block.
 - 49 b. Thirty-two (32) 2k-OHM, 12 watt resistors wired to back panel.
 - 50 c. See section 9-29.13(3)B8 for more information.

3. Additional blank panels are not required for vacant space in the back right side of the cabinet.

The Front Right (FRRT) side panel(s) shall contain the following:

1. FRRT/PP - Power Panel
 - a. See Section 9-29.13(3)B5 for additional requirements
2. FRRT/CIP - Communication Interface Panel
 - a. See Section 9-29.13(3)B6 for additional requirements
3. FRRT/Generator Panel
 - a. See section 9-29.13(3)B7
4. Blank aluminum spare panels shall be installed in the available space on the front right side of the cabinet.

9-29.13(3)B1 Power Supply Interface Panel

The power supply interface panel shall be mounted on the upper back left wall of the cabinet above the top shelf. The power supply interface panel shall include terminations for all the cabinet power supply inputs and outputs. It shall have a protective plastic cover.

9-29.13(3)B2 SDLC Interface Panel

All SDLC cables shall be terminated on both ends, securely terminated to the SDLC interface panel with screw type connection and professionally routed in the cabinet interior to easily reach the controller, malfunction management unit, BIUs. All SDLC connectors shall be fully populated with 15 pins each. SDLC cables shall be tie wrapped in a neat and orderly way.

9-29.13(3)B3 Video Detection Interface Panel

The video detection interface panel shall be the single point interface for video power and coax cabling. The panel shall have (6) individual 1 amp circuit breakers so that individual cameras can be replaced in the field without disrupting the entire video detection system, a (10) position terminal block with #8/32 screws to provide termination for 120VAC and camera 120AC line and 8-position copper neutral and ground buss bars with raised slotted & torque style screws. The AC terminal block shall be covered with a Plexiglas cover.

A coax surge arrestor shall be installed for each coax based video detection camera identified in the project plans and specifications. The coax surge arrestor shall meet or exceed the manufacturer's recommendations for the cameras installed. Surge arrestors are not required to be installed in the cabinet when a coax based detection system is not identified in the plans and specifications.

9-29.13(3)B4 Detection Panel

The detection panel shall be mounted on the left side of the main cabinet compartment below the bottom shelf. The detection panel shall support (32) channels of vehicle detection, (4) channels of emergency vehicle preemption, (4) channels or pedestrian detection with (2) terminal screws per channel and (8) pedestrian returns on a single panel. The pedestrian call terminal block shall be (2) single row terminals. They shall be connected by removable buss bars. The loop wires shall be a 22AWG twisted pair. One of the twisted pair wires of all colors shall have a white tracer and land on the second position terminal of each loop. The emergency preempt wires shall be color coded as follows. +24VDC orange, preempt inputs yellow and ground blue. The auxiliary vehicle

preemption shall be white with a yellow tracer. All wiring for the detection panel shall enter the terminal block from the left and provide sufficient room to close the cabinet door.

The panel shall also include a (24) position solid copper neutral buss bar with with raised slotted & torque style screws and a (16) position minimum solid copper ground buss bar with raised slotted & torque style screws. They shall be mounted vertically at the bottom of the panel.

9-29.13(3)B5 Power Panel

The power panel shall handle all the power distribution and protection for the cabinet and shall be mounted in the bottom right side of the cabinet. All equipment shall be mounted on an appropriately sized silkscreened aluminum panel and include at a minimum the following equipment:

1. A 30-amp main breaker shall be supplied. This breaker shall supply power to the load bay, load switches, controller, MMU, power supply, detector racks, power strip and auxiliary panels. Breaker shall be din rail mounted.
2. A 15-amp auxiliary breaker shall supply power to the fan, cabinet lights and GFI. Breaker shall be din rail mounted.
3. The surge protection device (SPD) shall consist of a modular surge protector for the AC line, another modular surge protector for the AC neutral and ground. There shall also be a radio interference suppressor (RIS). All units shall meet the following requirements.
 - a. Devices shall be Open Type 1 UL Listed 1449 4th Edition.
 - b. The surge components are all Din-Rail mountable.
 - c. If a failure is to occur the components are hot swappable
 - d. An indicator flag will show that the component has failed. No more guessing or testing.
 - e. The Surge component has a contact closure that can notify you if a failure occurs on the unit.
 - f. No bolts or wires to remove to replace the unit.
 - g. The unit is Safe Touch. No need for a plastic protective cover.
4. A normally open, solid state relay rated for 50-amp minimum for the load switch power. (No Mercury Contactors shall be allowed.)
5. One see-through Plexiglas cover to protect maintenance personnel from AC line voltages.
6. One (1) 19-position standard solid copper neutral buss bars with raised slotted & torque style screw heads suitable for #14 through #4 cu.
7. Two (2) 19-position, standard solid copper ground buss bars with raised slotted & torque style screw heads suitable for #14 through #4 cu.
8. Line side AC Power Terminal, 3-position, double row. Power Terminal shall be a dead-front type rated at a minimum of 300V, 50 amp and suitable for #6 cu.
9. The neutral buss bar, the ground buss bars, and the line side power terminal shall be installed at the bottom of the power panel. The buss bars shall be installed horizontally and the terminal shall be installed with the same orientation such that the wires coming into the cabinet can be easily connected from the bottom of the cabinet. The power terminal shall be installed to the right of the ground and neutral bus bars.

1 All circuit breakers shall be Square D, Siemens, GE, Eaton/Cutler Hammer, or Engineer
2 approved equal.

3 4 **9-29.13(3)B6 Communication Interface Panel**

5 There shall be (2) 12-position, double row, high barrier terminal blocks, with #6/32
6 slotted brass screws on the left bottom side of the spare panel on the right side wall of
7 the cabinet. The Communication Interface Panel height shall be from the top of the
8 Power Panel to the top of the "C" Channel.

9 10 **9-29.13(3)B7 Generator Panel**

11 There shall be a Line side AC Power Terminal, 3-position, double row. Power Terminal
12 shall be a dead-front type rated at a minimum of 300V, 50 amp and suitable for #6 cu.
13 The AC power terminal shall be covered with a **see-through Plexiglas** cover to protect
14 maintenance personnel from AC line voltages. The Generator Panel shall be mounted
15 directly below the Power Panel.

16 17 **9-29.13(3)B8 Supplemental Load Panel**

18 There shall be a supplemental load panel with din mounted disconnect screw type
19 terminal block and resistors. The disconnect terminal shall be wired to the green and
20 yellow outputs for each phase and allow current through the resistor when the circuit is
21 completed.

22 23 **9-29.13(3)B9 Fiberoptic Termination Box**

24 The cabinet shall come with a wall mounted fiber optic termination box as defined by
25 section 9-29.3(1)D of these provisions.

26 27 **9-29.13(3)C Convenience Outlets**

28 The cabinet shall be wired with (1) 120 VAC convenience outlet with a ground fault
29 interrupter (GFI) and (1) 120 VAC power strip without ground fault interrupters. The
30 ground fault outlet (GFI) shall be mounted on the right side of the main compartment on
31 or near the power panel. The power strip shall be near the top shelf of the main
32 compartment in the upper left corner of the cabinet and the wiring shall be neatly
33 secured. No outlets shall be mounted on the door. The non-GFI power strip shall be on
34 a separate circuit from the GFI outlet, and provide a minimum of six (6) outlets. The
35 power strip shall be fed through the transient voltage suppressor located on the cabinet
36 power panel.

37 38 **9-29.13(3)D Cabinet Illumination**

39 Two LED light strips shall be provided for cabinet illumination. One shall be mounted to
40 the top front of the cabinet interior, and shall be rated at a minimum of 475 lumens. A
41 second LED light to illuminate the load bay area and shall be mounted below the rollout
42 drawer (computer shelf), and shall be rated at a minimum of 240 lumens. The light shall
43 be attached so that it remains stationary when the drawer is extended. A door switch
44 shall be wired so as to allow both lights to operate only when the door is open.

45 46 **9-29.13(3)E Generator Bypass Compartment and Cable**

47 Inside the generator compartment there shall be a silkscreened panel housing:

- 48 1. 30A / 125V flanged inlet receptacle capable of accepting a standard 30 amp
49 generator plug. The receptacle shall be appropriate for an extra heavy duty
50 industrial application meeting the following requirements:
 - 51 a. Backwired terminations for ease of installation

- b. NEMA L5-30P
 - c. Listed to UL 498
 - d. Fed Spec: W-C-596
 - e. Certified to CSA C22.2 No. 42
 - f. Housing/Flange: Nylon
 - g. Terminal Retainer: Clear Polycarbonate
 - h. Blades: Brass
 - i. Terminal Screws: #10-32 Brass (Phillips / Slotted / Robertson)
 - j. Terminal Clamp: Cold Rolled Steel – nickel plated
 - k. Assembly Screws: Steel - nickel plated
 - l. Mounting Screw: Nickel plated brass
 - m. Electrical: Current Interrupting Certified for current interrupting at full rated current
 - n. Dielectric Voltage: Withstands 2,000V minimum
 - o. Mechanical: Cord Grip Accommodation #16 AWG - #8 AWG solid or stranded copper wire only.
 - p. Terminal Identification: In accordance with UL 498
 - q. Flammability: HB or better per UL94/CSA 22.2 No.0.17
 - r. Moisture Resistance: IP20 Suitability
 - s. Operating Temperatures: Maximum Continuous 75°C. Minimum - 40°C (w/o impact)
2. A 50A, 2 pole, 4 contact cam switch with split 120VAC line and neutral feeds. The switch shall be a break before make type.
 3. (2) LED lamps with sockets. One LED shall be illuminated when the cabinet has service line power available and the other when the cabinet has generator power available. All LED's shall be field replaceable without putting the intersection in flash and shall carry a 5 year manufacturer warranty.

All wiring to the generator bypass compartment shall be contained in a single cable bundle. The cable shall connect to the backside of the electrical components and shall only be accessible from the inside of the cabinet front door. All electrical components on the inside of the front door that carry AC voltage shall be covered by a see-through plexi-glass cover. The generator bypass cable shall terminate at the same power panel location as service line voltage.

9-29.13(3)F Police Panel

Behind the police panel door there shall be switches for use by emergency personnel. The wiring for these switches shall be accessible when the auxiliary panel is open.

The following switches shall be included:

1. **Flash Switch:** There shall be a switch for the police that puts the cabinet into flashing operations. The switch shall have two positions, "Auto" (up) and "Flash" (down). The "Auto" position shall allow normal signal operation. The "Flash" position shall immediately cause all signal displays to flash as programmed for emergency flash and apply stop time to the controller. When the police flash switch is returned to "Auto", the controller shall restart except when the MMU has commanded flash operation. The effect shall be to disable the police panel switch when the MMU has detected a malfunction and all controller and MMU indications shall be available to the technician regardless of the position of the

1 police flash switch. The switch shall be a general-purpose bat style toggle switch
2 with 0.688-inch long bat.

3 2. **Signals On/Off Switch:** There shall be a switch that renders the field signal
4 displays electrically dead while maintaining controller operation for purpose of
5 monitoring controller operations. The switch shall be a general-purpose bat style
6 toggle switch with 0.688-inch long bat.

7

8 **9-29.13(3)G Auxiliary Switch Panel**

9 The cabinet shall include an auxiliary switch panel mounted to the interior side of the
10 police panel compartment on the cabinet front door. The panel shall be secured to the
11 police panel compartment by (2) Philips head screws and shall be hinged at the bottom
12 to allow access to the soldered side of the switches. Both sides of the panel shall be
13 silkscreened. All of the switches shall be protected by a hinged see-through Plexiglas
14 cover.

15

16 The following switches shall be included:

17 1. **Controller ON/OFF Switch:** There shall be a switch that renders the controller
18 and load-switching devices electrically dead while maintaining flashing
19 operations for purpose of changing the controller or load-switching devices. The
20 switch shall be a general-purpose bat style toggle switch with 0.688-inch long
21 bat.

22 2. **Signals ON/OFF Switch:** There shall be a switch that renders the field signal
23 displays electrically dead while maintaining controller operation for purpose of
24 monitoring controller operations. The switch shall be a general-purpose bat style
25 toggle switch with 0.688-inch long bat.

26 3. **Stop Time Switch:** There shall be a 3-position switch labeled "Normal" (up),
27 "Off" (center), and "On" (down). With the switch in the "Normal" position, a stop
28 timing command shall be applied to the controller by the police flash switch or the
29 MMU (Malfunction Management Unit). When the switch is in its "Off" position,
30 stop timing commands shall be removed from the controller. The "On" position
31 shall cause the controller to stop time. The switch shall be a general-purpose bat
32 style toggle switch with 0.688-inch long bat.

33 4. **Technician Flash Switch:** There shall be a switch that places the field signal
34 displays in flashing operation while the controller continues to operate. This flash
35 shall have no effect on the operation of the controller or MMU. The switch shall
36 be a general-purpose bat style toggle switch with 0.688-inch long bat.

37 5. **Light Switch:** There shall be a switch that turns cabinet lighting off with the main
38 door open. The switch shall be a general-purpose bat style toggle switch with
39 0.688-inch long bat.

40

41 **9-29.13(4) Auxiliary Equipment**

42

43 **9-29.13(4)A Traffic Signal Controller**

44 Traffic Signal Controller shall be a Siemens Controller, EPAC M62 with an ATC
45 Communications Module. The CPU operating system shall be Linux. The Contractor
46 shall contact the City of Tacoma Traffic Signal Shop at 253-491-5287 to obtain the
47 current firmware version to be utilized.

Siemens M62 traffic signal controllers operating a Pedestrian Hybrid Beacon (HAWK Signal), must be configured by the manufacturer for operation of a pedestrian hybrid beacon. The contractor/vendor shall configure and test the operation of the controller and malfunction management unit prior to delivery to the City of Tacoma Signal Shop.

9-29.13(4)B Malfunction Management Unit (MMU)

The cabinet shall come with a Malfunction Management Unit (MMU). The cabinet shall come with a (MMU) that meets all the requirements of NEMA TS2-2003 while remaining downward compatible with NEMA TS1. It shall have (2) high contrast LCD displays and an internal diagnostic wizard. It shall come with a 10/100 Ethernet port. It shall come with software to run flashing yellow arrow operation. The MMU shall be an Eberle Design, Inc. (EDI) model MMU2-16LEip. Contractor shall provide a compatible TS2 program card onboard memory.

MMUs monitoring a Pedestrian Hybrid Beacon (HAWK Signal), must be configured by the manufacturer specifically for the monitoring and operation of a pedestrian hybrid beacon. The contractor/vendor shall configure and test the operation of the controller and malfunction management unit prior to delivery to the City of Tacoma Signal Shop.

9-29.13(4)C Dual Channel Load Switches

The cabinet shall be provided with eight (8) dual channel load switches. All load switches shall be solid state circuit board type with a 2-piece aluminum case. Separate LED indications shall be provided for the input and output side of the loads for each channel. The load switches shall be Western Systems model SSS-216.

9-29.13(4)D Dual Channel Flasher

The Cabinet shall come with one (1) dual channel flasher. The flasher shall be solid state circuit board type with a two-piece aluminum case. LED indications shall be provided for both channels. The flasher shall be Western Systems model SSF-216.

9-29.13(4)E High Density Flash Transfer Relay

The High Density Flash Transfer Relay (HDFTR) shall have a hermetically sealed cover and shall be moisture proof. The HDFTR shall be filled with dry nitrogen to protect contacts from corrosion and to prevent condensation. The HDFTR shall have a shock/impact resistant metal can cover with solid and bend proof pins. The HDFTR contacts shall be rated at 120VAC @ 10 Amp. The coil of the HDFTR shall be rated at 120VAC. The HDFTR shall have an LED indicator to display contact transfer position.

9-29.13(4)F Loop Detector Card Rack

Two (2) fully wired 8-position card racks, shall be installed. Detector racks shall be capable of using both two channel and four channel detection devices. One of the card racks shall also have the additional capacity and be fully wired for an Opticom Model 760 Card. Racks shall be secured to the detector shelf as far to the right as possible within the cabinet in such a manner as to afford easy access for maintenance, without interfering with access to any of the ports. The racks shall accommodate 4.5 inch high, 6.875 inch long, 1.12 inch wide two channel, two output per channel detector modules. Connectors shall be 44 contacts (22 each side) spaced on 0.156" centers. Each rack shall be provided with a bus interface unit (BIU). These shall meet all the requirements of NEMA TS-2 1988 standards. In addition, all BIUs shall provide separate front panel indicator LED's for DC power status and SDLC Port 1 transmit and receive status.

The (BIU)'s shall be Eberle Design, Inc. model BIU-700H, Econolite model BIU-64, Reno A&E model BIU/2, or Engineer approved equal.

The loop cabling shall be connected via a 37 pin DB connector using spring clips. The Opticom cable shall be connected via a 24 pin connector using locking latches. The power cable shall be a 6 pin connector. All power wires shall be 18AWG. The addressing of detector racks shall be accomplished via dipswitches mounted to the PCB. There shall be the capability to turn off the TS2 status to the BIU for the uses of TS1 detector equipment via dipswitches mounted to the PCB. There shall be a 34 pin connector using locking latches that breaks the output from the detector to the input of the BIU, there shall also be +24VDC and logic ground on this connector. All racks shall have space at the bottom front for labeling. All racks shall be designed for horizontal stacking. Separate racks for detection and preemption are not allowed.

9-29.13(4)G Detector Power Supply

The cabinet shall come with a shelf mounted cabinet power supply meeting at minimum NEMA TS 2-2003 (R2008) standards. It shall be a heavy duty device that provides +12VDC at 5 Amps / +24VDC at 3 Amps / 12VAC at 0.25 Amp, and line frequency reference at 50 mA. The power supply shall provide a separate front panel indicator LED for each of the four outputs. Front panel banana jack test points for 12VDC, 24VDC, and logic ground shall also be provided. The power supply shall provide 5A of power and be able to cover the load of four (4) complete detector racks.

9-29.13(4)H Ethernet Switch

Ethernet switch shall be EtherWAN ED3575-622 Hardened Managed Switch with 2 VDSL2 Ethernet Extender ports. 6 10/100TX, + Gigabit SFP Combo + 2 Copper Pair VDSL2 Ports. (Etherwan P/N ED3575-622). A 30 watt, 24VDC output power supply unit shall be provided by the same manufacturer as the switch. A DSL-Octal Cable 2xRJ45, and a minimum 6' Ethernet patch cable shall be provided with each. Two (2) SFP Optics 100Base-FX SM, 1310NM, 15KM, LC fiber optic units shall be provided with each switch.

9-29.13(4)I Uninterruptable Power System (UPS)

The cabinet shall come with a complete uninterruptable power system (UPS), also referred to as a Batter Backup System (BBS). The UPS shall include at a minimum a UPS module with SNMP, ATS assembly, batteries, battery heater mats, battery cables and a battery management system. All other ancillary equipment for a complete functioning UPS system shall be included.

The key UPS system components are identified in the subsection below.

9-29.13(4)I1 UPS Module

The cabinet shall come with (1) FXM 1100W uninterruptible power supply or approved equivalent that supplies clean reliable power control and management. It shall have Automatic Voltage Regulation (AVR), an Ethernet SNMP interface and a control and power connection panel that is rotatable for viewing in any vertical or horizontal orientation. It shall have nominal dimensions of 5.22" x 15.5" x 8.75" and come with mounting brackets. The UPS module shall be an Alpha model 017-201-23 or approved equivalent.

9-29.13(4)I2 UATS/UGTS Assembly

The cabinet shall come with (1) universal automatic transfer switch and universal generator transfer switch connected between the UPS module and the batteries. It shall have surge protection, have dimensions of 3.25" x 15.5" x 6.00" and come with mounting brackets. The ATS module shall be an Alpha model 020-168-25 or approved equivalent.

9-29.13(4)I3 UPS Batteries

The cabinet shall come with (4) high performance Absorbed Glass Mat (AGM) AlphaCell™ batteries with 112Ah runtime. The BBS batteries shall be Alpha model 240XTV or equivalent.

9-29.13(4)I4 UPS Battery Harness

The cabinet shall come with (1) battery cable (10) foot long wired for (4) batteries. The battery harness shall be Alpha model 740-678-27 or equivalent.

9-29.13(4)I5 Battery Management System

The cabinet shall come with AlphaGuard™ battery charge management system Alpha model 012-306-21 or approved equivalent.

9-29.13(4)J Preemption/Priority Equipment

The cabinet shall come with (1) 4-channel rack mounted Opticom™ phase selector. This device shall be capable of receiving encoded signals from Opticom series 700 emitters and detectors. The Opticom™ phase selectors shall be Global Traffic Technologies model 764 or equivalent.

9-29.13(4)K BUS Interface Unit (BIU)

The cabinet shall come with four (4) BIU's. They shall meet all requirements of NEMA TS2-1998 standards. In addition, all BIU's shall provide separate front panel indicator LED's for DC power status and SDLC Port 1 transmit and receive status. Each BIU's shall utilize only 1 rack position.

The (BIU)'s shall be Eberle Design, Inc. model BIU-700H, Econolite model BIU-64, Reno A&E model BIU/2, or Engineer approved equal.

9-29.13(5) Manufacturer Testing and Certification

The complete cabinet assembly with electronics shall undergo complete input/output function testing by the manufacturer before being released to the City of Tacoma.. Testing shall be done via service feed to the 120VAC field terminal. Service power shall be routed through the generator bypass switch, UPS inverter before being connected to the power panel so that all service load circuits are tested.

If the cabinet specified comes with a UPS system (BBS) and batteries; the entire controller cabinet assembly shall undergo a BBS field test procedure where the cabinet is run off battery power for a minimum of one hour.

9-29.14 Vacant

This vacant section is renamed and replaced with the following:

1 **9-29.14 School Speed Zone Beacon Controls**

2
3 School zone beacons shall be controlled by an AP22 time switch by RTC Manufacturing,
4 Inc.

5
6 For new installations of radio controlled systems RTC Parent Part Number
7 TACOMAR2AC, "AC Cabinet SYS w/ R2 Radio SYS" shall be utilized. TACOMAR2AC
8 includes the following components:

- 9
 - Cabinet: 14x16x10
 - 10 • Panel AC Cube FL SPC 500320T
 - 11 • AP22 Time Switch – No Harness
 - 12 • Converter TSC-R2
 - 13 • Antenna YAGI 900MHZ 11dBi
 - 14 • Ant Lead 25' LMR240 TNC-TNC
 - 15 • Adapter N Male to TNC Female
 - 16 • Bracket Ant Radio 20'x40" RIS

17
18 For new installations of cellular controlled systems RTC Parent Part Number
19 TACOMAM2MACFB, "AC Flare Cabinet SYS w/M2M SYS" shall be utilized.
20 TACOMAM2MACFB includes the following components:

- 21
 - Cabinet: 14x16x10
 - 22 • Panel AC Cube FL SPC 500320T
 - 23 • AP22 Time Switch – No Harness
 - 24 • M2M4GA Converter w/Sim Card
 - 25 • Bracket Modem
 - 26 • Antenna M2M MT Internal Cab.
 - 27 • M2M (MT) 4G Adapter Cable

28
29 **9-29.16 Vehicular Signal Heads, Displays, and Housing**

30
31 **9-29.16(2)B Signal Housing**

32 *The second paragraph is supplemented with the following:*

33
34 The door shall open a minimum of 160 degrees.

35
36 *The third paragraph is supplemented with the following:*

37
38 The sections shall be held firmly together by corrosion-resistant hardware in such a
39 manner that additional sections may be added easily.

40
41 *The fourth paragraph is supplemented with the following:*

42
43 The terminal strip for a standard three-section head shall be a minimum five-position,
44 ten-terminal, barrier-type strip with No. 8 screw-type fasteners. To one side of each
45 terminal shall be attached the white, red, yellow and green signal section leads, leaving
46 the opposite terminal for field wires. Multi-section heads shall be provided with a
47 terminal strip located in the yellow (center) section. Lead shall be No. 18 AWG type with
48 1/32-inch wall, 105-1/4 centigrade thermoplastic insulation.
49

1 **9-29.16(3) Polycarbonate Traffic Signal Heads**

2 *This section is deleted.*

4 **9-29.17 Signal Head Mounting Brackets and Fittings**

5 *This section is revised to read:*

7 Vehicle and pedestrian signal heads shall be as detailed in the standard plans.

9 Span wire vehicle signal hanger hardware shall consist of span wire clamp, balance
10 adjuster, wire entrance fitting and vehicle head locking device.

12 A. Construction

- 13 1. Bronze hangers are required.
- 14 2. The minimum size of pins shall be 5/8-inch diameter. Pins shall be stainless
15 steel.
- 16 3. The minimum size of the 'J' or 'U' cable clamps is 1/2-inch diameter. Cable
17 clamp bolts shall be stainless steel. Clamping insert shall be used.
- 18 4. The cable saddle shall be at least 9 inches long.
- 19 5. All cotter pins shall be brass and washers shall be stainless steel.
- 20 6. All hardware shall be of stainless steel, bronze or brass materials.
- 21 7. Signal stem shall be locked with a square headed set screw 1/4-inch
22 minimum in diameter.
- 23 8. Wire entrance shall be a minimum of 1-1/4-inch diameter and shall have a
24 female threaded base for nipple.
- 25 9. The balance adjuster directional lock shall be of the clamping type with 1/2-
26 inch through bolt for locking. No set screw or lock nut acceptable.
- 27 10. All stems shall be secured to signal head with proper lock fitting.

29 Vehicle signal heads attached to a mast arm shall use a type M mounting bracket as
30 detailed in the standard plans and in accordance with Section 8-20.3(14)B and Section
31 9-29.17.

33 **9-29.18 Vehicle Detector**

34 *This section is supplemented with the following:*

35 Unless otherwise specified in the contract plans, the vehicle detection system provided
36 shall be a Gridsmart detection system with the performance plus module.

38 **9-29.18(3) Gridsmart Detection System**

39 The Gridsmart system provided shall provide all necessary components required in
40 order to fully install, setup, test, operate and maintain a fully functional detection system,
41 including, but not limited to, the following components:

- 43 1. Gridsmart Power over Ethernet Bell Camera(s)
- 44 2. Gridsmart GS2 Processor with the Performance Plus Module
- 45 3. Mounting Hardware
- 46 4. Connection Cables, SDLC connector kits

47 Unless otherwise identified in the project plans, one Bell Camera with a fisheye lens is
48 required for each intersection. Additional cameras may be required, and will be
49 identified in the project plans when two or more major arterials intersect, or where sight

lines require additional cameras. Changes to the intersection layout, or camera locations may require additional cameras for proper functionality. Field adjustments to the camera location shall not be permitted without approval from the Engineer.

All mounting hardware and cabling shall meet the manufacturer's recommendations, unless otherwise specified herein.

9-29.19 Pedestrian Push Buttons

This section is supplemented with the following:

Pushbutton systems shall be fully compliant with Accessible Pedestrian System requirements as defined by the American with Disabilities Act. Pushbutton systems shall be two wire systems (four wire systems shall not be permitted).

Unless otherwise specified, the pedestrian push button central control unit shall be Polara shelf mount control unit capable of communication through a SDLC cable (Polara Model iCCU-S2).

Push buttons stations shall be Polara – iNS2 series with the following options:

1. 9x12 Front Plate Adapter
2. 9x12 Faceplate compliant with MUTCD R10-3b
3. No braille on Face Plate
4. Custom Messages
5. Black Button Cover

Extenders may be required for locations where the APS buttons are not within an acceptable reach. Extenders or adapters may be required to accommodate the size of the faceplates for locations where two pushbuttons are mounted to the same pole.

9-29.20 Pedestrian Signals

This section is supplemented with the following:

All pedestrian signals housings shall be die-cast aluminum.

The Vacant Section 9-29.22 is replaced with the following:

9-29.22 Preemption Hardware

Preemption Hardware shall be Opticom TM Model 721 unless otherwise specified.

9-29.24 Service Cabinets

This section is supplemented with the following:

Service cabinets shall be pole mounted, exterior NEMA 3R Rated with a bolt on HUB for top entry. Cabinet shall be a maximum 10 inches wide, 14 inches high, and 5 inches deep.

Load Center shall have between 100 and 150 Amps, with capacity for 6 spaces and 12 circuits, or 8 spaces and 16 circuits as required by Code.

Service panels shall be Square D – QO Series

1 **9-29.24(2) Electrical Circuit Breakers and Contactors**

2 *The first paragraph is supplemented with the following:*

3
4 Mercury relays shall not be accepted. Contactors shall be one of the following brands:

- 5 1. Square D
- 6 2. Siemens
- 7 3. Eaton/Cutler Hammer
- 8 4. Engineer Approved Equal

9
10 *The second paragraph is deleted.*

11
12 *The third sentence of the third paragraph is deleted.*

13
14 *The third paragraph is supplemented with the following:*

15
16 All service panel breakers shall be one of the following brands/series

- 17 1. Square D – QO Series
- 18 2. Siemens – Type BL
- 19 3. Eaton/Cutler Hammer – Quick Lag Type BA
- 20 4. Engineer approved Equal

21
22 All surface mount breakers shall be one of the following Brands/Series:

- 23 1. Square D (Type QOU)
- 24 2. Siemens
- 25 3. Eaton/Cutler Hammer
- 26 4. General Electric
- 27 5. Engineer approved Equal

28
29 **9-29.25 Amplifier, Transformer, and Terminal Cabinets**

30 *This section is supplemented with the following:*

31
32 Terminal compartments may be incorporated into the signal standard as an alternative to
33 providing a separate terminal cabinet attached to the pole. Terminal compartment
34 should offer similar physical and electrical capacity as specified. Contractor shall
35 provide submittals in accordance with the contract documents and obtain approval from
36 the engineer for the alternate design prior to proceeding. Signal standards and terminal
37 compartments shall meet all other structural, mechanical, electrical, and finish
38 requirements as specified, and be suitable for the intended purpose.

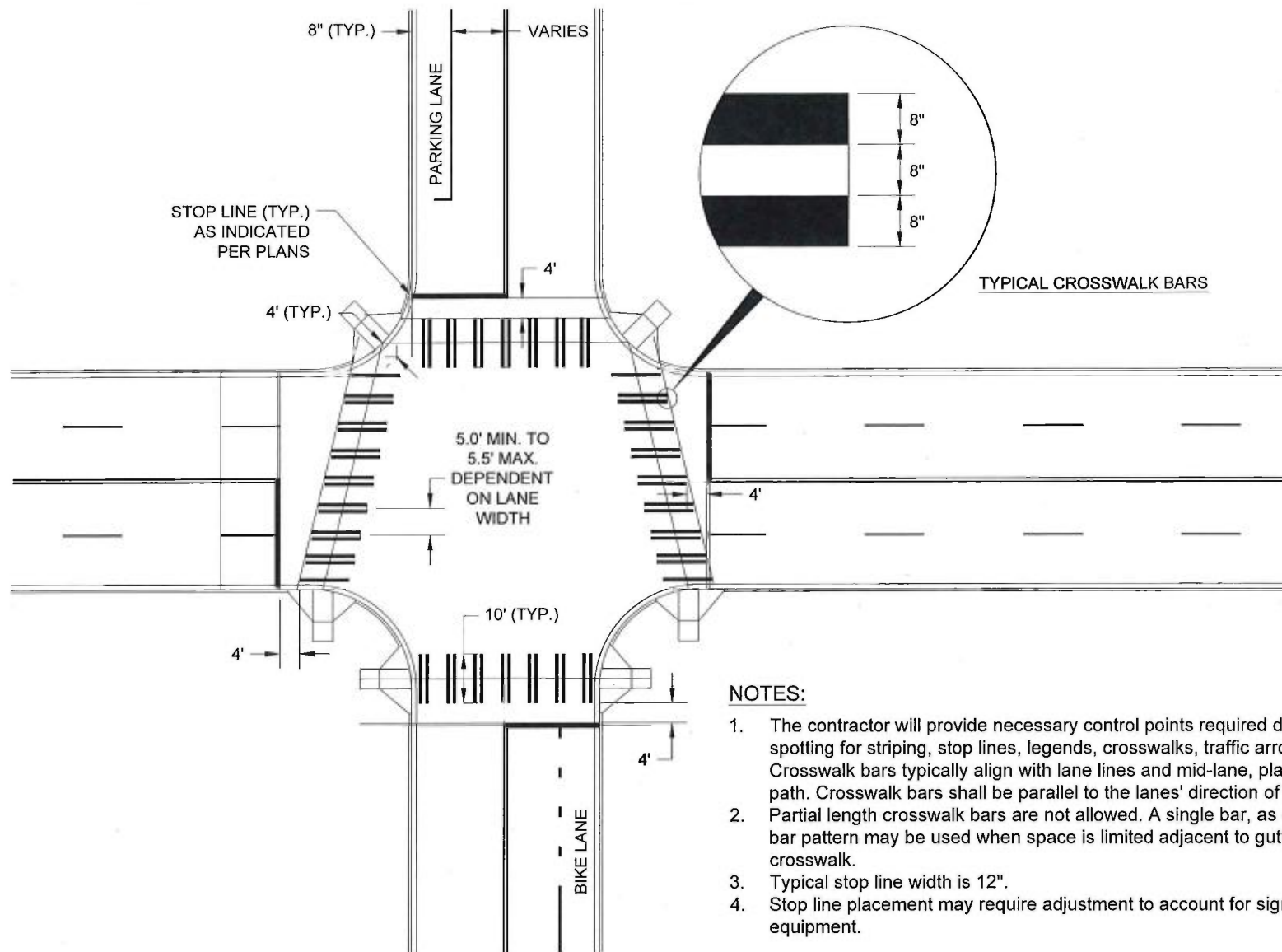
39
40
41
42 **END OF SECTION**

43
44 **END OF SPECIAL PROVISIONS**

APPENDIX A

CITY OF TACOMA &

WSDOT STANDARD PLANS



NOTES:

1. The contractor will provide necessary control points required during preliminary spotting for striping, stop lines, legends, crosswalks, traffic arrows, and signs. Crosswalk bars typically align with lane lines and mid-lane, placed to avoid wheel path. Crosswalk bars shall be parallel to the lanes' direction of travel.
2. Partial length crosswalk bars are not allowed. A single bar, as opposed to the double bar pattern may be used when space is limited adjacent to gutter, curb or intersecting crosswalk.
3. Typical stop line width is 12".
4. Stop line placement may require adjustment to account for signal detection equipment.

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TACOMA POWER

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ENVIRONMENTAL
SERVICES

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[Signature] 8/16/16

CITY ENGINEER

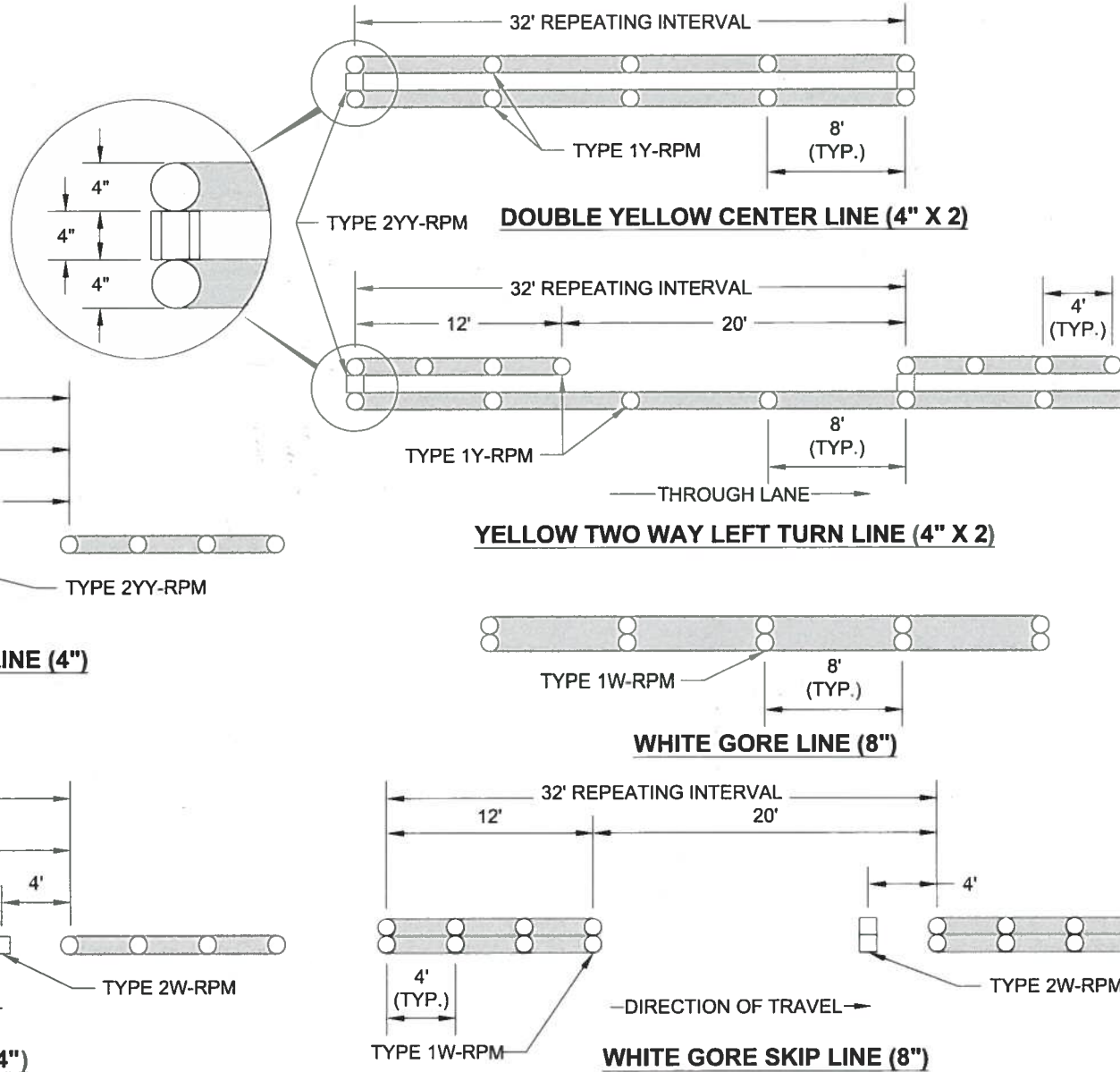
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CITY OF TACOMA
TYPICAL CROSSWALK AND
STOP LINE LAYOUT FOR
VARIOUS CURB RAMP COMBINATIONS

STANDARD PLAN NO. CH-02

NOTES:

1. The Contractor will provide necessary control points for striping, stop lines, legends, crosswalks, traffic arrows, and signs. City inspection required before striping or associated sign installation begins.
2. Use of RPMs as shown correspond with paint striping. If striping consists of thermoplastic (or similar) then Type 1Y/W-RPMs are omitted.
3. RPMs shall not be placed over longitudinal or transverse joints of the pavement surface.



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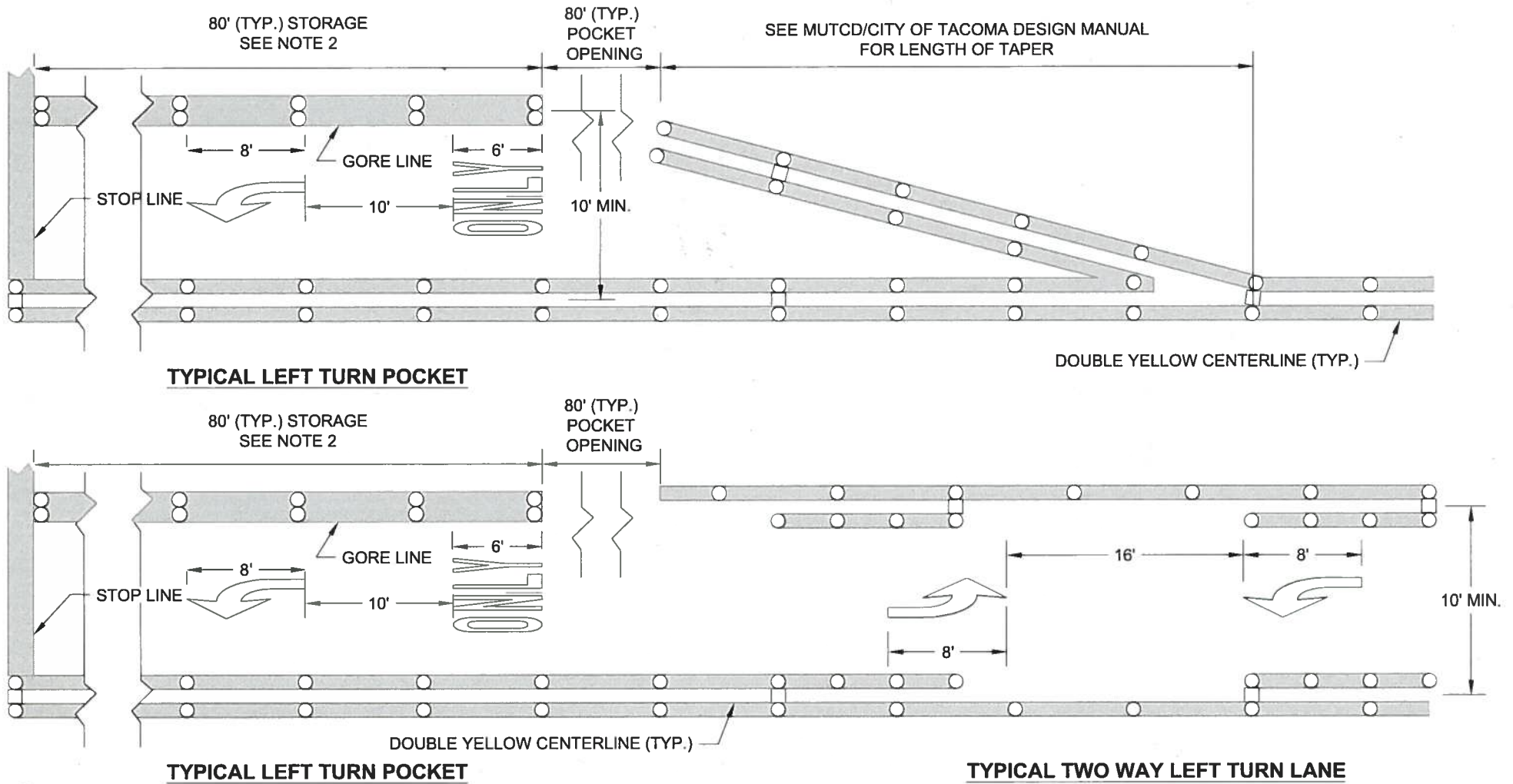
CITY OF TACOMA

LONGITUDINAL
PAVEMENT MARKINGS

STANDARD PLAN NO. CH-03A

NOTES:

1. Contractor will provide necessary control points to assist in preliminary spotting for striping, stop line, legends, crosswalks, traffic arrows, and associated signs.
2. If storage length is 100 feet or greater, then a second arrow, (without "only"), to be placed at 22 feet from stop line to near edge of the arrow.
3. Use of RPMs as shown correspond with paint striping. If striping consists of thermoplastic (or similar) then type 1Y/W-RPMs are omitted.



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CITY OF TACOMA

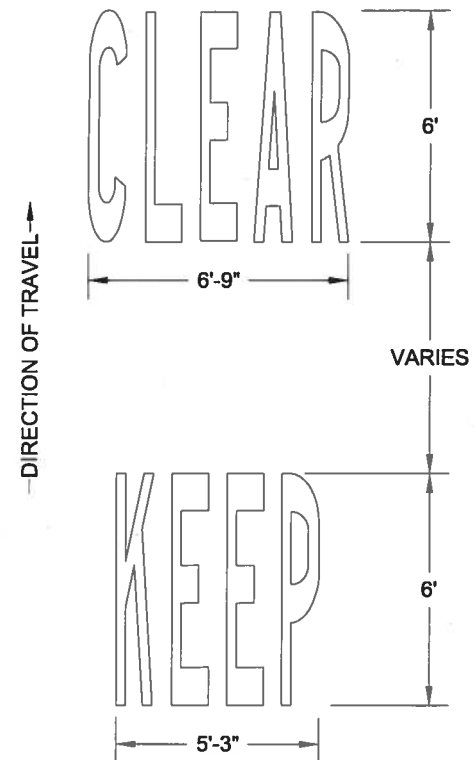
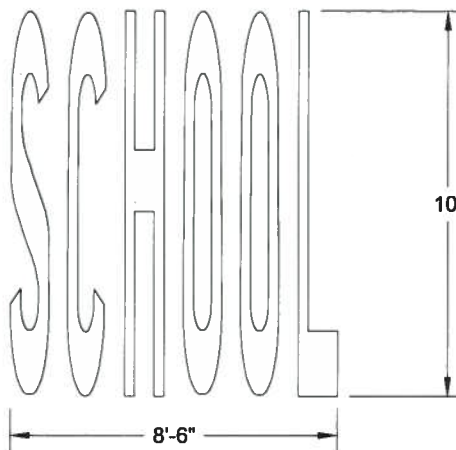
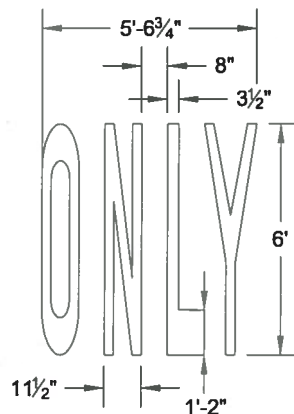
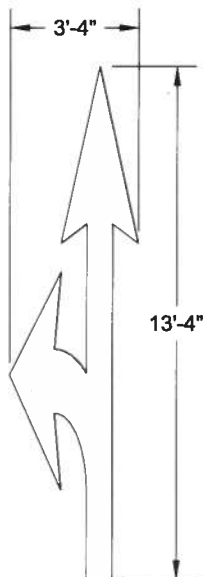
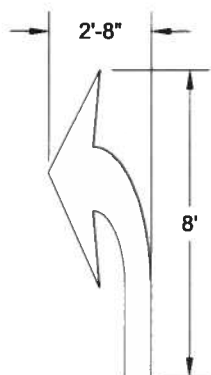
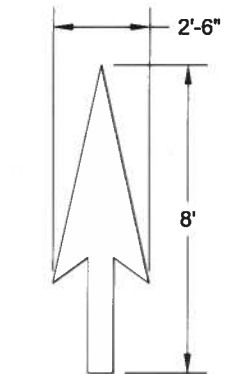
LEFT TURN POCKET
PAVEMENT MARKINGS

STANDARD PLAN NO.

CH-09

NOTES:

1. Contractor will provide necessary control points to assist in preliminary spotting for stripe, stop line, legends, crosswalks, traffic arrows, and associated signs.
2. Typical letter width is 11½".
3. Typical letter spacing is 8".
4. Letter stroke is 3½".
5. Refer to WSDOT M24.40-02 for more specific traffic arrow dimensions.
6. Arrows shown may be mirrored about their centerline as applicable to design.



DCS

PUBLIC WORKS

N/A

TACOMA POWER

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ENVIRONMENTAL SERVICES

NA

TACOMA WATER



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CITY ENGINEER

DATE _____

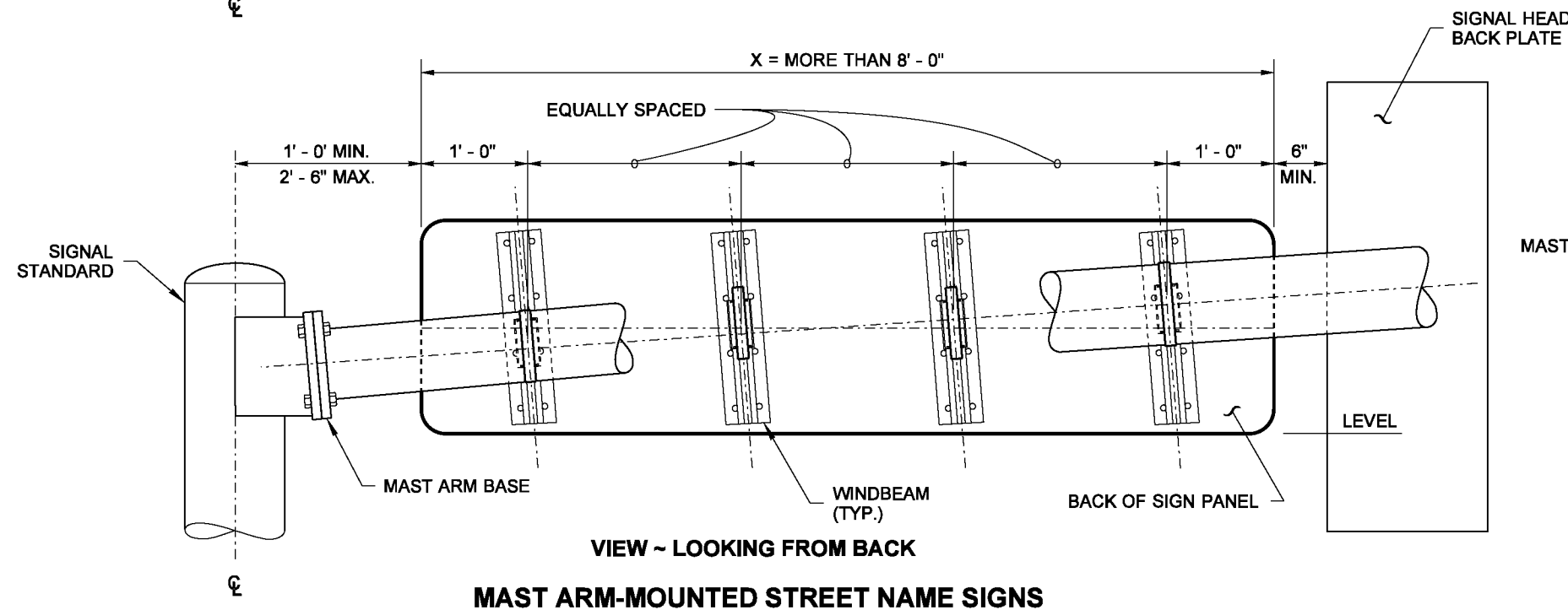
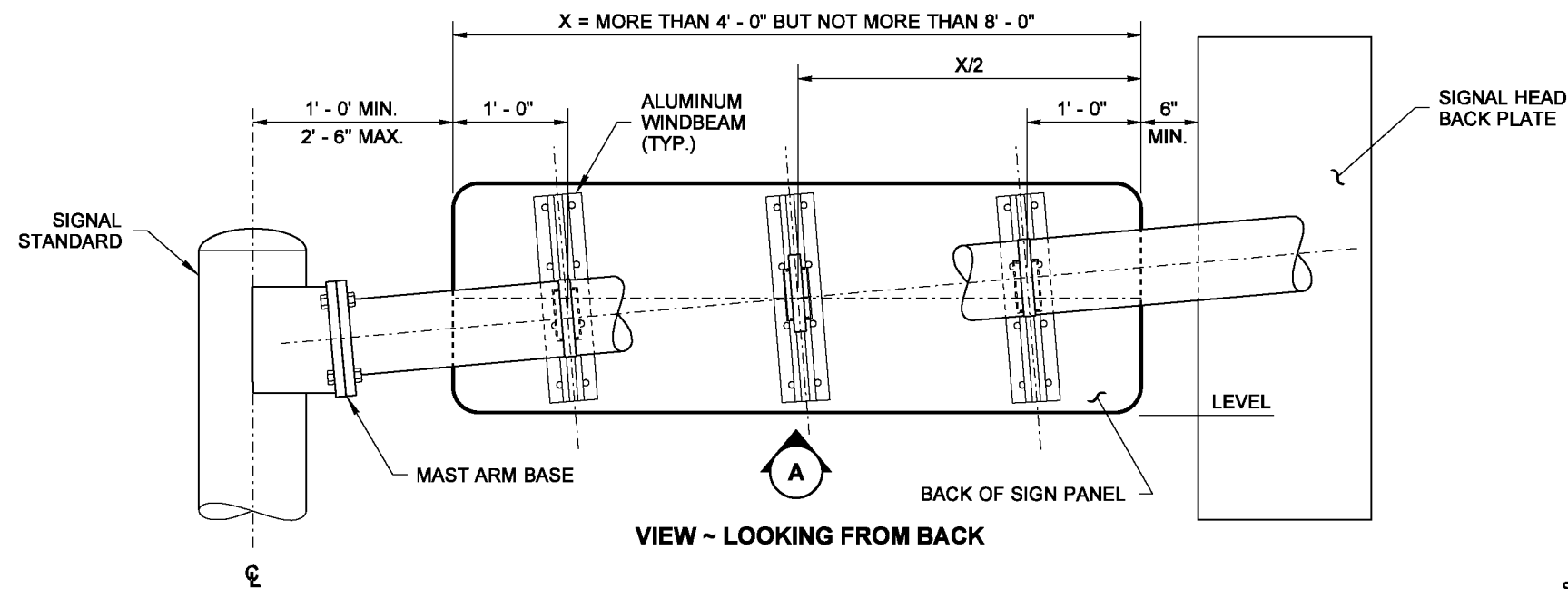
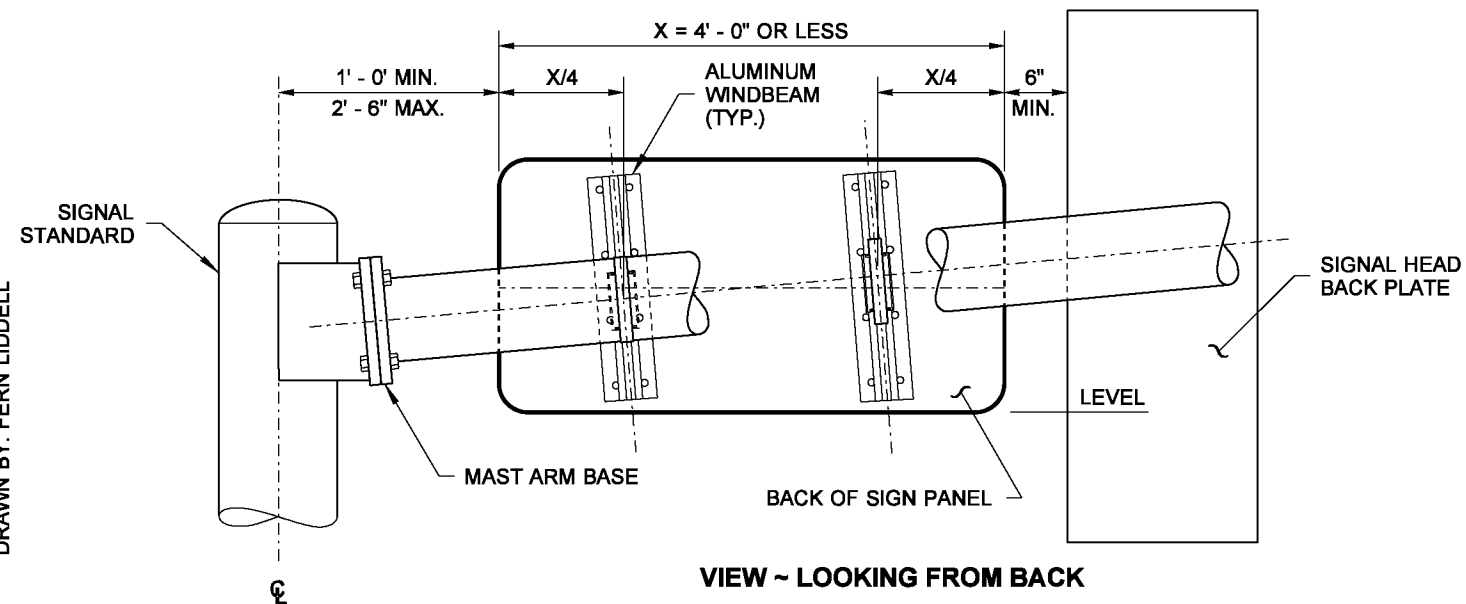
CITY OF TACOMA

PAVEMENT WORDS AND ARROWS

STANDARD PLAN NO.

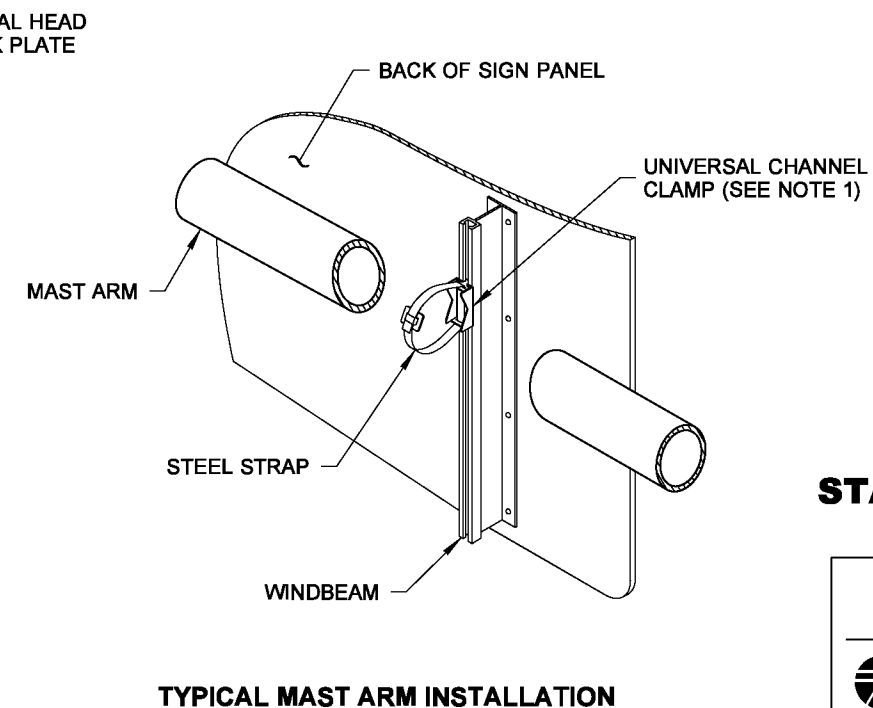
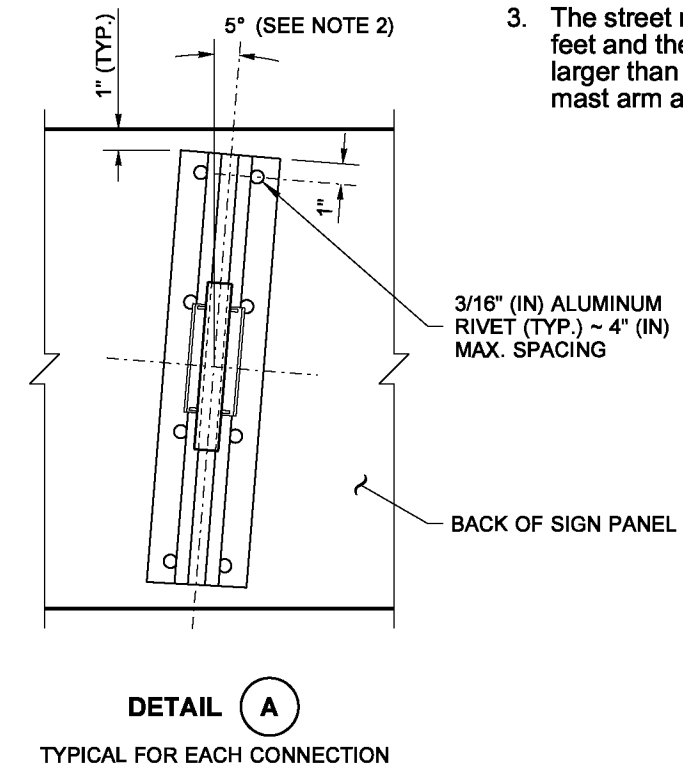
CH-10

DRAWN BY: FERN LIDDELL



NOTES

1. Mounting brackets with steel straps shall be a stainless steel band and buckle system product or an approved equal. Mounting brackets shall be universal channel clamps; steel straps shall be 3/4" (in) wide and 0.030" (in) thick.
2. All signs installed on mast arms or standards (poles) require windbeams. All signs shall be installed with horizontal edges level. A skewed windbeam is required only when the sign is mounted within 12" (in) of the mast arm base (see Detail "A").
3. The street name sign shall be a maximum of 36 square feet and the sign height is a maximum of 3' (ft); signs larger than 36 square feet require a special design mast arm and signal pole.



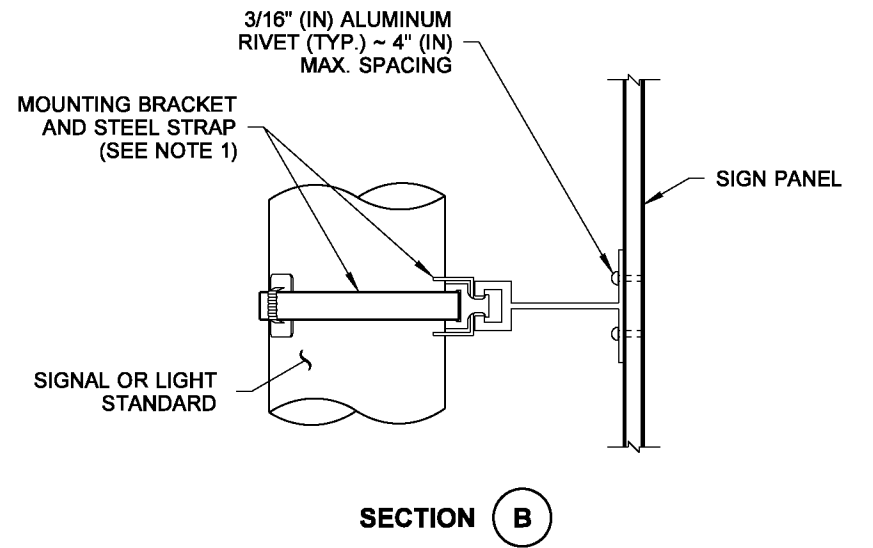
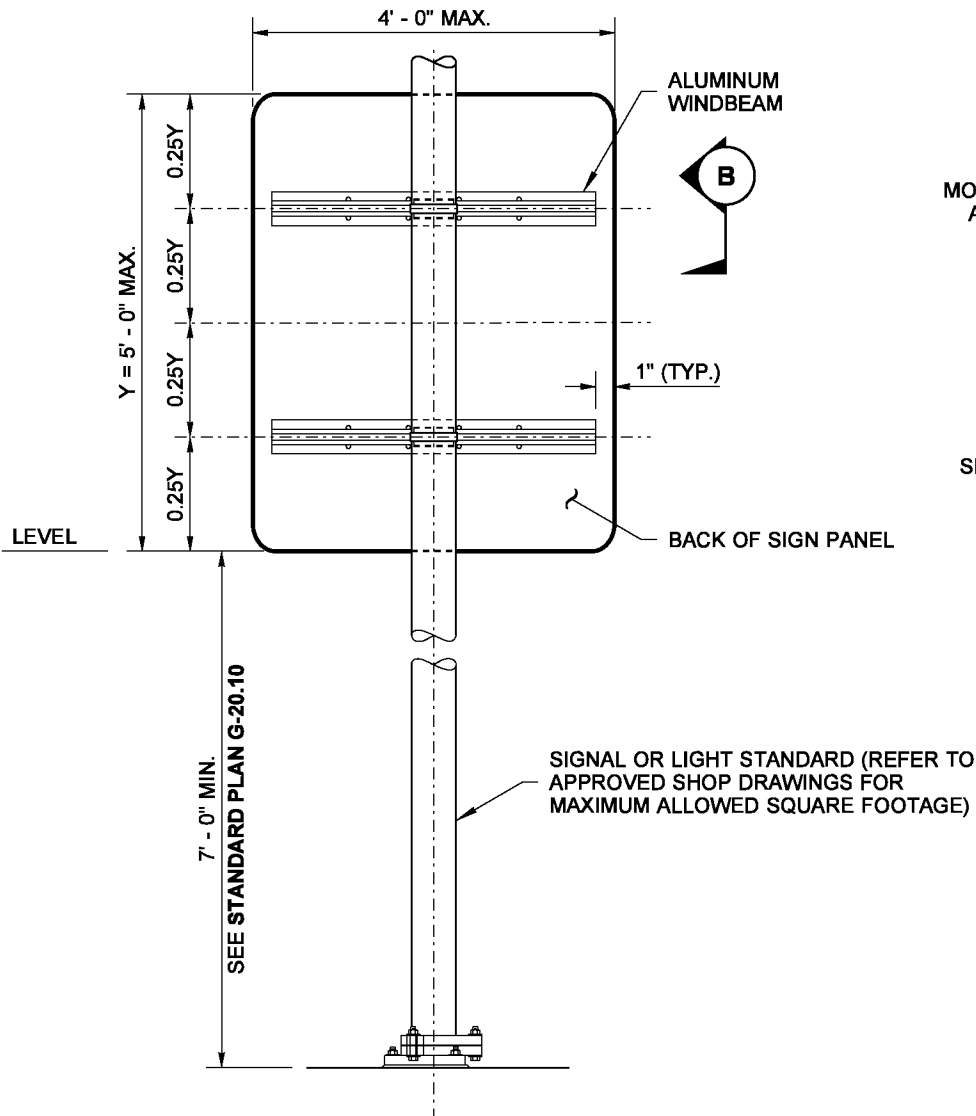
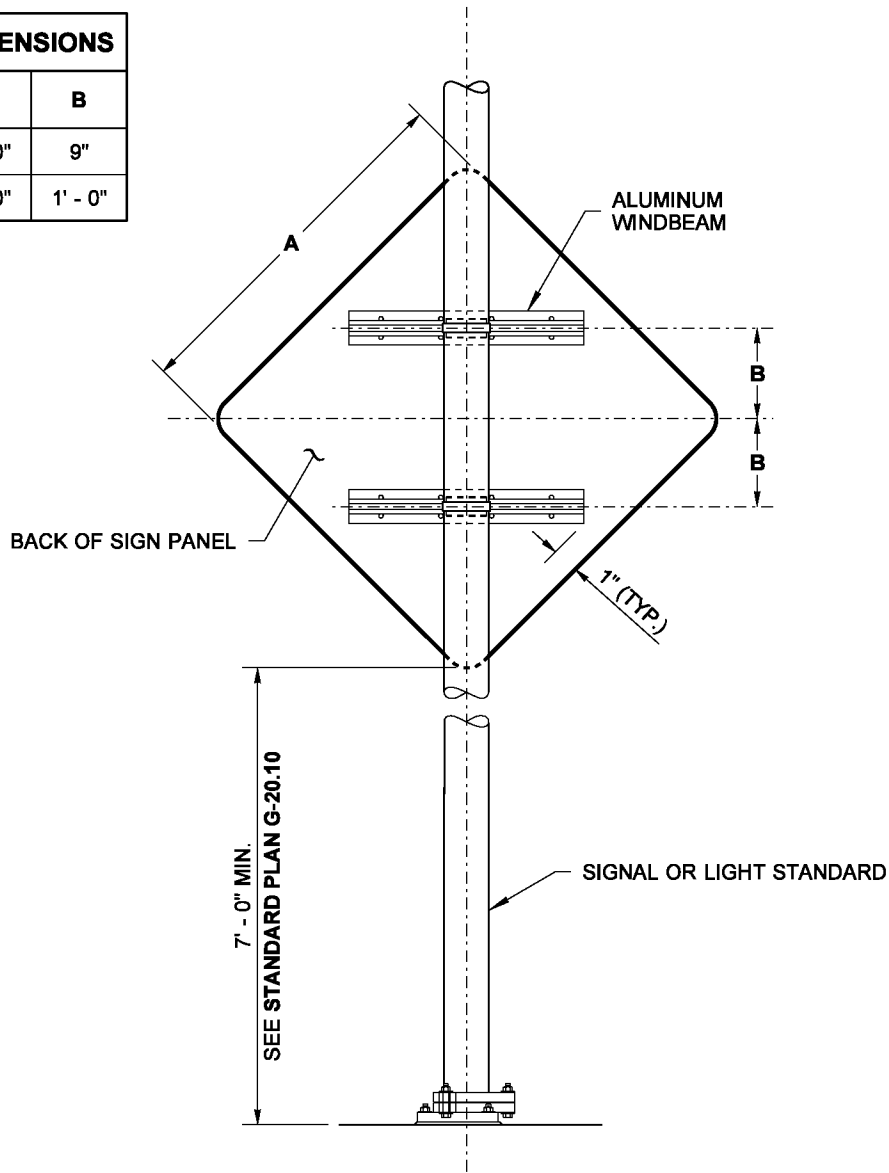
SIGN INSTALLATION ON SIGNAL AND LIGHT STANDARDS STANDARD PLAN G-30.10-04

SHEET 1 OF 2 SHEETS

APPROVED FOR PUBLICATION

STATE DESIGN ENGINEER
Washington State Department of Transportation

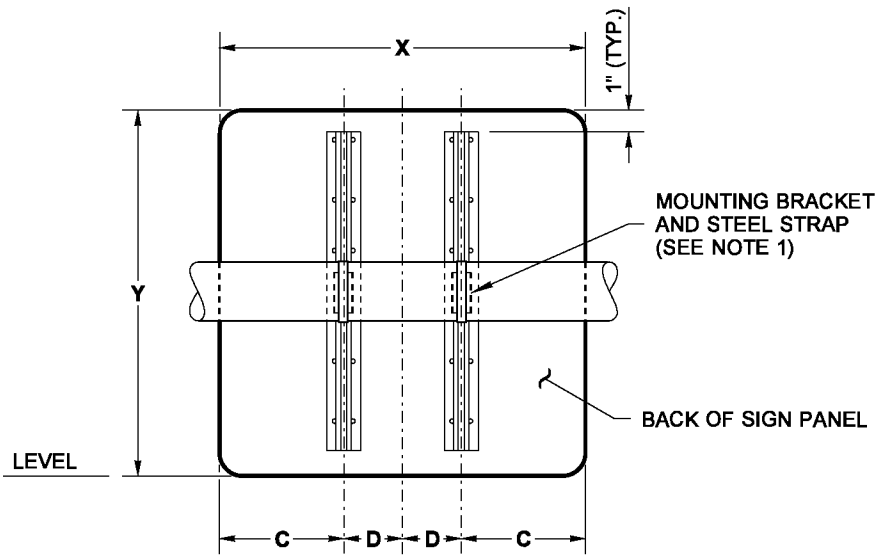
DIMENSIONS	
A	B
3' - 0"	9"
4' - 0"	1' - 0"



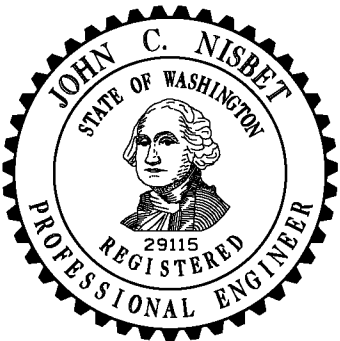
SIGN INSTALLATION ON SIGNAL OR LIGHT STANDARD

DIMENSIONS			
X	Y	C	D
3' - 0"	2' - 6"	1' - 0"	6"
3' - 0"	3' - 0"	1' - 0"	6"
3' - 0"	4' - 0"	1' - 3"	9"
4' - 0"	2' - 6"	1' - 3"	9"

NOTE:
Any Lane Use Sign greater than 7.5 sq ft. requires a Special Design Mast Arm and Signal Pole.



MAST ARM-MOUNTED LANE USE SIGNS



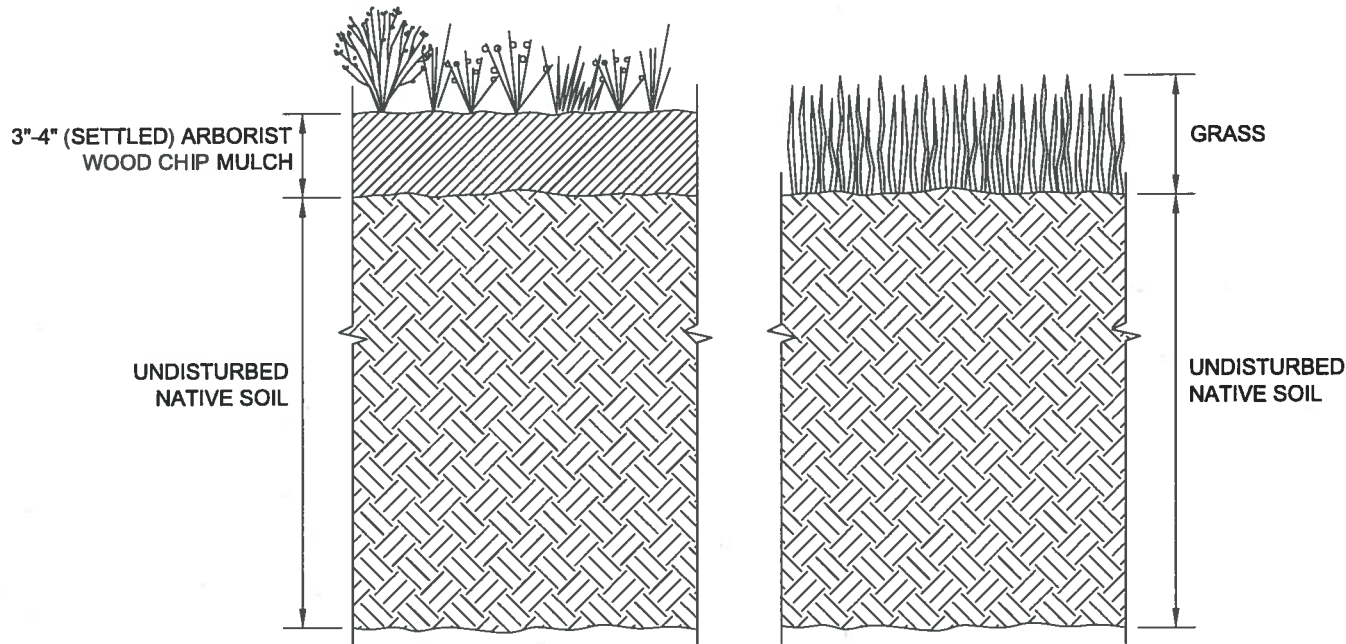
**SIGN INSTALLATION
ON SIGNAL AND
LIGHT STANDARDS
STANDARD PLAN G-30.10-04**

SHEET 2 OF 2 SHEETS

APPROVED FOR PUBLICATION

PLANTING BEDS

TURF (LAWN) AREAS



OPTION 1: Leave native vegetation and soil undisturbed, and protect from compaction during construction. Identify areas of the site that will not be stripped, logged, graded or driven on, and fence off those areas to prevent impacts during construction. If neither soils nor vegetation are disturbed, these areas do not require amendment.

See SWMM BMP L613 for additional information.

DCS

PUBLIC WORKS

NA

TACOMA POWER

REVIEWED BY

ENVIRONMENTAL
SERVICES

NA

TACOMA WATER



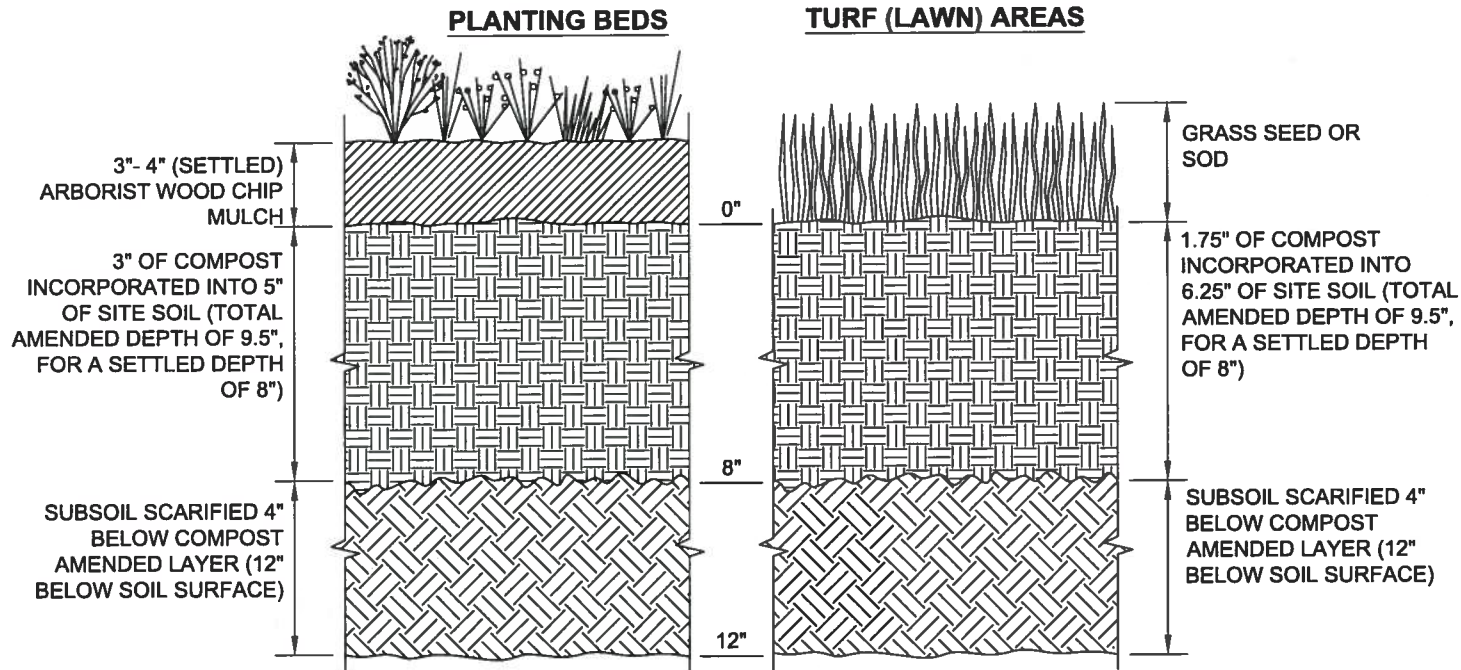
APPROVED FOR PUBLICATION

CITY ENGINEER

DATE

CITY OF TACOMA
BMP L613 POST-CONSTRUCTION
SOIL QUALITY AND DEPTH
OPTION 1 - NO DISTURBANCE

STANDARD PLAN NO. GSI-01a



OPTION 2: Amend existing site topsoil, or subsoil, either at preapproved rate or at calculated rate based on tests of the soil and amendments. All soil areas disturbed or compacted during construction, and not covered by buildings or pavement, shall be amended with compost as described below.

Scarification: Scarify or till subgrade to 8 inches depth (or to depth needed to achieve a total depth of 12 inches of uncompacted soil after calculated amount of amendment is added). Entire surface should be disturbed by scarification. Do not scarify within drip line of existing trees to be retained or where scarification would damage tree roots or as determined by the engineer.

A. Planting Beds

1. **PREAPPROVED RATE:** Place 3 inches of composted material and rototill into 5 inches of existing site soils (a total amended depth of about 9.5 inches, for a settled depth of 8 inches).

2. **CALCULATED RATE:** Place calculated amount of composted material or approved organic material and rototill into depth of soil needed to achieve 8 inches of settled soil at 10% organic content.

Rake beds to smooth and remove surface rocks larger than 2 inches diameter. Mulch planting beds with 3" - 4" of organic mulch or stockpiled duff.

B. Turf (Lawn) Areas

1. **PREAPPROVED RATE:** Place 1.75 inches of composted material and rototill into 6.25 inches of existing site soils (a total amended depth of about 9.5 inches, for a settled depth of 8 inches).

2. **CALCULATED RATE:** Place calculated amount of composted material or approved organic material and rototill into depth of soil needed to achieve 8 inches of settled soil at 5% organic content.

Water or roll to compact to 85% of maximum dry density. Rake to level and remove surface rocks larger than 1 inch diameter.

Setbacks: to prevent uneven settling, do not compost-amend soils within 3 feet on center of utility infrastructure (poles, vaults, meters etc.). Within one foot of pavement edge, curbs and sidewalks; soil should be compacted to approximately 90% max. modified proctor density (ASTM D1557) to ensure a firm surface. Do not compact within the tree protection zone. See Std. Plan LS-08 and LS-09.

See SWMM BMP L613 for additional information.

