CITY OF MERCER ISLAND

KING COUNTY, WASHINGTON

MERCER ISLAND PUBLIC WORKS DEPARTMENT

80th Ave SE Pedestrian Improvements

Bid Number:
24-27

Contract Specifications

June 2024

BRYCE CORRIGAN
STATE OF WASHINGTON
20100320
REGISTERED
PROFESSIONAL ENGINEER

I attest to the accuracy and integrity of this document
2024.06.04
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Notices

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Advertisement for Bids
City of Mercer Island

Project Title: 80th Ave SE Pedestrian Improvements
Bid Number: SP0111
Engineers Estimated Cost: $1,650,000

Bidders shall submit their bids in PDF format to the Public Works email address at: bids@mercerisland.gov. Sealed bids will be received, not sent, electronically by the City until **2:00 pm on June 26, 2024**. There will be no public bid opening for this project. Bid results will be posted on the City's web page at: https://www.mercerisland.gov/rfps.

Bidder questions are to be directed to Ian Powell, Street Engineer, by email only ian.powell@mercerisland.gov . The City will receive questions until **3:00 pm on June 21, 2024.** Questions received after this date will not be answered.

Work to be performed under this contract includes temporary traffic control, vegetation removal, concrete sidewalk and curb removals, pavement removals, minor grading, new concrete curb & gutter, new concrete sidewalk, new ADA ramps, conduit, wiring, and luminaire installation for new illumination system, new pavement markings, and landscape restoration.

The City reserves the right to reject any and all bids and to waive minor irregularities.

Plans, specifications, addenda, and bidders list are available on-line through Builders Exchange of Washington, Inc. at http://www.bxwa.com. Click on "Posted Projects", "Public Works", "City of Mercer Island", "Projects Bidding". Builders Exchange manages the official bidders list. Bidders are encouraged to register in order to receive automatic email notification of future addenda and to be placed on the official bidders list.

Plans and specifications are also available at the City of Mercer Island website https://www.mercerisland.gov/rfps. Addenda may not be available or updated on this website.

A bid deposit in the amount of five percent (5%) of the bid total price must accompany each bid.

The City of Mercer Island, in accordance with Title VI of the Civil Rights Act of 1964, 78 Stat. 252, 42 U.S.C. 2000d to 2000d-4 and Title 49, Code of Federal Regulations, Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally-assisted programs of the Department of Transportation issued pursuant to such Act, hereby notifies all bidders that it will affirmatively ensure that in any contract entered into pursuant to this advertisement, disadvantaged business enterprises as defined at 49 CFR Part 23 will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, national origin, or sex in consideration for an award.

Andrea Larson, City Clerk

Published: Seattle Daily Journal of Commerce – June 5 & June 12, 2024

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City of Mercer Island
Instructions to Bidders

1. ELIGIBILITY TO BID:

It is the intent of the City to award a contract to the low responsible bidder. Before award, the bidder must meet the following bidder responsibility criteria to be considered a responsible bidder. To be eligible to bid, each Bidder must, at the time of the bid submittal:

A. Have a current certificate of registration as a contractor in compliance with chapter 18.27 RCW; and

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

C. If applicable:
   i. Have Industrial Insurance (workers' compensation) coverage for the bidder's employees working in Washington, as required in Title 51 RCW; and
   ii. Have a Washington Employment Security Department number, as required in Title 50 RCW; and
   iii. Have a Washington Department of Revenue state excise tax registration number, as required in Title 82 RCW; and
   iv. Have an electrical contractor license, if required by Chapter 19.28 RCW; and
   v. Have an elevator contractor license, if required by Chapter 70.87 RCW; and

D. Not be disqualified from bidding on any public works contract under RCW 39.06.010, 39.12.050, RCW 39.12.055, or 39.12.065 (3); and

E. Not be disqualified or debarred or ineligible to be awarded contracts for which Federal funds have been requested or received.

F. Completed the L&I online training or meet the prior experience requirements in RCW 39.04.350(1)(f); and

G. Within the three-year period immediately preceding the date of the bid solicitation, not have been 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 to have willfully violated, as defined in RCW 49.48.082, any provision of chapter 49.46, 49.48 or 49.52 RCW.

A contract shall only be awarded to a Bidder that demonstrates to the City's satisfaction that the Bidder is qualified to perform the Work and is, therefore, a responsible bidder.

2. SUBCONTRACTOR RESPONSIBILITY CRITERIA:

The Bidder must verify responsibility criteria for each first-tier subcontractor, and each subcontractor of any tier that hires other subcontractors must verify responsibility criteria for each of its subcontractors. Upon request of the City the Bidder shall promptly provide documentation to the City demonstrating that the subcontractor(s) meets the subcontractor responsibility criteria below. The requirements of this section apply to all subcontractors regardless of tier.

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

A. Have a current certificate of registration in compliance with chapter 18.27 RCW; and

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

C. If applicable:
   i. Have Industrial Insurance (workers' compensation) coverage for the subcontractor's employees working in Washington, as required in Title 51 RCW; and
   ii. Have a Washington Employment Security Department number, as required in Title 50 RCW; and
   iii. Have a Washington Department of Revenue state excise tax registration number as required in Title 82 RCW; and
   iv. Have an electrical contractor license, if required by Chapter 19.28 RCW; and
   v. Have an elevator contractor license, if required by Chapter 70.87 RCW; and

D. Not be disqualified from bidding on any public works contract under RCW 39.06.010, RCW 39.12.050, RCW 39.12.055, or RCW 39.12.065 (3); and

E. Not be disqualified or debarred or ineligible to be awarded contracts for which Federal funds have been requested or received.

F. Completed the L&I online training or meet the prior experience requirements in RCW 39.04.350(1)(f); and

G. Within the three-year period immediately preceding the date of the bid solicitation, not have been 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 to have willfully violated, as defined in RCW 49.48.082, any provision of chapter 49.46, 49.48 or 49.52 RCW.

H. Key personnel must hold an appropriate license in the applicable discipline.

3. EXAMINATION OF PLANS, SPECIFICATIONS AND SITE:

Each bidder is instructed to examine the Plans, Specifications, Addenda, the site of the proposed improvements, and conduct any other examination and investigation which the bidder may desire to make as to the accuracy of the nature of the work and the difficulties to be encountered. The Bidder shall be responsible for all costs associated with these additional examinations including all restoration work and damages which may be a result of such investigation. Bidders shall consider Federal, State, and local laws and regulations that may affect cost, progress, or performance of the work.

4. ADDITIONAL INFORMATION:

All questions about the meaning or intent of the Contract Documents are to be directed to Ian Powell, Street Engineer, in writing or by email to ian.powell@mercerisland.gov. No telephone questions will be accepted or considered. Bidders should include a reference to the specification section and paragraph number and/or drawing number in the Contract Documents.

The City will receive questions until 3:00 pm on June 21, 2024. Questions received after this date will not be answered. All questions and responses will be posted by June 24, 2024 to the Builders Exchange site. The City will delete bidder names from the text of question(s) and answers being sent.

Interpretations or clarifications considered necessary by the City in response to such questions will be issued by Addenda mailed or delivered to all parties recorded by the Engineer or City as having received the Contract Documents. Only questions answered by formal written Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

5. WAGES:

This Contract is subject to Chapters 39.12 and 49.28 RCW, amendments thereto and regulations issued thereunder, relating to prevailing wages, benefits and other requirements. Bidders shall examine and be familiar with such requirements. No claim for additional compensation will be allowed which is based upon a lack of knowledge or a misunderstanding of any such requirements by the Bidder or a failure to include in Bidder's price adequate increases in such wages during the performance of this Contract. A copy of the most recent prevailing wage schedule is in the Appendix of the specifications. Current prevailing wage rates for King County can be obtained from the Washington State Department of Labor and Industries at https://lni.wa.gov/licensing-permits/public-works-projects/prevailing-wage-rates/.

If this Contract is for a project that receives Federal funds, the labor and wage and benefits standards in 29 CFR part 5 may also apply, so Bidders shall examine and be familiar with such requirements.

6. PROGRESS AND COMPLETION:

Time is of the essence for this Project. Progress and completion of the Work shall comply with all requirements herein, and intermediate and final completion dates as may be set forth in the specifications. The submission of a bid constitutes the Bidder's acknowledgement that such progress and completion requirements have been taken into account in formulating a price for this Work.

7. PREVENTION OF ENVIRONMENTAL POLLUTION AND PRESERVATION OF PUBLIC NATURAL RESOURCES:

If awarded the Contract, the Bidder shall fully comply with all such environmental protection laws, ordinances and regulations dealing with prevention and environmental pollution and the preservation of public natural resources that may be applicable to this Project. The cost of such compliance shall be included in the bid prices.

8. BID FORM:

The Bid Form is included in the Contract Documents. The Bid Form must be completed in ink. Bids that contain omissions, erasures or irregularities of any kind may be rejected. Any qualification, addition, limitation or provision attached to or contained in a bid may render the bid non-responsive and not eligible for award. No oral, facsimile, telegraphic or telephonic bids or modifications will be considered.

All bids shall be signed by the Bidder, or the Bidder's authorized representative. If the bid is made:

A. By an individual, the Bidder's name, signature, and address must be shown;

B. By a partnership or joint venture, it shall contain the names of each partner, the mailing address of the partnership or joint venture and shall be signed in the firm name, followed by the signature of the person signing, indicating that person's position in the partnership or joint venture;

C. By a corporation or limited liability company ("LLC"), the name of the state under the laws of which the corporation or LLC is chartered, the name and post office address of the corporation or LLC and the title of the person who signs on behalf of the corporation or LLC must be shown.

Upon the City's request, the Bidder shall provide copies of the articles of incorporation, bylaws, resolutions of board of directors, partnership papers, joint venture agreements, and any other documents evidencing the legal status of the Bidder and the authority of the Bidder's officer or representative who signed the bid on behalf of the Bidder.

The City is not responsible for any cost incurred in responding to this Call for Bids.

9. ACKNOWLEDGEMENT OF ADDENDA:

Each Bidder shall include on the Bid Form specific acknowledgment of receipt of each Addendum issued by the City during the bidding period. If the Bidder does not specifically acknowledge each addendum, the City may reject the bid as non- responsive unless the City determines from delivery records or from inclusion of information in the bid of information contained in the addenda that the Bidder received constructive notice of the addenda.

10. BID SECURITY:

The Bid shall be accompanied by a bid deposit in the amount equal to at least 5% of the Total Bid Price. The bid deposit shall be in one of the following formats and made payable to the City:

A. A bid guaranty bond, in accordance with and using a form acceptable to the City which contains provisions substantially similar to those in the bid bond form included with the Contract Documents, duly completed by a guaranty company authorized to carry on business in the state of Washington; or

B. A postal money order, a certified check, or cashier's check drawn upon a banking institution with a branch office in the state of Washington.

The surety signing the bid guaranty bond shall be registered with the Washington State Insurance Commissioner, and the surety's name shall appear in the current Authorized Insurance Company List in the State of Washington published by the Office of the Insurance Commissioner. A Power of Attorney must accompany the bid guaranty bond and must appoint the surety's true and lawful attorney-in-fact to make, execute, seal and deliver the bid guarantee bond. Failure to submit the required bid security with the Bid shall render the bid non-responsive and the Bid shall be rejected.

11. NON-COLLUSION:

Each bid shall be accompanied by a signed Non-Collusion Declaration in accordance with, and using the form provided by the City. Failure to submit a signed Declaration with the Bid shall render the bid non-responsive and the Bid shall be rejected.

More than one Bid from an individual, firm, partnership, corporation, or association under the same or different names will not be considered. If the City believes that any Bidder is interested in more than one Bid for the work contemplated, all Bids in which such Bidder is interested will be rejected. If the City believes that collusion exists among the Bidders, all Bids will be rejected.

12. DELIVERY OF BID:

Each Bid shall be submitted in PDF format via electronic transmission to the Public Works email address at: bids@mercerisland.gov. The City will not consider bids received after the time fixed for opening bids in the Advertisement for Bids. A Bid is deemed submitted as evidenced by the receipt date and time shown in the source code of the email received by the City's computer system. Contractors accept all risk of late delivery, regardless of fault. Any submittal received after the due date and time shall be deemed non-responsive and will eliminate their Bid from any further consideration. All respondents will receive an email confirmation within the next business day indicating their submittal has been successfully received.

The submission of a Bid will constitute an incontrovertible representation by the Bidder that the Bidder has complied with every requirement of these instructions, that without exception the Bid is premised upon performing the work required by the Contract Documents and such means, methods, techniques, sequences, or procedures of construction as may be indicated in or required by the Contract Documents, and that the Contract Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for performance of the work.

13. MODIFICATION OF BID:

A modification of a Bid will be considered only if the modification is received prior to the time announced for the opening of Bids. All modifications shall be made in writing executed and submitted in the same form and manner as the original Bid.

14. RETURN OF BID SECURITY:

After the bid prices have been compared, the City may return the bid security if, in the City's judgment, the Bidder would not be considered for award. All other Proposal Guarantees will be held until the Contract and the Performance Bond of the successful bidder have been executed.

15. EVALUATION OF BIDS AND BID ERRORS:

After opening the Bids, the City will check them for correctness of extensions of the prices per unit and the total price. If a discrepancy exists between the price per unit and the extended amount of any bid item, the price per unit will control. The total of extensions, corrected where necessary, will be used by the City for award purposes.

Irregular Bids:

A. A Bid will be considered irregular and will be rejected if:

i. The authorized Bid Form furnished by the City is not used or is materially altered;
ii. The completed Bid Form contains any unauthorized additions, deletions, alternate bids, or conditions;
iii. The bidder adds provisions reserving the right to reject or accept the Award, or enter into the Contract;
iv. A price per unit cannot be determined from the Bid Form;
v. The Bid Form is not properly executed;
vi. An executed non-collusion certificate is not provided; or
vii. Proper bid security does not accompany the Bid.

B. A Bid may be considered irregular and may be rejected if:

i. The Bid Form does not include a unit price for every Bid item;
ii. Any of the unit prices are excessively unbalanced (either above or below the amount of a reasonable Bid) to the potential detriment of the City;
iii. Receipt of Addenda is not acknowledged;
iv. A member of a joint venture or partnership and the joint venture or partnership submit Bid Forms for the same project (in such an instance, both Bids may be rejected); or
v. If Bid Form entries are not made in ink.

Bids will be evaluated by the City to determine which bid is the apparent lowest, responsive bid.

Bid results will be posted on the City's website at https://www.mercerisland.gov/rfps.

The City, in its sole discretion, reserves the right to waive minor bid errors, informalities, and immaterial irregularities when it is in the City's best interest to do so.

16. EVALUATION OF BIDDER RESPONSIBILITY:

A Contract shall only be awarded to a Bidder that demonstrates to the City's satisfaction that the Bidder is qualified to perform the Work and is, therefore, a responsible bidder.

A. Bidder Responsibility Criteria. To be determined responsible, the Bidder must, in addition to satisfying the bidder responsibility criteria listed in Section 1. ELIGIBILITY TO BID above:
   i. Have adequate financial resources to perform the contract, or the ability to obtain them;
   ii. Have a satisfactory performance record;
   iii. Have a satisfactory record of integrity and business ethics;
   iv. Have the necessary production, construction, and technical equipment and facilities or the ability to obtain them;
   v. Be otherwise qualified and eligible to receive an award under applicable laws and regulations;
   vi. Be in compliance with training requirements in RCW 39.04.350(1)(f); and
   vii. Provide a statement in accordance with RCW 9A.72.085 verifying compliance with responsible bidder criteria requirement of RCW 39.04.350(1)(g).

B. Reference Checking. To assist the City in the review of the Bidder's qualifications, the Bidder shall, within five (5) days of being requested to do so by the City, provide the following information:

   i. Past Experience in Similar Projects. Provide a list of all construction contracts (whether completed or in progress) entered into or performed by the Bidder within the past five (5) years for projects similar in scope, time and complexity to the work called for under this Contract. Provide the names of the contracts, the total contract price, the name of the foreman, the foreman's previous project experience as a foreman on 3 similar construction contracts, and the names and phone numbers of the owners.

   ii. References. Provide a list of five (5) references. References will be asked to rate performance on the following items: overall impression of the company; firm experience and technical knowledge; foreman experience and quality of work, effective coordination of subcontractors; ability to coordinate and work with utility companies and governmental entities; responsiveness to owner requests; attention to safety; quality and timeliness of submittals, change order proposals, project schedule, schedule updates and other applicable paperwork.

If the Bidder is a joint venture, the Bidder shall submit information for the joint venture if the members have worked together in the past and also information about each member of the joint venture. The Joint Venture Agreement shall be included in the submission.

If the Bidder fails to supply information requested concerning responsibility within the time and the manner specified, the City may base its determination of responsibility upon any available information related to the responsibility criteria or may find the Bidder is not responsible.

The City reserves the right to inspect records, reports and other information which may be maintained by or for the Bidder to the extent necessary, as determined by the City to verify, clarify or otherwise consider the information provided by the Bidder.

17. DETERMINATION OF NON-RESPONSIBILITY:

If the City determines a Bidder to be not responsible, the City will provide, in writing, the reasons for the determination. The Bidder may appeal the determination within ten (10) days of its receipt of the City's determination of non-responsibility by presenting additional information to the City. The City shall consider the additional information before issuing its final determination. If the City's final determination affirms that the Bidder is not responsible, the City shall not execute a contract with any other bidder until two (2) business days after the Bidder determined to be not responsible has received the final determination.