DCS

PUBLIC WORKS

NA

TACOMA POWER

REVIEWED BY

GY

ENVIRONMENTAL
SERVICES

NA

TACOMA WATER



APPROVED FOR PUBLICATION

[Signature]

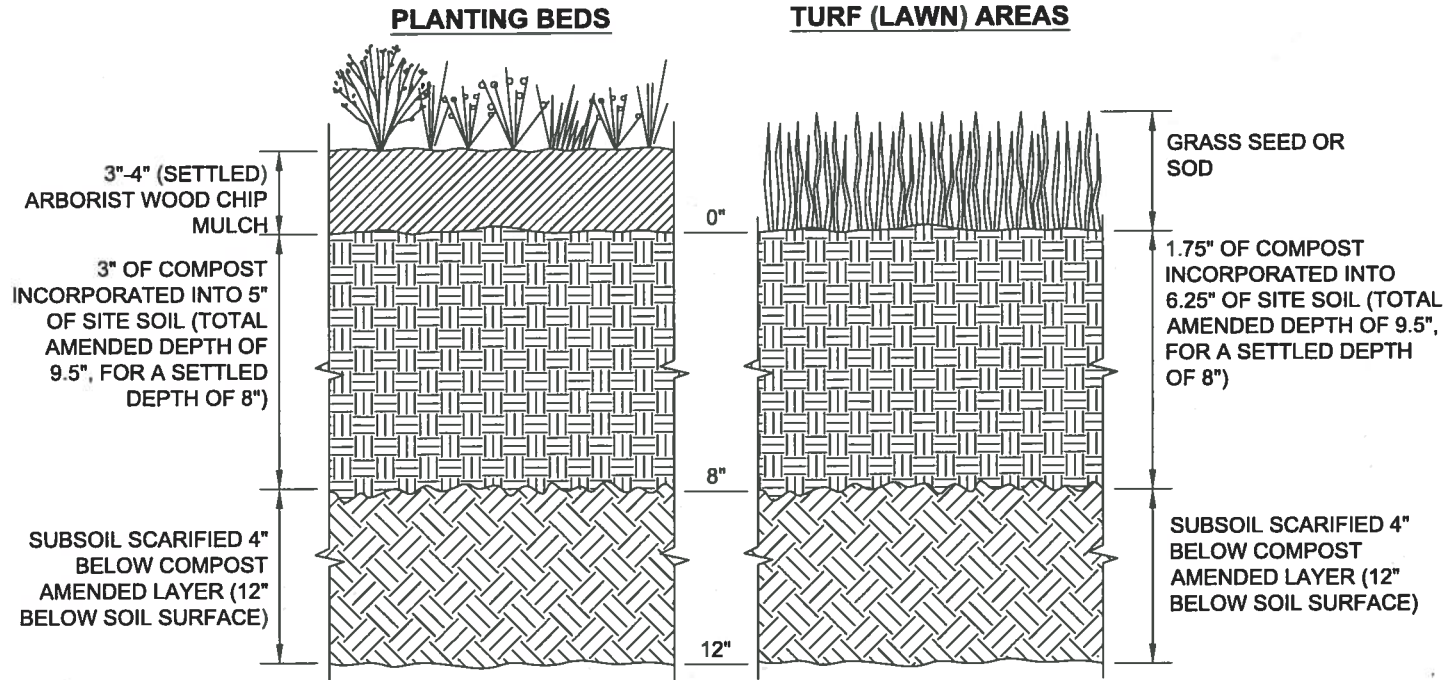
CITY ENGINEER

4/4/10

DATE

CITY OF TACOMA
BMP L613 POST CONSTRUCTION SOIL
QUALITY AND DEPTH
OPTION 2 - AMEND IN PLACE

STANDARD PLAN NO. GSI-01b



OPTION 3: Stockpile existing topsoil during grading. Stockpile and cover soil with weed barrier material that sheds moisture yet allows air transmission, in approved location, prior to grading. Replace stockpiled topsoil prior to planting. Stockpiled topsoil shall be tested and amended if needed to meet the organic matter or depth requirements either at preapproved rate or calculated rate. All soil areas disturbed or compacted during construction, and not covered by buildings or pavement, shall be amended with compost as described below.

Scarification: If placed topsoil plus compost or other organic material will amount to less than 12 inches, scarify or till subgrade to depth needed to achieve 12 inches of loosened soil after topsoil and amendment are placed. Entire surface should be disturbed by scarification. Do not scarify within drip line of existing trees to be retained.

A. Planting Beds	B. Turf (Lawn) Areas
1. PREAPPROVED RATE: Place 3 inches of composted material and rototill into 5 inches of replaced soil (a total amended depth of about 9.5 inches, for a settled depth of 8 inches).	1. PREAPPROVED RATE: Place 1.75 inches of composted material and rototill into 6.25 inches of replaced soil (a total amended depth of about 9.5 inches, for a settled depth of 8 inches).
2. CALCULATED RATE: Place calculated amount of composted material or approved organic material and rototill into depth of replaced soil needed to achieve 8 inches of settled soil at 10% organic content.	2. CALCULATED RATE: Place calculated amount of composted material or approved organic material and rototill into depth of replaced soil needed to achieve 8 inches of settled soil at 5% organic content.
Rake beds to smooth and remove surface rocks larger than 2 inches diameter. Mulch planting beds with 3" - 4" of organic mulch or stockpiled duff.	Water or roll to compact to 85% of maximum dry density. Rake to level and remove surface rocks larger than 1 inch diameter.

Setbacks: to prevent uneven settling, do not compost-amend soils within 3 feet on center of utility infrastructure (poles, vaults, meters etc.). Within one foot of pavement edge, curbs and sidewalks; soil should be compacted to approximately 90% max. modified proctor density (ASTM D1557) to ensure a firm surface. Do not compact within the tree protection zone. See Std. Plans LS-08 and LS-09.

See SWMM BMP L613 for more information.

DCS

PUBLIC WORKS

NA

TACOMA POWER

REVIEWED BY

ENVIRONMENTAL
SERVICES

NA

TACOMA WATER



APPROVED FOR PUBLICATION

[Signature]

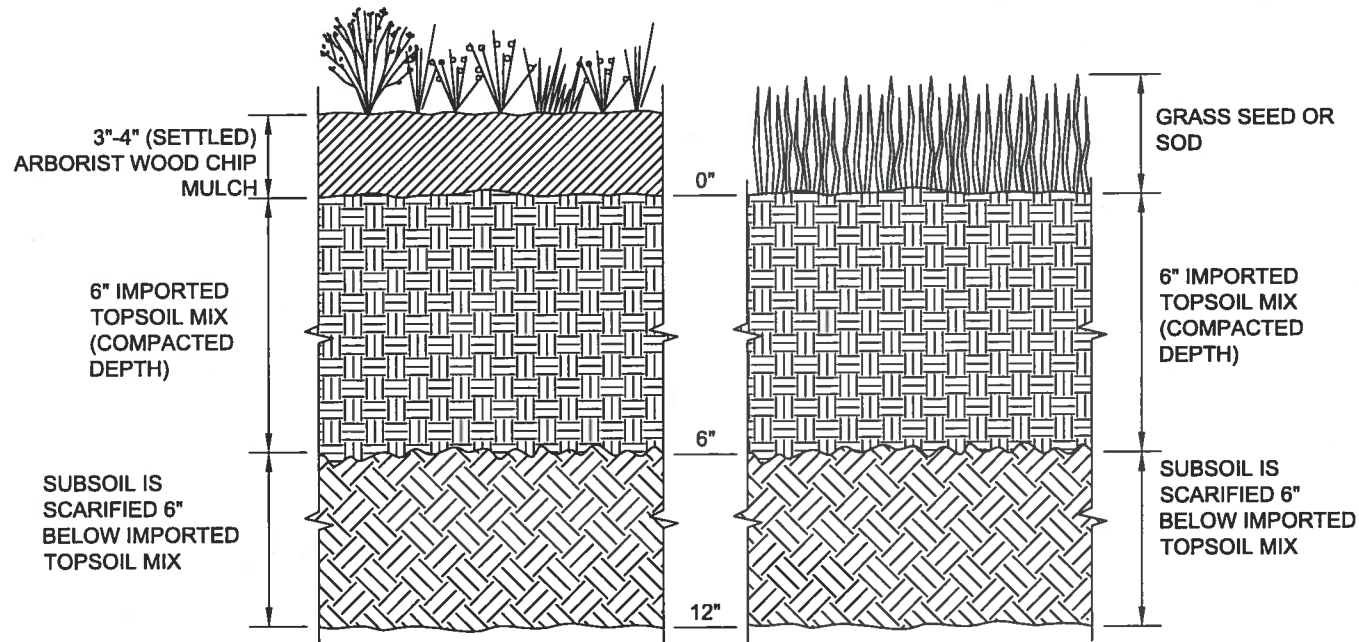
CITY ENGINEER

DATE

CITY OF TACOMA
BMP L613 POST CONSTRUCTION SOIL
QUALITY AND DEPTH
OPTION 3 - STOCKPILE AND AMEND
STANDARD PLAN NO. GSI-01c

PLANTING BEDS

TURF (LAWN) AREAS



OPTION 4: Import topsoil mix of sufficient organic content and depth to meet the requirements. All soil areas disturbed or compacted during construction, and not covered by buildings or pavement, shall be restored as described below.

Scarification: scarify or till subgrade in two direction to 6 inches depth. Entire surface shall be disturbed by scarification. Do not scarify within drip line of existing trees to be retained.

A. Planting Beds

Use imported topsoil mix containing 10% organic matter (typically around 40% compost). Soil portion must be sand or sandy loam as defined by the USDA. Place 3 inches of imported topsoil mix on surface and till into 2 inches of soil. Place 3 inches of imported topsoil mix on surface and till into 2 inches of soil. Place second lift of 3 inches topsoil mix on surface.

Rake beds to smooth and remove surface rocks larger than 2 inches diameter. Mulch planting beds with 3" - 4" of organic mulch or stockpiled duff.

B. Turf (Lawn) Areas

Use imported topsoil mix containing 5% organic matter (typically around 25% compost). Soil portion must be sand or sandy loam as defined by the USDA. Place 3 inches of imported topsoil mix on surface and till into 2 inches of soil. Place second lift of 3 inches topsoil mix on surface.

Water or roll to compact to 85% of maximum dry density. Rake to level and remove surface rocks larger than 1 inch diameter.

Setbacks: to prevent uneven settling, do not compost-amend soils within 3 feet on center of utility infrastructure (poles, vaults, meters etc.). Within one foot of pavement edge, curbs and sidewalks; soil should be compacted to approximately 90% max. modified proctor density (ASTM D1557) to ensure a firm surface. Do not compact within tree protection zone. See Std. Plans LS-08 and LS-09.

See SWMM BMP L613 for additional information.

DCS

PUBLIC WORKS

NA

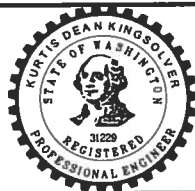
TACOMA POWER

REVIEWED BY

ENVIRONMENTAL
SERVICES

NA

TACOMA WATER

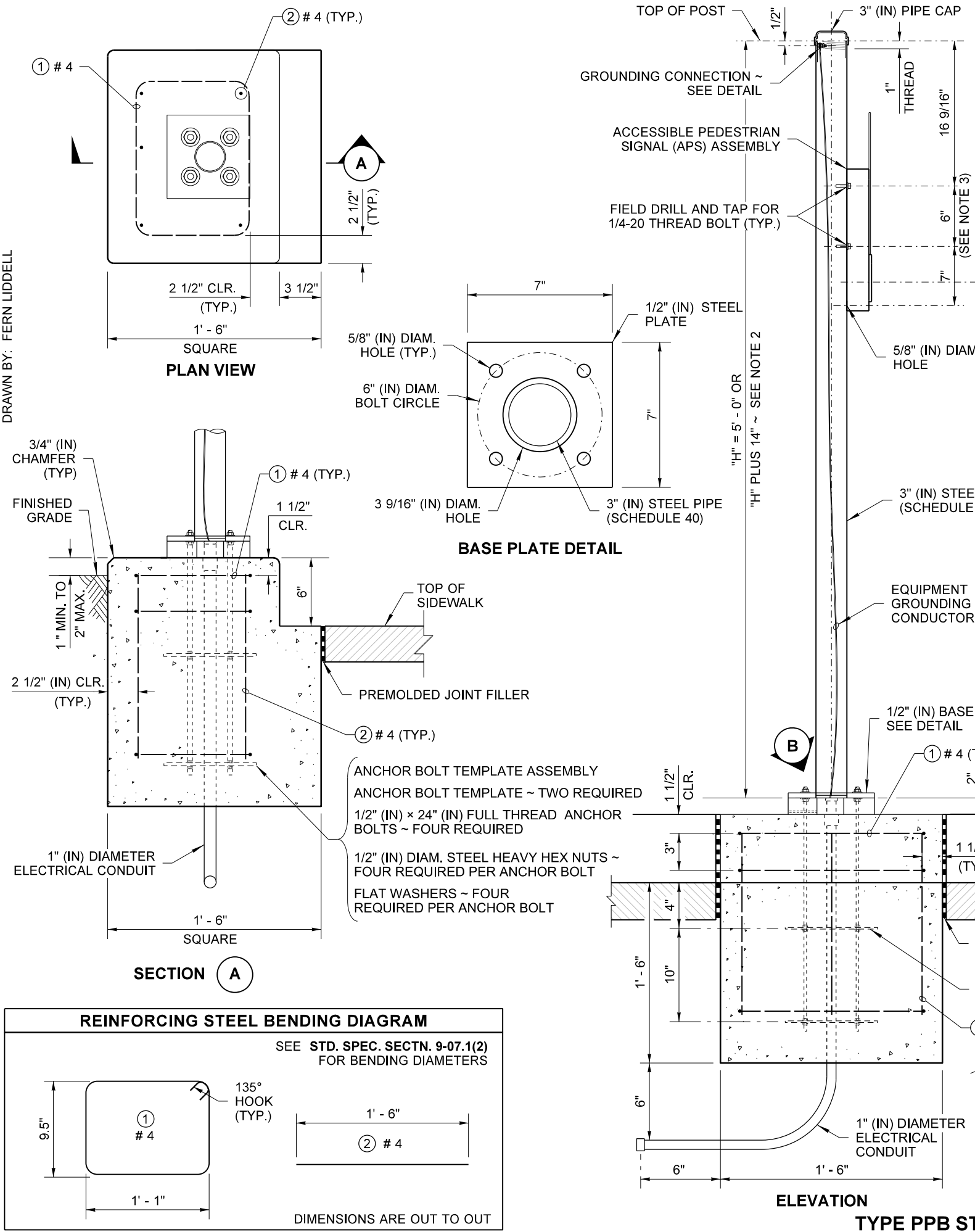


APPROVED FOR PUBLICATION

CITY ENGINEER

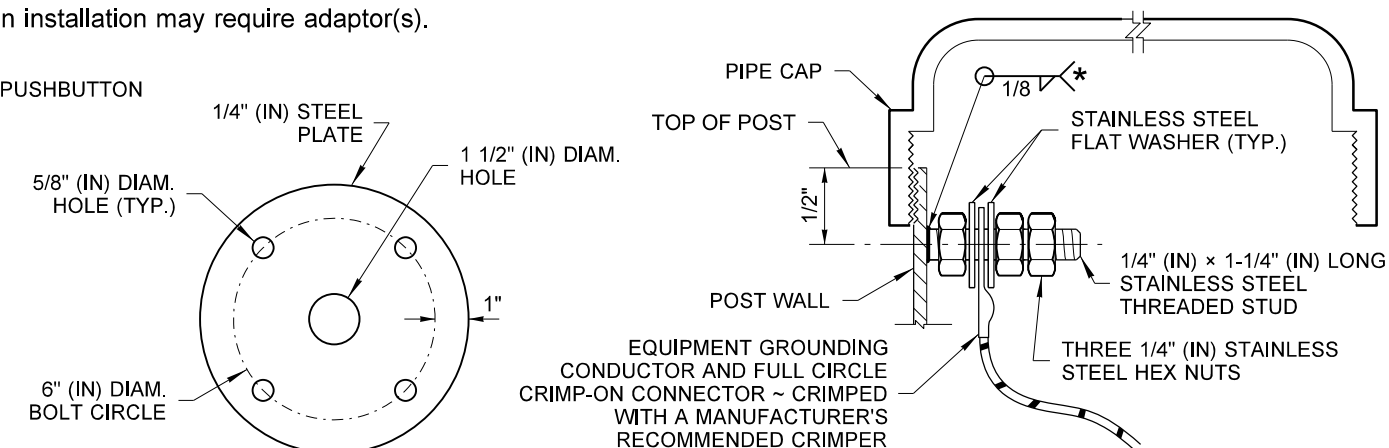
DATE

CITY OF TACOMA
BMP L613 POST CONSTRUCTION SOIL
QUALITY AND DEPTH
OPTION 4 - IMPORTED TOPSOIL
STANDARD PLAN NO. GSI-01d



NOTES

1. See **Standard Plan J-20.26** for Accessible Pedestrian Pushbutton details.
2. Where shown in the plans, install plaque (R10-32P) "PUSH BUTTON FOR 2 SECONDS FOR EXTRA CROSSING TIME" above the Accessible Pedestrian Signal (APS) assembly. Add 14" (in) to the PPB post height to accommodate plaque and leave a 2" (in) space between signs.
3. Mounting distances vary between manufacturers. See manufacturers recommendations for mounting information.
4. Junction Box serving the Standard shall preferably be located 5' - 0" (10' - 0" Max.) from the Standard.
5. Supplemental Grounding Conductor shall be non-insulated #4 AWG stranded copper and shall be clamped to vertical rebar with a connector suitable for use embedded in concrete: Provide 3' - 0" min. slack. Attach to pole grounding stud with a full circle crimp-on connector (crimped with a manufacturer recommended crimper).
6. Two button installation may require adaptor(s).

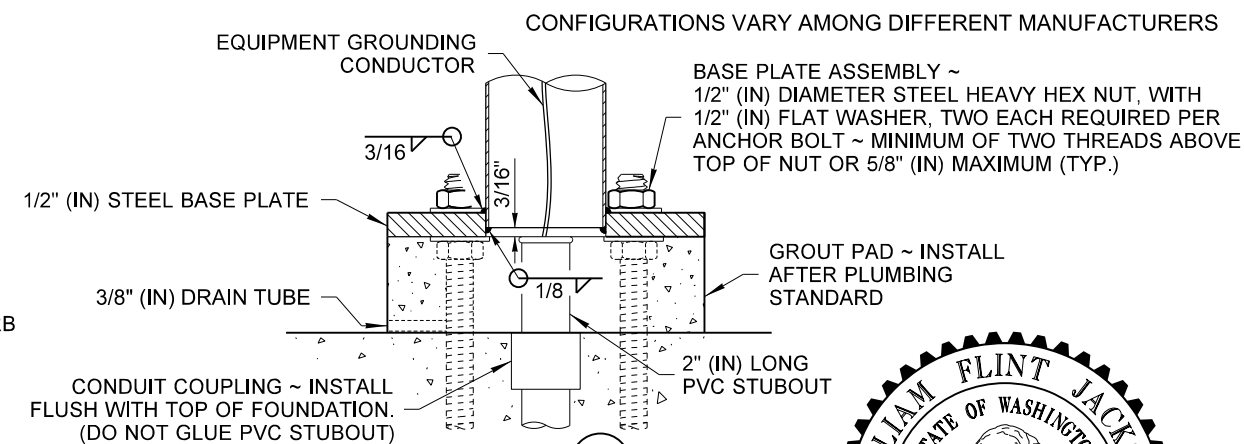


ANCHOR BOLT TEMPLATE

GROUNDING CONNECTION DETAIL

* WELD STUD TO POLE WALL TO MAXIMUM EXTENT POSSIBLE ~ 1/2" (IN) MINIMUM WELD

CONFIGURATIONS VARY AMONG DIFFERENT MANUFACTURERS



SECTION (B)



**ACCESSIBLE PEDESTRIAN
PUSHBUTTON WITH
CURB BASE
STANDARD PLAN J-20.11-03**

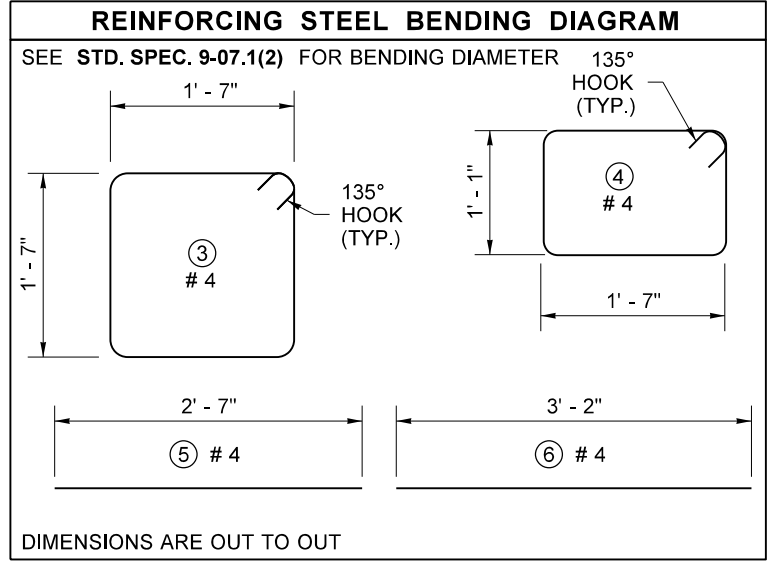
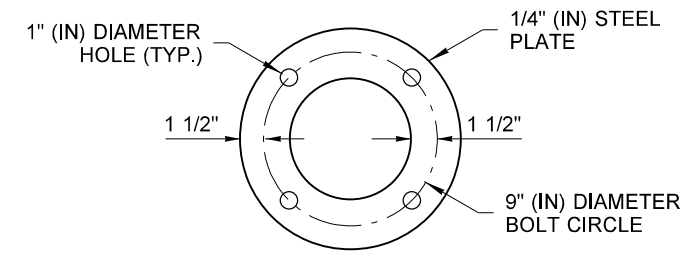
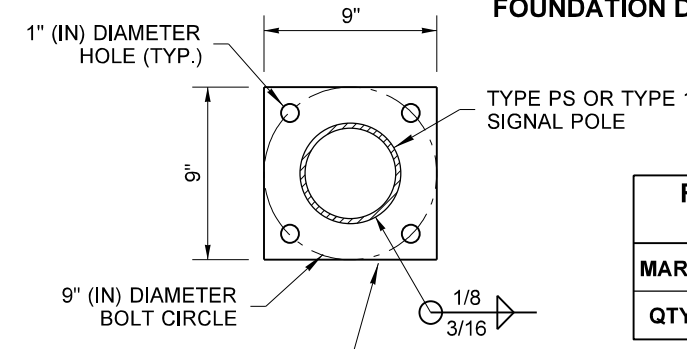
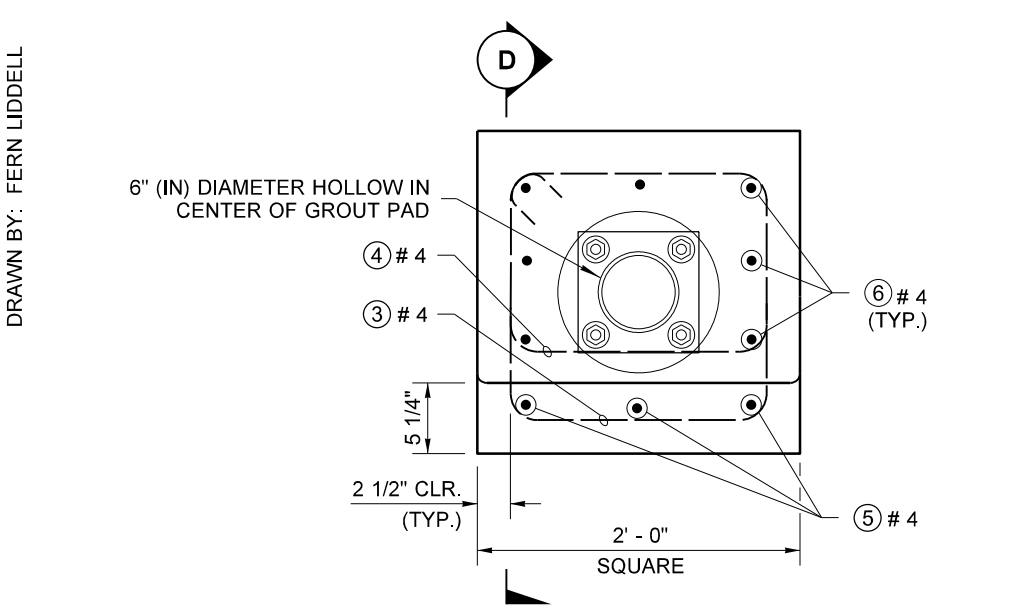
SHEET 1 OF 2 SHEETS

APPROVED FOR PUBLICATION

STATE DESIGN ENGINEER

 Washington State Department of Transportation

DRAWN BY: FERN LIDDELL



REINFORCING STEEL QUANTITIES LIST				
MARK	③	④	⑤	⑥
QTY.	3	2	3	7

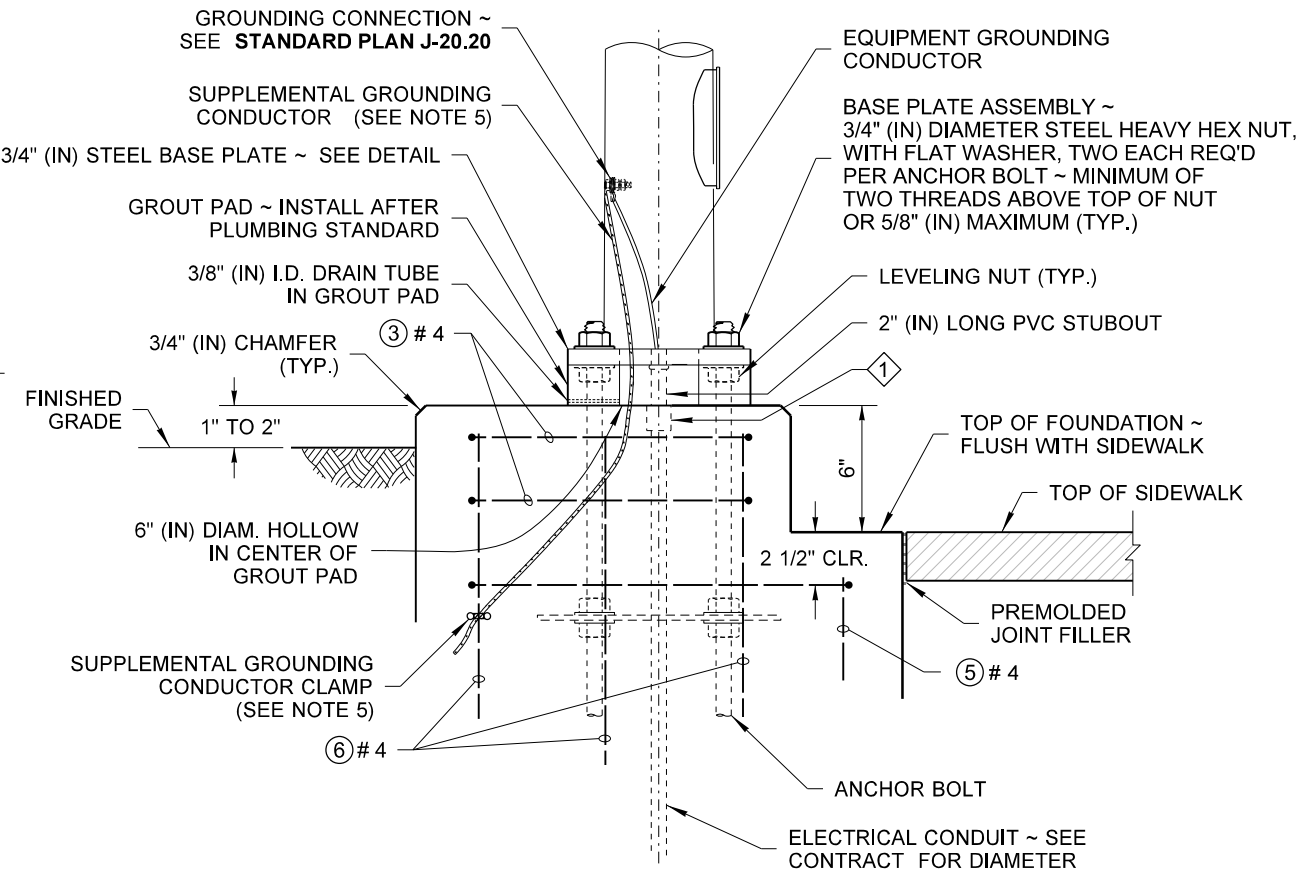
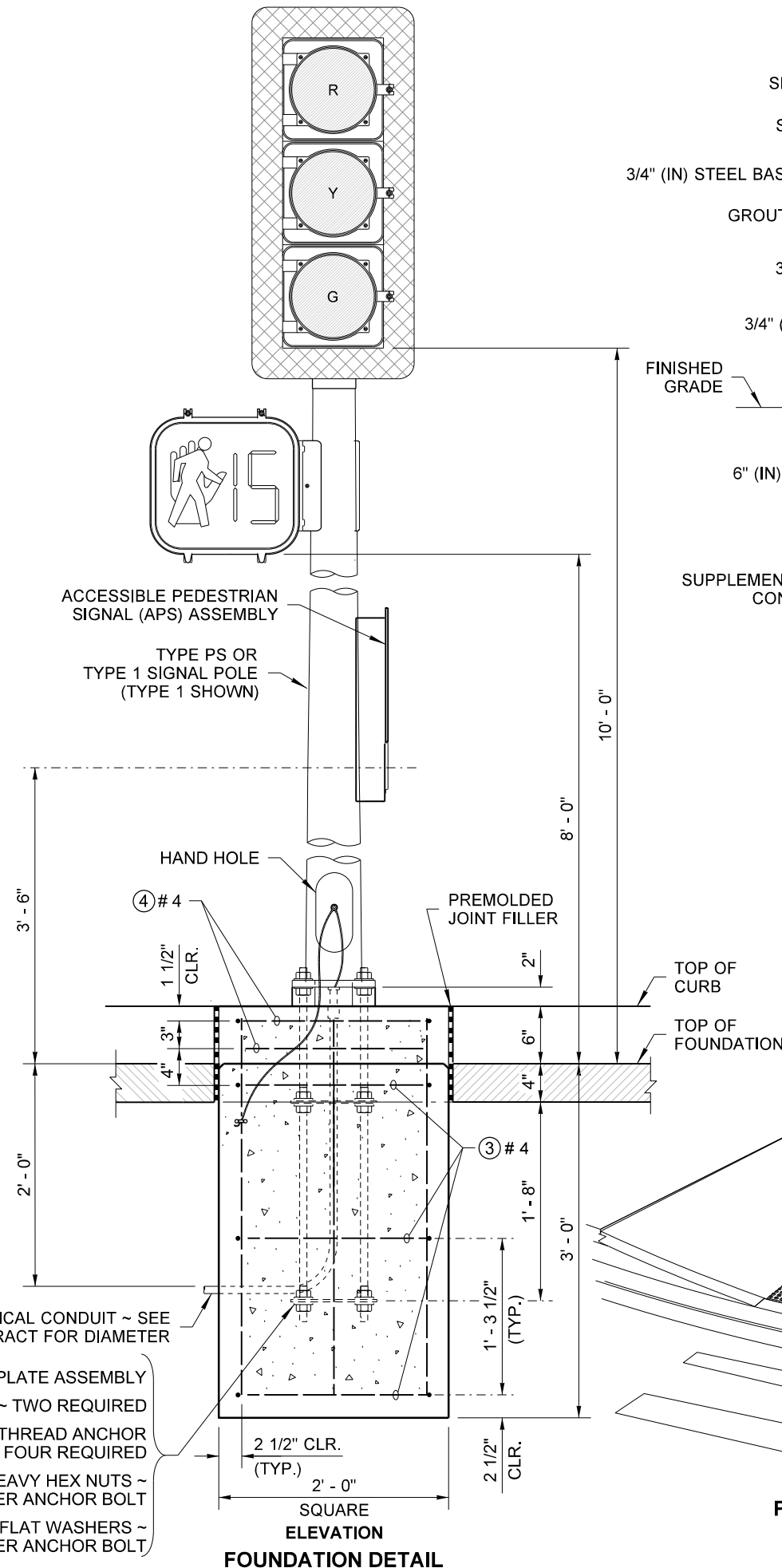
ANCHOR BOLT TEMPLATE ASSEMBLY

ANCHOR BOLT TEMPLATE ~ TWO REQUIRED

3/4" (IN) × 36" (IN) FULL THREAD ANCHOR BOLT ~ FOUR REQUIRED

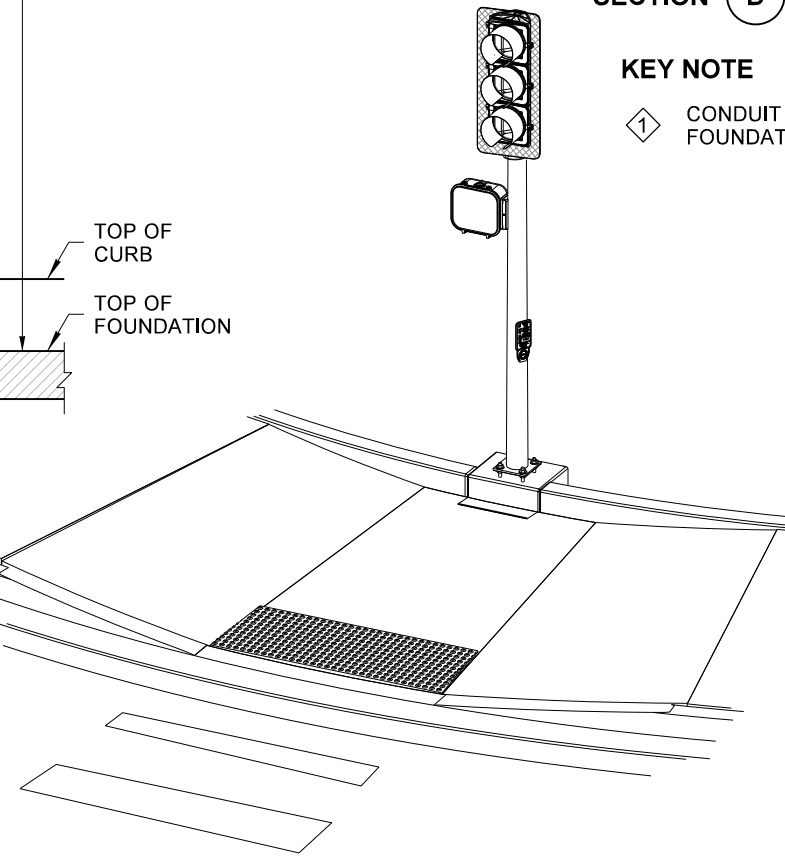
3/4" (IN) DIAM. STEEL HEAVY HEX NUTS ~ FOUR REQUIRED PER ANCHOR BOLT

FLAT WASHERS ~ FOUR REQUIRED PER ANCHOR BOLT



KEY NOTE

① CONDUIT COUPLING ~ INSTALL FLUSH WITH TOP OF FOUNDATION. (DO NOT GLUE PVC STUBOUT)

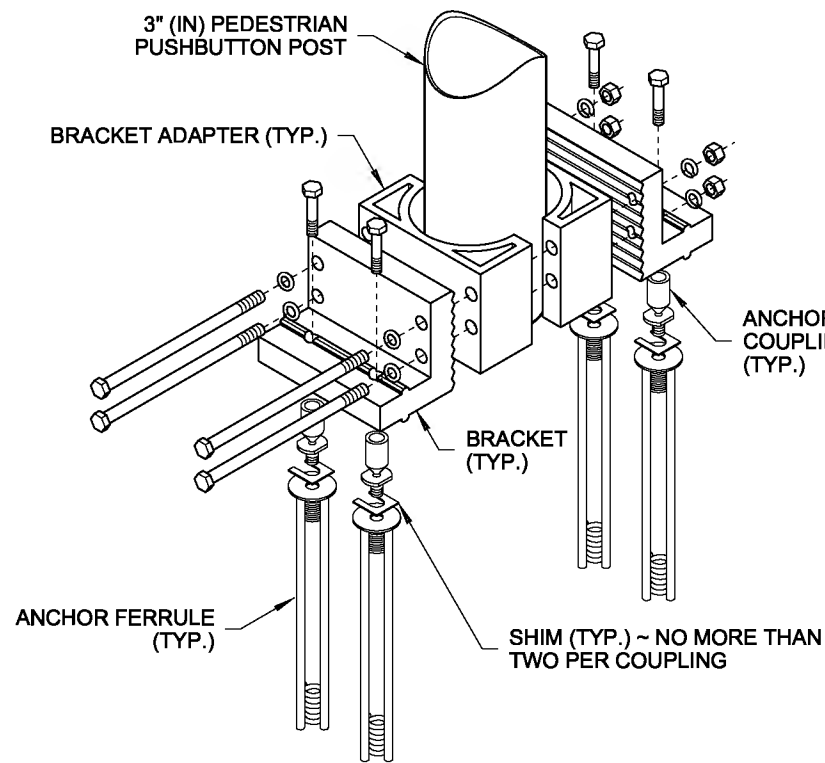


**ACCESSIBLE PEDESTRIAN
PUSHBUTTON WITH
CURB BASE
STANDARD PLAN J-20.11-03**

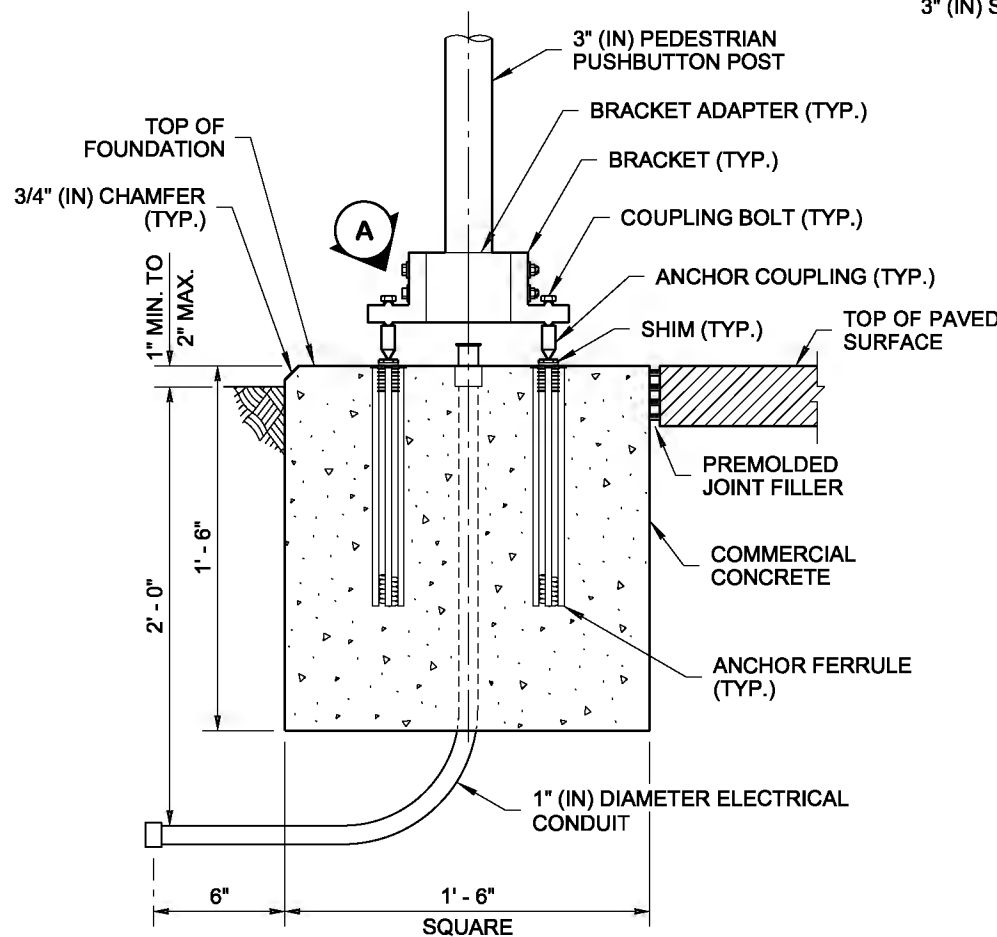
SHEET 2 OF 2 SHEETS

APPROVED FOR PUBLICATION

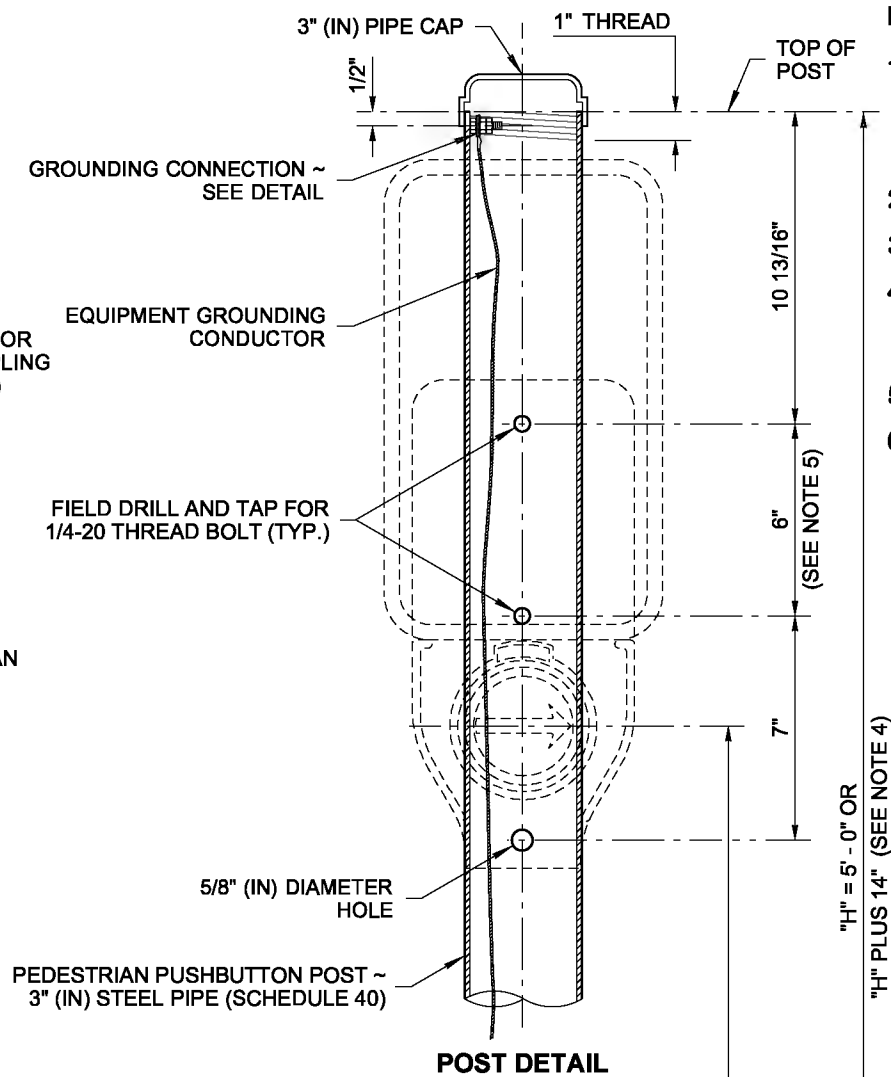
DRAWN BY: FERN LIDDELL



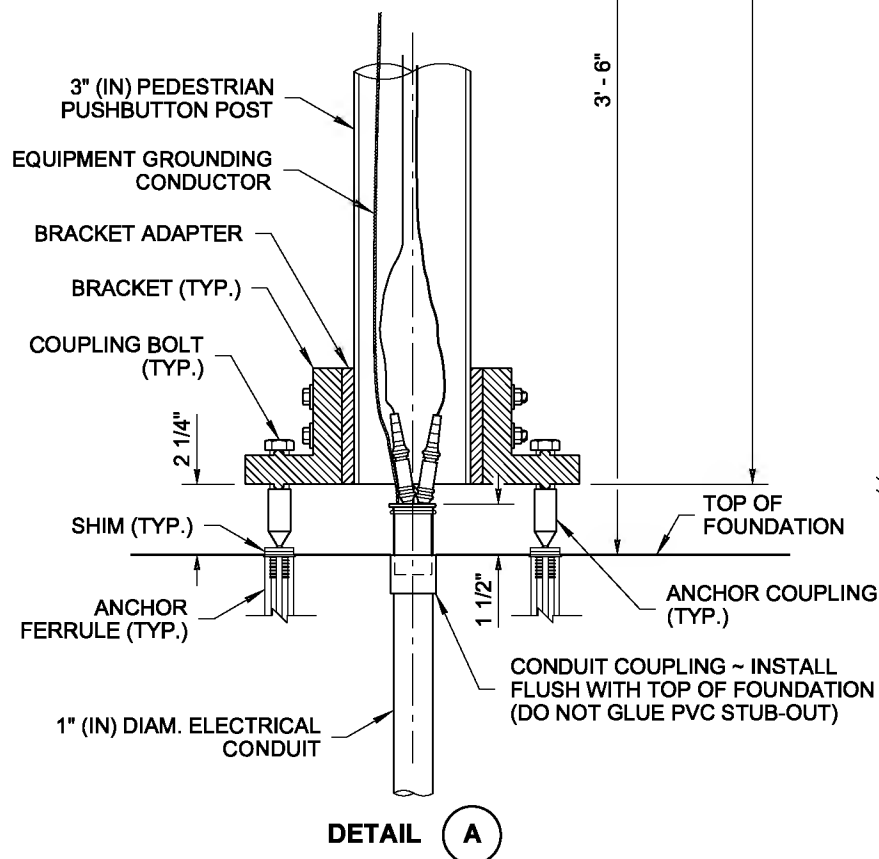
**EXPLODED VIEW
BREAKAWAY BASE CONNECTOR**
(SEE NOTE 1)



FOUNDATION DETAIL



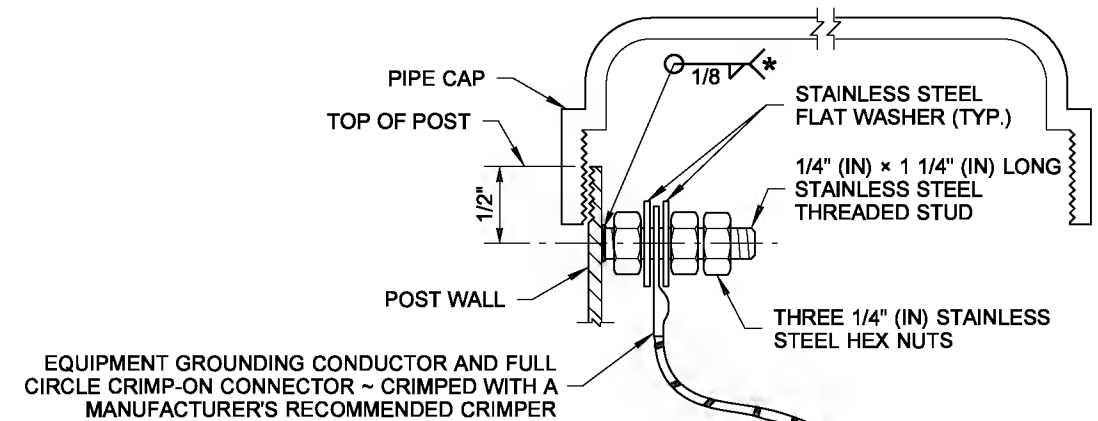
POST DETAIL



DETAIL A

NOTES

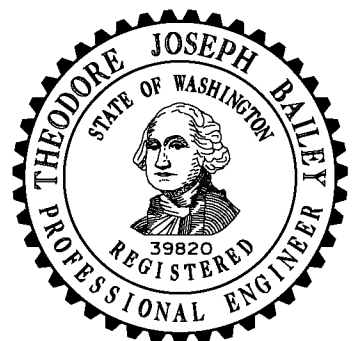
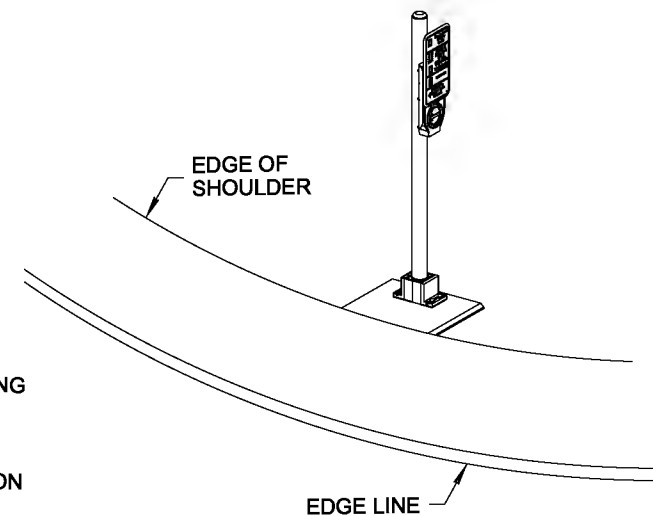
1. See **Standard Specification 9-06.16** for Breakaway Base Connection details. Dimensions for the parts used to assemble the base connections are intentionally not shown. Base connections are patented manufactured products that are in compliance with NCHRP 350 crash test criteria. The Breakaway Base Connection details are only shown on this plan to illustrate how parts are assembled.
2. See **Standard Plan J-20.26** for Accessible Pedestrian Pushbutton details.
3. Secure conductor in adjacent Junction Box per detail in **Standard Plan J-28.70**.
4. Where shown in the plans, install plaque (R10-32P) "PUSH BUTTON FOR 2 SECONDS FOR EXTRA CROSSING TIME" above the Accessible Pedestrian Signal (APS) assembly. Add 14" (in) to post height to accommodate plaque and leave a 2" (in) space between signs.
5. Mounting distances vary between manufacturers. See manufacturer's recommendations for mounting information.
6. Junction Box serving the Standard shall preferably be located 5' - 0" (10' - 0" Max.) from the Standard.



GROUNDING CONNECTION DETAIL

* WELD STUD TO POLE WALL TO MAXIMUM EXTENT POSSIBLE ~ 1/2" (IN) MINIMUM WELD

CONFIGURATIONS VARY AMONG DIFFERENT MANUFACTURERS (SHOWN EXPLODED FOR CLARITY)



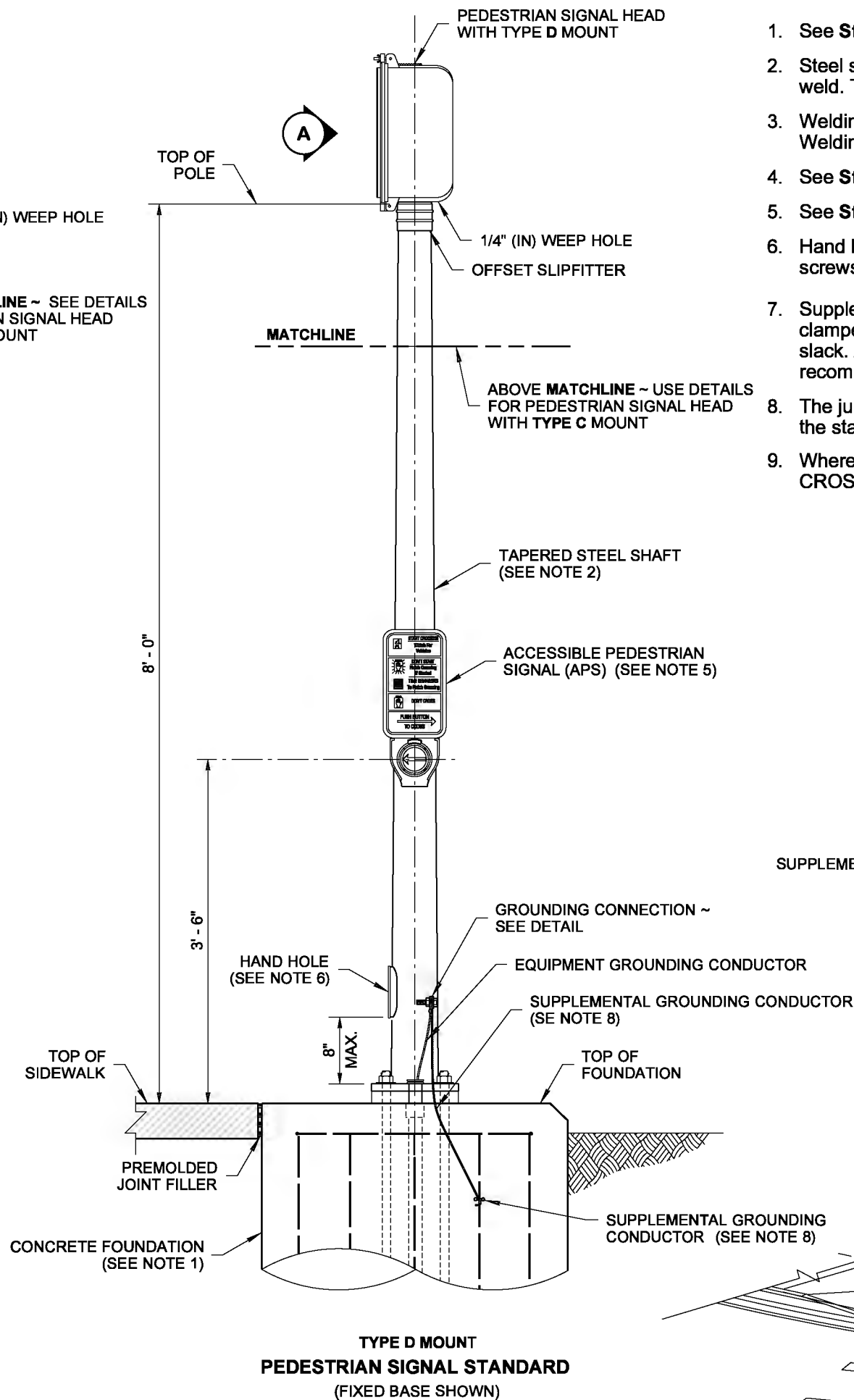
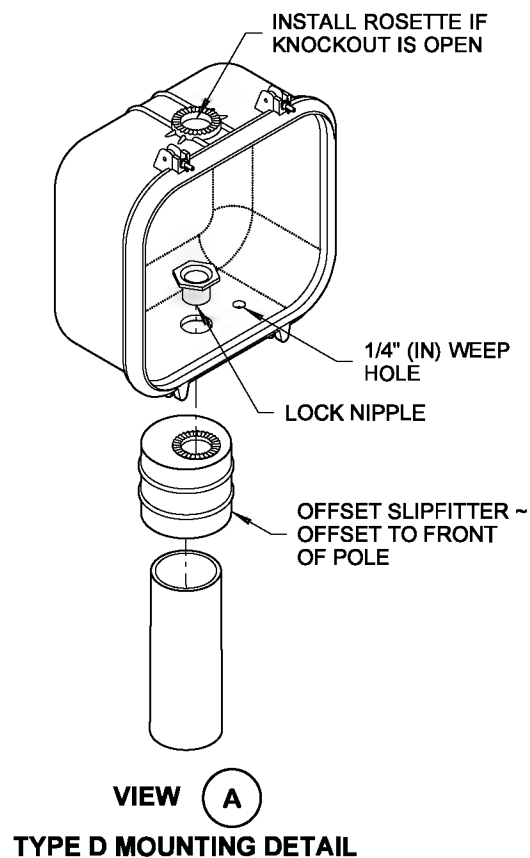
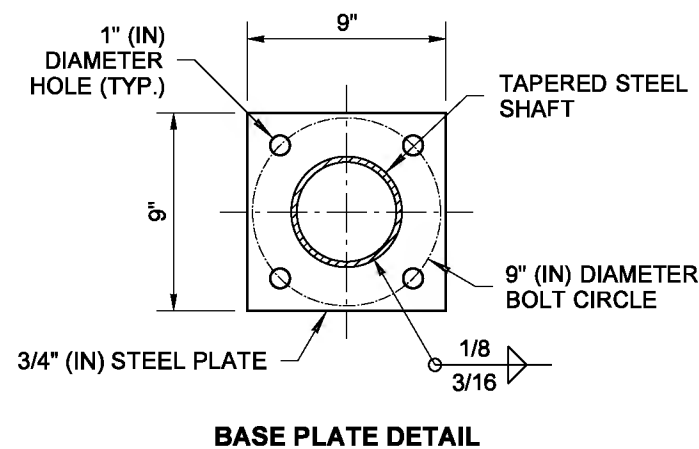
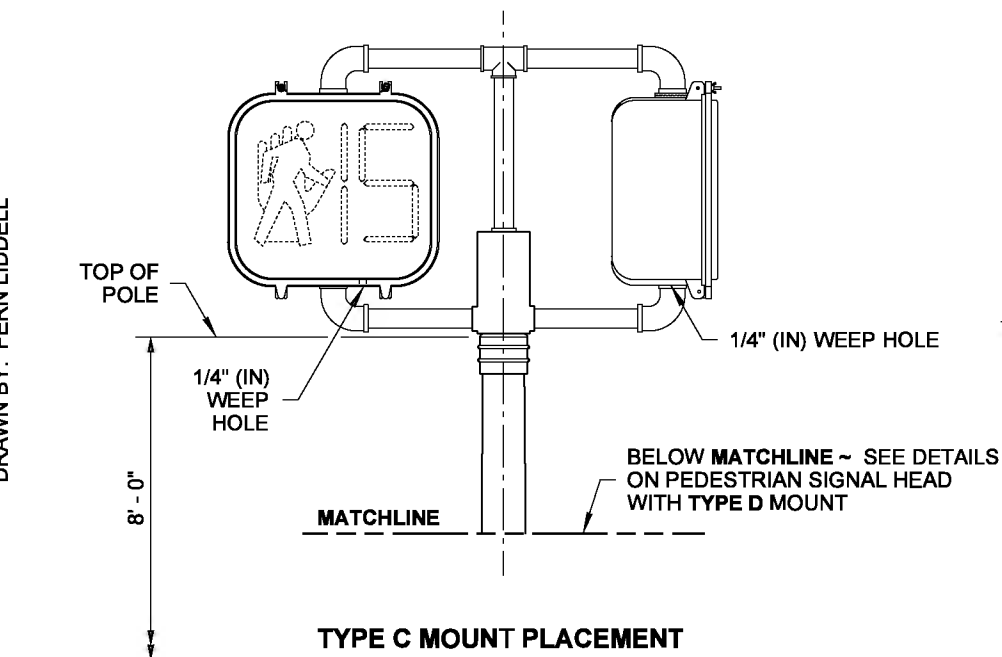
**ACCESSIBLE BREAKAWAY
PEDESTRIAN PUSHBUTTON
(PPB) POST**
STANDARD PLAN J-20.15-03

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

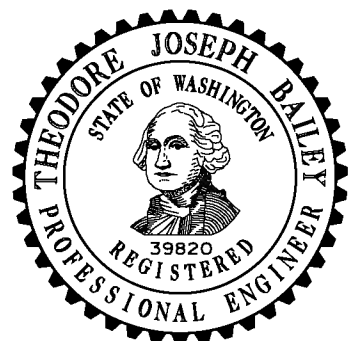
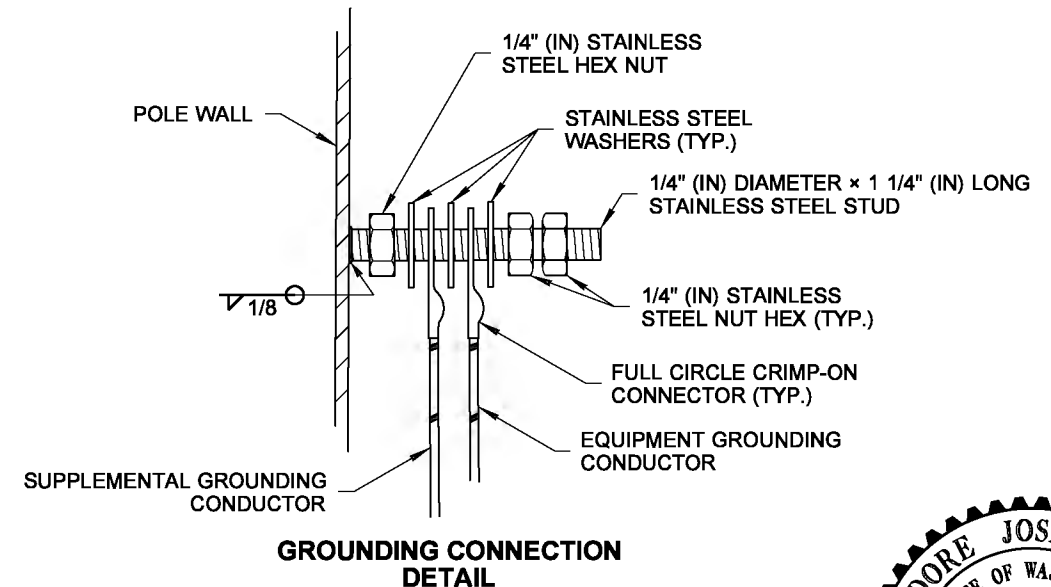
STATE DESIGN ENGINEER
Washington State Department of Transportation

DRAWN BY: FERN LIDDELL



NOTES

1. See **Standard Plan J-21.10** for Signal Standard Foundation with Fixed Base and Slip Base details.
2. Steel shaft shall be tapered either round or dodecagon (12-sided), 11 gage, 4 1/2" (in) O.D. at slipfitter weld. Taper shall be 0.14" (in) per foot.
3. Welding of structures shall be in accordance with the latest edition of the AWS D1.1 Structural Welding Code - Steel. All butt welds shall be ground flush with base metal.
4. See **Standard Plan J-20.26** for Accessible Pedestrian Pushbutton details.
5. See **Standard Plan J-20.20** for Accessible Pedestrian Signal Standard Electrical details.
6. Hand holes shall include a removable, rain-tight cover and gasket, fastened with two stainless steel screws (ASTM 593).
7. Supplemental grounding conductor shall be non-insulated #4 AWG stranded copper and shall be clamped to vertical rebar with a connector suitable for use embedded in concrete. Provide 3' - 0" min. slack. Attach to pole grounding stud with a full circle crimp-on connector (crimped with a manufacturer recommended crimper).
8. The junction box serving the standard shall preferably be located 5' - 0" (10' - 0" max.) from the standard.
9. Where shown in the plans, install plaque (R10 - 32P) "PUSH BUTTON FOR 2 SECONDS FOR EXTRA CROSSING TIME" two inches above the Accessible Pedestrian Signal (APS) Assembly.



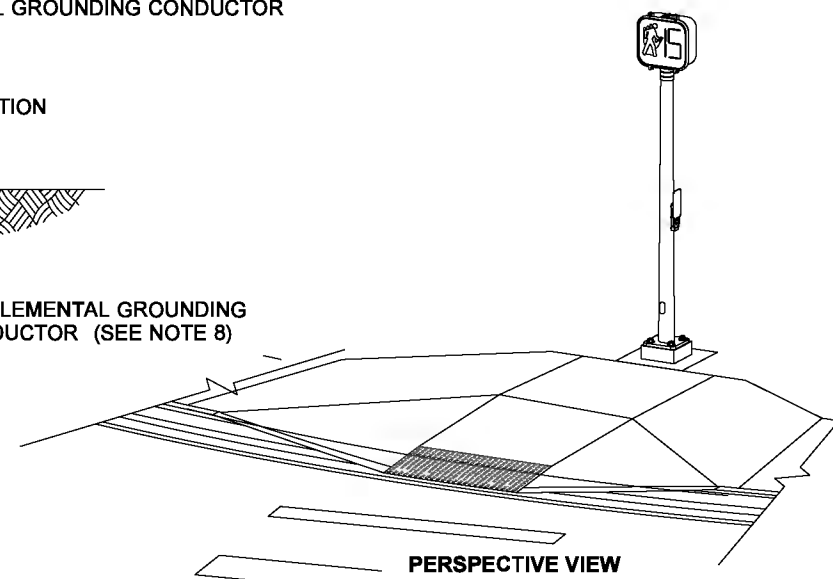
PEDESTRIAN SIGNAL STANDARD (TYPE PS) DETAILS

STANDARD PLAN J-20.16-02

SHEET 1 OF 1 SHEET

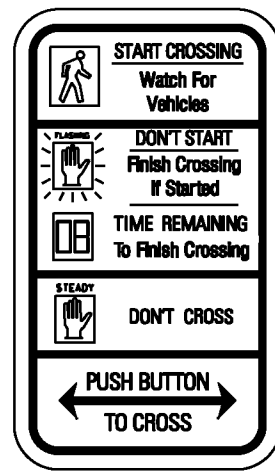
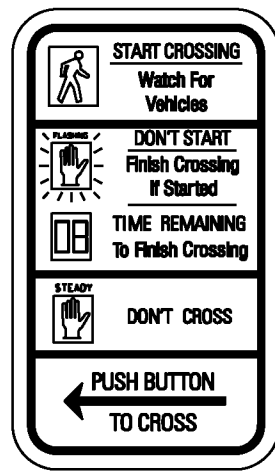
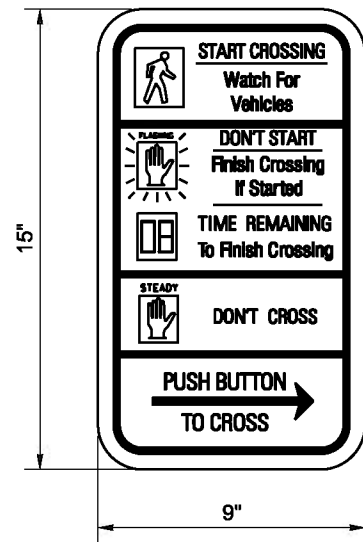
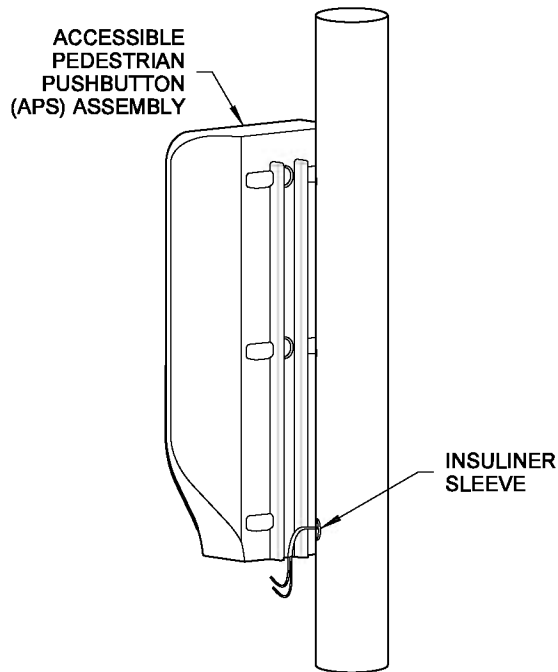
APPROVED FOR PUBLICATION

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Washington State Department of Transportation

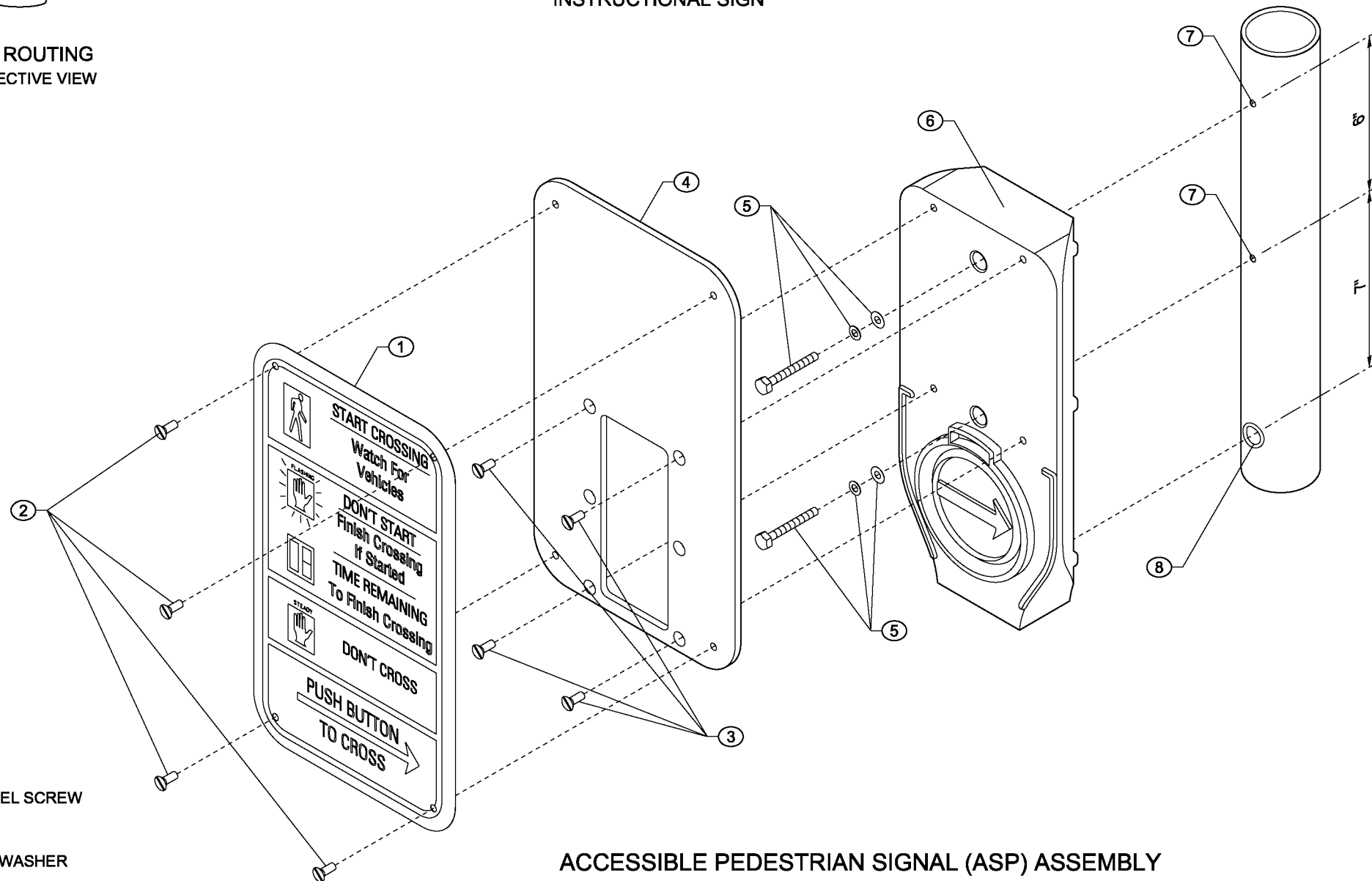
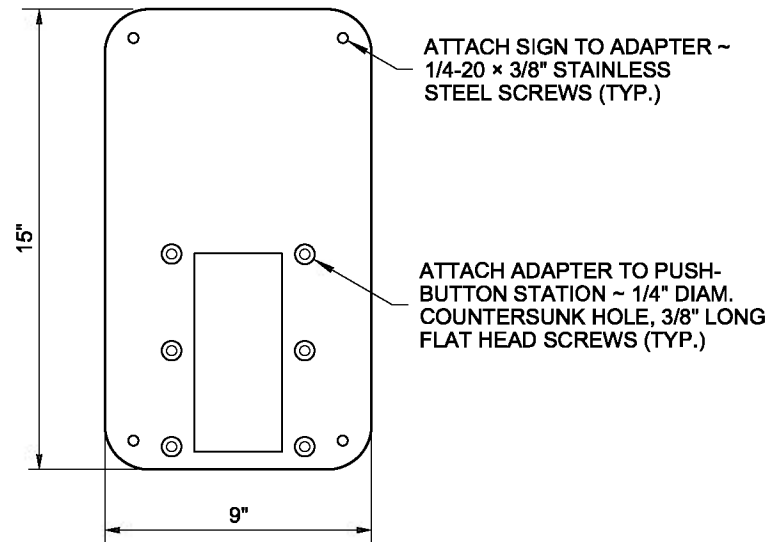


PERSPECTIVE VIEW

DRAWN BY: LISA CYFORD



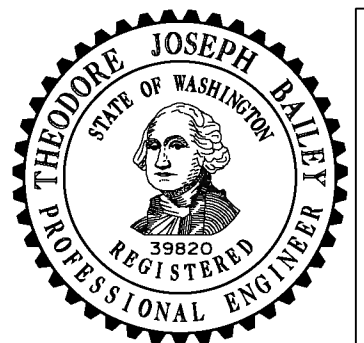
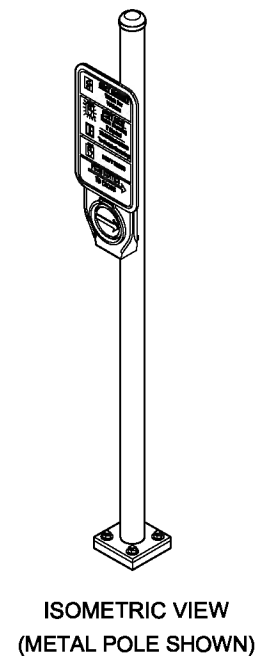
PEDESTRIAN PUSHBUTTON
INSTRUCTIONAL SIGN



KEY

- ① FACE PLATE
- ② 1/4-20 x 3/8" LONG STAINLESS STEEL SCREW
- ③ 1/4-20 STAINLESS STEEL SCREWS
- ④ PUSHBUTTON FRAME ADAPTER
- ⑤ 1/4-20 STAINLESS STEEL BOLT W/ WASHER AND LOCK WASHER
- ⑥ PUSHBUTTON STATION
- ⑦ DRILL AND TAP SHAFT FOR 1/4" DIAM. BOLT
- ⑧ DRILL AND TAP SHAFT FOR 5/8" WIRE GUIDE HOLE - ADD INSULINER

ACCESSIBLE PEDESTRIAN SIGNAL (ASP) ASSEMBLY
METAL POLE INSTALLATION
PPB-M



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**ACCESSIBLE PEDESTRIAN
PUSHBUTTON (PPB)
DETAILS**

STANDARD PLAN J-20.26-01

SHEET 1 OF 2 SHEETS

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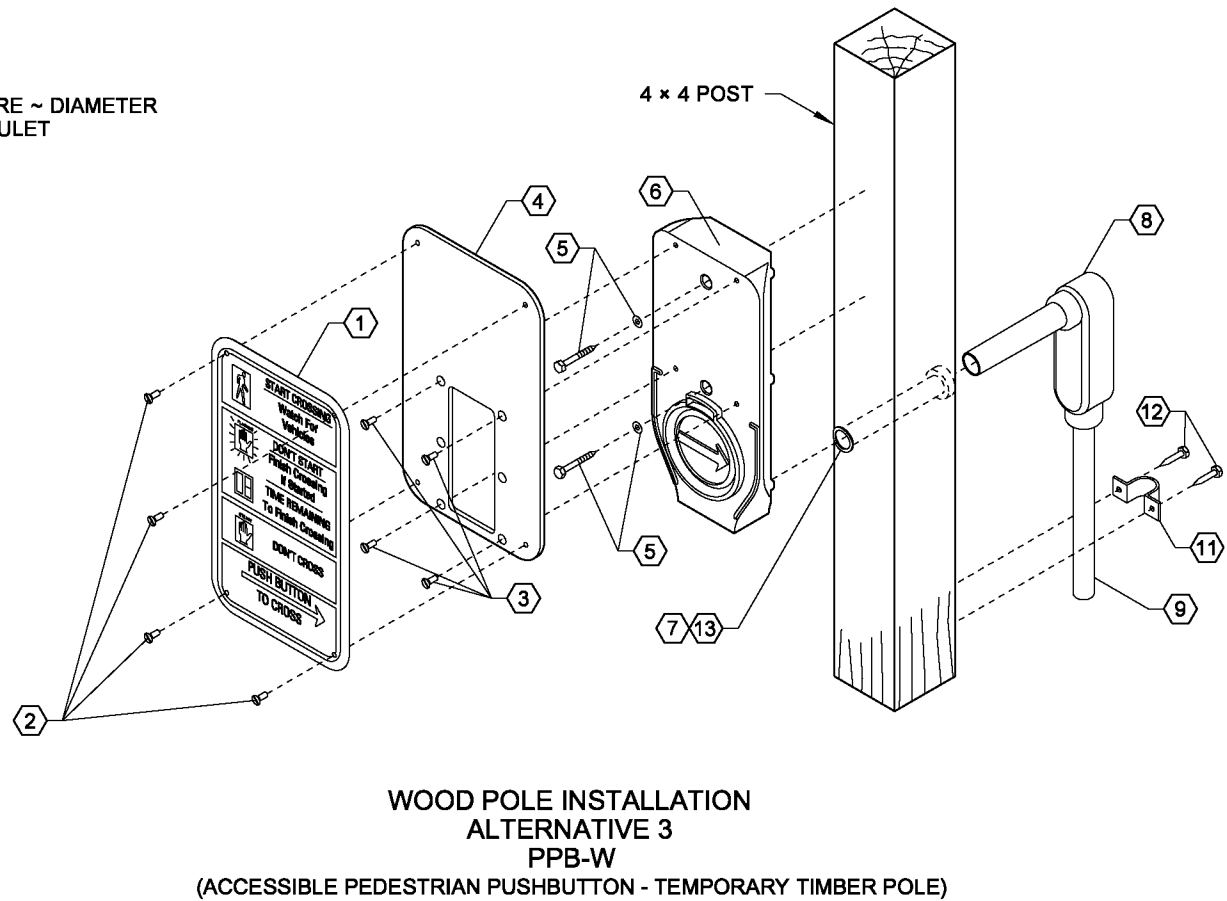
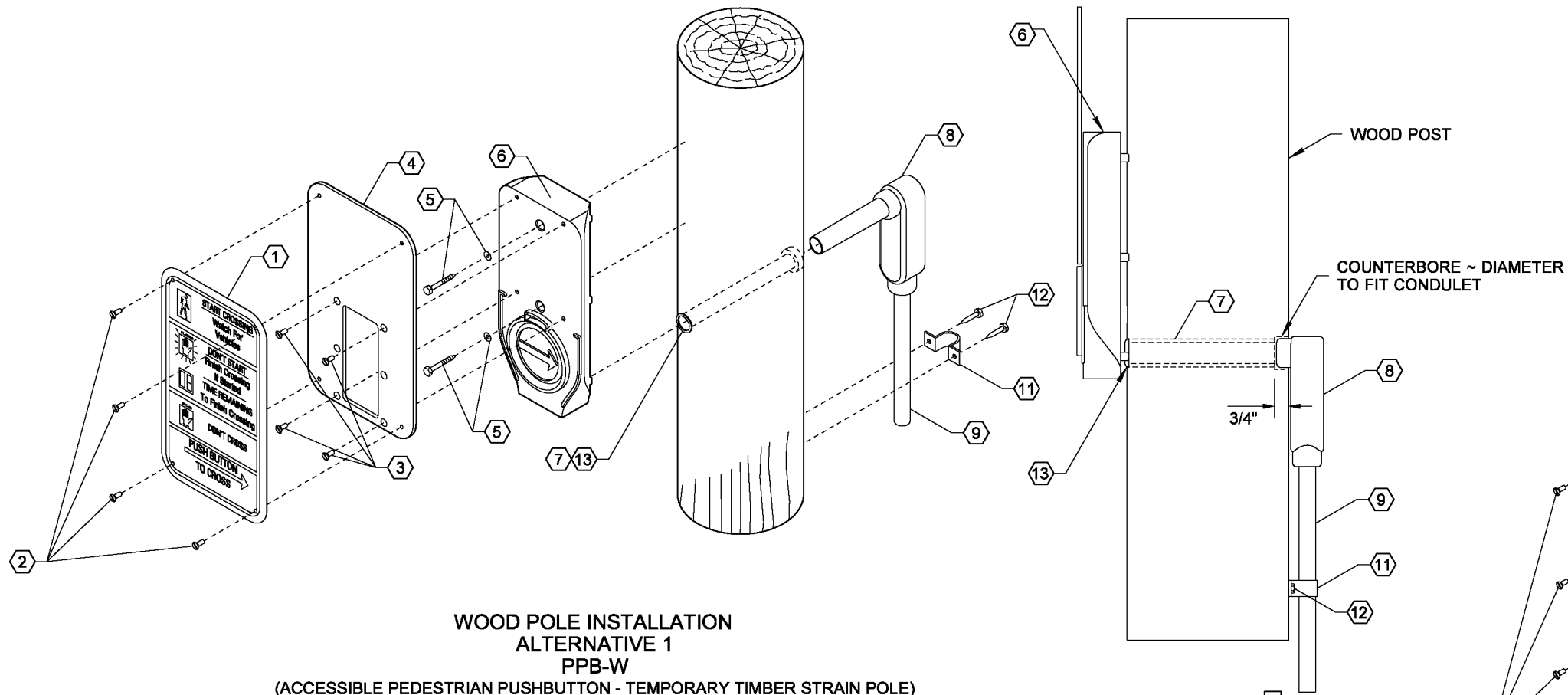
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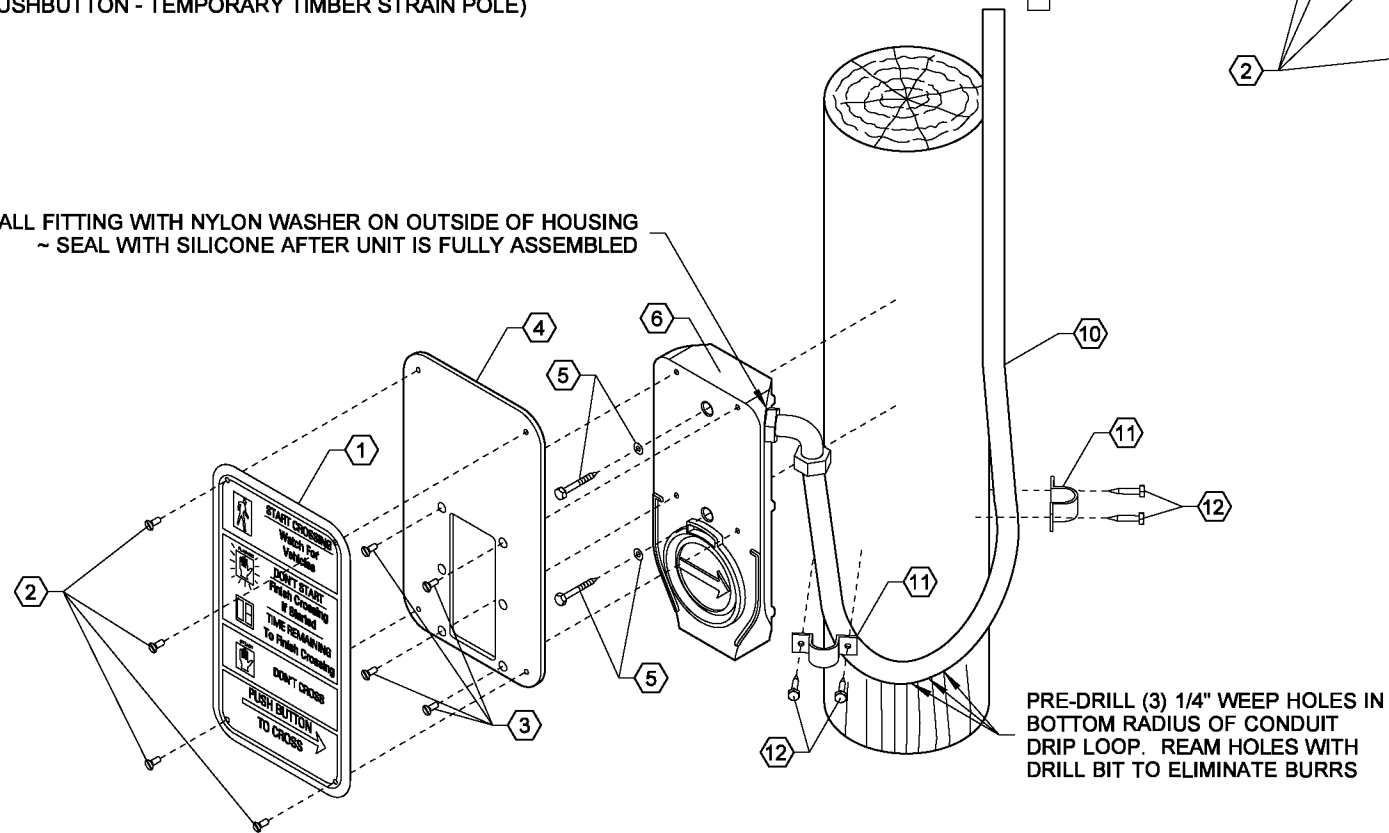
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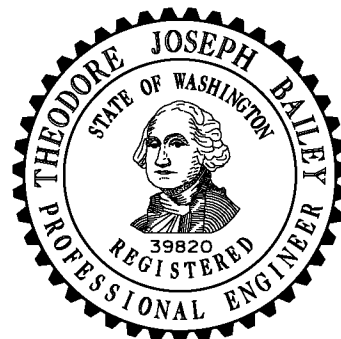