18. CONTRACT AWARD:

If a Contract is awarded, the City will award the contract to the responsible bidder that submits the lowest total responsive bid for the schedule(s) selected by City after bid opening and prior to award.

If the Contract is to be awarded, City will give the successful Bidder a Notice of Award within sixty (60) days after the day of the Bid opening. No other act of the City or others will constitute acceptance of a Bid.

The City reserves the right to request bidders to extend the effective period of their bids.

19. REJECTION OF ALL BIDS:

The City reserves the right to reject any or all Bids at any time up to actual execution of the Public Works Contract, even if there has been an award of the Contract.

Any or all Bids will be rejected if the City has reason to believe that collusion exists among the Bidders.

20. EXECUTION OF PUBLIC WORKS CONTRACT:

The Bidder to whom award is made shall execute a written Public Works Contract with the City on the form provided, including any Addenda and any other Exhibits attached thereto, shall secure all insurance, and shall furnish all certificates, endorsements and bonds required by the Contract Documents within ten (10) calendar days after receipt of the forms from the City. Failure or refusal to execute the Public Works Contract, including any Addenda and any other Exhibits attached thereto, as herein provided or to conform to any of the stipulated requirements in connection therewith shall be just cause for annulment of the award and forfeiture of the Bid security. If the lowest responsive, responsible Bidder refuses or fails to execute the Public Works Contract, including any Addenda and any other Exhibits attached

thereto, the City may award the Contract to the second lowest responsive, responsible Bidder. If the second lowest responsive, responsible Bidder refuses or fails to execute the Public Works Contract, including any Addenda and any other Exhibits attached thereto, the City may award the contract to the third lowest responsive, responsible Bidder. On the failure or refusal of such second or third lowest Bidder to execute the Agreement, including any Addenda and any other Exhibits attached thereto, each such Bidder's Bid securities shall be likewise forfeited to the City.

21. BID PROTEST PROCEDURES:

A. Form of Protest. In order to be considered, a Protest shall be in writing, addressed and delivered to the attention of the project manager at the City of Mercer Island, 9601 SE 36th Street, Mercer Island, Washington 98040. The Protest shall include the following:

i. The name, address, and phone number of the Bidder protesting, or the authorized representative of the Bidder;
ii. A complete, detailed statement of all grounds for protest, supporting authority, and any supporting documentation. Supplemental information will not be considered unless the supplementation contains information not available at the time of protest;
iii. The specific ruling or relief requested; and
iv. Evidence that all persons with a financial interest in the procurement have been given notice of the Protest or if such persons are unknown, a statement to that effect.

B. Who May Protest:

i. Protests based on specifications: Any prospective Bidder.
ii. Protests following Bid opening: Any Bidder with a substantial financial interest in the award of a Contract.

C. Time to Protest:

i. Protests based on specifications or other terms in the Contract Documents must be received by the City no later than ten (10) calendar days prior to the date established for submittal of Bids.
ii. The City must receive protests based on other circumstances within five (5) calendar days after the bids are opened and publicly read.
iii. In no event shall a Protest be considered if all bids are rejected or after execution of the Contract.

D. Determination of Protest. Upon receipt of a timely written Protest, the City shall investigate the Protest and shall respond in writing to the Protest prior to the award of Contract. If protest is submitted in accordance with the procedures set forth above, the City will not execute a contract any sooner than two (2) business days after the City's decision on the Protest.

E. Failure to Comply. Failure to comply with the procedures set forth herein may render a Protest untimely or inadequate and may result in rejection thereof by the City.

F. Exhaustion of Administrative Remedies. By submitting a bid, the Bidder agrees the Bidder's compliance with the protest procedures set forth herein are a mandatory condition precedent to the Bidder initiating a lawsuit against the City.

G. Venue. By submitting a bid, the Bidder acknowledges and agrees that a lawsuit or action related to or arising out of this procurement shall be brought in the Superior Court of King County, Washington.

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Bidder's Checklist

ALL BIDDERS must properly complete, execute and submit the following with their bids:

1. NON-COLLUSION DECLARATION: Failure to submit the certificate shall make the bid non-responsive and not eligible for award.

2. BID FORM: Bidders must bid on all items contained in the Bid Form and the Form must be signed. The omission or deletion of any bid item may render the bid non-responsive and result in the rejection of the bid. Bidders are reminded to comply with RCW 39.30.060.

3. CONTRACTOR DECLARATION PURSUANT TO RCW 39.04.350(2): Failure to submit the declaration shall make the bid non-responsive and not eligible for award.

4. BID GUARANTY BOND: Failure to furnish a bid deposit of a minimum of five percent (5%) shall make the bid non-responsive and not eligible for award.

5. BIDDERS QUALIFICATION CERTIFICATE: To be completed and signed. The City reserves the right to check all statements and to judge the adequacy of the bidder's qualifications.

To assist the City in the review of the responsible Bidder's qualifications, the Bidder(s) shall, within five (5) days of being requested to do so by the City, provide the information required in Evaluation of Bidder Responsibility of the Instructions to Bidders, including a statement in accordance with RCW 9A.72.085 verifying compliance with responsible bidder criteria requirement of RCW 39.04.350(1)(g).

The **SUCCESSFUL BIDDER** shall properly complete, execute (as required) and submit the following after receiving notice of the award of the Project.

1. Public Works Contract,

2. Performance Bond,

3. Payment Bond,

4. Certificate of Insurance,

5. Retainage Agreement,

6. Statement of Intent to Pay Prevailing Wages,

7. Other documents requested by City.

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BIDDING REQUIREMENTS

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Non-Collusion Declaration

Project Name: 80th Ave SE Pedestrian Improvements SP0111

Bidder/Contractor: _____

I, _____, declare under penalty of perjury under the laws of the State of Washington that the following statements are true and correct:

1. I am the representative for the above-named bidder/contractor, and as its _____, I am authorized to make the declaration herein on its behalf.

2. That the undersigned person(s), firm, association or corporation has (have) not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with the project for which this proposal is submitted.

_____ _____

Date and Place Signature

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BID FORM

(NOTE TO BIDDER: This BID FORM shall be completed in ink or typewritten)

TO: City of Mercer Island

ADDRESS: 9601 SE 36th Street
Mercer Island, Washington 98040

PROJECT TITLE: **80th Ave SE Pedestrian Improvements, SP0111**

Bidder Declaration and Understanding

The undersigned Bidder hereby declares that they have carefully examined the Contract Documents for the construction of the project, that they have personally inspected the site, that they have satisfied themselves as to the quantities involved, including materials and equipment, and conditions of work involved, including the fact that the description of the quantities of work and materials, as included herein, is brief and is intended only to indicate the general nature of the work and to identify the quantities with the detailed requirements of the Contract Documents, and that this Proposal is made according to the provisions and under the terms of the Contract Documents, which Documents are hereby made a part of this Proposal. The Bidder further declares that they have exercised their own judgment regarding the interpretation of subsurface information and has utilized all data, which they believe pertinent from the Engineer, Owner, and other sources and have made such independent investigations as the Bidder deems necessary in arriving at their conclusions.

The Bidder is hereby notified that no goal for disadvantaged business enterprise utilization has been established for this project. As part of the City's affirmative action effort, however, the City encourages participation of certified disadvantaged businesses and women business enterprises to act as prime contractors as well as subcontractors on this project.

_____ _____
Contractor Name Signature

The undersigned Bidder hereby declares that they have carefully examined the Contract Documents including the following addenda, receipt of all is hereby acknowledged:

Addendum Number		Date	
	_____		_____
	_____		_____
	_____		_____
	_____		_____

Start of Construction and Contract Completion Time

The Bidder agrees that they will begin work within 10 calendar days of the Notice to Proceed, and Completion of the entire project will be achieved as described below (except for extensions of time granted in accordance with the General Terms and Conditions). The Bidder further agrees he/she will, if necessary, accelerate their work, provide additional workers and equipment, and expedite materials delivery to meet these dates, all at no additional expense to the OWNER.
By submitting this bid, the bidder agrees that, if awarded this contract, they will achieve Substantial Completion within 80 working days from the Notice to Proceed and Final Completion Date will be achieved within 100 working days.

Project timeline and work limitations for this contract are:

1. A contract is scheduled for award on July 16, 2024.
2. Notice to Proceed with construction is anticipated by the week of July 29, 2024.
3. Substantial project completion, including installation of all concrete curbs, sidewalks, asphalt patching, electrical conduits, light bases, and utility adjustments shall be achieved by December 13, 2024.
4. Upon substantial completion, a suspension of work is anticipated due to potential long lead times for illumination materials.

Lump Sum or Unit Price Work

The Bidder proposes to accept as full payment for the work proposed herein the amounts computed under the provisions of the Contract Documents and based on the following lump sum or unit price amounts, it being expressly understood that the unit prices are independent of the exact quantities involved. The Contractor shall be compensated for the actual unit quantities performed in accordance with the General Terms and Conditions set forth in these Contract Documents. The Bidder agrees that the lump sum prices and the unit prices represent a true measure of the labor, services, and materials required to perform the work, including all allowances for Contractor-paid taxes, overhead, and profit for each type and unit of work, as well as any auxiliary costs associated with completing a unit of work called for in these Contract Documents. The City does not guarantee the quantities estimated for unit price items, nor does the City limit itself to the estimated number.

If any material, item, or service required by the Contract Documents has not been mentioned specifically, the same shall be furnished and placed with the understanding that the full cost to the Owner has been merged with the prices named in the Proposal.

To the extent possible, standard bid items have been utilized for the work listed in the Proposal. The Bidder is directed to review the Standard Specifications and the City of Mercer Island's Amendments (Special Provisions herein) for descriptions of bid item work, measurement, and payment.

BID SCHEDULES

ALL ENTRIES SHALL BE WRITTEN IN INK OR TYPED TO VALIDATE BID

Note: Unit prices for all items, all extensions, and total amount of bid shall be shown. Enter unit prices in numerical figures only in dollars and cents to two (2) decimal places (including whole dollar amounts). All figures must be clearly legible. Bids with illegible figures in the Unit Price column will be regarded nonresponsive and rejected. Where conflict occurs between the unit price and the total amount specified for any item, the unit price shall prevail, and totals shall be corrected to conform thereto. Per 1-07.2(2) all retail sales tax and other applicable taxes shall be included in the unit prices provided in the bid schedule per Rule 171.

80TH AVE SE PEDESTRIAN IMPROVEMENTS						
ITEM NO.	SECTION	ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL PRICE
1	1-04	Minor Change	1	FA	$40,000.00	$40,000.00
2	1-05	Roadway Surveying	1	LS		
3	1-05	ADA Features Surveying	1	LS		
4	1-09	Mobilization	1	LS		
5	1-10	Traffic Control Supervisor	1	LS		
6	1-10	Pedestrian Traffic Control	1	LS		
7	1-10	Flaggers	1300	HR		
8	1-10	Portable Changeable Message Signs	1920	HR		
9	1-10	Other Project Temporary Traffic Control	1	LS		
10	2-02	Removal of Structure and Obstruction	1	LS		
11	2-02	Asphalt Removal Incl Haul	1020	SY		
12	2-02	Cement Conc. Curb and Gutter Removal Incl Haul	1460	LF		
13	2-02	Cement Conc. Driveway and Sidewalk Removal Incl Haul	1790	SY		
14	2-02	Tree Removal Incl Haul	29	EA		
15	2-03	Roadway Excavation Incl. Haul	250	CY		
16	2-03	Unsuitable Foundation Excavation Incl. Haul	20	CY		
17	2-03	Gravel Borrow Incl. Haul	20	TN		
18	2-09	Shoring or Extra Excavation Class B	1	LS		
19	4-04	Crushed Surfacing Top Course	800	TN		
20	5-04	HMA Cl. 1/2" PG58H-22	240	TN		
21	5-04	Temporary HMA for Walkway	20	TN		
22	7-04	Ductile Iron Storm Sewer Pipe 8 In. Diam	10	LF		

80TH AVE SE PEDESTRIAN IMPROVEMENTS						
ITEM NO.	SECTION	ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL PRICE
23	7-05	Connection to Drainage Structure	1	EA		
24	7-05	Adjust Catch Basin	10	EA		
25	7-05	Concrete Inlet	1	EA		
26	7-06	Trench Drain	30	LF		
27	7-12	Adjust Water Valve Box	3	EA		
28	7-14	Hydrant Assembly	1	EA		
29	7-15	Adjust Water Meter Box	4	EA		
30	8-01	Erosion and Water Pollution Prevention	1	LS		
31	8-02	Property Restoration	1	FA	$10,000.00	$10,000.00
32	8-02	Topsoil Type A	300	CY		
33	8-02	Bark or Wood Chip Mulch	45	CY		
34	8-02	PSIPE Nyssa Sylvatica 'Wildfire'/ Wildfire Tupelo, 12'-14' Ht.	14	EA		
35	8-02	PSIPE Ulmus propinqua 'JFS-Bieberich'/ Emerald Sunshine Elm	10	EA		
36	8-02	PSIPE Acer Circinatum; 7'-8' Ht.	4	EA		
37	8-02	PSIPE Lonicera pileata 'Moss Green'/ Moss Green Privet Honeysuckle; 1 Gal. Cont.	61	EA		
38	8-02	PSIPE Spiraea betulifolia var lucida/ Shinyleaf Spirea; 1 Gal. Cont.	71	EA		
39	8-02	PSIPE Mahonia nervosa/ Cascade Oregon Grape; 1 Gal. Cont.	142	EA		
40	8-02	PSIPE Sesleria autumnalis/ Autumn Moor Grass; 1 Gal. Cont.	82	EA		
41	8-02	PSIPE Epimedium x perralchicum 'Frohnleiten'/ Hybrid Epimedium; 1 Gal. Cont.	610	EA		
42	8-02	PSIPE Ribes sanguineum/ Red-Flowering Currant; 1 Gal. Cont.	26	EA		
43	8-02	PSIPE Vaccinium ovatum/ Evergreen Huckleberry; 1 Gal. Cont.	28	EA		
44	8-02	PSIPE Gaultheria shallon/ Salal; 1 Gal. Cont.	35	EA		
45	8-02	PSIPE Blechnum spicant/ Deer Fern; 1 Gal. Cont.	85	EA		
46	8-02	PSIPE Arctostaphylos uva-ursi/ Kinnikinnick; 1 Gal. Cont.	170	EA		
47	8-02	Root Barrier	380	LF		
48	8-02	Tree Watering Bag	28	EA		

80TH AVE SE PEDESTRIAN IMPROVEMENTS						
ITEM NO.	SECTION	ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL PRICE
49	8-04	Cement Conc. Traffic Curb and Gutter	1460	LF		
50	8-04	Cement Conc. Pedestrian Curb	50	LF		
51	8-04	Cement Conc. Extruded Curb	40	LF		
52	8-06	Cement Conc. Driveway Entrance Type 1	230	SY		
53	8-09	Raised Pavement Marker Type 1	270	EA		
54	8-09	Raised Pavement Marker Type 2	40	EA		
55	8-12	Permanent Safety Hand Railing	30	LF		
56	8-14	Cement Conc. Sidewalk	1600	SY		
57	8-14	Cement Conc. Curb Ramp Type Parallel A	5	EA		
58	8-14	Cement Conc. Curb Ramp Type Perpendicular A	3	EA		
59	8-14	Cement Conc. Curb Ramp Type Combination	1	EA		
60	8-14	Detectable Warning Surface	96	SF		
61	8-14	Decorative Pavers	80	SF		
62	8-14	Cement Conc. Stairs	2	EA		
63	8-19	Adjust Franchise Utility	1	EA		
64	8-20	Franchise Utility Vault Lid	1	EA		
65	8-20	Adjust Junction Box	8	EA		
66	8-20	Replacement of Existing Illumination System, Complete	1	LS		
67	8-20	Temporary Illumination During Construction, Complete	1	LS		
68	8-21	Permanent Signing	1	LS		
69	8-22	Remove Pavement Markings	1	LS		
70	8-22	Plastic Stop Line	210	LF		
71	8-22	Plastic Crosswalk Line	1670	SF		
72	8-22	Plastic Traffic Arrow	5	EA		
73	8-23	Temporary Pavement Markings	1	LS		
74	8-27	Install Trash Receptacle	2	EA		
75	8-27	Reinstall Stone Bench	2	LS		

80TH AVE SE PEDESTRIAN IMPROVEMENTS						
ITEM NO.	SECTION	ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL PRICE
76	8-27	Reinstall Bike Rack	1	LS		
77	8-28	Modular Soil Cells	2300	SF		

TOTAL BID……$_____

BID SUMMARY

Unit prices for all items, all extensions, and the total amount of bid must be shown on all Schedules. Where conflict occurs between the unit price and the total amount named for any item, the unit price shall prevail, and the totals shall be corrected to conform thereto.

The bidder shall bid on all items included in the Bid Form.

Per 1-07.2(2) all retail sales tax and other applicable taxes shall be included in the unit prices provided in the bid schedule per Rule 171.

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Subcontractor Listing – RCW 39.30.060

Pursuant to RCW 39.30.060, the Bidder shall list as part of its Bid either itself or the names of the subcontractors with whom the Bidder, if awarded the contract, will subcontract for performance of the work of heating, ventilation and air conditioning ("HVAC"), plumbing as described in chapter 18.106 RCW, and electrical as described in chapter 19.28 RCW, or to name itself for the work. The Bidder shall not list more than one subcontractor for each category of work.

Failure of the Bidder to submit as part of the Bid the names of such subcontractors or to name itself to perform such work or the naming of two or more subcontractors to perform the same category of work shall render the Bidder's Bid nonresponsive and therefore, void.