INSTALL FITTING WITH NYLON WASHER ON OUTSIDE OF HOUSING
~ SEAL WITH SILICONE AFTER UNIT IS FULLY ASSEMBLED



KEY

- 1 FACE PLATE
- 2 1/4-20 x 3/8" LONG STAINLESS STEEL SCREW
- 3 1/4-20 STAINLESS STEEL SCREWS
- 4 PUSHBUTTON FRAME ADAPTER
- 5 LAG BOLT WITH WASHER
- 6 PUSHBUTTON STATION
- 7 CONDUIT DIAMETER + 1/8" HOLE THRU POLE
- 8 CONDULET
- 9 3/4" CONDUIT
- 10 LIQUID-TITE FLEX CONDUIT
- 11 ONE PIECE TWO HOLE CLAMP
- 12 LAG BOLT
- 13 INSULINER SLEEVE



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**ACCESSIBLE PEDESTRIAN
PUSHBUTTON (PPB)
DETAILS**
STANDARD PLAN J-20.26-01

SHEET 2 OF 2 SHEETS

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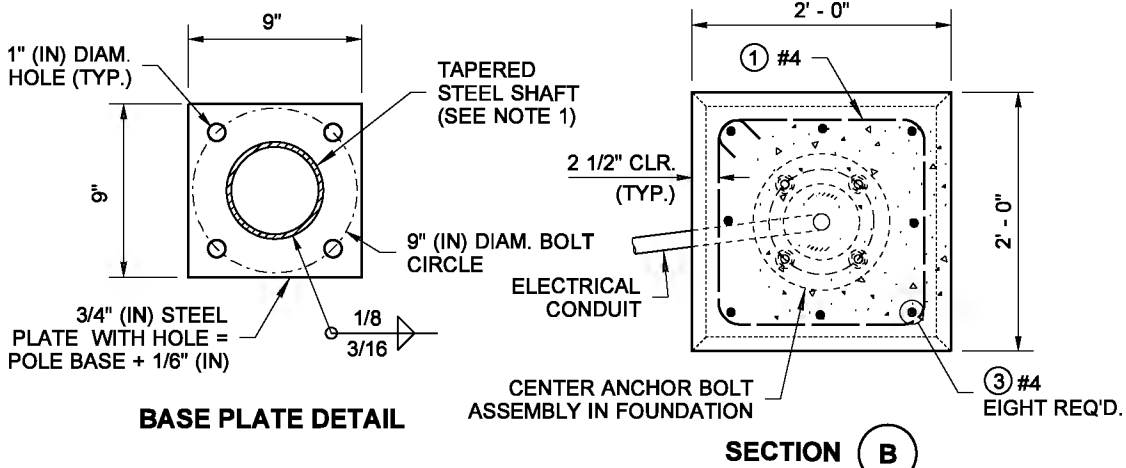
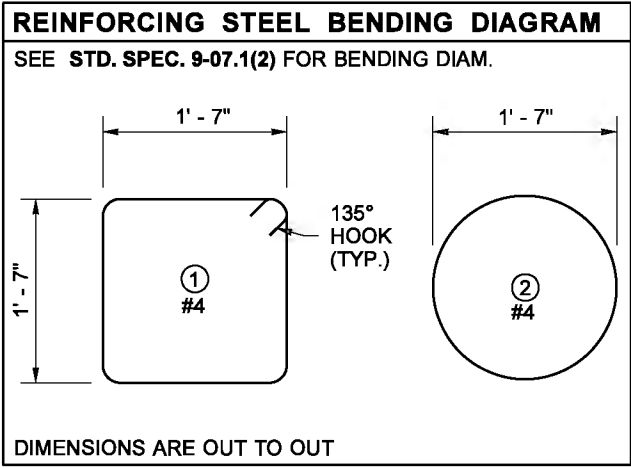
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7/12/12

DATE

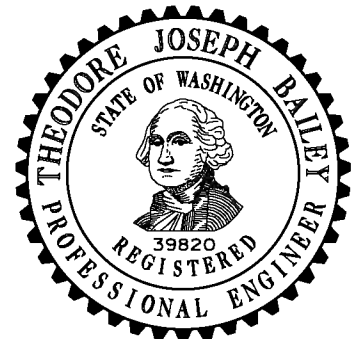
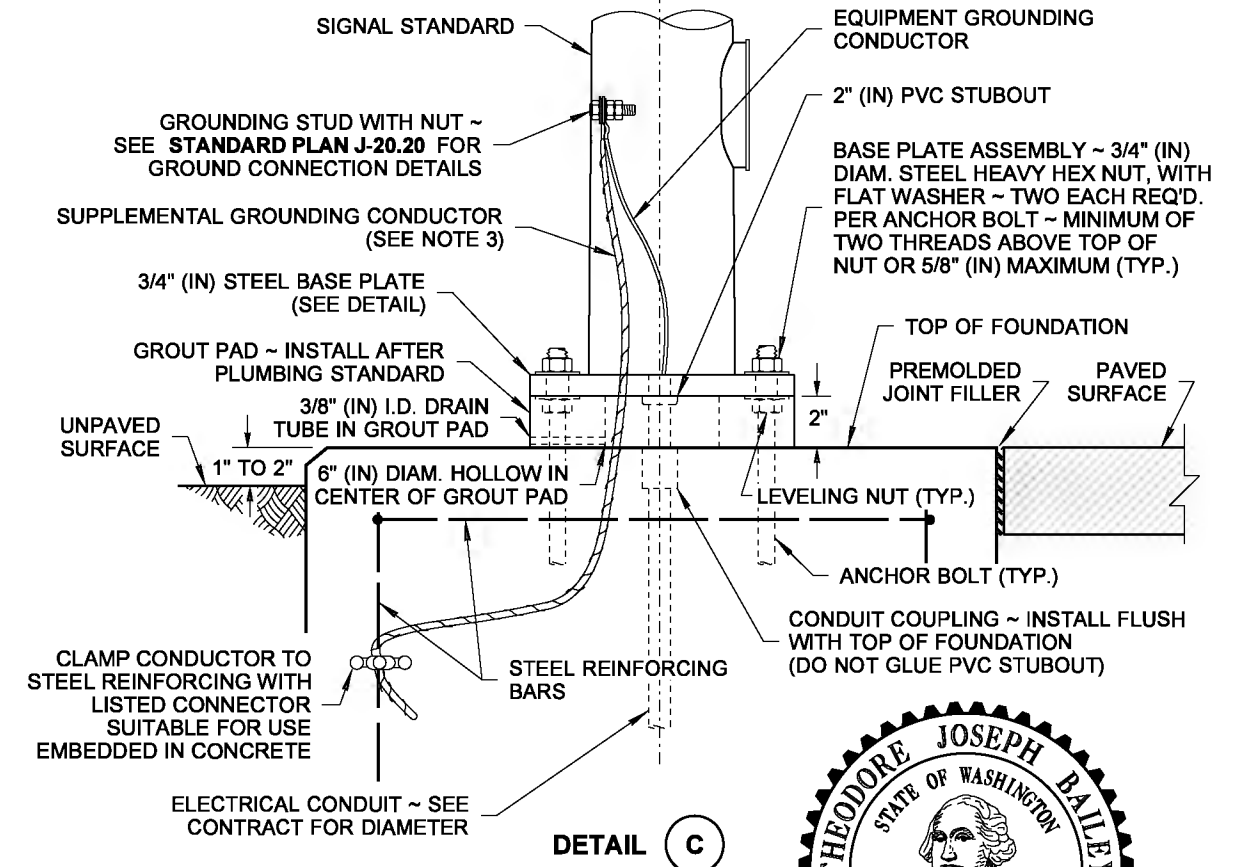
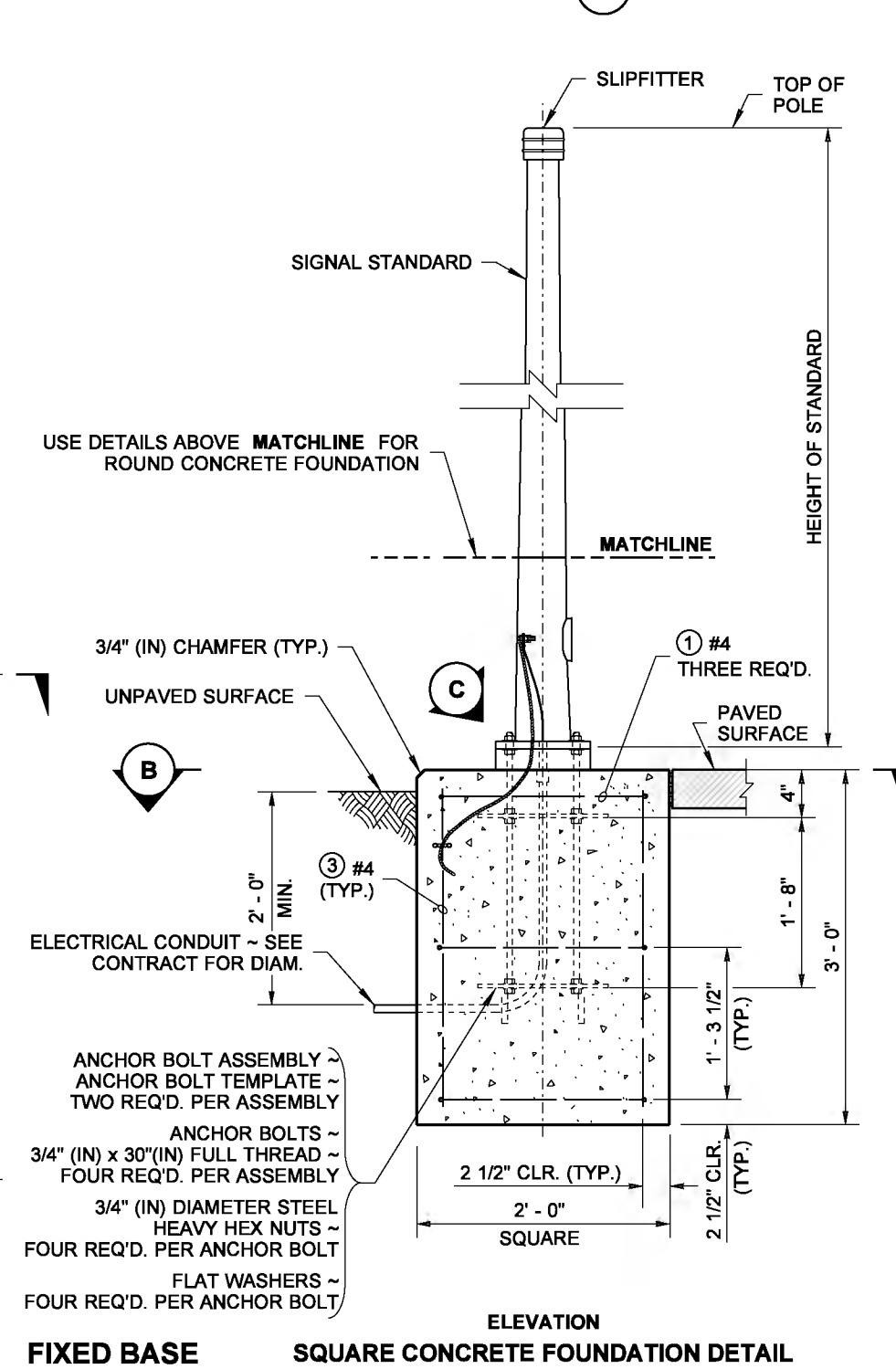
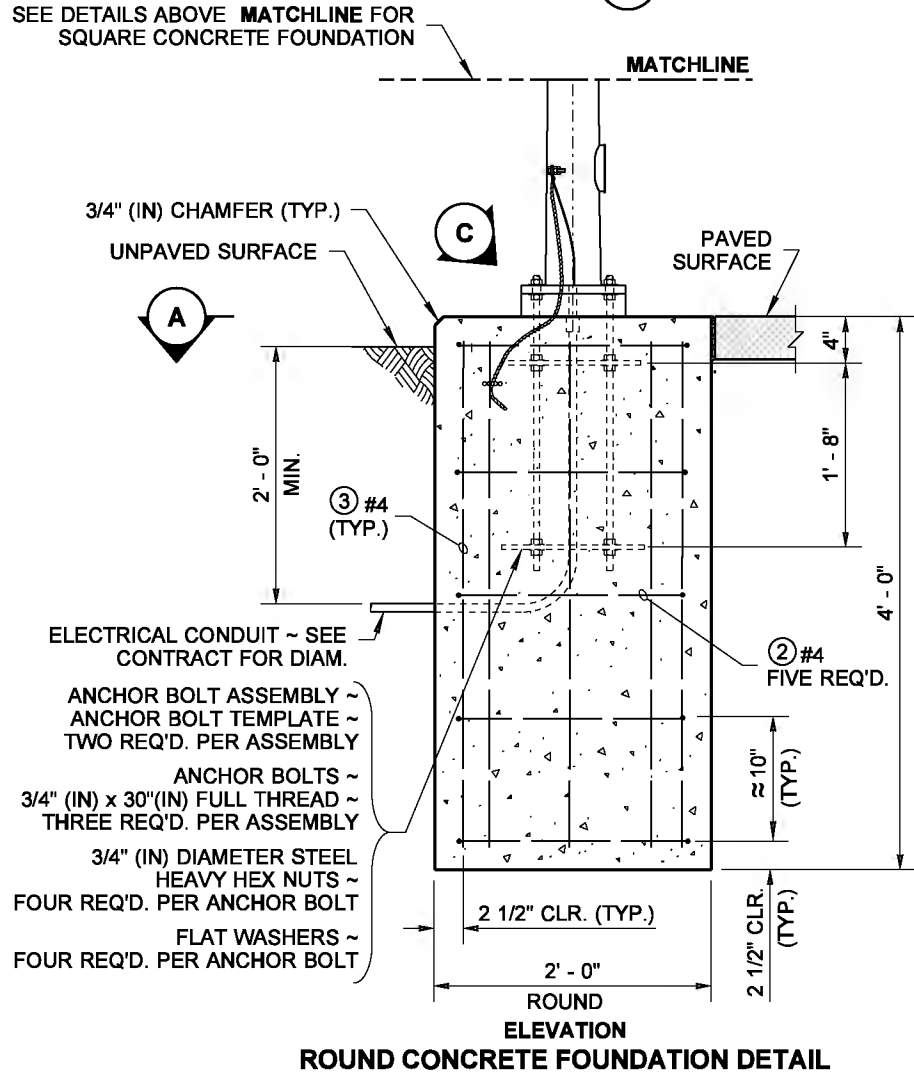
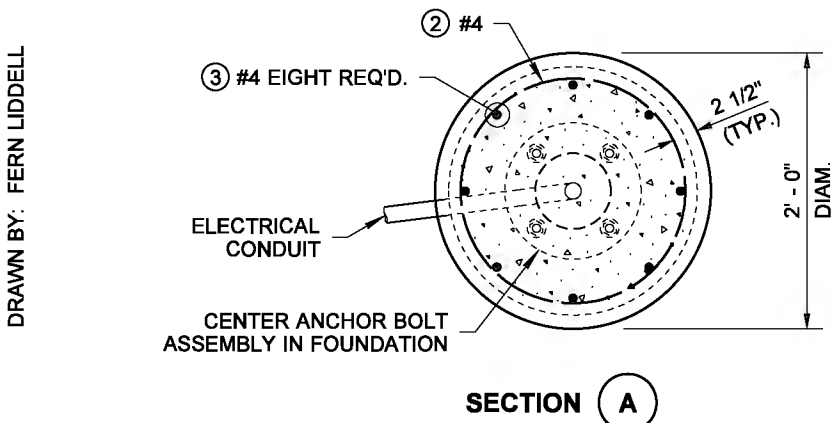


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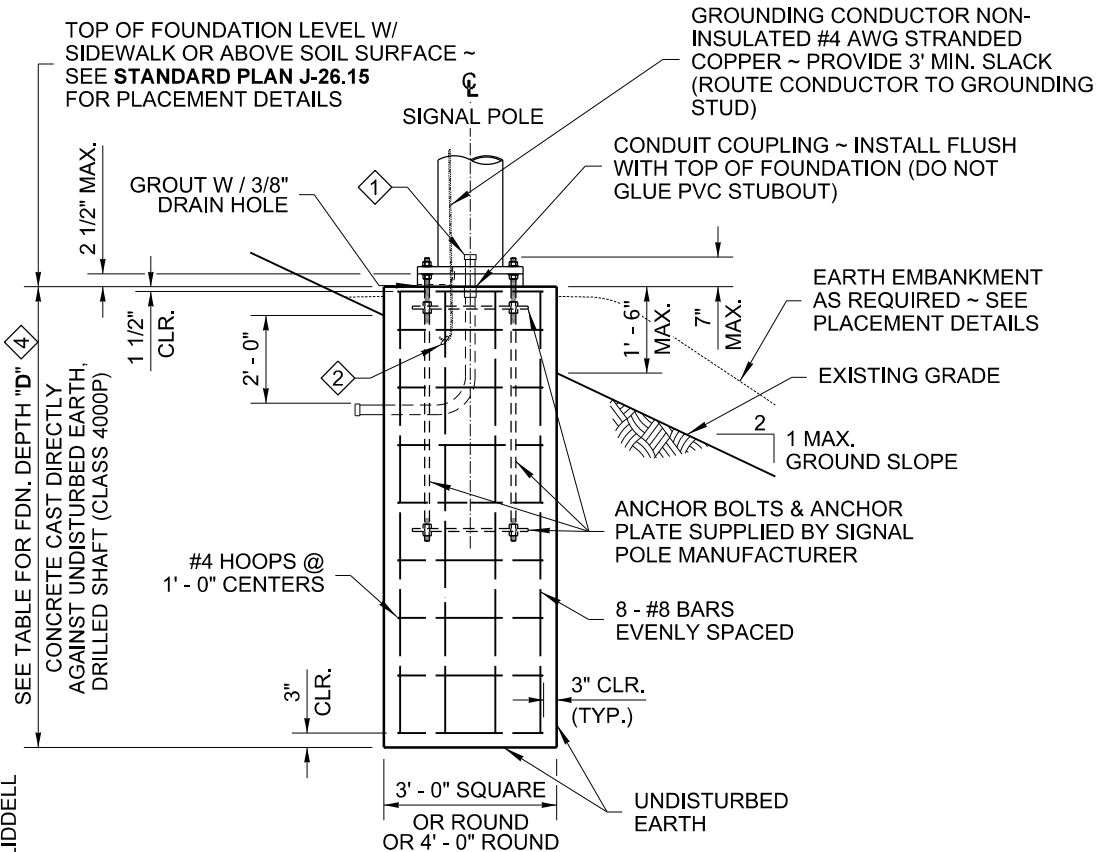
- NOTES**
- Clamping bolts shall be tightened to 50 ft-lbs max. torque. After state inspection, burr threads to prevent nut rotation. **DO NOT OVERTIGHTEN.**
 - The final height of the Anchor Bolts shall be below the top of the slip plate assembly to ensure proper function of the slip base.
 - Supplemental grounding conductor shall be non-insulated #4 AWG stranded copper and shall be clamped to vertical rebar with a connector suitable for use embedded in concrete. Provide 3' - 0" min. slack. Attach to pole grounding stud with a full circle crimp-on connector (crimped with a manufacturer recommended crimper).
 - Junction box serving the Standard shall preferably be located 5' - 0" (10' - 0" Max.) from the Standard.
 - Provide cable tie at wiring entering the junction box (for slip base installations only) ~ See **Detail A**, **Standard Plan J-28.70**.
 - Keeper Plate shall not extend beyond the edges of the pole base plate.

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TYPE PS, TYPE 1, RM & FB SIGNAL STANDARD FOUNDATION DETAILS
STANDARD PLAN J-21.10-04

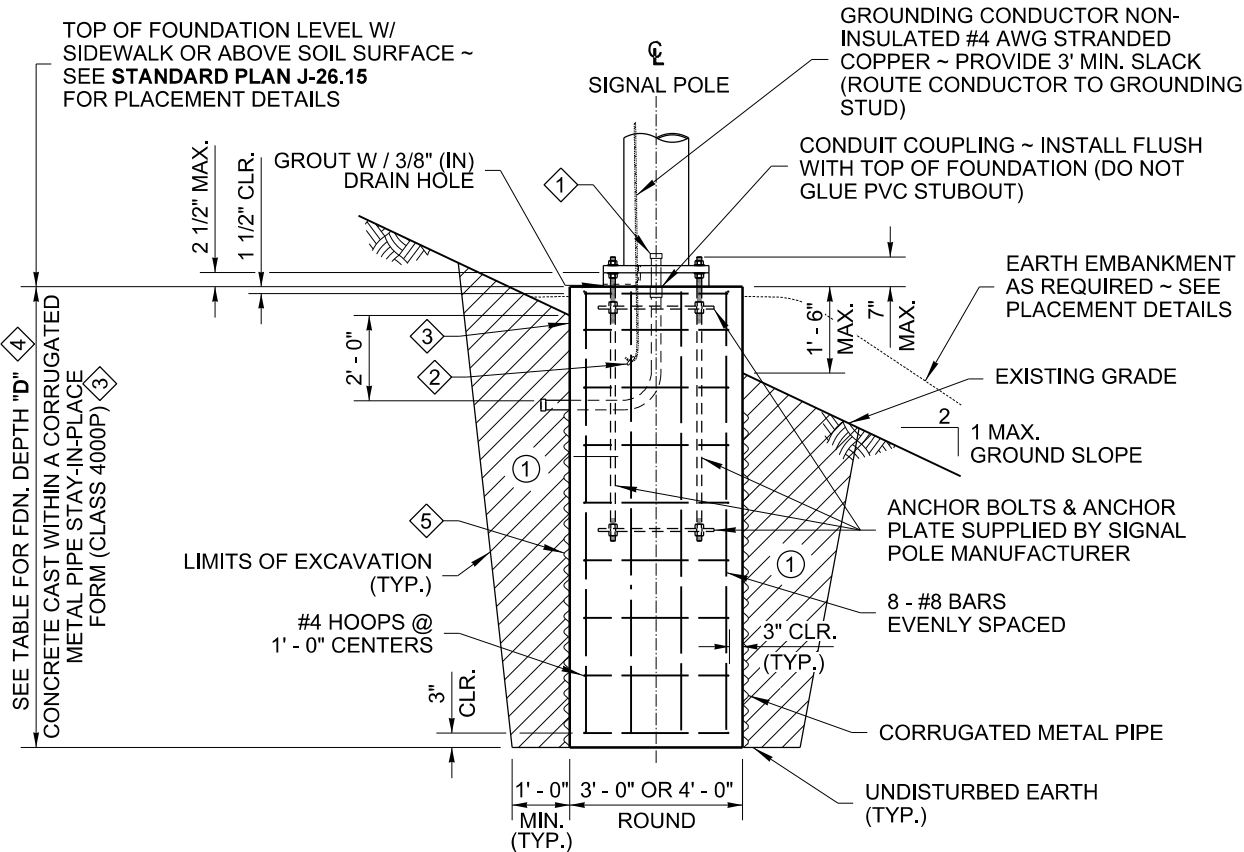
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FOUNDATION REINFORCEMENT DETAIL
CONCRETE CAST DIRECTLY AGAINST UNDISTURBED EARTH, DRILLED SHAFT

ALTERNATE # 1

- ① CONDUIT SIZE AND QUANTITY AS SHOWN IN THE CONTRACT; CAP BOTH ENDS.
- ② CLAMP CONDUCTOR TO STEEL REINFORCING WITH LISTED CONNECTOR SUITABLE FOR USE EMBEDDED IN CONCRETE



FOUNDATION REINFORCEMENT AND BACKFILL DETAIL
⑤ CONCRETE CAST WITHIN A CORRUGATED METAL PIPE STAY-IN-PLACE FORM (CLASS 4000P)

ALTERNATE # 2

- ③ PAPER OR CARDBOARD FORM SHALL NOT STAY-IN-PLACE
- ④ SEE NOTE 5

NOTES

1. This structure has been designed according to the Fifth Edition 2009 AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals. Basic wind velocity is 90 mph, Design Life/Recurrence Interval 50 years, and Fatigue Category III.
2. Foundations are designed for Type II, III, and SD Signal Standards with a maximum mast arm length of 65'.
3. Foundations are designed for Single Mast Arm Standards and Double Mast Arm Standards with 90° between arms. Special foundation design is required for Double Arm Standards where the angle between mast arms is other than 90°. For Double Mast Arm Standards with 90° between arms, use larger XYZ value for foundation depth selection.
4. Foundations not within the parameters of this standard require Special Design. Contact the **WSDOT Bridge and Structures Office** through the Engineer for Special Foundation Designs.
5. Where a foundation is constructed within a Media Filter Drain, the foundation depth shown in the Contract Plans shall be increased by the depth of the Media Filter Drain.
6. The top 2 feet of the foundation shall use a smooth form (such as paper or cardboard). After the concrete has cured, this entire form shall be removed.
7. For design parameters between the values listed in Table, depth requirements may be interpolated between the values provided.
8. Install Signal Foundation Identification Tag. See **Standard Plan J-26.15** for details.

ALTERNATE #2 - CONSTRUCTION METHOD
METAL (SUBSURFACE) FORM REQUIRED

FOUNDATION DEPTH "D" TABLE																			
ALTERNATE # 1 DRILLED SHAFT-TYPE CONSTRUCTION FOR LATERAL BEARING PRESSURE = 2500 PSF & Ø = 34°, 1500 PSF & Ø = 28°, 1000 PSF & Ø = 26°																			
GROUND SLOPE = 3H : 1V OR FLATTER										GROUND SLOPE = GREATER THAN 3H : 1V TO 2H : 1V									
ALLOWABLE LATERAL BEARING PRESSURE	FOUNDATION TYPE	XYZ (FT³)								ALLOWABLE LATERAL BEARING PRESSURE	FOUNDATION TYPE	XYZ (FT³)							
		700	900	1350	1500	1900	2300	2600	3000			700	900	1350	1500	1900	2300	2600	3000
1000 PSF	3' - 0" ROUND	10' - 0"	10' - 0"	11' - 0"	11' - 0"	15' - 0"	18' - 0"	20' - 0"	20' - 0"	1000 PSF	3' - 0" ROUND	SPECIAL FOUNDATION TYPE							
	3' - 0" SQUARE	8' - 0"	8' - 0"	9' - 0"	9' - 0"	10' - 0"	11' - 0"	12' - 0"	12' - 0"		3' - 0" SQUARE	SPECIAL FOUNDATION TYPE							
	4' - 0" ROUND	8' - 0"	8' - 0"	9' - 0"	9' - 0"	10' - 0"	11' - 0"	12' - 0"	12' - 0"		4' - 0" ROUND	SPECIAL FOUNDATION TYPE							
1500 PSF	3' - 0" ROUND	8' - 0"	8' - 0"	9' - 0"	11' - 0"	13' - 0"	15' - 0"	18' - 0"	18' - 0"	1500 PSF	3' - 0" ROUND	11' - 0"	11' - 0"	12' - 0"	14' - 0"	16' - 0"	18' - 0"	21' - 0"	21' - 0"
	3' - 0" SQUARE	7' - 0"	7' - 0"	7' - 0"	8' - 0"	8' - 0"	9' - 0"	10' - 0"	10' - 0"		3' - 0" SQUARE	10' - 0"	10' - 0"	10' - 0"	11' - 0"	11' - 0"	12' - 0"	13' - 0"	13' - 0"
	4' - 0" ROUND	7' - 0"	7' - 0"	7' - 0"	8' - 0"	8' - 0"	9' - 0"	10' - 0"	10' - 0"		4' - 0" ROUND	10' - 0"	10' - 0"	10' - 0"	11' - 0"	11' - 0"	12' - 0"	13' - 0"	13' - 0"
2500 PSF OR GREATER	3' - 0" ROUND	6' - 0"	6' - 0"	7' - 0"	8' - 0"	9' - 0"	11' - 0"	15' - 0"	15' - 0"	2500 PSF OR GREATER	3' - 0" ROUND	9' - 0"	9' - 0"	10' - 0"	12' - 0"	12' - 0"	14' - 0"	18' - 0"	18' - 0"
	3' - 0" SQUARE	6' - 0"	6' - 0"	6' - 0"	6' - 0"	7' - 0"	7' - 0"	8' - 0"	8' - 0"		3' - 0" SQUARE	9' - 0"	9' - 0"	9' - 0"	9' - 0"	10' - 0"	10' - 0"	11' - 0"	11' - 0"
	4' - 0" ROUND	6' - 0"	6' - 0"	6' - 0"	6' - 0"	7' - 0"	7' - 0"	8' - 0"	8' - 0"		4' - 0" ROUND	9' - 0"	9' - 0"	9' - 0"	9' - 0"	10' - 0"	10' - 0"	11' - 0"	11' - 0"
ALTERNATE # 2 CORRUGATED METAL PIPE TYPE CONSTRUCTION FOR LATERAL BEARING PRESSURE = 2500 PSF & Ø = 23°, 1500 PSF & Ø = 18°, 1000 PSF & Ø = 17°																			
GROUND SLOPE = 3H : 1V OR FLATTER										GROUND SLOPE = GREATER THAN 3H : 1V TO 2H : 1V									
ALLOWABLE LATERAL BEARING PRESSURE	FOUNDATION TYPE	XYZ (FT³)								ALLOWABLE LATERAL BEARING PRESSURE	FOUNDATION TYPE	XYZ (FT³)							
		700	900	1350	1500	1900	2300	2600	3000			700	900	1350	1500	1900	2300	2600	3000
1000 PSF	3' - 0" ROUND	10' - 0"	10' - 0"	11' - 0"	15' - 0"	20' - 0"	25' - 0"	28' - 0"	28' - 0"	1000 PSF	3' - 0" ROUND	SPECIAL FOUNDATION TYPE							
	4' - 0" ROUND	8' - 0"	8' - 0"	9' - 0"	12' - 0"	13' - 0"	14' - 0"	15' - 0"	15' - 0"		4' - 0" ROUND	SPECIAL FOUNDATION TYPE							
1500 PSF	3' - 0" ROUND	8' - 0"	8' - 0"	11' - 0"	15' - 0"	18 - 0"	21' - 0"	25' - 0"	25' - 0"	1500 PSF	3' - 0" ROUND	11' - 0"	11' - 0"	14' - 0"	18' - 0"	21' - 0"	24' - 0"	28' - 0"	23' - 0"
	4' - 0" ROUND	7' - 0"	7' - 0"	7' - 0"	8' - 0"	10' - 0"	13' - 0"	15' - 0"	15' - 0"		4' - 0" ROUND	10' - 0"	10' - 0"	10' - 0"	11' - 0"	13' - 0"	16' - 0"	18' - 0"	18' - 0"
2500 PSF OR GREATER	3' - 0" ROUND	6' - 0"	6' - 0"	7' - 0"	11' - 0"	13' - 0"	18' - 0"	20' - 0"	20' - 0"	2500 PSF OR GREATER	3' - 0" ROUND	9' - 0"	9' - 0"	10' - 0"	14' - 0"	16' - 0"	21' - 0"	23' - 0"	23' - 0"
	4' - 0" ROUND	6' - 0"	6' - 0"	6' - 0"	6' - 0"	7' - 0"	9' - 0"	9' - 0"	9' - 0"		4' - 0" ROUND	9' - 0"	9' - 0"	9' - 0"	9' - 0"	10' - 0"	12' - 0"	12' - 0"	12' - 0"

When the existing soil will not retain a vertical face, over-excavate the foundation area and install a 36" or 48" diameter corrugated metal (pipe) form. The top of the corrugated metal form shall terminate 1 foot below final grade. Continue forming to full height using paper or cardboard form to achieve a smooth finish on final exposed cement concrete. Support the form as necessary to remain plumb.

Place the concrete foundation.

After concrete has cured, remove the entire paper or cardboard form portion.

- ① Shoring or Extra Excavation as required. Excavated area shall be backfilled with Controlled-Density Fill (CDF), or with soil in accordance with **Standard Specification Section 8-20.3(2)** and Compaction Method 1 of **Standard Specification Section 2-09.3(1)E**.

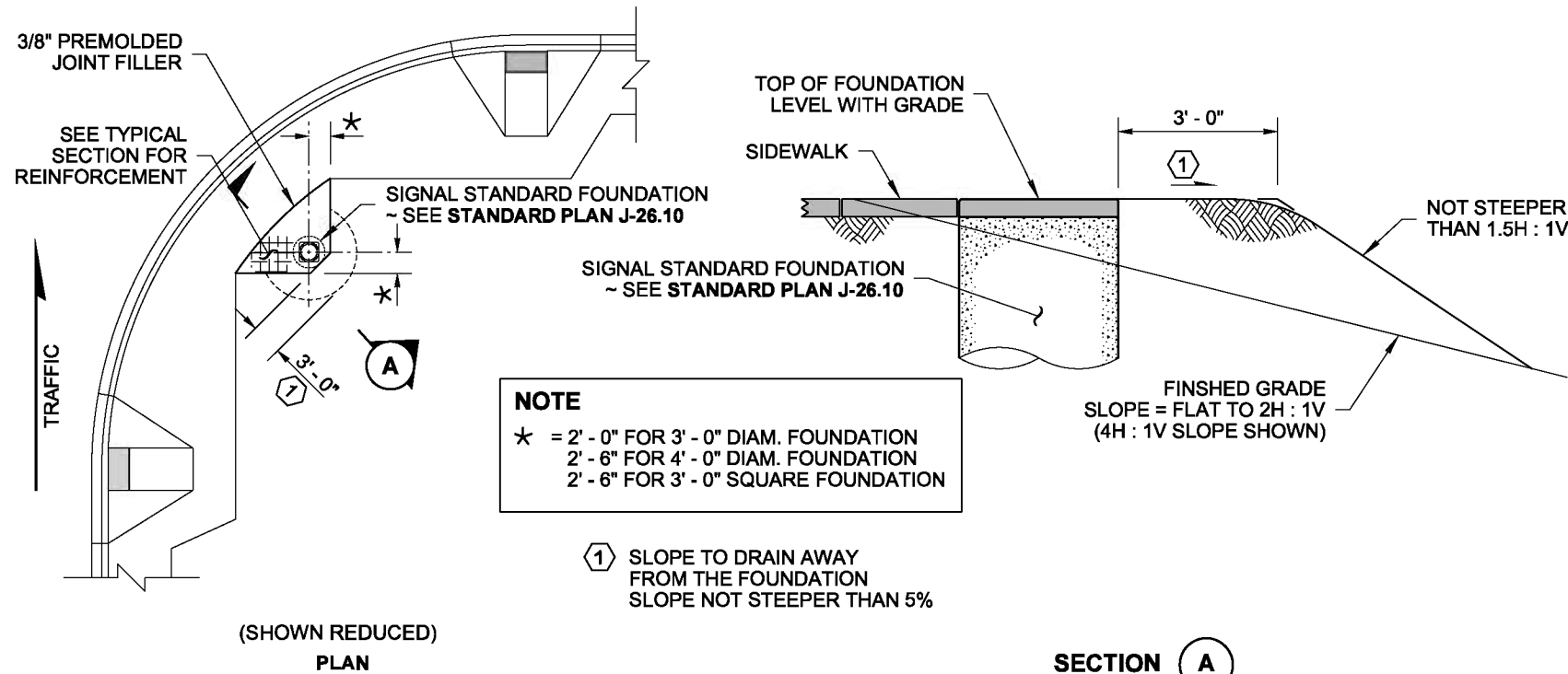


TRAFFIC SIGNAL STANDARD FOUNDATION

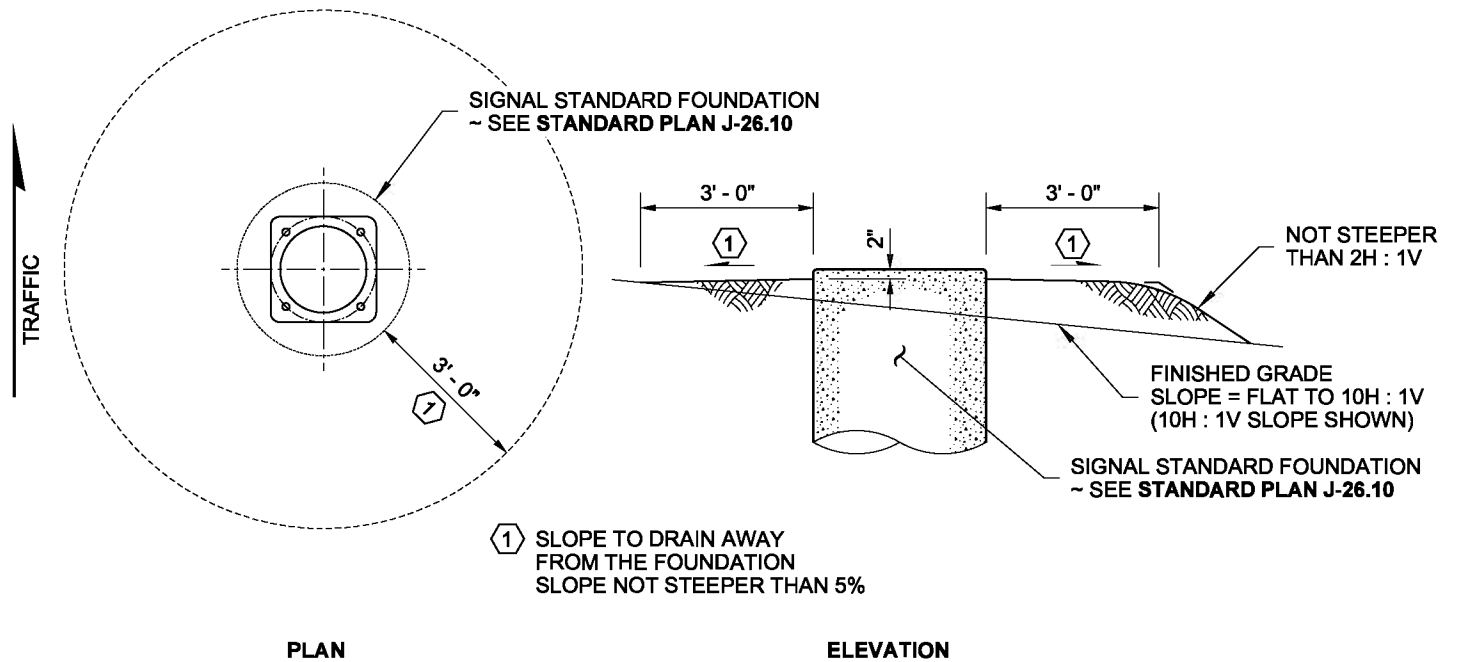
STANDARD PLAN J-26.10-03

SHEET 1 OF 1 SHEET

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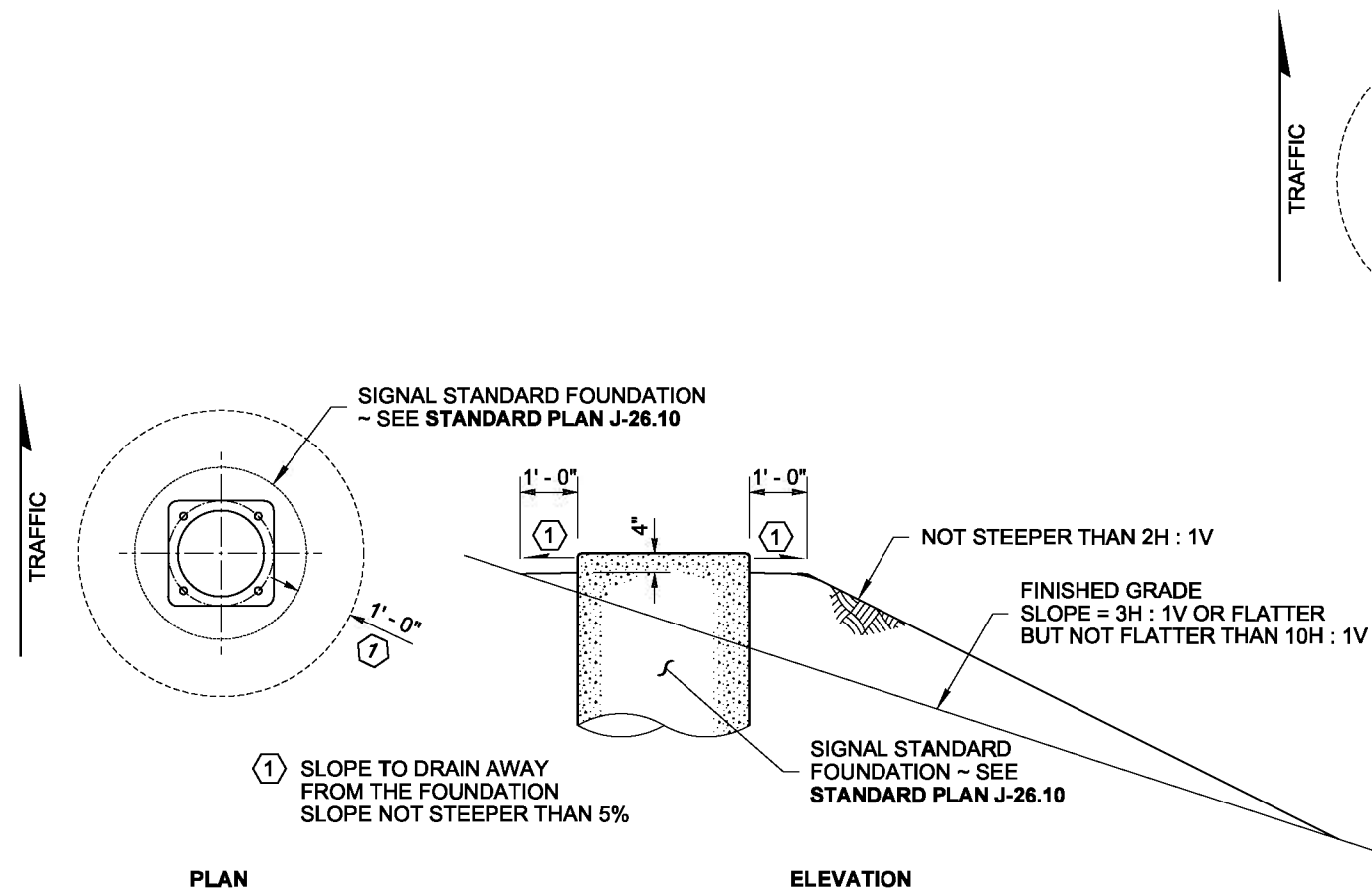


FOUNDATION IN OR NEAR SIDEWALK
CASE A

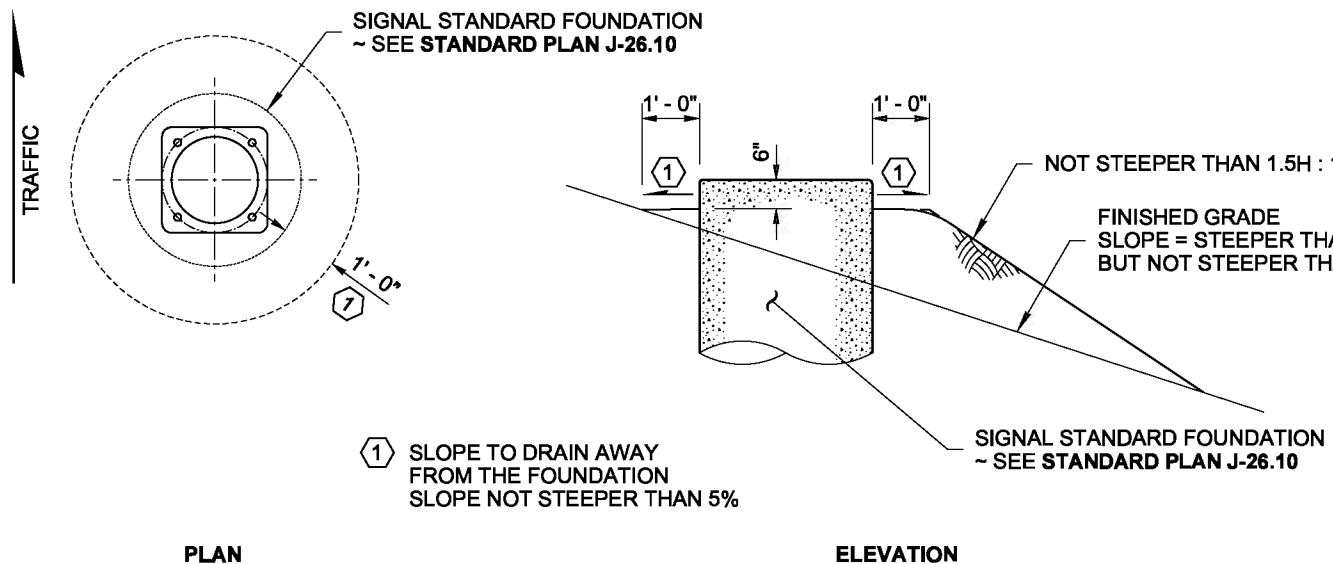


EXISTING GRADE OR FILL SLOPE = FLAT TO 10H : 1V
CASE B

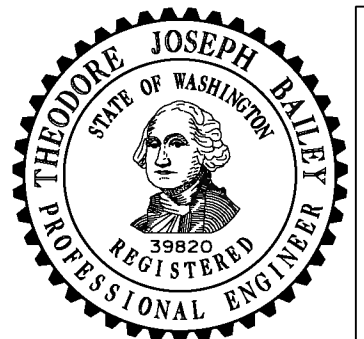
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EXISTING GRADE OR FILL SLOPE = 10H : 1V TO ≤ 3H : 1V
CASE C



EXISTING GRADE OR FILL SLOPE = > 3H : 1V TO 2H : 1V
CASE D



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SIGNAL STANDARD FOUNDATION PLACEMENTS

STANDARD PLAN J-26.15-01

SHEET 1 OF 3 SHEETS

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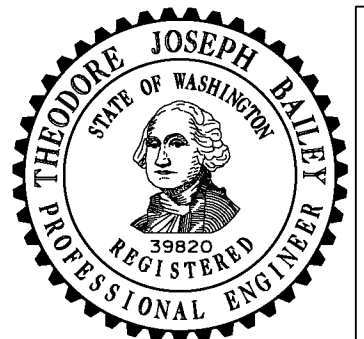
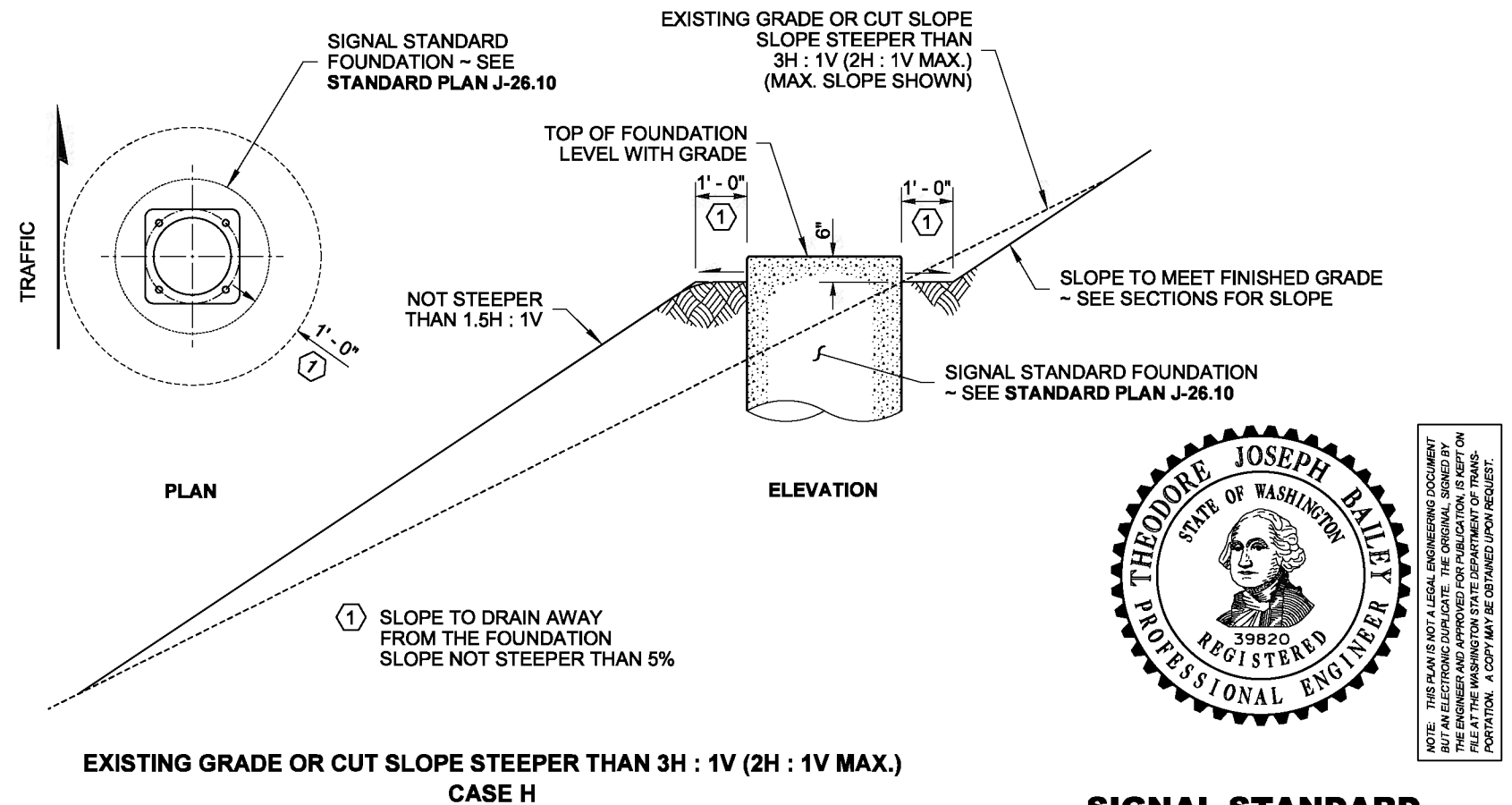
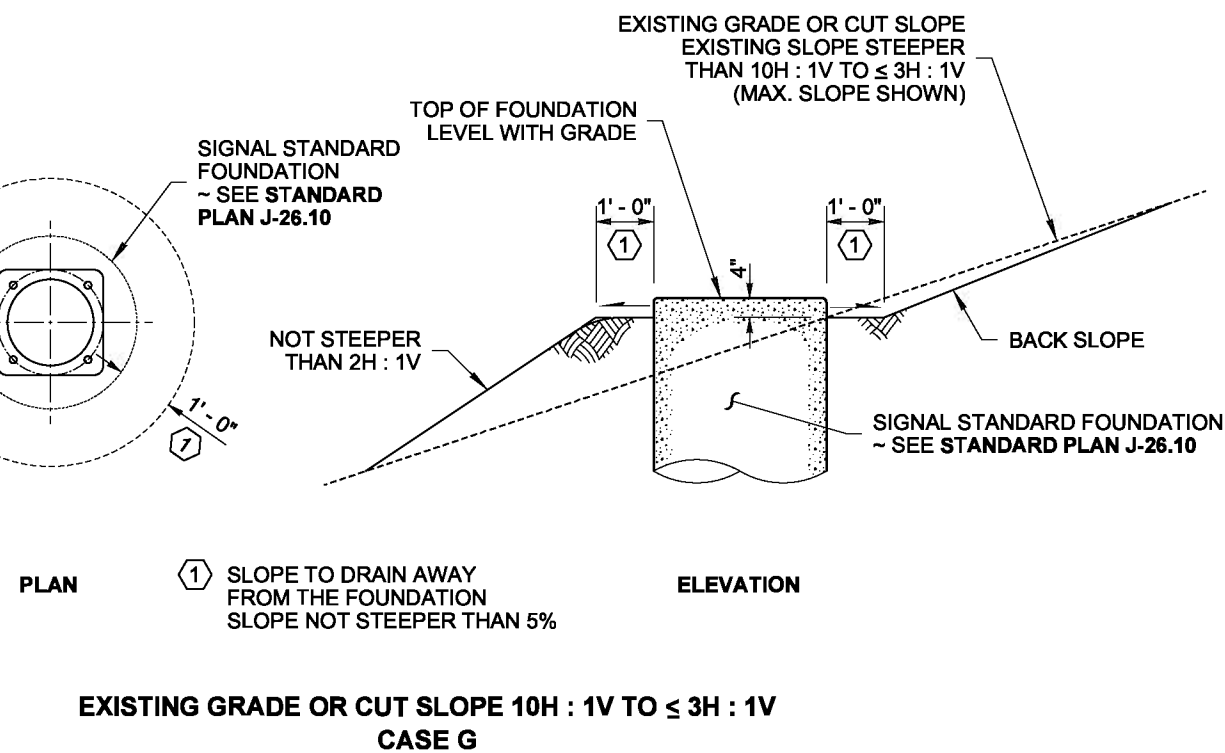
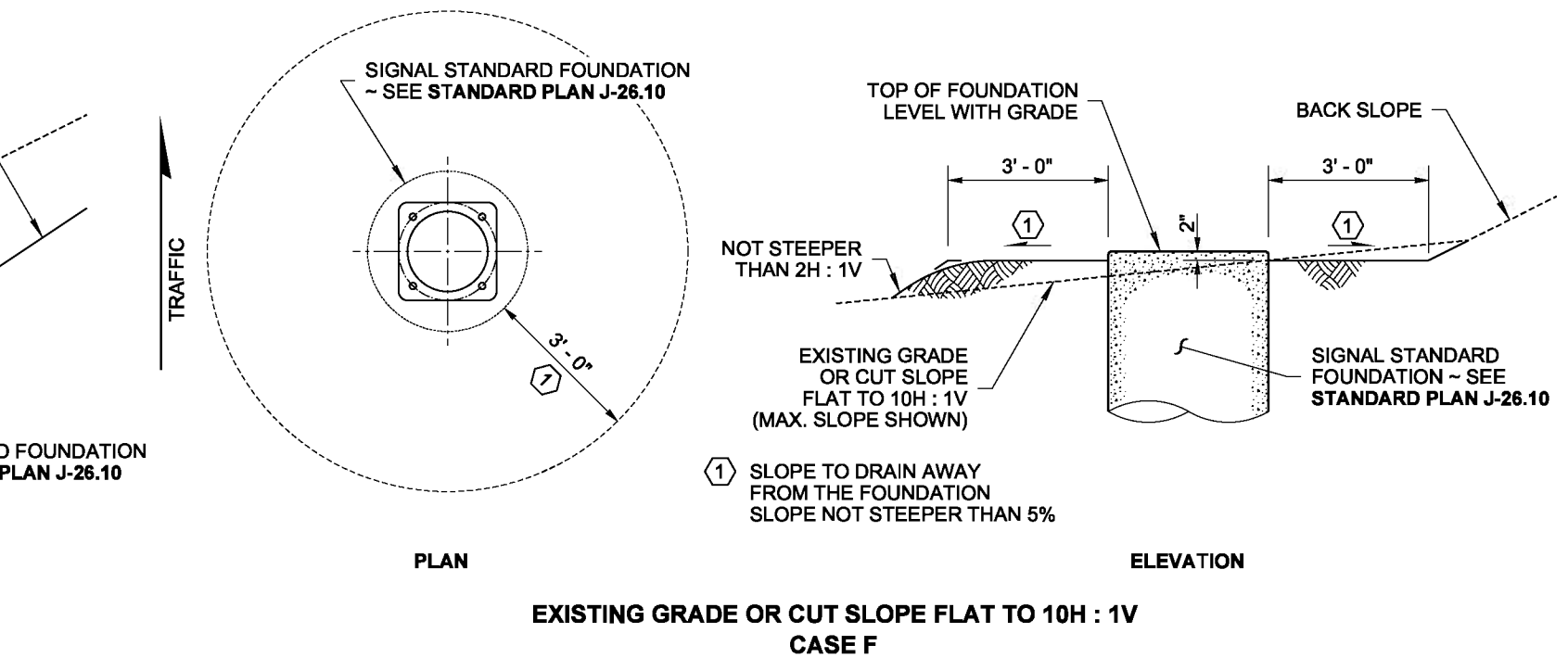
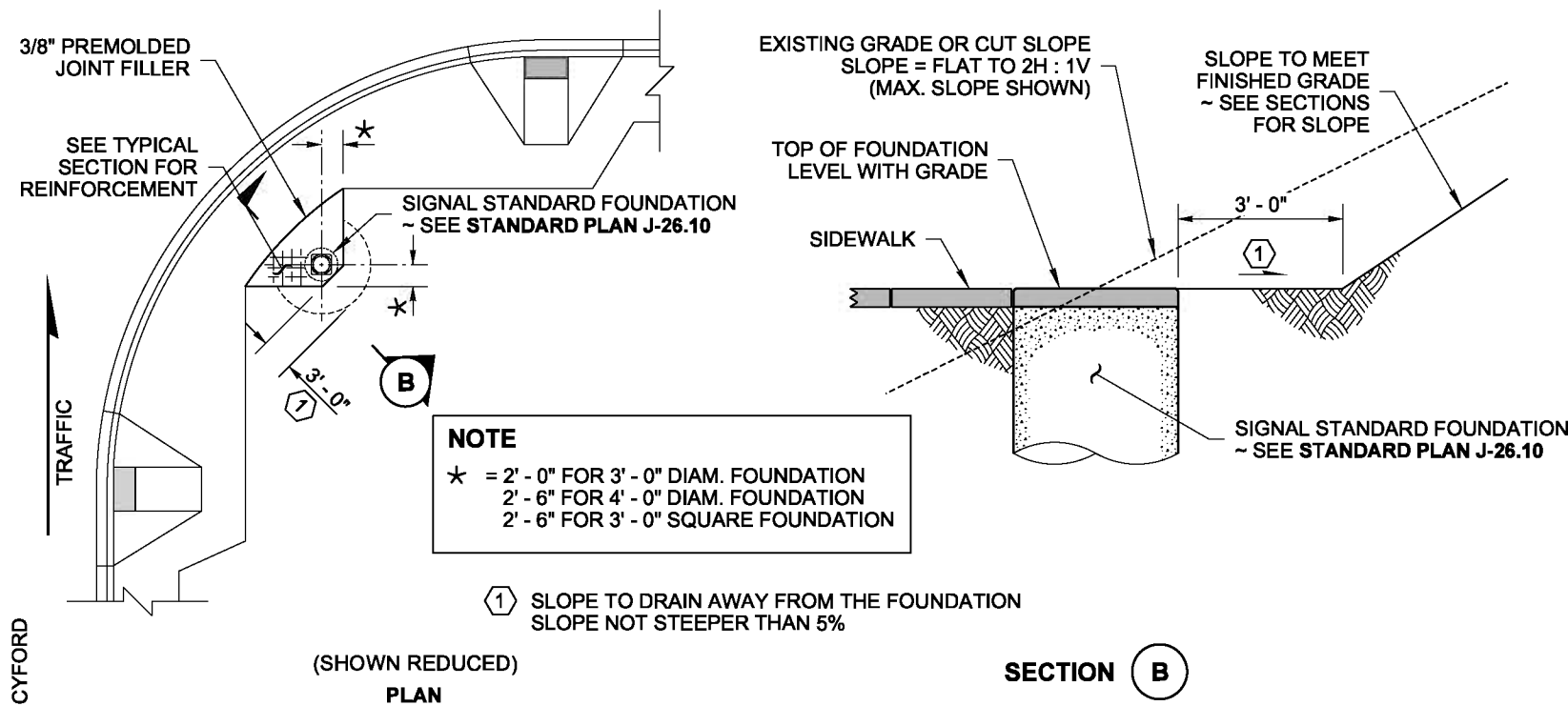
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SIGNAL STANDARD FOUNDATION PLACEMENTS

STANDARD PLAN J-26.15-01

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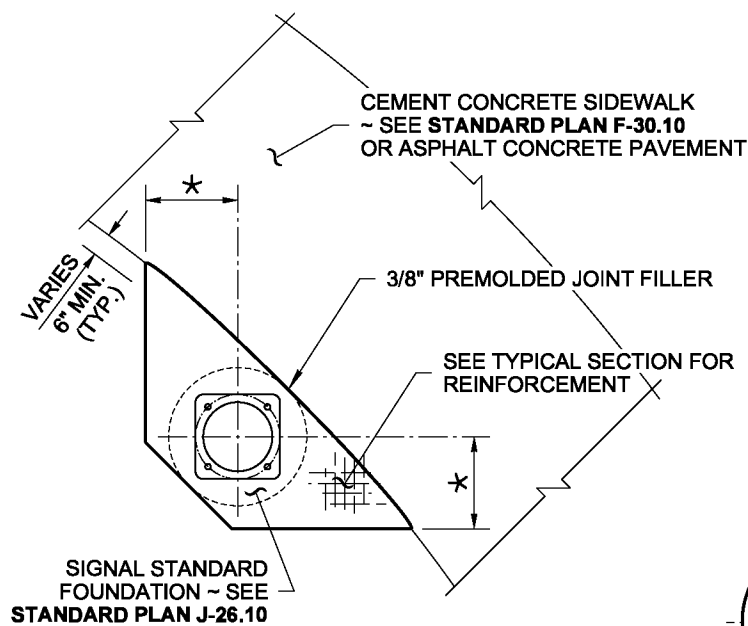
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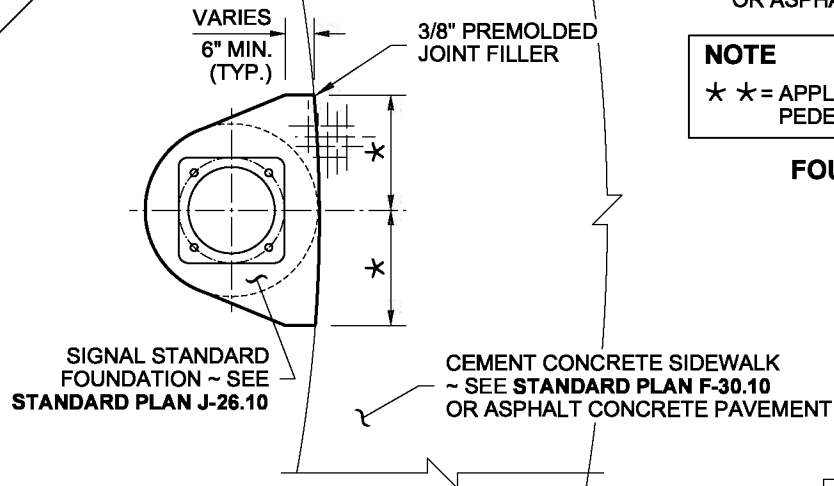
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DUAL PEDESTRIAN PUSH BUTTON

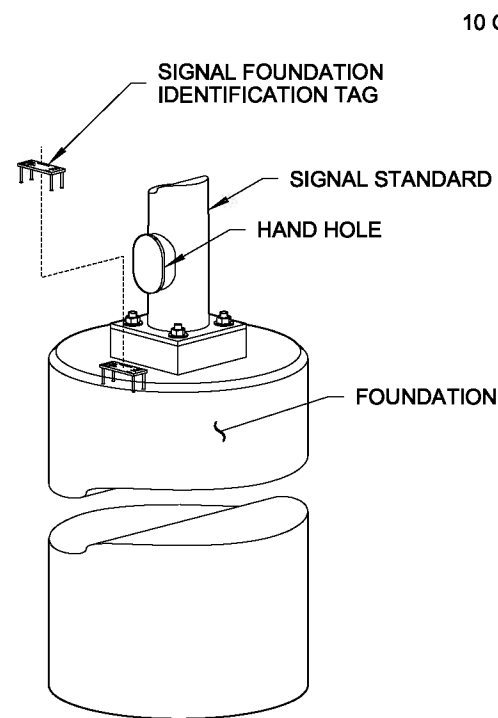
NOTE

* = 2' - 0" FOR 3' - 0" DIAM. FOUNDATION
2' - 6" FOR 4' - 0" DIAM. FOUNDATION
2' - 6" FOR 3' - 0" SQUARE FOUNDATION



SINGLE PEDESTRIAN PUSH BUTTON

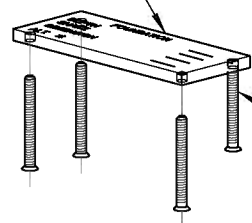
FOUNDATION OUTSIDE THE SIDEWALK SECTION



OBLIQUE VIEW

REINFORCING AND ANCHOR BOLTS
NOT SHOWN FOR CLARITY
(GROUT PAD OPTION SHOWN)

10 GAGE STAINLESS STEEL TAG ~
RECESS FLUSH WITH TOP OF
FINISHED FOUNDATION



**SIGNAL FOUNDATION
IDENTIFICATION TAG DETAIL**

TEXT SHALL BE ENGRAVED 0.014" DEEP

12 - 28 (NF) x 2" LONG STAINLESS STEEL
SCREW ~ DRILL AND TAP FROM BOTTOM,
LEAVE SCREW FLUSH WITH TOP. APPLY
LOCTITE TO SCREW THREADS TO BIND
SCREWS AND I.D. TAG TOGETHER

WWF 4 x 4 - W 2.9 x 2.9 AT CENTER
OF EXTENDED SIDE WALK AT
SIGNAL STANDARD FOUNDATION

APPLY GROUT EVEN WITH THE
BOTTOM OF THE ANCHOR PLATE
AFTER PLUMBING THE STANDARD

PROVIDE 3/8" DIAMETER DRAIN TUBE
IN THE GROUT PAD

SIGNAL STANDARD FOUNDATION
~ SEE STANDARD PLAN J-26.10

CLAMP CONDUCTOR TO STEEL REINFORCING
WITH LISTED CONNECTOR SUITABLE FOR USE
EMBEDDED IN CONCRETE

SEE CONTRACT PLANS FOR
FOR EXTENDED SIDEWALK
LAYOUT

GROUNDING CONDUCTOR NON-INSULATED
#4 AWG STRANDED COPPER ~ PROVIDE 3' MIN.
SLACK (ROUTE CONDUCTOR TO GROUNDING STUD)

FORM TO FINISH GRADE WHEN INSTALLING
SIDEWALK OR TRAFFIC ISLAND

3/8" PREMOLDED JOINT FILLER

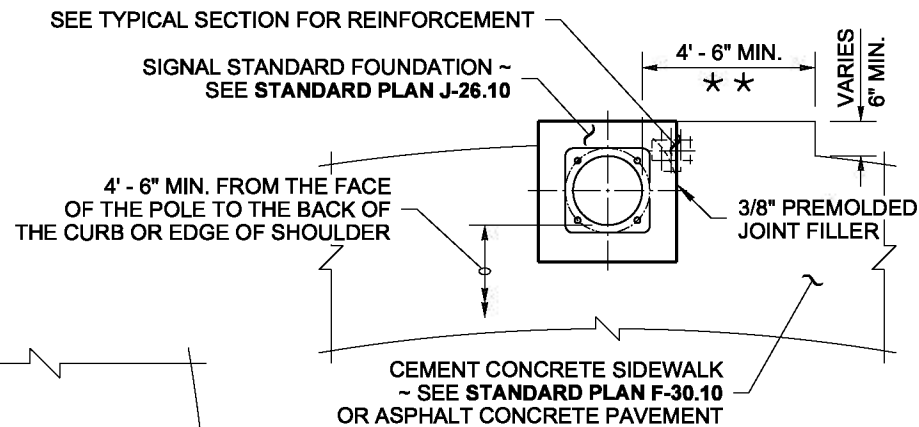
SIDEWALK OR
TRAFFIC ISLAND

ROUGHENED
CONCRETE SURFACE

NOTE

FOUNDATION REINFORCING ONLY PARTIALLY SHOWN FOR CLARITY.
~ SEE STANDARD PLAN J-26.10 FOR DETAILS NOT SHOWN.

TYPICAL SECTION

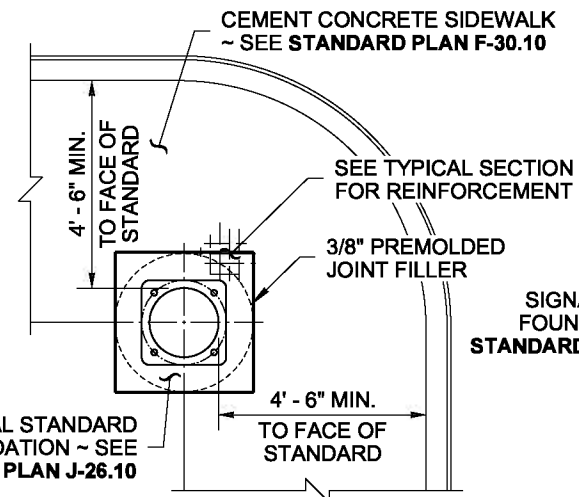


NOTE

* * = APPLIES TO THE SIDE OF THE FOUNDATION WHEN
PEDESTRIAN PUSH BUTTON IS TO BE INSTALLED.

**FOUNDATION PARTIALLY
WITHIN
SIDEWALK SECTION**

SIGNAL STANDARD
FOUNDATION ~ SEE
STANDARD PLAN J-26.10

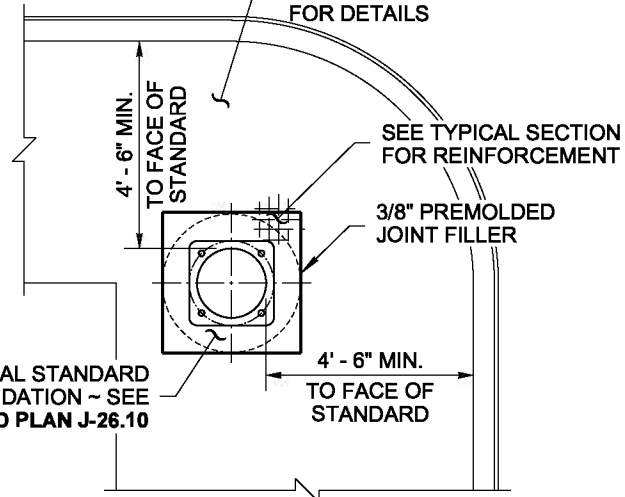


NOTE

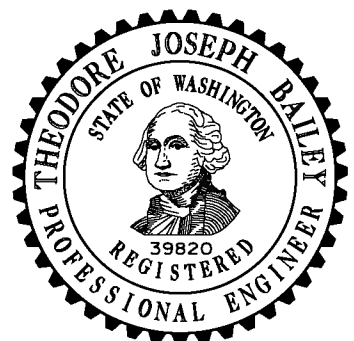
REFER TO CONTRACT DOCUMENTS FOR PROJECT SPECIFIC
INTERSECTION LAYOUTS & TRAFFIC ISLAND MATERIAL TYPE

**FOUNDATION PARTIALLY
WITHIN SIDEWALK SECTION**

SIGNAL STANDARD
FOUNDATION ~ SEE
STANDARD PLAN J-26.10



**FOUNDATION WITHIN SIDEWALK
OR TRAFFIC ISLAND SECTION**



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**SIGNAL STANDARD
FOUNDATION PLACEMENTS
STANDARD PLAN J-26.15-01**

SHEET 3 OF 3 SHEETS

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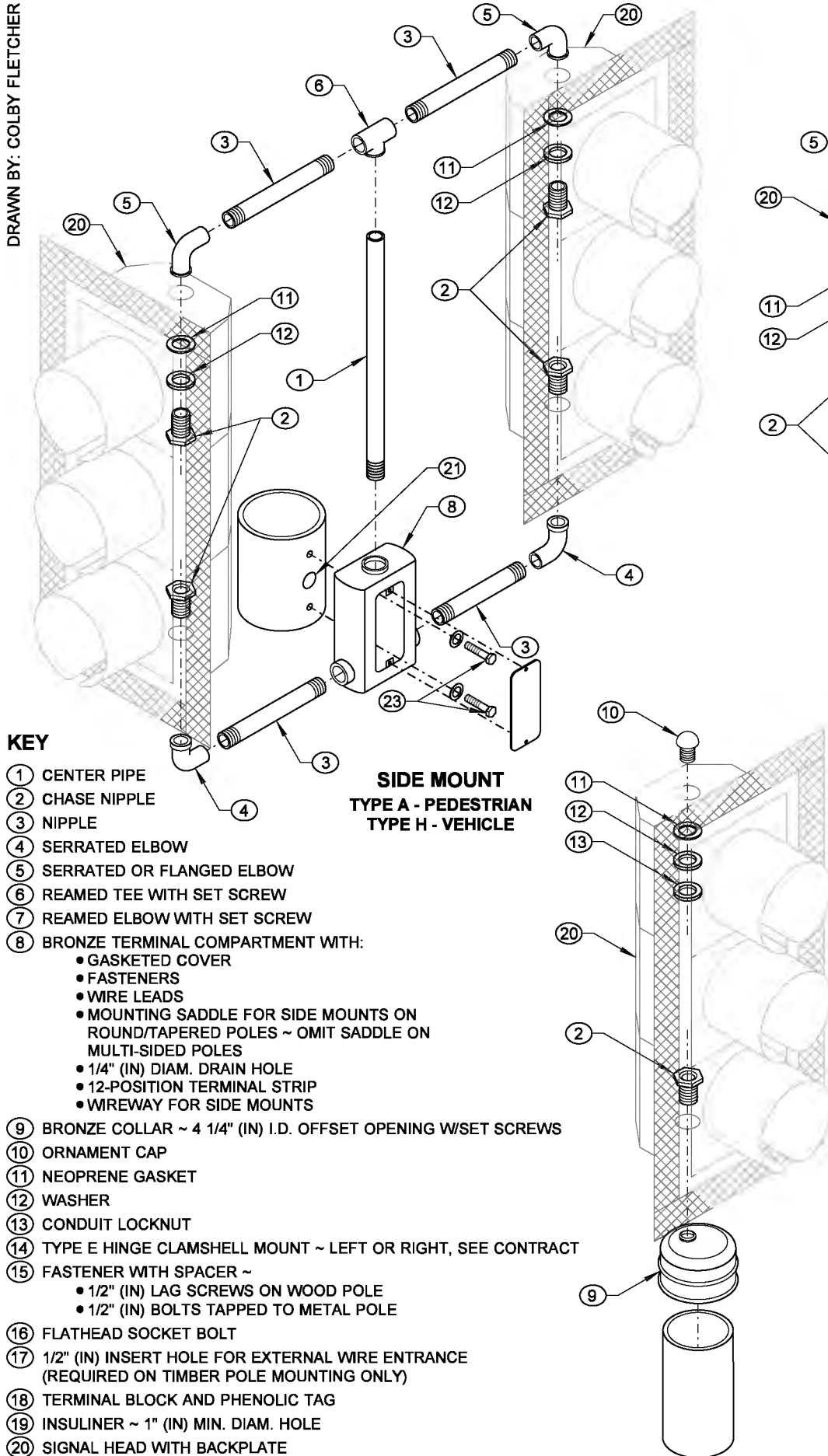
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05/17/12

DATE



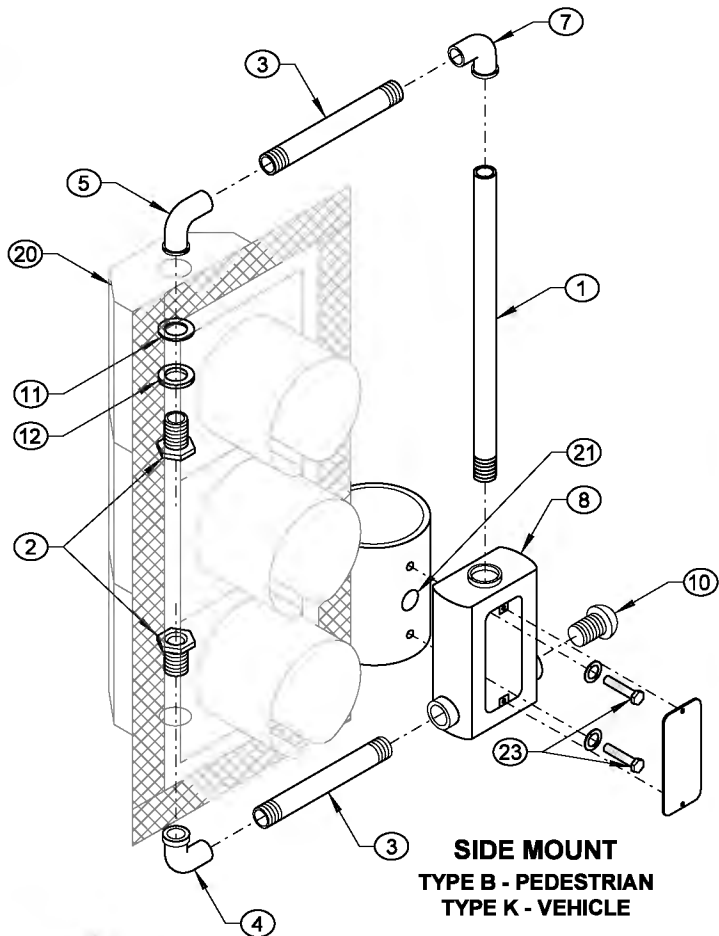
Washington State Department of Transportation



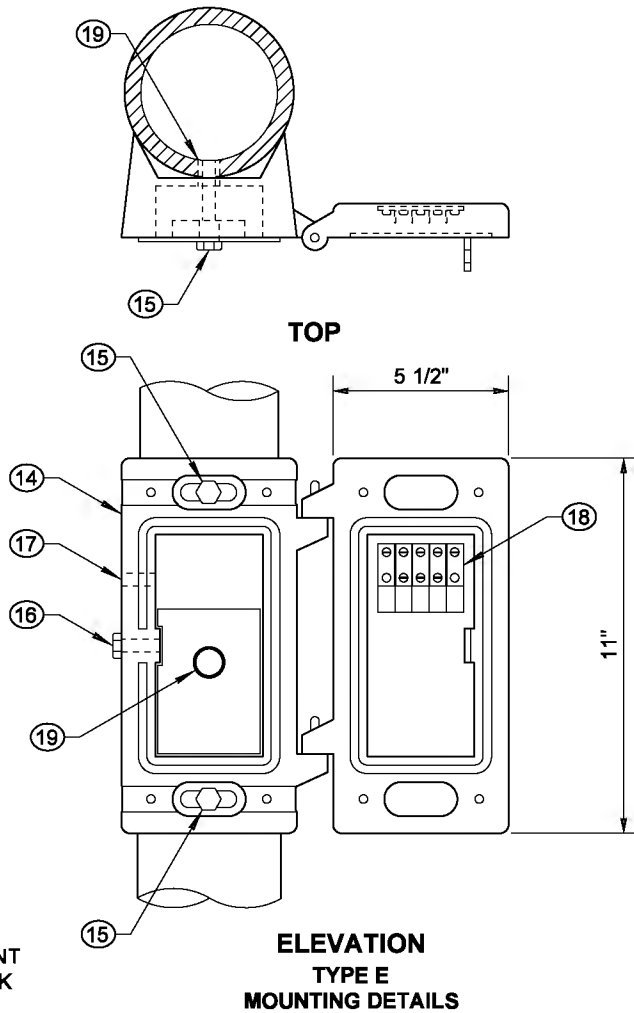
KEY

- ① CENTER PIPE
- ② CHASE NIPPLE
- ③ NIPPLE
- ④ SERRATED ELBOW
- ⑤ SERRATED OR FLANGED ELBOW
- ⑥ REAMED TEE WITH SET SCREW
- ⑦ REAMED ELBOW WITH SET SCREW
- ⑧ BRONZE TERMINAL COMPARTMENT WITH:
 - GASKETED COVER
 - FASTENERS
 - WIRE LEADS
 - MOUNTING SADDLE FOR SIDE MOUNTS ON ROUND/TAPERED POLES ~ OMIT SADDLE ON MULTI-SIDED POLES
 - 1/4" (IN) DIAM. DRAIN HOLE
 - 12-POSITION TERMINAL STRIP
 - WIREWAY FOR SIDE MOUNTS
- ⑨ BRONZE COLLAR ~ 4 1/4" (IN) I.D. OFFSET OPENING W/SET SCREWS
- ⑩ ORNAMENT CAP
- ⑪ NEOPRENE GASKET
- ⑫ WASHER
- ⑬ CONDUIT LOCKNUT
- ⑭ TYPE E HINGE CLAMSHELL MOUNT ~ LEFT OR RIGHT, SEE CONTRACT
- ⑮ FASTENER WITH SPACER ~
 - 1/2" (IN) LAG SCREWS ON WOOD POLE
 - 1/2" (IN) BOLTS TAPPED TO METAL POLE
- ⑯ FLATHEAD SOCKET BOLT
- ⑰ 1/2" (IN) INSERT HOLE FOR EXTERNAL WIRE ENTRANCE (REQUIRED ON TIMBER POLE MOUNTING ONLY)
- ⑱ TERMINAL BLOCK AND PHENOLIC TAG
- ⑲ INSULINER ~ 1" (IN) MIN. DIAM. HOLE
- ⑳ SIGNAL HEAD WITH BACKPLATE
- ㉑ FIELD DRILL POLE AND INSERT AN INSULINER OR SIMILAR DEVICE TO PROTECT CONDUCTORS
- ㉒ SIMILAR TO ⑧ WITH BRONZE INTEGRAL COLLAR
- ㉓ 1/2" (IN) DIAM. x 3" (IN) LONG BOLT WITH WASHER

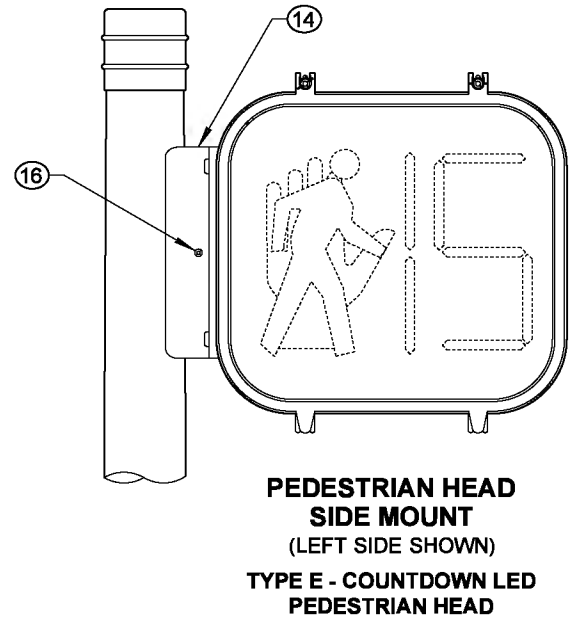
**SIDE MOUNT
TYPE A - PEDESTRIAN
TYPE H - VEHICLE**



**SIDE MOUNT
TYPE B - PEDESTRIAN
TYPE K - VEHICLE**



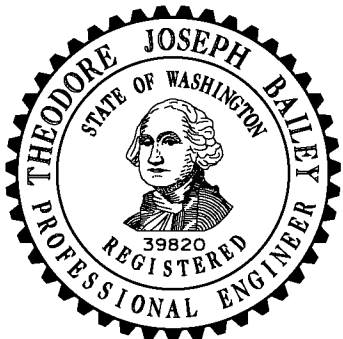
**TOP MOUNT
TYPE C - PEDESTRIAN
TYPE F - VEHICLE**



**PEDESTRIAN HEAD
SIDE MOUNT
(LEFT SIDE SHOWN)
TYPE E - COUNTDOWN LED
PEDESTRIAN HEAD**

NOTES

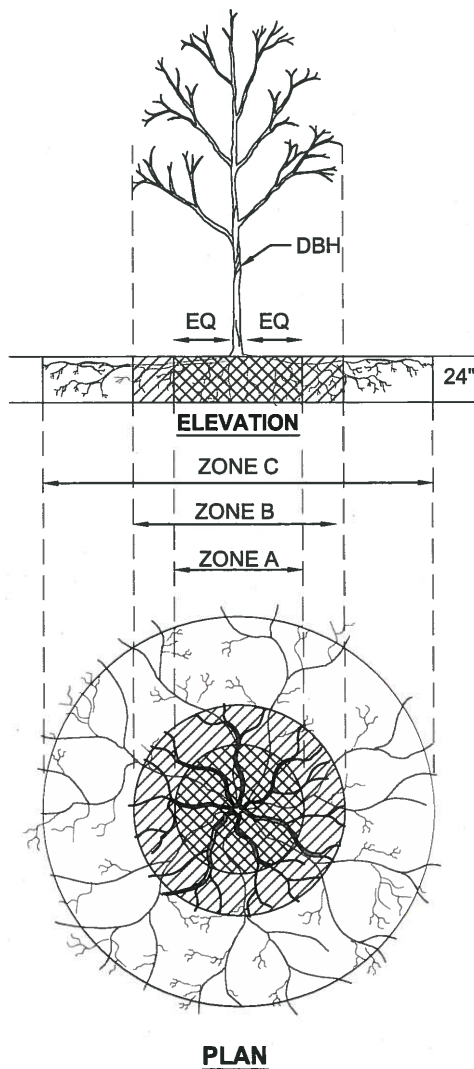
1. See Contract for head type, mounting height, and orientation.
2. All nipples, fittings, and center pipes shall be 1 1/2" (in) diameter.
3. Install neoprene gasket inside head when flanged elbows are supplied.
4. Extend wire sheath a minimum of 1" (in) inside all signal and sign housings and terminal compartments.
5. Apply bead of silicone to the serrated ring and around the perimeter of all top openings prior to installation of fittings.
6. See **Standard Specification 9-29.16** for backplate requirements. Where required, prismatic sheeting shall be applied in accordance with the manufacturer's recommendations. The application surface of the backplate shall be cleaned, degreased with isopropyl alcohol, and dried prior to application of the sheeting.
7. Drill a 1/4" (in) drain hole in the bottom of each signal display assembly, and one in the bottom of each pedestrian head. When signal display assembly is mounted horizontally, drill a 1/4" (in) drain hole at the lowest point of each section of the signal assembly.



**SIGNAL HEAD MOUNTING
DETAILS ~ POLE AND POST
TOP MOUNTINGS
STANDARD PLAN J-75.10-02**

SHEET 1 OF 1 SHEET

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ZONE A (CRITICAL ROOT ZONE)

The Critical Root Zone is the area under a tree measuring 1 foot of radius per 1 inch of diameter at breast height (DBH) from the trunk outwards and 24 inches in depth. For example: for a 10 inch dbh tree, the Critical Root Zone is located at least 10 feet out from the trunk and 24 inches deep.

RESTRICTIONS

1. No disturbance allowed without site-specific inspection and approval of methods to minimize root damage.
2. If roots larger than 2" IN DIA. are encountered, inspection and approval is required before proceeding trenching/excavation work.
3. Tunneling is required to install lines 3'-0" below grade or deeper.

ZONE C (FEEDER ROOT ZONE)

The Feeder Root Zone is the area under a tree measuring 2 feet of radius per 1 inch of DBH from the trunk outwards and 24 inches in depth. For example: for a ten inch diameter tree, The Critical Root Zone is located at least 20 feet out from the trunk and 24 inches deep.

RESTRICTIONS

1. Operation of heavy equipment and/or stockpiling of materials subject to approval. *Surface protection measures required
2. Trenching permitted as follows:
 - excavation by hand or WITH hand-driven trencher maybe required
 - Minimize trench width to the extent possible
 - Maintain 2/3 or more of ZONE C in an undisturbed condition

ZONE B (DRIP LINE)

The Drip Line is the area below the tree in which the boundary is designated by the edge of the tree's crown.

RESTRICTIONS

1. Operation of heavy equipment and/or stockpiling of materials subject to approval. *Surface protection measures required
2. Trenching permitted as follows:
 - Excavation by hand or with a hand-driven trencher may be required
 - Minimize trench width to the extent possible
 - No disturbance permitted within ZONE A
 - Maintain 2/3 or more of zone b in an undisturbed condition
3. Tunneling may be required for trenches deeper than 3'-0"

***SURFACE PROTECTION MEASURES**

1. Wood chip mulch layer, 6"-12" depth; or
2. 4" wood chip mulch layer under 3/4" plywood; or
3. 4" gravel over staked geotextile fabric
4. 4" wood chip mulch layer under steel plates;
5. 4" wood chip mulch layer under logging road mats

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DEPARTMENT OF PUBLIC WORKS

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CITY ENGINEER

7/14/16
DATE

TREE PROTECTION
DURING CONSTRUCTION

STANDARD PLAN NO. LS-08

TREE PROTECTION ZONE (TPZ)

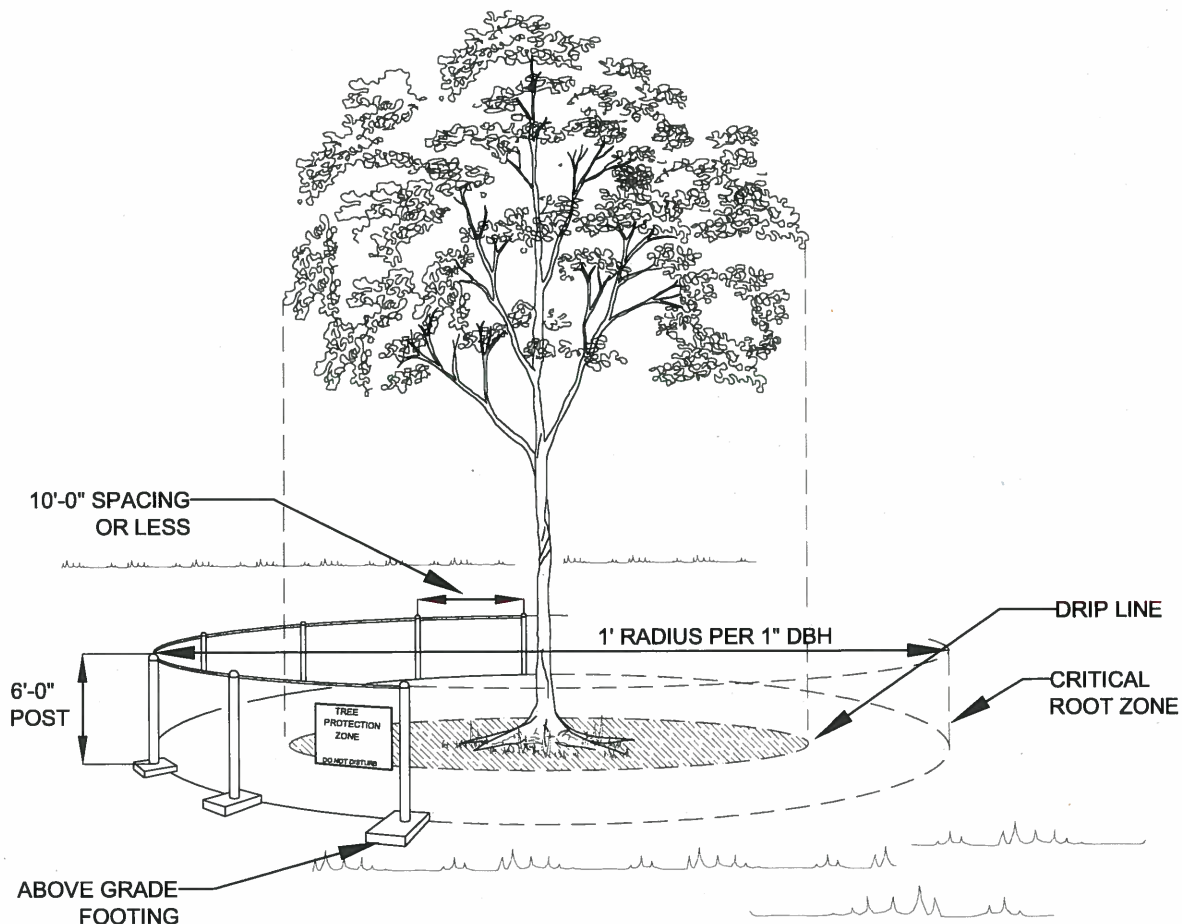
The Tree Protection Zone is an arborist defined area surrounding the trunk intended to protect the roots and soil to ensure future tree health and safety.

The location of the Tree Protection Zone is at the edge of the Critical Root Zone OR Drip Line, whichever is greater, or area as defined by the projects arborist.

For Critical Root Zone and Drip Line measurements see **TREE PROTECTION DURING CONSTRUCTION STANDARD PLAN NO. LS-08**.

TREE PROTECTION FENCING

1. Erect readily visible six-foot (6'-0") high chain link fencing at the edge of the Tree Protection Zone, and at the boundary of any open space tracts or conservation easements that abut the construction site except where, due to space restrictions, a specific distance is specified by the project's arborist.
2. Fencing shall be secured 6 foot metal posts with movable footings located above ground. metal posts shall not be more than 10 feet apart.
3. Fencing shall be flush with the initial undisturbed grade.
4. Signs shall be attached to the fencing stating that the tree is designated for protection and the area inside the fencing is a TPZ, which is not to be disturbed unless prior approval has been obtained from the city and/or the project's arborist.
5. Maintain the fencing in place until the city authorizes removal or a final certificate of occupancy is issued, whichever occurs first.
6. Ensure that any landscaping done in the TPZ, subsequent to the removal of the fencing, shall be accomplished with light machinery or hand labor.
7. No construction activity shall occur within the TPZ, including but not limited to:
 - Dumping or storage of materials such as building supplies, soil, waste items, and
 - storage of vehicles or equipment



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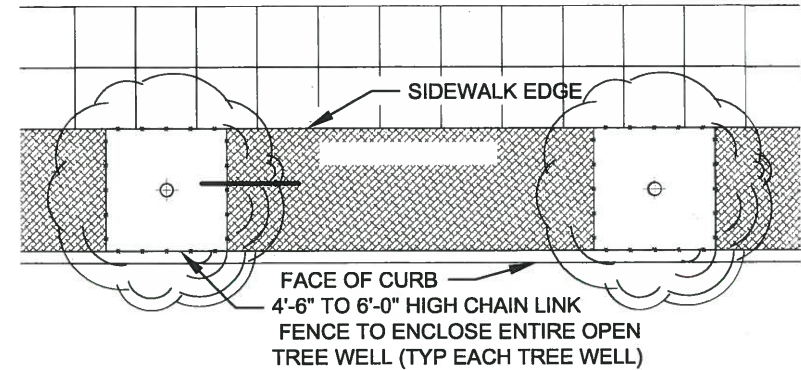
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**TREE PROTECTION
DURING CONSTRUCTION**

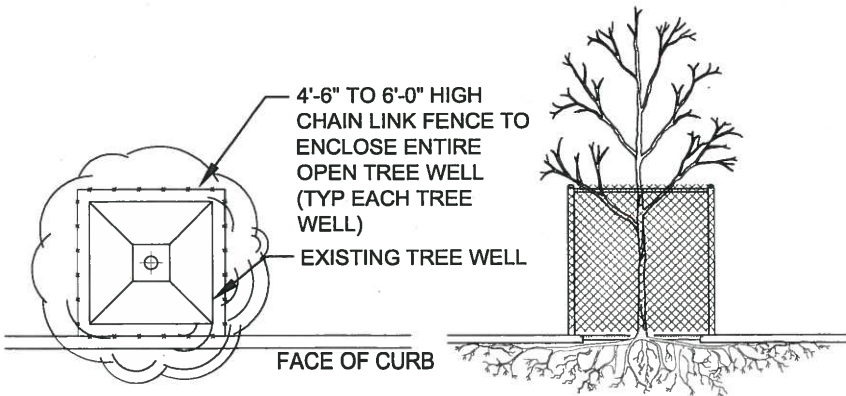
STANDARD PLAN NO. LS-09

NOTES:

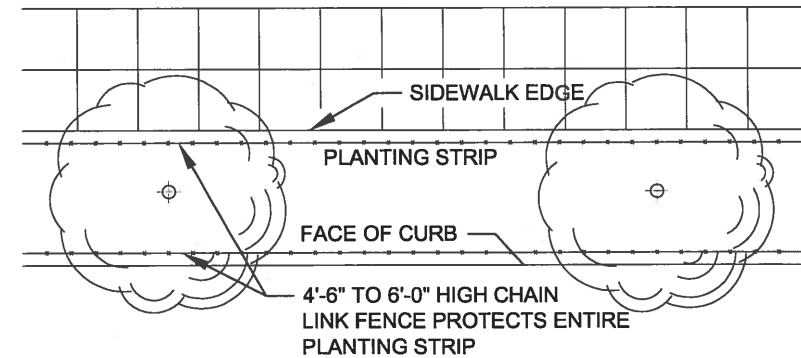
1. Tree protection requirements included in this standard detail are for trees which are directly adjacent to paved surfaces which will be retained through construction.
2. Required protection measures for trees other than those in tree wells and planting strips are contained in the TYPICAL TREE PROTECTION FENCING STANDARD PLAN NO. LS-09.
3. Reusable temporary tree and landscape protection fencing can be substituted for chain link fencing in tree wells and planting strips (SEE REUSABLE TREE PROTECTION FENCING FOR PAVED AREAS STANDARD PLAN NO. LS-11).
4. Consider traffic turning visibility and pedestrian visibility when selecting fence height; typically shorter fencing around tree pits between sidewalk and roadway is desired.



TREE IN PLANTING STRIP-OPTION 1



TREE IN TREE WELL



TREE IN PLANTING STRIP-OPTION 2

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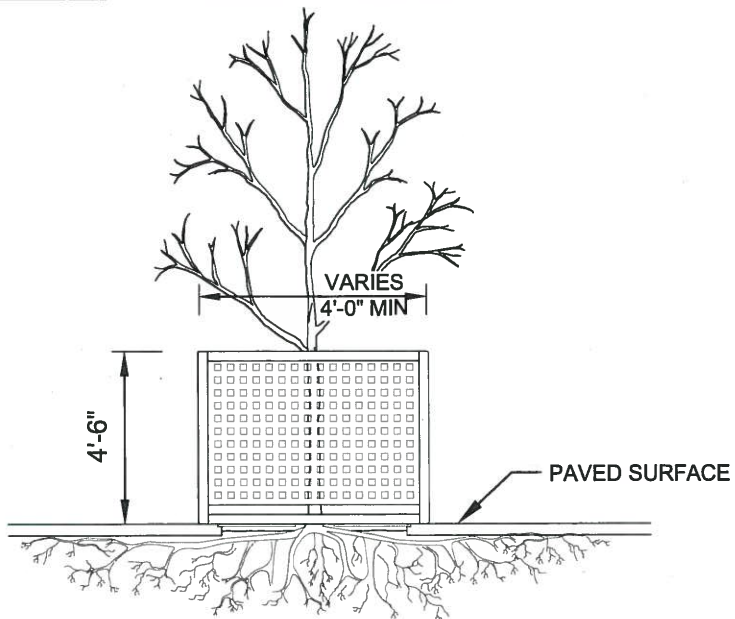
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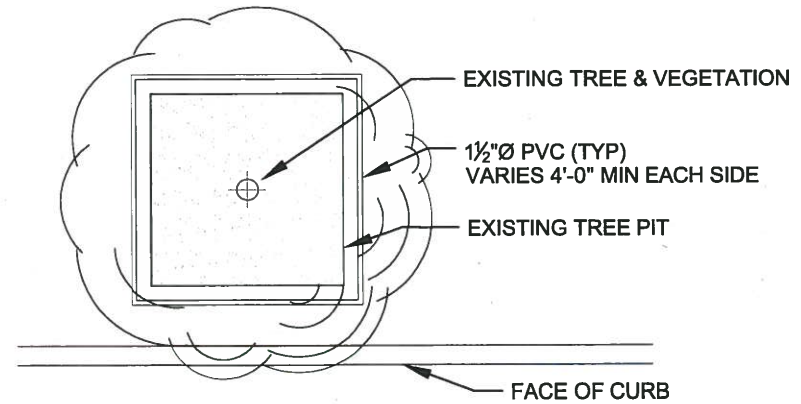
[Signature] 7/6/16
DATE

TREE PROTECTION FENCING
FOR TREES IN PAVED AREAS

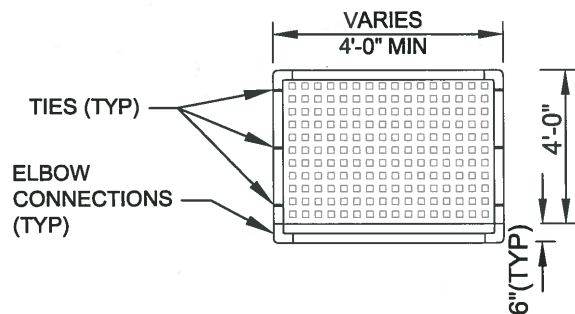
STANDARD PLAN NO. LS-10



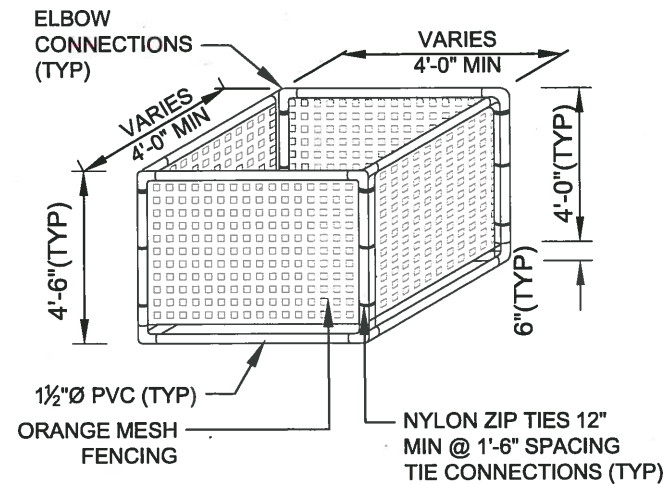
TYPICAL TREE GUARD RAIL



PLAN VIEW



TYPICAL PANEL



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7/6/15
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REUSABLE TREE PROTECTION
FENCING FOR PAVED AREAS

STANDARD PLAN NO. LS-11

STREETLIGHTING TAP
FOR USE IN BASE OF STANDARDS

TAPING INSTRUCTIONS

1. MAKE SPLICE AS SHOWN IN FIGURE A
2. APPLY TAPE AS SHOWN IN FIGURE A
APPLY TAPE AND "SCOTHKOTE" MOISTURE
RESISTANT ELECTRICAL COATING OVER
ENTIRE SPLICE AREA.
3. ATTACH CABLE TIE A MINIMUM OF 2" FROM
THE PRESSURE CONNECTOR AS SHOWN IN FIGURE B.
4. APPLY SECOND COAT OF VARNISH.

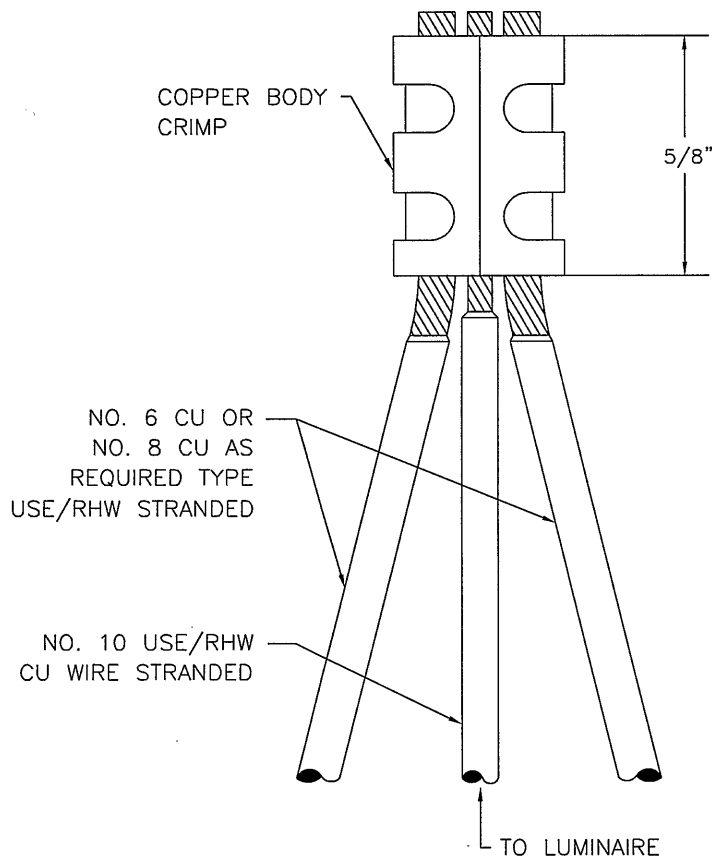


FIGURE A

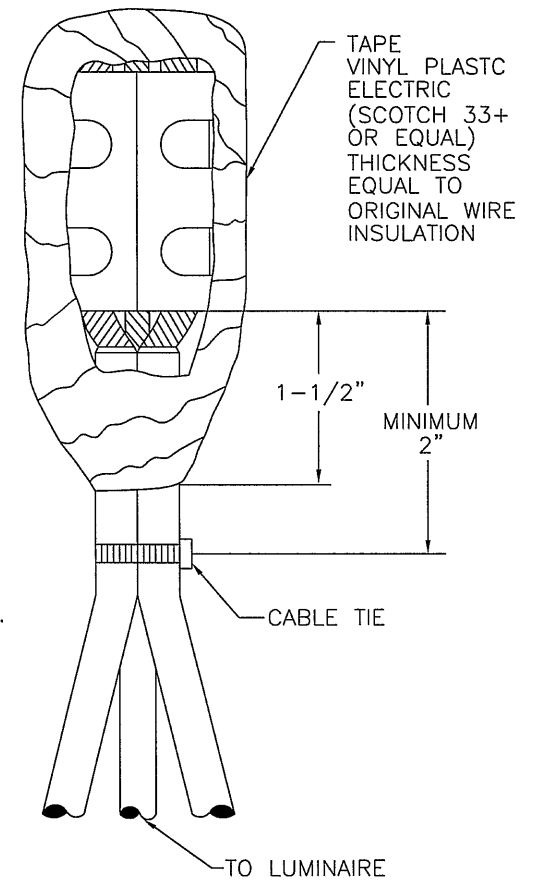


FIGURE B

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DEPARTMENT OF PUBLIC WORKS**

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CITY ENGINEER 

2/11/03
DATE 2/4/03

**STREETLIGHT
SPLICE FOR
HANDHOLES**

STANDARD PLAN NO. SL-05

50 AMP OR AS SPECIFIED
BACK-FED MAIN BREAKER

RETAINING CLIP

BRANCH CIRCUITS
QTY MAY VARY

MINIMUM
10,000AIC

WHEN SERVING FROM
TRANSFORMERS LARGER
THAN 50 KVA AN EVALUATION
OF INTERRUPT CAPACITY OF
THE SERVICE EQUIPMENT IS
REQUIRED.

PANEL LAYOUT
N.T.S.

SIZE OF BRANCH CIRCUIT CONDUCTOR	MAXIMUM BREAKER SIZE *
#8 AWG COPPER	30AMP
#6 AWG COPPER	40AMP

* SIZE BASED ON ENSURING BREAKER WILL TRIP
ON FAULTS AT END OF LONG CIRCUITS.

PROCEDURE:

1. OBTAIN ELECTRICAL PERMIT FROM TACOMA POWER FOR EACH ELECTRICAL SERVICE.
2. COMPLETE SERVICE PANEL INSTALLATION EXCEPT FOR ENTERING TRANSFORMER VAULT OR PAD. FOR SSB INSTALLATIONS, INSTALL CONDUIT AND WIRE INTO SSB.
3. PREFERRED PRACTICE IS TO OBTAIN SERVICE FROM SSB. CONTACT TACOMA POWER BEFORE SERVICING STREETLIGHTS FROM TRANSFORMER.
4. ARRANGE FOR ELECTRICAL INSPECTION AND CUT-IN BY TACOMA POWER (502-8277).
5. AFTER TACOMA POWER ACCEPTANCE OF SERVICE PANEL CONTACT THE UNDERGROUND RESIDENTIAL DISTRIBUTION (URD) OFFICE (502-8232) TO ARRANGE FOR CONDUIT AND CONDUCTOR ENTERANCE INTO TRANSFORMERS.

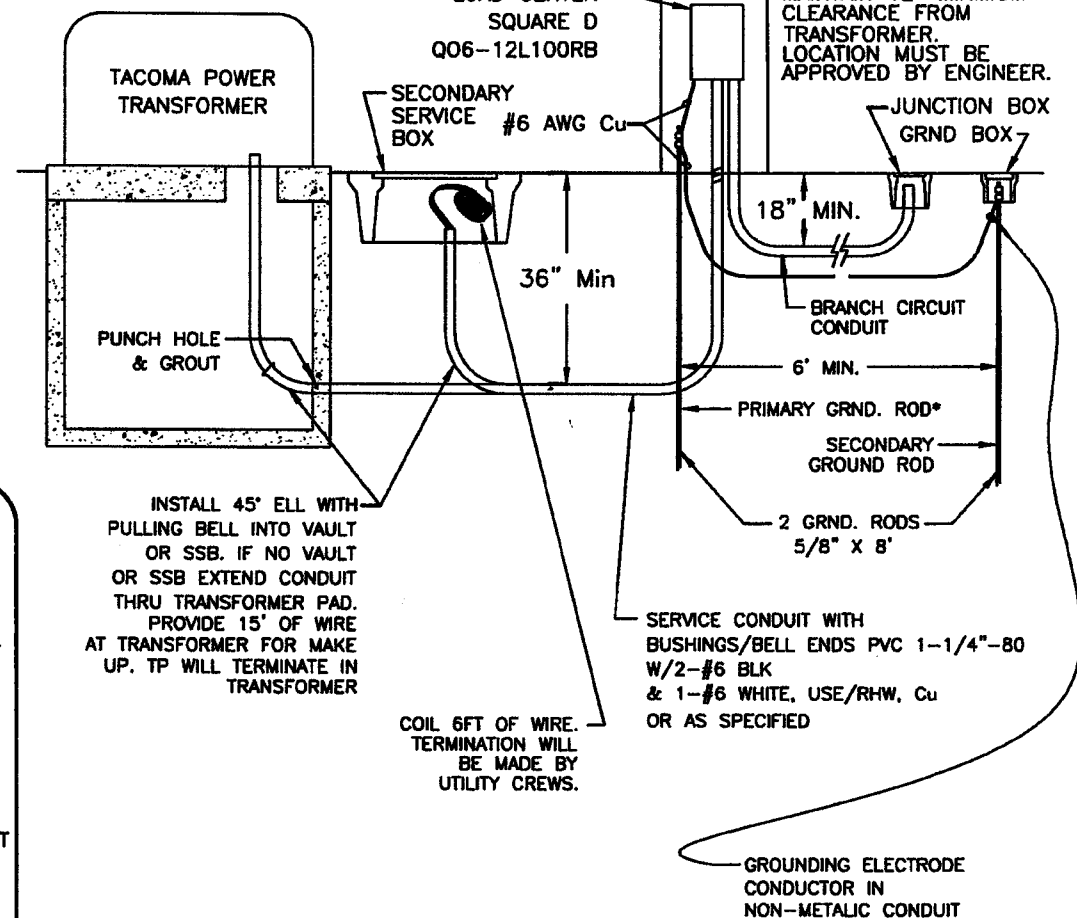
*6. PRIMARY GROUND ROD MAY BE LOCATED OUTSIDE OF SERVICE ENCLOSURE IN GROUND ROD BOX.

**7. DO NOT PENETRATE OUTER WALL OF ENCLOSURE WHEN MOUNTING EQUIPMENT HARDWARE.

SERVICE ENCLOSURE STYLE VARIES

**LOAD CENTER
SQUARE D
QO6-12L100RB

SERVICE PEDESTAL SHALL
MAINTAIN 12" MINIMUM
CLEARANCE FROM
TRANSFORMER.
LOCATION MUST BE
APPROVED BY ENGINEER.



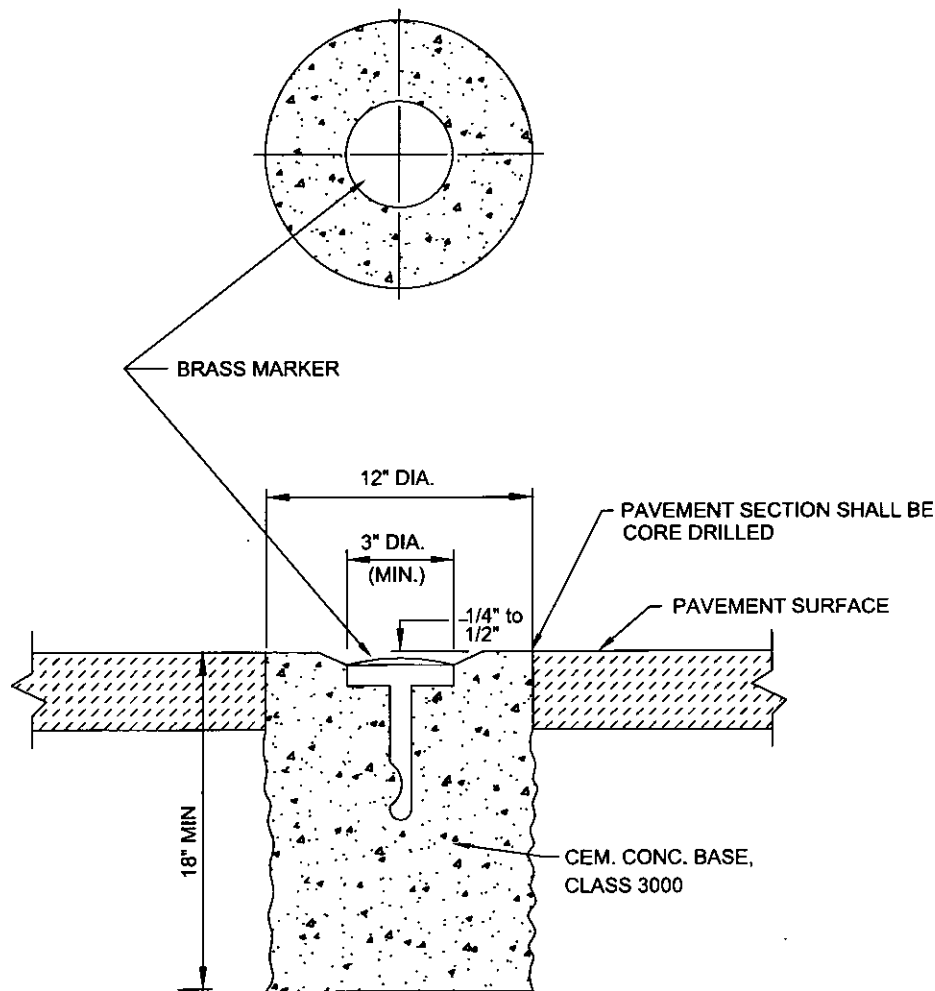
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DATE

STREETLIGHT
SERVICE DETAIL
UNDERGROUND TYPE A
STANDARD PLAN NO. SL-08



NOTES:

1. Concrete base shall be poured in place. Hand mixed concrete is prohibited. Concrete base need not be formed.
2. Notice to surveyors: any monument set in the City of Tacoma must bear the land surveyor number of the surveyor setting the monument. Monuments set as part of an approved plat are exempt.
3. The surveyor is to supply the City of Tacoma with a copy of the calculations used to determine all monument positions before the monuments are set.
4. Brass marker for City of Tacoma funded projects will be supplied by the City, all other brass markers to be supplied by the contractor.
5. Monument must be magnetically locatable.
6. Prior to removing or destroying a monument, the surveyor or engineer shall apply for a permit from the Department of Natural Resources in accordance with WAC 332-120.

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DEPARTMENT OF PUBLIC WORKS

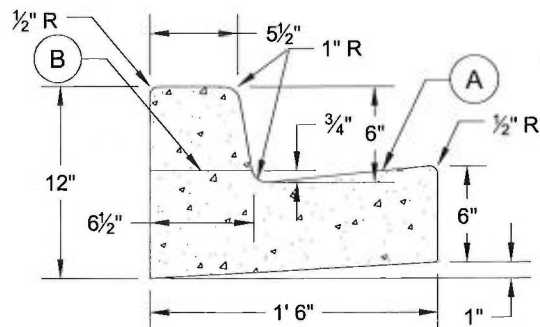
James Parney 09 JUN 2009
CITY ENGINEER DATE

POURED MONUMENT

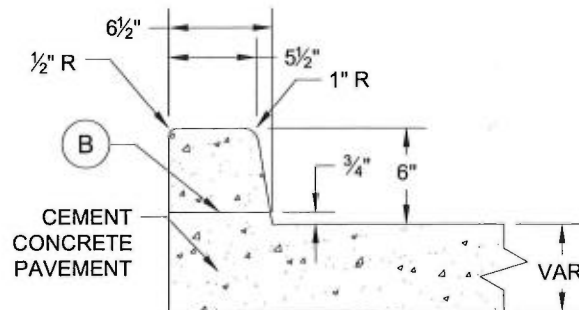
STANDARD PLAN NO. SU-01

A When used on high side of roadways, the cross slope of the gutter shall match the cross slope of the adjacent pavement. The height of the curb shall be 6", unless otherwise shown on plans.

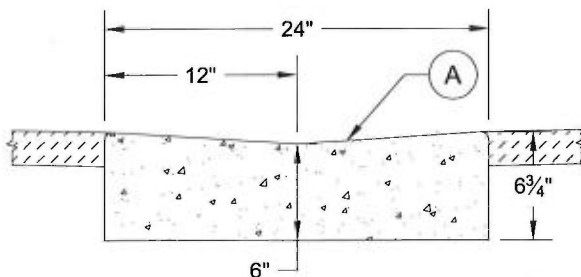
- (B) Flush with gutter pan at curb ramp entrance or $\frac{3}{4}$ " vertical lip at driveway entrance.



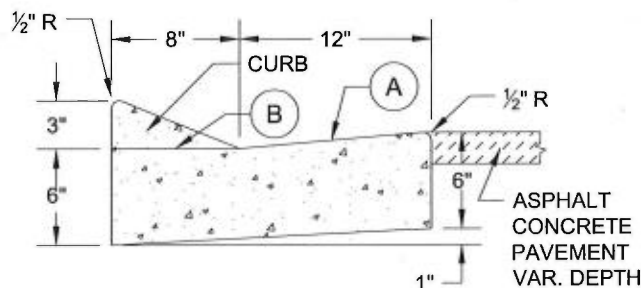
**CEMENT CONCRETE TRAFFIC
CURB & GUTTER**



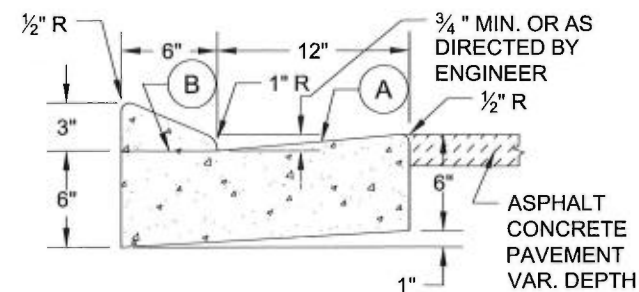
INTEGRAL CEMENT CONCRETE TRAFFIC CURB



CEMENT CONCRETE VALLEY GUTTER



TYPE "C" MOUNTABLE
CEMENT CONCRETE CURB & GUTTER



TYPE "D" MOUNTABLE
CEMENT CONCRETE CURB & GUTTER

1. For trench crossings, curb and gutter shall be removed to a minimum 2' cut back over undisturbed soil.
2. In all projects, any remaining sections of curb and gutter less than 5' in length between the project area and the nearest control joint shall also be removed and replaced.
3. All joints shall be saw cut full depth prior to restoration and $\frac{3}{8}$ " expansion joint installed.
4. Concrete finish shall match existing.
5. Cutting wheel run-out beyond the limits of the opening shall be filled in accordance with WSDOT Standard Specification 5-05.3(8)B for cement concrete surfaces and 5-04.3(5)C for asphalt concrete surfaces.
6. Foundations shall be fully compacted prior to form placement.
7. Unsuitable foundation shall be replaced with $\frac{5}{8}$ " crushed surfacing top course.

DCS

PUBLIC WORKS

NA

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SERVICES

NA

TACOMA WATER



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DATE _____

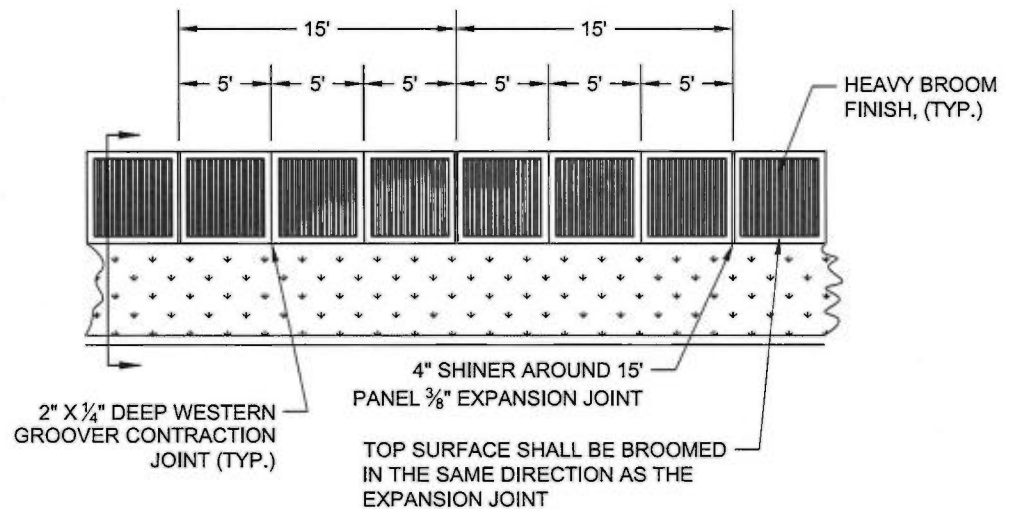
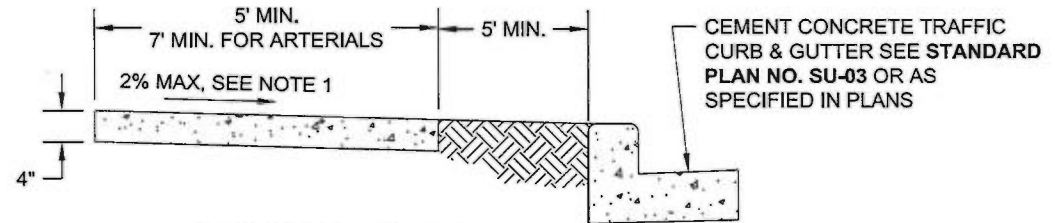
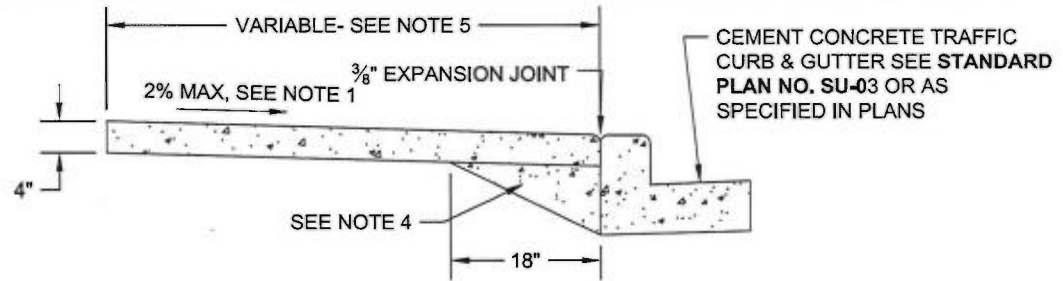
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CEMENT CONCRETE CURB AND GUTTER

STANDARD PLAN NO. SU-03

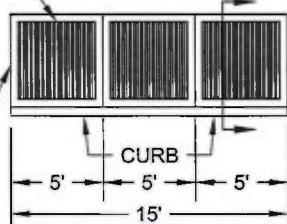
NOTES:

1. Sidewalks shall be designed and constructed in accordance with 2010 ADA Standards, 28 CFR, Part 35 and as supplemented by the Public Right of Way Accessibility Guidelines (PROWAG). City of Tacoma prefers sidewalk cross slopes to be designed to a maximum of 1.5% and a minimum of 1.0%
2. When placing walk adjacent to existing curb and gutter, curb and gutter will be repaired as necessary before placing concrete forms for walk.
3. Staking is required where no curb is present.
4. Thickened edge shall be constructed using cement concrete on all radii. All other locations shall be backfilled and compacted.
5. Combination walk shall be 7' min. on all commercial sites and arterial streets. Combination walk shall be a minimum of 5' on non arterial streets. Dimensions are from back of curb to back of walk. See contract plans for width and placement of sidewalk.
6. All expansion joints shall be full depth with $\frac{3}{8}$ " premolded joint filler.
7. All joints shall be cleaned and edged. External edges shall be $\frac{1}{2}$ " radius. Internal joints shall be $\frac{1}{4}$ " radius.
8. All soft and yielding foundation material shall be removed and replaced with crushed surfacing top course (CSTC) per Section 9-03.9(3) of the WSDOT Standard Specifications.
9. All sidewalk shall be replaced to the nearest expansion or contraction joint. All joints shall be saw cut full depth prior to restoration and $\frac{3}{8}$ " expansion joint installed. Cutting wheel run-out beyond the limits of the opening shall be filled in accordance with WSDOT Standard Specification 5-05.3(8)B for cement concrete surfaces and 5-04.3(5)C for asphalt concrete surfaces.
10. For sidewalks within the North Slope Historical District area use Standard Plan HD-NS03. See Standard Plan HD-NS01 for North Slope Historic District site map.



TOP SURFACE SHALL BE BROOMED IN THE SAME DIRECTION AS THE EXPANSION JOINT

4" SHINER AROUND 15' PANEL $\frac{3}{8}$ " EXPANSION JOINT



$\frac{3}{8}$ " EXPANSION JOINT TO MATCH CURB JOINTS NOT TO EXCEED 15'

REVIEWED BY

PUBLIC WORKS

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ENVIRONMENTAL SERVICES

N/A

TACOMA WATER



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CITY ENGINEER

4/25/19
DATE

CITY OF TACOMA

CEMENT CONCRETE
SIDEWALK

STANDARD PLAN NO. SU-04

GENERAL NOTES:

1. Provide a separate directional curb ramp for each marked or unmarked crosswalk. Directional curb ramps are preferred over 45 degree ramps. Curb ramp location shall be placed within the width of the associated crosswalk, or as shown on the Contract Plans. The curb ramp centerline shall be parallel to the direction of the crossing. Forty-five (45) degree curb ramps shall be installed only after approval by the City's ADA Coordinator or the Street Operations Division Manager.
2. Where "GRADE BREAK" is called out, the entire length of the grade break between the two adjacent surface planes shall be flush and perpendicular to the direction of travel. There shall be no vertical discontinuity between the base of curb ramp and gutter line.
3. Do not place grates, junction boxes, access covers, or other appurtenances in front of the curb ramp or on any part of the curb ramp or turning space. Placement on or in front of ramp flares is allowed.
4. See Contract Plans for the curb design specified. See **Standard Plan SU-03** and **SU-03A** for Curb, and Curb and Gutter Details.
5. A thickened edge shall be constructed to full depth of adjacent curb along entire curb radius.
6. For sidewalk and curb ramps within the North Slope Historical District area see **North Slope Historic District Site Map, HD-NS01**. Apply Lamp Black 1lb. per cubic yard of cement concrete or as required for discoloration in accordance with ASTM D209-81 Standard Specifications for Lamp Black pigment.
7. The running slope of a curb ramp shall not exceed 8.3% but does not require the ramp length to exceed 15 feet to avoid chasing the slope indefinitely when connecting to steep grades.
8. Curb ramp, turning space and flares shall receive a broom finish, see **WSDOT Standard Specifications 8-14**.
9. Return curbs, (pedestrian curbs), may only be used with landscaping or railing. Return curbs, (pedestrian curbs), shall not be used to prevent pedestrians from crossing streets.
10. All curb ramp designs shall be stamped by a Washington State licensed Professional Engineer. If meeting the current design standards is not possible, curb ramps shall be constructed to the maximum extent feasible as indicated by an Engineer's note on the stamped drawings. Rationale supporting the design variance shall be provided by the Engineer and shall include a description of the scope of work, the site-specific factors affecting compliance, and the measures implemented to improve compliance.
11. Pedestrian traffic should be aligned to the receiving curb ramp. The existing curb ramps shall be evaluated using criteria in the City's Curb Ramp Installation Matrix.
12. Consult the City's Curb Ramp Installation Matrix and the Right Of Way Restoration Policy for additional requirements.
13. Conduit for APS equipment shall be installed during curb ramp construction at all signalized intersections and at intersections where signalization is anticipated within the next 6 years. Coordinate with Public Works - Engineering, Traffic Section.
14. A Pedestrian Accessibility Control Plan shall be developed in conjunction with each project-specific Temporary Traffic Control Plan for all work in the ROW.
15. Pedestrian traffic shall NOT be directed behind the stop bar.
16. Curb ramp alignment should be consistent with crosswalk alignment
17. Curb ramp shall be 5' minimum in width.
18. Catch basins shall be located upstream of curb ramps outside of flare/wing for new construction or when performing storm sewer upgrades.
19. For constructability purposes, the City recommends designing to **less than** the maximum allowable slopes.

DCS

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SERVICES

NA

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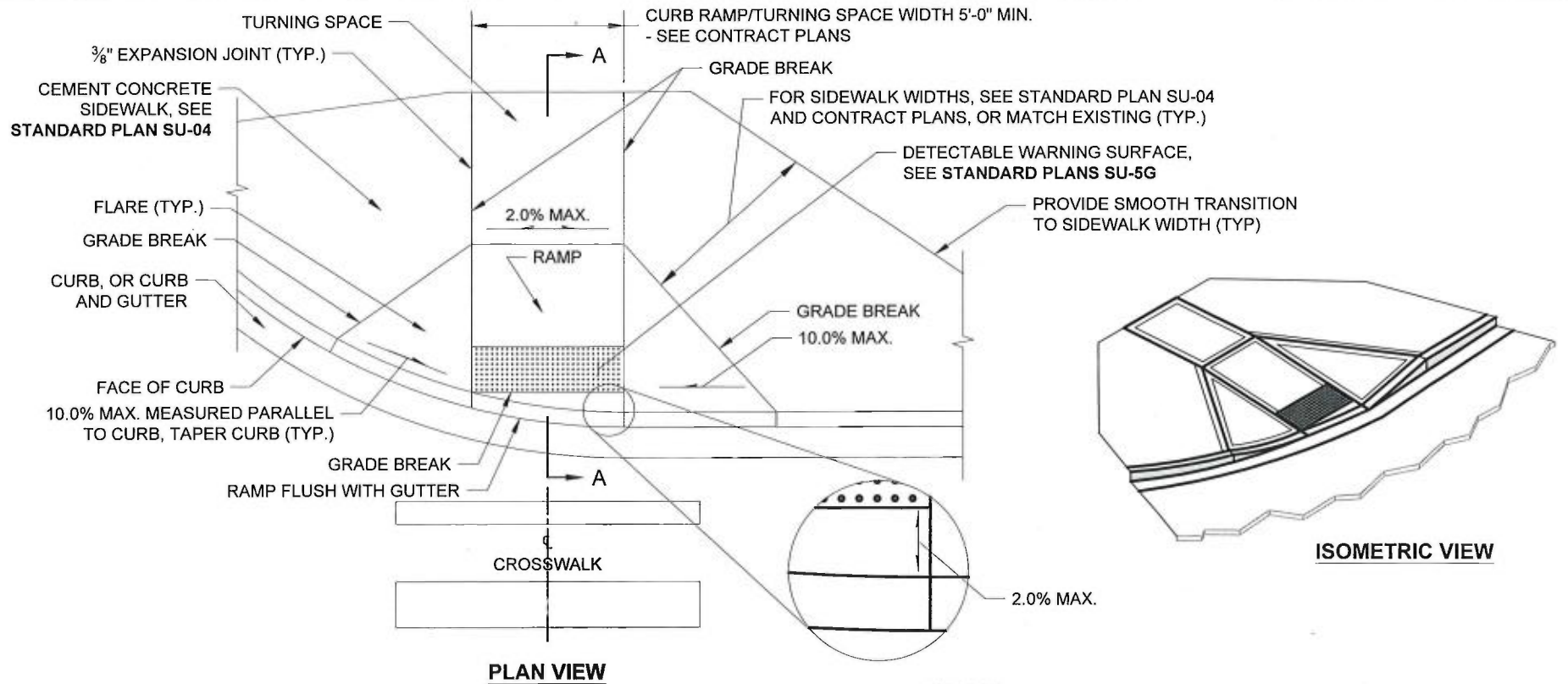
CITY ENGINEER

DATE

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CURB RAMP DETAILS
GENERAL INFORMATION

STANDARD PLAN NO. SU-05

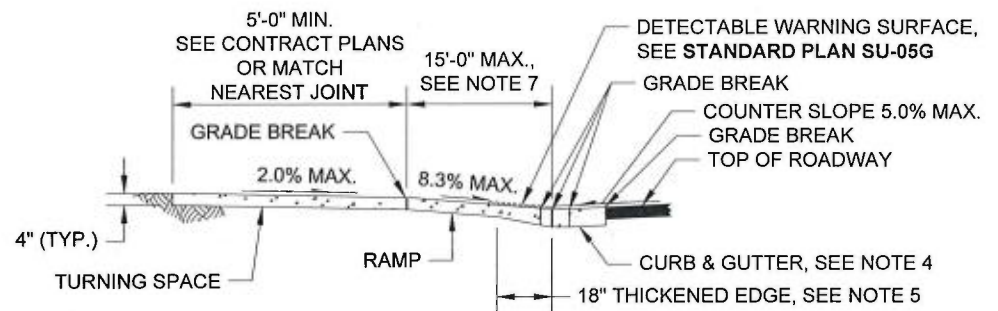


NOTES:

See Standard Plan SU-05 for referenced notes

LEGEND

— SLOPE IN EITHER DIRECTION



SECTION DETAIL A-A

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NA

NA

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[Signature] 8/16/16

CITY ENGINEER

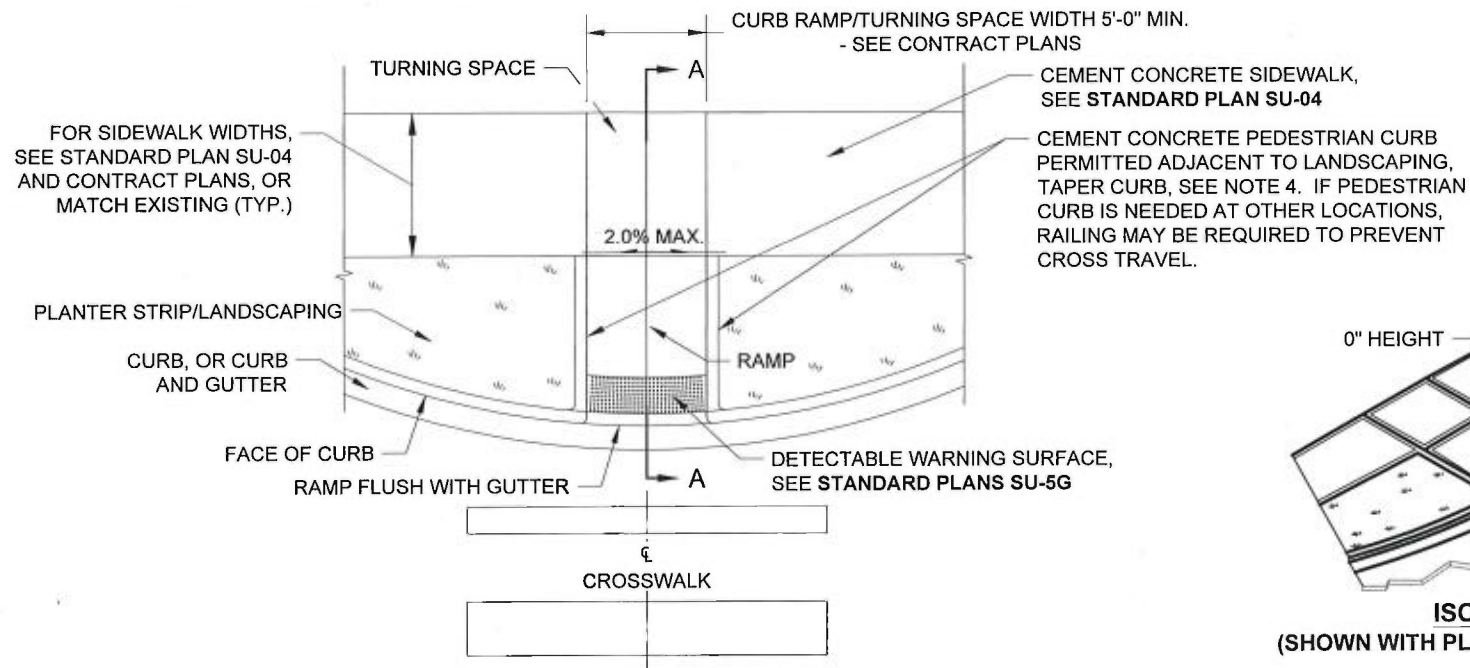
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CITY OF TACOMA

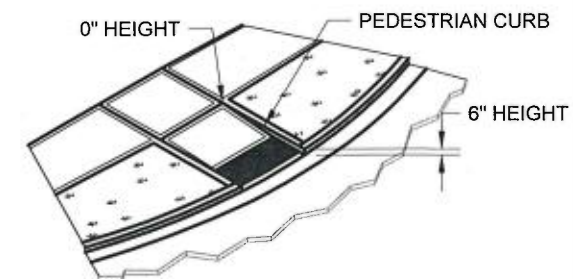
PERPENDICULAR CURB RAMP
TYPE 'A'

STANDARD PLAN NO.

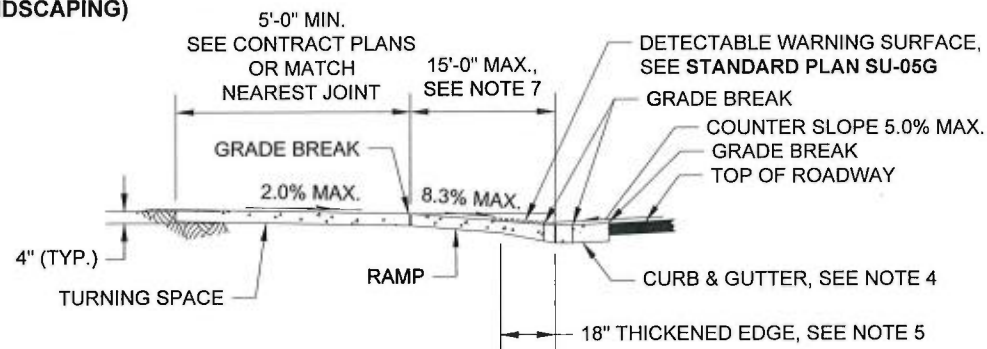
SU-05A



PLAN VIEW
(SHOWN WITH PLANTER STRIP/LANDSCAPING)



ISOMETRIC VIEW
(SHOWN WITH PLANTER STRIP/LANDSCAPING)



SECTION DETAIL A-A

NOTES:

See **Standard Plan SU-05** for referenced notes

LEGEND

— SLOPE IN EITHER DIRECTION

DCS

REVIEWED BY

GMS

PUBLIC WORKS

ENVIRONMENTAL SERVICES

NA

NA

TACOMA POWER

TACOMA WATER



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[Signature] 8/16/16

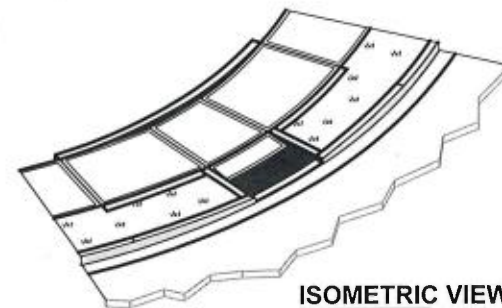
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DATE

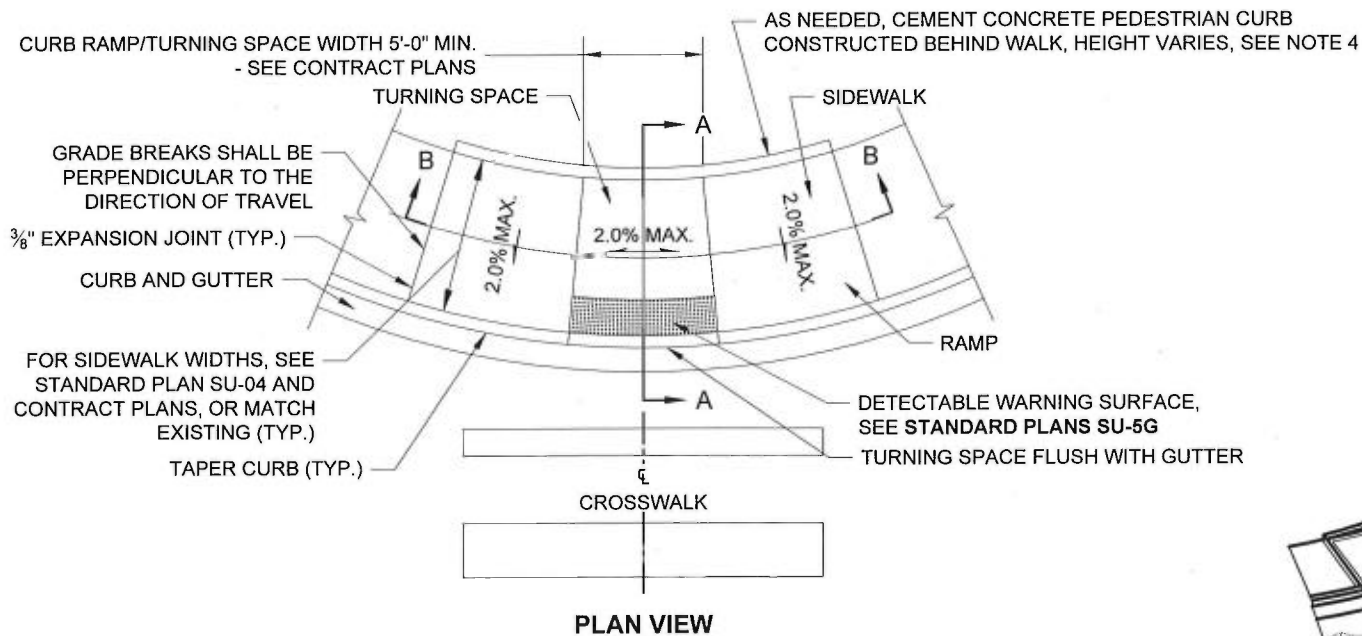
CITY OF TACOMA

PERPENDICULAR CURB RAMP
TYPE 'B'

STANDARD PLAN NO. SU-05B



STANDARD PLAN NO. SU-05C



NOTES:

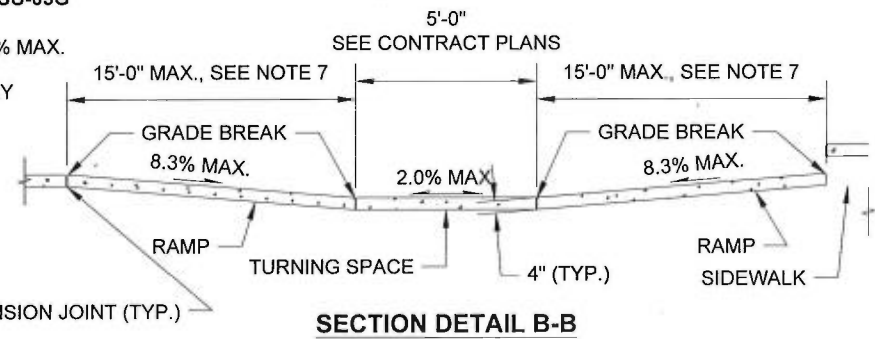
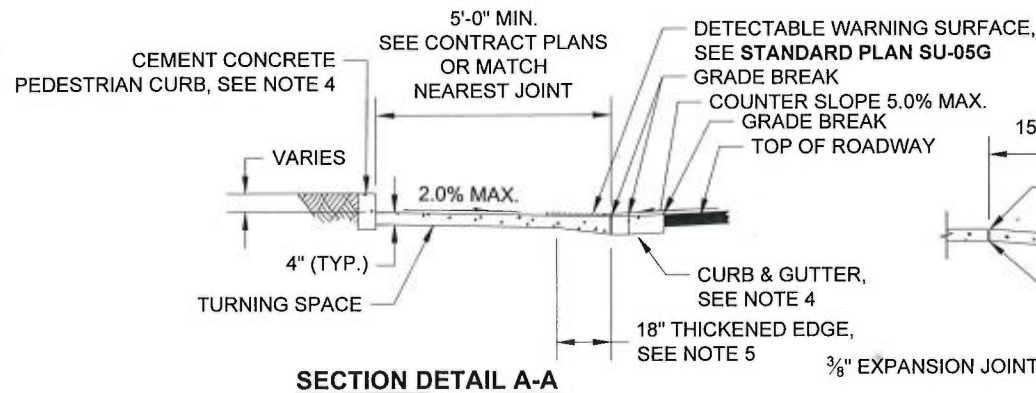
See **Standard Plan SU-05** for referenced notes

LEGEND

— SLOPE IN EITHER DIRECTION



ISOMETRIC VIEW



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ENVIRONMENTAL SERVICES

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TACOMA WATER



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CITY ENGINEER

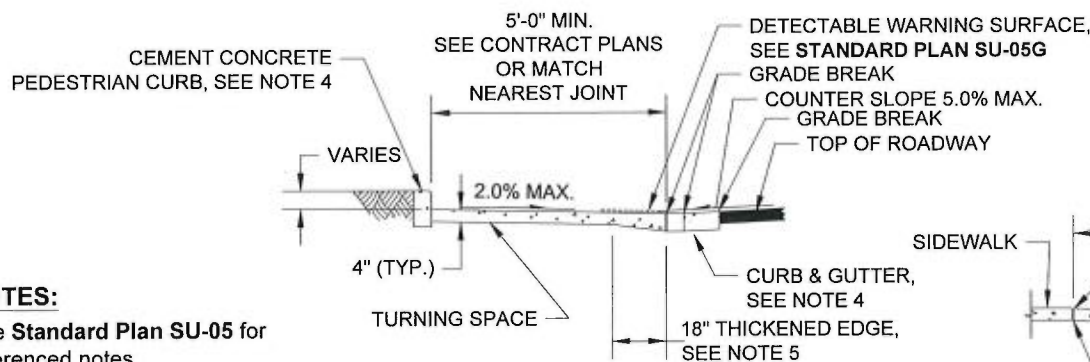
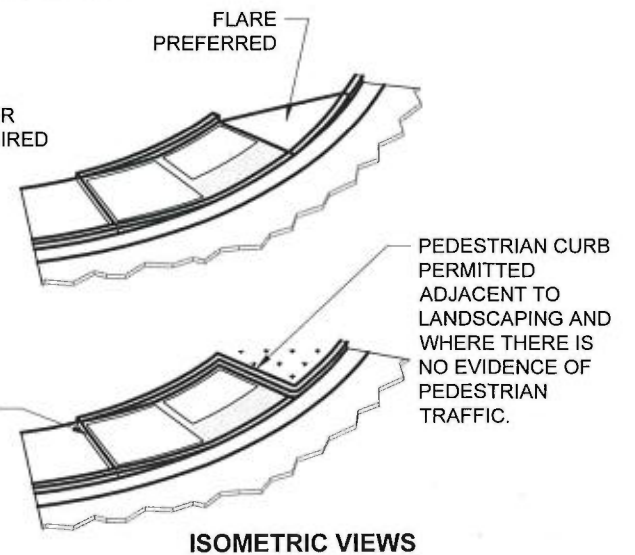
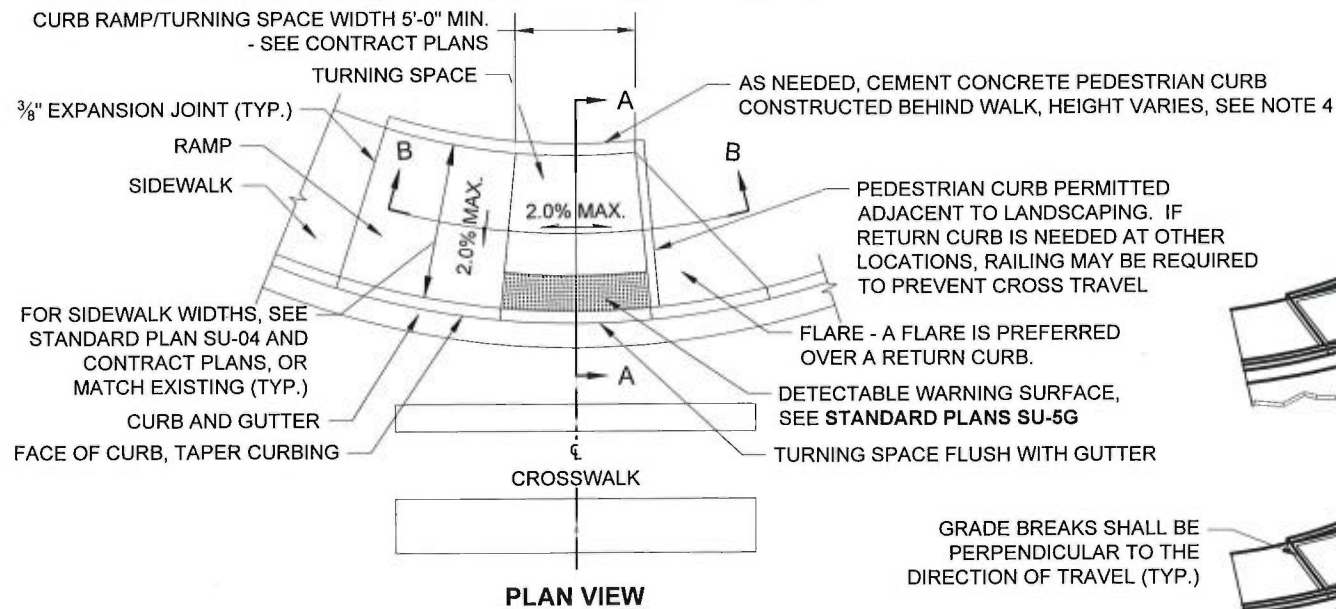
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CITY OF TACOMA

PARALLEL CURB RAMP
TYPE 'A'

STANDARD PLAN NO.

SU-05D

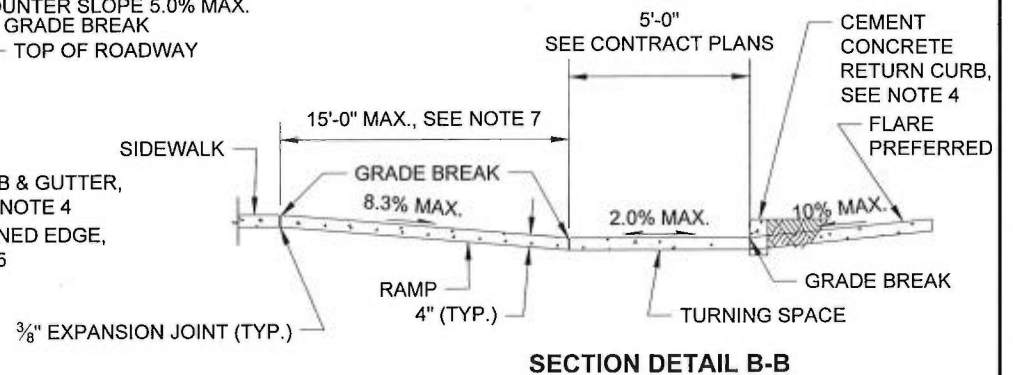


NOTES:

See **Standard Plan SU-05** for
referenced notes

LEGEND

— SLOPE IN EITHER
DIRECTION



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PUBLIC WORKS

ENVIRONMENTAL
SERVICES

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CITY ENGINEER

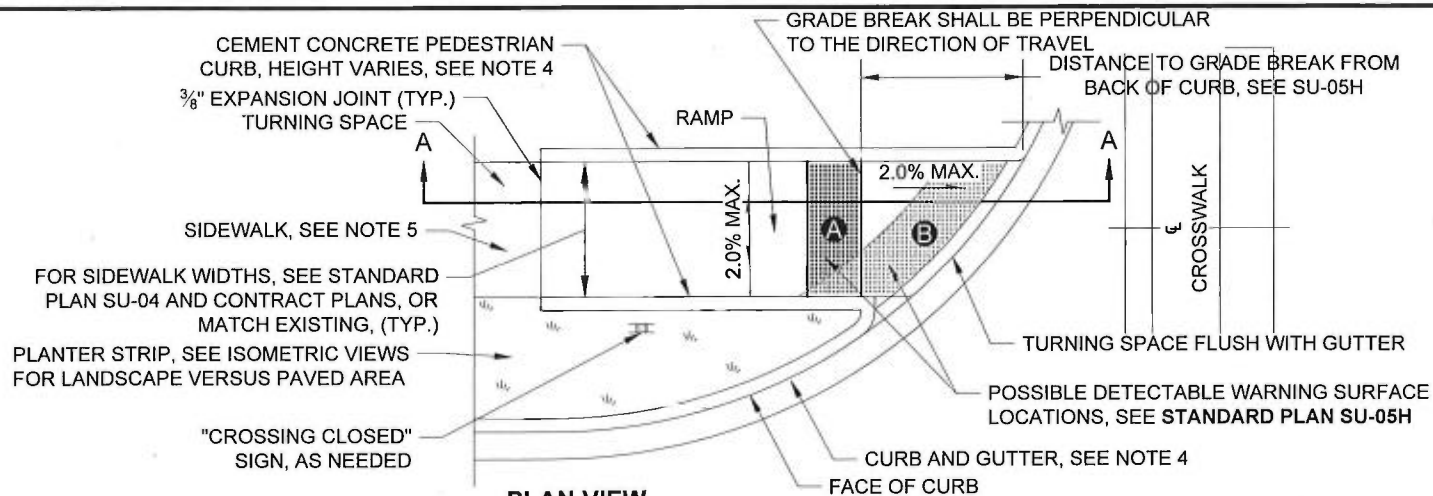
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CITY OF TACOMA

PARALLEL CURB RAMP
TYPE 'B'

STANDARD PLAN NO.

SU-05E



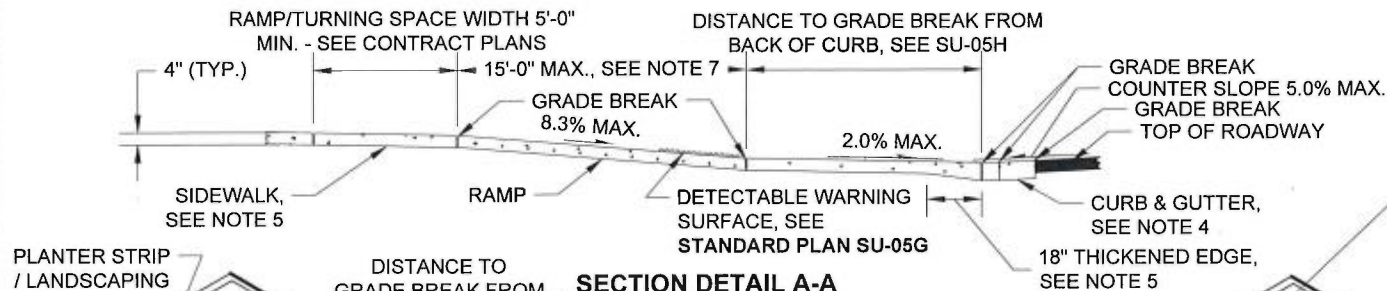
PLAN VIEW

NOTES:

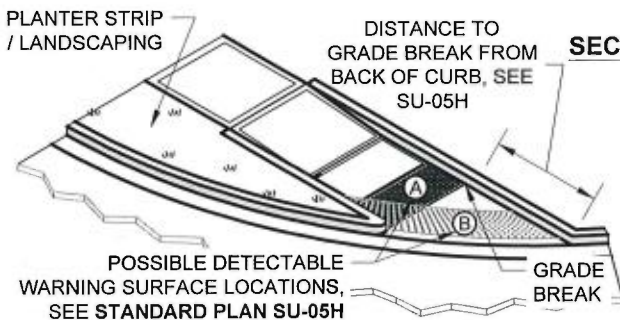
See Standard Plan SU-05 for referenced notes

LEGEND

— SLOPE IN EITHER DIRECTION



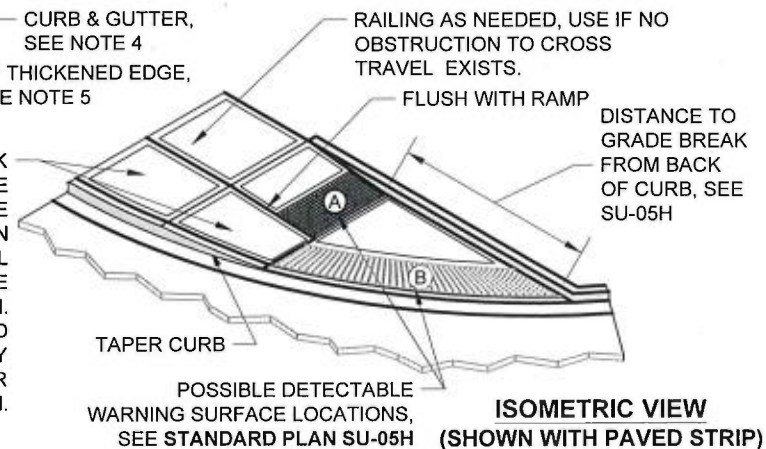
SECTION DETAIL A-A



ISOMETRIC VIEW

(SHOWN WITH PLANTER STRIP/LANDSCAPING)

HARDSCAPED BUFFER SHALL BE DARK GRAY COLORED CEMENT CONCRETE OR HAVE A PATTERN TO INDICATE THE AREA IS OUTSIDE THE PEDESTRIAN ACCESS ROUTE. THE PATTERN SHALL BE SUBMITTED AND APPROVED BY THE CITY, PRIOR TO CONSTRUCTION. ALTERNATE COLORS MAY BE USED WITH PRIOR WRITTEN APPROVAL BY THE CITY'S ADA COORDINATOR PRIOR TO CONSTRUCTION.



ISOMETRIC VIEW

(SHOWN WITH PAVED STRIP)

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CITY ENGINEER

DATE

CITY OF TACOMA

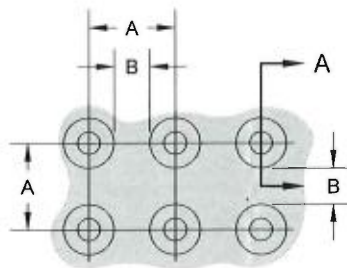
SINGLE DIRECTION CURB RAMP

STANDARD PLAN NO.

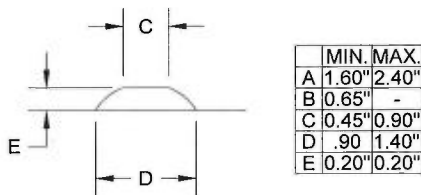
SU-05F

NOTES:

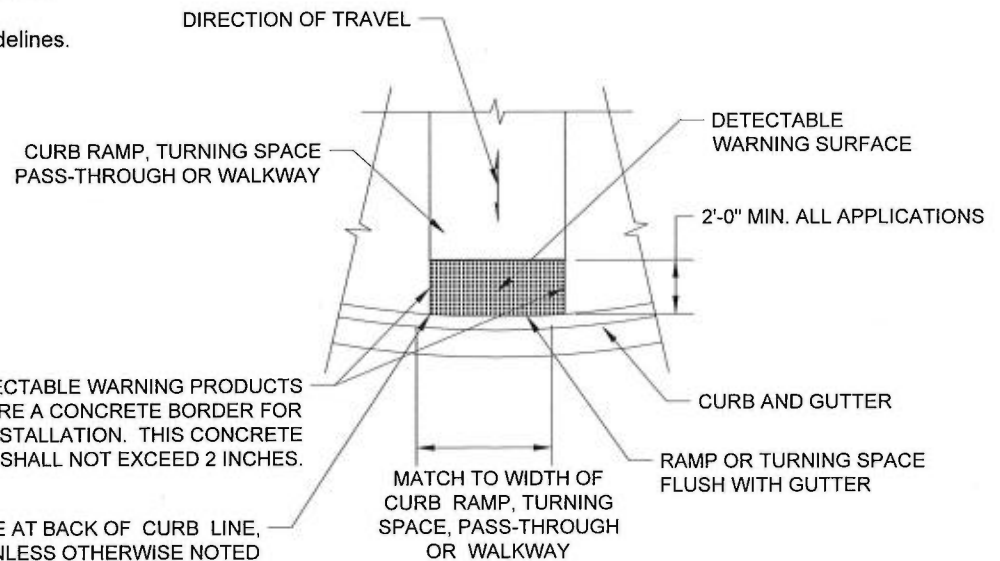
1. The Detectable Warning Surface shall extend the full width of the curb ramp (exclusive of flares) or the turning area.
2. The rows of truncated domes in a Detectable Warning Surface shall be parallel with the direction of wheelchair travel.
3. See **Standard Plans SU-04** through **SU-05F** for sidewalk and curb ramp details.
4. If a curb is not present, place the Detectable Warning Surface at the edge of the pavement.
5. The Detectable Warning Pattern shall be installed using Vanguard ADA Systems, ADA Solutions, or Armor-Tile "Cast in Place Systems," manufactured by Engineering Plastics Inc., or approved equal. Concrete shall be blocked out as required for the installation of the Detectable Warning Pattern material.
6. The Detectable Warning Pattern area shall be yellow and shall match the color of Federal Standard 595a, color number 33538.
7. See **Standard Plan SU-05H** for Detectable Warning Surface placement guidelines.