The requirement of this section to name the Bidder's proposed HVAC, plumbing, and electrical subcontractors applies only to proposed HVAC, plumbing, electrical subcontractors, structural steel installation, and rebar installation who will contract directly with the general contractor submitting the Bid to the City.

Electrical work must be performed by a licensed electrical contractor. Bidders are cautioned that installation of electrical equipment (PVC or metal conduit, junction boxes or similar work) may be considered electrical work even if for future use and no electrical current is involved.

Within 48 hours after the published bid submittal time, the Bidder shall submit the names of the subcontractors with whom the bidder, if awarded the contract, will subcontract for performance of the work of structural steel installation and rebar installation, or shall name itself for the work.

If the subcontract work categories as described above are not applicable to the work being bid, the bidder
must indicate that the subcontract category is "NOT APPLICABLE."

HVAC

Subcontractor Name: _____

UBI Number: _____

Plumbing

Subcontractor Name: _____

UBI Number: _____

Electrical

Subcontractor Name: _____

UBI Number: _____

Structural Steel

Subcontractor Name: _____

UBI Number: _____

Rebar

Subcontractor Name: _____

UBI Number: _____

PROPOSAL SIGNATURE SHEET

If Sole Proprietor, Partnership or Joint Venture

IN WITNESS hereto the undersigned have set their hands this

_____ day of _____ , 20 _____ .

Name of Bidder (name each partner or joint venture partner) _____

Washington Contractor's Registration No. _____

Address _____

_____

Authorized Signature _____

Position/Title _____

If Corporation or Limited Liability Company (LLC)

IN WITNESS WHEREOF the undersigned corporation has caused this instrument to be executed and its seal affixed by its duly authorized officers this

_____ day of _____ , 20 _____ .

Name of Corporation or Limited Liability Company (LLC) _____

Washington Contractor's Registration No. _____

Address _____

_____

State of Incorporation or Organization _____

Authorized Signature _____

Position/Title _____

BID GUARANTY BOND

KNOW ALL BY THESE PRESENTS: That we, _____,
as Principal, and _____, as Surety, are jointly and severally held and firmly bound unto the City of Mercer Island, hereinafter called the Obligee, each in the penal sum of five percent *(5%)* of the Principal's Total Bid Price for the work, this sum not to exceed _____ DOLLARS ($_____) (hereinafter referred to as "penal sum") of lawful money of the United States, for the payment whereof unto the Obligee.

WHEREAS, the Principal is herewith submitting its bid proposal for the

80th Ave SE Pedestrian Improvements

NOW, THEREFORE, the condition of this obligation is such that if the Principal is awarded the Contract, and if the Principal, within the time specified, fulfills all of the requirements of the Contract Documents which are conditions precedent to the execution of the Agreement, enters into, executes and delivers to the Obligee an agreement on the form provided herein complete with evidences of insurance, and if the Principal, within the time specified, gives to the Obligee the performance and payment bond on the forms provided herein, then this obligation shall be void; otherwise, the Principal and Surety shall pay unto the Obligee the penal sum; provided however, in no event shall the Surety's liability exceed the penal sum. Provided further, if the difference in money between the Principal's Total Bid Price and the amount for which the Obligee legally contracts with another party to fulfill the Contract is greater than the penal sum, the Principal shall pay unto the Obligee the difference between the penal sum and the amount the Obligee pays another to fulfill the Contract.

AND IT IS HEREBY DECLARED AND AGREED that the Surety shall be liable under this obligation as Principal, and that nothing of any kind or nature whatsoever that will not discharge the Principal shall operate as a discharge or a release of liability of the Surety.

IT IS HEREBY FURTHER DECLARED AND AGREED that this obligation shall be binding upon and inure to the benefit of the Principal, the Surety and the Obligee and their respective heirs, executors, administrators, successors and assigns.

SIGNED this _____ day of _____, 20 _____.

Principal: _____	Surety: _____
By: _____	By: _____
Title: _____	Title: _____
Address: _____	Address: _____
Telephone: ( ) _____	Telephone: ( ) _____

Note: A power of attorney must be provided which appoints the Surety's true and lawful attorney-in-fact to make, execute, seal and deliver this bid guaranty bond.

Bidder's Qualification Certificate

The undersigned hereby certifies and submits the following:

Company Name _____

Address _____

_____

Owner Name _____

Contact Person _____

Contact Person's Title _____

Phone _____

E-mail _____

Washington State Contractor Registration # _____

Washington State Unified Business Identifier (UBI) # _____

Federal Tax ID # _____

City of Mercer Island Business License #
(required prior to award of contract) _____

	Yes or No	Account / Registration Number (as applicable)
Does the contractor have industrial insurance coverage for its employees working in Washington as required by Title 51 RCW?		
Does the contractor have a Washington State excise tax registration number as required by Title 82 RCW?		
Does the contractor have a Washington State Employment Security Department number as required by Title 50 RCW?		
Has the contractor been disqualified from bidding on any public works contract under RCW 39.06.010 or 39.12.065(3)?		
Within the three-year period immediately preceding the date of the bid solicitation, has the contractor been 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 to have willfully violated, as defined in RCW 49.48.082, any provision of Chapters 49.46, 49.48, or 49.52 RCW?		

By:

_____ _____

Signature **Print Name**

_____ _____

Title **Date**

Contractor Declaration Pursuant to RCW 39.04.350(2)

Project Name: 80th Ave SE Pedestrian Improvements

Bidder/Contractor: _____

I, _____, declare under penalty of perjury under the laws of the State of Washington that the foregoing is true and correct:

1. I am the representative for the above-named bidder/contractor, and as its _____ I am authorized to make the declaration herein on its behalf.

2. Within the three-year period immediately preceding the date of the bid solicitation for the above-named project, the above-named bidder/contractor has not been 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 to have willfully violated, as defined in RCW 49.48.082, any provision of chapter 49.46, 49.48, or 49.52 RCW.

_____ _____

Date and Place Signature

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AGREEMENT FORMS

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CITY OF MERCER ISLAND, WASHINGTON
PUBLIC WORKS CONTRACT
FOR
80TH AVE SE PEDESTRIAN IMPROVEMENTS

THIS PUBLIC WORKS CONTRACT ("Contract") dated [insert date agreement drafted], is effective on the date the Contract is fully executed by the Parties. The Parties to this Contract are the CITY OF MERCER ISLAND, a Washington municipal corporation ("City" or "Owner"), and [INSERT FULL LEGAL NAME OF CONTRACTOR], a [insert state where formed] [choose type of person or entity] ("Contractor").

A. The City desires to retain an independent contractor to furnish all labor and materials necessary to perform work at [insert address], Mercer Island, Washington ("Property"); and

B. The Contractor has the requisite skill and experience to perform such work and has submitted a proposal dated [insert date proposal received] to complete such work ("Proposal").

NOW, THEREFORE, the parties ("Parties") agree to the following terms and conditions:

1. SERVICES BY CONTRACTOR

1.1 Description of Work. Contractor shall perform all work and furnish all tools, materials, supplies, equipment, labor and other items incidental thereto necessary for the construction and completion of the work, more particularly described in the Contract Documents for the 80TH Avenue SE Pedestrian Improvements project, including this Public Works Contract, the Contractor's completed Bid Form, the City's General Terms and Conditions (May 2020 ed.), any Supplemental and/or Special Conditions, Technical Specifications, Drawings and Addenda, which documents are incorporated by this reference, ("Work"), which Work shall be completed to the City's satisfaction, within the time period prescribed by the City and pursuant to the direction of the City Manager or his or her designee.

1.2 Completion Date. The Work shall be commenced within ten (10) days of receipt by the Contractor of the City's Notice to Proceed and shall be Substantially Completed by December 13, 2024, (the "Contract Time") as may be extended in accordance with the Contract Documents. In the event the Work is not completed within the time specified, Contractor agrees to pay to the City liquidated damages in the amount set forth in Section 1.3 of this Contract.

1.3 Liquidated Damages. TIME IS OF THE ESSENCE OF THIS CONTRACT. Delays inconvenience the residents of Mercer Island and cost taxpayers undue sums of money, adding time needed for administration, engineering, inspection and supervision. It is impractical for the City to calculate the actual cost of delays. Accordingly, the Contractor agrees to pay liquidated damages as follows: Liquidated damages for failure to achieve timely Substantial Completion shall be in the amount of $150 per day.

1.4 Performance Standard. Contractor shall perform the Work in a manner consistent with accepted practices for highly skilled and competent contractors performing this type of work in this area.

1.5 Compliance with Laws. Contractor shall perform the Work in accordance with all applicable federal, state and City laws, including but not limited to all City ordinances, resolutions, standards, or policies, as now existing, or hereafter adopted or amended, and obtain all necessary permits and pay all permit, inspection, or other fees, at its sole cost and expense.

1.6 Utility Location. Contractor is responsible for locating any underground utilities affected by the Work and is deemed to be an excavator for purposes of Chapter 19.122 RCW, as amended. Contractor shall be responsible for compliance with Chapter 19.122 RCW, including utilization of the "one call" locator system before commencing any excavation activities.

1.7 Air Environment. Contractor shall fully cover any and all loads of loose construction materials including without limitation, sand, dirt, gravel, asphalt, excavated materials, construction debris, etc., to protect said materials from air exposure and to minimize emission of airborne particles to the ambient air environment within the City of Mercer Island.

2. TERM

This Contract shall commence on the effective date of this Contract and continue until the Work is complete, and formally accepted by City, and all warranties have expired.

3. REQUISITE SKILL

The Contractor warrants that it has the requisite skill to complete the Work and is appropriately accredited and licensed by all applicable agencies and governmental entities, including but not limited to being registered to do business in the City of Mercer Island by obtaining a City of Mercer Island business registration. Contractor represents that it has visited the site and is familiar with all of the plans and specifications in connection with the completion of the Work.

4. COMPENSATION

4.1 Total Compensation. In consideration of the Contractor performing the Services, the City agrees to pay the Contractor an amount not to exceed [insert maximum value of contract in words] Dollars ($[insert $ amount in figures]), based on the Proposal submitted by Contractor dated [insert date proposal received] and as may be adjusted under the Contract Documents.

4.2 Contractor Responsible for Taxes. Except as otherwise stated in the Contract Documents, the Contractor shall be solely responsible for the payment of any taxes imposed by any lawful jurisdiction as a result of the performance and payment of this Contract.

4.3 Method of Payment. Payment by the City for the Work will only be made after the Work has been completed, a voucher or invoice is submitted in a form satisfactory to the City, and such invoice is approved by the appropriate City representative. Payment shall be made within thirty (30) days of receipt of such invoice or voucher unless otherwise set forth in the Bid Form. The Contractor's acceptance of such payment for the Work shall constitute full compensation for the performance of the Work. Invoices shall be submitted to:

City of Mercer Island
ATTN: Ian Powell, Street Engineer

9611 SE 36th Street
Mercer Island, WA 98040

4.4 Retainage. Pursuant to Chapter 60.28 RCW, five percent (5%) of the Total Compensation shall be retained by the City to assure payment of Contractor's state taxes as well as payment of subcontractors, suppliers, and laborers. Upon execution of this Contract, Contractor shall complete, execute, and deliver to the City the Contractor's Retainage Agreement set forth in the Contract Documents. No payments shall be made by the City from the retained percentage fund ("Fund") nor shall the City release any retained percentage escrow account to any person, until the City has received from the Department of Revenue a certificate that all taxes, increases, and penalties due from the Contractor and all taxes due and to become due with respect to the Contract have been paid in full or that they are, in the Department's opinion, readily collectible without recourse to the State's lien on the retained percentage. Upon non-payment by the general contractor, any supplier or subcontractor may file a lien against the retainage funds, pursuant to Chapter 60.28 RCW. Subcontractors or suppliers are required to give notice of any lien within thirty (30) days of the completion of the Work and in the manner provided in RCW 39.08.030. Within sixty (60) days after completion of all Work on this Contract, the City shall release and pay in full the money held in the Fund, unless the City becomes aware of outstanding claims made against this Fund.

5. EQUAL OPPORTUNITY EMPLOYER

In all Contractor services, programs or activities, and all Contractor hiring and employment made possible by or resulting from this Contract, there shall be no discrimination by Contractor or by Contractor's employees, agents, subcontractors or representatives against any person because of sex, sexual orientation, age (except minimum age and retirement provisions), race, color, creed, national origin, marital status or the presence of any disability, including sensory, mental or physical handicaps, unless based upon a bona fide occupational qualification in relationship to hiring and employment. This requirement shall apply, but not be limited to the following: employment, advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship. Contractor shall not violate any of the terms of Chapter 49.60 RCW, Title VII of the Civil Rights Act of 1964, the Americans With Disabilities Act, Section 504 of the Rehabilitation Act of 1973 or any other applicable federal, state, or local law or regulation regarding non-discrimination. Any material violation of this provision shall be grounds for termination of this Contract by the City and, in the case of the Contractor's breach, may result in ineligibility for further City agreements.

6. INDEPENDENT CONTRACTOR/CONFLICT OF INTEREST

It is the intention and understanding of the Parties that the Contractor shall be an independent contractor and that the City shall be neither liable nor obligated to pay Contractor sick leave, vacation pay or any other benefit of employment, nor to pay any social security or other tax which may arise as an incident of employment. The Contractor shall pay all income and other taxes as due. Industrial or any other insurance which is purchased for the benefit of the City, regardless of whether such may provide a secondary or incidental benefit to the Contractor, shall not be deemed to convert this Contract to an employment contract. It is recognized that Contractor may perform work during the Term of this Contract for other third parties; provided, however, that such performance of other work shall not conflict with or interfere with the Contractor's ability to perform the Work. Contractor agrees to resolve any such conflicts of interest in favor of the City.

7. INDEMNIFICATION

7.1 Indemnification and Hold Harmless.

A. The Contractor shall protect, defend, indemnify, and hold harmless City, its elected officials, officers, agents, volunteers, and employees, from any and all claims, demands, suits, penalties, losses, damages, judgments, or costs of any kind whatsoever, including attorneys' fees (hereinafter "claims"), arising out of or in connection with the performance of this Contract except for injuries and damages caused by the sole negligence of the City. However, should a court of competent jurisdiction determine that this Contract is subject to RCW 4.24.115, then, in the event of liability for damages arising out of bodily injury to persons or damages to property caused by or resulting from the concurrent negligence of the Contractor and the City, its officers, officials, employees, and volunteers, the Contractor's liability hereunder shall be only to the extent of the Contractor's negligence.

B. The Contractor's obligations under this section shall include, but not be limited to,

i. The duty to promptly accept tender of defense and provide defense to City at the Contractor's own expense.

ii. The duty to indemnify and defend City, its elected officials, officers, agents, and employees, from any claim, demand, and/or cause of action brought by or on behalf of any of its employees, or agents. The foregoing duty is specifically and expressly intended to constitute a waiver of the Contractor's immunity under Washington's Industrial Insurance Act, RCW Title 51, as respects City with a full and complete indemnity and defense of claims made by the Contractor's employees. The parties acknowledge that these provisions were mutually negotiated upon by them.

iii. To the maximum extent permitted by law, the Contractor shall indemnify and defend City, its elected officials, officers, agents and employees, from and be liable for all damages and injury which shall be caused to owners of property on or in the vicinity of the work or which shall occur to any person or persons or property whatsoever arising out of the performance of this Contract, whether or not such injury or damage is caused by negligence of the Contractor or caused by the inherent nature of the work specified.

C. City may, in its sole discretion, (1) withhold amounts sufficient to pay the amount of any claim for injury, and/or (2) pay any claim for injury of which City may have knowledge, regardless of the formalities of notice of such claim, arising out of the performance of this Contract.

D. Any amount withheld will be held until the Contractor secures a written release from the claimant, obtains a court decision that such claim is without merit, or satisfies any judgment on

such claim. In addition, the Contractor shall reimburse and otherwise be liable for claims costs incurred by City, including, without limitation, costs for claims adjusting services, attorneys, engineering, and administration.

E. In the event City incurs any judgment, award, and/or costs arising therefrom, including attorneys' fees, to enforce the provisions of this article, all such fees, expenses, and costs shall be recoverable from the Contractor.

F. This provision has been mutually negotiated by the City and the Contractor.

7.2 Survival. The provisions of this Section 7 shall survive the expiration or termination of this Contract with respect to any event occurring prior to such expiration or termination.

8. INSURANCE

8.1 The Contractor agrees to carry without interruption from commencement of the Contractors work through the term of the contract and for thirty (30) days after Physical Completion, unless otherwise indicated herein, the following insurance against claims for injuries to persons or damage to property which may arise from or in connection with the performance of the Work by Contractor, its agents, representatives, employees or subcontractors with a carriers having a current A.M. Best rating of not less than A:VII. The City, at its discretion, may require additional types and greater limits of insurance coverage commensurate with the risk associated with the performance of the Work.

A. Workers' Compensation and Employer's Liability Insurance in amounts sufficient pursuant to the laws of the State of Washington.

B. Commercial general liability insurance shall be written on a form at least as broad as Insurance Services Office (ISO) occurrence form CG 00 01 and shall cover liability arising from premises, operations, independent contractors, products-completed operations for three years following substantial completion of the Work, stop gap liability, personal injury and advertising injury, and liability assumed under an insured contract. The Commercial General Liability insurance shall be endorsed to provide the Aggregate Per Project Endorsement ISO form CG 25 03 05 09. There shall be no exclusion for liability arising from explosion, collapse, or underground property damage. The City shall be named as an additional insured under the Commercial General Liability insurance policy with respect to the Work performed for the City using ISO Additional Insured endorsement CG 20 10 10 01 and Additional Insured Completed Operations endorsement CG 20 37 10 01 or substitute endorsements providing coverage at least as broad, with limits of no less than $2,000,000 each occurrence, $2,000,000 general aggregate, and a $2,000,000 products-completed operations aggregate limit.