TRUNCATED DOME DETAILS
TRUNCATED DOME SPACING



SECTION DETAIL A-A
TRUNCATED DOME



DETECTABLE WARNING SURFACE DETAIL

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ENVIRONMENTAL
SERVICES

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TACOMA WATER



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CITY ENGINEER

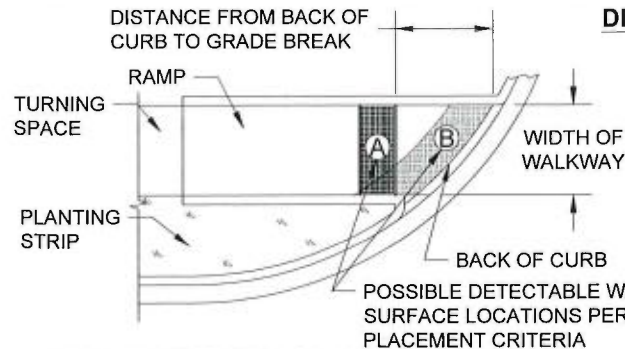
DATE

CITY OF TACOMA

DETECTABLE WARNING SURFACE
DETAILS

STANDARD PLAN NO.

SU-05G

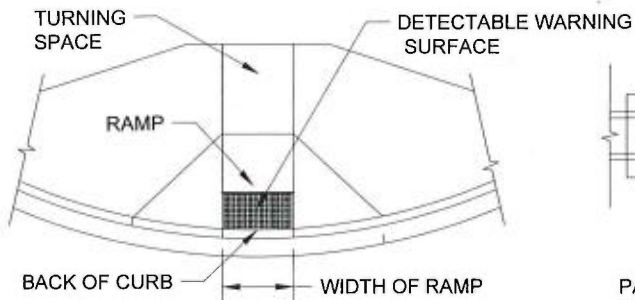


DETECTABLE WARNING PLACEMENT CRITERIA FOR SINGLE DIRECTION CURB RAMP

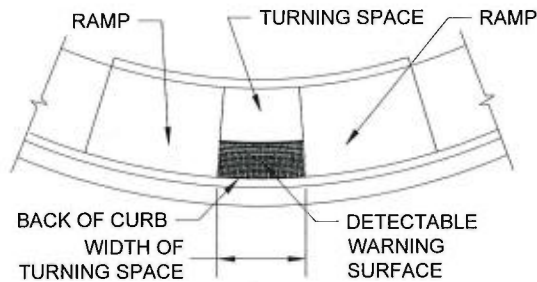
USE LOCATION (A) IF DISTANCE FROM BACK OF CURB TO GRADE BREAK IS LESS THAN OR EQUAL TO 5 FT.

USE LOCATION (B) IF DISTANCE FROM BACK OF CURB TO GRADE BREAK IS GREATER THAN 5 FT.

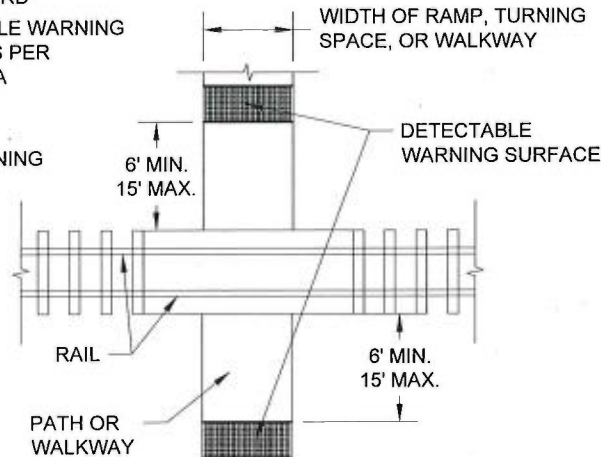
SINGLE DIRECTION CURB RAMP



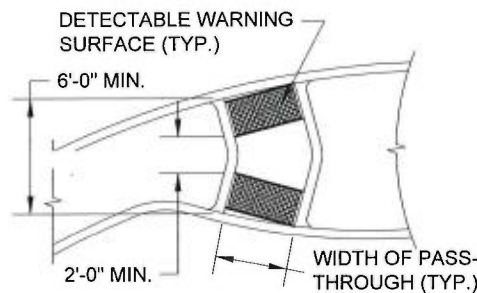
PERPENDICULAR CURB RAMP (SEE SU-05A AND SU-05B)



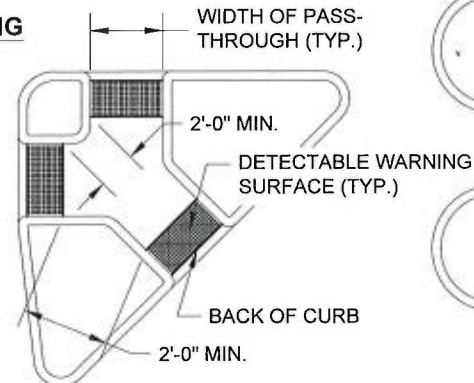
PARALLEL CURB RAMP (SEE SU-05C, SU-05D, AND SU-05E)



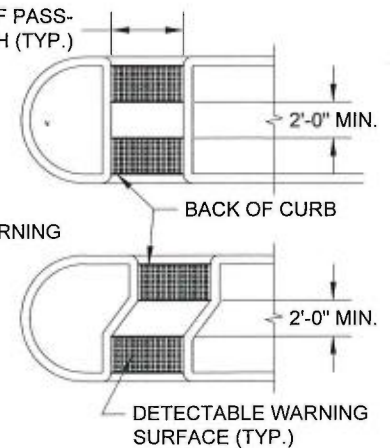
PEDESTRIAN RAILROAD CROSSING



ROUNDBOUT SPLITTER ISLAND



ISLAND PASS-THROUGH



MEDIAN PASS-THROUGH

NOTES:

1. The Detectable Warning Surface shall extend the full width of the curb ramp (exclusive of flares) or the turning space.
2. The edge of the Detectable Warning Surface shall be placed along the back of the curb line unless otherwise noted.
3. The Detectable Warning Surface shall be within 2" (max.) of the edge of the ramp.
4. The rows of truncated domes in the Detectable Warning Surface shall be parallel with the direction of travel.
5. See Standard Plans for sidewalk and curb ramp details.
6. If a curb is not present, place the Detectable Warning Surface at the edge of the pavement.
7. The Detectable Warning Pattern shall be installed using Vanguard ADA Systems, or Armor-Tile "Cast in Place Systems" as manufactured by Engineering Plastics Inc., or approved equal. Concrete shall be blocked out as required for the installation of the Detectable Warning Pattern material. See **Standard Plan SU-05G** for additional information.
8. The Detectable Warning Pattern area shall be yellow and shall match the color of Federal Standard 595a, Color Number 33538 unless otherwise noted.

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SERVICES

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CITY ENGINEER

8/16/16

DATE

CITY OF TACOMA

DETECTABLE WARNING SURFACE
PLACEMENT GUIDELINES

STANDARD PLAN NO.

SU-05H

R303.3.2 DETECTABLE WARNINGS.
DETECTABLE WARNING SURFACES COMPLYING WITH R304 SHALL BE PROVIDED, WHERE A CURB RAMP, LANDING, OR BLENDED TRANSITION CONNECTS TO A STREET.

R304.1.4 SIZE.
DETECTABLE WARNING SURFACES SHALL EXTEND 24 IN. MINIMUM IN THE DIRECTION OF TRAVEL AND THE FULL WIDTH OF THE CURB RAMP (EXCLUSIVE OF FLARES), THE LANDING OR, THE BLENDED TRANSITION.

R304.2.1 PERPENDICULAR CURB RAMPS.
WHERE BOTH ENDS OF THE BOTTOM GRADE BREAK COMPLYING WITH R303.3.4 ARE 5.0 FT OR LESS FROM THE BACK OF CURB, THE DETECTABLE WARNING SHALL BE LOCATED ON THE RAMP SURFACE AT THE BOTTOM GRADE BREAK. WHERE EITHER END OF THE BOTTOM GRADE BREAK IS MORE THAN 5.0 FT FROM THE BACK OF CURB, THE DETECTABLE WARNING SHALL BE LOCATED ON THE LOWER LANDING.

R304.2.3 ALIGNMENT.
THE ROWS OF TRUNCATED DOMES IN A DETECTABLE WARNING SURFACE SHALL BE ALIGNED TO BE PERPENDICULAR OR RADIAL TO THE GRADE BREAK BETWEEN THE RAMP, LANDING, OR BLENDED TRANSITION AND THE STREET.

R303.3.4 GRADE BREAKS.
GRADE BREAKS AT THE TOP AND BOTTOM OF PERPENDICULAR CURB RAMPS SHALL BE PERPENDICULAR TO THE DIRECTION OF RAMP RUN. AT LEAST ONE END OF THE BOTTOM GRADE BREAK SHALL BE AT THE BACK OF CURB. GRADE BREAKS SHALL NOT BE PERMITTED ON THE SURFACE OF CURB RAMPS, BLENDED TRANSITIONS, LANDINGS, AND GUTTER AREAS WITHIN THE PEDESTRIAN ACCESS ROUTE. SURFACE SLOPES THAT MEET THE GRADE BREAKS SHALL BE FLUSH.

CROSSWALK

R303.3.5 COUNTER SLOPES.
THE COUNTER SLOPE OF THE GUTTER OR STREET AT THE FOOT OF A CURB RAMP, LANDING, OR BLENDED TRANSITION SHALL BE 5% MAXIMUM.

R303.2.1.2 CROSS SLOPE.
THE CROSS SLOPE AT INTERSECTIONS SHALL BE 2% MAXIMUM. THE CROSS SLOPE AT MID-BLOCK CROSSING SHALL BE PERMITTED TO BE WARPED TO MEET STREET GRADE.

R303.2.1.4 FLARES.
FLARED SIDES WITH A SLOPE OF 10% MAXIMUM, MEASURED PARALLEL TO THE CURB LINE, SHALL BE PROVIDED WHERE A PEDESTRIAN CIRCULATION PATH CROSSES THE CURB RAMP.

ADVISORY R303.2.1.4 FLARES.
SIDE OF RAMPS MAY BE RETURNED, PROVIDING USEFUL DIRECTIONAL CUES, IF PROTECTED FROM CROSS TRAVEL BY LANDSCAPING, STREET FURNITURE, POLES, OR EQUIPMENT.

NOTE: CITY OF TACOMA PREFERS A RETURN CURB BE USED ONLY ADJACENT TO LANDSCAPING. IF RETURN CURB IS NEEDED AT OTHER LOCATIONS, RAILING MAY BE REQUIRED TO PREVENT CROSS TRAVEL.

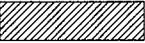
R303.2.1.3 LANDING.
A LANDING (4.0 FEET MINIMUM BY 4.0 FEET MINIMUM, 5.0 FEET BY 5.0 FEET PREFERRED) SHALL BE PROVIDED AT THE TOP OF THE CURB RAMP AND SHALL BE PERMITTED TO OVERLAP OTHER LANDINGS AND CLEAR SPACE. RUNNING AND CROSS SLOPES AT INTERSECTIONS SHALL BE 2% MAXIMUM.

NOTES:

1. CURB RAMPS SHALL BE LOCATED, CONSTRUCTED OR RETROFITTED IN ACCORDANCE WITH ADA STANDARDS FOR ACCESSIBLE DESIGN, 28 CFR, PART 35 AS SUPPLEMENTED BY THE DRAFT PUBLIC WORKS RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG), THE CITY OF TACOMA STANDARD PLANS AND THE CITY'S CURB RAMP INSTALLATION MATRIX.

2. CONDUIT FOR APS EQUIPMENT SHALL BE INSTALLED DURING CURB RAMP CONSTRUCTION AT ALL SIGNALIZED INTERSECTIONS AND AT INTERSECTIONS WHERE SIGNALIZATION IS ANTICIPATED WITHIN THE NEXT 6 YEARS. COORDINATE WITH PUBLIC WORKS - ENGINEERING, TRAFFIC SECTION.

R303.22 REFERENCE TO PROWAG SECTION, 2005 DRAFT RULE (IDENTIFIED AS CURRENT BEST PRACTICE IN ACCESSIBLE PEDESTRIAN DESIGN UNDER FHWA FEDERAL AID (504) REGULATION).

 TAPER CURB

TRANSITION PANEL FROM RAMP TO EXISTING SIDEWALK (WHERE REQUIRED TO MATCH EXISTING SIDEWALK CROSS SLOPE). MAXIMUM GRADES ARE NOT SPECIFIED BY PROWAG. ADJUST LENGTH AS NEEDED TO PROVIDE SMOOTH TRANSITION. IF PROPOSED MATCH LINE LOCATION DOES NOT FALL ON AN EXISTING JOINT IN THE SECTION OF SIDEWALK TO REMAIN, THE EXISTING WALK SHALL BE REMOVED BACK TO THE NEXT JOINT (MINIMUM 2 FEET).

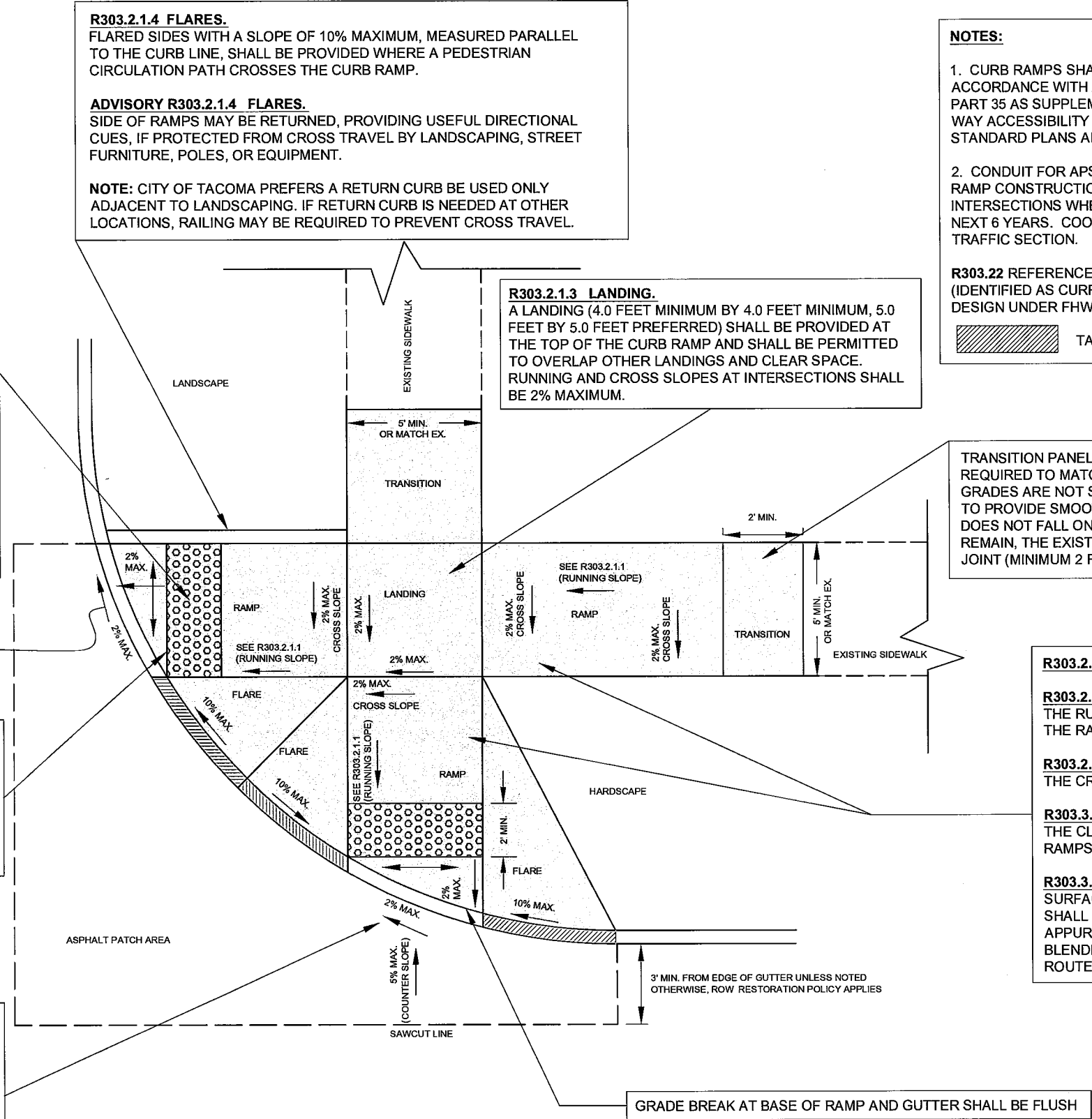
R303.2.1 PERPENDICULAR CURB RAMPS.

R303.2.1.1 RUNNING SLOPE.
THE RUNNING SLOPE SHALL BE 8.3% MAXIMUM BUT SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15.0 FEET.

R303.2.1.2 CROSS SLOPE.
THE CROSS SLOPE SHALL BE 2% MAXIMUM.

R303.3.1 WIDTH.
THE CLEAR WIDTH OF LANDINGS, BLENDED TRANSITIONS, AND CURB RAMPS, EXCLUDING FLARES, SHALL BE 4.0 FEET MINIMUM.

R303.3.3 SURFACES.
SURFACES OF CURB RAMPS, BLENDED TRANSITIONS, AND LANDINGS SHALL COMPLY WITH R301. GRATINGS, ACCESS COVERS, AND OTHER APPURTENANCES SHALL NOT BE LOCATED ON CURB RAMPS, LANDINGS, BLENDED TRANSITIONS AND GUTTERS WITHIN THE PEDESTRIAN ACCESS ROUTE.



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DO NOT INCLUDE IN CONTRACT SPECIFICIATIONS**

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS

**PROWAG GUIDELINES
TYPICAL PERPENDICULAR CURB RAMP
DESIGN STANDARDS**

STANDARD PLAN NO. SU-05I

R303.2.2 PARALLEL CURB RAMPS.

R303.2.2.1 RUNNING SLOPE.

THE RUNNING SLOPE SHALL BE 8.3% MAXIMUM BUT SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15.0 FEET.

R303.2.1.2 CROSS SLOPE.

THE CROSS SLOPE SHALL BE 2% MAXIMUM.

R303.3.1 WIDTH.

THE CLEAR WIDTH OF LANDINGS, BLENDED TRANSITIONS, AND CURB RAMPS, EXCLUDING FLARES, SHALL BE 4.0 FEET MINIMUM.

R303.3.3 SURFACES.

SURFACES OF CURB RAMPS, BLENDED TRANSITIONS, AND LANDINGS SHALL COMPLY WITH R301. GRATINGS, ACCESS COVERS, AND OTHER APPURTENANCES SHALL NOT BE LOCATED ON CURB RAMPS, LANDINGS, BLENDED TRANSITIONS AND GUTTERS WITHIN THE PEDESTRIAN ACCESS ROUTE.

R303.3.2 DETECTABLE WARNINGS.

DETECTABLE WARNING SURFACES COMPLYING WITH R304 SHALL BE PROVIDED, WHERE A CURB RAMP, LANDING, OR BLENDED TRANSITION CONNECTS TO A STREET.

R304.1.4 SIZE.

DETECTABLE WARNING SURFACES SHALL EXTEND 24 IN. MINIMUM IN THE DIRECTION OF TRAVEL AND THE FULL WIDTH OF THE CURB RAMP (EXCLUSIVE OF FLARES), THE LANDING OR, THE BLENDED TRANSITION.

R304.2.3 ALIGNMENT.

THE ROWS OF TRUNCATED DOMES IN A DETECTABLE WARNING SURFACE SHALL BE ALIGNED TO BE PERPENDICULAR OR RADIAL TO THE GRADE BREAK BETWEEN THE RAMP, LANDING, OR BLENDED TRANSITION AND THE STREET.

R303.3.4 GRADE BREAKS.

GRADE BREAKS AT THE TOP AND BOTTOM OF PERPENDICULAR CURB RAMPS SHALL BE PERPENDICULAR TO THE DIRECTION OF RAMP RUN. AT LEAST ONE END OF THE BOTTOM GRADE BREAK SHALL BE AT THE BACK OF CURB. GRADE BREAKS SHALL NOT BE PERMITTED ON THE SURFACE OF CURB RAMPS, BLENDED TRANSITIONS, LANDINGS, AND GUTTER AREAS WITHIN THE PEDESTRIAN ACCESS ROUTE. SURFACE SLOPES THAT MEET THE GRADE BREAKS SHALL BE FLUSH.

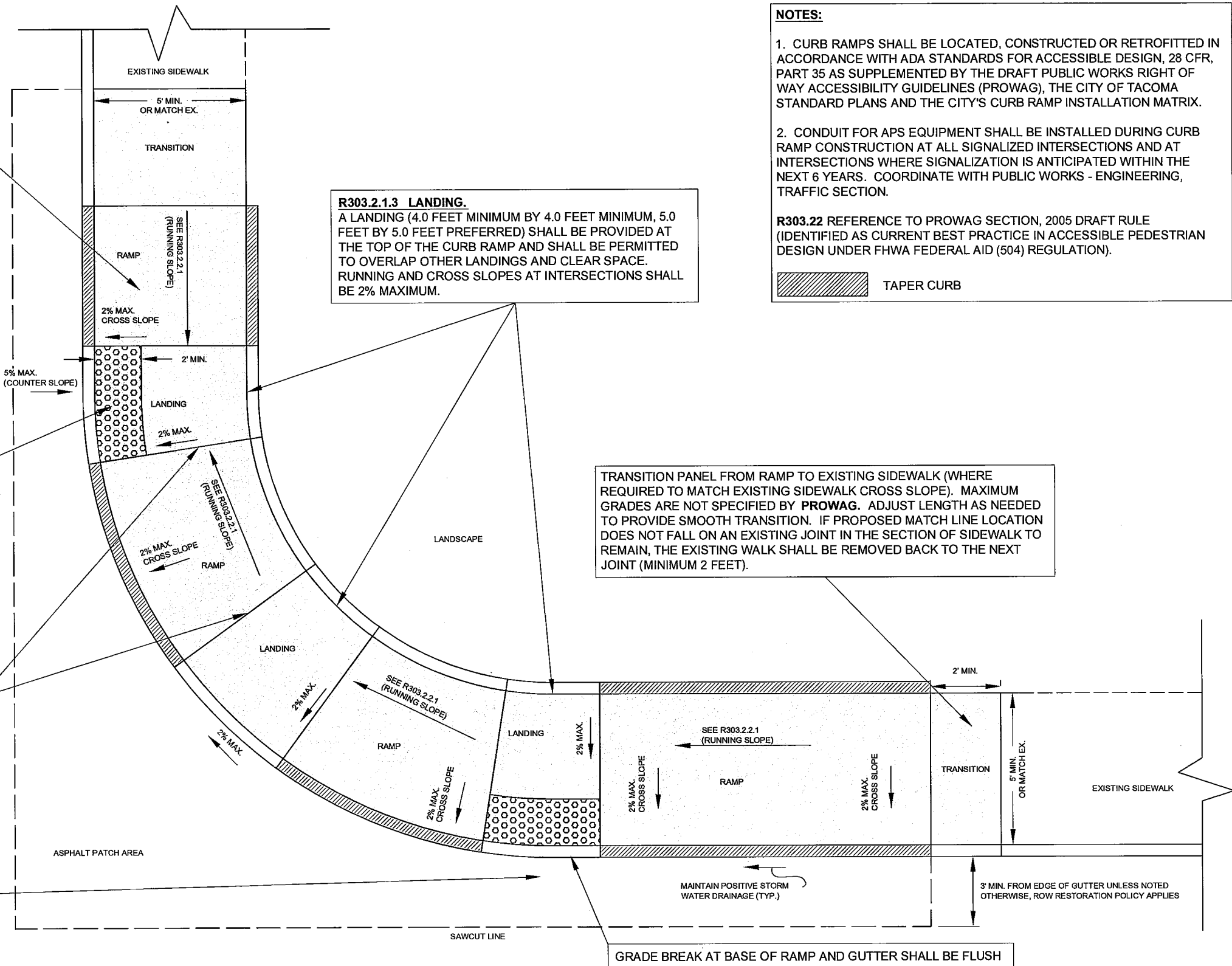
CROSSWALK.

R303.3.5 COUNTER SLOPES.

THE COUNTER SLOPE OF THE GUTTER OR STREET AT THE FOOT OF A CURB RAMP, LANDING, OR BLENDED TRANSITION SHALL BE 5% MAXIMUM.

R303.2.1.2 CROSS SLOPE.

THE CROSS SLOPE AT INTERSECTIONS SHALL BE 2% MAXIMUM. THE CROSS SLOPE AT MID-BLOCK CROSSING SHALL BE PERMITTED TO BE WARPED TO MEET STREET GRADE.



NOTES:

1. CURB RAMPS SHALL BE LOCATED, CONSTRUCTED OR RETROFITTED IN ACCORDANCE WITH ADA STANDARDS FOR ACCESSIBLE DESIGN, 28 CFR, PART 35 AS SUPPLEMENTED BY THE DRAFT PUBLIC WORKS RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG), THE CITY OF TACOMA STANDARD PLANS AND THE CITY'S CURB RAMP INSTALLATION MATRIX.
2. CONDUIT FOR APS EQUIPMENT SHALL BE INSTALLED DURING CURB RAMP CONSTRUCTION AT ALL SIGNALIZED INTERSECTIONS AND AT INTERSECTIONS WHERE SIGNALIZATION IS ANTICIPATED WITHIN THE NEXT 6 YEARS. COORDINATE WITH PUBLIC WORKS - ENGINEERING, TRAFFIC SECTION.

R303.22 REFERENCE TO PROWAG SECTION, 2005 DRAFT RULE (IDENTIFIED AS CURRENT BEST PRACTICE IN ACCESSIBLE PEDESTRIAN DESIGN UNDER FHWA FEDERAL AID (504) REGULATION).

 TAPER CURB

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**CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS**

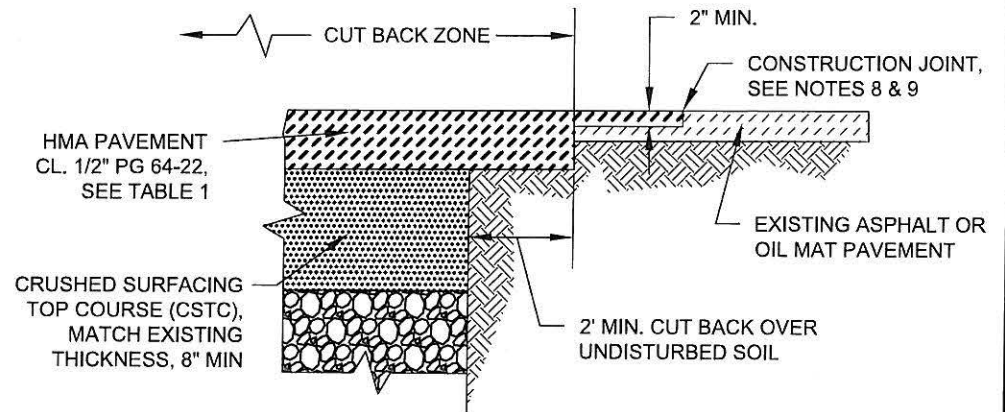
**PROWAG GUIDELINES
TYPICAL PARALLEL CURB RAMP
DESIGN STANDARDS**
STANDARD PLAN NO. SU-05J

NOTES

1. **All pavement restoration work shall also meet the requirements of the City of Tacoma's Right of Way Restoration Policy. See Standard Plan SU-15B for any streets exempt from this policy.**
2. Temporary Surface Restoration:
 Arterials, industrial areas and/or roads with bus traffic: Temporary patches shall be compacted and leveled to a minimum of 3-inches of hot-mix asphalt (HMA).
 Residential and alleys: Temporary patches shall be compacted and leveled to a minimum of 2-inches of either HMA or cold-mix asphalt. Temporary patches between October 1st and March 31st shall be made with HMA unless otherwise approved.
3. All permanent final patches shall be rectangular in shape and constructed parallel and perpendicular to the road centerline.
4. Where existing pavement defects are in close proximity to the new cut, the inspector may require additional pavement removal to eliminate the pavement defect.
5. The final cut edge of paved surfaces shall be smooth and straight, consistent with grinding or saw cutting devices. No jagged, broken or undermined edges are allowed. Cutting wheel run-out beyond the limits of the opening shall be filled in accordance with WSDOT Standard Specification 5-05.3(8)B for cement concrete surfaces and 5-04.3(5)C for asphalt concrete surfaces.
6. Final compaction of HMA shall be 91% of maximum density.
Isolated patches: Minimum 1 test per patch up to 150 square feet, and 1 test required every additional 300 square feet, thereafter.
Trench patches: 1 test every 150 linear feet of trench with a minimum of 2 tests per trench.
 Testing shall be performed by a certified independent testing laboratory or certified tester, as approved by the City's Construction Division. Tests shall be completed and reports identifying the project number submitted to the City Construction Division within 48 hours of test.
7. All joints between the new and original asphalt pavement shall be sealed with hot asphalt or asphalt emulsion and covered with dry paving sand before the asphalt solidifies. Existing surfaces shall be prepared in accordance with WSDOT Standard Specification 5-04.3(5)A prior to placing any new pavement surfaces.

8. Longitudinal construction joints shall only be located at the center or edge of affected lanes.
 Streets and courts 20 feet or less in width and all alleys are considered one-lane streets. Non-arterial streets and courts greater than 20 feet in width with no traffic channelization are considered two-lane streets with one-lane either side of the centerline of the street.
 Non-arterial streets greater than 32 feet in width with no traffic channelization may be considered three lane streets upon prior approval from the City Engineer.
9. Transverse construction joints terminate at the edge of the 2' cut back.
10. HMA pavement shall not be placed over CDF until approved by the City.

TABLE 1 PAVEMENT REPLACEMENT DEPTH IN CUT BACK ZONE		
	MIN.	MAX.
ARTERIALS, INDUSTRIAL AREAS & ROADS WITH BUS TRAFFIC	MATCH EXISTING +1", OR 4", WHICHEVER IS GREATER	6"
RESIDENTIALS AND ALLEYS	MATCH EXISTING +1", OR 3", WHICHEVER IS GREATER	4"



CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS

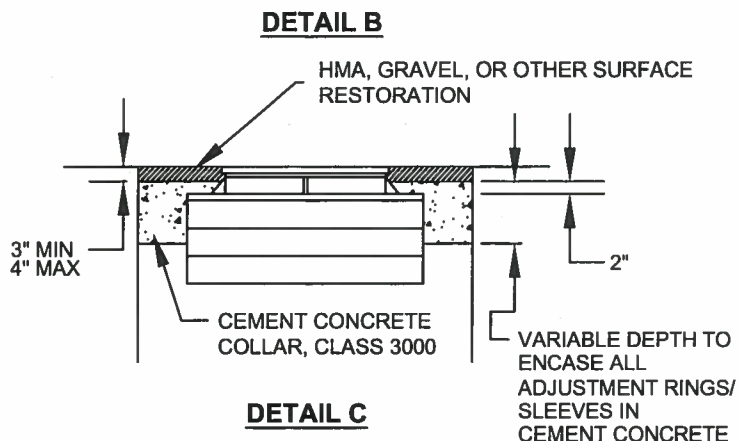
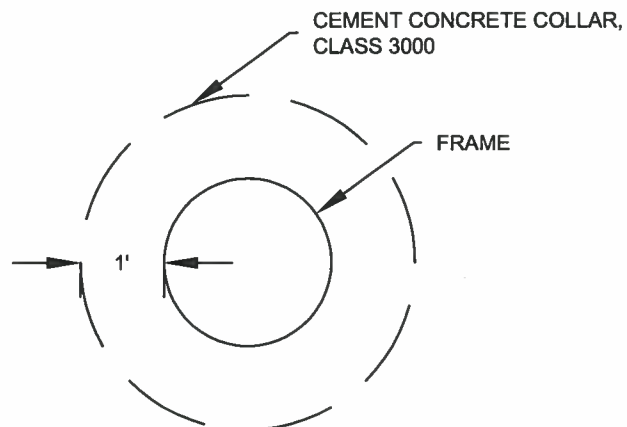
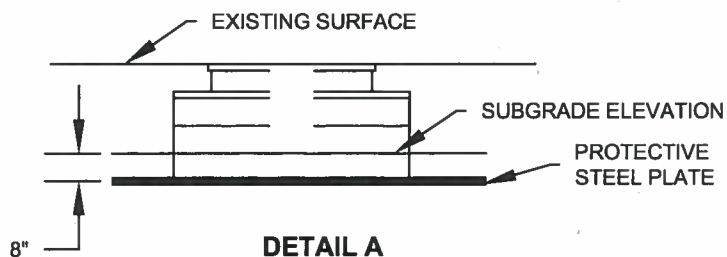
APPROVED FOR PUBLICATION

James Ramsey
CITY ENGINEER

12 Jun 2009
DATE

TYPICAL PAVEMENT RESTORATION
FOR ASPHALT CONCRETE/OIL MAT
PAVEMENT

STANDARD PLAN NO. SU-15A



PROGRESSION OF WORK

PRIOR TO EXCAVATING OR RESURFACING:

Contractor shall:
Remove frame and risers to a depth 8-inches below subgrade.
Install steel protective plate in accordance with Detail A.
Reference the location of the utility structure.

CONSTRUCTION OF SURFACING:

Gravel surfacing:
Install base materials and gravel over protective steel plate.

Asphalt surfacing:
Install base materials and asphalt over protective steel plate.

Concrete surfacing:
Adjust frame and grate to final grade prior to placing concrete surfacing.

UPON COMPLETION OF SURFACING:

The asphalt concrete pavement or gravel surfacing shall be removed in a neat circle in accordance with Detail B.

The location of the asphalt or gravel removal shall be based upon the reference location established by the Contractor.

Crushed surfacing and base materials shall be removed and disposed of to allow the removal of the steel protective plate.

The structure shall be adjusted to finish grade utilizing the same methods of construction as specified for new construction in Section 7-05.

For hot mix asphalt, the area shall then be backfilled with Class 3000 cement concrete to an elevation of 3 to 4 inches below the finished pavement surface. 24-hours after placing the concrete, HMA pavement CL. 3/8" PG 64-22 shall be placed in accordance with Standard Plan No. SU-15.

For non-paved surfaces, the area shall be backfilled with Class 3000 cement concrete to an elevation of 3 to 4 inches below the top of the casting and then backfilled with crushed surfacing top course and compacted.

NOTE:

All general provisions, construction and warranty requirements of the Right of Way Restoration Policy will be followed.

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS

APPROVED FOR PUBLICATION

CITY ENGINEER

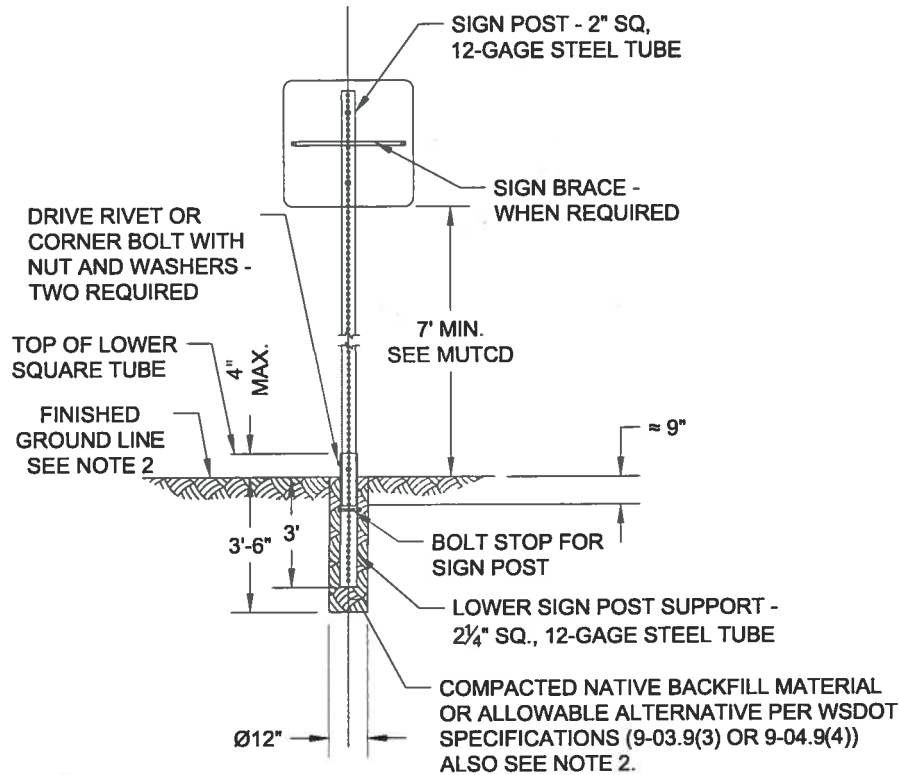
DATE

UTILITY ADJUSTMENT

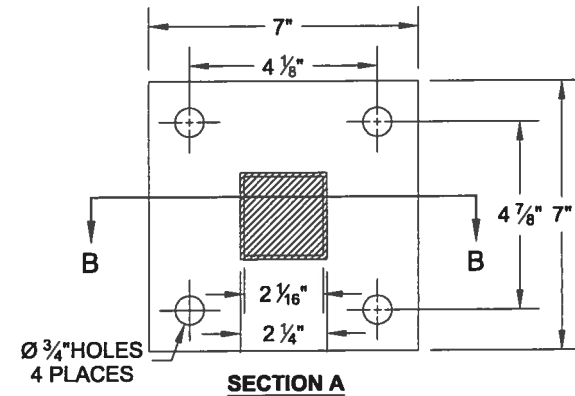
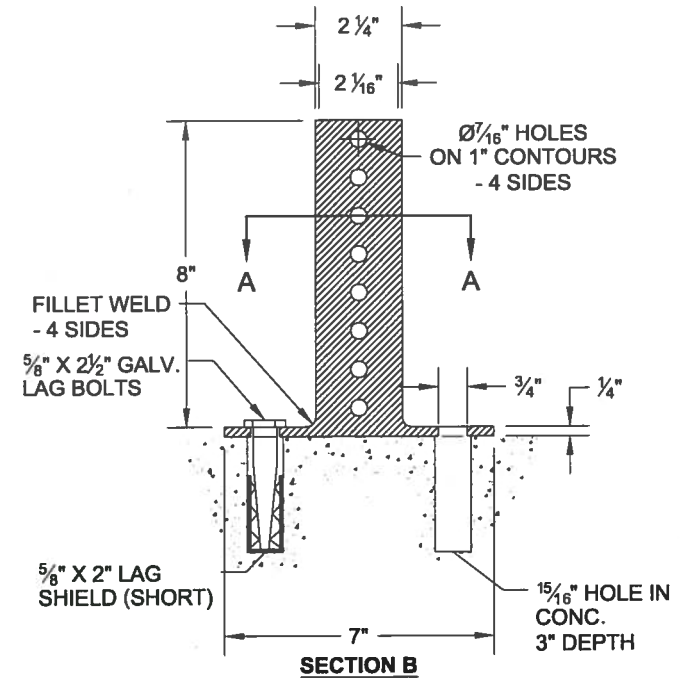
STANDARD PLAN NO. SU-25

NOTES:

1. Surface mounting of sign posts, especially within traffic islands or medians, is only allowable with special authorization from the city's traffic engineering group, (Exception: Surface mounting of flexible post object markers within islands or medians is permitted).
2. If finished ground line is a hard surface, then compacted native backfill material shall be concrete with the top of foundation being smooth, dense, and uniform to finished ground line.



**SIGN SUPPORT DETAIL
FOR STEEL SIGN POST**



**BASE PLATE DETAIL FOR
STEEL SIGN POST SURFACE MOUNTING
(SEE NOTE 1)**

DCS
PUBLIC WORKS
NA
TACOMA POWER

REVIEWED BY

ENVIRONMENTAL SERVICES
NA
TACOMA WATER



APPROVED FOR PUBLICATION

CITY ENGINEER

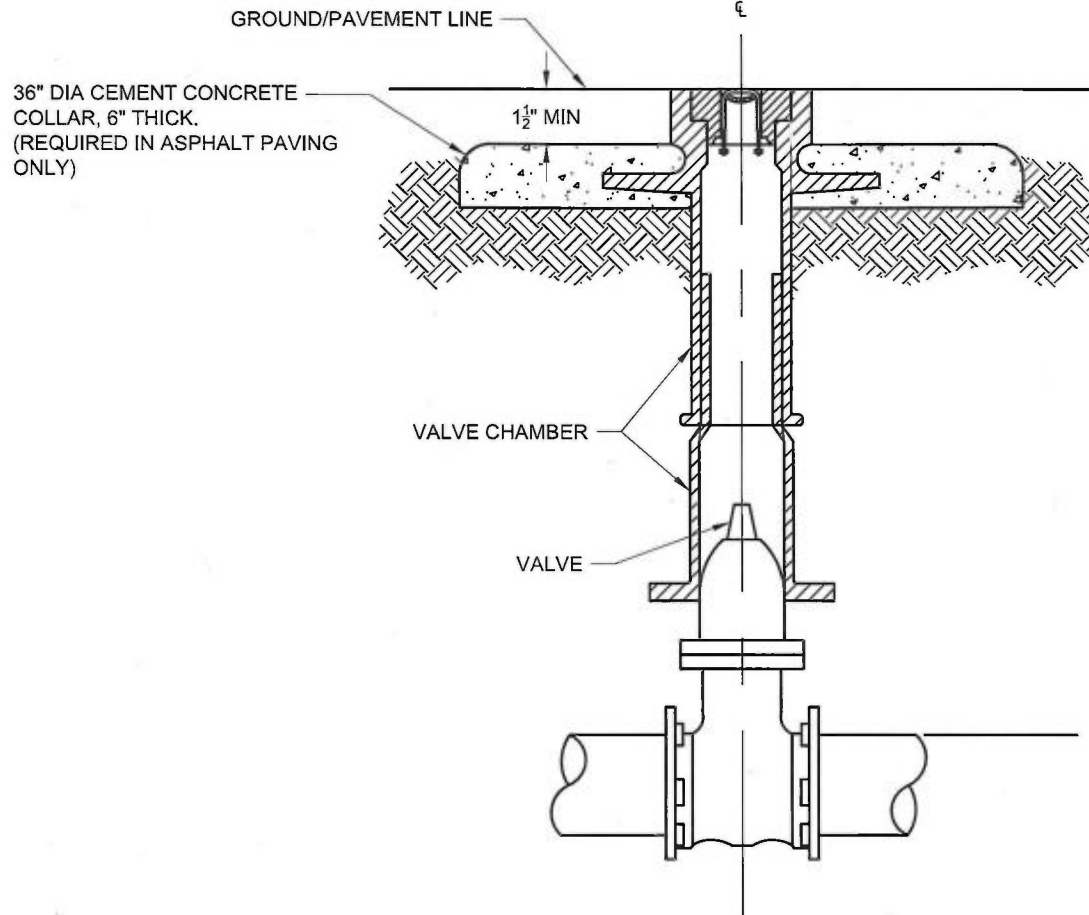
DATE

CITY OF TACOMA

SIGN POST
INSTALLATION

STANDARD PLAN NO.

SU-34



NOTES:

Class 3000 cement concrete shall be placed, 1 1/2" min, below the finished pavement surface.

24-hours after placing the cement collar, HMA Class 3/8" PG 64-22 shall be placed in accordance with Standard Plan SU-15.

If the valve chamber being adjusted belongs to Tacoma Water, the Contractor shall contact Tacoma Water, Operations, at 253-502-8742 for final inspection.

REVIEWED BY

DCS
PUBLIC WORKS

ENVIRONMENTAL
SERVICES

N/A
TACOMA POWER

G.W.
TACOMA WATER



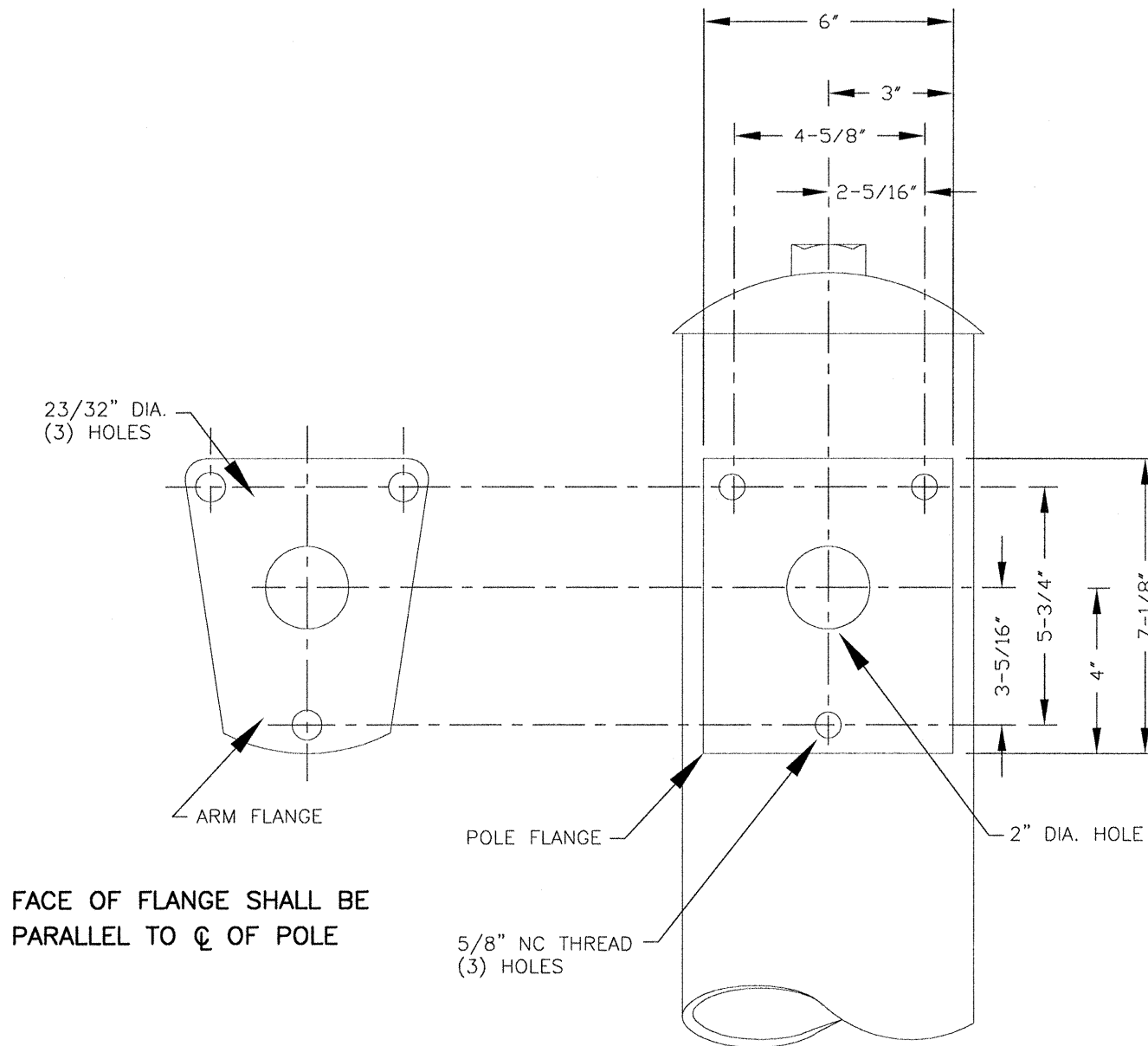
APPROVED FOR PUBLICATION

[Signature]
CITY ENGINEER

5/31/12
DATE

CITY OF TACOMA
VALVE CHAMBER
COLLAR DETAIL

STANDARD PLAN NO. SU-37



CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS

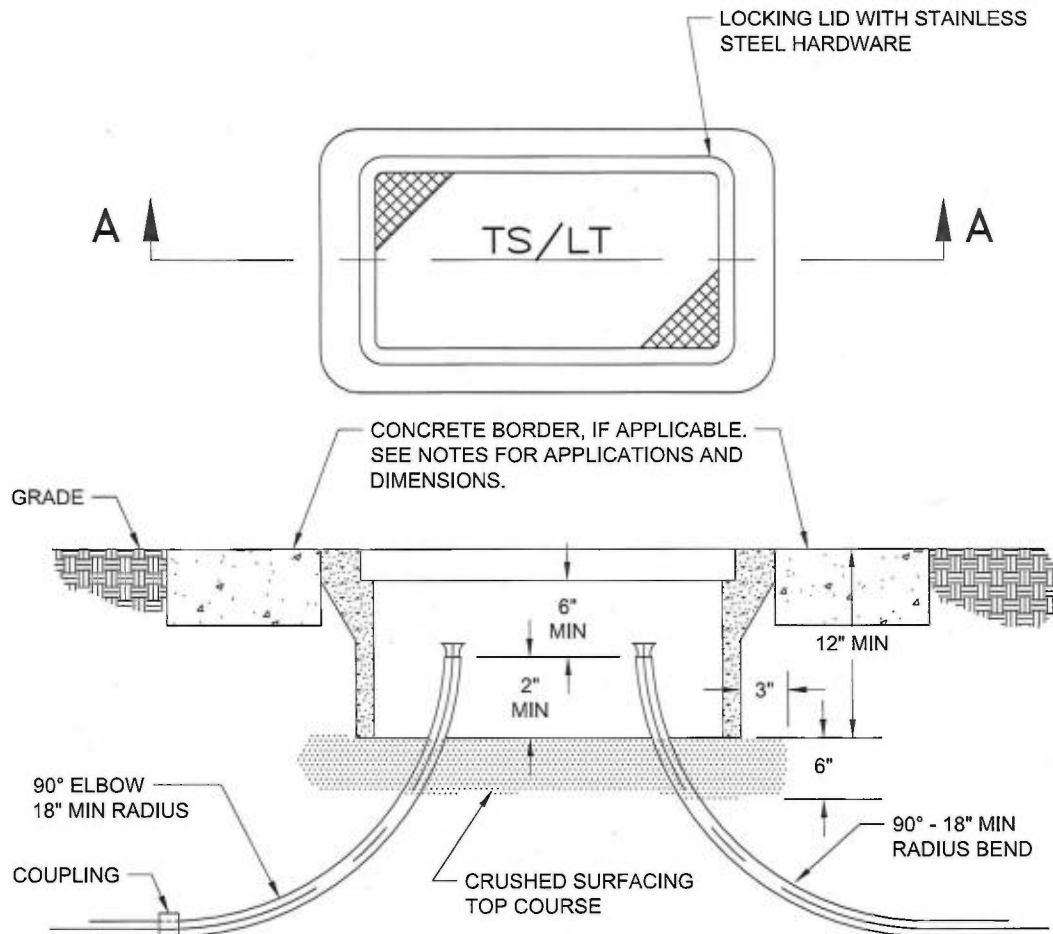
APPROVED FOR PUBLICATION

CITY ENGINEER

DATE 2/4/03

STREETLIGHT
MAST ARM MOUNTING
FLANGE DETAIL

STANDARD PLAN NO. TS-07



SECTION A-A

NOTES:

1. Junction boxes shall be concrete and in conformance with WSDOT's Type 1 and 2 Locking Lid Standard Duty Junction Box. Box and lid will be load rated for traffic and shall have a nonskid surface. The lid shall be marked "TS", "LT", or other designation as called for on the proposal.
2. All junction boxes containing interconnect cable will be Type 2 or larger.
3. Boxes shall be set on a base of 6 inch crushed surfacing top course for drainage.
4. Metal lids will be grounded. Ground conductor shall be a minimum 24 inches long.
5. Care shall be taken to place junction boxes outside of areas heavily used by pedestrians, especially near crosswalks and corners.
6. Junction boxes shall not be placed in curb ramps or areas subject to vehicular traffic.
7. Adjacent junction boxes will be separated by a minimum of 3 inches.
8. Install pulling bells or bushings on conduit ends.

CONCRETE BORDER APPLICATION AND DIMENSION:

1. For junction boxes bordered by less than 12 inches wide of concrete or asphalt section, a concrete border is required.
2. Junction boxes located in asphalt will be secured on all sides with a minimum 12 inch wide by 6 inch deep concrete section.
3. Junction boxes located in concrete will be secured on all sides with a minimum 12 inch wide concrete section. The depth of the concrete shall meet the depth of the adjacent concrete. The concrete will be finished in the same manner as the adjacent concrete, where applicable.
4. Junction boxes located in a planter strip, landscaped area, or other non-hardened surface will be secured on all sides with a minimum 6 inch wide by 12 inch deep concrete section flush with the top of the junction box.

DCS

PUBLIC WORKS

N/A

TACOMA POWER

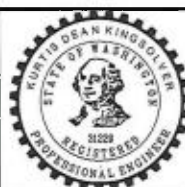
REVIEWED BY

GWS

ENVIRONMENTAL
SERVICES

N/A

TACOMA WATER



APPROVED FOR PUBLICATION

[Signature]

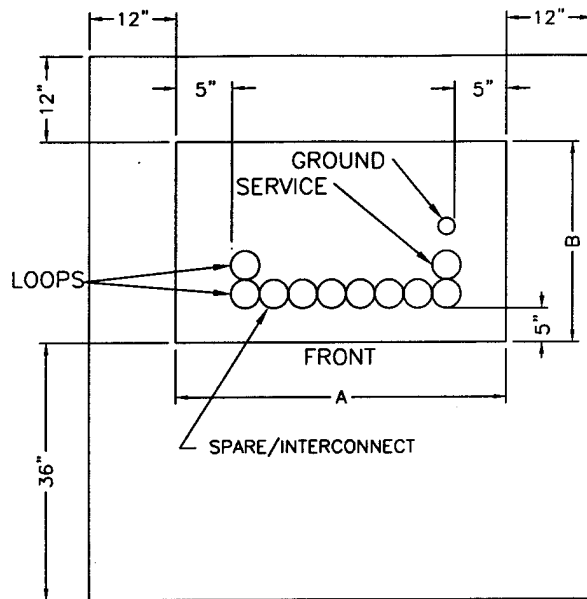
CITY ENGINEER

5/31/17

DATE

CITY OF TACOMA
JUNCTION BOX
INSTALLATION
TYPICAL

STANDARD PLAN NO. TS-08



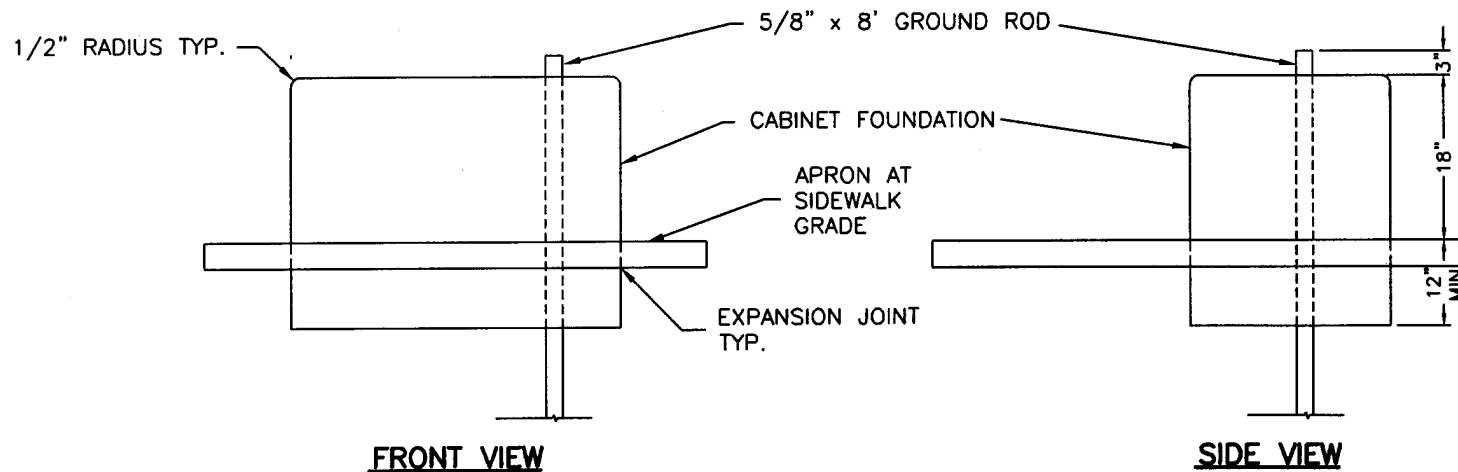
PLAN VIEW

M-CABINET FOUNDATION
A=32", B=19"

P-CABINET FOUNDATION
A=46", B=28"

NOTES:

1. CONDUIT SHALL HAVE MINIMUM 18" RADIUS BENDS.
2. CONDUITS SHALL EXTEND 1" ABOVE TOP OF BASE. INSTALL PULLING BELLS ON CONDUIT ENDS.
3. CONDUITS TO BE INSTALLED PER ENGINEER'S INSTRUCTIONS.
4. 15 FEET OF SLACK CABLE SHALL BE PROVIDED AT THE CONTROLLER END OF ALL CABLES TERMINATING IN THE CONTROLLER CABINET.
5. CABINET ANCHORS SHALL BE EXPANSION ANCHORS (5/8" x 4-1/2").
6. 4" THICK CONCRETE APRON SHALL EXTEND 12" AROUND REAR AND SIDES AND 36" IN FRONT. INSTALL EXPANSION JOINT BETWEEN FOUNDATION AND APRON.



FRONT VIEW

SIDE VIEW

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS

APPROVED FOR PUBLICATION

CITY ENGINEER

DATE

FOUNDATION & APRON FOR
"M" AND "P"
CONTROLLER CABINETS
STANDARD PLAN NO. TS-10

APPENDIX B

TRAFFIC CONTROL HANDBOOK

TRAFFIC CONTROL HANDBOOK

**MUST MAINTAIN
PEDESTRIAN AND
DISABILITY ACCESS AT
ALL TIMES**



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INTRODUCTION (READ FIRST)

Traffic Control Handbook instructions
Permits / General Rules
Special Traffic Requirements

SAMPLE SETUP DRAWINGS

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Single Lane Non-Arterial with A Flagger
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Two Lane Road with Center Closure
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Right Lane Closure
Right Lane Closure at Intersection
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One Way Street Multi-Lane Closure
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Lane Closure at Intersection
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PEDESTRIANS & MISCELLANEOUS

Traffic Control Recommendations for Truck Crossings
Traffic Control for Portable Dumpsters
Traffic Control for Moving Van
Bypass Walkway for Pedestrians
Bypass Ramps for Pedestrians
Curb Ramp Pedestrian Control
Sidewalk Closures
Sidewalk Closure with Parking Closure

SURVEY CREWS

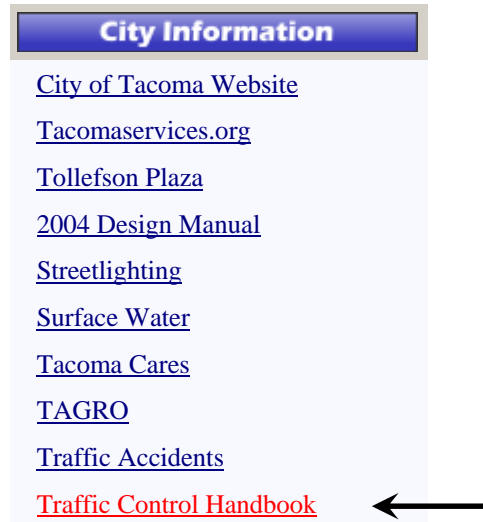
Survey Two Lane Arterial Intersection
Survey Two Lane Arterial Mid Block
Survey Multi-Lane Arterial

CREATE YOUR OWN PLAN

Blank Two Lane Road
Blank Two Lane Road with Center Turn Lane
Blank Two Lane Road with Two Intersections
Blank Two Lane Road with Two Intersections and Parking
Blank Two Lane Road with Four Intersections and Parking
Blank Four Lane Road with Two Intersections
Blank Four Lane Road with Two Intersections and Parking
Blank Five Lane Road

TRAFFIC CONTROL PLAN INSTRUCTIONS

- 1) To create a traffic control plan, go to www.govME.com
- 2) At the bottom of the page, under “City Information” choose “[Traffic Control Handbook](#)”



The City of Tacoma Traffic Control Handbook will open up in a new screen.

- 3) Read “**INTRODUCTION & SPECIAL REQUIREMENTS**” Chapter. Pay particular attention to the sections regarding [*Pedestrian and Disability access.*](#)
- 4) Choose a plan closest to the type of traffic control you need.
 - You may need to alter an existing plan or use multiple plans
- 5) Print out the traffic control plan that you need.
- 6) On the map, identify street names and addresses of work.
- 7) Draw site specific details (work area, location of signs, cones, etc.).
- 8) Add Contractor name and contact information.
- 9) Specify type of work at the top of the page
- 10) List dates of work and desired work hours.
- 11) Contact a Permit Specialist when you are done filling in your Traffic Control Plan.
- 12) Write the permit number in the top right corner of the sheet (when obtained from the Permit Specialist).
- 13) The Traffic Control Plan is not valid until permit is acquired and paid for.
- 14) You must keep a copy of the Traffic Control Plan on your job site for Inspectors and Road Use Compliance Officers to review. Prime contractors will be responsible for any subcontractor's traffic control unless sub goes through the above process.



City of Tacoma Public Works Department

INTRODUCTION

This manual is intended for use by any person, firm or corporation, public or private, when involved in construction, maintenance or any activity that alters the normal flow of traffic, vehicular or pedestrian, on any City right-of-way.

This manual shall be used in conjunction with Part VI of The Manual on Uniform Traffic Control Devices (MUTCD) for the installation of temporary traffic control and the Access Board's Guidelines for Accessible Public Rights -of-Way (2002), (www.access-board.gov/),

Authority to establish local rules regarding channelization and traffic control is permitted by Washington Administrative Code (WAC) 308.330.265.

Unless specifically addressed in this manual, when the term "should" is used in the MUTCD to describe a condition or method for traffic control, it means that if that suggestion is not used an equally effective method will be used. It does not eliminate the responsibility to address the situation.

This manual does not prohibit the use of additional traffic control or warning devices as long as the minimum conditions are met.

For additional information, please call the Engineering Division at (253) 591-5500.

PERMITS

A permit must first be obtained from the Public Works Department by any person, firm or corporation working in City right-of-way that alters the normal flow of traffic or makes any public place dangerous.

Provisions for obtaining a permit are outlined in Tacoma Municipal Code Chapter 10.22.

All applications for permits must have a comprehensive traffic control plan attached for review by the Traffic Engineer. Permits will not be issued unless the Traffic Engineer has approved the traffic control plan.

MUNICIPAL AGENCIES

Municipal agencies and Utilities are not required to obtain a permit for routine maintenance and repairs, but must notify the Traffic Engineer a minimum of 72 hours in advance if the following conditions apply:

1. Closing any street (see attached street closure requirements).
2. Altering or detouring traffic during commute hours on arterial streets (7 a.m. – 9 a.m. and 4 p.m. – 6 p.m.).
3. The activity or obstruction will be in place for more than 8 hours.
4. The activity or obstruction is during the hours of darkness.
5. The activity reduces traffic on arterial streets to less than one lane in each direction.

GENERAL RULES

The following list of rules must be followed while involved in construction, maintenance or other activity in City right of way unless specifically addressed by the Traffic Engineer.

1. All traffic control devices must meet the requirements established by the Manual on Uniform Traffic Control Devices.
2. No activity will be placed in such a way as to detour, slow or alter traffic flow during peak commute hours. These times are generally from 7 a.m.– 9 a.m. and 3:30 p.m. – 6 p.m. The Traffic Engineer may allow an exception with prior approval.
3. An approved traffic control plan must be on-site and accessible for inspection at all times by law enforcement or inspectors.
4. Traffic control plans and activities must include the following components:
 - a. Advanced Warning Area: Signs and other devices inform drivers of what to expect.
 - b. Transition Area: Channelization devices move traffic from the normal flow to the desired path.
 - c. Activity Area: Area where the work takes place.
 - d. Buffer Space: Area used to separate traffic from the work activity area and provides recovery space for an errant vehicle.
 - e. Termination Area: Area used to return traffic to the normal path.
5. **Pedestrian and disability access** must be maintained throughout the period of time construction is underway. This does not just apply to the final product, but accessibility must be maintained during the actual construction. Safe, clearly marked routes must be maintained through or around the construction activity at all times. The use of temporary walkways with width, slope, and cross-slope compliant to the maximum extent feasible shall be incorporated on the job site. Surfaces must be firm, stable, and slip resistant. Channeling and barricading must be used to separate pedestrians from traffic. Adequate barricading must be addressed to prevent visually impaired pedestrians from entering work zones. Alternate pedestrian circulation routes with appropriate signage that can be accessed by people who use mobility aids (wheelchairs, walkers, scooters, etc.) The alternate circulation path shall have a minimum width of 5 feet and parallel the disrupted pedestrian access route when practicable. Barricades and channelizing devices shall be continuous, stable, non-flexible, and shall consist of a wall, fence, or enclosure specified in section 6F of the MUTCD. A solid toe rail should be attached such that the bottom edge is 6 inches maximum above the walkway surface. The top rail shall be parallel to the toe rail and shall be located 36 inches minimum and 42 inches maximum above the walkway surface. If drums, cones, or tubular markers are used to channelize pedestrians, they shall be located such that there are no gaps between the bases of the devices in order to create a continuous bottom, and the height of each individual device shall be no less than 36 inches.
6. 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.
7. A flagger cannot be used to direct traffic 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.
8. In some situations, Signal modifications may be used to support the traffic control plan. The traffic Signal Shop shall make all modifications, and all modifications must be approved by the Traffic Engineer.
9. A uniformed police officer is required to direct traffic through a signalized intersection against the signal indications.
10. Police officers may also be required during activities for traffic calming if speeds are high, pedestrian or vehicular traffic volume is extremely high, or during emergencies.

11. To minimize the disruption to access to adjacent properties, and to Pierce Transit operations, the lane closure area shall be limited to that area of active work and necessary for appropriate lane closure tapers. The Contractor shall stage work to maintain access to and egress from all properties at all times. An **approved traffic control plan and permit shall** be posted on the job site for review by City officials. Construction Inspectors shall ensure the approved traffic control plan is on site at all times. Any approved Traffic control plans the Contractor doesn't follow are in violation of the Standard Specifications which are included in the contract. It is the inspector's job to have them comply or Stop work. Jobs having permits only and not following the approved Traffic Control plan is a violation of Tacoma Municipal Code 10.22.080. The work can be stopped or a violation infraction can be imposed in an amount not exceeding \$500.00.
12. When parking lanes are closed due to construction, "no parking" portables will be installed at least 48 hours in advance of the closure in unrestricted areas and 24 hours in advance in time restricted areas. The message on the portables shall establish the date and hours for no parking.
13. During emergencies where life, property or public safety is in danger, conditions listed may be changed. Traffic control will be addressed along with the initial response. (See attached page for emergency contact numbers.)
14. The Traffic Engineer may allow reduced speed limits in construction area zones. Request for speed reduction must be included in the traffic control plan.
15. All signs and cones shall be removed from the right-of-way when traffic control is not in effect.
16. The contractor may be required to discontinue work if possible conflict exists with special events such as parades, sporting events, miscellaneous rallies, and large public meetings. Information concerning such events can usually be obtained from the City Clerks Office, tel. (253) 591-5171.
17. Maintenance of 2-way traffic on arterial streets at all times except on one-way streets. Additional width for facilitating traffic flow may be obtained by prohibiting on-street parking adjacent to the work zone.
18. No work shall be scheduled on streets or sidewalks within the City of Tacoma Business Districts from Thanksgiving Day through New Year's Day.
19. All traffic control devices used at night, particularly signs, barricades and channelizing devices, must have Type C steady burn lights. Requests to reduce the number of lights used on channelizing devices must be specifically detailed on the approved traffic control plan.

Failure to comply with the provisions of this manual is a traffic infraction and, notwithstanding any fines or penalties levied against the person, firm or corporation involved, if a safety hazard exists, the work may be ordered stopped and the obstruction cleared by the person, firm or corporation responsible or by the City at that responsible party's expense.

<http://www.cityoftacoma.org/>

<http://wspwit01.ci.tacoma.wa.us/govME/Admin/Inter/StartPage/default.aspx>

http://wspwit01.ci.tacoma.wa.us/download/PDF/Traffic_Control_Handbook.pdf

Special Traffic Requirements

The contractor shall notify the following departments three (3) working days prior to any street closure.

Pierce Transit requires five (5) working days prior to any route detours.

Department	Phone	Fax	Email
Traffic Engineering	591-5500	591-5533	
Tacoma Fire Department	591-5733	591-5034	kmueller@cityoftacoma.org
Tacoma Police –Ops	591-5932	594-7842	
LESA	798-4721 Opt #3	798-2708	
Sound Transit Link	206-370-5674		
Pierce Transit	581-8109	589-6364 or 589-6367	
Pierce Transit Events Coordinator	581-8001	984-8161	
Public Works/Street Ops	591-5495	591-5302	
School Trans Office	571-1853	571-1932	
Durham School Services		475-0422	
First Students		272-7799	
UWT Facilities Services		692-5705	
Off-Duty Police Officer	591-5932		TacomaPoliceEvents@cityoftacoma.org
Tacoma Refuse	591-5544	591-5547	

Include the following information when notifying the above departments.

Name of street to be closed & the extent of the closure (between which two roads).

Stipulate whether or not the area is to be open to local traffic & emergency vehicles.

State the date(s) & hour(s) the closure will be in effect.

Give the reason for the closure.

Provide detour information.

State who/which firm is performing the work.

Provide the name and telephone number of a contact person.

Recommended Publications

As a contractor you will have many opportunities for setting up traffic control. To comply with national standards, we recommend having the **MUTCD** (Manual on Uniform Traffic Control Devices) for future reference.

To order hard copies or CD versions of the MUTCD please go to one of the links below:

American Association of State Highway Organizations at: <https://bookstore.transportation.org/>

Institute of Traffic Engineers at: <http://www.ite.org/bookstore/index.asp>

American Traffic Safety Services Association at: <http://www.atssa.com/>

Things to Think About

Before the traffic control plan is drawn visit the site and look for special circumstances that may be unique to the area. For example work being done on the sidewalk may be a hazard if someone walks out a door into your wet cement or a tool may fall on someone's head if someone is in a lift washing windows. Call Pierce Transit if you need to do work at a bus stop. Transit requires five (5) days notice for route detours. Transit will inform citizens and move or temporarily close the stop. Keep in mind that pedestrians need 5' of unobstructed walking area. If roadwork needs to be done on an arterial street, traffic control devices shall be removed during peak hour traffic (7am to 9am and 4pm to 6pm). For further information see our TRAFFIC CONTROL HANDBOOK.

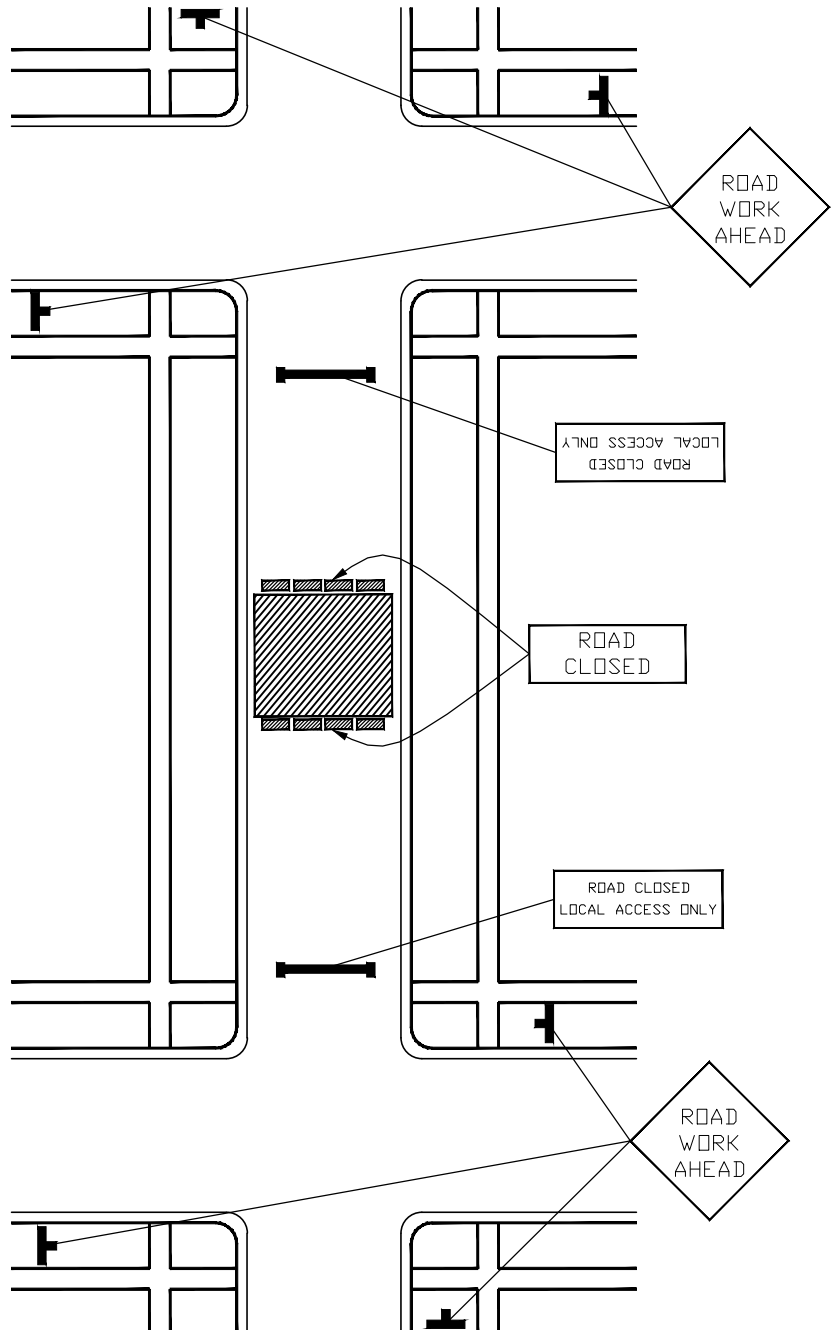
<http://www.cityoftacoma.org/>

<http://wspwit01.ci.tacoma.wa.us/govME/Admin/Inter/StartPage/default.aspx>

http://wspwit01.ci.tacoma.wa.us/download/PDF/Traffic_Control_Handbook.pdf

SAMPLE SETUP

Note: At night, signage and barricades must be Type C steady burn lights. A contractor may close a nonarterial street to through traffic, provided that local access is maintained at all times with a minimum of a 20' wide access lane. Road Work Ahead signs may be eliminated on non-arterial streets.



NON-ARTERIAL ROAD CLOSURES

☐ APPROVED BY: _____
☐ APPROVED WITH CONDITIONS BY: _____ DATE: _____

START TRAFFIC CONTROL SET UP DATE: _____ OFF PEAK 9:00 AM WEEKDAYS

MUST BE OUT OF THE ROAD BY DATE: _____ OFF PEAK 3:30 PM WEEKDAYS

EVENING AND WEEKENDS ONLY

START TRAFFIC CONTROL SET UP DATE & TIME: _____

MUST BE OUT OF THE ROAD BY DATE & TIME: _____

MERGING TAPER LENGTHS FOR CONE PATTERN

(All minimums)

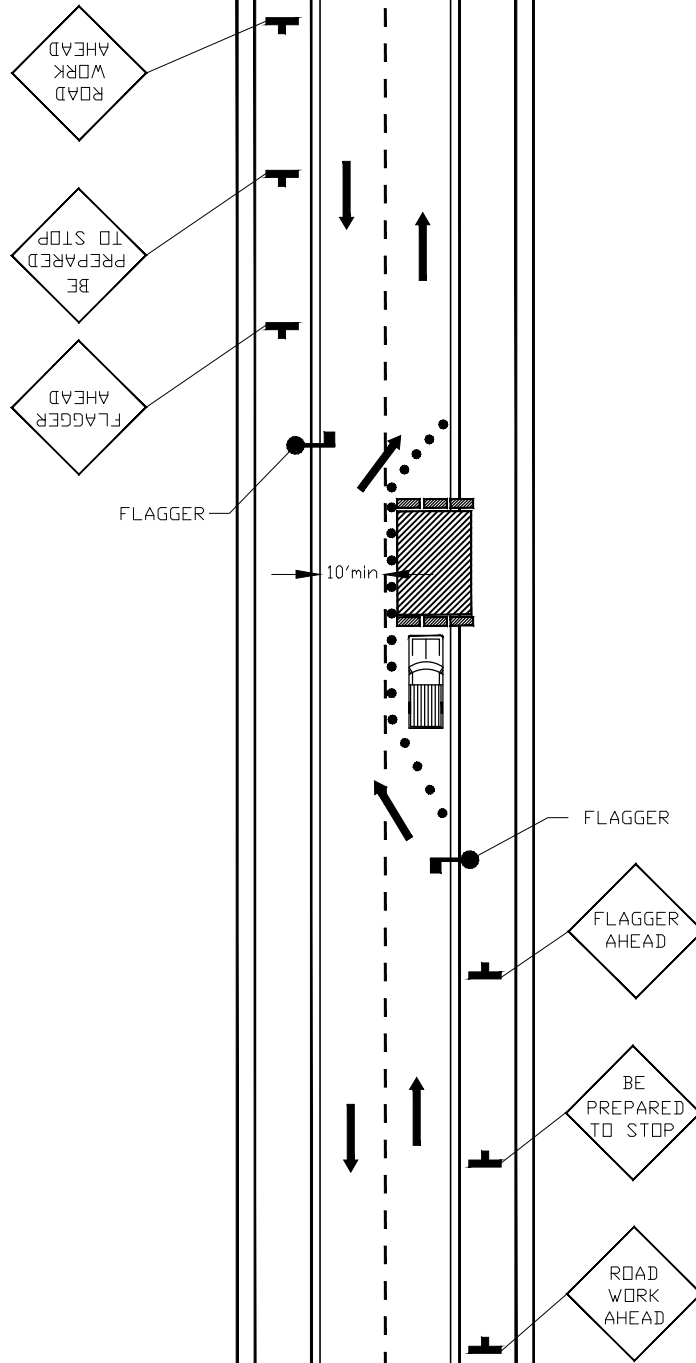
MPH	10	15	20	25	30	35	40
8'	14	30	54	84	120	164	214
10'	17	38	67	105	150	204	267
12'	20	45	80	125	180	245	320
14'	24	53	94	146	210	286	374
16'	27	60	107	167	240	327	427
NUMBER OF CHANNELIZATION DEVICES (CONES)							
Offset cones 1 foot maximum.							

NOTE 1: MAINTAIN LOCAL ACCESS AND PROTECTED WALKWAYS AT ALL TIMES. PROVIDE AND MAINTAIN BARRICADES, SIGNS, LIGHTS, ETC., AS PER "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AT ALL TIMES. STREETS AND WALKWAYS SHALL BE KEPT CLEAR OF DEBRIS DROPPED OR TRACKED BY VEHICLES ENTERING OR EXITING THE WORK SITE. FAILURE TO COMPLY WILL RESULT IN A STOP WORK ORDER AND/OR CITATION.

NOTE 2: NO WORK SHALL BE SCHEDULED ON STREETS OR WALKWAYS WITHIN THE CITY OF TACOMA BUSINESS DISTRICTS FROM THANKSGIVING DAY THROUGH NEW YEAR'S DAY.

NOTE 3: SIGN SPACING: URBAN LOW SPEED 25-30 MPH SIGNS MUST BE PLACED 100' APART. URBAN HIGH SPEED 35-40 MPH SIGNS MUST BE PLACED 350' APART.