C. Automobile liability insurance covering all owned, non-owned, hired, and leased vehicles. Coverage shall be written on ISO form CA 00 01 or a substitute form providing equivalent liability coverage. If necessary, the policy shall be endorsed to provide contractual liability coverage with combined single limits for bodily injury and property damage of not less than $1,000,000 per accident.

D. Asbestos Abatement or Hazardous Materials. If asbestos abatement or hazardous materials work is performed, Contractor shall review coverage with the City Attorney's office and provide scope and limits of coverage that are appropriate for the scope of Work and are satisfactory to the City. Contractor shall not commence any Work until its coverage has been approved by the City Attorney's office.

E. Builders Risk insurance covering interests of the City, the Contractor, Subcontractors, and Sub-subcontractors in the work. Builders Risk insurance shall be on a special perils policy form and shall insure against the perils of fire and extended coverage and physical loss or damage including flood, earthquake, theft, vandalism, malicious mischief, and collapse. The Builders Risk insurance shall include coverage for temporary buildings, debris removal, and damage to materials in transit or stored off-site. This Builders Risk insurance covering the work will have a deductible of $5,000 for each occurrence, which will be the responsibility of the Contractor. Higher deductibles for flood and earthquake perils may be accepted by the City upon written request by the Contractor and written acceptance by the City. Any increased deductibles accepted by the City will remain the responsibility of the Contractor. The Builders Risk insurance shall be maintained until the City has granted substantial completion of the project. An installation floater may be acceptable in lieu of Builders Risk for renovation projects only if approved in writing by the City. Builders Risk insurance shall be written in the amount of the completed value of the project with no coinsurance provisions.

8.2 The City shall be named as additional insured on all such insurance policies, with the exception of workers' compensation coverages. The Contractor's insurance coverage shall be primary insurance as respect the City. Any insurance, self-insurance, or insurance pool coverage maintained by the City shall be excess of the Contractor's insurance and shall not contribute with it. If the Contractor maintains higher insurance limits than the minimums shown above, the City shall be insured for the full available limits of Commercial General and Excess or Umbrella liability maintained by the Contractor, irrespectively of whether such limits maintained by the Contractor are greater than those required by this Contract or whether any certificate of insurance furnished to the City evidences limits of liability lower than those maintained by the Contractor. Contractor shall provide certificates of insurance and amendatory endorsements, concurrent with the execution of this Contract, evidencing such coverage and, at City's request, furnish the City with copies of all insurance policies and with evidence of payment of premiums or fees of such policies. The Contractor shall provide the City and all Additional Insureds for this work with written notice of any policy cancellation within two business days of their receipt of such notice.

8.3 The Contractor shall cause each and every Subcontractor to provide insurance coverage that complies with all applicable requirements of the Contractor-provided insurance as set forth herein, except that the Contractor shall have sole responsibility for determining the limits of coverage required to be obtained by Subcontractors. The Contractor shall ensure that the City is an additional insured on each and every Subcontractor's Commercial General Liability insurance policy using an endorsement at least as broad as ISO CG 20 10 10 01 for ongoing operations and CG 20 37 10 01 for completed operations.

8.4. Failure on the part of the Contractor to maintain the insurance as required shall constitute a material breach of contract, upon which the City may, after giving five business days notice to the Contractor to correct the breach, immediately terminate the Contract or, at its discretion, procure or renew such insurance and pay any and all premiums in connection therewith, with any sums so expended to be repaid to the City on demand, or at the sole discretion of the City, offset against funds due the Contractor from the City.

8.5 Waiver of Subrogation. The Contractor and the City waive all rights against each other, any of their Subcontractors, Sub-subcontractors, agents, and employees, each of the other, for damages caused by fire or other perils to the extent covered by Builders Risk insurance or other property insurance obtained pursuant to the Insurance Requirements Section of this Contract or other property insurance applicable to the work. The policies shall provide such waivers by endorsement or otherwise.

8.6 The Contractor's maintenance of insurance, its scope of coverage and limits as required herein shall not be construed to limit the liability of the Contractor to the coverage provided by such insurance, or otherwise limit the City's recourse to any remedy available at law or in equity.

8.7 The provisions of this Section shall survive the expiration or termination of this Contract with respect to any event occurring prior to such expiration or termination.

9. PERFORMANCE/PAYMENT BOND OR ADDITIONAL RETAINAGE

Pursuant to RCW 39.08.010, Contractor shall provide Performance Bond and Payment Bond each in an amount equal to 100% of the amount of this Contract to cover the performance of all provisions of this Contract and the payment of all laborers and suppliers. The Contract bonds shall be in a form set forth in the Contract Documents. The Contract bond shall assure that the Contractor will faithfully perform all of the provisions of the Contract as well as pay all laborers, mechanic subcontractors, materialmen, and suppliers. Contractor's obligations under this Contract shall not be limited to the bond amount.

Alternatively, pursuant to RCW 39.08.010, on contracts of Fifty-Five Thousand Dollars ($55,000) or less, at the option of the Contractor, the City may, in lieu of a bond, retain ten percent (10%) of the Contract amount for a period of thirty (30) days after the date of final acceptance, or until receipt of all necessary releases from the Department of Revenue and the Department of Labor and Industries and settlement of any liens filed under Chapter 60.28 RCW, whichever is later.

10. SAFETY

Contractor shall take all necessary precautions for the safety of its employees on the work site and shall comply with all applicable provisions of federal, state, and municipal safety and health laws and codes, including without limitation, all OSHA/WISHA requirements, Safety and Health Standards for Construction Work (Chapter 296-155 WAC), General Safety and Health Standards (Chapter 296-24 WAC), and General Occupational Health Standards (Chapter 296-62 WAC). Contractor shall erect and properly maintain, at all times, all necessary guards, barricades, signals, and other safeguards at all unsafe places at or near the Work for the protection of its employees and the public, safe passageways at all road crossings, crosswalks, street intersections, post danger signs warning against known or unusual hazards and do all other things necessary to prevent accident or loss of any kind. Contractor shall protect from damage all water, sewer, gas, steam or other pipes or conduits, and all hydrants and

all other property that is likely to become displaced or damaged by the execution of the Work. The Contractor shall, at its own expense, secure and maintain a safe storage place for its materials and equipment and is solely responsible for the same.

11. PREVAILING WAGES

11.1 Wages of Employees. This Contract is subject to the minimum wage requirements of Chapter 39.12 of the Revised Code of Washington, as now existing or hereafter amended or supplemented. In the payment of hourly wages and fringe benefits to be paid to any of Contractor's laborers, workpersons and/or mechanics, Contractor shall not pay less than the "prevailing rate of wage" for an hour's work in the same trade or occupation in the locality within the State of Washington where such labor is performed, as determined by the Industrial Statistician of the Department of Labor and Industries of the State of Washington. Prevailing wages paid pursuant to this Agreement shall be the prevailing wage rates which are in effect on the date when the bids, proposals, or quotes were required to be submitted to the City.

The State of Washington prevailing wage rates applicable for this public works project, which is located in King County, may be found at the following website address of the Department of Labor and Industries: https://lni.wa.gov/licensing-permits/public-works-projects/prevailing-wage-rates/. A copy of the applicable prevailing wage rates is also available for viewing at the office of the City located at 9611 SE 36th St, Mercer Island, WA 98040. Upon request, the City will mail a hard copy of the applicable prevailing wages for this project.

11.2 Reporting Requirements. Contractor shall comply with all reporting requirements of the Department of Labor and Industries of the State of Washington. Upon the execution of this Contract, Contractor shall complete and file a Statement of Intent to Pay Prevailing Wages with the Department of Labor and Industries. If requested by the City, the Contractor shall provide certified payroll records for its employees and the employees of its subcontractors. Upon completion of the Work, Contractor shall complete and file an Affidavit of Wages Paid with the Department of Labor and Industries. Contractor shall deliver copies of both the Statement of Intent to Pay Prevailing Wages and the Affidavit of Wages Paid, certified by the Department of Labor and Industries, to the City.

12. SUBCONTRACTOR RESPONSIBILITY

Contractor shall verify responsibility criteria for each first-tier subcontractor, and a subcontractor of any tier that hires other subcontractors must verify responsibility criteria for each of its subcontractors. Verification shall include that each subcontractor, at the time of subcontract execution, meets the responsibility criteria listed in the Instructions to Bidders and possesses an electrical contractor license, if required by chapter 19.28 RCW, or an elevator contractor license, if required by chapter 70.87 RCW. This verification requirement must be included in every public works subcontract or every tier.

13. OWNERSHIP OF DOCUMENTS

All originals and copies of work product, including plans, sketches, layouts, designs, design specifications, records, files computer disks, magnetic media, all finished or unfinished documents or material which may be produced or modified by Contractor while performing the Work shall become the property of the City and shall be delivered to the City at its request.

14. CONFIDENTIALITY

If it is necessary to provide proprietary information, the Contractor shall clearly mark the information on each page of the document(s) as "Proprietary and Confidential". The City is subject to laws regarding the disclosure of public records and document. Proposals and other materials, submitted by the Contractor become public record and may be subject to public disclosure, in whole or in part, and may be released by the City in the event of a request for disclosure. In the event the City receives a public record request for information and the Contractor has marked the requested document as "Proprietary and Confidential", the City shall notify the Contractor of such request and withhold disclosure of such information for not less than five (5) business days, to permit the Contractor to seek judicial protection of such information; provided that the Contractor shall be solely responsible for all attorney fees and costs in such action and shall save and hold harmless the City from any costs, attorneys fees or penalty assessments under Chapter 42.56 RCW for withholding or delaying public disclosure of such information.

15. BOOKS AND RECORDS

The Contractor agrees to maintain books, records, and documents which sufficiently and properly reflect all direct and indirect costs related to the performance of this Contract and such accounting procedures and practices as may be deemed necessary by the City to assure proper accounting of all funds paid pursuant to this Contract. These records shall be subject at all reasonable times to inspection, review or audit by the City, its authorized representative, the State Auditor, or other governmental officials authorized by law to monitor this Contract.

16. CLEAN UP

At any time ordered by the City and immediately after completion of the Work, the Contractor shall, at its own expense, clean up and remove all refuse and unused materials of any kind resulting from the Work. In the event the Contractor fails to perform the necessary clean up, the City may, but in no event is it obligated to, perform the necessary clean up and the costs thereof shall be immediately paid by the Contractor to the City and/or the City may deduct its costs from any remaining payments due to the Contractor.

17. GENERAL PROVISIONS

This Contract, the Contract Documents and any supporting contract documents contain all of the agreements of the Parties with respect to any matter covered or mentioned in this Contract and no prior agreements or understandings shall be effective for any purpose. No provision of this Contract may be amended except by written agreement of the Parties. Any provision of this Contract which is declared invalid, void or illegal shall in no way affect, impair, or invalidate any other provision hereof and such other provisions shall remain in full force and effect. The Contractor shall not transfer or assign, in whole or in part, any or all of its obligations and rights hereunder without the prior written consent of the City. In the event the City consents to any such assignment or transfer, such consent shall in no way release the Contractor from any of its obligations or liabilities under this Contract. Subject to the preceding sentence, this Contract shall be binding upon and inure to the benefit of the Parties' successors in interest, heirs, and assigns. In the event the City or the Contractor defaults on the performance of any terms in this Contract, and the Contractor or City places the enforcement of the Contract or any part

thereof, or the collection of any monies due, in the hands of an attorney, or files suit, each Party shall pay all its own attorneys' fees and expenses. The venue for any dispute related to this Contract shall be King County, Washington. Failure of the City to declare any breach or default immediately upon occurrence thereof, or delay in taking any action in connection with, shall not waive such breach or default. This Contract shall be governed by and interpreted in accordance with the laws of the State of Washington. Each individual executing this Contract on behalf of the City and Contractor represents and warrants that such individuals are duly authorized to execute this Contract. Time is of the essence of this Contract and each and all of its provisions in which performance is a factor. Adherence to completion dates is essential to the Contractor's performance of this Contract.

IN WITNESS WHEREOF, the Parties have executed this Contract the day of , 20 .

CONTRACTOR:

[INSERT FULL LEGAL NAME OF CONTRACTOR]

By: _____
[insert full legal name and title of signator]

Address:

Phone:
Email:

CITY:

CITY OF MERCER ISLAND

By: _____
Jessi Bon, City Manager

Attest:

By:_____
Andrea Larson, City Clerk

Approved as to form:

By: _____
Bio Park, City Attorney

PERFORMANCE BOND

To City of Mercer Island, WA

Bond No._____

The City of Mercer Island, Washington has awarded to _____(Principal), a contract for the construction of the project designated as 80th Ave SE Pedestrian Improvements, Project No. SP0111, in Mercer Island, Washington (Contract), and said Principal is required to furnish a bond for performance of all obligations under the Contract.

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

This statutory performance bond shall become null and void, if and when the Principal, its heirs, executors, administrators, successors, or assigns shall well and faithfully perform all of the Principal's obligations under the Contract and fulfill all 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 increased obligation.

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

PRINCIPAL		SURETY	
Principal Signature	Date	Surety Signature	Date
Printed Name	Date	Printed Name	Date
Title		Title	

Name, address, and telephone of local office/agent of Surety Company is:

PAYMENT BOND

to City of Mercer Island, WA

Bond No_____

The City of Mercer Island, Washington has awarded to _____(Principal), a contract for the construction of the project designated as 80th Ave SE Pedestrian Improvements, Project No. SP0111, in Mercer Island, Washington (Contract), and said Principal is required under the terms of that Contract to furnish a payment bond in accord with Title 39.08 Revised Code of Washington (RCW) and (where applicable) 60.28 RCW.

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

This statutory payment bond shall become null and void, if and when the Principal, its heirs, executors, administrators, successors, or assigns shall pay all persons in accordance with RCW 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, 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 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.

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

PRINCIPAL		SURETY	
Principal Signature	Date	Surety Signature	Date
Printed Name	Date	Printed Name	Date
Title		Title	

Name, address, and telephone of local office/agent of Surety Company is:

RETAINAGE AGREEMENT

Contract Title 80th Ave SE Pedestrian Improvements
Project No. SP0111

Contract Date _____

Contractor Name _____

Contractor Address _____

_____

Contractor Phone _____

Contractor Federal ID # _____

State Law on How Contract Retainage Monies can be Reserved:

RCW 60.28.010 Retained percentage, labor and material Contracts for public improvements or work other than for professional services, provides that there shall be reserved by the city from the monies earned by the contractor on estimates during the progress of the improvement or work, a sum of five percent of such estimates, said sum to be retained by the city as a trust fund for the protection and payment of any persons performing work or supplying provisions or supplies during the work. The monies reserved for contract retainage may be reserved by the contractor choosing one of the following four options:

All investments selected below are subject to City approval.

Contractor Options (Contractor shall place an "x" in one of the boxes below.)

[ ] (a) Retained in a non-interest bearing fund by the public body until released in accordance with applicable state statutes;

[ ] (b) Deposited by the public body in an interest bearing account in a bank, mutual savings bank, or savings and loan association, not subject to withdrawal until released in accordance with applicable state statutes, provided that interest on such account shall be paid to the contractor;

[ ] (c) Placed in escrow with a bank or trust company by the public body until released in accordance with applicable state statutes. The cost of the investment program and the risk thereof is to be borne entirely by the contractor.

[ ] (d) Contractor may submit a Retainage Bond equal to 5% of the total awarded bid amount for all schedules to be held by the public body until released in accordance with applicable state statutes.

Contractor's Bank

If Contractor selects options (b) or (c) above, Contractor shall designate below the bank in which the retainage is to be deposited:

ACCOUNT NO. _____

BANK NAME _____

BANK ADDRESS _____

_____

BANK PHONE # _____

Agreement

Contractor and City agree that all or part of the monies in the account can only be approved for disbursement by Bank to Contractor upon written authorization of the City Finance Director, or his/her authorized designee.

By _____ By _____
City of Mercer Island Contractor

Date _____ Date _____

FORM19

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Table of Contents – Special Provisions

INTRODUCTION TO THE SPECIAL PROVISIONS
(December 10, 2020 APWA GSP)

The work on this project shall be accomplished in accordance with the *Standard Specifications for Road, Bridge and Municipal Construction*, 2023 edition, as issued by the Washington State Department of Transportation (WSDOT) and the American Public Works Association (APWA), Washington State Chapter (hereafter "Standard Specifications"). The Standard Specifications, as modified or supplemented by these Special Provisions, all of which are made a part of the Contract Documents, shall govern all of the Work.

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

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

(March 8, 2013 APWA GSP)

(April 1, 2013 WSDOT GSP)

Also incorporated into the Contract Documents by reference are:

- *Manual on Uniform Traffic Control Devices for Streets and Highways*, currently adopted edition, with Washington State modifications, if any
- *Standard Plans for Road, Bridge and Municipal Construction*, WSDOT/APWA, current edition
- City of Mercer Island Standard Details

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

DIVISION 1: GENERAL REQUIREMENTS

1-01 DEFINITIONS AND TERMS

1-01.3 Definitions

(January 19, 2022 APWA GSP)

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

Dates

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

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

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

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

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

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

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

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

Supplement this Section with the following:

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

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

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

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

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

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

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

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

Contract Documents
See definition for “Contract”.