SAMPLE SETUP



SINGLE LANE NON-ARTERIAL WITH FLAGGER

MERGING TAPER LENGTHS FOR CONE PATTERN (All minimums)

☐ APPROVED BY: _____
☐ APPROVED WITH CONDITIONS BY: _____ DATE: _____

START TRAFFIC CONTROL SET UP DATE: _____ OFF PEAK 9:00 AM WEEKDAYS

MUST BE OUT OF THE ROAD BY DATE: _____ OFF PEAK 3:30 PM WEEKDAYS

EVENING AND WEEKENDS ONLY

START TRAFFIC CONTROL SET UP DATE & TIME: _____

MUST BE OUT OF THE ROAD BY DATE & TIME: _____

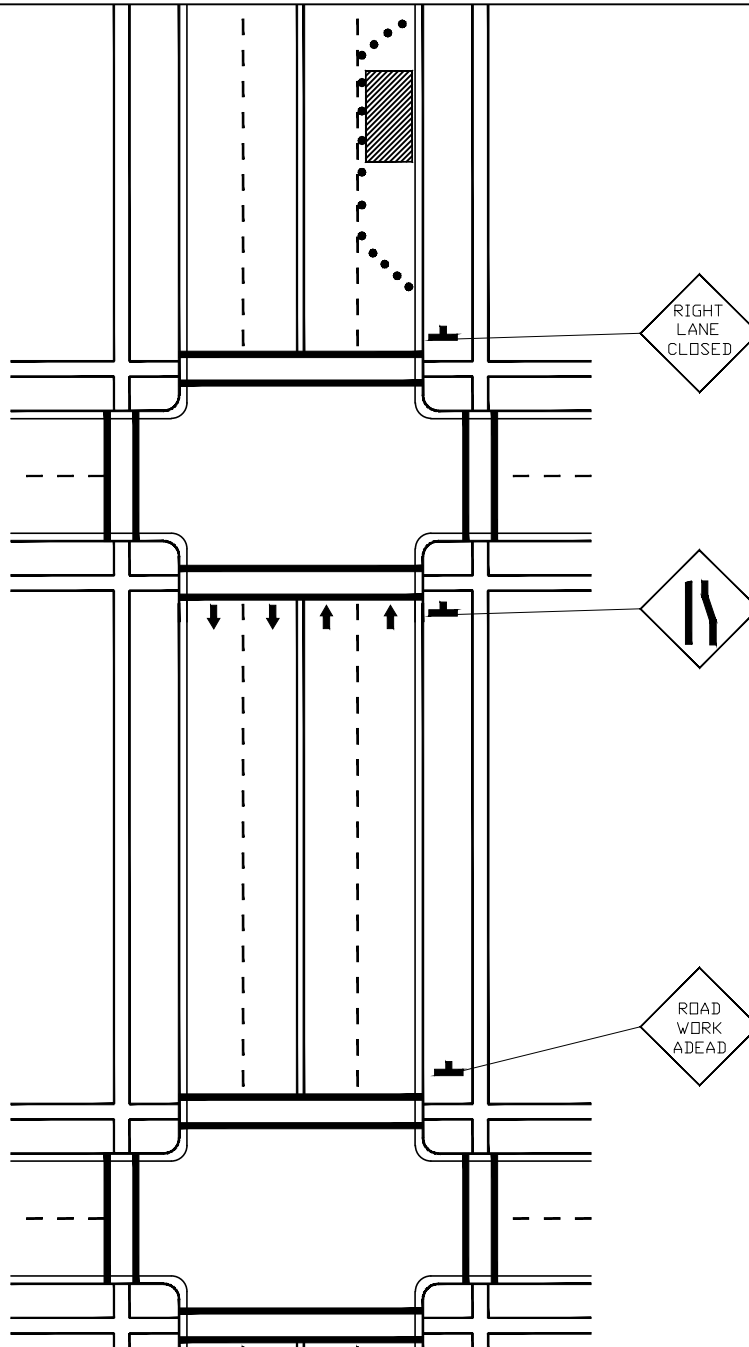
MPH	10	15	20	25	30	35	40
8'	14	30	54	84	120	164	214
10'	17	38	67	105	150	204	267
12'	20	45	80	125	180	245	320
14'	24	53	94	146	210	286	374
16'	27	60	107	167	240	327	427
NUMBER OF CHANNELIZATION DEVICES (CONES)							
Offset cones 1 foot maximum.							

NOTE 1: MAINTAIN LOCAL ACCESS AND PROTECTED WALKWAYS AT ALL TIMES. PROVIDE AND MAINTAIN BARRICADES, SIGNS, LIGHTS, ETC., AS PER "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AT ALL TIMES. STREETS AND WALKWAYS SHALL BE KEPT CLEAR OF DEBRIS DROPPED OR TRACKED BY VEHICLES ENTERING OR EXITING THE WORK SITE. FAILURE TO COMPLY WILL RESULT IN A STOP WORK ORDER AND/OR CITATION.

NOTE 2: NO WORK SHALL BE SCHEDULED ON STREETS OR WALKWAYS WITHIN THE CITY OF TACOMA BUSINESS DISTRICTS FROM THANKSGIVING DAY THROUGH NEW YEAR'S DAY.

NOTE 3: SIGN SPACING: URBAN LOW SPEED 25-30 MPH SIGNS MUST BE PLACED 100' APART. URBAN HIGH SPEED 35-40 MPH SIGNS MUST BE PLACED 350' APART.

SAMPLE SETUP



CBD
RIGHT LANE
CLOSURE

☐ APPROVED BY: _____
☐ APPROVED WITH CONDITIONS BY: _____ DATE: _____

START TRAFFIC CONTROL SET UP DATE: _____ OFF PEAK 9:00 AM WEEKDAYS

MUST BE OUT OF THE ROAD BY DATE: _____ OFF PEAK 3:30 PM WEEKDAYS

EVENING AND WEEKENDS ONLY

START TRAFFIC CONTROL SET UP DATE & TIME: _____

MUST BE OUT OF THE ROAD BY DATE & TIME: _____

MERGING TAPER LENGTHS FOR CONE PATTERN (All minimums)

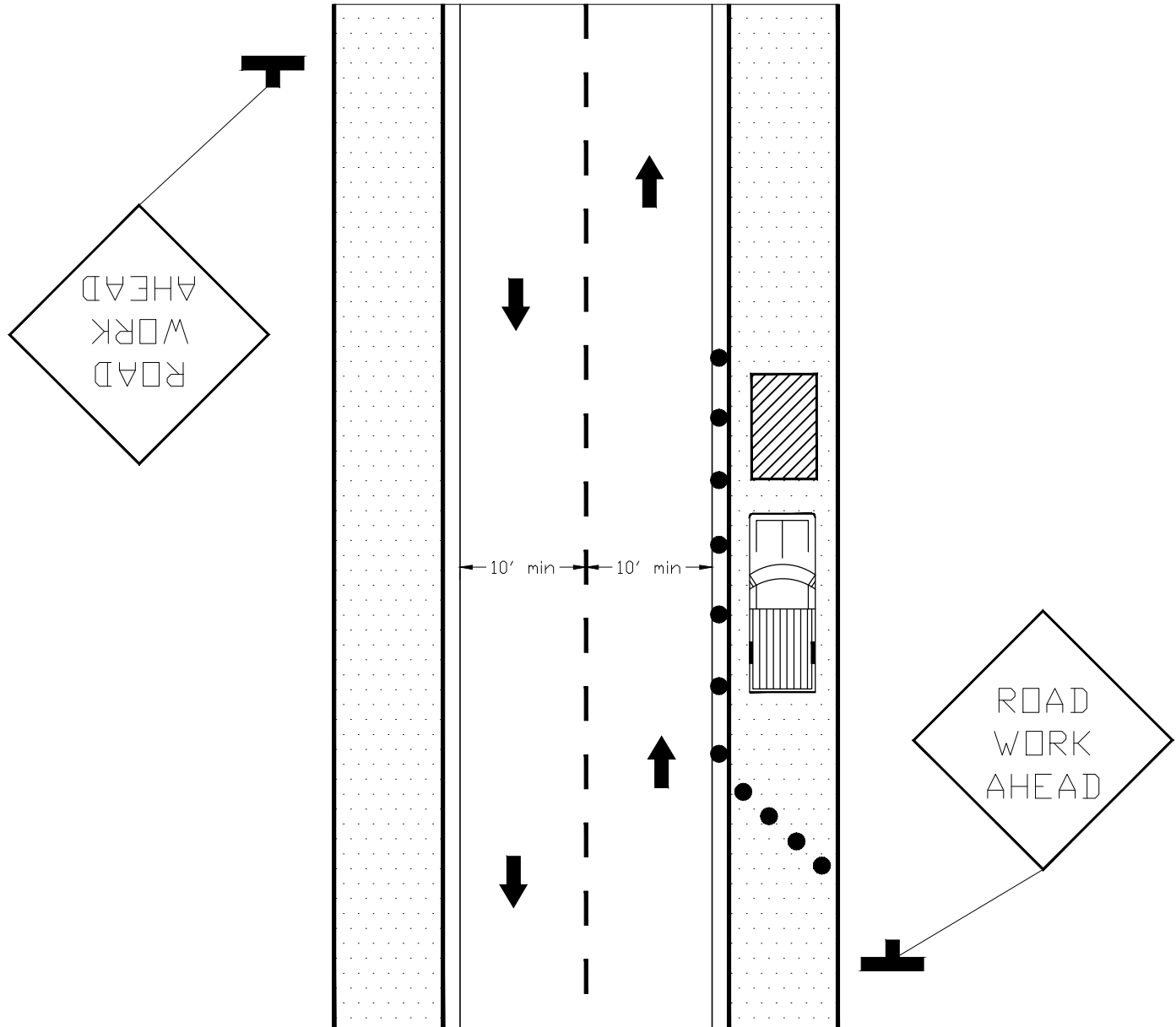
MPH	10	15	20	25	30	35	40
8'	14	30	54	84	120	164	214
10'	17	38	67	105	150	204	267
12'	20	45	80	125	180	245	320
14'	24	53	94	146	210	286	374
16'	27	60	107	167	240	327	427
NUMBER OF CHANNELIZATION DEVICES (CONES)							
Offset cones 1 foot maximum.							

NOTE 1: MAINTAIN LOCAL ACCESS AND PROTECTED WALKWAYS AT ALL TIMES. PROVIDE AND MAINTAIN BARRICADES, SIGNS, LIGHTS, ETC., AS PER "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AT ALL TIMES. STREETS AND WALKWAYS SHALL BE KEPT CLEAR OF DEBRIS DROPPED OR TRACKED BY VEHICLES ENTERING OR EXITING THE WORK SITE. FAILURE TO COMPLY WILL RESULT IN A STOP WORK ORDER AND/OR CITATION.

NOTE 2: NO WORK SHALL BE SCHEDULED ON STREETS OR WALKWAYS WITHIN THE CITY OF TACOMA BUSINESS DISTRICTS FROM THANKSGIVING DAY THROUGH NEW YEAR'S DAY.

NOTE 3: SIGN SPACING: URBAN LOW SPEED 25-30 MPH SIGNS MUST BE PLACED 100' APART. URBAN HIGH SPEED 35-40 MPH SIGNS MUST BE PLACED 350' APART.

SAMPLE SETUP



SHOULDER WORK WITH MINOR ENCROACHMENT

☐ APPROVED BY: _____
☐ APPROVED WITH CONDITIONS BY: _____ DATE: _____

START TRAFFIC CONTROL SET UP DATE: _____ OFF PEAK 9:00 AM WEEKDAYS

MUST BE OUT OF THE ROAD BY DATE: _____ OFF PEAK 3:30 PM WEEKDAYS

EVENING AND WEEKENDS ONLY

START TRAFFIC CONTROL SET UP DATE & TIME: _____

MUST BE OUT OF THE ROAD BY DATE & TIME: _____

MERGING TAPER LENGTHS FOR CONE PATTERN (All minimums)

MPH	10	15	20	25	30	35	40
8'	14	30	54	84	120	164	214
10'	17	38	67	105	150	204	267
12'	20	45	80	125	180	245	320
14'	24	53	94	146	210	286	374
16'	27	60	107	167	240	327	427
NUMBER OF CHANNELIZATION DEVICES (CONES)							
Offset cones 1 foot maximum.							

NOTE 1: MAINTAIN LOCAL ACCESS AND PROTECTED WALKWAYS AT ALL TIMES. PROVIDE AND MAINTAIN BARRICADES, SIGNS, LIGHTS, ETC., AS PER "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AT ALL TIMES. STREETS AND WALKWAYS SHALL BE KEPT CLEAR OF DEBRIS DROPPED OR TRACKED BY VEHICLES ENTERING OR EXITING THE WORK SITE. FAILURE TO COMPLY WILL RESULT IN A STOP WORK ORDER AND/OR CITATION.

NOTE 2: NO WORK SHALL BE SCHEDULED ON STREETS OR WALKWAYS WITHIN THE CITY OF TACOMA BUSINESS DISTRICTS FROM THANKSGIVING DAY THROUGH NEW YEAR'S DAY.

NOTE 3: SIGN SPACING: URBAN LOW SPEED 25-30 MPH SIGNS MUST BE PLACED 100' APART. URBAN HIGH SPEED 35-40 MPH SIGNS MUST BE PLACED 350' APART.

The diagram illustrates a two-lane road construction zone. A central hatched rectangle represents the work area, flanked by two lanes of traffic. On the left side, a diamond-shaped sign with a downward arrow points towards the work area, with a line indicating a minimum 10-foot distance. Above this, two T-shaped advance warning signs are shown: one labeled 'ROAD WORK AHEAD' and another labeled 'KEEP RIGHT'. On the right side, a diamond-shaped sign with an upward arrow points away from the work area, with a line indicating a minimum 10-foot distance. Below this, two T-shaped advance warning signs are shown: one labeled 'KEEP RIGHT' and another labeled 'ROAD WORK AHEAD'. The road is marked with a dashed center line and solid edge lines. A north arrow is located in the upper right corner of the diagram.

TWO LANE
CENTER CLOSURE

☐ APPROVED BY: _____

☐ APPROVED WITH CONDITIONS BY: _____ DATE: _____

START TRAFFIC CONTROL SET UP DATE: _____ OFF PEAK 9:00 AM WEEKDAYS

MUST BE OUT OF THE ROAD BY DATE: _____ OFF PEAK 3:30 PM WEEKDAYS

EVENING AND WEEKENDS ONLY

START TRAFFIC CONTROL SET UP DATE & TIME: _____

MUST BE OUT OF THE ROAD BY DATE & TIME: _____

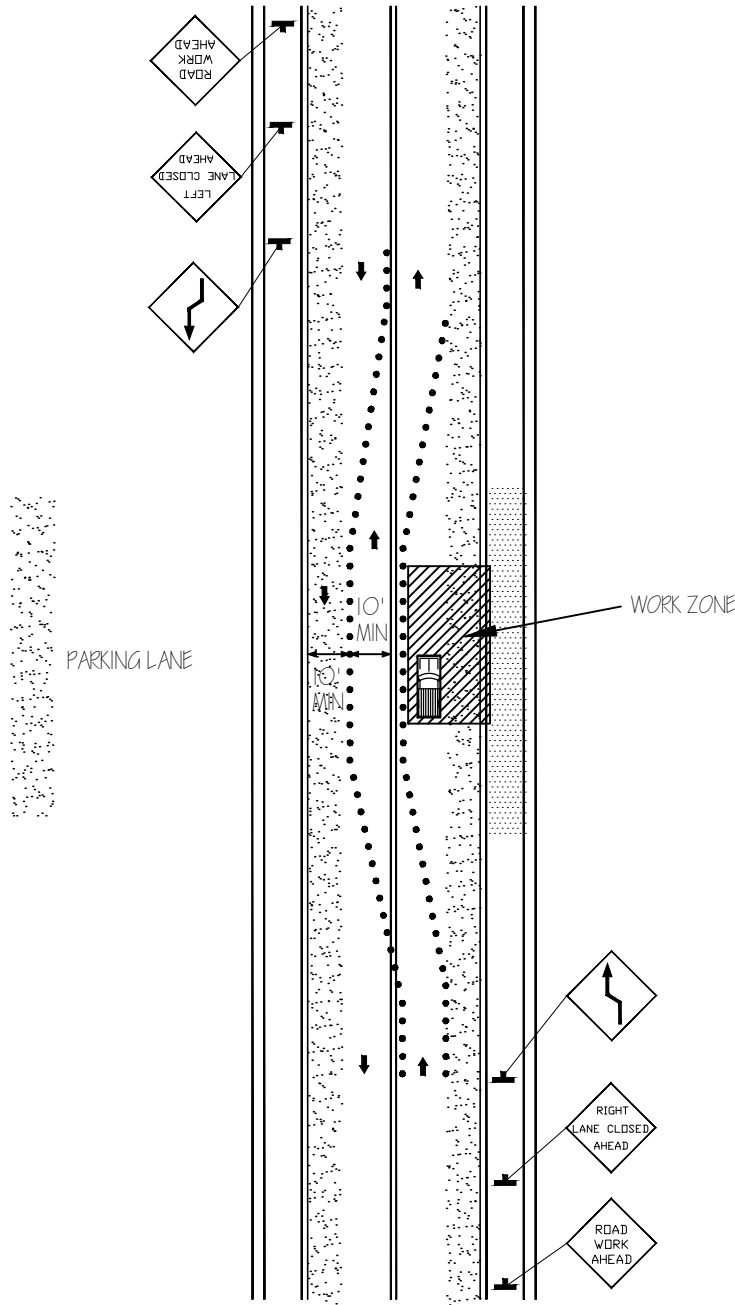
MERGING TAPER LENGTHS FOR CONE PATTERN (All minimums)								
MPH	10	15	20	25	30	35	40	
LANE WIDTH	8'	14	30	54	84	120	164	214
	10'	17	38	67	105	150	204	267
	12'	20	45	80	125	180	245	320
	14'	24	53	94	146	210	286	374
	16'	27	60	107	167	240	327	427
	NUMBER OF CHANNELIZATION DEVICES (CONES)							
Offset cones 1 foot maximum.								

NOTE 1: MAINTAIN LOCAL ACCESS AND PROTECTED WALKWAYS AT ALL TIMES. PROVIDE AND MAINTAIN BARRICADES, SIGNS, LIGHTS, ETC, AS PER "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AT ALL TIMES. STREETS AND WALKWAYS SHALL BE KEPT CLEAR OF DEBRIS DROPPED OR TRACKED BY VEHICLES ENTERING OR EXITING THE WORK SITE. FAILURE TO COMPLY WILL RESULT IN A STOP WORK ORDER AND/OR CITATION.

NOTE 2: NO WORK SHALL BE SCHEDULED ON STREETS OR WALKWAYS WITHIN THE CITY OF TACOMA BUSINESS DISTRICTS FROM THANKSGIVING DAY THROUGH NEW YEAR'S DAY.

NOTE 3: SIGN SPACING: URBAN LOW SPEED 25-30 MPH SIGNS MUST BE PLACED 100' APART. URBAN HIGH SPEED 35-40 MPH SIGNS MUST BE PLACED 350' APART.

SAMPLE SETUP



TWO WAY LANE SHIFT WITH PARKING

☐ APPROVED BY: _____
☐ APPROVED WITH CONDITIONS BY: _____ DATE: _____

START TRAFFIC CONTROL SET UP DATE: _____ OFF PEAK 9:00 AM WEEKDAYS

MUST BE OUT OF THE ROAD BY DATE: _____ OFF PEAK 3:30 PM WEEKDAYS

EVENING AND WEEKENDS ONLY

START TRAFFIC CONTROL SET UP DATE & TIME: _____

MUST BE OUT OF THE ROAD BY DATE & TIME: _____

MERGING TAPER LENGTHS FOR CONE PATTERN (All minimums)

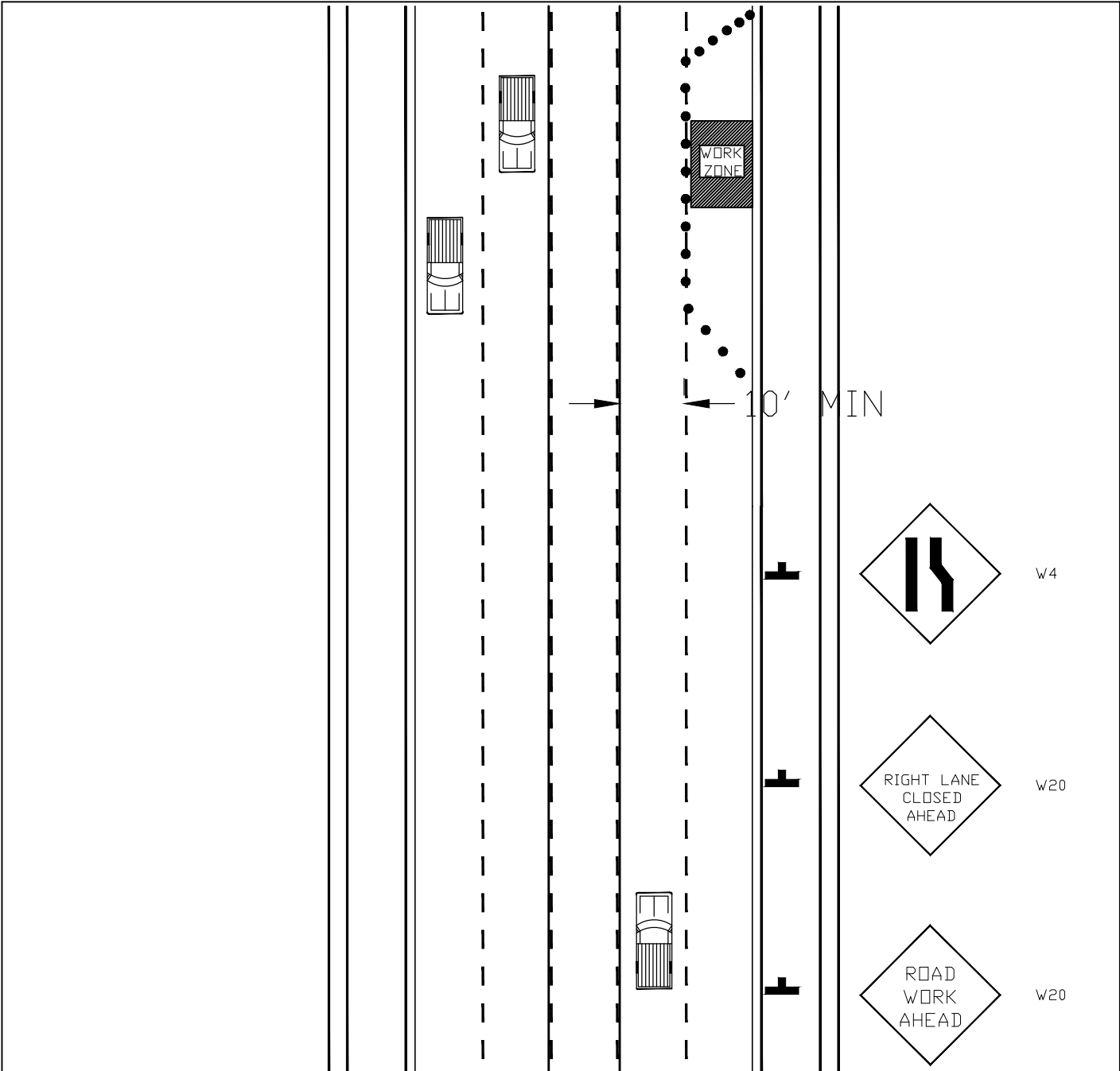
MPH	10	15	20	25	30	35	40
8'	14	30	54	84	120	164	214
10'	17	38	67	105	150	204	267
12'	20	45	80	125	180	245	320
14'	24	53	94	146	210	286	374
16'	27	60	107	167	240	327	427
NUMBER OF CHANNELIZATION DEVICES (CONES)							
Offset cones 1 foot maximum.							

NOTE 1: MAINTAIN LOCAL ACCESS AND PROTECTED WALKWAYS AT ALL TIMES. PROVIDE AND MAINTAIN BARRICADES, SIGNS, LIGHTS, ETC, AS PER "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AT ALL TIMES. STREETS AND WALKWAYS SHALL BE KEPT CLEAR OF DEBRIS DROPPED OR TRACKED BY VEHICLES ENTERING OR EXITING THE WORK SITE. FAILURE TO COMPLY WILL RESULT IN A STOP WORK ORDER AND/OR CITATION.

NOTE 2: NO WORK SHALL BE SCHEDULED ON STREETS OR WALKWAYS WITHIN THE CITY OF TACOMA BUSINESS DISTRICTS FROM THANKSGIVING DAY THROUGH NEW YEAR'S DAY.

NOTE 3: SIGN SPACING: URBAN LOW SPEED 25-30 MPH SIGNS MUST BE PLACED 100' APART. URBAN HIGH SPEED 35-40 MPH SIGNS MUST BE PLACED 350' APART.

SAMPLE SETUP



RIGHT LANE
CLOSURE

MERGING TAPER LENGTHS
FOR CONE PATTERN
(All minimums)

☐ APPROVED BY: _____
☐ APPROVED WITH CONDITIONS BY: _____ DATE: _____

START TRAFFIC CONTROL SET UP DATE: _____ OFF PEAK 9:00 AM WEEKDAYS
MUST BE OUT OF THE ROAD BY DATE: _____ OFF PEAK 3:30 PM WEEKDAYS
EVENING AND WEEKENDS ONLY
START TRAFFIC CONTROL SET UP DATE & TIME: _____
MUST BE OUT OF THE ROAD BY DATE & TIME: _____

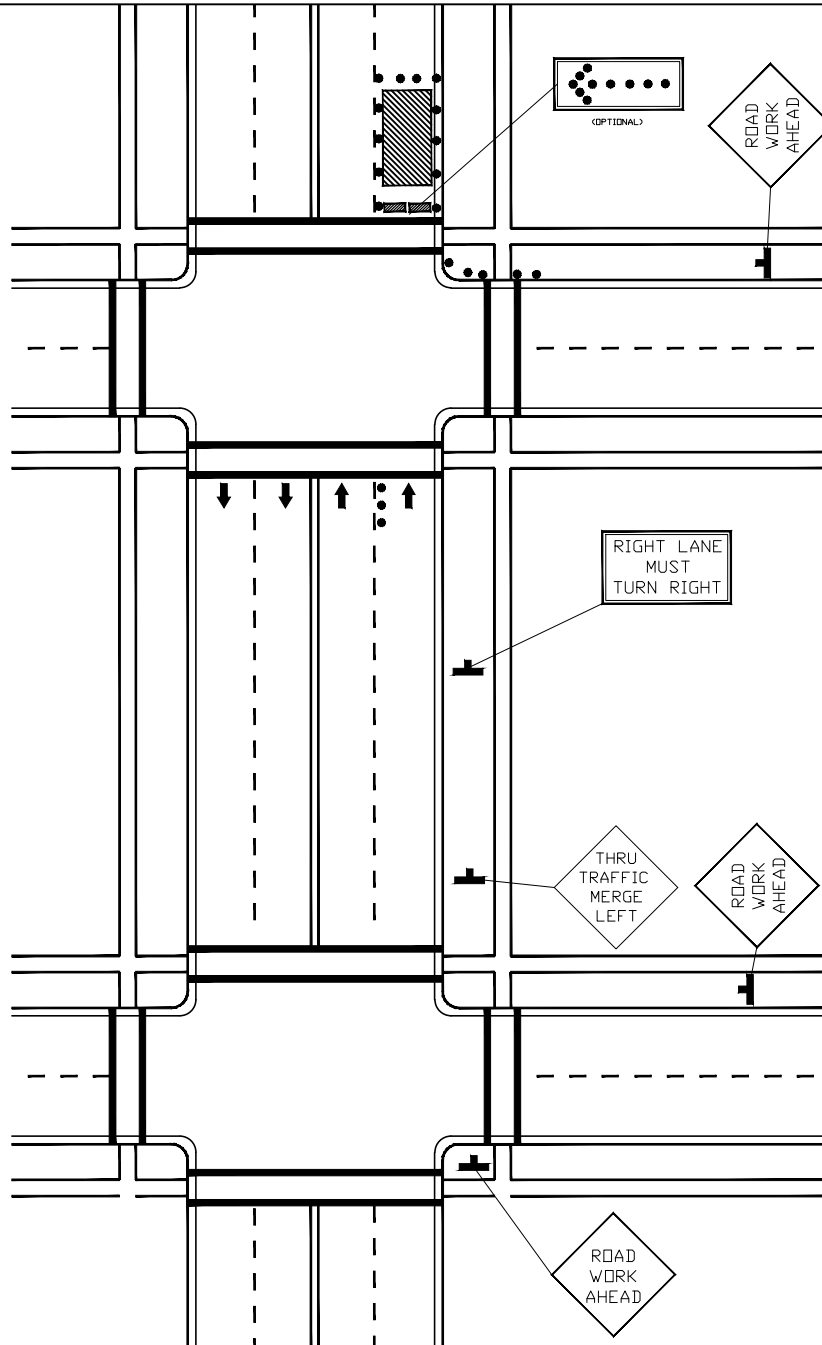
MPH	10	15	20	25	30	35	40
8'	14	30	54	84	120	164	214
10'	17	38	67	105	150	204	267
12'	20	45	80	125	180	245	320
14'	24	53	94	146	210	286	374
16'	27	60	107	167	240	327	427
NUMBER OF CHANNELIZATION DEVICES (CONES)							
Offset cones 1 foot maximum.							

NOTE 1: MAINTAIN LOCAL ACCESS AND PROTECTED WALKWAYS AT ALL TIMES. PROVIDE AND MAINTAIN BARRICADES, SIGNS, LIGHTS, ETC., AS PER "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AT ALL TIMES. STREETS AND WALKWAYS SHALL BE KEPT CLEAR OF DEBRIS DROPPED OR TRACKED BY VEHICLES ENTERING OR EXITING THE WORK SITE. FAILURE TO COMPLY WILL RESULT IN A STOP WORK ORDER AND/OR CITATION.

NOTE 2: NO WORK SHALL BE SCHEDULED ON STREETS OR WALKWAYS WITHIN THE CITY OF TACOMA BUSINESS DISTRICTS FROM THANKSGIVING DAY THROUGH NEW YEAR'S DAY.

NOTE 3: SIGN SPACING: URBAN LOW SPEED 25-30 MPH SIGNS MUST BE PLACED 100' APART. URBAN HIGH SPEED 35-40 MPH SIGNS MUST BE PLACED 350' APART.

SAMPLE SETUP



RIGHT LANE CLOSURE AT INTERSECTION

☐ APPROVED BY: _____
☐ APPROVED WITH CONDITIONS BY: _____ DATE: _____

START TRAFFIC CONTROL SET UP DATE: _____ OFF PEAK 9:00 AM WEEKDAYS

MUST BE OUT OF THE ROAD BY DATE: _____ OFF PEAK 3:30 PM WEEKDAYS

EVENING AND WEEKENDS ONLY

START TRAFFIC CONTROL SET UP DATE & TIME: _____

MUST BE OUT OF THE ROAD BY DATE & TIME: _____

MERGING TAPER LENGTHS FOR CONE PATTERN (All minimums)

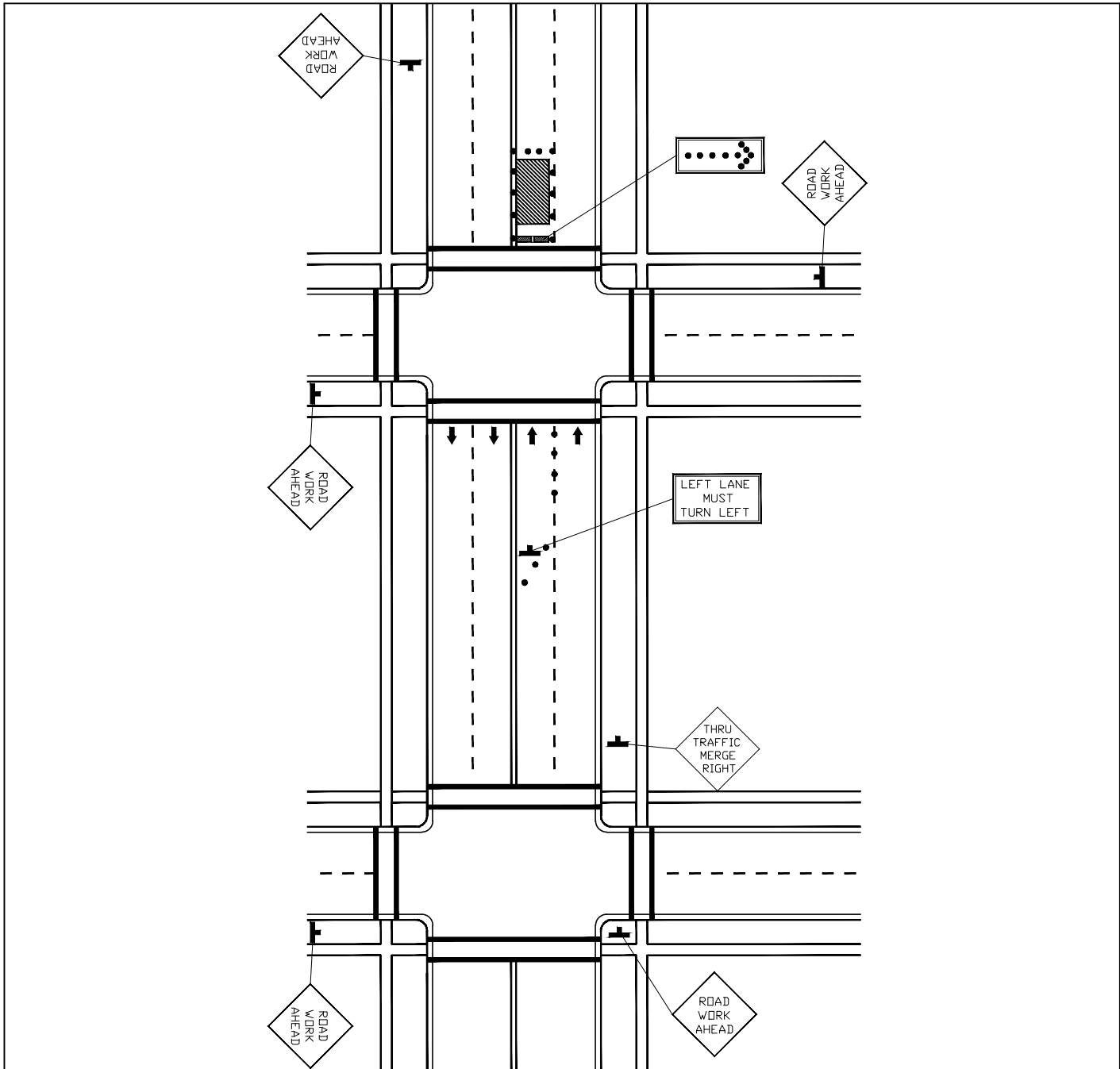
MPH	10	15	20	25	30	35	40
8'	14	30	54	84	120	164	214
10'	17	38	67	105	150	204	267
12'	20	45	80	125	180	245	320
14'	24	53	94	146	210	286	374
16'	27	60	107	167	240	327	427
NUMBER OF CHANNELIZATION DEVICES (CONES)							
Offset cones 1 foot maximum.							

NOTE 1: MAINTAIN LOCAL ACCESS AND PROTECTED WALKWAYS AT ALL TIMES. PROVIDE AND MAINTAIN BARRICADES, SIGNS, LIGHTS, ETC., AS PER "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AT ALL TIMES. STREETS AND WALKWAYS SHALL BE KEPT CLEAR OF DEBRIS DROPPED OR TRACKED BY VEHICLES ENTERING OR EXITING THE WORK SITE. FAILURE TO COMPLY WILL RESULT IN A STOP WORK ORDER AND/OR CITATION.

NOTE 2: NO WORK SHALL BE SCHEDULED ON STREETS OR WALKWAYS WITHIN THE CITY OF TACOMA BUSINESS DISTRICTS FROM THANKSGIVING DAY THROUGH NEW YEAR'S DAY.

NOTE 3: SIGN SPACING: URBAN LOW SPEED 25-30 MPH SIGNS MUST BE PLACED 100' APART. URBAN HIGH SPEED 35-40 MPH SIGNS MUST BE PLACED 350' APART.

SAMPLE SETUP



LEFT LANE CLOSURE AT INTERSECTION

☐ APPROVED BY: _____
☐ APPROVED WITH CONDITIONS BY: _____ DATE: _____

START TRAFFIC CONTROL SET UP DATE: _____ OFF PEAK 9:00 AM WEEKDAYS

MUST BE OUT OF THE ROAD BY DATE: _____ OFF PEAK 3:30 PM WEEKDAYS

EVENING AND WEEKENDS ONLY

START TRAFFIC CONTROL SET UP DATE & TIME: _____

MUST BE OUT OF THE ROAD BY DATE & TIME: _____

MERGING TAPER LENGTHS FOR CONE PATTERN (All minimums)

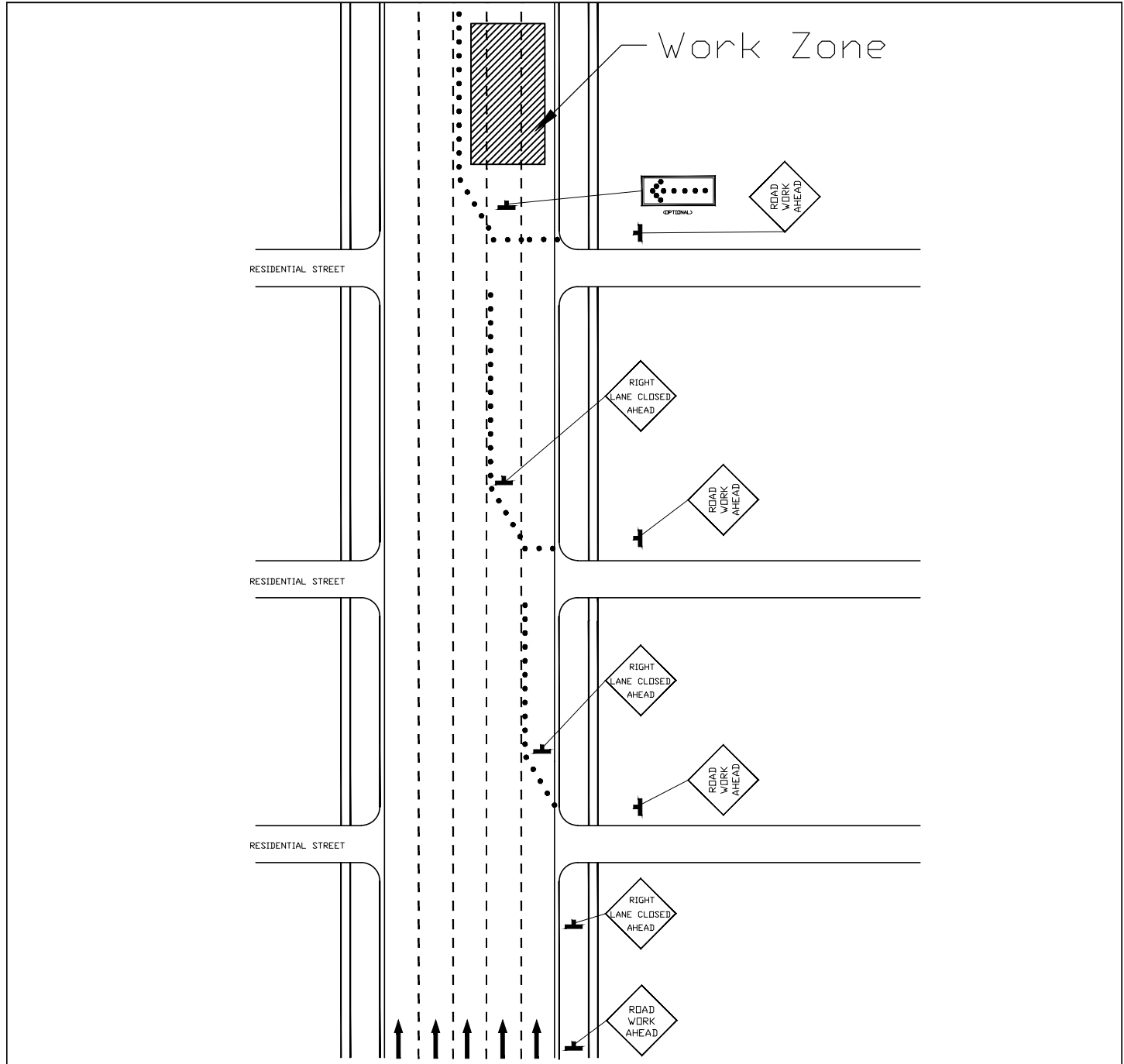
MPH	10	15	20	25	30	35	40
8'	14	30	54	84	120	164	214
10'	17	38	67	105	150	204	267
12'	20	45	80	125	180	245	320
14'	24	53	94	146	210	286	374
16'	27	60	107	167	240	327	427
NUMBER OF CHANNELIZATION DEVICES (CONES)							
Offset cones 1 foot maximum.							

NOTE 1: MAINTAIN LOCAL ACCESS AND PROTECTED WALKWAYS AT ALL TIMES. PROVIDE AND MAINTAIN BARRICADES, SIGNS, LIGHTS, ETC., AS PER "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AT ALL TIMES. STREETS AND WALKWAYS SHALL BE KEPT CLEAR OF DEBRIS DROPPED OR TRACKED BY VEHICLES ENTERING OR EXITING THE WORK SITE. FAILURE TO COMPLY WILL RESULT IN A STOP WORK ORDER AND/OR CITATION.

NOTE 2: NO WORK SHALL BE SCHEDULED ON STREETS OR WALKWAYS WITHIN THE CITY OF TACOMA BUSINESS DISTRICTS FROM THANKSGIVING DAY THROUGH NEW YEAR'S DAY.

NOTE 3: SIGN SPACING: URBAN LOW SPEED 25-30 MPH SIGNS MUST BE PLACED 100' APART. URBAN HIGH SPEED 35-40 MPH SIGNS MUST BE PLACED 350' APART.

SAMPLE SETUP



ONE WAY MULTI-LANE CLOSURE

☐ APPROVED BY: _____
☐ APPROVED WITH CONDITIONS BY: _____ DATE: _____

START TRAFFIC CONTROL SET UP DATE: _____ OFF PEAK 9:00 AM WEEKDAYS

MUST BE OUT OF THE ROAD BY DATE: _____ OFF PEAK 3:30 PM WEEKDAYS

EVENING AND WEEKENDS ONLY

START TRAFFIC CONTROL SET UP DATE & TIME: _____

MUST BE OUT OF THE ROAD BY DATE & TIME: _____

MERGING TAPER LENGTHS FOR CONE PATTERN (All minimums)

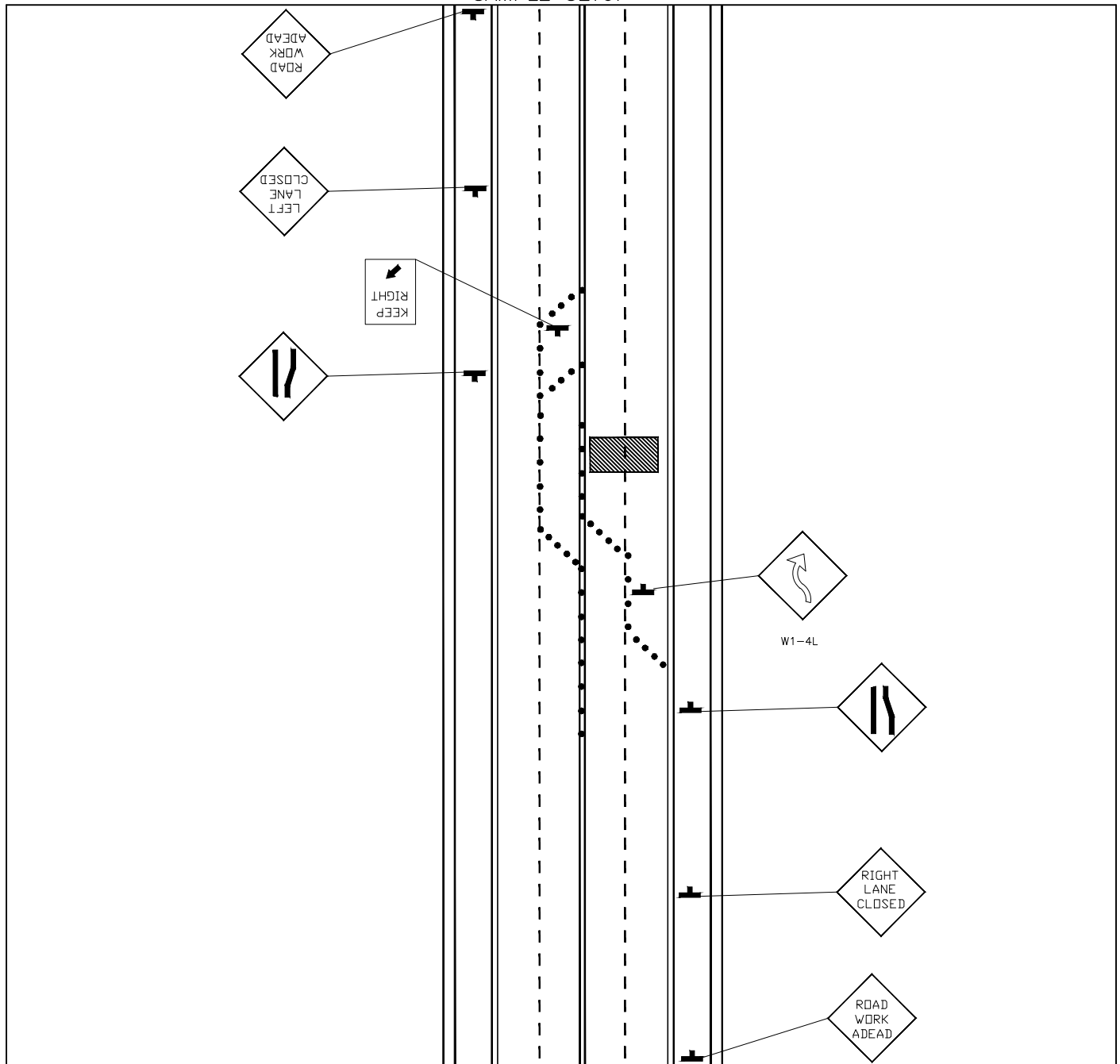
MPH	10	15	20	25	30	35	40	
LANE WIDTH	8'	14	30	54	84	120	164	214
	10'	17	38	67	105	150	204	267
	12'	20	45	80	125	180	245	320
	14'	24	53	94	146	210	286	374
	16'	27	60	107	167	240	327	427
NUMBER OF CHANNELIZATION DEVICES (CONES)								
Offset cones 1 foot maximum.								

NOTE 1: MAINTAIN LOCAL ACCESS AND PROTECTED WALKWAYS AT ALL TIMES. PROVIDE AND MAINTAIN BARRICADES, SIGNS, LIGHTS, ETC., AS PER "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AT ALL TIMES. STREETS AND WALKWAYS SHALL BE KEPT CLEAR OF DEBRIS DROPPED OR TRACKED BY VEHICLES ENTERING OR EXITING THE WORK SITE. FAILURE TO COMPLY WILL RESULT IN A STOP WORK ORDER AND/OR CITATION.

NOTE 2: NO WORK SHALL BE SCHEDULED ON STREETS OR WALKWAYS WITHIN THE CITY OF TACOMA BUSINESS DISTRICTS FROM THANKSGIVING DAY THROUGH NEW YEAR'S DAY.

NOTE 3: SIGN SPACING: URBAN LOW SPEED 25-30 MPH SIGNS MUST BE PLACED 100' APART. URBAN HIGH SPEED 35-40 MPH SIGNS MUST BE PLACED 350' APART.

SAMPLE SETUP



FOUR LANE ROAD
TWO LANE CLOSURE
ARTERIAL STREET

MERGING TAPER LENGTHS
FOR CONE PATTERN
(All minimums)

MPH	10	15	20	25	30	35	40
8'	14	30	54	84	120	164	214
10'	17	38	67	105	150	204	267
12'	20	45	80	125	180	245	320
14'	24	53	94	146	210	286	374
16'	27	60	107	167	240	327	427

NUMBER OF CHANNELIZATION DEVICES (CONES)

Offset cones 1 foot maximum.

☐ APPROVED BY: _____
☐ APPROVED WITH CONDITIONS BY: _____ DATE: _____

START TRAFFIC CONTROL SET UP DATE: _____ OFF PEAK 9:00 AM WEEKDAYS

MUST BE OUT OF THE ROAD BY DATE: _____ OFF PEAK 3:30 PM WEEKDAYS

EVENING AND WEEKENDS ONLY

START TRAFFIC CONTROL SET UP DATE & TIME: _____

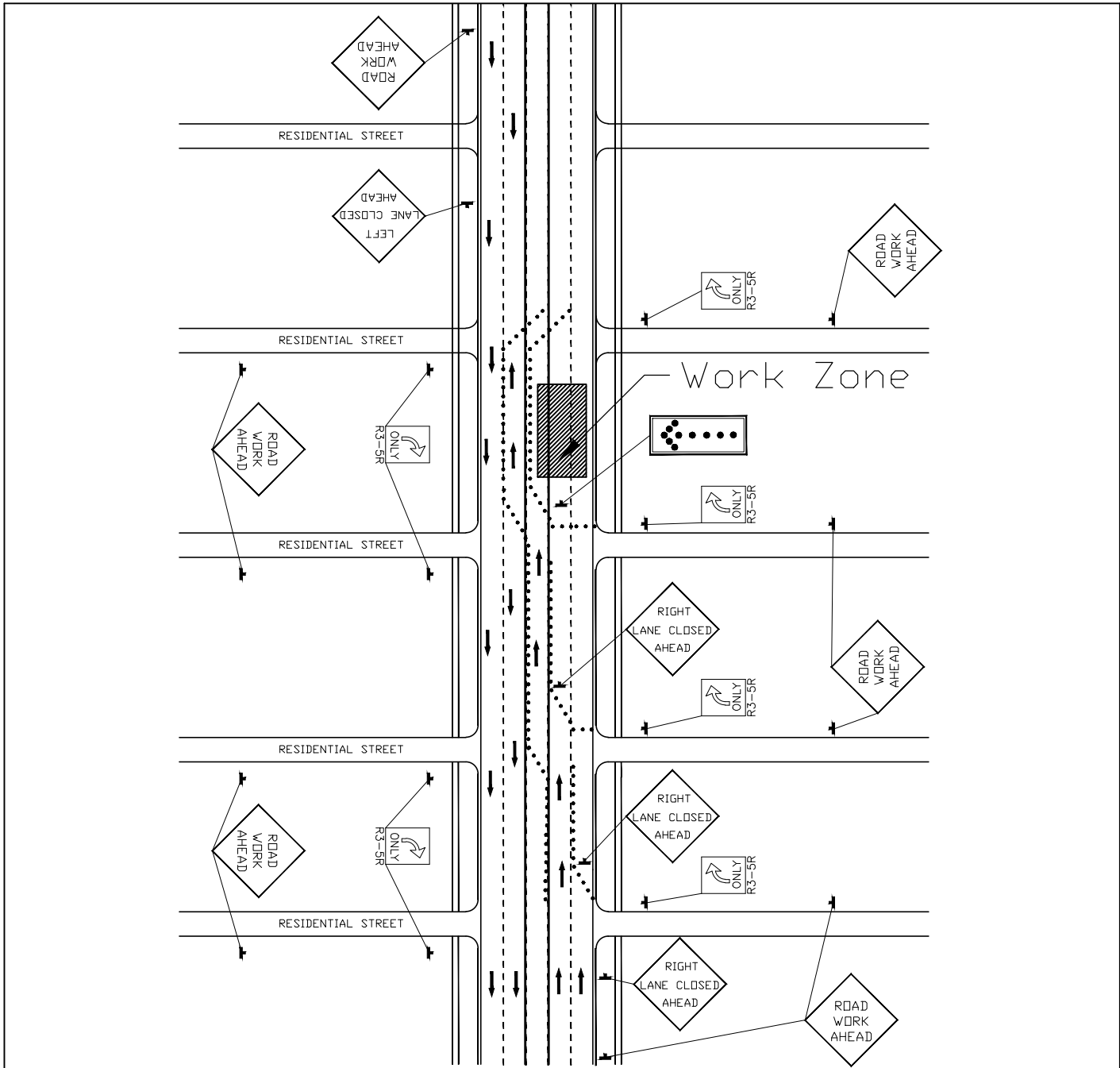
MUST BE OUT OF THE ROAD BY DATE & TIME: _____

NOTE 1: MAINTAIN LOCAL ACCESS AND PROTECTED WALKWAYS AT ALL TIMES. PROVIDE AND MAINTAIN BARRICADES, SIGNS, LIGHTS, ETC., AS PER "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AT ALL TIMES. STREETS AND WALKWAYS SHALL BE KEPT CLEAR OF DEBRIS DROPPED OR TRACKED BY VEHICLES ENTERING OR EXITING THE WORK SITE. FAILURE TO COMPLY WILL RESULT IN A STOP WORK ORDER AND/OR CITATION.

NOTE 2: NO WORK SHALL BE SCHEDULED ON STREETS OR WALKWAYS WITHIN THE CITY OF TACOMA BUSINESS DISTRICTS FROM THANKSGIVING DAY THROUGH NEW YEAR'S DAY.

NOTE 3: SIGN SPACING: URBAN LOW SPEED 25-30 MPH SIGNS MUST BE PLACED 100' APART. URBAN HIGH SPEED 35-40 MPH SIGNS MUST BE PLACED 350' APART.

SAMPLE SETUP



FIVE LANE ROAD MULTI-LANE CLOSURE

☐ APPROVED BY: _____
☐ APPROVED WITH CONDITIONS BY: _____ DATE: _____

START TRAFFIC CONTROL SET UP DATE: _____ OFF PEAK 9:00 AM WEEKDAYS

MUST BE OUT OF THE ROAD BY DATE: _____ OFF PEAK 3:30 PM WEEKDAYS

EVENING AND WEEKENDS ONLY

START TRAFFIC CONTROL SET UP DATE & TIME: _____

MUST BE OUT OF THE ROAD BY DATE & TIME: _____

MERGING TAPER LENGTHS FOR CONE PATTERN

(All minimums)

MPH	10	15	20	25	30	35	40
8'	14	30	54	84	120	164	214
10'	17	38	67	105	150	204	267
12'	20	45	80	125	180	245	320
14'	24	53	94	146	210	286	374
16'	27	60	107	167	240	327	427

NUMBER OF CHANNELIZATION DEVICES (CONES)

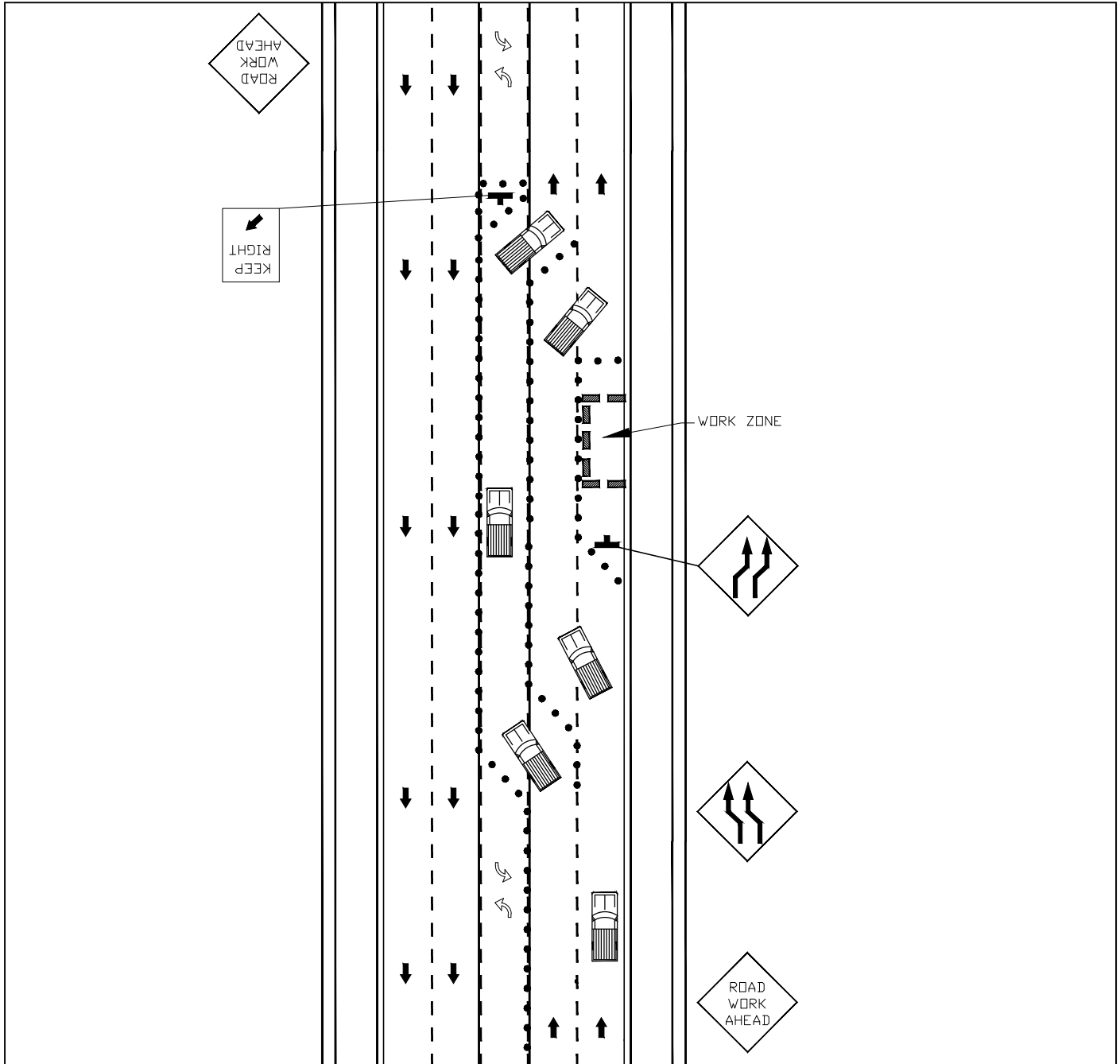
Offset cones 1 foot maximum.

NOTE 1: MAINTAIN LOCAL ACCESS AND PROTECTED WALKWAYS AT ALL TIMES. PROVIDE AND MAINTAIN BARRICADES, SIGNS, LIGHTS, ETC., AS PER "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AT ALL TIMES. STREETS AND WALKWAYS SHALL BE KEPT CLEAR OF DEBRIS DROPPED OR TRACKED BY VEHICLES ENTERING OR EXITING THE WORK SITE. FAILURE TO COMPLY WILL RESULT IN A STOP WORK ORDER AND/OR CITATION.

NOTE 2: NO WORK SHALL BE SCHEDULED ON STREETS OR WALKWAYS WITHIN THE CITY OF TACOMA BUSINESS DISTRICTS FROM THANKSGIVING DAY THROUGH NEW YEAR'S DAY.

NOTE 3: SIGN SPACING: URBAN LOW SPEED 25-30 MPH SIGNS MUST BE PLACED 100' APART. URBAN HIGH SPEED 35-40 MPH SIGNS MUST BE PLACED 350' APART.

SAMPLE SETUP



TRAFFIC CONTROL FOR 5 LANE SHIFTING

☐ APPROVED BY: _____
☐ APPROVED WITH CONDITIONS BY: _____ DATE: _____

START TRAFFIC CONTROL SET UP DATE: _____ OFF PEAK 9:00 AM WEEKDAYS

MUST BE OUT OF THE ROAD BY DATE: _____ OFF PEAK 3:30 PM WEEKDAYS

EVENING AND WEEKENDS ONLY

START TRAFFIC CONTROL SET UP DATE & TIME: _____

MUST BE OUT OF THE ROAD BY DATE & TIME: _____

MERGING TAPER LENGTHS FOR CONE PATTERN (All minimums)

MPH	10	15	20	25	30	35	40
8'	14	30	54	84	120	164	214
10'	17	38	67	105	150	204	267
12'	20	45	80	125	180	245	320
14'	24	53	94	146	210	286	374
16'	27	60	107	167	240	327	427

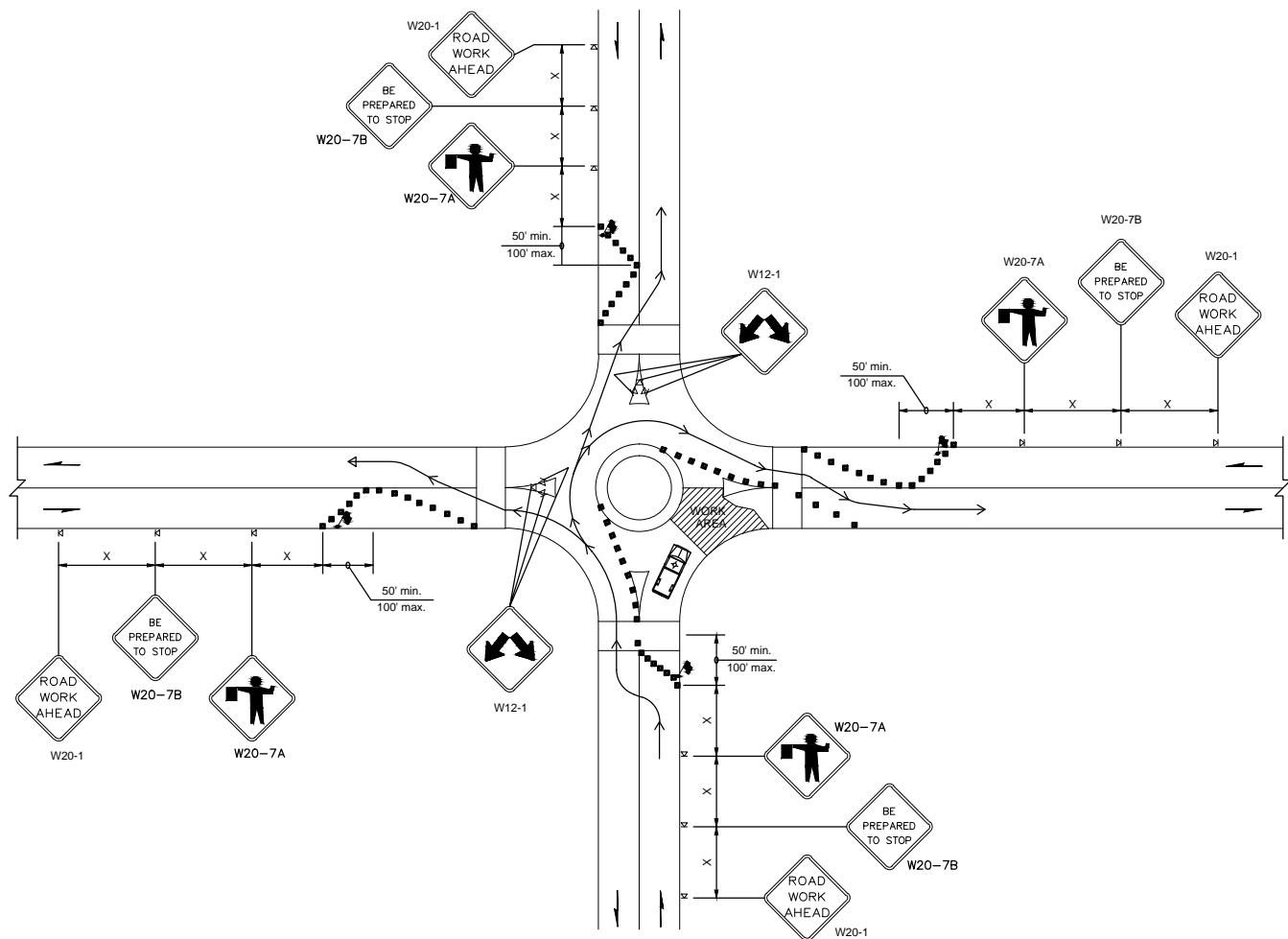
NUMBER OF CHANNELIZATION DEVICES (CONES)

Offset cones 1 foot maximum.

NOTE 1: MAINTAIN LOCAL ACCESS AND PROTECTED WALKWAYS AT ALL TIMES. PROVIDE AND MAINTAIN BARRICADES, SIGNS, LIGHTS, ETC., AS PER "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AT ALL TIMES. STREETS AND WALKWAYS SHALL BE KEPT CLEAR OF DEBRIS DROPPED OR TRACKED BY VEHICLES ENTERING OR EXITING THE WORK SITE. FAILURE TO COMPLY WILL RESULT IN A STOP WORK ORDER AND/OR CITATION.

NOTE 2: NO WORK SHALL BE SCHEDULED ON STREETS OR WALKWAYS WITHIN THE CITY OF TACOMA BUSINESS DISTRICTS FROM THANKSGIVING DAY THROUGH NEW YEAR'S DAY.

NOTE 3: SIGN SPACING: URBAN LOW SPEED 25-30 MPH SIGNS MUST BE PLACED 100' APART. URBAN HIGH SPEED 35-40 MPH SIGNS MUST BE PLACED 350' APART.



LEGEND

1. Night work requires additional roadway lighting at flagging stations, refer to WSDOT Standard Specifications for additional details
2. Protective vehicle recommended – may be a work vehicle.
3. Each roundabout location is unique and the traffic control must be developed to meet the specific conditions of the location and the work operation.
4. If the work and all work vehicles are off of the travel lanes and island apron, a single Road Work Ahead sign per approach is all that is required. Refer to additional guidance in the MUTCD manual for further information.
5. Consider an additional flagger in center island to assist traffic movement through roundabout or additional signing as appropriate.

LEGEND

- FLAGGING STATION
- SIGN LOCATION
- CHANNELIZING DEVICES
- PROTECTIVE VEHICLE – RECOMMENDED
- VEHICLE TRAVEL PATH DURING A FLAGGING PHASE

TYPICAL ROUNDABOUT TRAFFIC CONTROL WITH FLAGGERS

☐ APPROVED BY: _____
☐ APPROVED WITH CONDITIONS BY: _____ DATE: _____

START TRAFFIC CONTROL SET UP DATE: _____ OFF PEAK 9:00 AM WEEKDAYS

MUST BE OUT OF THE ROAD BY DATE: _____ OFF PEAK 3:30 PM WEEKDAYS

EVENING AND WEEKENDS ONLY

START TRAFFIC CONTROL SET UP DATE & TIME: _____

MUST BE OUT OF THE ROAD BY DATE & TIME: _____

MERGING TAPER LENGTHS FOR CONE PATTERN (All minimums)

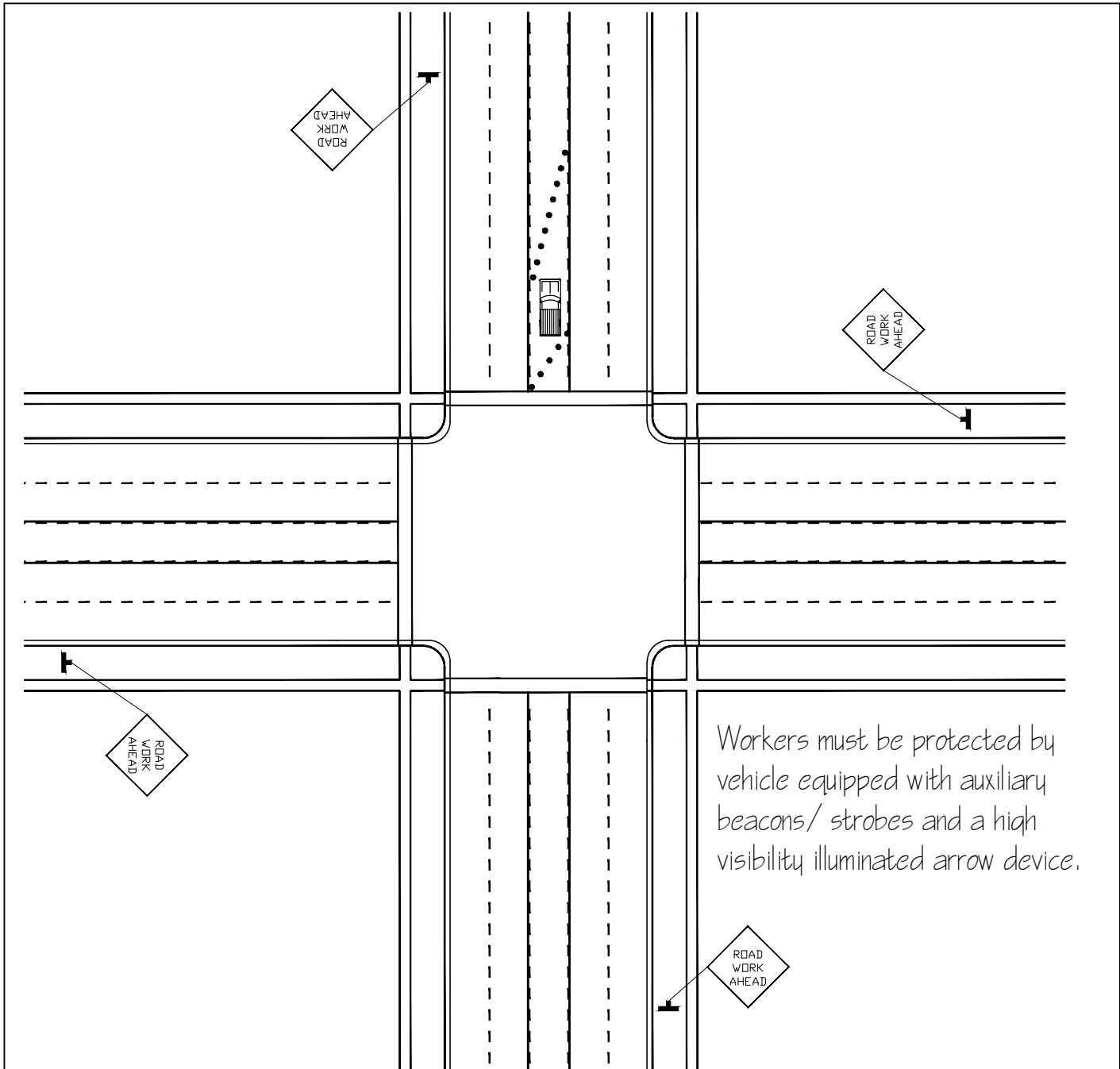
MPH	10	15	20	25	30	35	40
8'	14	30	54	84	120	164	214
10'	17	38	67	105	150	204	267
12'	20	45	80	125	180	245	320
14'	24	53	94	146	210	286	374
16'	27	60	107	167	240	327	427
NUMBER OF CHANNELIZATION DEVICES (CONES)							
Offset cones 1 foot maximum.							

NOTE 1: MAINTAIN LOCAL ACCESS AND PROTECTED WALKWAYS AT ALL TIMES. PROVIDE AND MAINTAIN BARRICADES, SIGNS, LIGHTS, ETC., AS PER "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AT ALL TIMES. STREETS AND WALKWAYS SHALL BE KEPT CLEAR OF DEBRIS DROPPED OR TRACKED BY VEHICLES ENTERING OR EXITING THE WORK SITE. FAILURE TO COMPLY WILL RESULT IN A STOP WORK ORDER AND/OR CITATION.

NOTE 2: NO WORK SHALL BE SCHEDULED ON STREETS OR WALKWAYS WITHIN THE CITY OF TACOMA BUSINESS DISTRICTS FROM THANKSGIVING DAY THROUGH NEW YEAR'S DAY.

NOTE 3: SIGN SPACING: URBAN LOW SPEED 25-30 MPH SIGNS MUST BE PLACED 100' APART. URBAN HIGH SPEED 35-40 MPH SIGNS MUST BE PLACED 350' APART.

SAMPLE SETUP



CENTER LANE CLOSURE AT INTERSECTION UNDER 60 MINUTES

☐ APPROVED BY: _____
☐ APPROVED WITH CONDITIONS BY: _____ DATE: _____

START TRAFFIC CONTROL SET UP DATE: _____ OFF PEAK 9:00 AM WEEKDAYS

MUST BE OUT OF THE ROAD BY DATE: _____ OFF PEAK 3:30 PM WEEKDAYS

EVENING AND WEEKENDS ONLY

START TRAFFIC CONTROL SET UP DATE & TIME: _____

MUST BE OUT OF THE ROAD BY DATE & TIME: _____

MERGING TAPER LENGTHS FOR CONE PATTERN

(All minimums)

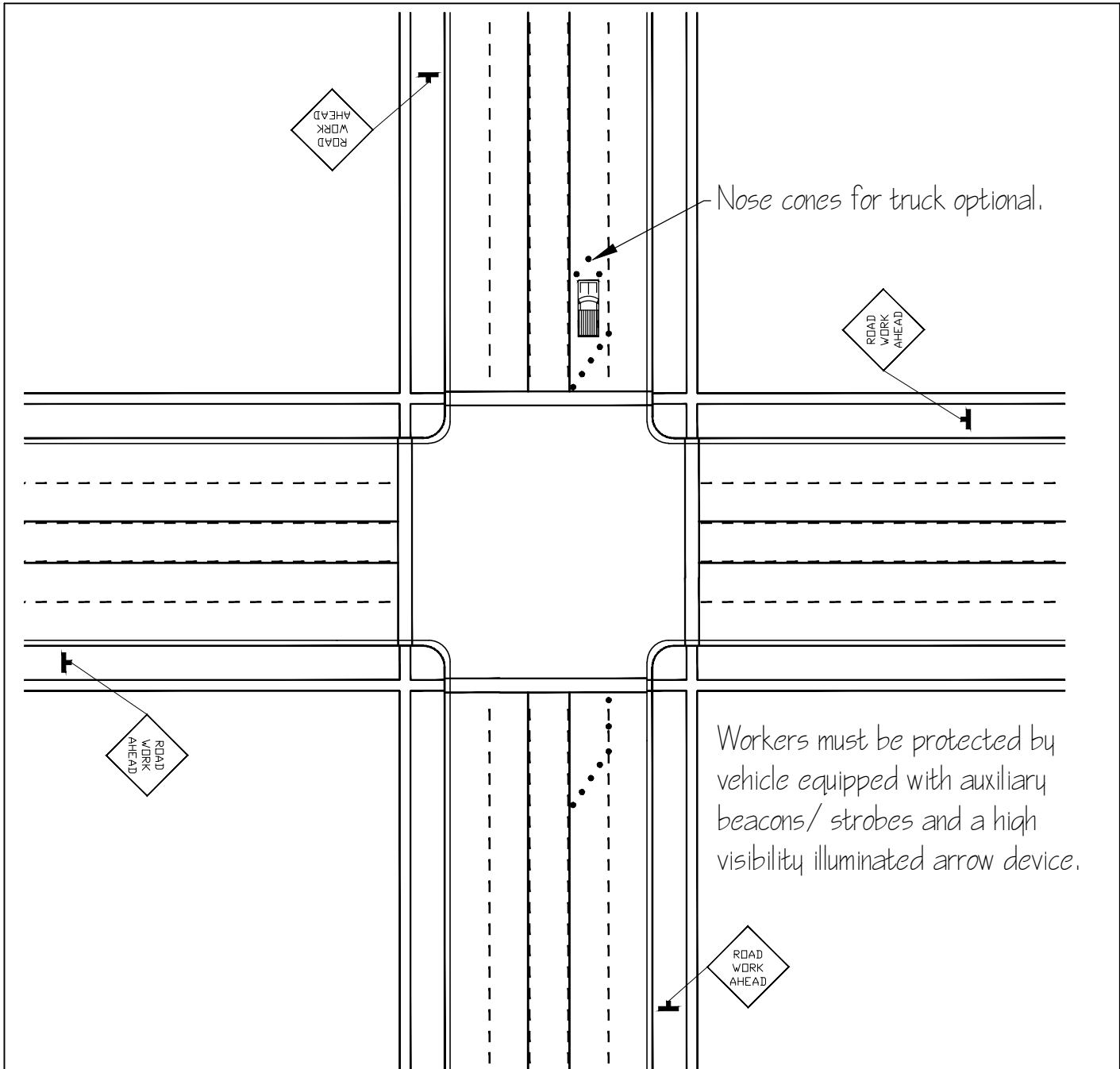
MPH	10	15	20	25	30	35	40
8'	14	30	54	84	120	164	214
10'	17	38	67	105	150	204	267
12'	20	45	80	125	180	245	320
14'	24	53	94	146	210	286	374
16'	27	60	107	167	240	327	427
NUMBER OF CHANNELIZATION DEVICES (CONES)							
Offset cones 1 foot maximum.							

NOTE 1: MAINTAIN LOCAL ACCESS AND PROTECTED WALKWAYS AT ALL TIMES. PROVIDE AND MAINTAIN BARRICADES, SIGNS, LIGHTS, ETC., AS PER "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AT ALL TIMES. STREETS AND WALKWAYS SHALL BE KEPT CLEAR OF DEBRIS DROPPED OR TRACKED BY VEHICLES ENTERING OR EXITING THE WORK SITE. FAILURE TO COMPLY WILL RESULT IN A STOP WORK ORDER AND/OR CITATION.

NOTE 2: NO WORK SHALL BE SCHEDULED ON STREETS OR WALKWAYS WITHIN THE CITY OF TACOMA BUSINESS DISTRICTS FROM THANKSGIVING DAY THROUGH NEW YEAR'S DAY.

NOTE 3: SIGN SPACING: URBAN LOW SPEED 25-30 MPH SIGNS MUST BE PLACED 100' APART. URBAN HIGH SPEED 35-40 MPH SIGNS MUST BE PLACED 350' APART.

SAMPLE SETUP



INSIDE LANE CLOSURE AT INTERSECTION UNDER 60 MINUTES

☐ APPROVED BY: _____
☐ APPROVED WITH CONDITIONS BY: _____ DATE: _____

START TRAFFIC CONTROL SET UP DATE: _____ OFF PEAK 9:00 AM WEEKDAYS

MUST BE OUT OF THE ROAD BY DATE: _____ OFF PEAK 3:30 PM WEEKDAYS

EVENING AND WEEKENDS ONLY

START TRAFFIC CONTROL SET UP DATE & TIME: _____

MUST BE OUT OF THE ROAD BY DATE & TIME: _____

MERGING TAPER LENGTHS FOR CONE PATTERN (All minimums)

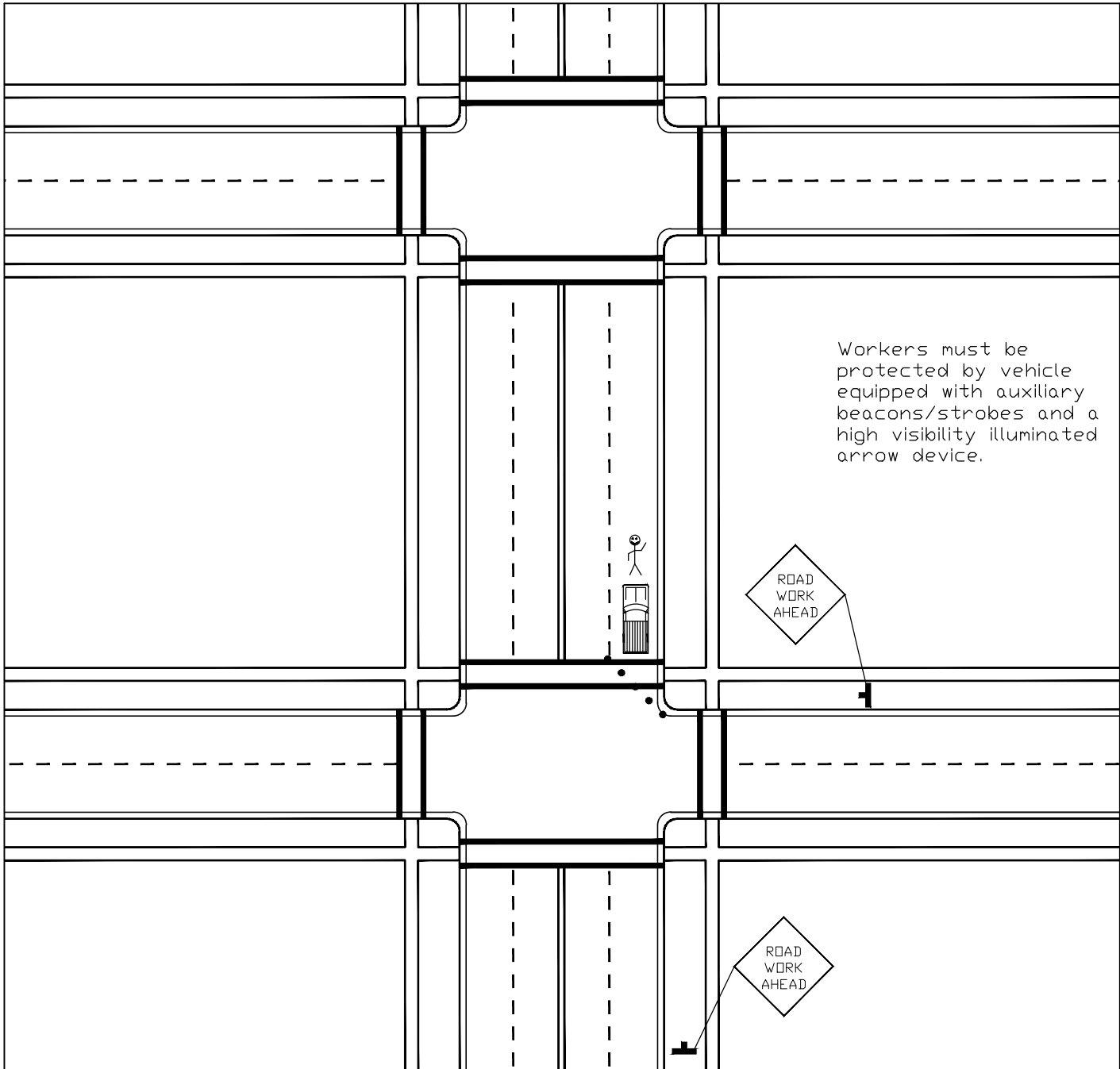
MPH	10	15	20	25	30	35	40	
LANE WIDTH	8'	14	30	54	84	120	164	214
	10'	17	38	67	105	150	204	267
	12'	20	45	80	125	180	245	320
	14'	24	53	94	146	210	286	374
	16'	27	60	107	167	240	327	427
NUMBER OF CHANNELIZATION DEVICES (CONES)								
Offset cones 1 foot maximum.								