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

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

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

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

1-02 BID PROCEDURES AND CONDITIONS

1-02.1 Prequalification of Bidders

Delete this Section and replace it with the following:

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

Bidders must meet the minimum qualifications of RCW 39.04.350(1), as amended:

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

Add the following:

1-02.2 Plans and Specifications
(June 27, 2011 APWA GSP)

Delete this section and replace it with the following:

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

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

To Prime Contractor	No. of Sets	Basis of Distribution
Reduced plans (11" x 17") and Contract Provisions	2	Furnished automatically upon award.
Contract Provisions	2	Furnished automatically upon award
Large plans (22" x 34") and Contract Provisions	1	Furnished only upon request.

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

1-02.4(1) General
(December 30, 2022 APWA GSP Option B)

The first sentence of the ninth paragraph, beginning with "Prospective Bidder desiring…", is revised to read:

Prospective Bidders desiring an explanation or interpretation of the Bid Documents, shall request the explanation or interpretation in writing by close of business 3 business days preceding the bid opening to allow a written reply to reach all prospective Bidders 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; 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.

1-02.7 Bid Deposit
(March 8, 2013 APWA GSP)

Supplement this section with the following:

Bid bonds shall contain the following:

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

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

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

1-02.10 Withdrawing, Revising, or Supplementing Proposal
(July 23, 2015 APWA GSP)

Delete this section, and replace it with the following:

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

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

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

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

1-02.13 Irregular Proposals
(December 30, 2022 APWA GSP)

Delete this section and replace it with the following:

1. A Proposal will be considered irregular and will be rejected if:
   a. The Bidder is not prequalified when so required;
   b. The authorized Proposal form furnished by the Contracting Agency is not used or is altered;
   c. The completed Proposal form contains any unauthorized additions, deletions, alternate Bids, or conditions;
   d. The Bidder adds provisions reserving the right to reject or accept the award, or enter into the Contract;
   e. A price per unit cannot be determined from the Bid Proposal;
   f. The Proposal form is not properly executed;
   g. The Bidder fails to submit or properly complete a subcontractor list (WSDOT Form 271-015), if applicable, as required in Section 1-02.6;
   h. The Bidder fails to submit or properly complete a Disadvantaged Business Enterprise Certification (WSDOT Form 272-056), if applicable, as required in Section 1-02.6;
   i. The Bidder fails to submit Written Confirmations (WSDOT Form 422-031) from each DBE firm listed on the Bidder's completed DBE Utilization Certification that they are in agreement with the bidder's DBE participation commitment, if applicable, as required in Section 1-02.6, or if the written confirmation that is submitted fails to meet the requirements of the Special Provisions;
   j. The Bidder fails to submit DBE Good Faith Effort documentation, if applicable, as required in Section 1-02.6, or if the documentation that is submitted fails to demonstrate that a Good Faith Effort to meet the Condition of Award was made;
   k. The Bidder fails to submit a DBE Bid Item Breakdown (WSDOT Form 272-054), if applicable, as required in Section 1-02.6, or if the documentation that is submitted fails to meet the requirements of the Special Provisions;
   l. The Bidder fails to submit DBE Trucking Credit Forms (WSDOT Form 272-058), if applicable, as required in Section 1-02.6, or if the documentation that is submitted fails to meet the requirements of the Special Provisions;
   m. The Bid Proposal does not constitute a definite and unqualified offer to meet the material terms of the Bid invitation; or
   n. More than one Proposal is submitted for the same project from a Bidder under the same or different names.

2. A Proposal may be considered irregular and may be rejected if:

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

1-02.14 Disqualification of Bidders
(May 17, 2018 APWA GSP, Option B)

Delete this section and replace it with the following:

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

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

1. **Delinquent State Taxes**

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

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

2. **Federal Debarment**

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

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

3. **Subcontractor Responsibility**

A Criterion: The Bidder’s standard subcontract form shall include the subcontractor responsibility language required by RCW 39.06.020, and the Bidder shall have

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

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

4. **Claims Against Retainage and Bonds**

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

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

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

5. **Public Bidding Crime**

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

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

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

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

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

7. **Lawsuits**

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

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

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

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

If the Contracting Agency determines the Bidder does not meet the bidder responsibility criteria above and is therefore not a responsible Bidder, the Contracting Agency shall notify the Bidder in writing, with the reasons for its determination. If the Bidder disagrees with this determination, it may appeal the determination within two (2) business days of the

Contracting Agency's determination by presenting its appeal and any additional information to the Contracting Agency. The Contracting Agency will consider the appeal and any additional information before issuing its final determination. If the final determination affirms that the Bidder is not responsible, the Contracting Agency will not execute a contract with any other Bidder until at least two business days after the Bidder determined to be not responsible has received the Contracting Agency's final determination.

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

1-02.15 Pre Award Information

(December 30, 2022 APWA GSP)

Revise this section to read:

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

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

1-03 AWARD AND EXECUTION OF CONTRACT

1-03.1 Consideration of Bids

(December 30, 2022 APWA GSP)

Revise the first paragraph to read:

After opening and reading proposals, the Contracting Agency will check them for correctness of extensions of the prices per unit and the total price. If a discrepancy exists between the price per unit and the extended amount of any bid item, the price per unit will control. If a minimum bid amount has been established for any item and the bidder's unit or lump sum price is less than the minimum specified amount, the Contracting Agency will unilaterally

revise the unit or lump sum price, to the minimum specified amount and recalculate the extension. The total of extensions, corrected where necessary, including sales taxes where applicable and such additives and/or alternates as selected by the Contracting Agency, will be used by the Contracting Agency for award purposes and to fix the Awarded Contract Price amount and the amount of the contract bond.

1-03.2 Award of Contract

(Special Provision) *Supplement*

The Award of contract, if made, will be made to the lowest responsive and responsible bidder. No Award will be made until necessary investigations are made by Contracting Agency as to the responsibility of the apparent low bidder. Contracting Agency shall be the sole judge as to the responsibility of the bidder to satisfactorily perform the work as specified and within the time limit set.

1-03.3 Execution of Contract

(January 19, 2022 APWA GSP)

Revise this section to read:

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

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

Within 10 calendar days after the award date, the successful bidder shall return the signed Contracting Agency-prepared contract, an insurance certification as required by Section 1-07.18, a satisfactory bond as required by law and Section 1-03.4, the Transfer of Coverage form for the Construction Stormwater General Permit with sections I, III, and VIII completed when provided. Before execution of the contract by the Contracting Agency, the successful bidder shall provide any pre-award information the Contracting Agency may require under Section 1-02.15.

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

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

1-03.4 Contract Bond

(July 23, 2015 APWA GSP)

Delete the first paragraph and replace it with the following:

The successful bidder shall provide executed payment and performance bond(s) for the full contract amount. The bond may be a combined payment and performance bond; or be

separate payment and performance bonds. In the case of separate payment and performance bonds, each shall be for the full contract amount. The bond(s) shall:

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

1-04 SCOPE OF THE WORK

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

(December 30, 2022 APWA GSP)

Revise the second paragraph to read:

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

1. Addenda,
2. Proposal Form,
3. Special Provisions,
4. Contract Plans,
5. Standard Specifications,
6. Contracting Agency's Standard Plans or Details (if any), and
7. WSDOT Standard Plans for Road, Bridge, and Municipal Construction.

1-04.4 Changes

1-04.4(1) Minor Changes

(May 30, 2019 APWA GSP)

Delete the first paragraph and replace it with the following:

Payments or credits for changes amounting to $25,000 or less may be made under the Bid item "Minor Change". At the discretion of the Contracting Agency, this procedure for Minor Changes may be used in lieu of the more formal procedure as outlined in Section 1-04.4, Changes. All "Minor Change" work will be within the scope of the Contract Work and will not change Contract Time.

1-04.6 Variation in Estimated Quantities

(December 30, 2022 APWA GSP, Option A)

Revise the first paragraph to read:

Payment to the Contractor will be made only for the actual quantities of Work performed and accepted in conformance with the Contract. When the accepted quantity of Work performed under a unit item varies from the original Proposal quantity, payment will be at the unit Contract price for all Work unless the total accepted quantity of the Contract item, adjusted to exclude added or deleted amounts included in change orders accepted by both parties, increases or decreases by more than 25 percent from the original Proposal quantity, and if the total extended bid price for that item at time of award is equal to or greater than $5,000. In that case, payment for contract work may be adjusted as described herein.

1-04.9 Use of Buildings or Structures

1-04.9(1) Construction Staging and/or Personnel Parking

(Special Provision) *New Section*

The Contractor shall be responsible for providing a Construction Staging and/or Personnel Area in a safe condition and orderly manner throughout the duration of the project. Prior to any construction activity, the Contractor shall provide written notification; informing the Engineer and all employees, contractors, and subcontractors who intend to arrive at this project with vehicles, equipment or supplies; of the location, purpose, and restrictions that apply to the Construction Staging and Personnel Parking Area.

No Construction Staging and/or Personnel Parking Area will be provided by the Contracting Agency. It is the Contractor's responsibility to locate and arrange for the use of this area. The Contractor must restrict all parking and storage activities to approved Construction Staging and Personnel Parking Area(s) for this project.

The purpose of the Construction Staging and/or Personnel Parking Area for this project is to provide all contractors, subcontractors, and personnel associated with this project a safe and orderly location to store equipment, tools, and supplies, and for parking construction or personal vehicles. There is a limited amount of available parking in and around the project area. The use of on-street parking areas in the vicinity of the project is prohibited without the expressed written approval of the Engineer and Public Works Director. Do not use private parking space in or around this project to park construction or personal vehicles without the expressed written approval of the owner of the property. Such approval is to be provided to the Engineer.

All costs associated with providing, maintaining, permitting, operating, and closing the Construction Staging and/or Personal Parking Area(s) for this project shall be considered incidental to and included in the unit contract prices of other Bid Items in this Contract.

1-05 CONTROL OF WORK

1-05.4 Conformity With and Deviations from Plans and Stakes

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.

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

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

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

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

2. Establish, the centerlines of all alignments, by placing hubs, stakes, or marks on centerline or on offsets to centerline at all curve points (PCs, PTs, and PIs) and at points on the alignments spaced no further than 50 feet.

3. Establish clearing limits, placing stakes at all angle points and at intermediate points not more than 50 feet apart. The clearing and grubbing limits shall be 5

feet beyond the toe of a fill and 10 feet beyond the top of a cut unless otherwise shown in the Plans.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Payment

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

"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.

Section 1-05.4 is supplemented with the following:

(April 2, 2018)
Contractor Surveying – ADA Features

ADA Feature Staking Requirements

The Contractor shall be responsible for setting, maintaining, and resetting all alignment stakes, and grades necessary for the construction of the ADA features. Calculations, surveying, and measuring required for setting and maintaining the necessary lines and grades shall be the Contractor's responsibility. The Contractor shall build the ADA features within the specifications in the Standard Plans and contract documents.

ADA Feature As-Built Measurements

The Contractor shall be responsible for providing electronic As-Built records of all ADA feature improvements completed in the Contract.

The survey work shall include but not be limited to completing the measurements, recording the required measurements and completing other data fill-ins found on the ADA Measurement Forms, and transmitting the electronic Forms to the Engineer. The ADA Measurement Forms are found at the following website location:

https://wsdot.wa.gov/engineering-standards/design-topics/design-ada

In the instance where an ADA Feature does not meet accessibility requirements, all work to replace non-conforming work and then to measure, record the as-built measurements, and transmit the electronic Forms to the Engineer shall be completed at no additional cost to the Contracting Agency, as ordered by the Engineer.

Payment

Payment will be made for the following bid item that is included in the Proposal:

"ADA Features Surveying", lump sum.

The unit Contract price per lump sum for "ADA Features Surveying" shall be full pay for all the Work as specified.

1-05.4(5) Payment

(Special Provision) *Supplement*

Payment will be made in accordance with Section 1-04.1, for each of the following Bid Items that are included in the proposal:

Roadway Surveying	**Per Lump Sum**

All costs associated with roadway surveying, licensed surveying, structure surveying, utility surveying, Record Drawings and cross sectioning as required by the Standard Specifications

and these Special Provisions shall be measured and paid under the bid item "Roadway Surveying" and no additional payment will be made.

Primary horizontal and vertical control data shall not be furnished by the Contracting Agency and the Contractor shall establish horizontal vertical control as part of the "Roadway Surveying" bid item provided in the Proposal. Available horizontal and vertical control data provided in the Plans is for the Contractor's convenience and shall be verified as part of the "Roadway Surveying" Work.

1-05.7 Removal of Defective and Unauthorized Work

(October 1, 2005 APWA GSP)

Supplement this section with the following:

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

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

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

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

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

1-05.11 Final Inspection

Delete this section and replace it with the following:

1-05.11 Final Inspections and Operational Testing

(October 1, 2005 APWA GSP)

1-05.11(1) Substantial Completion Date

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

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

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

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

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

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

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

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

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

1-05.11(3) Operational Testing

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

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

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

1-05.12 Final Acceptance

Add the following new section:

1-05.12(1) One-Year Guarantee Period

(March 8, 2013 APWA GSP)

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

the time specified, the work will be otherwise accomplished and the cost of same shall be paid by the Contractor.

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

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

1-05.13 Superintendents, Labor and Equipment of Contractor

(August 14, 2013 APWA GSP)

Delete the sixth and seventh paragraphs of this section.

1-05.14 Cooperation with Other Contractors

(Special Provision) *Supplement*

The Contractor shall afford Contracting Agency and other contractors working in the area reasonable opportunity for the introduction and storage of their materials and the execution of their respective work, and Contractor shall properly connect and coordinate its work with theirs.

Other utilities, districts, agencies, and/or contractors who may be working within the project area are as follows:

- Sound Transit
- Puget Sound Energy/Gas
- Lumen/CenturyLink Telecommunications
- Mercer Island School District
- Mercer Island Water & Sewer

The Contractor shall coordinate and afford franchise utilities the opportunity to relocate existing facilities in direct conflict with proposed improvements.

1-05.14(1) Notifications Relative to Contractor's Activities

(Special Provision) *New Section*

The Contractor shall give written notification to the Engineer and to the listed agencies and individuals, in time for them to receive such notice at least 7 calendar days prior to commencement of Work on the Project site. This notification must include:

- the time of the commencement and completion of work
- names of streets or locations of alleys to be closed
- routes of detours where possible
- schedule of operations

- name(s) and phone number(s) of the construction superintendent in responsible charge
- names of individuals having full authority to execute the orders or directions of the Engineer, in the event of an emergency. Include phone numbers with 24/7 availability.

The Contractor shall copy the Engineer on all communications with others related to this project, whether written, or logs of phone conversations:

- All fire, ambulance and police agencies servicing the project area(s).

1-05.15 Method of Serving Notices

(December 30, 2022 APWA GSP)
Revise the second paragraph to read:

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

Add the following new sections:

1-05.16 Water and Power

(October 1, 2005 APWA GSP)

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

1-05.17 Oral Agreements

(Special Provision) *Supplement*

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

Add the following new section:

1-05.18 Record Drawings

(March 8, 2013 APWA GSP)

The Contractor shall maintain one set of full size plans for Record Drawings, updated with clear and accurate red-lined field revisions on a daily basis, and within 2 business days after receipt of information that a change in Work has occurred. The Contractor shall not conceal any work until the required information is recorded.

This Record Drawing set shall be used for this purpose alone, shall be kept separate from other Plan sheets, and shall be clearly marked as Record Drawings. These Record Drawings shall be kept on site at the Contractor's field office, and shall be available for review by the Contracting Agency at all times. The Contractor shall bring the Record Drawings to each progress meeting for review.

The preparation and upkeep of the Record Drawings is to be the assigned responsibility of a single, experienced, and qualified individual. The quality of the Record Drawings, in terms of accuracy, clarity, and completeness, is to be adequate to allow the Contracting Agency to modify the computer-aided drafting (CAD) Contract Drawings to produce a complete set of Record Drawings for the Contracting Agency without further investigative effort by the Contracting Agency.

The Record Drawing markups shall document all changes in the Work, both concealed and visible. Items that must be shown on the markups include but are not limited to:

- Actual dimensions, arrangement, and materials used when different than shown in the Plans.
- Changes made by Change Order or Field Order.
- Changes made by the Contractor.
- Accurate locations of storm sewer, sanitary sewer, water mains and other water appurtenances, structures, conduits, light standards, vaults, width of roadways, sidewalks, landscaping areas, building footprints, channelization and pavement markings, etc. Include pipe invert elevations, top of castings (manholes, inlets, etc.).

If the Contract calls for the Contracting Agency to do all surveying and staking, the Contracting Agency will provide the elevations at the tolerances the Contracting Agency requires for the Record Drawings.

When the Contract calls for the Contractor to do the surveying/staking, the applicable tolerance limits include, but are not limited to the following:

	Vertical	Horizontal
As-built sanitary & storm invert and grate elevations	± 0.01 foot	± 0.01 foot
As-built monumentation	± 0.001 foot	± 0.001 foot
As-built waterlines, inverts, valves, hydrants	± 0.10 foot	± 0.10 foot
As-built ponds/swales/water features	± 0.10 foot	± 0.10 foot
As-built buildings (fin. Floor elev.)	± 0.01 foot	± 0.10 foot
As-built gas lines, power, TV, Tel, Com	± 0.10 foot	± 0.10 foot
As-built signs, signals, etc.	N/A	± 0.10 foot

Making Entries on the Record Drawings:

- Use erasable colored pencil (not ink) for all markings on the Record Drawings, conforming to the following color code:
- Additions - Red
- Deletions - Green
- Comments - Blue
- Dimensions - Graphite
- Provide the applicable reference for all entries, such as the change order number, the request for information (RFI) number, or the approved shop drawing number.