NOTE 1: MAINTAIN LOCAL ACCESS AND PROTECTED WALKWAYS AT ALL TIMES. PROVIDE AND MAINTAIN BARRICADES, SIGNS, LIGHTS, ETC., AS PER "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AT ALL TIMES. STREETS AND WALKWAYS SHALL BE KEPT CLEAR OF DEBRIS DROPPED OR TRACKED BY VEHICLES ENTERING OR EXITING THE WORK SITE. FAILURE TO COMPLY WILL RESULT IN A STOP WORK ORDER AND/OR CITATION.

NOTE 2: NO WORK SHALL BE SCHEDULED ON STREETS OR WALKWAYS WITHIN THE CITY OF TACOMA BUSINESS DISTRICTS FROM THANKSGIVING DAY THROUGH NEW YEAR'S DAY.

NOTE 3: SIGN SPACING: URBAN LOW SPEED 25-30 MPH SIGNS MUST BE PLACED 100' APART. URBAN HIGH SPEED 35-40 MPH SIGNS MUST BE PLACED 350' APART.

SAMPLE SETUP



LANE CLOSURE AT INTERSECTION UNDER 60 MINUTES

☐ APPROVED BY: _____
☐ APPROVED WITH CONDITIONS BY: _____ DATE: _____

START TRAFFIC CONTROL SET UP DATE: _____ OFF PEAK 9:00 AM WEEKDAYS

MUST BE OUT OF THE ROAD BY DATE: _____ OFF PEAK 3:30 PM WEEKDAYS

EVENING AND WEEKENDS ONLY

START TRAFFIC CONTROL SET UP DATE & TIME: _____

MUST BE OUT OF THE ROAD BY DATE & TIME: _____

MERGING TAPER LENGTHS FOR CONE PATTERN

(All minimums)

MPH	10	15	20	25	30	35	40
8'	14	30	54	84	120	164	214
10'	17	38	67	105	150	204	267
12'	20	45	80	125	180	245	320
14'	24	53	94	146	210	286	374
16'	27	60	107	167	240	327	427

LANE WIDTH

NUMBER OF CHANNELIZATION DEVICES (CONES)

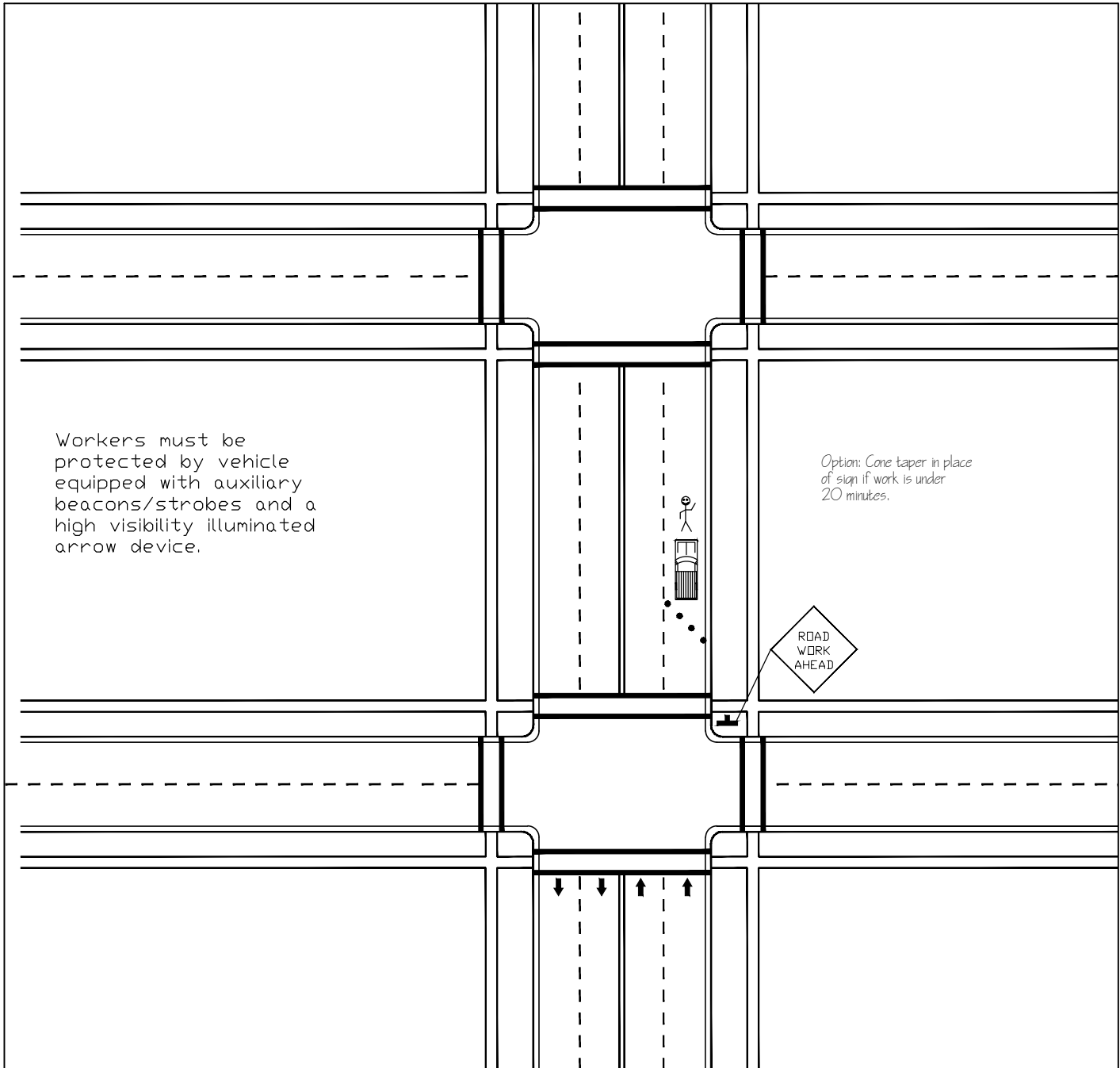
Offset cones 1 foot maximum.

NOTE 1: MAINTAIN LOCAL ACCESS AND PROTECTED WALKWAYS AT ALL TIMES. PROVIDE AND MAINTAIN BARRICADES, SIGNS, LIGHTS, ETC., AS PER "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AT ALL TIMES. STREETS AND WALKWAYS SHALL BE KEPT CLEAR OF DEBRIS DROPPED OR TRACKED BY VEHICLES ENTERING OR EXITING THE WORK SITE. FAILURE TO COMPLY WILL RESULT IN A STOP WORK ORDER AND/OR CITATION.

NOTE 2: NO WORK SHALL BE SCHEDULED ON STREETS OR WALKWAYS WITHIN THE CITY OF TACOMA BUSINESS DISTRICTS FROM THANKSGIVING DAY THROUGH NEW YEAR'S DAY.

NOTE 3: SIGN SPACING: URBAN LOW SPEED 25-30 MPH SIGNS MUST BE PLACED 100' APART. URBAN HIGH SPEED 35-40 MPH SIGNS MUST BE PLACED 350' APART.

SAMPLE SETUP



MID-BLOCK LANE CLOSURE UNDER 60 MINUTES

☐ APPROVED BY: _____
☐ APPROVED WITH CONDITIONS BY: _____ DATE: _____

START TRAFFIC CONTROL SET UP DATE: _____ OFF PEAK 9:00 AM WEEKDAYS

MUST BE OUT OF THE ROAD BY DATE: _____ OFF PEAK 3:30 PM WEEKDAYS

EVENING AND WEEKENDS ONLY

START TRAFFIC CONTROL SET UP DATE & TIME: _____

MUST BE OUT OF THE ROAD BY DATE & TIME: _____

MERGING TAPER LENGTHS FOR CONE PATTERN

(All minimums)

MPH	10	15	20	25	30	35	40
8'	14	30	54	84	120	164	214
10'	17	38	67	105	150	204	267
12'	20	45	80	125	180	245	320
14'	24	53	94	146	210	286	374
16'	27	60	107	167	240	327	427

LANE WIDTH

NUMBER OF CHANNELIZATION DEVICES (CONES)

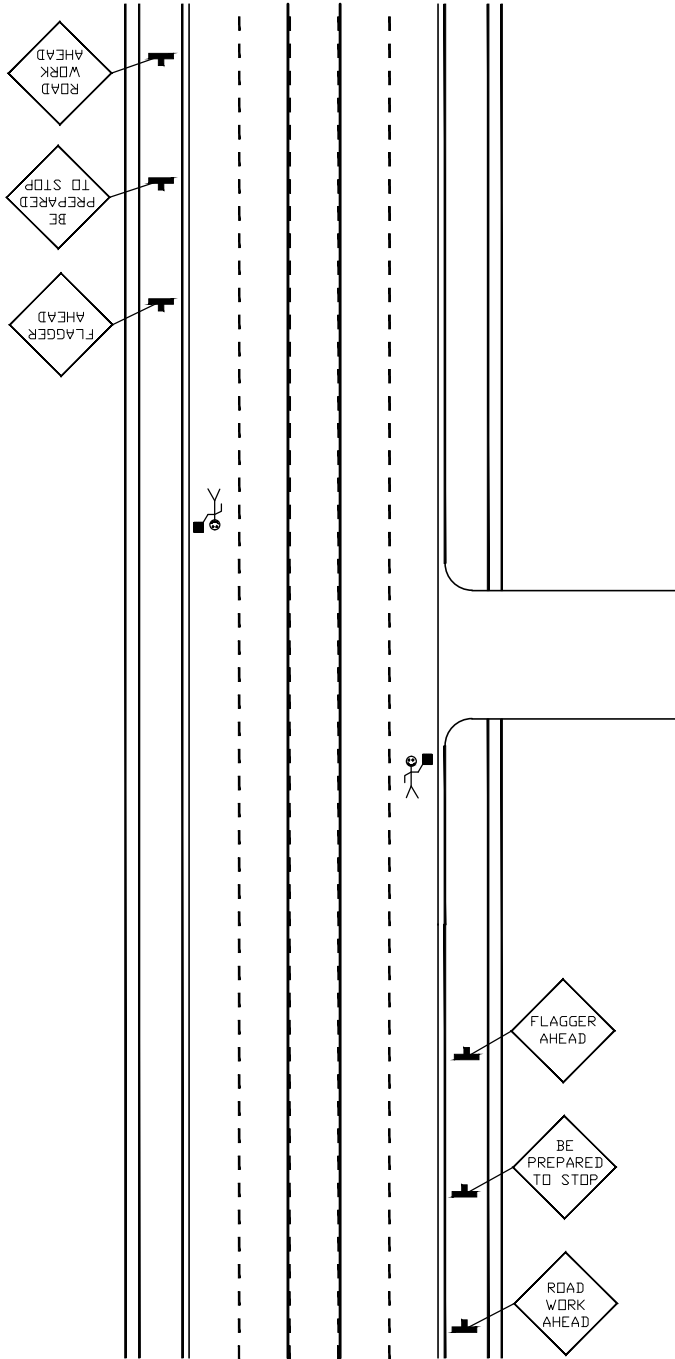
Offset cones 1 foot maximum.

NOTE 1: MAINTAIN LOCAL ACCESS AND PROTECTED WALKWAYS AT ALL TIMES. PROVIDE AND MAINTAIN BARRICADES, SIGNS, LIGHTS, ETC., AS PER "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AT ALL TIMES. STREETS AND WALKWAYS SHALL BE KEPT CLEAR OF DEBRIS DROPPED OR TRACKED BY VEHICLES ENTERING OR EXITING THE WORK SITE. FAILURE TO COMPLY WILL RESULT IN A STOP WORK ORDER AND/OR CITATION.

NOTE 2: NO WORK SHALL BE SCHEDULED ON STREETS OR WALKWAYS WITHIN THE CITY OF TACOMA BUSINESS DISTRICTS FROM THANKSGIVING DAY THROUGH NEW YEAR'S DAY.

NOTE 3: SIGN SPACING: URBAN LOW SPEED 25-30 MPH SIGNS MUST BE PLACED 100' APART. URBAN HIGH SPEED 35-40 MPH SIGNS MUST BE PLACED 350' APART.

SAMPLE SETUP



TRAFFIC CONTROL RECOMMENDATIONS FOR TRUCK CROSSING

- ☐ APPROVED BY: _____
☐ APPROVED WITH CONDITIONS BY: _____ DATE: _____

START TRAFFIC CONTROL SET UP DATE: _____ OFF PEAK 9:00 AM WEEKDAYS

MUST BE OUT OF THE ROAD BY DATE: _____ OFF PEAK 3:30 PM WEEKDAYS

EVENING AND WEEKENDS ONLY

START TRAFFIC CONTROL SET UP DATE & TIME: _____

MUST BE OUT OF THE ROAD BY DATE & TIME: _____

MERGING TAPER LENGTHS FOR CONE PATTERN (All minimums)

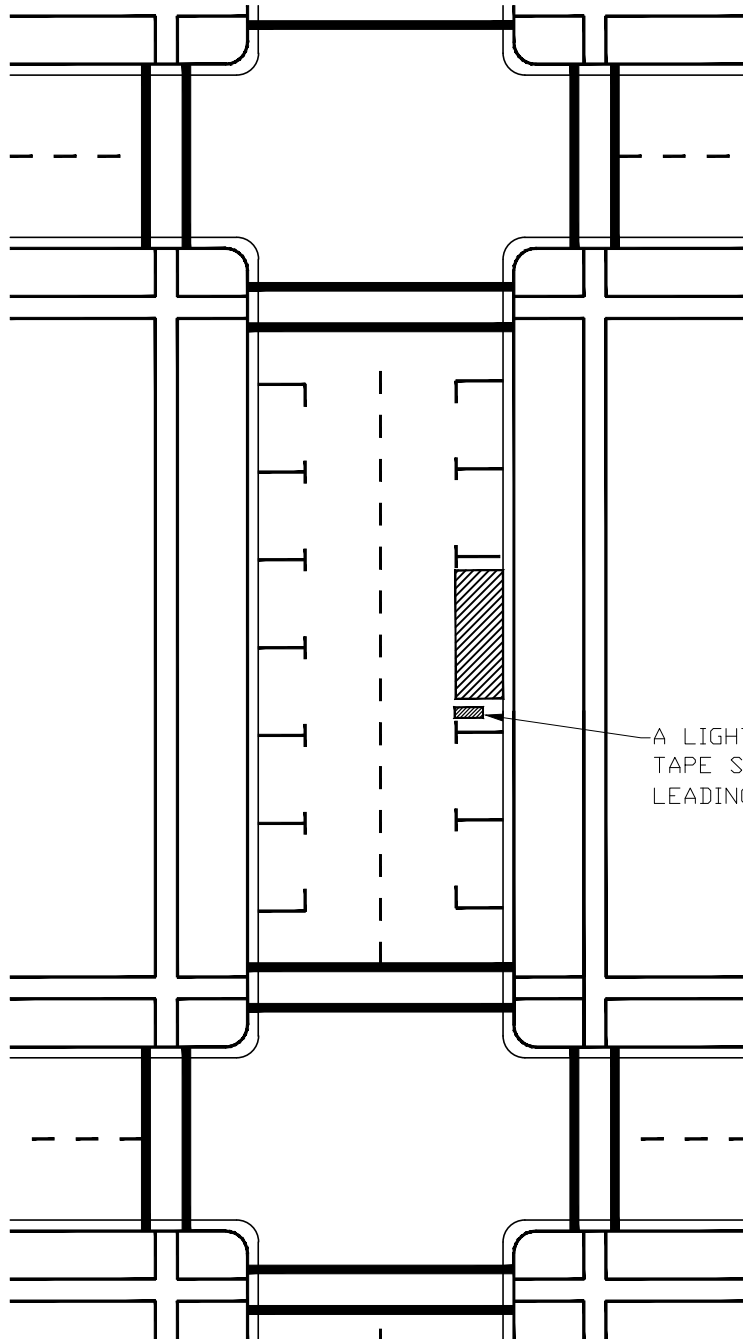
MPH	10	15	20	25	30	35	40
8'	14	30	54	84	120	164	214
10'	17	38	67	105	150	204	267
12'	20	45	80	125	180	245	320
14'	24	53	94	146	210	286	374
16'	27	60	107	167	240	327	427
NUMBER OF CHANNELIZATION DEVICES (CONES)							
Offset cones 1 foot maximum.							

NOTE 1: MAINTAIN LOCAL ACCESS AND PROTECTED WALKWAYS AT ALL TIMES. PROVIDE AND MAINTAIN BARRICADES, SIGNS, LIGHTS, ETC., AS PER "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AT ALL TIMES. STREETS AND WALKWAYS SHALL BE KEPT CLEAR OF DEBRIS DROPPED OR TRACKED BY VEHICLES ENTERING OR EXITING THE WORK SITE. FAILURE TO COMPLY WILL RESULT IN A STOP WORK ORDER AND/OR CITATION.

NOTE 2: NO WORK SHALL BE SCHEDULED ON STREETS OR WALKWAYS WITHIN THE CITY OF TACOMA BUSINESS DISTRICTS FROM THANKSGIVING DAY THROUGH NEW YEAR'S DAY.

NOTE 3: SIGN SPACING: URBAN LOW SPEED 25-30 MPH SIGNS MUST BE PLACED 100' APART. URBAN HIGH SPEED 35-40 MPH SIGNS MUST BE PLACED 350' APART.

SAMPLE SETUP



A LIGHTED BARRICADE OR REFLECTIVE TAPE SHALL BE INSTALLED ON THE LEADING EDGE OF THE DUMPSTER.

TRAFFIC CONTROL FOR A PORTABLE DUMPSTER

☐ APPROVED BY: _____
☐ APPROVED WITH CONDITIONS BY: _____ DATE: _____

START TRAFFIC CONTROL SET UP DATE: _____ OFF PEAK 9:00 AM WEEKDAYS

MUST BE OUT OF THE ROAD BY DATE: _____ OFF PEAK 3:30 PM WEEKDAYS

EVENING AND WEEKENDS ONLY

START TRAFFIC CONTROL SET UP DATE & TIME: _____

MUST BE OUT OF THE ROAD BY DATE & TIME: _____

MERGING TAPER LENGTHS FOR CONE PATTERN (All minimums)

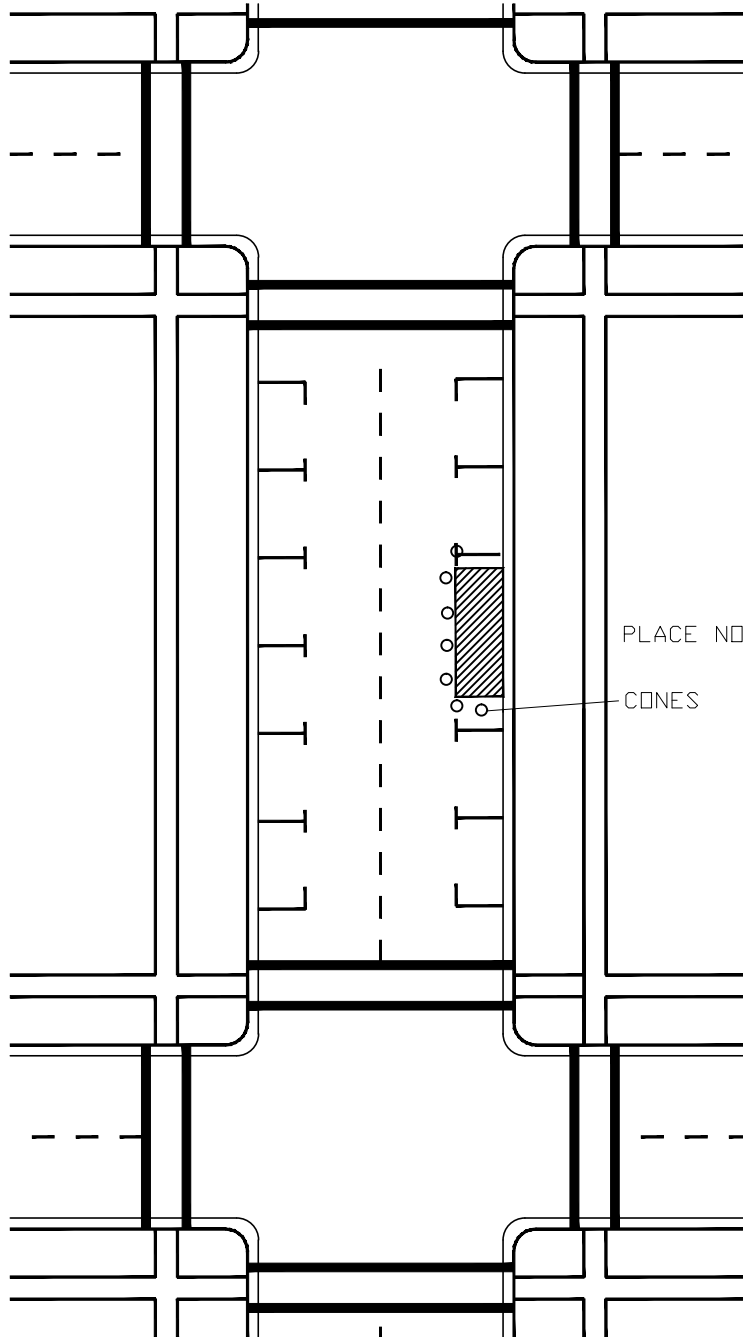
MPH	10	15	20	25	30	35	40
8'	14	30	54	84	120	164	214
10'	17	38	67	105	150	204	267
12'	20	45	80	125	180	245	320
14'	24	53	94	146	210	286	374
16'	27	60	107	167	240	327	427
NUMBER OF CHANNELIZATION DEVICES (CONES)							
Offset cones 1 foot maximum.							

NOTE 1: MAINTAIN LOCAL ACCESS AND PROTECTED WALKWAYS AT ALL TIMES. PROVIDE AND MAINTAIN BARRICADES, SIGNS, LIGHTS, ETC., AS PER "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AT ALL TIMES. STREETS AND WALKWAYS SHALL BE KEPT CLEAR OF DEBRIS DROPPED OR TRACKED BY VEHICLES ENTERING OR EXITING THE WORK SITE. FAILURE TO COMPLY WILL RESULT IN A STOP WORK ORDER AND/OR CITATION.

NOTE 2: NO WORK SHALL BE SCHEDULED ON STREETS OR WALKWAYS WITHIN THE CITY OF TACOMA BUSINESS DISTRICTS FROM THANKSGIVING DAY THROUGH NEW YEAR'S DAY.

NOTE 3: SIGN SPACING: URBAN LOW SPEED 25-30 MPH SIGNS MUST BE PLACED 100' APART. URBAN HIGH SPEED 35-40 MPH SIGNS MUST BE PLACED 350' APART.

SAMPLE SETUP



TRAFFIC CONTROL FOR MOVING VAN

☐ APPROVED BY: _____
☐ APPROVED WITH CONDITIONS BY: _____ DATE: _____

START TRAFFIC CONTROL SET UP DATE: _____ OFF PEAK 9:00 AM WEEKDAYS

MUST BE OUT OF THE ROAD BY DATE: _____ OFF PEAK 3:30 PM WEEKDAYS

EVENING AND WEEKENDS ONLY

START TRAFFIC CONTROL SET UP DATE & TIME: _____

MUST BE OUT OF THE ROAD BY DATE & TIME: _____

MERGING TAPER LENGTHS FOR CONE PATTERN

(All minimums)

MPH	10	15	20	25	30	35	40
8'	14	30	54	84	120	164	214
10'	17	38	67	105	150	204	267
12'	20	45	80	125	180	245	320
14'	24	53	94	146	210	286	374
16'	27	60	107	167	240	327	427

LANE WIDTH

NUMBER OF CHANNELIZATION DEVICES (CONES)

Offset cones 1 foot maximum.

NOTE 1: MAINTAIN LOCAL ACCESS AND PROTECTED WALKWAYS AT ALL TIMES. PROVIDE AND MAINTAIN BARRICADES, SIGNS, LIGHTS, ETC., AS PER "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AT ALL TIMES. STREETS AND WALKWAYS SHALL BE KEPT CLEAR OF DEBRIS DROPPED OR TRACKED BY VEHICLES ENTERING OR EXITING THE WORK SITE. FAILURE TO COMPLY WILL RESULT IN A STOP WORK ORDER AND/OR CITATION.

NOTE 2: NO WORK SHALL BE SCHEDULED ON STREETS OR WALKWAYS WITHIN THE CITY OF TACOMA BUSINESS DISTRICTS FROM THANKSGIVING DAY THROUGH NEW YEAR'S DAY.

NOTE 3: SIGN SPACING: URBAN LOW SPEED 25-30 MPH SIGNS MUST BE PLACED 100' APART. URBAN HIGH SPEED 35-40 MPH SIGNS MUST BE PLACED 350' APART.

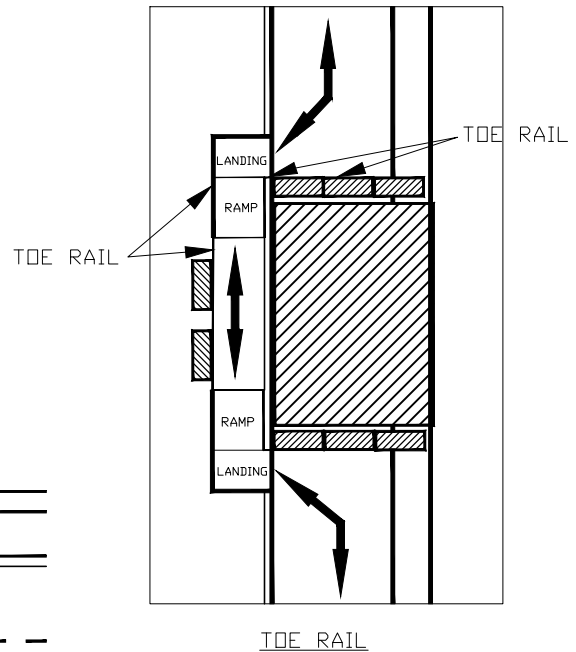
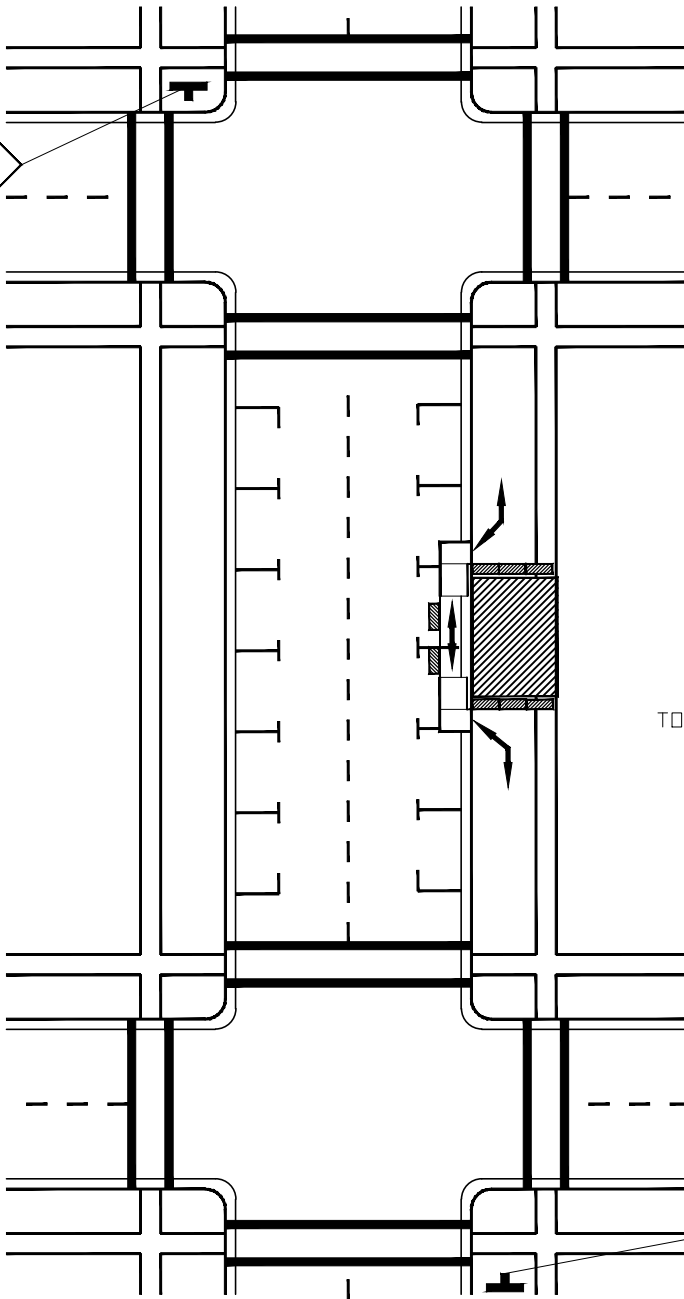
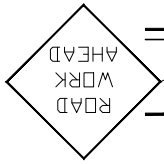
SAMPLE SETUP

NOTE:

PEDESTRIAN WALKWAYS SHALL BE A MINIMUM OF 5 FEET WIDE.

TOE RAIL ON RAMP ENTRANCE AND BARRICADE TOE RAIL SHALL HAVE NO GAPS AND BE PARALLEL.

SEE BYPASS RAMP DETAIL FOR PROPER CONSTRUCTION OF RAMP TO ALLOW FOR PEDESTRIAN AND DISABILITY ACCESS.



BYPASS
WALKWAY FOR
PEDESTRIANS

☐ APPROVED BY: _____
☐ APPROVED WITH CONDITIONS BY: _____ DATE: _____

START TRAFFIC CONTROL SET UP DATE: _____ OFF PEAK 9:00 AM WEEKDAYS

MUST BE OUT OF THE ROAD BY DATE: _____ OFF PEAK 3:30 PM WEEKDAYS

EVENING AND WEEKENDS ONLY

START TRAFFIC CONTROL SET UP DATE & TIME: _____

MUST BE OUT OF THE ROAD BY DATE & TIME: _____

MERGING TAPER LENGTHS FOR CONE PATTERN (All minimums)

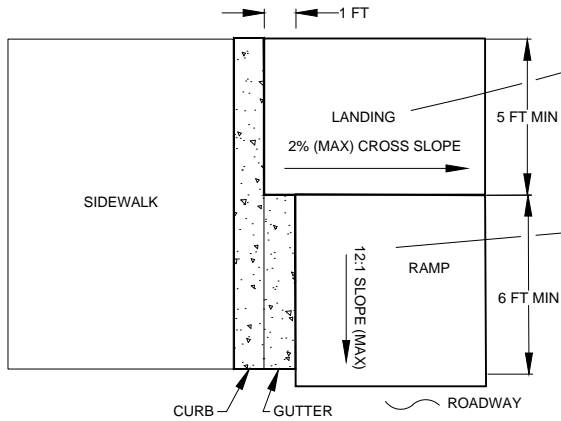
MPH	10	15	20	25	30	35	40
8'	14	30	54	84	120	164	214
10'	17	38	67	105	150	204	267
12'	20	45	80	125	180	245	320
14'	24	53	94	146	210	286	374
16'	27	60	107	167	240	327	427
NUMBER OF CHANNELIZATION DEVICES (CONES)							
Offset cones 1 foot maximum.							

NOTE 1: MAINTAIN LOCAL ACCESS AND PROTECTED WALKWAYS AT ALL TIMES. PROVIDE AND MAINTAIN BARRICADES, SIGNS, LIGHTS, ETC., AS PER "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AT ALL TIMES. STREETS AND WALKWAYS SHALL BE KEPT CLEAR OF DEBRIS DROPPED OR TRACKED BY VEHICLES ENTERING OR EXITING THE WORK SITE. FAILURE TO COMPLY WILL RESULT IN A STOP WORK ORDER AND/OR CITATION.

NOTE 2: NO WORK SHALL BE SCHEDULED ON STREETS OR WALKWAYS WITHIN THE CITY OF TACOMA BUSINESS DISTRICTS FROM THANKSGIVING DAY THROUGH NEW YEAR'S DAY.

NOTE 3: SIGN SPACING: URBAN LOW SPEED 25-30 MPH SIGNS MUST BE PLACED 100' APART. URBAN HIGH SPEED 35-40 MPH SIGNS MUST BE PLACED 350' APART.

SAMPLE SETUP



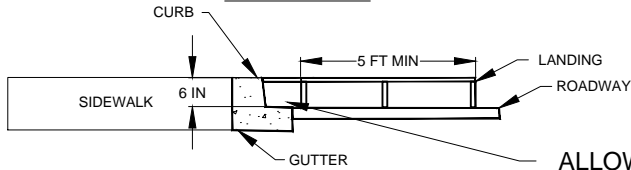
RAMP LANDING SHALL BE 1" X 5' X 5' (MIN) AND FLUSH WITH THE TOP OF THE CURB

RAMP SHALL BE 1" X 5' X 6' (MIN) AND HAVE A 600 POUND LOAD CAPACITY MIN.

NOTES:

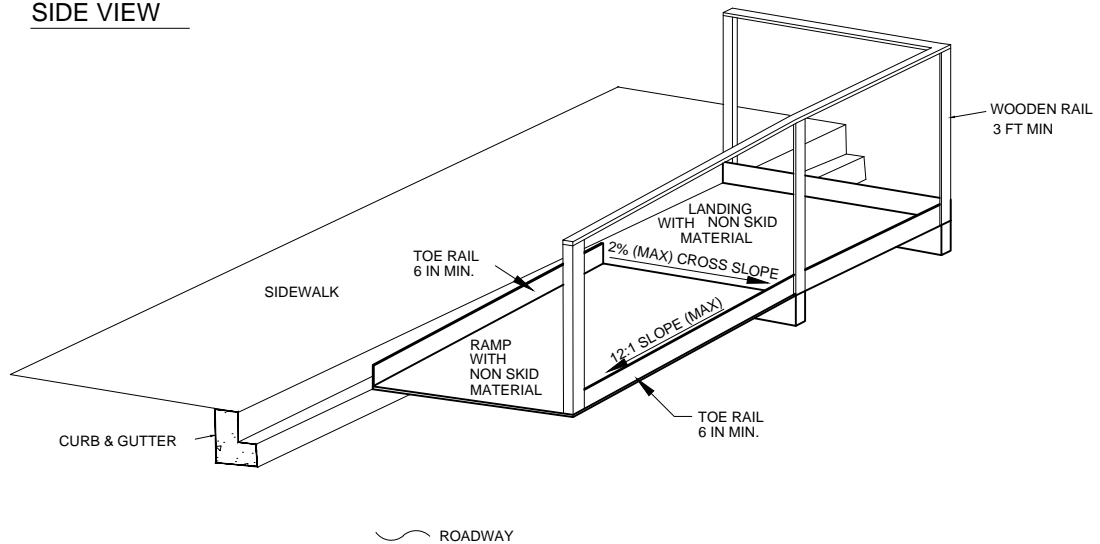
1. CONTACT AND COORDINATE IMPACTED TRANSIT AGENCIES PRIOR TO IMPLEMENTING ANY CLOSURES.
2. ADA ACCOMODATIONS MUST BE ADDRESSED AND CONSIDERED FOR ALL WORK OPERATIONS. EXISTING ADA FACILITIES MUST BE MAINTAINED.

TOP VIEW



SIDE VIEW

ALLOW FOR STORM DRAINAGE IN GUTTER LINE



PEDESTRIAN BYPASS RAMPS FOR TEMPORARY TRAFFIC CONTROL MINIMUM STANDARDS

☐ APPROVED BY: _____
☐ APPROVED WITH CONDITIONS BY: _____ DATE: _____

START TRAFFIC CONTROL SET UP DATE: _____ OFF PEAK 9:00 AM WEEKDAYS

MUST BE OUT OF THE ROAD BY DATE: _____ OFF PEAK 3:30 PM WEEKDAYS

EVENING AND WEEKENDS ONLY

START TRAFFIC CONTROL SET UP DATE & TIME: _____

MUST BE OUT OF THE ROAD BY DATE & TIME: _____

MERGING TAPER LENGTHS FOR CONE PATTERN

(All minimums)

MPH	10	15	20	25	30	35	40
8'	14	30	54	84	120	164	214
10'	17	38	67	105	150	204	267
12'	20	45	80	125	180	245	320
14'	24	53	94	146	210	286	374
16'	27	60	107	167	240	327	427

LANE WIDTH

NUMBER OF CHANNELIZATION DEVICES (CONES)

Offset cones 1 foot maximum.

NOTE 1: MAINTAIN LOCAL ACCESS AND PROTECTED WALKWAYS AT ALL TIMES. PROVIDE AND MAINTAIN BARRICADES, SIGNS, LIGHTS, ETC, AS PER "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AT ALL TIMES. STREETS AND WALKWAYS SHALL BE KEPT CLEAR OF DEBRIS DROPPED OR TRACKED BY VEHICLES ENTERING OR EXITING THE WORK SITE. FAILURE TO COMPLY WILL RESULT IN A STOP WORK ORDER AND/OR CITATION.

NOTE 2: NO WORK SHALL BE SCHEDULED ON STREETS OR WALKWAYS WITHIN THE CITY OF TACOMA BUSINESS DISTRICTS FROM THANKSGIVING DAY THROUGH NEW YEAR'S DAY.

NOTE 3: SIGN SPACING: URBAN LOW SPEED 25-30 MPH SIGNS MUST BE PLACED 100' APART. URBAN HIGH SPEED 35-40 MPH SIGNS MUST BE PLACED 350' APART.

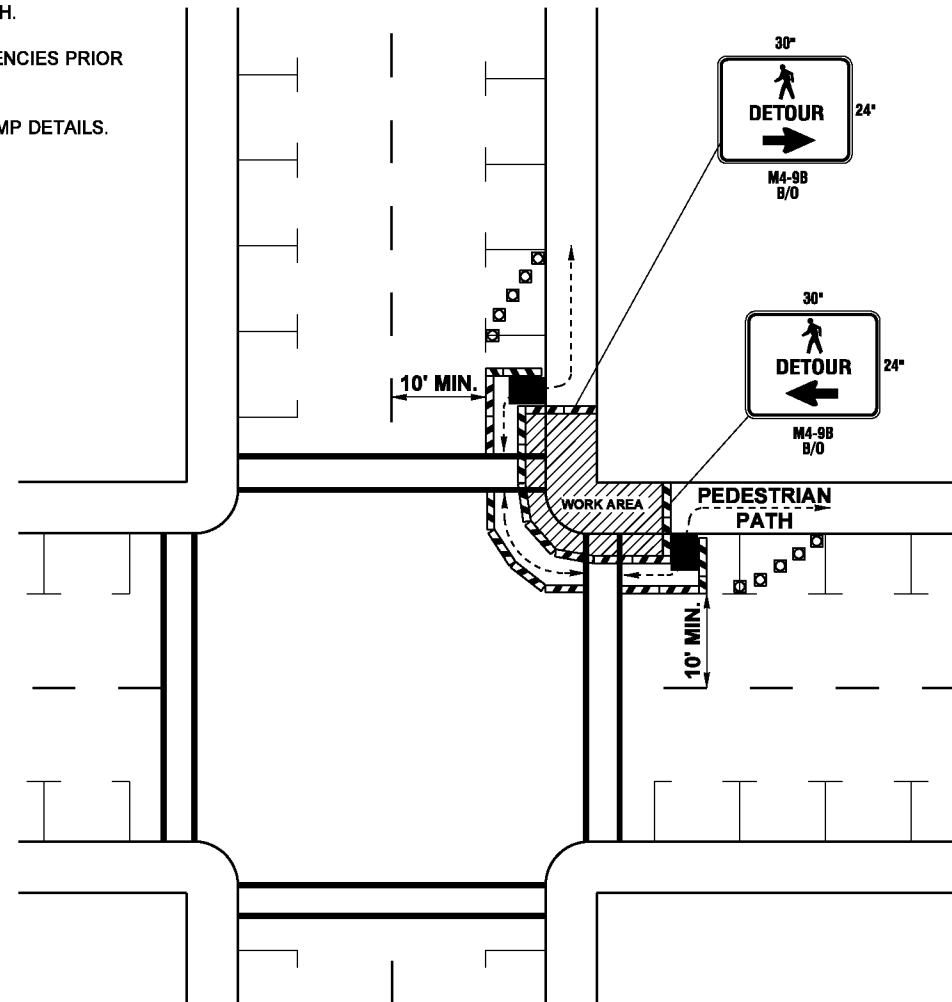


R8-3
24" x 30"
R/W

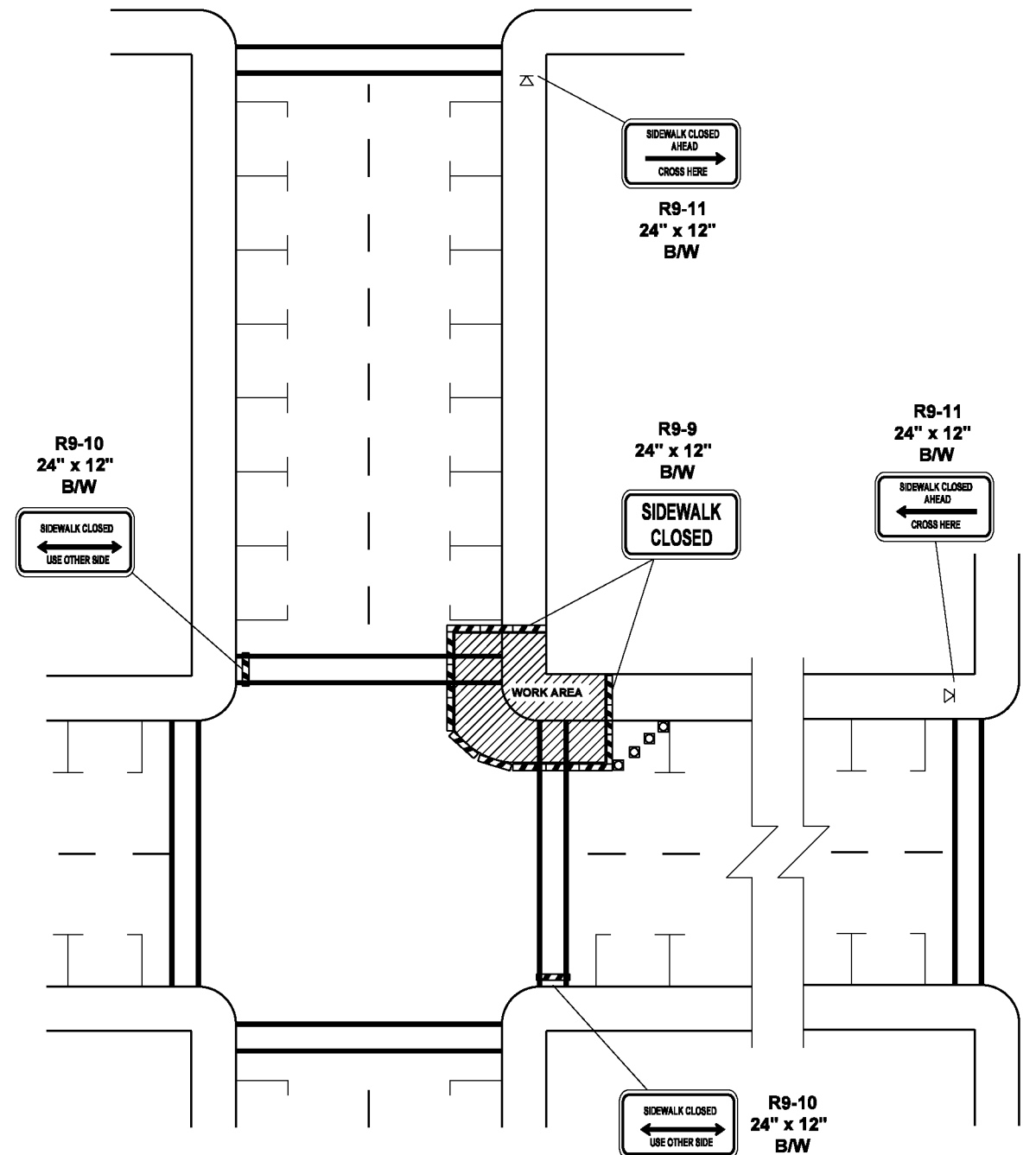
INSTALL ON TYPE 2 BARRICADES THROUGHOUT THE WORK AREA
24 HOURS PRIOR TO IMPLEMENTING TRAFFIC CONTROL.
PRIOR NOTIFICATION OF LOCAL LAW ENFORCEMENT REQUIRED.

NOTES:

1. CONTROLS SHOWN ARE FOR PEDESTRIAN TRAFFIC ONLY.
2. MAINTAIN A MINIMUM OF 48" FOR A PEDESTRIAN PATH.
3. CONTACT AND COORDINATE IMPACTED TRANSIT AGENCIES PRIOR TO IMPLEMENTING ANY CLOSURES.
4. SEE SHEET TC-52 FOR TEMPORARY PEDESTRIAN RAMP DETAILS.
5. ADA PEDESTRIAN FACILITIES MUST BE MAINTAINED.



SIDEWALK DIVERSION



SIDEWALK DETOUR

LEGEND

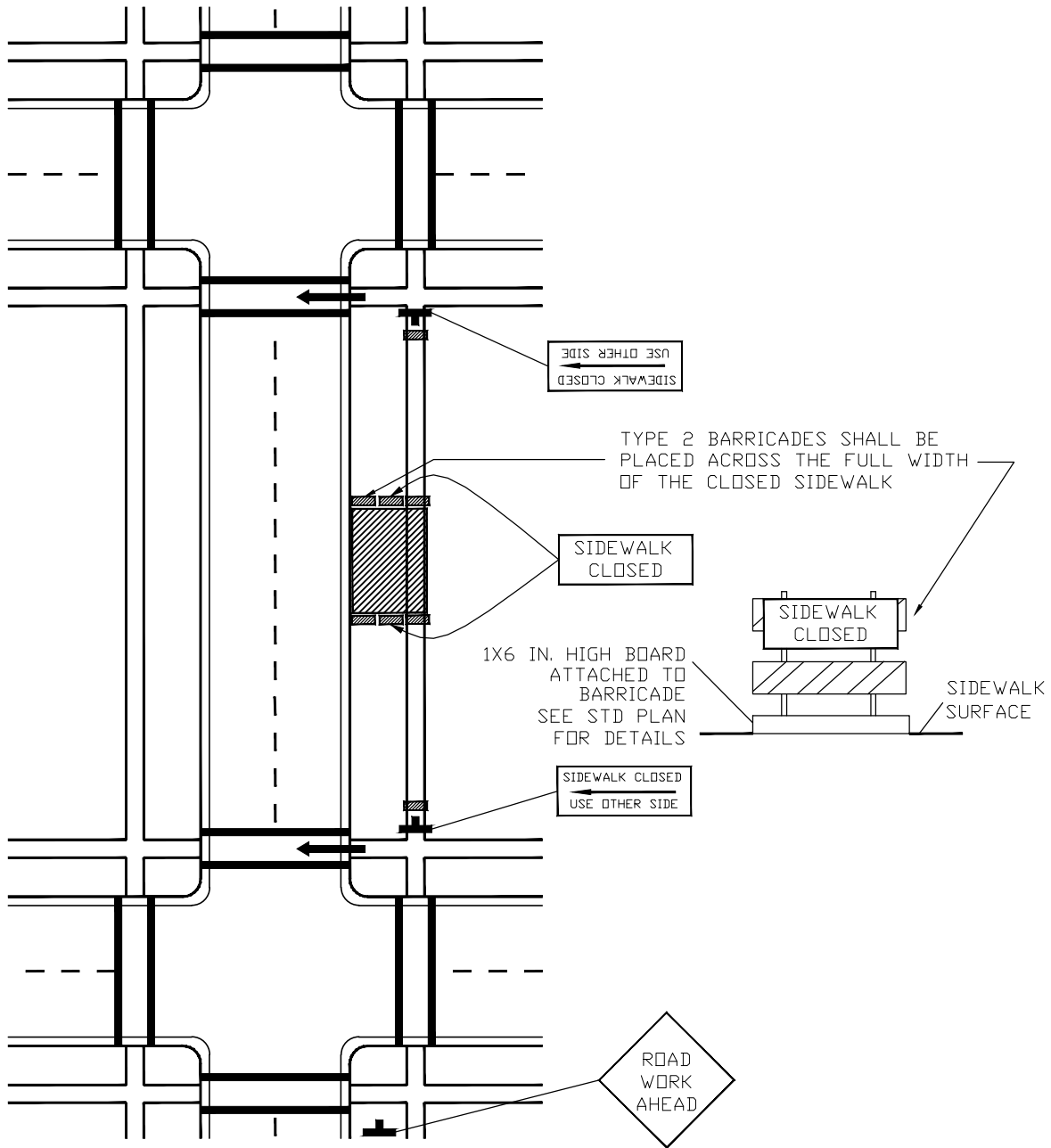
- TEMPORARY SIGN LOCATION
- CHANNELIZING DEVICES
- PEDESTRIAN CHANNELIZING DEVICES
- TEMPORARY PEDESTRIAN RAMP FOR SIDEWALKS

INTERSECTION PEDESTRIAN TRAFFIC CONTROL

NOT TO SCALE

FILE NAME		S:\Design R P& S\4-Standards\2-Plan Sheet Library\10-Work Zone Traffic Control (TC)\TC-16\TC-16.dgn				REGION NO.		STATE	FED.AID PROJ.NO.				TC16	
TIME	9:18:30 AM					10	WASH						SHEET	
DATE	9/19/2012										Washington State Department of Transportation		OF	
PLOTTED BY	CyfordL												SHEETS	
DESIGNED BY											PEDESTRIAN CONTROL AND PROTECTION			
ENTERED BY														
CHECKED BY														
PROJ. ENGR.														
REGIONAL ADM.		REVISION	DATE	BY										

SAMPLE SETUP



SIDEWALK
CLOSURE

☐ APPROVED BY: _____
☐ APPROVED WITH CONDITIONS BY: _____ DATE: _____

START TRAFFIC CONTROL SET UP DATE: _____ OFF PEAK 9:00 AM WEEKDAYS

MUST BE OUT OF THE ROAD BY DATE: _____ OFF PEAK 3:30 PM WEEKDAYS

EVENING AND WEEKENDS ONLY

START TRAFFIC CONTROL SET UP DATE & TIME: _____

MUST BE OUT OF THE ROAD BY DATE & TIME: _____

MERGING TAPER LENGTHS
FOR CONE PATTERN
(All minimums)

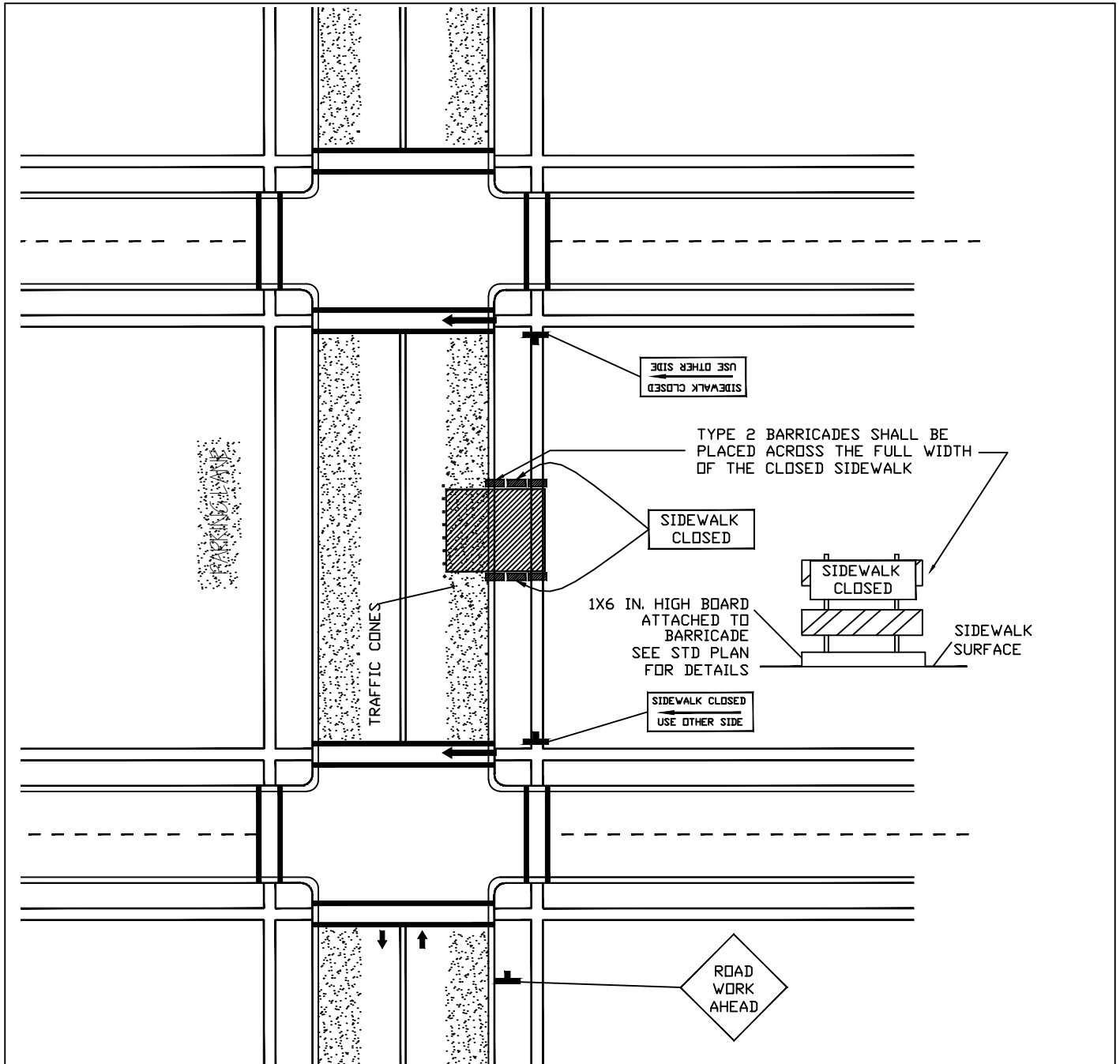
MPH	10	15	20	25	30	35	40
8'	14	30	54	84	120	164	214
10'	17	38	67	105	150	204	267
12'	20	45	80	125	180	245	320
14'	24	53	94	146	210	286	374
16'	27	60	107	167	240	327	427
NUMBER OF CHANNELIZATION DEVICES (CONES)							
Offset cones 1 foot maximum.							

NOTE 1: MAINTAIN LOCAL ACCESS AND PROTECTED WALKWAYS AT ALL TIMES. PROVIDE AND MAINTAIN BARRICADES, SIGNS, LIGHTS, ETC., AS PER "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AT ALL TIMES. STREETS AND WALKWAYS SHALL BE KEPT CLEAR OF DEBRIS DROPPED OR TRACKED BY VEHICLES ENTERING OR EXITING THE WORK SITE. FAILURE TO COMPLY WILL RESULT IN A STOP WORK ORDER AND/OR CITATION.

NOTE 2: NO WORK SHALL BE SCHEDULED ON STREETS OR WALKWAYS WITHIN THE CITY OF TACOMA BUSINESS DISTRICTS FROM THANKSGIVING DAY THROUGH NEW YEAR'S DAY.

NOTE 3: SIGN SPACING: URBAN LOW SPEED 25-30 MPH SIGNS MUST BE PLACED 100' APART. URBAN HIGH SPEED 35-40 MPH SIGNS MUST BE PLACED 350' APART.

SAMPLE SETUP



SIDEWALK / PARKING CLOSURE

☐ APPROVED BY: _____
☐ APPROVED WITH CONDITIONS BY: _____ DATE: _____

START TRAFFIC CONTROL SET UP DATE: _____ OFF PEAK 9:00 AM WEEKDAYS

MUST BE OUT OF THE ROAD BY DATE: _____ OFF PEAK 3:30 PM WEEKDAYS

EVENING AND WEEKENDS ONLY

START TRAFFIC CONTROL SET UP DATE & TIME: _____

MUST BE OUT OF THE ROAD BY DATE & TIME: _____

MERGING TAPER LENGTHS FOR CONE PATTERN (All minimums)

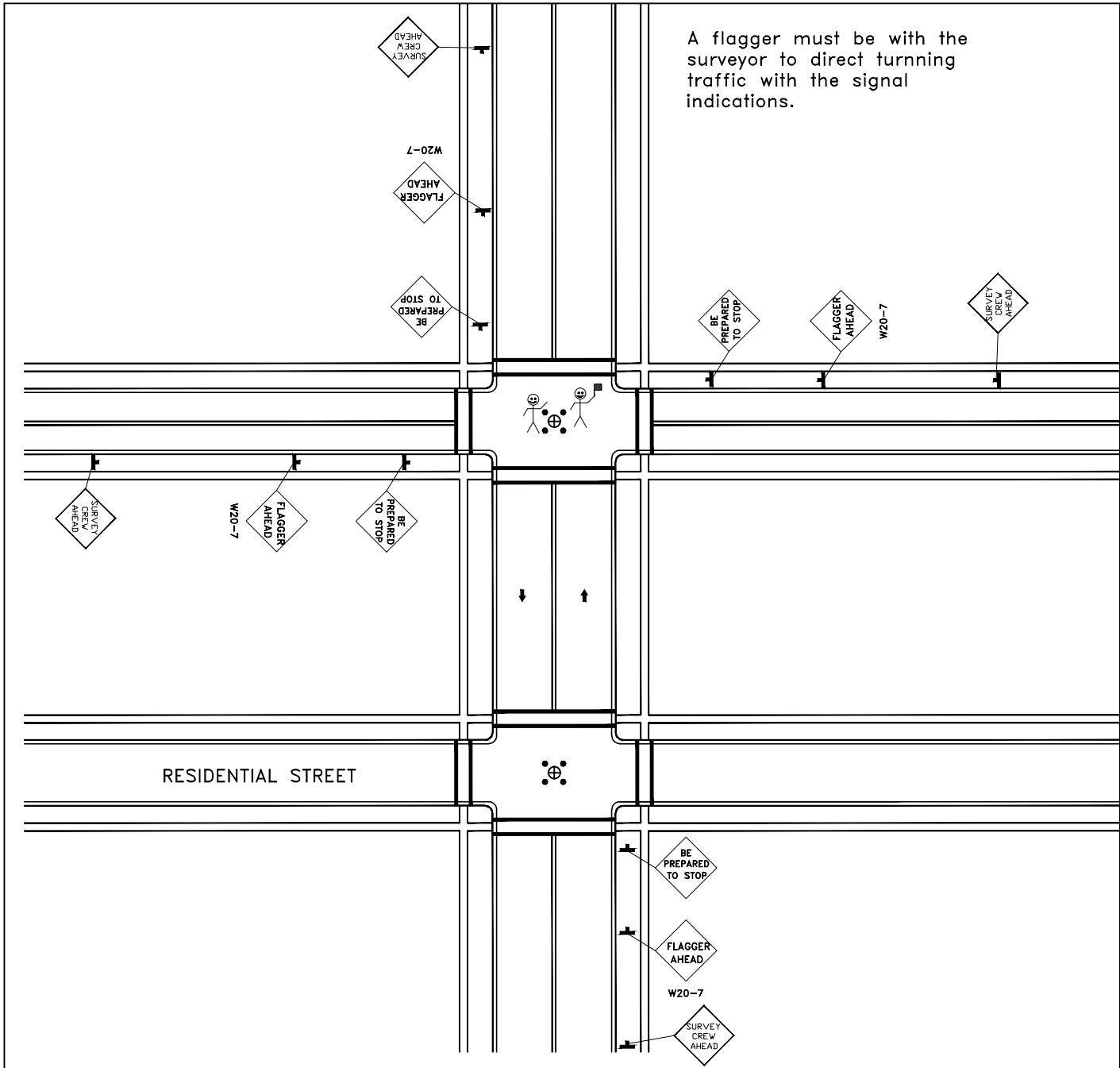
MPH	10	15	20	25	30	35	40
8'	14	30	54	84	120	164	214
10'	17	38	67	105	150	204	267
12'	20	45	80	125	180	245	320
14'	24	53	94	146	210	286	374
16'	27	60	107	167	240	327	427
NUMBER OF CHANNELIZATION DEVICES (CONES)							
Offset cones 1 foot maximum.							

NOTE 1: MAINTAIN LOCAL ACCESS AND PROTECTED WALKWAYS AT ALL TIMES. PROVIDE AND MAINTAIN BARRICADES, SIGNS, LIGHTS, ETC., AS PER "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AT ALL TIMES. STREETS AND WALKWAYS SHALL BE KEPT CLEAR OF DEBRIS DROPPED OR TRACKED BY VEHICLES ENTERING OR EXITING THE WORK SITE. FAILURE TO COMPLY WILL RESULT IN A STOP WORK ORDER AND/OR CITATION.

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NOTE 3: SIGN SPACING: URBAN LOW SPEED 25-30 MPH SIGNS MUST BE PLACED 100' APART. URBAN HIGH SPEED 35-40 MPH SIGNS MUST BE PLACED 350' APART.

SAMPLE SETUP



SURVEY TWO LANE ARTERIAL INTERSECTION

☐ APPROVED BY: _____
☐ APPROVED WITH CONDITIONS BY: _____ DATE: _____

START TRAFFIC CONTROL SET UP DATE: _____ OFF PEAK 9:00 AM WEEKDAYS

MUST BE OUT OF THE ROAD BY DATE: _____ OFF PEAK 3:30 PM WEEKDAYS

EVENING AND WEEKENDS ONLY

START TRAFFIC CONTROL SET UP DATE & TIME: _____

MUST BE OUT OF THE ROAD BY DATE & TIME: _____

MERGING TAPER LENGTHS FOR CONE PATTERN

(All minimums)

MPH	10	15	20	25	30	35	40
8'	14	30	54	84	120	164	214
10'	17	38	67	105	150	204	267
12'	20	45	80	125	180	245	320
14'	24	53	94	146	210	286	374
16'	27	60	107	167	240	327	427

NUMBER OF CHANNELIZATION DEVICES (CONES)

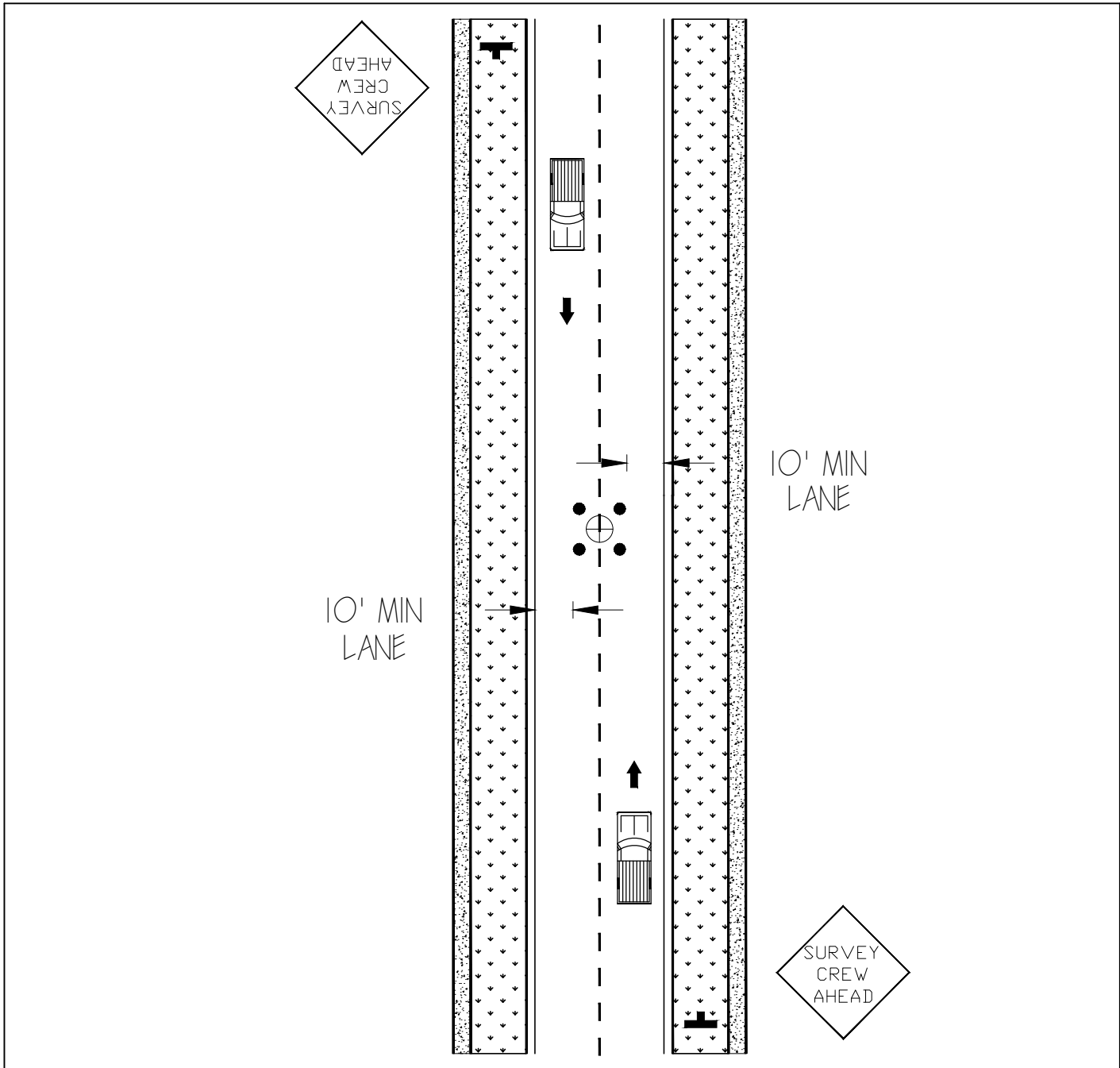
Offset cones 1 foot maximum.

NOTE 1: MAINTAIN LOCAL ACCESS AND PROTECTED WALKWAYS AT ALL TIMES. PROVIDE AND MAINTAIN BARRICADES, SIGNS, LIGHTS, ETC., AS PER "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AT ALL TIMES. STREETS AND WALKWAYS SHALL BE KEPT CLEAR OF DEBRIS DROPPED OR TRACKED BY VEHICLES ENTERING OR EXITING THE WORK SITE. FAILURE TO COMPLY WILL RESULT IN A STOP WORK ORDER AND/OR CITATION.

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NOTE 3: SIGN SPACING: URBAN LOW SPEED 25-30 MPH SIGNS MUST BE PLACED 100' APART. URBAN HIGH SPEED 35-40 MPH SIGNS MUST BE PLACED 350' APART.

SAMPLE SETUP



SURVEY TWO LANE ARTERIAL MID-BLOCK		MERGING TAPER LENGTHS FOR CONE PATTERN (All minimums)							
		MPH	10	15	20	25	30	35	40
LANE WIDTH	8'	14	30	54	84	120	164	214	
	10'	17	38	67	105	150	204	267	
	12'	20	45	80	125	180	245	320	
	14'	24	53	94	146	210	286	374	
	16'	27	60	107	167	240	327	427	
		NUMBER OF CHANNELIZATION DEVICES (CONES)							
		Offset cones 1 foot maximum.							

☐ APPROVED BY: _____

☐ APPROVED WITH CONDITIONS BY: _____ DATE: _____

START TRAFFIC CONTROL SET UP DATE: _____ OFF PEAK 9:00 AM WEEKDAYS

MUST BE OUT OF THE ROAD BY DATE: _____ OFF PEAK 3:30 PM WEEKDAYS

EVENING AND WEEKENDS ONLY

START TRAFFIC CONTROL SET UP DATE & TIME: _____

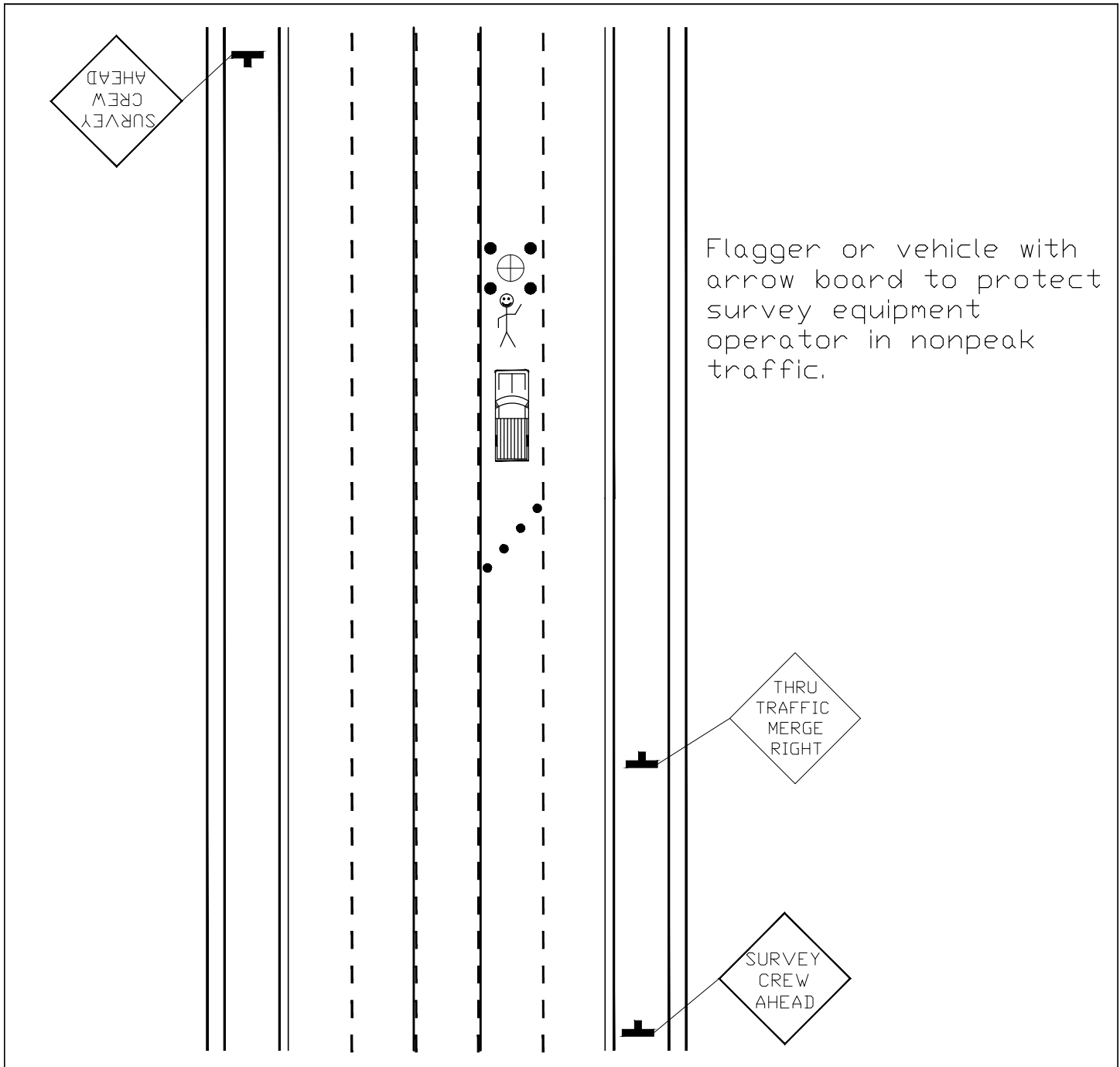
MUST BE OUT OF THE ROAD BY DATE & TIME: _____

NOTE 1: MAINTAIN LOCAL ACCESS AND PROTECTED WALKWAYS AT ALL TIMES. PROVIDE AND MAINTAIN BARRICADES, SIGNS, LIGHTS, ETC., AS PER "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AT ALL TIMES. STREETS AND WALKWAYS SHALL BE KEPT CLEAR OF DEBRIS DROPPED OR TRACKED BY VEHICLES ENTERING OR EXITING THE WORK SITE. FAILURE TO COMPLY WILL RESULT IN A STOP WORK ORDER AND/OR CITATION.

NOTE 2: NO WORK SHALL BE SCHEDULED ON STREETS OR WALKWAYS WITHIN THE CITY OF TACOMA BUSINESS DISTRICTS FROM THANKSGIVING DAY THROUGH NEW YEAR'S DAY.

NOTE 3: SIGN SPACING: URBAN LOW SPEED 25-30 MPH SIGNS MUST BE PLACED 100' APART. URBAN HIGH SPEED 35-40 MPH SIGNS MUST BE PLACED 350' APART.

SAMPLE SETUP



SURVEY
MULTI-LANE
ARTERIAL

MERGING TAPER LENGTHS
FOR CONE PATTERN
(All minimums)

☐ APPROVED BY: _____
☐ APPROVED WITH CONDITIONS BY: _____ DATE: _____

START TRAFFIC CONTROL SET UP DATE: _____ OFF PEAK 9:00 AM WEEKDAYS

MUST BE OUT OF THE ROAD BY DATE: _____ OFF PEAK 3:30 PM WEEKDAYS

EVENING AND WEEKENDS ONLY

START TRAFFIC CONTROL SET UP DATE & TIME: _____

MUST BE OUT OF THE ROAD BY DATE & TIME: _____

MPH	10	15	20	25	30	35	40
8'	14	30	54	84	120	164	214
10'	17	38	67	105	150	204	267
12'	20	45	80	125	180	245	320
14'	24	53	94	146	210	286	374
16'	27	60	107	167	240	327	427
NUMBER OF CHANNELIZATION DEVICES (CONES)							
Offset cones 1 foot maximum.							

NOTE 1: MAINTAIN LOCAL ACCESS AND PROTECTED WALKWAYS AT ALL TIMES. PROVIDE AND MAINTAIN BARRICADES, SIGNS, LIGHTS, ETC, AS PER "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AT ALL TIMES. STREETS AND WALKWAYS SHALL BE KEPT CLEAR OF DEBRIS DROPPED OR TRACKED BY VEHICLES ENTERING OR EXITING THE WORK SITE. FAILURE TO COMPLY WILL RESULT IN A STOP WORK ORDER AND/OR CITATION.

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NOTE 3: SIGN SPACING: URBAN LOW SPEED 25-30 MPH SIGNS MUST BE PLACED 100' APART. URBAN HIGH SPEED 35-40 MPH SIGNS MUST BE PLACED 350' APART.

[illegible]

TRAFFIC CONTROL RECOMMENDATIONS

☐ APPROVED BY: _____

☐ APPROVED WITH CONDITIONS BY: _____ DATE: _____

START TRAFFIC CONTROL SET UP DATE: _____ OFF PEAK 9:00 AM WEEKDAYS

MUST BE OUT OF THE ROAD BY DATE: _____ OFF PEAK 3:30 PM WEEKDAYS

EVENING AND WEEKENDS ONLY

START TRAFFIC CONTROL SET UP DATE & TIME: _____

MUST BE OUT OF THE ROAD BY DATE & TIME: _____

MERGING TAPER LENGTHS FOR CONE PATTERN (All minimums)								
MPH	10	15	20	25	30	35	40	
LANE WIDTH	8'	14	30	54	84	120	164	214
	10'	17	38	67	105	150	204	267
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	14'	24	53	94	146	210	286	374
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NOTE 3: SIGN SPACING: URBAN LOW SPEED 25-30 MPH SIGNS MUST BE PLACED 100' APART. URBAN HIGH SPEED 35-40 MPH SIGNS MUST BE PLACED 350' APART.

[illegible]

TRAFFIC CONTROL
RECOMMENDATIONS

☐ APPROVED BY:

☐ APPROVED WITH CONDITIONS BY: _____ DATE: _____

START TRAFFIC CONTROL SET UP DATE: _____ OFF PEAK 9:00 AM WEEKDAYS

MUST BE OUT OF THE ROAD BY DATE: _____ OFF PEAK 3:30 PM WEEKDAYS

EVENING AND WEEKENDS ONLY

START TRAFFIC CONTROL SET UP DATE & TIME: _____

MUST BE OUT OF THE ROAD BY DATE & TIME: _____

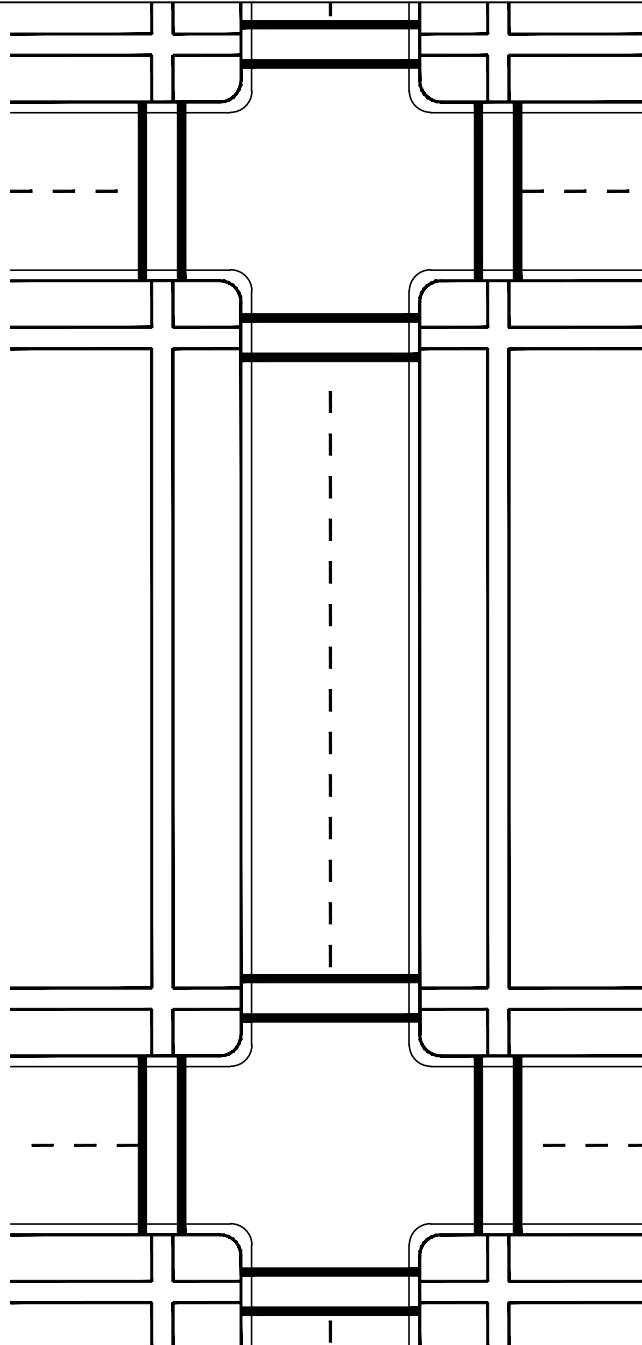
MERGING TAPER LENGTHS FOR CONE PATTERN (All minimums)								
MPH	10	15	20	25	30	35	40	
LANE WIDTH	8'	14	30	54	84	120	164	214
	10'	17	38	67	105	150	204	267
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SAMPLE SETUP



TRAFFIC CONTROL RECOMMENDATIONS

☐ APPROVED BY: _____
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START TRAFFIC CONTROL SET UP DATE: _____ OFF PEAK 9:00 AM WEEKDAYS

MUST BE OUT OF THE ROAD BY DATE: _____ OFF PEAK 3:30 PM WEEKDAYS

EVENING AND WEEKENDS ONLY

START TRAFFIC CONTROL SET UP DATE & TIME: _____

MUST BE OUT OF THE ROAD BY DATE & TIME: _____

MERGING TAPER LENGTHS FOR CONE PATTERN

(All minimums)

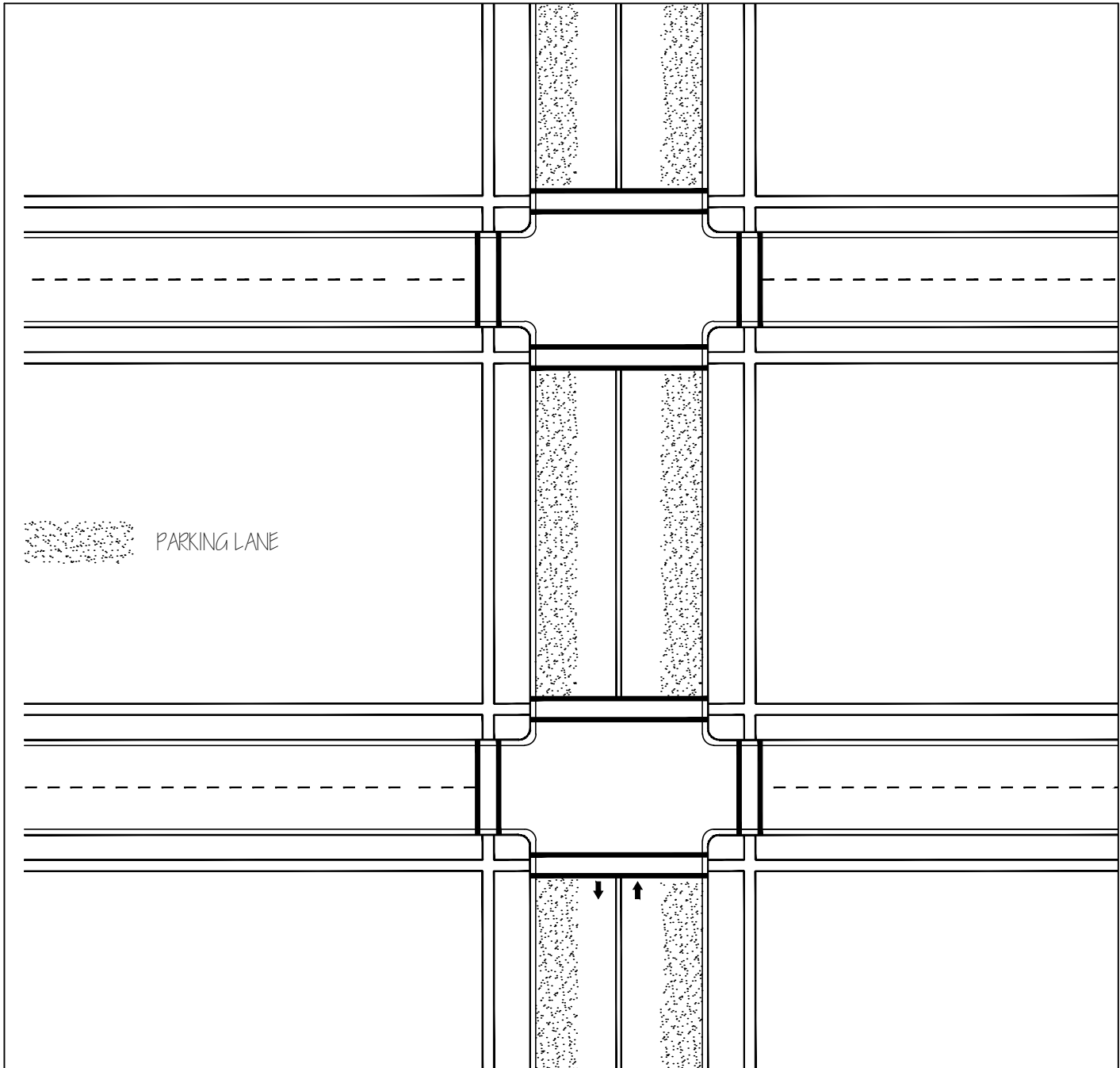
MPH	10	15	20	25	30	35	40
8'	14	30	54	84	120	164	214
10'	17	38	67	105	150	204	267
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SAMPLE SETUP



TRAFFIC CONTROL RECOMMENDATIONS

☐ APPROVED BY: _____
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START TRAFFIC CONTROL SET UP DATE: _____ OFF PEAK 9:00 AM WEEKDAYS

MUST BE OUT OF THE ROAD BY DATE: _____ OFF PEAK 3:30 PM WEEKDAYS

EVENING AND WEEKENDS ONLY

START TRAFFIC CONTROL SET UP DATE & TIME: _____

MUST BE OUT OF THE ROAD BY DATE & TIME: _____

MERGING TAPER LENGTHS FOR CONE PATTERN

(All minimums)

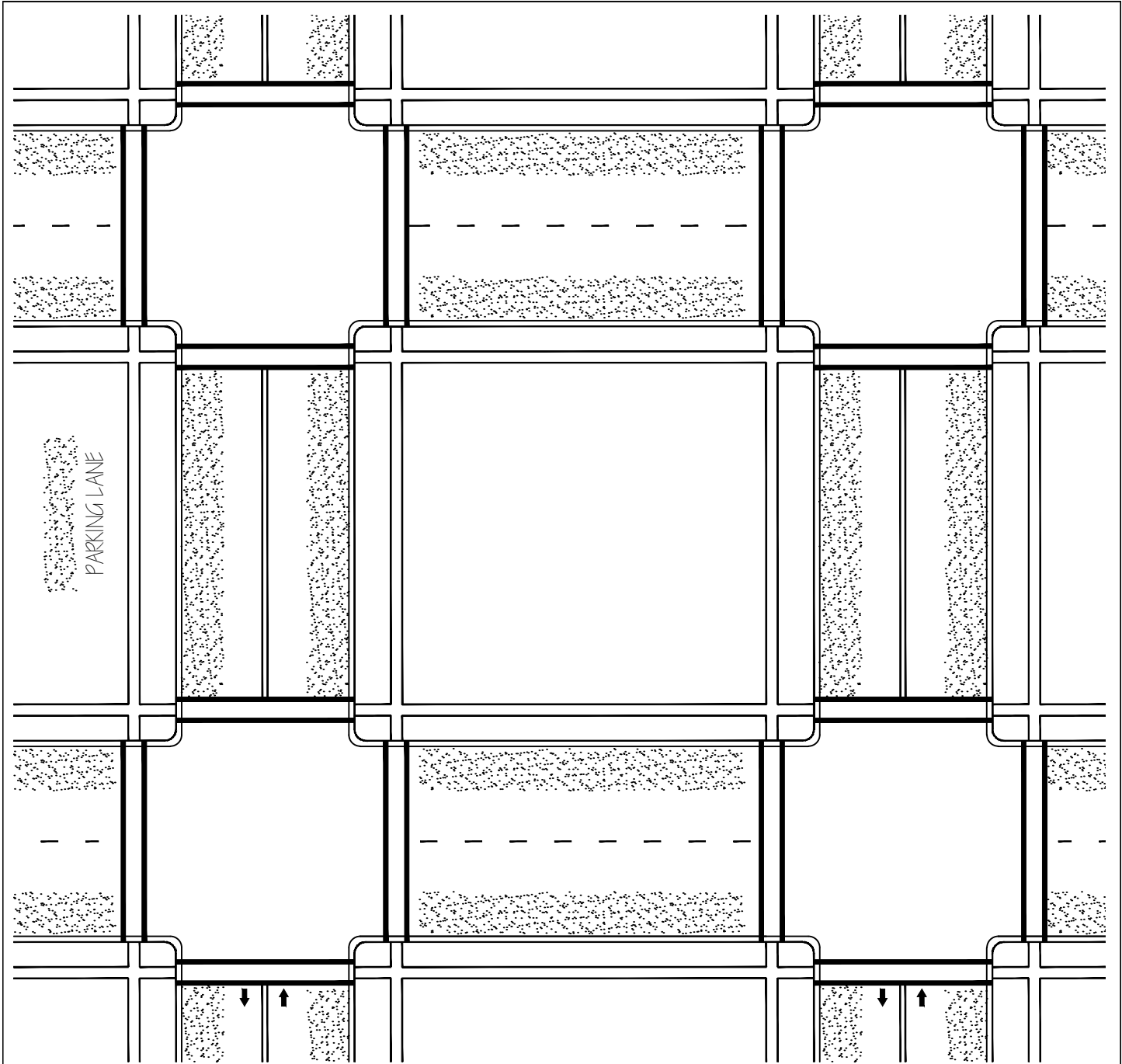
MPH	10	15	20	25	30	35	40
8'	14	30	54	84	120	164	214
10'	17	38	67	105	150	204	267
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SAMPLE SETUP



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12'	20	45	80	125	180	245	320
14'	24	53	94	146	210	286	374
16'	27	60	107	167	240	327	427

LANE WIDTH

NUMBER OF CHANNELIZATION DEVICES (CONES)

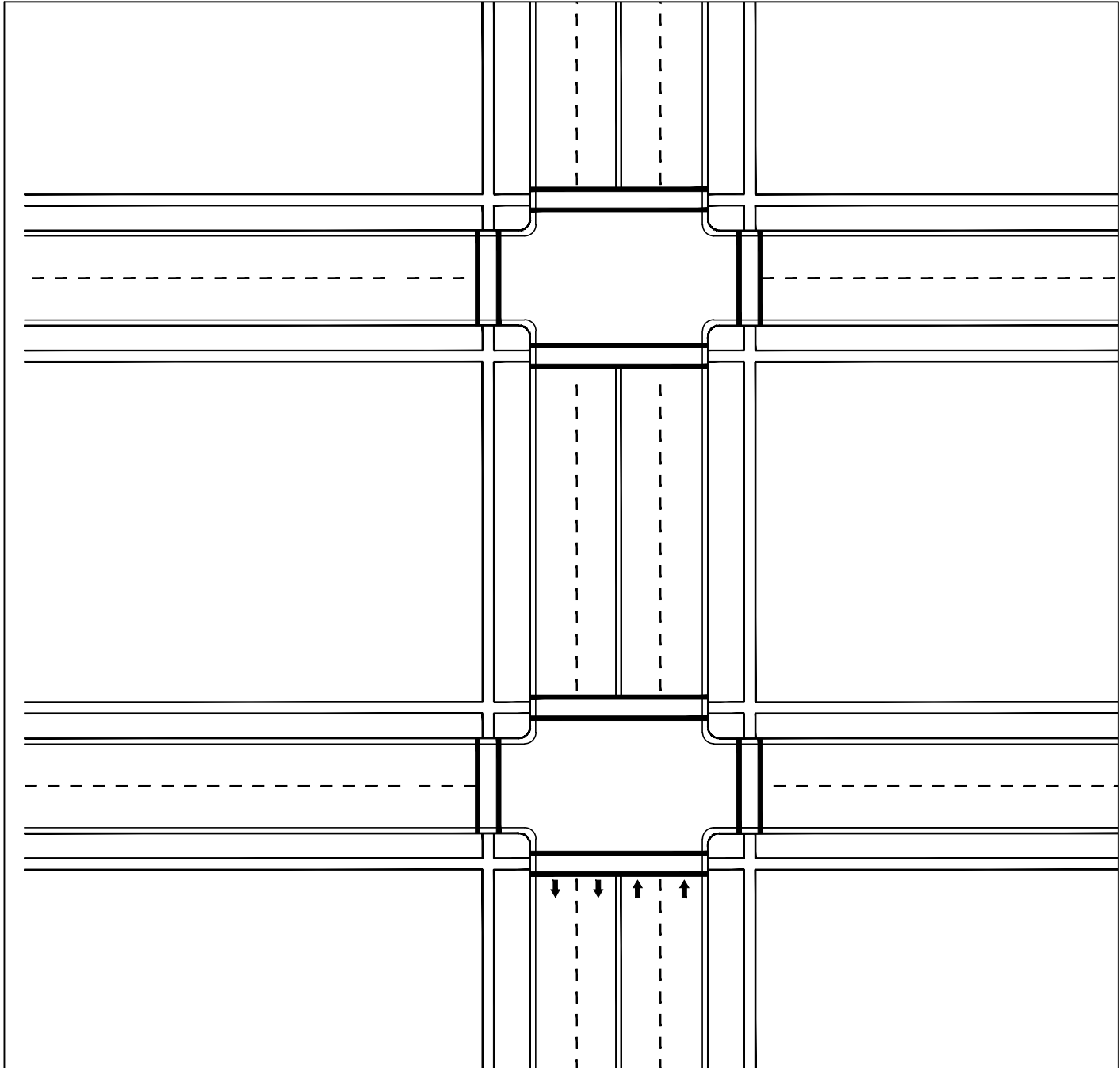
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MERGING TAPER LENGTHS FOR CONE PATTERN

(All minimums)

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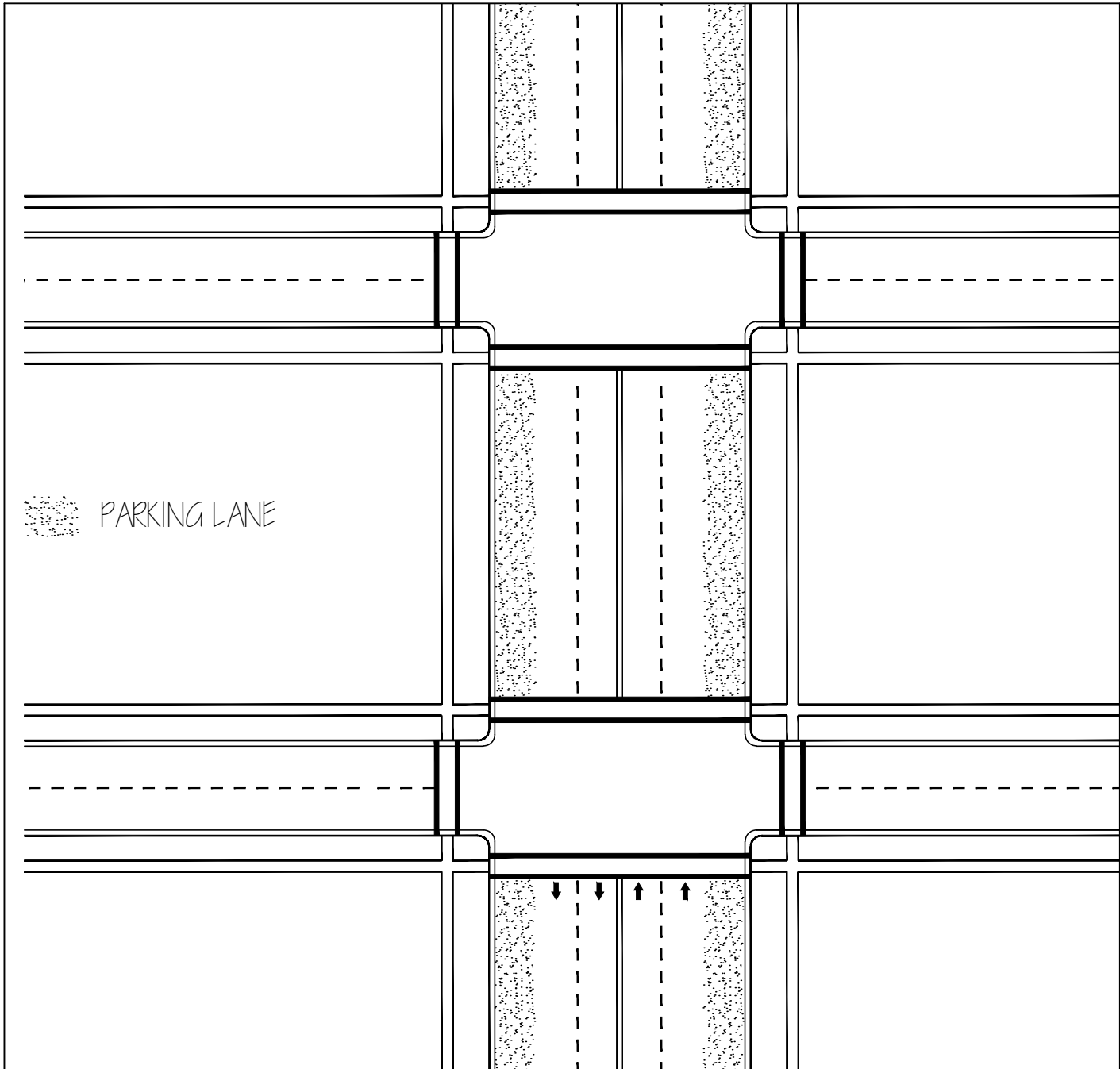
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(All minimums)

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14'	24	53	94	146	210	286	374
16'	27	60	107	167	240	327	427

LANE WIDTH

NUMBER OF CHANNELIZATION DEVICES (CONES)

Offset cones 1 foot maximum.

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[illegible]

TRAFFIC CONTROL RECOMMENDATIONS

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APPENDIX C

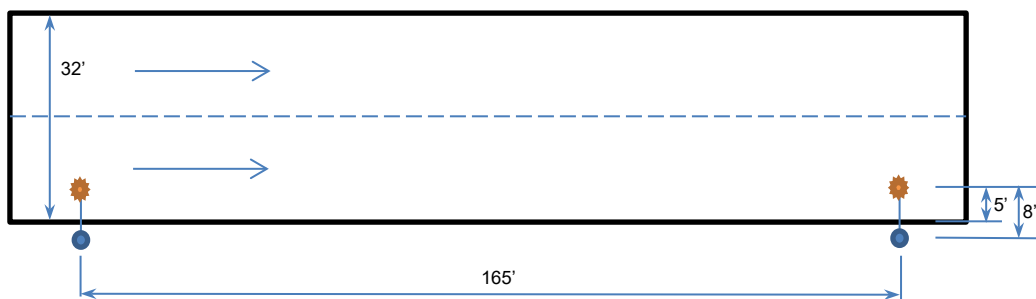
STANDARD LUMINAIRE DESIGN CRITERIA

Standard Luminaire Design Criteria

100WEQ Luminaire – Residential

Attribute	Design Assumption
Road Width:	32 feet
Luminaire Height:	30 feet
Mast Arm Length:	8 feet
Setback from FC:	3 feet
Luminaire Spacing:	165 feet
Luminaire LLF (Total):	0.9
Luminaire Pattern:	One Row Near Side
Road Model:	IES RP8 – 2 Lanes in Direction of Travel
Road Type:	Local
Ped Conflict	Low/Residential
Road Surface	R3

Design Attribute	Criteria
Minimum Average Illuminance	0.35 fc
Maximum Illuminance Uniformity (Ave/Min)	6:1
Minimum Average Luminance	0.3 cd/m ²
Maximum Luminance Uniformity (Ave/Min)	6:1
Maximum Luminance Uniformity (Max/Min)	10:1
Maximum Veiling Luminance Ratio (Lvmax/Lavg)	0.4:1
IES Distribution	Type II or Best Fit
Color Temperature	3000K
Maximum Fixture BUG Rating	B1-U0-G1



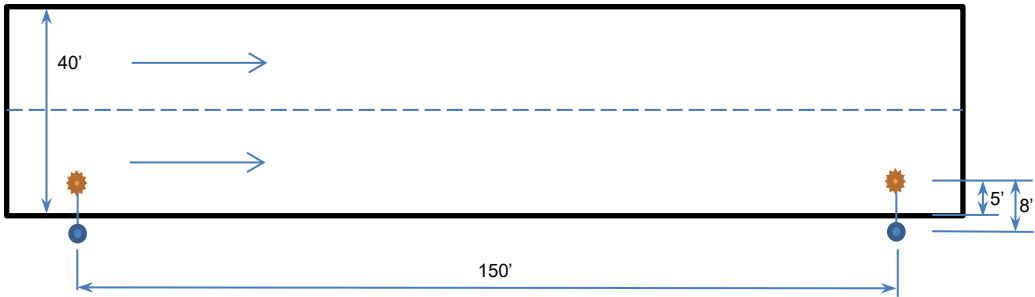
Design Criteria Based on Roadway Lighting Design Guide, AASHTO Publication GL-6, 2018

Standard Luminaire Design Criteria

200WEQ Luminaire – Arterial

Attribute	Design Assumption
Road Width:	40 feet
Luminaire Height:	30 feet
Mast Arm Length:	8 feet
Setback from FC:	3 feet
Luminaire Spacing:	150 feet
Luminaire LLF (Total):	0.9
Luminaire Pattern:	One Row Near Side
Road Model:	IES RP8 – 2 Lanes in Direction of Travel
Road Type:	Collector
Ped Conflict	Medium/Intermediate
Road Surface	R3

Design Attribute	Criteria
Minimum Average Illuminance	0.75 fc
Maximum Illuminance Uniformity (Ave/Min)	4:1
Minimum Average Luminance	0.6 cd/m ²
Maximum Luminance Uniformity (Ave/Min)	3.5:1
Maximum Luminance Uniformity (Max/Min)	6:1
Maximum Veiling Luminance Ratio (Lvmax/Lavg)	0.4:1
IES Distribution	Type II or Best Fit
Color Temperature	3700K to 4300K
Maximum Fixture BUG Rating	B2-U0-G2



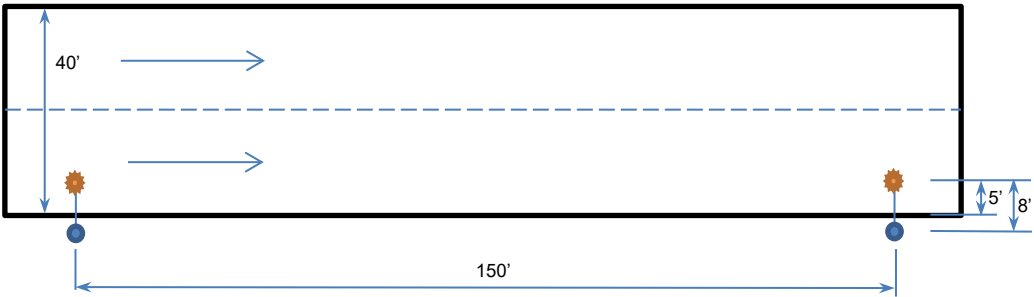
Design Criteria Based on Roadway Lighting Design Guide, AASHTO Publication GL-6, 2018

Standard Luminaire Design Criteria

250WEQ Luminaire – Arterial

Attribute	Design Assumption
Road Width:	40 feet
Luminaire Height:	40 feet
Mast Arm Length:	8 feet
Setback from FC:	3 feet
Luminaire Spacing:	150 feet
Luminaire LLF (Total):	0.9
Luminaire Pattern:	One Row Near Side
Road Model:	IES RP8 – 2 Lanes in Direction of Travel
Road Type:	Collector
Ped Conflict	Medium/Intermediate
Road Surface	R3

Design Attribute	Criteria
Minimum Average Illuminance	0.75 fc
Maximum Illuminance Uniformity (Ave/Min)	4:1
Minimum Average Luminance	0.6 cd/m ²
Maximum Luminance Uniformity (Ave/Min)	3.5:1
Maximum Luminance Uniformity (Max/Min)	6:1
Maximum Veiling Luminance Ratio (Lvmax/Lavg)	0.4:1
IES Distribution	Type II or Best Fit
Color Temperature	3700K to 4300K
Maximum Fixture BUG Rating	B2-U0-G2



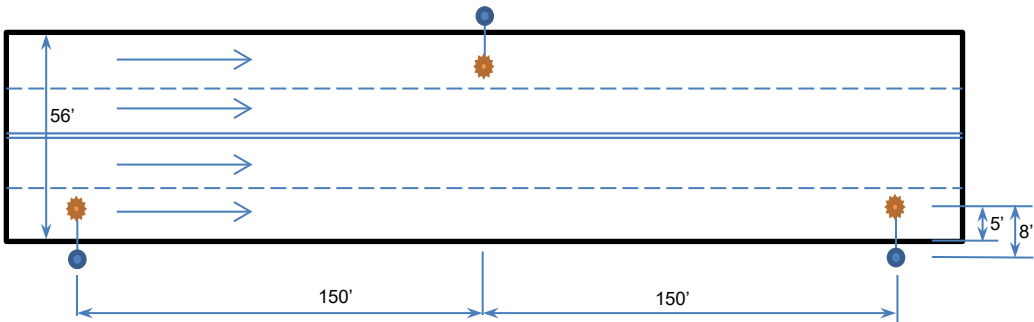
Design Criteria Based on Roadway Lighting Design Guide, AASHTO Publication GL-6, 2018

Standard Luminaire Design Criteria

400WEQ Luminaire – Arterial

Attribute	Design Assumption
Road Width:	56 feet
Luminaire Height:	40 feet
Mast Arm Length:	8 feet
Setback from FC:	3 feet
Luminaire Spacing:	300 feet/side - 150 feet staggered
Luminaire LLF (Total):	0.9
Luminaire Pattern:	Two Rows - Staggered
Road Model:	IES RP8 – 4 Lanes in Direction of Travel
Road Type:	Major Arterial/Other Principal Arterials
Ped Conflict	Medium/Intermediate
Road Surface	R3

Design Attribute	Criteria
Minimum Average Illuminance	1.15 fc
Maximum Illuminance Uniformity (Ave/Min)	3:1
Minimum Average Luminance	0.9 cd/m ²
Maximum Luminance Uniformity (Ave/Min)	3:1
Maximum Luminance Uniformity (Max/Min)	5:1
Maximum Veiling Luminance Ratio (Lvmax/Lavg)	0.3:1
IES Distribution	Type III or Best Fit
Color Temperature	3700K to 4300K
Maximum Fixture BUG Rating	B3-U0-G3



Design Criteria Based on Roadway Lighting Design Guide, AASHTO Publication GL-6, 2018

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APPENDIX D

CULTURAL RESOURCES INADVERTENT DISCOVERY PLAN

Pierce County

Cultural Resources Inadvertent Discovery Plan

In the event that any ground-disturbing activities or other project activities related to this development or in any future development uncover protected cultural material (e.g., bones, shell, antler, horn or stone tools), the following actions will be taken:

1. When an unanticipated discovery of protected **cultural material** (see definitions below) occurs, the property owner or contractor will completely secure the location and contact:
 - a) The City of Tacoma project manager, Basel Kitmitto (253-591-5448 or 253-328-0302);
 - b) The Department of Archaeology and Historic Preservation (DAHP) (Stephanie Jolivet, 360-586-3088, or DAHP Front Desk 360-586-3065);
 - c) The affected Tribes:
 - a. Brandon Reynon, Puyallup Tribe (253-573-7986);
 - b. Annette Bullchild, Nisqually Tribe (360-456-5221 ext. 1106);
 - c. Laura Murphy, Muckleshoot Tribe (253-876-3272);
 - d) and the planner associated with the project.
2. If the discovery is **human remains**, the property owner or contractor will stop work in and adjacent to the discovery, completely secure the work area by moving the land-altering equipment to a reasonable distance, and will immediately contact:
 - a) The City of Tacoma project manager, Basel Kitmitto (253-591-5448 or 253-328-0302);
 - b) The Pierce County Sheriff's Office (253-798-7530);
 - c) and the Pierce County Medical Examiner's Office (253-798-6494) to determine if the remains are forensic in nature;
 - d) If the remains are not forensic in nature the Department of Archaeology and Historic Preservation (DAHP) (Guy Tasa 360-586-3534); will take the lead on determining the appropriate method of treatment for the remains and will consult with the affected tribes;

Cultural material that may be protected by law could include but not be limited to:

1. Buried layers of black soil with layers of shell, charcoal, and fish and mammal bones (Figure 1, top).
2. Buried cobbles that may indicate a hearth feature (Figure 1, bottom);
3. Non-natural sediment or stone deposits that may be related to activity areas of people;
4. Stone, bone, shell, horn, or antler tools that may include projectile points (arrowheads),
5. scrapers, cutting tools, wood working wedges or axes, grinding stones (Figures 2 & 3);
6. Stone tools or stone flakes (Figures 2 and 3);
7. Perennially damp areas may have preservation conditions that allow for remnants of wood and other plant fibers; in these locations there may be remains including fragments of basketry, weaving, wood tools, or carved pieces (Figure 4); and
8. Concentrations of historical period artifacts (> 50 years old) (Figure 5); and
9. Human remains. This includes complete burials as well as fragmentary remains.

Figure 1: Shell Middens. These middens can extend into the intertidal zone in areas that have undergone sea level rise during the precontact period.



Figure 2: Examples of stone and bone tools.



Figure 3: Examples of stone flakes from an archaeological site.



Figure 4: Examples of underwater/intertidal archaeological features including wood or stone fish weirs (top), clam gardens (middle), sunken canoes (bottom) or other watercraft. Basketry (bottom) and other wood and fibrous artifacts can preserve in submerged environments.



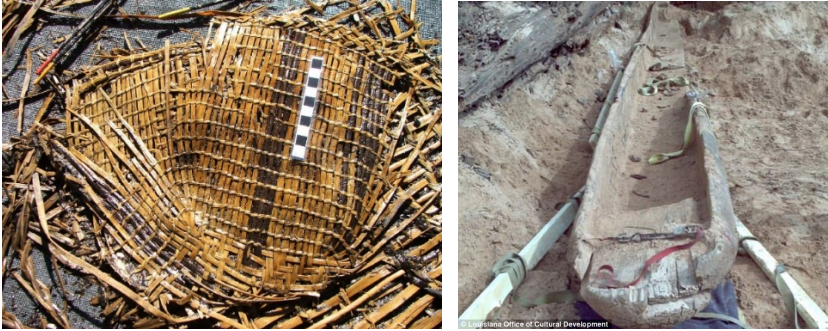
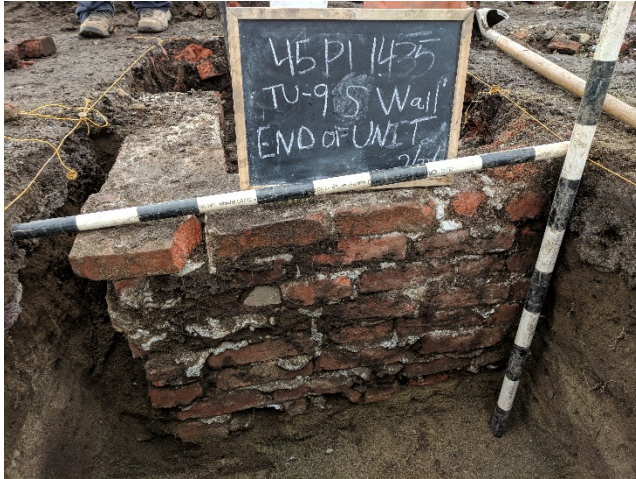


Figure 5. Historical period sites (more than 50 years in age) are also protected by archaeology laws. These can include concentrations of broken ceramics, bottles, bricks, and metal objects (top) or historical period building foundations (bottom left) and historical period trash deposits (bottom right).





PART III

CITY OF TACOMA

EQUITY IN CONTRACTING PROGRAM

EIC REQUIREMENT FORM

EQUITY IN CONTRACTING REQUIREMENTS & PROCEDURES:

All bidders must complete and submit with their bid the following solicitation form contained in the bid submittal package:

City of Tacoma – EIC Utilization Form

IMPORTANT NOTE:

It is the bidder's responsibility to insure that the EIC-eligible subcontractor(s) listed on the EIC Utilization Form are currently certified by the City of Tacoma or the State of Washington's Office of Minority and Women Business Enterprises at the time of bid opening. This may be verified by contacting the EIC Office at 253-591-5075 between 8 AM and 5 PM, Monday through Friday. Please refer to the City of Tacoma EIC Provisions included elsewhere in these Special Provisions.

Equity in Contracting Requirements

Minority Business
Enterprise Requirement

8%

Women Business
Enterprise Requirement

7%

Small Business Enterprise
Requirement

14%

A list of EIC-eligible companies is available on the following web site addresses:

www.cityoftacoma.org/sbe
www.omwbe.diversitycompliance.com*

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

CCD/SBE: PW20-0034F
Date of Record: 10.6.2020

*For the OMWBE list, be sure to only look for businesses in Pierce, King, Lewis, Mason, and Grays Harbor counties.

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 Certification.
- 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.

- 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."
- C. "City" means all Departments, Divisions and agencies of the City of Tacoma.
- D. "Contract" means any type of legally binding agreement regardless of form or title that governs the terms and conditions for procurement of Public Works and Improvements and/or Non-Public Works and Improvements Supplies and Services. Contracts include the terms and conditions found in Specifications, Bidder or Respondent Submittals, and purchase orders issued by the City. A "Contract" as used in this chapter shall include an agreement between the City and a non-profit entity to perform construction-related services for Public Works. A "Contract" does not include: (1) awards made by the City with federal/state grant or City general funds monies to a non-profit entity where the City offers assistance, guidance, or supervision on a project or program, and the recipient of the grant awards uses the grant moneys to provide services to the community; (2) sales transactions where the City sells its personal or real property; (3) a loan transaction where the City is acting as a debtor or a creditor; (4) lease, franchise; (5) agreements to use City real property (such as Licenses, Permits and Easements) and, (6) banking and other financial or investment services.
- E. "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.

F. “Goals” means the annual level of participation by MWBEs and SBEs 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 for individual Contracts may be adjusted as provided for in this chapter and shall not be construed as a minimum for any particular Contract or for any particular geographical area.

G. “MWBE Certified business” (or “MWBEs”) means a business that meets the criteria set forth in Section 1.07.050 of this chapter and has been certified as meeting that criteria by the Community and Economic Development Department Program Manager.

H. “SBE Certified Business” (or “SBEs”) means a business that meets the criteria set forth in Section 1.07.050 of this chapter and has been certified as meeting that criteria by the Community and Economic Development Department-SBE Program Manager.

I. “SBE Program Manager” means the individual appointed, from time to time, by the City’s Community and Economic Development Director to administer the Program Regulations.

J. “Program Regulations” shall mean the written regulations and procedures adopted pursuant to this chapter for procurement of Supplies, Services and Public Works.

K. “Non-Public Works and Improvements” means all competitively solicited procurement of Supplies and/or Services by the City not solicited as Public Works.

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

M. “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.

N. “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.

O. “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.

P. “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.

Q. “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.

R. “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.

S. “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.

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

(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 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. 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 rules and 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 MWBE and SBE goals set forth herein. The Program Regulations shall become effective following public notice and an opportunity to comment by the public.

C. The Program Regulations adopted pursuant to this section are for the administrative and procedural guidance of the officers and employees of the City and are further expressions of the public policy of the City. The Program Regulations, when adopted, shall not confer an independent cause of action or claim for relief cognizable in the courts of the state of Washington or the United States of America to any third parties, and such provisions shall not be used as the basis for a lawsuit in any court of competent jurisdiction challenging the award of any contract by the City.

(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 Certification.

A. The Program Manager shall approve a business as a Certified Business if all of the following criteria are satisfied:

1. The business is certified as a SBE, MBE, WBE, or MWBE through the state of Washington's Office of Minority & Women Business Enterprises; and
2. The company can demonstrate that it also meets at least one of the following additional requirements:
 - a. The personal residence of the owner is located within the City of Tacoma or Tacoma Public Utilities Service Area, or
 - b. The company's business offices are located in any county of the Tacoma Public Utilities Service Area or any county adjacent to Pierce County, or
 - c. When the work is performed outside of Pierce County, the company's business offices may be located in an adjacent county in which the work is performed, or
 - d. Such additional information as the Program Manager or designee may require.

When another governmental entity has an equivalent business classification process, the City may enter into an interlocal cooperative agreement for mutual recognition of certifications.

B. Appeals. The applicant may appeal any certification determination by the Program Manager under this chapter to the Director. The appeal must be made in writing and must set forth the specific reasons for the appeal. The Director shall make a decision on the appeal request within a reasonable time, which decision shall be final unless further appeal is made to the Hearing Examiner. In that event, the Hearing Examiner Rules of Procedure for Hearings, Chapter 1.23 TMC, shall be applicable to that appeal proceeding.

(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 MWBEs and SBEs in the provision of supplies, services, and public works procured by the City. Cumulative annual goals for the participation of MWBEs and SBEs in City contracts shall be based on the number of qualified MWBEs and SBEs operating within the Tacoma Public Utilities Service Area. The dollar value of all contracts awarded by the City to MWBEs and SBEs in the procurement of supplies, services, and public works shall be counted toward the accomplishment of the applicable goal.

2. Application of Annual Goals to Contracts. The Program Manager shall consult with City departments/divisions to establish department/division specific goals for competitively solicited contracts in accordance with this chapter and the Program Regulations.

B. Waivers. City departments/divisions or the Program Manager may request to waive one or more of the requirements of this chapter as they apply to a particular contract or contracts. Waivers 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 and waiver must be documented by the department/division awarding the contract.

2. Not Practicable: Compliance with the requirements of this chapter would impose an unwarranted economic burden or risk to the City after consideration of existing budgetary approvals.

3. Sole source: The supplies, services, and/or public works are available from only one source, and subcontracting possibilities do not reasonably exist as determined by the finance purchasing manager.

4. Government purchasing. The City is a party to or included in a federal, state or inter-local government purchasing agreement as approved by the finance purchasing manager.

5. Lack of certified contractors: An insufficient number of qualified contractors exist to create utilization opportunities.

6. Best interests of the City: Waiver of goals is in the best interests of the City due to unforeseen circumstances, provided that said circumstances are set forth in writing by the requestor.

C. Review of Waivers. A waiver determination by the finance purchasing manager may be reviewed by the Board of Contracts and Awards (C&A Board). The C&A Board may also review a request to reduce or waive the utilization requirements based on Not Practicable or Best Interests of the City circumstances. The C&A Board shall determine whether compliance with such requirements 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. If the determination of the C&A Board does not resolve the matter, a final determination shall be made by the City Council or Public Utility Board, as the case may be.

(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 a supplies, services, or public works and improvements contracts shall be evaluated for attainment of the MWBE and SBE requirements established for that contract in accordance with this chapter and the Program Regulations.

B. The determination of MWBE and SBE usage and the calculation of MWBE or SBE requirements per this section shall include the following considerations:

1. General. The dollar value of the contract awarded by the City to a MWBE or SBE in the procurement of supplies, services, or public works shall be counted toward achievement of the respective goal.

2. Supplies. A public works and improvements contractor may receive credit toward attainment of the MWBE and/or SBE requirement(s) for expenditures for supplies obtained from an MWBE or SBE; provided such MWBE or SBE assumes the actual and contractual responsibility for delivering the supplies with its resources. The contractor may also receive credit toward attainment of the MWBE or SBE goal for the amount of the commission paid to a MWBE or SBE resulting from a supplies contract with the City; provided the MWBE or SBE performs a commercially useful function in the process.

3. Services and Public Works subcontracts. Any bid by a certified MWBE and/or SBE or a bidder that utilizes a certified MWBE and/or SBE shall receive credit toward requirement attainment based on the percentage of MWBE and/or SBE usage demonstrated in the bid. A contractor that utilizes an MWBE and/or SBE subcontractor to provide services or public works

shall receive a credit toward the contractor's attainment of the respective requirement based on the value of the subcontract with that firm.

4. Brokers, Fronts, or Similar Pass-Through Arrangements. MWBEs and/or SBEs acting as brokers, fronts, or similar pass-through arrangements (as such terms are defined in the Program Regulations) shall not count toward the requirement attainment unless the activity reflects normal industry practices and the broker performs a commercially useful function.

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. An MWBE and/or SBE firm may self-count utilization on such bids if they will perform the work for the scope the requirement is based upon.

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

b. any bidder that does not meet the MWBE and/or SBE requirements shall be considered a non-responsible bidder unless the bidder receives a waiver from the Program Manager or C&A Board.

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. 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 MWBE or SBE 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 MWBE or SBEs projected to be used must be approved in advance by the Program Manager. Substitution of one MWBE or SBE with another shall be allowed where there has been a refusal to execute necessary agreements by the original MWBE or SBE, 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 MWBE or SBE is available as a substitute and that failure to secure participation by the MWBE or SBE identified in the solicitation is not the fault of the respondent, substitution with a non-MWBE or non-SBE 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 MWBEs or SBEs, 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 MWBEs or SBEs, and shall include the right of the City to inspect such records.

(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 MWBE and SBE utilization

levels, waivers, proposed modifications to the program, and such other matters as may be specified 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)

1.07.100 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 Remedies.

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; and/or
5. Recommend appropriate action including, but not limited to, disqualification of eligibility for future contract awards by the City (debarment) per Section 1.06.279 TMC;

B. Prior to exercise of any of the foregoing remedies, 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. 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 through and until December 31, 2024, unless the City Council shall determine at an earlier date that the requirements of this chapter are no longer necessary. If this chapter has not been repealed by July 1, 2024, the City Council shall determine by the end of that year whether substantial effects or lack of opportunity of MWBEs and/or SBEs 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.

(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)

City of Tacoma

Equity In Contracting Program Regulations

City of Tacoma Equity In Contracting Regulations Manual

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Introduction

This document serves as the administrative manual for the Equity in Contracting policy that is described in Tacoma Municipal Code (TMC) Chapter 1.07.040(B). The manual will explain how compliance, monitoring, oversight, requirement-making, bid incentives, and enforcement actions will be administered. The document will be regularly updated. For any questions related to this document, please contact the Equity in Contracting (EIC) office at (253)591-5075 or SBEOffice@cityoftacoma.org.

Goals/Requirements on Contracts

A. Requirements

1. Public Work

- a. Minority Business Enterprise (MBE), Women Business Enterprise (WBE), and Small Business Enterprise (SBE) requirements are placed on all Public Work projects.
 - i. MBE, WBE, and SBE requirements are **mandatory**. As such, any bidder that does not meet any requirement shall be considered non-responsive by the Equity in Contracting office.
 - ii. If a bidder wishes to request a waiver, they must identify the request on the Equity in Contracting Waiver Request Form complete with the reason(s) why.
 1. Waiver types are listed under the “Waivers” section B.

Contractors are also subject to the City’s ordinances and regulations pertaining to having an affirmative action program and prohibiting discrimination. If needed, please contact the Equity in Contracting Office at 253-591-5075 for assistance. The list of City of Tacoma SBE subcontractors is available at

<https://cityoftacoma.org/cms/One.aspx?portalId=169&pageId=112505>. The list of MBE, WBE, and SBE certified firms from the Washington State Office of Minority and Women Owned Business Enterprises (OMWBE) can be found at: <https://omwbe.diversitycompliance.com/>

All SBE goals may be met by using DBE’s or SBE’s from the OMWBE list or the City of Tacoma SBE list. Please contact the Equity in Contracting Office for questions or to verify a firms status.

Contract Compliance

A. Benefits

The City of Tacoma must monitor compliance for all contracts that have requirements related to Equity in Contracting policies. Adequate monitoring allows the City to audit ongoing contracts for compliance, make necessary changes to the Equity in Contracting Regulations Manual based on real data, and to pro-actively monitor any possible discrimination on City of Tacoma-funded contracts.

B. Requirements

1. All contracts that have requirements related to the Equity in Contracting policy must utilize two cloud-based software solutions:
 - a. “B2GNow” for prime-contractor and sub-contractor payment compliance.
 - b. “LCP Tracker” for certified payroll compliance.
2. To access both systems, please use the following link:
<https://cityoftacoma.sbecompliance.com/?TN=cityoftacoma>

3. For support using these software solutions, please contact the Equity in Contracting office at (253)591-5075.

C. Key Performance Indicators

1. B2GNow
 - a. Ethnicity and Gender Summary
 - i. Subcontractors Only
 - ii. With Primes
 - b. Prompt Payment Analysis
 - c. Prime Contractor Performance on Active Contracts
 - d. Contract Awards Summarized by Department
2. LCP Tracker
 - a. Apprentice Hours
 - i. By Trade
 - ii. By Contractor
 - b. Employment By Area
 - i. Zip Code
 - ii. Council Districts
 - c. Employment By Ethnicity

Waivers

A. Benefits

There are times where the City may desire to waive a requirement from a contract. The following waivers, also identified in the Purchasing Policy Manual, give the City flexibility to waive requirements when the situation makes sense for it.

B. Requirements

1. Emergency
 - a. Must be documented and requested by the department/division awarding the contract.
2. Not Practicable
 - a. Must be documented and requested by the department/division awarding the contract.
3. Sole Source
 - a. Must be confirmed by the Finance Purchasing Manager.
 - b. Preliminary check to be made by Equity in Contracting division explicitly for potential MBEs, WBEs, and SBEs.
4. Government Purchasing
 - a. Must be confirmed by the Finance Purchasing Manager.
5. Lack of Certified Contractors
 - a. Must be documented and confirmed by the Equity in Contracting division.
 - b. The division will look up the available contractors by scope of work from the OMWBE roster and/or WEBS.
 - c. The list produced by this research shall be documented with other files for the contract in question.
 - d. If there are not more than 3 available contractors, there will not be a requirement placed on the contract for that scope of work.
6. Best Interests of the City
 - a. Must be documented and requested by the department/division awarding the contract.

C. Compliance

1. Waiver requests may be initiated by the contractor or the department owner.
 - a. When initiated by the contractor, the “Application for EIC Requirement Waiver” must be submitted to the EIC office.
 - i. The application will be reviewed by the office, and a determination will be made.
 - b. When initiated by the department owner, a request must be made in writing to the EIC office.
2. The waivers will be reviewed in accordance with 1.07.060(C).

D. Key Performance Indicators

1. Total quantity of Waivers
 - a. By type number
 - b. Type 5 will also need to document the NAICS code referenced.

Version History

The version history is marked by day.month.year.version nomenclature. A higher version number denotes a more recent version. For example, a 1.1.2020.1 version would denote the first version made in January 1st of 2020. A 1.1.2020.3 version would denote the third version made on January 1st of 2020. When referencing a specific contract, be sure to note that the version of the administrative manual matches that which was in the bid specifications.

Current Version

3.11.2020.1

Previous Version(s)

2.21.2020.1



City of Tacoma
Community & Economic Development
Office of Equity in Contracting
747 Market Street, Rm 900
Tacoma WA 98402
253-591-5075

EQUITY IN CONTRACTING UTILIZATION FORM

This form is to document **only** the EIC contractors or material suppliers that will be awarded a contract. This information will be used in calculating the **EVALUATED BID**. Additional forms may be used if needed.

- Prime contractors are encouraged to solicit bids from EIC approved firms.
- Be sure to include this form with your bid submittal in order to receive EIC credit.
- It is the prime contractor's responsibility to check the certification status of EIC contractors prior to the submittal deadline.

Bidder's Name: _____

Address: _____ City/State/Zip: _____

Spec. No. _____ Base Bid * \$ _____ **Complete company names and phone numbers are required to verify your EIC usage.**

a. Company Name and Telephone Number	b. MBE, WBE, or SBE (Write all that apply)	c. NAICS code(s)	d. Contractor Bid Amount (100%)	e. Material Supplier Bid Amount (20%)	f. Estimated MBE Usage Dollar Amount	g. Estimated WBE Usage Dollar Amount	h. Estimated SBE Usage Dollar Amount
i. MBE Utilization %	j. WBE Utilization %	k. SBE Utilization %					

By signing and submitting this form the bidder certifies that the EIC firms listed will be used on this project including all applicable change orders.

Type or Print Name of Responsible Officer / Title

Signature of Responsible Officer

Date

INSTRUCTIONS FOR COMPLETING EIC UTILIZATION FORM

The purpose of these instructions is to assist bidders in properly completing the EIC Utilization Form.

This form when submitted with your bid provides information to the City of Tacoma to accurately review and evaluate your proposed EIC usage.

1. * Base Bid is the prime contractor's bid, plus any alternates, additives and deductive selected by the City. Also, please refer to Items #10-12 below.
2. Column "a" – List all EIC companies that you will be awarding a contract to if you are the successful bidder.
3. Column "b" – Identify if this firm is being utilized as an MBE, WBE, or SBE. (Firms may count towards multiple requirements)
4. Column "c" – List the appropriate NAICS code for the scope of work, services, or materials/supplies for each contractor.
5. Column "d" – The bid amount must be indicated for **all** listed **EIC** that you plan on doing business with. This quote is the price that you and the contractor have negotiated prior to bid opening.
6. Column "e" – The bid amount must be indicated for **all** listed **EIC** that you plan on doing business with. This quote is the price that you and the material supplier have negotiated prior to bid opening.
8. Column "f" – Estimated MBE Usage Dollar Amount: For all MBE firms used, multiply the amount in Column "d" by 1.0 plus the amount in Column "e" by 0.20. Insert the total amount in this column.
9. Column "g" – Estimated WBE Usage Dollar Amount: For all WBE firms used, multiply the amount in Column "d" by 1.0 plus the amount in Column "e" by 0.20. Insert the total amount in this column.
10. Column "h" – Estimated SBE Usage Dollar Amount: For all MBE, WBE, or SBE firms used, Multiply the amount in Column "d" by 1.0 plus the amount in Column "e" by 0.20. Insert the total amount in this column.
11. Block "i" – The percent of actual MBE utilization calculated on the Base Bid only. (Divide the sum of Estimated MBE Usage Dollar Amount (Column "f") by your Base Bid (*) then multiply by 100 to get a percentage: \$ amounts from column "f" divided by Base Bid (*) x 100 = EIC usage as a percent of the Base Bid.)
12. Block "j" – The percent of actual WBE utilization calculated on the Base Bid only. (Divide the sum of Estimated WBE Usage Dollar Amount (Column "g") by your Base Bid (*) then multiply by 100 to get a percentage: \$ amounts from column "g" divided by Base Bid (*) x 100 = EIC usage as a percent of the Base Bid.)

13. Block "k" – The percent of actual SBE utilization calculated on the Base Bid only. (Divide the sum of Estimated SBE Usage Dollar Amount (Column "h") by your Base Bid (*) then multiply by 100 to get a percentage: \$ amounts from column "h" divided by Base Bid (*) x 100 = EIC usage as a percent of the Base Bid.)

It is the prime contractor's responsibility to check the status of EIC contractors prior to bid opening. Call the EIC Office at 253- 591-5075 for additional information.

Application for Waiver of EIC Requirements

Section 1: Basic Information			
Contractor's Name:		EIC Requirements	
Street Address:		MBE %	WBE %
City, State, ZIP Code:			
Contact E-mail Address:		SBE %	
Contact Telephone No.:			
Section 2: Type of EIC Waiver Requested			
MBE Waiver: <input type="checkbox"/> Total	<input type="checkbox"/> Partial	If partial waiver, please enter the revised MBE percentage:	
WBE Waiver: <input type="checkbox"/> Total	<input type="checkbox"/> Partial	If partial waiver, please enter the revised WBE percentage:	
SBE Waiver: <input type="checkbox"/> Total	<input type="checkbox"/> Partial	If partial waiver, please enter the revised SBE percentage:	
Please explain the reason for the waiver request:			
Section 3: Supporting Documentation			
<p>Provide the following documentation as evidence of your efforts to meet the EIC requirements set forth in the contract and in support of your waiver application:</p> <p><input type="checkbox"/> Attachment A. List of the general circulation, trade and MWBE/SBE-oriented publications and dates of publications soliciting for certified MWBE/SBE participation as a subcontractor/supplier and copies of such solicitation.</p> <p><input type="checkbox"/> Attachment B. List of the certified MWBEs/SBEs appearing in the State of Washington Office of Minority and Women Business Enterprise (OMWBE) directory that were solicited for this contract. Provide proof of dates or copies of the solicitations and copies of the responses made by the certified MWBEs/SBEs. Describe the specific reasons that responding certified MWBEs/SBEs were not selected.</p> <p><input type="checkbox"/> Attachment C. Descriptions of the contract documents/plans/specifications made available to certified MWBEs/SBEs by the contractor when soliciting their participation and steps taken to structure the scope of work for the purpose of subcontracting with or obtaining supplies from certified MWBEs.</p> <p><input type="checkbox"/> Attachment D. Description of the negotiations between the contractor and certified MWBEs/SBEs for the purposes of complying with the EIC requirements of this contract.</p> <p><input type="checkbox"/> Attachment E. Identify dates of any pre-bid, pre-award or other meetings attended by the contractor, if any, scheduled by the City of Tacoma with certified MWBEs/SBEs whom the City of Tacoma determined were capable of fulfilling the EIC requirements set in the contract.</p> <p><input type="checkbox"/> Attachment F. Other information deemed relevant to the request.</p>			
Section 4: Signature and Contract Information			
<p>By signing and submitting this form, the contractor or department certifies that a good faith effort has been made to promote MWBE/SBE participation pursuant to the EIC requirements set forth under the contract. Failure to submit complete and accurate information may result in a finding of noncompliance, non-responsibility, non-responsiveness, and a suspension or termination of the contract.</p>			
Prepared by (signature): _____		Date: _____	
Name and title of preparer (print): _____			

Instructions for Completing and Submitting an Application for a Waiver of EIC Requirements

Section 1.07 of the Tacoma Municipal Code requires the City to set requirements for participation by Minority and Women-owned Business Enterprises (MWBE) and/or Small Business Enterprise (SBE) on many types of contracts. Prior to the contract award, separate goals are established for MBE, WBE, and SBE utilization, expressed as a percentage of payments made under the contract. The regulations allow the City to impose penalties if contractors fail to meet the requirements established for the contract and also allow the City to grant waivers of requirements, either prior to a contract award or after the award has been made, provided the contractor demonstrates an inability to solicit participation despite good faith efforts to that end. In order for a waiver to be granted, the contractor must submit a completed “Application for Waiver of EIC Requirements” form, along with the required supporting documentation.

Section 1: Basic Information

Enter the contractor’s name, address, federal identification number, and the contract number in the spaces provided. Enter the MBE, WBE, and SBE utilization goals set forth in the solicitation or assigned contract.

Section 2: Type of Waiver Request

Check the type(s) of waiver requested. You may request a total or partial waiver of the EIC requirements. If you request a partial waiver any requirement, enter the revised goal for participation in the box provided. Use the space provided to provide a rationale for your waiver request. Consult the EIC Regulations Manual for the acceptable reasons waivers may be provided. You may attach additional sheets, if necessary.

Section 3: Supporting Documentation

Extensive documentation is required to demonstrate good faith efforts to comply with the EIC requirements. See the form for details on the required documentation.

Section 4: Signature and Contact Information

The waiver application must be signed by someone authorized to discuss the waiver with the Equity in Contracting office and Procurement. By signing the waiver application, the contractor certifies that a good faith effort has been made to promote MWBE/SBE participation pursuant to the EIC requirements set forth under the contract. Failure to submit complete and accurate information may result in a finding of non-compliance, non-responsibility, non-responsiveness, and a suspension or termination of the contract.

Note: Unless total waivers for all three of the MBE, WBE, and SBE participation have been granted, the contractor is required to submit all reports and documents – including compliance reports – pursuant to the provisions set forth in the contract, to evidence compliance with the requirements.

PART IV

CITY OF TACOMA

**LOCAL EMPLOYMENT AND APPRENTICESHIP
TRAINING PROGRAM (LEAP) REGULATIONS FOR
PUBLIC WORKS CONTRACTS**

LOCAL EMPLOYMENT AND APPRENTICESHIP TRAINING PROGRAM (LEAP) INSTRUCTIONS AND GOAL FORM

LEAP REQUIREMENTS & PROCEDURES:

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 Submittals:

- Prime Contractor LEAP Utilization Plan - This form is to be completed and presented at the Pre-Construction Meeting.
- LEAP Employee Verification Form - This form is to be completed for every qualifying LEAP employee.
- LEAP Weekly Payroll Report - This form is to be completed and submitted with each certified payroll.

The forms above, LEAP Program Requirements, community empowerment zone maps, and all related LEAP documents can be accessed on the City of Tacoma LEAP website by navigating to LEAP Forms at the following link: <http://cityoftacoma.org/leap>.

The City of Tacoma's LEAP office enforces two mandatory goals on City projects above certain monetary thresholds.

The Local Employment Utilization Goal requires the Prime Contractor performing a qualifying public works project 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 Areas of the Tacoma Public Utilities Service Area.

The Apprentice Utilization Goal requires the Prime Contractor performing a qualifying public works project to ensure that 15 percent of the total labor hours worked on the project are performed by Apprentices who are residents of the City of Tacoma or Tacoma Public Utilities Service Area. The accompanying LEAP Regulations, forms, and maps are included in these specifications.

*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 above \$250,000 and below \$1,000,000 and is thusly subject to the:

1. 15% Local Employment Utilization Goal

LEAP staff can assist contractors in the recruitment, screening and selection of 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) 594-7933 or (253) 591-5826. The LEAP Office is located in the Tacoma Municipal Building, 747 Market Street, Room 808, Tacoma, WA 98402.



City of Tacoma
LEAP Office
747 Market Street, Room 900
Tacoma, WA 98402
Phone (253) 591-5826
FAX (253) 591-5232

LEAP

Document Submittal Schedule

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

- ❑ **LEAP Abbreviated Program Requirements:** brief overview of LEAP Program requirements
- ❑ **Prime Contractor *LEAP* Utilization Plan:** to be submitted at the Pre-Construction Meeting
(*Required by Prime Contractor Only*)
- ❑ **LEAP Employee Verification Form:** to be submitted on an ongoing basis for each qualified LEAP employee
- ❑ **LEAP Weekly Payroll Report:** must be attached and filled out to the front of each certified payroll
- ❑ **Tacoma Public Utilities Service Area Map:** 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:** to be submitted weekly, biweekly or monthly with the LEAP Payroll Report attached as scheduled by the Prime
- ❑ **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
- ❑ **Local Resident/Pierce County (State – Approved) Apprentice Verification Form:** to be submitted on an ongoing basis for each qualified LEAP employee
- ❑ **Document Verification:** provide required information when requested from LEAP Office

Please submit above documents as instructed by the Project Manager.

If you have any questions or request further information, please feel free to contact the City of Tacoma's LEAP Program at (253) 591-5826, Fax (253) 591-5232, or email carmsstrong@cityoftacoma.org.



City of Tacoma
Community and Economic Development Department
LEAP Office
747 Market Street, Room 808
Tacoma, WA 98402
(253) 591-5826
FAX (253) 591-5232

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. It requires Contractors performing qualifying public works projects or service contracts to ensure that 15 percent of the total labor hours worked on the project are performed by LEAP-Qualified Pierce County apprentices approved by the Washington State Apprenticeship Council (SAC), youth, veterans and/or residents of Tacoma. Compliance may be met through any combination LEAP-Qualified employees. The Prime Contractor shall be solely responsible for meeting the LEAP Utilization Goal requirements.

Prime Contractors may obtain further information by contacting the City of Tacoma's LEAP Program at (253) 591-5826, Fax (253) 591-5232, or e-mail carmstrong@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 808.

LEAP PROGRAM REQUIREMENTS:

1. **LOCAL EMPLOYMENT GOAL:** The 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 GOAL:** The Contractor is required to ensure that 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.

3. **SUBCONTRACTOR NOTIFICATION:** Prime Contractors shall notify all Subcontractors of the LEAP Program requirement. Subcontractor labor hours may be utilized towards achievement of the LUG. Owner/Operator hours may be used for the Local Employment Goal.

4. **FAILURE TO MEET LEAP UTILIZATION GOAL:** Contractors shall be assessed an amount for each hour that is not achieved. The amount per hour shall be based on the extent the Contractor met its goal. The amount per hour that shall be assessed shall be as follows:

- 100% achievement \$0.00 penalty
- 99% to 90% achievement \$2.00 penalty
- 89% to 75% achievement \$3.50 penalty
- 74% to 50% achievement \$5.00 penalty
- 49% to 1% achievement \$7.50 penalty
- 0% achievement \$10.00 penalty

*Penalty may be waived in the best interests of the City of Tacoma.

LEAP DOCUMENT SUBMITTALS:**

1. **PRIME CONTRACTOR LEAP UTILIZATION PLAN (PCLUP):** The Contractor is required to provide the *PCLUP* at the **Pre-Construction meeting** showing the goals to be achieved for the project. The Contractor must identify in the *PCLUP* the estimated labor hours to be worked on the project by trade/craft persons.

2. *LEAP EMPLOYEE VERIFICATION FORM*: The Contractor must provide the LEAP Office with a form for every person whom the contractor will claim credit towards meeting the LUG with at least one piece of verifying documentation.
3. *LEAP WEEKLY PAYROLL REPORT*: The Prime and Subcontractors must complete and attach this form to the front of each weekly certified payroll when submitting to the LEAP Office for review.
4. *WEEKLY CERTIFIED PAYROLL*: 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.
5. *L&I STATEMENT OF INTENT TO PAY PREVAILING WAGE FORM*: The LEAP Office shall be provided with a copy for every contractor on the project.
6. *L&I AFFIDAVIT OF WAGES PAID FORM*: The LEAP Office shall be provided with a copy for every contractor on the project.

****WITHHOLDING PROGRESS PAYMENTS**: The LEAP Coordinator may withhold progress payments for failure to submit required forms.



City of Tacoma
LEAP Office
747 Market Street, Room 900
Tacoma WA 98402
Telephone (253) 591-5826
Fax (253) 591-5232

PRIME CONTRACTOR LEAP UTILIZATION PLAN

Failure to submit this plan at the Pre-Construction Meeting may result in Progress Payments being withheld.

Part A

Contractor:		Date:
Specification Number:	Contract/Work Order Number(s):	Contract Dollar Amount:
Project Description:		Notes:

PART B		PLANNED LEAP HOURS*			
Trade or Craft	City of Tacoma Resident	Economic Distressed Area Resident	Tacoma Public Utilities Service Area Apprentice Resident	WA State Apprentice *(Contracts outside of TPU Service Area Only)	
	hrs.	hrs.	hrs.	hrs.	
	hrs.	hrs.	hrs.	hrs.	Date
	hrs.	hrs.	hrs.	hrs.	
	hrs.	hrs.	hrs.	hrs.	
	hrs.	hrs.	hrs.	hrs.	
	hrs.	hrs.	hrs.	hrs.	Rejected
	hrs.	hrs.	hrs.	hrs.	
	hrs.	hrs.	hrs.	hrs.	Date
	hrs.	hrs.	hrs.	hrs.	
Totals					
					TOTAL hrs.

Part C

Provide a description of how the Contractor plans to ensure that the LEAP Utilization Goals on the project will be met. (Use additional sheets if necessary)

General Instructions for completing Prime Contractor LEAP Utilization Plan

Part A

Contractor/Contract Information Section: The Prime Contractor is responsible for completing this section. Failure to submit this plan at the Pre-Construction Meeting may result in Progress Payments being withheld.

Part B

Planned LEAP Hours Section: This section should be completed by the Prime Contractor. The information required in Part B is described below.

Trade or Craft: Indicate the Trade or Craft being used.

LEAP Employee Categories: Indicate the number of hours that will be utilized by the Prime Contractor and all Sub Contractors for each craft and broken down by City of Tacoma Resident, City of Tacoma Apprentice, Youth, or Veteran, Pierce County Apprentice, Youth, or Veteran.

For Watershed Projects: King County Apprentice – Approved by Washington State and/or Seattle Renewal Community (CEZ) Resident.

For Hydro Projects: Area Residents (residing in either Pierce County or the County where the work is performed: Lewis, Mason, Grays Harbor or Thurston County), Tacoma Community Empowerment Zone Resident, City of Tacoma Residents.

Totals: Total the number of hours in each of the six (6) columns.

Total Planned LEAP Utilization Hours: This is the total number of hours planned on this project to satisfy the LEAP Utilization Goal.

Part C

Description of how the Contractor plans to ensure fulfillment of the LEAP Utilization Goal: This section is to be completed by the Prime Contractor. Please describe how you plan to satisfy the LEAP Utilization Goal on this project. Provide a summary of your outreach and recruitment procedures to hire LEAP Qualified Employees to work on this project.



City of Tacoma LEAP Office
747 Market Street, Room 808
Tacoma, WA 98402
(253) 591-5826 fax (253) 591-5232
www.cityoftacoma.org/leap

LEAP EMPLOYEE VERIFICATION FORM

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 within the geographic boundaries of the City of Tacoma

_____ b. Resident within Economically Distressed ZIP Codes of the Tacoma Public Utilities Service Area

_____ c. WA State Approved Apprentice living in Tacoma Public Utilities Service Area

_____ 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 the following document(s) showing the address of residence as proof of local (Tacoma) and/or Pierce County residency and apprentice status, youth status, or veteran status.

.....

_____ For Youth - Copy of Birth Certificate or WA State ID or
WA Driver's License (projects advertised after 05-20-13)

_____ For Veterans – Copy of DD-214(Projects advertised after
05-20-13)

_____ 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:_____



City of Tacoma
LEAP Office
747 Market Street Room. 900
Tacoma WA, 98402
Phone (253) 591-5826
Fax (253) 591-5232
www.cityoftacoma.org/leap

LEAP Weekly Payroll Report

Prime / Subcontractor: _____ Union ☐ Non-Union ☐

Specification Number: _____ Project: _____

Payroll Week Ending Date: _____ Payroll Number: _____

To the extent possible, Contractors shall recruit Apprentices from multiple trades or crafts. (LEAP Regulations Section III)

Failure to submit this report attached to Weekly Certified Payrolls may result in Progress Payments being withheld.

1) Total Labor hours worked by all employees this payroll period on *this job*: _____

2) Total Wages paid *including benefits* to all employees this payroll period on *this job*: _____

Please include below LEAP qualified employees that have been verified by the LEAP Office *only*. A LEAP employee is a City of Tacoma resident and/or a Washington State approved apprentice who is a resident of Pierce County.

(Use additional sheets if necessary)

3) LEAP Employee Name	4) Social Security Number	5) Craft	6) Class J / A	7) Type of hours	8) Hours worked (this job)	9) Hourly Rate of pay incl. F/B
						\$
						\$
						\$
						\$
						\$
						\$
						\$
						\$

I, the undersigned, affirm that the information contained herein is true and correct.

Signature of Responsible Officer

Title

Date

Instructions for completing the LEAP Weekly Payroll Report

If no work was performed on this job for this week, write **No Work Performed** on line # 1.

If work was performed on this job for this week, complete the form using the following instructions.

- 1) Enter the number of hours worked on this job by **all** employees
- 2) Enter the total Gross wages paid to **all** employees, (including fringe benefits) for this job
- 3) Enter employee name for **LEAP** qualified employees
- 4) Enter Social Security Number
- 5) Enter Craft as listed on Labor & Industries Intent to Pay Prevailing Wage
 - if this employee worked in more than one craft category, enter 5) through 9) on separate lines
- 6) Enter the employee class, Journeyman (J) or Apprentice (A)
- 7) Enter type of hours (regular (R) , overtime (O), double time (DT), for this employee
 - for each change in type of hours enter 5) through 9) on separate lines
- 8) Enter the hours worked by this employee
- 9) Enter the rate of pay (including fringe benefits) for this employee

Sample

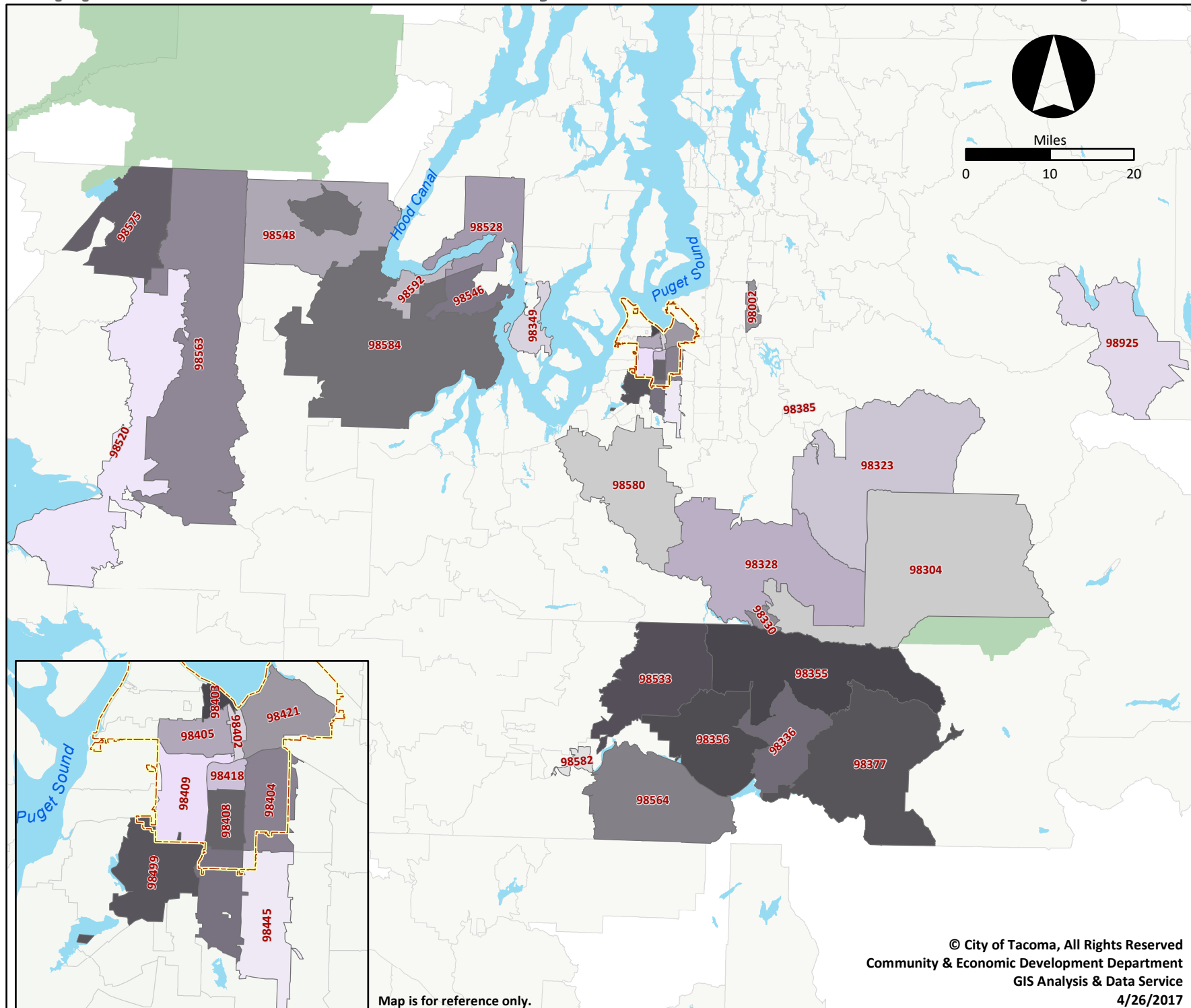
1) Total hours worked on this job by all employees 142

2) Total gross pay for all employees working on this job \$ 5412.91

The following employees have been identified as qualified LEAP employees for the purpose of meeting the LEAP Utilization Goal for this project.

3) Employee Name	4) Social Security Number	5) Craft	6) Class J / A	7) Type of hours	8) Hours worked (this job)	9) Hourly Rate of pay incl. F/B
Joe Smith	123-45-6789	Laborer	J	R	15	\$31.34
		Laborer	J	O	5	\$47.01
Tom Thompson	987-65-4321	Laborer	J	R	8	\$31.34
		Power Equipment Operator	J	R	8	\$37.24
Ken Swanson	654-59-7531	Electrician	A	R	32	\$29.93

Appendix C: Economically Distressed ZIP Codes Map



City Limits

98002

98304

98323

08278

08330

[illegible]

58556

58549

98355

98356

98377

98385

98520

98528

98533

08546

22512

See 10

98503

98564

98575

98580

98582

98584

98592

98925

08402

08402

58404

98405

98408

98409

98418

98421

98444

98445

98/99

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Community & Economic Development Department
GIS Analysis & Data Service
4/26/2017

Map is for reference only.

Economically Distressed ZIP Codes

Zip Code	200% Pov	Unemployed	25+ College	Area
98002		Y	Y	Auburn
98030	Y	Y		Kent
98032	Y	Y		Kent
98198	Y	Y		Seattle
98304	Y	Y	Y	Ashford
98323		Y	Y	Carbonado
98330	Y		Y	Elbe
98336	Y		Y	Glenoma
98355	Y	Y	Y	Mineral
98356	Y	Y	Y	Morton
98377		Y	Y	Randle
98385		Y	Y	South Prairie
98424	Y	Y		Fife
98433		Y	Y	JBLM
98439	Y	Y		Lakewood
98444	Y	Y	Y	Parkland
98467	Y	Y		University Place
98499	Y	Y		Lakewood
98520	Y	Y		Aberdeen
98528	Y		Y	Belfair
98548	Y	Y	Y	Hoodsport
98564	Y		Y	Mosssyrock
98575		Y	Y	Quinault
98580		Y	Y	Roy
98584	Y	Y		Shelton
98597	Y	Y		Yelm
98925	Y	Y	Y	Easton

“200% Pov” = People at or below 200% of the federal poverty line. (69th percentile)

“Unemployed” = Unemployment rate (45th percentile)

“25+ College” = People at or above 25 years old without a college degree. (75th percentile)

Tacoma Public Utility Service Area

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	Hoodspport
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

Apprentices may come from **any** of the ZIP codes listed under this page. If an apprentice lives in a Economically Distressed ZIP code, they may count towards those labor hours as well. Journeyman must be from the Economically Distressed ZIP codes.

No Work Performed (NWP) Report

Prime/Sub Contractor: _____

Specification Number: _____

Project Description: _____

Payroll Week Ending Date: _____ Payroll Number: _____

NO WORK PERFORMED

I, the undersigned, do hereby certify under penalty of perjury, that the information contained herein is true and correct.

Signature of Responsible Officer

Title

Date

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 goals.
- 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 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. 26301 § 1; passed Oct. 6, 1998)

1.90.030 Definitions.

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

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.

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).

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.

D. “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.

E. “Contractor or Service Provider” means a person, corporation, partnership, or joint venture entering into a contract with the City to construct a Public Work or Improvement.

F. “Director” shall mean the Director of Community and Economic Development, or the Director’s Designee.

G. “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 thresholds 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)

Said thresholds shall be updated within 30 days following any Prevailing Wage updates issued by the Washington State Labor and Industry. All updates are to be published on the first business day in August and in February of each calendar year.

H. "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 and telecommunications services of that Division, and the Water Division of the Department of Public Utilities of the City of Tacoma.

I. "Estimated Labor Hours" shall mean the anticipated number of Labor Hours determined by the City to be necessary to construct a Public Work or Improvement and set forth in the specifications for the project, or as may be subsequently revised due to contract or project adjustment, or pursuant to an agreed upon change order.

J. "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.

K. "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, 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).

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

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

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

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

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

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

R. "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.

S. "Resident of Tacoma" shall mean any person, not defined as a Resident of the Economically Distressed ZIP Codes within the Tacoma Public Utilities Service Area, 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.

T. "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 to be performed primarily for the Electrical Utility.

U. "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 to be performed primarily for the Water Utility.

V. "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."

W. "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 by a Contractor.

X. "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.

Y. Washington State Labor and Industry 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.

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

(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 goals.

A. Utilization Goals.

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 actually 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 Goal.

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 goals 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 goal. The amount per hour that shall be assessed shall be as follows:

Percent of Goal Met	Assessment per unmet hour
100%	\$ 0.00
90% - 99%	\$ 2.00
75% to 89%	\$ 3.50
50% to 74%	\$ 5.00
1% to 49%	\$ 7.50
0%	\$10.00

When determining the percent of goal that is 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 program. 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 Director 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 Director'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 Director's LEAP reports may be considered by the Board of Contracts and Awards in its determinations as to bidder responsibility.

D. LEAP Goal Adjustments.

1. LEAP utilization goals 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 goals 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 goal adjustment may not be appealed.

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

2. The methodology of determining the appropriate adjustments to LEAP utilization goals 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 goals 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 Director 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 goal specified in subsection A1. of this section. The 15% utilization goal 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. 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 Good faith efforts. *Repealed by Ord. 27368.*

(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 or Improvement 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 Director 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 Director 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 Board of Contracts and Awards, 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 Board of Contracts and Awards may be appealed to the City Council or Public Utility Board, as appropriate, and thereafter if desired, to the Superior Court of Pierce County, Washington, within fifteen (15) days of the previous decision.

(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 Director'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. 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)

PART V

STATE PREVAILING WAGE RATES

AND

GENERAL REQUIREMENTS

PREVAILING WAGE RATES

This project requires prevailing wages under chapter 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 DOCUMENTS

The Contractor shall submit to the City the following Department of Labor and Industries (L&I) forms for itself and for each firm covered under [39.12 RCW](#) that provided work and materials for the Contract:

1. A copy of an approved Statement of Intent to Pay Prevailing Wages, L&I form number [F700-029-000](#). The City will make no payment under this Contract for the Work performed until this statement has been approved by L&I and a copy of the approved form has been submitted to the City.
2. A copy of an approved Affidavit of Prevailing Wages Paid, L&I form number [F700-007-000](#). The Contracting Agency will not grant completion or release retainage held under chapter 60.28 RCW until all approved Affidavit of Wages paid for Contractor and all Subcontractors have been received by the City.



CITY OF TACOMA

INSURANCE REQUIREMENTS FOR CONTRACTS

The Contractor (Contractor) shall maintain at least the minimum insurance set forth below. By requiring such minimum insurance, the City of Tacoma shall not be deemed or construed to have assessed the risk that may be applicable to Contractor under this Contract. Contractor shall assess its own risks and, if it deems appropriate and/or prudent, maintain greater limits and/or broader coverage.

1. GENERAL REQUIREMENTS

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

- 1.1. City of Tacoma reserves the right to approve or reject the insurance provided based upon the insurer, terms and coverage, the Certificate of Insurance, and/or endorsements.
- 1.2. Contractor shall not begin work under the Contract until the required insurance has been obtained and approved by City of Tacoma.
- 1.3. Contractor shall keep this insurance in force during the entire term of the Contract and for Thirty (30) calendar days after completion of all work required by the Contract, unless otherwise provided herein.
- 1.4. Insurance policies required under this Contract that name "City of Tacoma" as Additional Insured shall:
 - 1.4.1. Be considered primary and non-contributory for all claims.
 - 1.4.2. Contain a "Separation of Insured provision and a "Waiver of Subrogation" clause in favor of City of Tacoma.
- 1.5. Section 1.4 above does not apply to contracts for purchasing supplies only.
- 1.6. Verification of coverage shall include:
 - 1.6.1. An ACORD certificate or equivalent.
 - 1.6.2. Copies of all endorsements naming the City of Tacoma as additional insured and showing the policy number.
 - 1.6.3. A notation of coverage enhancements on the Certificate of Insurance shall not satisfy these requirements – actual endorsements must be submitted.
- 1.7. Liability insurance policies, with the exception of Professional Liability and Workers' Compensation, shall name the City of Tacoma and its officers, elected officials, employees, agents, and authorized volunteers as additional insured.
 - 1.7.1. No specific person or department should be identified as the additional insured.
 - 1.7.2. All references on certificates of insurance and endorsements shall be listed as "City of Tacoma".
 - 1.7.3. The City of Tacoma shall be additional insured for both ongoing and completed operations using Insurance Services Office (ISO) form CG 20 10 04 13 and CG 20



CITY OF TACOMA

INSURANCE REQUIREMENTS FOR CONTRACTS

37 04 13 or the equivalent for the full available limits of liability maintained by the Contractor irrespective of whether such limits maintained by the Contractor are greater than those required by this Contract and irrespective of whether the Certificate of Insurance describes limits lower than those maintained by the Contractor.

- 1.8. Contractor shall provide a Certificate of Insurance for each policy of insurance meeting the requirements set forth herein when Contractor provides the signed Contract for the work to City of Tacoma. Contractor shall provide copies of any applicable Additional Insured, Waiver of Subrogation, and Primary and Non-contributory endorsements. Contract or Permit number and the City Department must be shown on the Certificate of Insurance.
- 1.9. Insurance limits shown below may be written with an excess policy that follows the form of an underlying primary liability policy or an excess policy providing the required limit.
- 1.10. Liability insurance policies shall be written on an "occurrence" form, except for Professional Liability/Errors and Omissions, Pollution Liability, and Cyber/Privacy and Security
- 1.11. If coverage is approved and purchased on a "Claims-Made" basis, Contractor warrants continuation of coverage, either through policy renewals or by the purchase of an extended reporting period endorsement as set forth below.
- 1.12. The insurance must be written by companies licensed or authorized in the State of Washington pursuant to RCW 48 with an (A-) VII or higher in the A.M. Best's Key Rating Guide www.ambest.com.
- 1.13. Contractor shall provide City of Tacoma notice of any cancellation or non-renewal of this required insurance within Thirty (30) calendar days.
- 1.14. Contractor shall not allow any insurance to be cancelled or lapse during any term of this Contract, otherwise it shall constitute a material breach of the Contract, upon which City of Tacoma may, after giving Five (5) business day notice to Contractor to correct the breach, immediately terminate the Contract or, at its discretion, procure or renew such insurance and pay any and all premiums in connection therewith; with any sums so expended to be repaid to City of Tacoma by Contractor upon demand, or at the sole discretion of City of Tacoma, offset against funds due Contractor from City of Tacoma.
- 1.15. 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.
- 1.16. 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 has changed.



CITY OF TACOMA INSURANCE REQUIREMENTS FOR CONTRACTS

- 1.17. All costs for insurance shall be incidental to and included in the unit or lump sum prices of the Contract and no additional payment will be made by City of Tacoma to Contractor.
- 1.18. 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).
- 1.19. Failure by City of Tacoma to identify a deficiency in the insurance documentation provided by Contractor or failure of City of Tacoma 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.
- 1.20. If Contractor is a State of Washington or local government and is self-insured for any of the above insurance requirements, a certification of self-insurance shall be attached hereto and be incorporated by reference and shall constitute compliance with this Section.

2. CONTRACTOR

As used herein, "Contractor" shall be the Supplier(s) entering a Contract with City of Tacoma, whether designated as a Supplier, Contractor, Vendor, Proposer, Bidder, Respondent, Seller, Merchant, Service Provider, or otherwise.

3. SUBCONTRACTORS

It is Contractor's responsibility to ensure that each subcontractor obtain and maintain adequate liability insurance coverage. Contractor shall provide evidence of such insurance upon City of Tacoma's request.

4. 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.

4.1 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. The Commercial General Liability Insurance policy shall be written on an Insurance Services Office form CG 00 01 04 13 or its equivalent. Products and Completed Operations shall be maintained for a period of three years following Substantial Completion of the Work related to performing construction services.

This policy shall include product liability especially when a Contract solely is for purchasing supplies. The Commercial General Liability policy shall be endorsed to include:

- 4.1.1 A per project aggregate policy limit, using ISO form CG 25 03 05 09 or an equivalent endorsement.

4.2 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



CITY OF TACOMA

INSURANCE REQUIREMENTS FOR CONTRACTS

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 an MCS 90 endorsement or equivalent and a CA 99 48 endorsement or equivalent if "Pollutants" are to be transported.

4.3 Workers' Compensation

4.3.1 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. The Contractor must comply with their domicile State Industrial Insurance laws if it is outside the State of Washington.

4.4 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.

4.5 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.

4.6 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.