- Date all entries.
- Clearly identify all items in the entry with notes similar to those in the Contract Drawings (such as pipe symbols, centerline elevations, materials, pipe joint abbreviations, etc.).

The Contractor shall certify on the Record Drawings that said drawings are an accurate depiction of built conditions, and in conformance with the requirements detailed above. The Contractor shall submit final Record Drawings to the Contracting Agency. Contracting Agency acceptance of the Record Drawings is one of the requirements for achieving Physical Completion.

No Specific unit of Payment will be made for the following bid item and shall be considered incidental to Roadway Surveying:

1-05.19 Daily Construction Report

(Special Provision) *New Section*

The Contractor and subcontractors shall maintain daily, a Daily Construction Report of the Work. The Diary must be kept and maintained by Contractor's designated project superintendent(s). Entries must be made on a daily basis and must accurately represent all of the project activities on each day. The Contractor shall provide signed copies of diary sheets for the previous week to Engineer at each Weekly Coordination Meeting.

Every single diary sheet/page must have:

- Project name & number;
- Consecutive numbering of pages, and
- Typed or printed name, signature, and date of the person making the entry.

At a minimum, the diary shall, for each day, have a separate entry detailing each of the following:

1. Day and date.
2. Weather conditions, including changes throughout the day.
3. Complete description of work accomplished during the day, with adequate references to the Plans and Contract Provisions so the reader can easily and accurately identify said work on the Plans. Identify location/description of photographs or videos taken that day.
4. Each and every changed condition, dispute or potential dispute, incident, accident, or occurrence of any nature whatsoever which might affect Contractor, Contracting Agency, or any third party in any manner.
5. List all materials received and stored on- or off-site by Contractor that day for future installation, including the manner of storage and protection of the same.
6. List materials installed that day.
7. List all subcontractors working on-site that day.
8. List the number of Contractor's employees working during each day, by category of employment.

9. List Contractor's equipment on the site that day; showing which were in use, and which idle.
10. Notations to explain inspections, testing, stake-out, and all other services furnished by Contracting Agency or other party during the day.
11. Verify the daily (including non-work days) inspection and maintenance of traffic control devices and condition of the traveled roadway surfaces.
12. Any other information that serves to give an accurate and complete record of the nature, quantity, and quality of Contractor's progress on each day.
13. Hours worked.

It is expressly agreed between Contractor and Contracting Agency that the Daily Diary maintained by Contractor shall be the "Contractor's Book of Original Entry" for the documentation of any potential claims or disputes that might arise during this Contract. Failure of Contractor to maintain this Diary in the manner described above will constitute a waiver of any such claims or disputes by Contractor.

Engineer or his representative on the job site will also complete a Daily Construction Report.

All costs associated with the Contractor's Daily Construction Report are considered incidental to and included in the various bid items.

1-07 LEGAL RELATIONS AND RESPONSIBILITIES TO THE PUBLIC

1-07.1 Laws to be Observed

(October 1, 2005 APWA GSP)

Supplement this section with the following:

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

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

The Contractor shall maintain at the project site office, or other well known place at the project site, all articles necessary for providing first aid to the injured. The Contractor shall establish, publish, and make known to all employees, procedures for ensuring immediate removal to a hospital, or doctor's care, persons, including employees, who

may have been injured on the project site. Employees should not be permitted to work on the project site before the Contractor has established and made known procedures for removal of injured persons to a hospital or a doctor's care.

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

intended to include review and adequacy of the Contractor's safety measures in, on, or near the project site.

1-07.2 State Sales Tax

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

1-07.2 State Sales Tax

(June 27, 2011 APWA GSP)

The Washington State Department of Revenue has issued special rules on the State sales tax. Sections 1-07.2(1) through 1-07.2(4) are meant to clarify those rules. The Contractor should contact the Washington State Department of Revenue for answers to questions in this area. The Contracting Agency will not adjust its payment if the Contractor bases a bid on a misunderstood tax liability.

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

The Contracting Agency will pay the retained percentage (or release the Contract Bond is a FHWA-Funded Project) only if the Contractor has obtained from the Washington State Department of Revenue a certificate showing that all contract-related taxes have been paid (RCW 60.28.050). The Contracting Agency may deduct from its payments to the Contractor any amount the Contractor may owe the Washington State Department of Revenue, whether the amount owed relates to this contract or not. Any amount so deducted will be paid into the proper State fund.

1-07.2(2) State Sales Tax — Rule 171

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

1-07.2(3) State Sales Tax — Rule 170

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

to real property, whether or not such personal property becomes a part of the realty by virtue of installation.

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

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

1-07.2(4) Services

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

1-07.7 Load Limits

(WSDOT GSP March 13, 1995)

Section 1-07.7 is supplemented with the following:

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

1-07.9(5)A Required Documents

(December 30, 2022 APWA GSP)

This section is revised to read as follows:

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

1-07.16(1) Private/Public Property

(Special Provision) *Supplement*

Contractor shall maintain jobsite, all streets used by it, and utilities in a neat, orderly, workmanlike, and usable condition. Contractor shall clean up on a daily basis all refuse, rubbish, scrap material, and debris caused by his operations, including sweeping of streets.

On the event the Contractor fails to conform to these requirements, the Contracting Agency shall have the right to have the work done by others and the cost shall be deducted from moneys due to the Contractor.

The Contractor shall maintain access to driveways adjacent to the project limits at all times. Cement concrete driveway approaches shall be poured in two halves (minimum) to facilitate ingress/egress. At the direction of the Engineer, the Contractor may be directed to place HMA for use in temporary driveway access based on site conditions or to maintain a clean site.

The Contractor shall coordinate with all emergency services within the project site to allow access at all times. This may require additional coordination and temporary facilities to be utilized during the prosecution of the Work such as providing temporary steel sheeting or HMA patching. The costs for coordination and temporary facilities shall be considered part of the project and included in all Bid Items and no additional compensation will be made.

1-07.17 Utilities and Similar Facilities
(Special Provision)

Section 1-07.17 is supplemented with the following:

Locations and dimensions shown in the Plans for existing buried facilities are in accordance with available information obtained without uncovering. The actual locations may not correspond to the locations shown in the Plans. The Contractor shall be responsible for determining the exact location of all utilities prior to beginning construction. See RCW 19.122 for the latest rules on contacting the one-number locator service, etc.

The Contractor is also warned that there may be utilities on the project that are not part of the One-Call System. If One-Call is not obtainable, notice shall be provided to the individual utility owners of the Contractor's intent to excavate, within the same time frame cited in RCW 19.122.030.

All existing utilities and services shown on the plans shall be maintained in continuous service during the Contractor's operations. During contractor operations if a utility is found in conflict with the contract work, the contractor shall notify the Engineer immediately. If any utility requires relocation or temporary shutoff, the Contractor shall coordinate all interruptions of service with the utility owner. Disruptions to the services require a minimum of forty-eight (48) hours notice to the impacted utility for notification to the property owner.

The following addresses and telephone numbers of utility companies known or suspected of having facilities within the project limits are supplied for the Contractor's convenience:

1-07.18 Public Liability and Property Damage Insurance

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

1-07.18 Insurance
(December 30, 2022 APWA GSP)

1-07.18(1) General Requirements

A. The Contractor shall procure and maintain the insurance described in all subsections of section 1-07.18 of these Special Provisions, from insurers with a current A. M. Best rating of not less than A-: VII and licensed to do business in the State of Washington. The

Contracting Agency reserves the right to approve or reject the insurance provided, based on the insurer's financial condition.

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

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

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

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

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

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

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

1-07.18(2) Additional Insured

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

- the Contracting Agency and its officers, elected officials, employees, agents, and volunteers
- KPG Psomas

The above-listed entities shall be additional insured(s) for the full available limits of liability maintained by the Contractor, irrespective of whether such limits maintained by the Contractor are greater than those required by this Contract, and irrespective of whether the Certificate of

Insurance provided by the Contractor pursuant to 1-07.18(4) describes limits lower than those maintained by the Contractor.

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

1-07.18(3) Subcontractors

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

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

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

1-07.18(4) Verification of Coverage

The Contractor shall deliver to the Contracting Agency a Certificate(s) of Insurance and endorsements for each policy of insurance meeting the requirements set forth herein when the Contractor delivers the signed Contract for the work. Failure of Contracting Agency to demand such verification of coverage with these insurance requirements or failure of Contracting Agency to identify a deficiency from the insurance documentation provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.

Verification of coverage shall include:

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

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

1-07.18(5) Coverages and Limits

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

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

1-07.18(5)A Commercial General Liability

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

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

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

Such policy must provide the following minimum limits:

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

1-07.18(5)B Automobile Liability

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

Such policy must provide the following minimum limit:

$1,000,000	Combined single limit each accident

1-07.18(5)C Workers' Compensation

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

Puget Sound Energy (Power)
PO Box 97034 EST-11W
Bellevue, WA
Attn: Hong Nguyen
Office: 425-449-6609
Hong.Nguyen@pse.com

Puget Sound Energy (Gas)
13230 SE 32nd St.
Bellevue, WA 98005
Attn: Ryan Yelle
Office: 425-449-7589
Ryan.Yelle@pse.com

1-07.23 Public Convenience and Safety

1-07.23(1) Construction Under Traffic

(Special Provision) *Supplement*

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

Work Zone Clear Zone

The Work Zone Clear Zone (WZCZ) applies during working and nonworking hours. The WZCZ applies only to temporary roadside objects introduced by the Contractor's operations and does not apply to preexisting conditions or permanent Work. Those work operations that are actively in progress shall be in accordance with adopted and approved Traffic Control Plans, and other contract requirements.

During nonworking hours equipment or materials shall not be within the WZCZ unless they are protected by permanent guardrail or temporary concrete barrier. The use of temporary concrete barrier shall be permitted only if the Engineer approves the installation and location.

During actual hours of work, unless protected as described above, only materials absolutely necessary to construction shall be within the WZCZ and only construction vehicles absolutely necessary to construction shall be allowed within the WZCZ or allowed to stop or park on the shoulder of the roadway.

The Contractor's nonessential vehicles and employees private vehicles shall not be permitted to park within the WZCZ at any time unless protected as described above.

Deviation from the above requirements shall not occur unless the Contractor has requested the deviation in writing and the Engineer has provided written approval.

Minimum WZCZ distances are measured from the edge of traveled way and will be determined as follows:

Posted Speed	Distance From Traveled Way (Feet)
35 mph or less	**10 ***
40 mph	**15**
45 to 55 mph	**20**
60 mph or greater	**30**

* or 2-feet beyond the outside edge of sidewalk

Minimum Work Zone Clear Zone Distance

1-07.24 Rights of Way

(July 23, 2015 APWA GSP)

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

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

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

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

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

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

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

1-08 PROSECUTION AND PROGRESS

Add the following new section:

1-08.0 PRELIMINARY MATTERS

(May 25, 2006 APWA GSP)

Add the following new section:

1-08.0(1) Preconstruction Conference

(October 10, 2008 APWA GSP)

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

1. To review the initial progress schedule;
2. To establish a working understanding among the various parties associated or affected by the work;
3. To establish and review procedures for progress payment, notifications, approvals, submittals, etc.;
4. To establish normal working hours for the work;
5. To review safety standards and the Contractor's Traffic Control Plan;
6. To discuss such other related items as may be pertinent to the work; including but not limited to temporary illumination and construction phasing.

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

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

Add the following new section:

1-08.0(2) Hours of Work

(December 8, 2014 APWA GSP)

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

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

If the Contractor wishes to deviate from the established working hours, the Contractor shall submit a written request to the Engineer for consideration. This request shall state what hours are being requested, and why. Requests shall be submitted for review no later than 48 hours prior to the day(s) the Contractor is requesting to change the hours.

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

1. On non-Federal aid projects, requiring the Contractor to reimburse the Contracting Agency for the costs in excess of straight-time costs for Contracting Agency representatives who worked during such times. (The Engineer may require designated representatives to be present during the work. Representatives who may be deemed necessary by the Engineer include, but are not limited to: survey crews; personnel from the Contracting Agency's material testing lab; inspectors; and other Contracting Agency employees or third party consultants when, in the opinion of the Engineer, such work necessitates their presence.)

2. Considering the work performed on Saturdays, Sundays, and holidays as working days with regard to the contract time.

3. Considering multiple work shifts as multiple working days with respect to contract time even though the multiple shifts occur in a single 24-hour period.

4. If a 4-10 work schedule is requested and approved the non working day for the week will be charged as a working day.

5. If Davis Bacon wage rates apply to this Contract, all requirements must be met and recorded properly on certified payroll.

1-08.3 Progress Schedule

1-08.3(1)A Project Specific Scheduling and Order of Work

(Special Provision) *New Section*

The order of work will be at the Contractor's option with the exception noted below and shall be in keeping with good construction practice and the terms of the Contract. However, the Contractor shall schedule his activities and have all work performed within the time constraints noted in the various documents, permits, and the Contract. The Contractor is cautioned to review said documents and permits and schedule the Work activities appropriately as no separate monies will be paid to the Contractor by the Owner due to the time constraints imposed by such documents.

Trenching

All trenches within the roadway area shall be backfilled and patched with temporary asphalt at the end of each working day, unless prior permission is granted by the Project Engineer. Temporary patching asphalt shall be HMA or cold mix asphalt as approved by the Project Engineer.

Relocation, adjustment, and replacement concurrent with Construction

Minor unexpected relocations, adjustments, and relocations by franchise utilities, and performed by Others shall be performed concurrent with the Contractor's activities. Puget Sound Energy will begin utility pole relocations prior to notice to proceed, but some work may run concurrent with Contractor's activities. Preliminary PSE pole relocation plans are included in Appendix C for reference.

Measurement and Payment

All costs associated with project specific scheduling and sequencing shall be incidental to the various bid items of this Contract.

1-08.3(2)B Type B Progress Schedule

(December 30, 2022 APWA GSP)

Revise the first paragraph to read:

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

Revise the first sentence of the second paragraph to read:

The Contractor shall submit 3 copies of a Type B Progress Schedule depicting the entire project no later than 21-calendar days after the preconstruction conference.

1-08.4 Prosecution of Work

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

1-08.4 Notice to Proceed and Prosecution of Work

(July 23, 2015 APWA GSP)

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

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

1-08.5 Time for Completion

(Special Provision) *Supplement*

This project shall be substantially completed within **80** working days. This project shall be physically completed within 100 working days.

(December 30, 2022 APWA GSP, Option A)

Revise the third and fourth paragraphs to read:

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

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

Revise the sixth paragraph to read:

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

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

1-08.9 Liquidated Damages

(March 3, 2021 APWA GSP, Option B)

Revise the second and third paragraphs to read:

Accordingly, the Contractor agrees:

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

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

Liquidated Damages Formula

LD=0.15C/T

Where:

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

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

1-09 MEASUREMENT AND PAYMENT

1-09.2(1) General Requirements for Weighing Equipment

(Special Provision) *Replacement*

Delete the last paragraph of this section and replace it with the following:

It is the responsibility of the Contractor to see that tickets are given to the Inspector on the project for each truckload of material delivered. The City will not have a receiver at the point of delivery. Pay quantities will be prepared on the basis of said tally tickets, delivered to the Inspector by the Contractor on or within one (1) business day of the delivery of materials. Tickets not provided to the Inspector will not be honored for payment.

1-09.6 Force Account

(December 30, 2022 APWA GSP)

Supplement this section with the following:

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

1-09.7 Mobilization

(December 30, 2022 APWA GSP)

Delete this Section and replace it with the following:

Mobilization consists of preconstruction expenses and the costs of preparatory Work and operations performed by the Contractor typically occurring before 10 percent of the total original amount of an individual Bid Schedule is earned from other Contract items on that Bid Schedule. Items which are not to be included in the item of Mobilization include but are not limited to:

1. Portions of the Work covered by the specific Contract item or incidental Work which is to be included in a Contract item or items.
2. Profit, interest on borrowed money, overhead, or management costs.
3. Costs incurred for mobilizing equipment for force account Work.

Based on the lump sum Contract price for “Mobilization”, partial payments will be made as follows:

1. When 5 percent of the total original Bid Schedule amount is earned from other Contract items on that original Bid Schedule, excluding amounts paid for materials on hand, 50 percent of the Bid Item for mobilization on that original Bid Schedule, 5 percent of the total of that original Bid Schedule, or 5 percent of the total original Contract amount, whichever is the least, will be paid.
2. When 10 percent of the total original Bid Schedule amount is earned from other Contract items on that original Bid Schedule, excluding amounts paid for materials on hand, 100 percent of the Bid Item for mobilization on that original Bid Schedule, 10 percent of the total of that original Bid Schedule, or 10 percent of the total original Contract amount, whichever is the least, will be paid.
3. When the Substantial Completion Date has been established for the project, payment of any remaining amount Bid for mobilization will be paid.

Nothing herein shall be construed to limit or preclude partial payments otherwise provided by the Contract.

1-09.9 Payments

(December 30, 2022 APWA GSP)

Section 1-09.9 is revised to read:

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

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

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

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

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

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

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

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

Progress payments for work performed shall not be evidence of acceptable performance or an admission by the Contracting Agency that any work has been satisfactorily completed.

The determination of payments under the contract will be final in accordance with Section 1-05.1.

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

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

If the Contractor fails, refuses, or is unable to sign and return the Final Contract Voucher Certification or any other documentation required for completion and final acceptance of the Contract, the Contracting Agency reserves the right to establish a Completion Date (for the purpose of meeting the requirements of RCW 60.28) and unilaterally accept the Contract. Unilateral final acceptance will occur only after the Contractor has been provided the opportunity, by written request from the Engineer, to voluntarily submit such documents. If voluntary compliance is not achieved, formal notification of the impending establishment of a Completion Date and unilateral final acceptance will be provided by email with delivery confirmation from the Contracting Agency to the Contractor, which will provide 30 calendar days for the Contractor to submit the necessary documents. The 30 calendar day period will begin on the date the email with delivery confirmation is received by the Contractor. The date the Contracting Agency unilaterally signs the Final Contract Voucher Certification shall constitute the Completion Date and the final acceptance date (Section 1-05.12). The reservation by the Contracting Agency to unilaterally accept the Contract will apply to Contracts that are Physically Completed in accordance with Section 1-08.5, or for Contracts that are terminated in accordance with Section 1-08.10. Unilateral final acceptance of the Contract by the Contracting Agency does not in any way relieve the Contractor of their responsibility to comply with all Federal, State, tribal, or local laws, ordinances, and regulations that affect the Work under the Contract.

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

1-09.13 Claim Resolution

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

(October 1, 2005 APWA GSP)

This section to be deleted and replaced with:

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

1-09.13(3)A Administration of Arbitration

(November 30, 2018 APWA GSP)

Revise the third paragraph to read:

The Contracting Agency and the Contractor mutually agree to be bound by the decision of the arbitrator, and judgment upon the award rendered by the arbitrator may be entered in the Superior Court of the county in which the Contracting Agency's headquarters is located, provided that where claims subject to arbitration are asserted against a county, RCW 36.01.050 shall control venue and jurisdiction of the Superior Court. The decision of the arbitrator and the specific basis for the decision shall be in writing. The arbitrator shall use the Contract as a basis for decisions.

1-10 TEMPORARY TRAFFIC CONTROL

1-10.2(1) General

(September 7, 2021, WSDOT GSP OPT1) *Supplement*

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

The Traffic Control Supervisor shall be certified by one of the following:

The Northwest Laborers-Employers Training Trust
27055 Ohio Ave.
Kingston, WA 98346
(360) 297-3035
https://www.nwlett.edu

Evergreen Safety Council
12545 135th Ave. NE
Kirkland, WA 98034-8709
1-800-521-0778
https://www.esc.org

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

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

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

1-10.2(2) Traffic Control Plans

(Special Provision) *Supplement*

Traffic Control Plans and Phasing and Sequencing Plans, including any revisions and updates, are the sole responsibility of the Contractor.

The Traffic Control Plans (TCP) shall be submitted at a scale of 1" = 20' and shall also show hauling routes, which must be approved in advance by the Engineer.

Per 1-08.0(1), the Contractor shall bring a preliminary TCP to the preconstruction meeting which shall include a proposed construction schedule, construction phasing, pedestrian route plan, and associated temporary traffic control implementation.

The TCP shall also include necessary phasing and sequencing diagrams to clarify the proposed order of work and work zones. The following minimum Traffic Control requirements shall be maintained during the construction of the project:

- Driveway closure shall be coordinated with property owners prior to reconstruction.
- Lane closures during working hours are allowable provided one lane of traffic is maintained at all times. Emergency response vehicles shall have immediate access at all times.
- Unless a pay item has specifically been included in the contract, dust, mud control and street cleaning is considered **incidental** to the project.
- The Contractor shall provide for cleaning all surfaced roadways as a result of the execution of this project. Flushing shall not be allowed.

No lane closures will be allowed on a holiday or holiday weekend. Holidays that occur on Friday, Saturday, Sunday or Monday are considered a holiday weekend.

The Contractor shall submit a Traffic Control Plan or Plans showing a method of handling traffic. All construction signs, flaggers, spotters and other traffic control devices shall be shown on the Traffic Control Plan(s) except for emergency situations. Generic TCP Plans will not be acceptable. The Contractor's proposed Traffic Control Plans shall show the necessary lane closures, lane shifts, construction signs, flaggers, spotters, and other traffic control devices required to support each phase of the construction. A separate plan shall be prepared for each major construction phase. The Contractor-provided Plans shall be prepared by the Contractor's Traffic Control Supervisor or a licensed engineer in the State of Washington and shall conform to the requirements contained in the latest version of the Manual on Uniform Traffic Control Devices (MUTCD), the latest version of the Work Zone Traffic Control Guidelines published by the Washington State Department of Transportation.

Traffic Control Plans shall specify how accessible pedestrian routes shall be maintained through the project site.

The Contractor shall maintain a pedestrian path for safe crossing at all times for at least one side of the roadway and one side of each intersection. Pedestrian access shall be ADA compliant and shall be maintained at all times. Pedestrian access shall be continuous along the

project frontage and provide access to adjacent businesses and buildings and shall be fully accessible after work hours and on weekends.

Payment for developing an approved Traffic Control Plan, including pedestrian access route plan, shall be considered **incidental** to the lump sum price in the Proposal for *"Other Project Temporary Traffic Control"* and no additional compensation will be made.

If operations of the Contractor are shown to significantly impede traffic flow during peak hours, the Engineer may restrict the Contractor's time for operating within the street.

The Contractor shall also be aware of any additional restrictions within the Contract Documents, in particular Special Provisions section 1-07.16(1) and 1-08.0(1).

1-10.3 Traffic Control Labor, Procedures, and Devices

1-10.3(3)A Construction Signs

(Special Provision) *Supplement*

Supplement this section with the following:

Project Signs and posts will be provided by the Contractor. Contractor shall coordinate with installation locations and protect signs from damage throughout construction. Costs associated with this work shall be incidental to other items of work.

1-10.3(3)C Portable Changeable Message Sign

(Special Provision) *Supplement*

Five days prior to commencement of work the Contractor shall place a portable changeable message sign at each end of the project as directed by the Engineer. Messages to display will be determined by the Engineer.

Portable Changeable Message signs shall remain in operation on the project until substantial completion.

1-10.5 Payment

(Special Provision) *Supplement*

Supplement this section with the following:

Traffic Control Supervisor	**Per Lump Sum**
Pedestrian Traffic Control	**Per Lump Sum**
Flaggers	**Per Hour**
Portable Changeable Message Sign	**Per Hour**
Other Project Temporary Traffic Control	**Lump Sum**

No separate payment will be made for the preparation of the Pedestrian Traffic Control Plan. All costs with developing, implementing, and maintaining temporary ADA pedestrian access path via boardwalks, procurement, placement and compaction of crushed surfacing top course for temporary paths, or other labor, tools, and materials to comply with MUTCD Chapter 6D requirements included in the approved Pedestrian Traffic Control Plan and Standard Specifications shall be included in the lump sum bid item ''Pedestrian Traffic Control''.

All costs for minimizing drop-offs and maintaining access to existing streets and driveways and walkways, including, but not limited to, steel sheeting, and channelization devices, additional Traffic Control Labor shall be included by the Contractor in the lump sum Bid price for “Other Project Temporary Traffic Control”. No additional or separate compensation will be allowed.

END OF DIVISION 1

DIVISION 2: ROADWAY EXCAVATION AND EMBANKMENT

2-01 CLEARING, GRUBBING, AND ROADSIDE CLEANUP

2-01.1 Description

Section 2-01.1 is supplemented with the following:
(March 13, 1995 WSDOT GSP)

Clearing and grubbing on this project shall not be performed beyond the limits established by the clearing limit line, sawcut lines, and shall remain within the Right-of-Way unless otherwise specified.

(Special Provision) *Supplement*

The Contractor shall stake the proposed clearing limits at a minimum of 25' interval. The Contractor notify Engineer upon completion of the staked limits and shall allow 48 hours, after notification, for the Engineer to approve the clearing limits before commencing activities. At the direction of the Engineer, the limits shall be adjusted in the field. When staking the clearing limits, the Contractor shall strive to protect from damage existing landscaping items, such as vegetation, rockeries, irrigation and other items not indicated for removal.

When trees, fencing, landscape vegetation, rockeries, irrigation systems on private property conflicts with the proposed improvements, the Contractor shall allow seven (7) days notice to the property owners before commencing removal of the materials to allow time for private salvage. Items to be salvaged by adjacent homeowners will be determined in the field on an individual basis. If the property owners do not desire to salvage materials, then clearing may commence upon approval of the limits.

2-01.2 Disposal of Usable Materials and Debris

(Special Provision) *Supplement*

No waste site has been provided for the disposal of excess or excavated materials. The Contractor shall make his or her own arrangements for obtaining waste sites in accordance with Section 2-01.2(2) and 2-03.3(7)C of the Standard Specifications.

2-01.5 Payment

(Special Provision) *Supplement*

The first and second paragraphs of Section 2-01.5 are revised to read:
(January 5, 1998 WSDOT GSP)

Payment will be made in accordance with Section 1-04.1 for the following bid items when they are included in the proposal:
All costs for clearing and grubbing on this project shall be included in the *** unit bid price for ''Removal of Structures and Obstructions ***

2-02 REMOVAL OF STRUCTURES AND OBSTRUCTIONS

2-02.1 Description

(Special Provision) *Supplement*

The following is added at the end of this section:

This work shall consist of clearing and grubbing, removing, and / or adjusting all materials noted in this section of the Special Provisions as well as any other materials designated for removal on the Plans or necessary for the construction. The Contractor shall remove and dispose of all items shown on the site preparation plans and other minor items necessary to complete the work. The contractor shall review the plans, specifications and project site to verify items to be removed within the clearing and grading limits.

Work shall consist of removing all materials noted in this section as well as any other materials noted for removal on the Plan or as necessary for construction of the proposed improvements for which a separate bid item is not provided. The following specific items shall be included under "Removal of Structure and Obstructions", as well as other minor items noted on the Plans:

- Remove Stairs (Various Locations per Plans), 2 EA
- Remove Pavement Markings
- Shrub and brush removal, 40 EA

In general, the Contractor shall remove/dispose or abandon existing items which are in conflict with the new improvements, as noted above, and/or shown on the site preparation and demolition Plans. Where not in conflict, or where not specified for relocation, demolition or removal Contractor shall protect all improvements. Miscellaneous small items requiring removal may not have been shown on the Plans.

All items that are to be removed *inside* the roadway prism, which is defined as edge of pavement removal limits (ie: sawcut) to the back of sidewalk or cut/fill line shown on the plans, whichever is furthest from roadway, and not specifically mentioned as a pay item, will be paid as *Roadway Excavation*, Section 2-03 herein. Items *outside* the roadway prism, and not specifically mentioned as a pay item, will be paid as *Removal of Structure and Obstruction*, Section 2-02.5 herein.

Structure excavation, backfill and compaction quantities for the removal of items are not shown in the Plans. This excavation, backfill and compaction work shall be considered incidental to the lump sum "Removal of Structure and Obstruction" or the unit bid price for items included in the Proposal and no further compensation shall be made. All voids shall be backfilled with crushed surfacing.

2-02.3 Construction Requirements

(Special Provision) *Supplement*

All material removed for the construction of the project shall be hauled off-site to a legal disposal site by the Contractor. The Contractor shall determine the requirements of his selected disposal site related to accepting the material to be deposited on the site. Testing of the material by the disposal site or refusal of the site to accept the material shall not be the basis for additional payment or for an extension of the contract time. The cost of all such requirements shall be included in the various Bid prices in the Proposal.

2-02.3(1) Saw Cutting

(Special Provision) *New Section*

All pavement removed, regardless of type, shall be sawcut with a neat, full depth, vertical edge/line except where the plans call for asphalt to be recycled in place in which case the pavement edge shall be created by asphalt milling equipment.

Prior to the placement of Hot Mix Asphalt in locations illustrated in the plans, the Contractor shall sawcut a neat, full depth (up to 12" in depth), vertical edge/line within the existing pavement where the proposed pavement adjoins. The sawcut shall also be set at a continuous offset from the face of curb as illustrated in the plans.

The Contractor shall be responsible for ensuring that special precautions are undertaken so that in accordance with Department of Ecology guidelines no concrete (asphalt or cement) or concrete by-products are discharged into any storm drain or surface water. Cutting operations will increase the pH of water, therefore filtering is not acceptable.

Thoroughly clean saw cuts where necessary by the use of high pressure water (1,400 psi or greater). All wastewater shall be collected using vacuuming and/or pumped into containers for disposal.

Impervious surfaces contaminated from cutting operations shall be cleaned by sweepers to prevent contaminants from entering storm systems.

All costs associated with sawcutting as well as collecting and disposal of wasted water shall be considered incidental to and included unit contract prices for the associated removal bid items which require sawcutting.

2-02.3(2) Asphalt Removal

(Special Provision) *New Section*

This work shall consist of asphalt pavement, driveway, and sidewalk/walkway removal to the limits identified on the plans. Regardless of thickness, existing asphalt shall be removed to install the proposed improvements.

All costs associated with asphalt pavement, driveway, and sidewalk/walkway removal and disposal shall be considered included in the bid items except when a specific bid item is included in the contract proposal

2-02.3(3) Cement Concrete Curb and Gutter Removal

(Special Provision) *New Section*

This work shall consist of removing cement concrete curb and gutter, cement concrete pedestrian curb, extruded curb, pedestrian curb, including any reinforcement, and other curbing indicated for removal in the Plans or as directed by the engineer. Removal shall be to the limits identified on the plans,

All costs associated with cement concrete curbing removal and disposal shall be considered included in the bid items except when a specific bid item is included in the contract proposal

2-02.3(4) Cement Concrete Sidewalk Removal

(Special Provision) *New Section*

This work shall consist of cement concrete sidewalk/walkway removal to the limits identified on the plans. Regardless of depth, existing concrete sidewalk shall be removed to install the proposed improvements. This work shall also consist of the removal of associated pedestrian curb adjacent to the concrete sidewalk.

All costs associated with cement concrete driveway and sidewalk removal and disposal shall be considered included in the bid items except when a specific bid item is included in the contract proposal

2-02.3(3)6 Removal of Drainage Structures

(Special Provision) *New*

Where shown in the Plans or where designated by the Engineer, the Contractor shall remove existing catch basins, manholes, pipes, and other drainage features in accordance with Section 2-02 of the Standard Specifications. Removal shall be conducted in such a manner as to prevent damage to surrounding facilities including any existing storm sewers, sanitary sewers, electrical conduits or other facilities to remain. All remaining facilities including but not limited to storm sewers, sanitary sewers, monuments, valves, vaults, and electrical conduits damaged due to the Contractor's operations shall be replaced by the Contractor to the satisfaction of the Engineer at no additional cost to the Contracting Agency. Catch basins, manholes, and other drainage structures designated for removal, including all debris, shall be completely removed. All removed catch basins, manholes, and other drainage structures shall become the property of the Contractor and shall be disposed of in accordance with Section 2-02 of the Standard Specifications. All undamaged frames, grates, and solid covers in a re-useable condition shall become the property of the City of Mercer Island and shall be delivered to a location specified by the Engineer.

Sawcutting (full depth) of existing asphalt concrete pavement and cement concrete curb and gutter surrounding the structure required for removal shall be considered incidental to various bid items. Sawcuts shall be in accordance with Section 2-02 of these Special Provisions.

Backfilling of catch basins, manholes, pipes and other drainage structures to be removed and replaced shall not be performed until the new structure is installed and shall be in accordance with Section 7-05. Backfilling of a structure to be replaced shall be performed using CSTC and paid in accordance with the Bid Schedule. Backfilling of catch basins, manholes, pipes and other drainage structures to be completely removed shall be performed using CSTC and paid in accordance with the Bid Schedule.

Prior to backfilling any voids, the Contractor shall remove pipe as noted in the plans. Pipe shown to be abandoned or ordered by the Engineer to be abandoned shall be plugged with concrete in accordance with Section 2-09.3(1)E of the Standard Specifications.

Material, labor, tools, and equipment necessary to remove and/or fill any abandoned pipe shall be paid in accordance with the Bid Schedule.

The Contractor shall maintain existing drainage, where designated by the Engineer, until the new drainage system is completely installed and functioning.

2-02.4 Measurement

(Special Provision) *Supplement*

"Asphalt Removal Incl Haul" shall be measured per square yard on the surface of pavement removed as identified on the plans.

"Cement Concrete Sidewalk Removal Incl Haul" shall be measured per square yard on the surface pavement removed as identified on the plans.

"Cement Concrete Curb and Gutter Removal" shall be measured per linear foot as identified on the plans.

"Tree Removal Incl Haul" shall be measured per linear each tree removed and hauled away.

2-02.5 Payment

(Special Provision) *Supplement*

Payment will be made in accordance with Section 1-04.1, for each of the following Bid items that are included in the Proposal:

Removal of Structure and Obstructions	**Lump Sum**
Asphalt Removal Incl Haul	**Per Square Yard**
Cement Concrete Curb and Gutter Removal Incl Haul	**Per Linear Foot**
Cement Concrete Sidewalk Removal Incl Haul	**Per Square Yard**
Tree Removal Incl Haul	**Per Each**

The Lump Sum Contract price for *"Removal of Structure and Obstruction"* shall be full compensation for all labor, materials, tools, and equipment necessary to satisfactorily complete the work defined in the Standard Specifications and the Special Provisions. This work includes, but not limited to, clearing and grubbing, excavation, removal, cutting, and disposal of existing surface and underground utilities, and the items shown on the Plans and specified herein that do not have a specific unit bid item. Haul and disposal/salvage of materials to which this bid item applies shall be considered incidental.

The Square Yard Contract price for *"Asphalt Removal Incl Haul"* shall be full compensation for all labor, materials, tools, and equipment necessary to satisfactorily complete the work defined in the Standard Specifications and the Special Provisions. This work includes, but not limited to, excavation, removal, breaking, and disposal of existing asphalt pavements, walkways, and driveways, regardless of thickness. Haul and disposal/salvage of materials to which this bid item applies shall be considered incidental.

The Linear Foot Contract price for *"Cement Concrete Curb and Gutter Removal Incl Haul"* shall be full compensation for all labor, materials, tools, and equipment necessary to satisfactorily complete the work defined in the Standard Specifications and the Special Provisions. This work includes, but not limited to, excavation, removal, breaking, and disposal of existing cement concrete curb and gutter. Haul and disposal/salvage of materials to which this bid item applies shall be considered incidental.

The Square Yard Contract price for *"Cement Concrete Sidewalk Removal Incl Haul"* shall be full compensation for all labor, materials, tools, and equipment necessary to satisfactorily complete the work defined in the Standard Specifications and the Special Provisions. This work includes, but not limited to, excavation, removal, breaking, and disposal of existing cement concrete sidewalk, walkways, and driveways, regardless of thickness or reinforcement. Haul and disposal/salvage of materials to which this bid item applies shall be considered incidental.

The Each Contract price for *"Tree Removal Incl Haul"* shall be full compensation for all labor, materials, tools, and equipment necessary to satisfactorily complete the work defined in the Standard Specifications and the Special Provisions. This work includes, but not limited to,

excavation, removal, breaking, and disposal of existing trees, regardless of diameter, stump excavation, stump removal, and/or stump grinding identified in the Plans. Haul and disposal/salvage of materials to which this bid item applies shall be considered incidental.

Sawcutting shall be considered incidental and the unit price shall be included in the various bid items

2-03 ROADWAY EXCAVATION AND EMBANKMENT

2-03.1 Description

(Special Provision) *Supplement*

The work described in this Section, regardless of the nature or type of the materials encountered, includes excavating subgrade below the existing roadway, existing sidewalk, existing curb and gutter, and existing driveways to establish subgrade required by the proposed improvements and daylighting to existing ground per the details in the Plans.

This work shall also consist of material excavation by various means (vactor truck, hand excavation, or excavator) for the installation of the modular soil cells.

Should the contractor remove the existing surface treatment and encounter suitable base material that has been inspected and accepted by the Engineer, the contractor shall stop excavation and grade existing ground for proposed improvements.

Any excavation beyond that necessary for construction, unless otherwise ordered by the Engineer in writing, shall not be paid for. Unauthorized over-excavated areas shall be filled with crushed surfacing to be furnished, placed, and compacted at the Contractor's expense.

A quantity has been provided for bidding purposed for ''Unsuitable Foundation Excavation Incl Haul'' and ''Gravel Borrow Incl Haul''. This contract does not anticipate unsuitable foundation excavation beyond minor areas beneath the existing sidewalk.

2-03.4 Measurement

(Special Provision) *Supplement*

No separate measurement for payment will be made for compaction. All costs associated with compaction shall be included with the other various unit Bid prices in the Proposal.

No separate measurement for payment will be made for disposal of surplus materials. All costs associated with this work shall be included with the other various Bid items in the Proposal.

2-03.5 Payment

(Special Provision) *Supplement*

Payment will be made in accordance with Section 1-04.1, for each of the following Bid items that are included in the Proposal:

Roadway Excavation Incl. Haul	**Per Cubic Yard**
Unsuitable Foundation Excavation Incl. Haul	**Per Cubic Yard**
Gravel Borrow Incl. Haul	**Per Ton**

The Cubic Yard price for "Roadway Excavation Incl. Haul" shall be full compensation for the cost of all labor, tools, equipment, and materials necessary or incidental for excavating, hauling, and disposing of all materials excavated below existing pavement and surfacing to establish roadway and sidewalk subgrade at an off-site location provided and paid for by the Contractor.

2-04 HAUL

2-04.1 Description

(Special Provision) *Supplement*

In reference to the term "haul" as used in Section 2-04 and Section 2-09.3(1)D of the Standard Specifications, all costs and expense involved in haul will be considered incidental to the unit contract prices of the bid items and no additional compensation will be made.

2-04.2 Hauling on Routes Other Than State Highways

(Special Provision) *New*

If the sources of materials provided by the Contractor necessitate hauling over roads other than City streets or State highways, the Contractor shall, at the Contractor's expense, make all arrangements for the use and cleaning, if necessary, of the haul routes.

2-04.5 Payment

(Special Provision) *Supplement*

All costs associated with hauling materials of any description to, from, and within the project site shall be included in the appropriate unit Bid prices in the Proposal and no further compensation will be paid.

2-09 STRUCTURE EXCAVATION

2-09.3(1)C Removal of Unsuitable Base Material

(Special Provision) *Supplement*

Unsuitable and unstable foundation material shall be excavated, removed, and replaced per the Standard Specifications. Payment shall be made per "*Unsuitable Foundation Excavation Incl. Haul*" as described in Section 2-03 herein.

2-09.3(1)D Disposal of Excavated Material

(Special Provision) *Supplement*

All costs associated with disposing, hauling, or reusing excavated material shall be considered **incidental** to the various bid items and no additional compensation shall be considered when a bid item is not included in the contract.

2-09.3(3)D Shoring and Cofferdams

(Special Provision) *Supplement*

Providing shoring and cribbing and all aspects involved therein shall be the sole responsibility of the Contractor. All structure excavation shall be performed in strict

compliance with Chapter 296-155 WAC and Chapter 49.17 RCW of the Washington Safety and Health Act.

2-09.4 Measurement

(Special Provision) *Supplement*

"Shoring or Extra Excavation Class B" will be by lump sum.

2-09.5 Payment

(Special Provision) *Modification*

Payment will be made in accordance with Section 1-04.1, for each of the following Bid items that are included in the Proposal:

Shoring or Extra Excavation Class B	**Per Lump Sum**

The lump sum bid price for "Shoring or Extra Excavation Class B" shall be full compensation for the cost of all labor, tools, equipment, and materials necessary or incidental to install shoring and establish safe working environment below grade in accordance with the Standard Specifications and these Special Provisions. Structure Excavation Cl B incl haul shall be included in the various item shown in the bid proposal and no additional payment will be made.

END OF DIVISION 2

DIVISION 3: PRODUCTION FROM QUARRY AND PIT SITES AND STOCKPILING

3-01 PRODUCTION FROM QUARRY AND PIT SITES

3-01.4 Contractor Furnished Material Sources

(Special Provision) *Supplement*

No source has been provided for any materials necessary for the construction of this improvement.

If the source of materials provided by the Contractor necessitates hauling over roads other than City streets, the Contractor shall at his or her own expense make all arrangements for the use of haul routes.

3-01.5 Payment

(Special Provision) *Supplement*

All costs of any work required under Division 3 shall be included in the unit contract prices for the various items in the Proposal.

END OF DIVISION 3

DIVISION 4: BASES

4-04 BALLAST AND CRUSHED SURFACING

4-04.1 Description

(Special Provision) *Supplement*

All crushed surfacing material included in this contract is to be used only as indicated on the Plans or as designated by the Engineer and is not for the convenience of the Contractor. The work shall consist of the placement and compaction of crushed surfacing top course beneath pavement, curbs, paths, and sidewalk at locations indicated on the Plans. The Contractor shall place the material on the project as directed.

Also included in this work is the crushed surfacing top course required for the bedding and backfill of the storm drainage improvements.

Also included in this work is the crushed surfacing top course required for placing and constructing temporary pedestrian facilities throughout the project site as directed by the engineer.

Also included in this work is material used for the construction and backfill and compaction of the Modular Soil Cells.

4-04-4 Measurement

(Special Provision) *Supplement*

The basis of measurement for “Crushed Surfacing Top Course” will be by the ton based on certified truck tickets collected by the inspector at the end of each working day. Tickets will be accepted for payment after the end of each working day only when prior arrangements have been made with the inspector.

Should the Contractor not prepare subgrade to the correct line and grades and crushed surfacing materials are placed in excess of the depths required by the Plans, the excess depth will not be measured for payment. The crushed surfacing in these areas will instead be measured by neat line to be converted to tons for deduction in quantities accepted based on the certified truck tickets.

Crushed surfacing top course or base course used for temporary purposes, including but not limited to driving surfaces, will not be measured for payment unless it is incorporated into construction of the final improvements as required by the Plans.

Water used in placing and compacting surfacing materials will not be measured for payment.

4-04-5 Payment

(Special Provision) *Supplement*

Payment will be made in accordance with Section 1-04.1, for each of the following Bid items that are included in the Proposal:

Crushed Surfacing Top Course	**Per Ton**

The unit bid price for the above including all incidental work (temporary placement and compaction for sidewalks and driveways, etc.) shall be full compensation for all labor, material, tools, and equipment necessary to satisfactorily complete the work as defined in the Standard Specifications and these Special Provisions. The Contract Bid price for "Crushed Surfacing Top Course" shall be full compensation for all labor, materials, tools, and equipment necessary to satisfactorily complete the work as defined in the Plans, Standard Specifications and these Special Provisions. Work elements shall include, but not be limited to, procuring, hauling, placing, grading, and compacting crushed surfacing material. Water used in placing and compacting surfacing materials shall be considered incidental to the material being placed. Compaction by means suitable to achieve acceptance by the City and Engineer.

END OF DIVISION 4

DIVISION 5: SURFACE TREATMENTS AND PAVEMENTS

5-04 HOT MIX ASPHALT

(July 18, 2018 APWA GSP)

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

5-04.1 Description

This Work shall consist of providing and placing one or more layers of plant-mixed hot mix asphalt (HMA) on a prepared foundation or base in accordance with these Specifications and the lines, grades, thicknesses, and typical cross-sections shown in the Plans. HMA shall be composed of asphalt binder and mineral materials as may be required, mixed in the proportions specified to provide a homogeneous, stable, and workable mixture.

This work shall also include placing and compacting Temporary HMA for Walkways for pavement transitions, temporary walkways, and other temporary facilities as directed by the engineer.

5-04.2 Materials

Materials shall meet the requirements of the following sections:

Asphalt Binder	9-02.1(4)
Cationic Emulsified Asphalt	9-02.1(6)
Anti-Stripping Additive	9-02.4
HMA Additive	9-02.5
Aggregates	9-03.8
Recycled Asphalt Pavement	9-03.8(3)B
Mineral Filler	9-03.8(5)
Recycled Material	9-03.21
Portland Cement	9-01
Sand	9-03.1(2)
(As noted in 5-04.3(5)C for crack sealing)	
Joint Sealant	9-04.2
Foam Backer Rod	9-04.2(3)A

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

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

The Contractor may use up to 20 percent RAP by total weight of HMA with no additional sampling or testing of the RAP. The RAP shall be sampled and tested at a frequency of one sample for every 1,000 tons produced and not less than ten samples per project. The asphalt content and gradation test data shall be reported to the Contracting Agency when submitting the mix design for approval on the QPL. The Contractor shall include the RAP as part of the mix design as defined in these Specifications.

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

The Contractor may only use warm mix asphalt (WMA) processes in the production of HMA with 20 percent or less RAP by total weight of HMA. The Contractor shall submit to the Engineer for approval the process that is proposed and how it will be used in the manufacture of HMA.

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

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

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

5-04.2(1)A Vacant

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

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

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

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

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

- The WSDOT Mix Design Evaluation Report from the current WSDOT QPL, or one of the mix design verification certifications listed below.

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

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

Mix designs for HMA accepted by Nonstatistical evaluation shall;

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

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

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

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

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

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

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

5-04.3 Construction Requirements

5-04.3(1) Weather Limitations

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

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

Minimum Surface Temperature for Paving

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

5-04.3(2) Paving Under Traffic

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

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

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

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

All costs in connection with performing the Work in accordance with these requirements, except the cost of temporary pavement markings, shall be included in the unit Contract prices for the various Bid items involved in the Contract.

5-04.3(3) Equipment

5-04.3(3)A Mixing Plant

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

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

5-04.3(3)B Hauling Equipment

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

The contractor shall provide an environmentally benign means to prevent the HMA mixture from adhering to the hauling equipment. Excess release agent shall be drained prior to filling hauling equipment with HMA. Petroleum derivatives or other coating material that

contaminate or alter the characteristics of the HMA shall not be used. For live bed trucks, the conveyer shall be in operation during the process of applying the release agent.

5-04.3(3)C Pavers

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

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

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

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

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

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

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

A Material Transfer Device/Vehicle (MTD/V) shall only be used with the Engineer's approval, unless other-wise required by the contract.

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

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

To be approved for use, an MTV:

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

To be approved for use, an MTD:

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

5-04.3(3)E Rollers

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

5-04.3(4) Preparation of Existing Paved Surfaces

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

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

Compaction of preleveling HMA shall be to the satisfaction of the Engineer and may require the use of small steel wheel rollers, plate compactors, or pneumatic rollers to avoid bridging across preleveled areas by the compaction equipment. Equipment used for the compaction of preleveling HMA shall be approved by the Engineer.

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

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

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

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

5-04.3(4)A Crack Sealing

5-04.3(4)A1 General

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

Cleaning: Ensure that cracks are thoroughly clean, dry and free of all loose and foreign material when filling with crack sealant material. Use a hot compressed air lance to dry and

warm the pavement surfaces within the crack immediately prior to filling a crack with the sealant material. Do not overheat pavement. Do not use direct flame dryers. Routing cracks is not required.

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

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

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

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

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

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

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

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

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

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

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

5-04.3(4)B Vacant

5-04.3(4)C Pavement Repair

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

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

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

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

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

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

5-04.3(5)A Vacant

5-04.3(6) Mixing

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

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

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

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

5-04.3(7) Spreading and Finishing

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

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

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

When more than one JMF is being utilized to produce HMA, the material produced for each JMF shall be placed by separate spreading and compacting equipment. The intermingling of HMA produced from more than one JMF is prohibited. Each strip of HMA

placed during a work shift shall conform to a single JMF established for the class of HMA specified unless there is a need to make an adjustment in the JMF.

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

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

5-04.3(9) HMA Mixture Acceptance

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

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

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

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

HMA Tolerances and Adjustments

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

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

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

   For Aggregates in the mixture:

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

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

   b. Second, adjust the preliminary upper and lower acceptance limits determined from step (a) the minimum amount necessary so that none of the aggregate

properties are outside the control points in Section 9-03.8(6). The resulting values will be the upper and lower acceptance limits for aggregates, as well as the USL and LSL required in Section 1-06.2(2)D2.

2. Job Mix Formula Adjustments – An adjustment to the aggregate gradation or asphalt binder content of the JMF requires approval of the Engineer. Adjustments to the JMF will only be considered if the change produces material of equal or better quality and may require the development of a new mix design if the adjustment exceeds the amounts listed below.
   a. **Aggregates** –2 percent for the aggregate passing the 1½″, 1″, ¾″, ½″, ⅜″, and the No. 4 sieves, 1 percent for aggregate passing the No. 8 sieve, and 0.5 percent for the aggregate passing the No. 200 sieve. The adjusted JMF shall be within the range of the control points in Section 9-03.8(6).
   b. **Asphalt Binder Con**tent – The Engineer may order or approve changes to asphalt binder content. The maximum adjustment from the approved mix design for the asphalt binder content shall be 0.3 percent

5-04.3(9)A Vacant

5-04.3(9)B Vacant

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

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

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

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

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

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

5-04.3(9)C2 Mixture Nonstatistical Evaluation Sampling

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

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

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

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

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

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

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

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

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

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

Table of Price Adjustment Factors	
Constituent	**Factor "f"**
All aggregate passing: 1½″, 1″, ¾″, ½″, ⅜″ and No.4 sieves	2
All aggregate passing No. 8 sieve	15
All aggregate passing No. 200 sieve	20
Asphalt binder	40
Air Voids (Va) (where applicable)	20

Each lot of HMA produced under Nonstatistical Evaluation and having all constituents falling within the tolerance limits of the job mix formula shall be accepted at the unit Contract price with no further evaluation. When one or more constituents fall outside the nonstatistical tolerance limits in the Job Mix Formula shown in Table of Price Adjustment Factors, the lot shall be evaluated in accordance with Section 1-06.2 to determine the

appropriate CPF. The nonstatistical tolerance limits will be used in the calculation of the CPF and the maximum CPF shall be 1.00. When less than three sublots exist, backup samples of the existing sublots or samples from the Roadway shall be tested to provide a minimum of three sets of results for evaluation.

5-04.3(9)C5 Vacant

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

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

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

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

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

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

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

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

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

5-04.3(10) HMA Compaction Acceptance

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

Tests for the determination of the pavement density will be taken in accordance with the required procedures for measurement by a nuclear density gauge or roadway cores after completion of the finish rolling.

If the Contracting Agency uses a nuclear density gauge to determine density the test procedures FOP for WAQTC TM 8 and WSDOT SOP T 729 will be used on the day the mix is placed and prior to opening to traffic.

Roadway cores for density may be obtained by either the Contracting Agency or the Contractor in accordance with WSDOT SOP 734. The core diameter shall be 4-inches minimum, unless otherwise approved by the Engineer. Roadway cores will be tested by the Contracting Agency in accordance with WSDOT FOP for AASHTO T 166.

If the Contract includes the Bid item “Roadway Core” the cores shall be obtained by the Contractor in the presence of the Engineer on the same day the mix is placed and at locations designated by the Engineer. If the Contract does not include the Bid item “Roadway Core” the Contracting Agency will obtain the cores.

For a lot in progress with a CPF less than 0.75, a new lot will begin at the Contractor’s request after the Engineer is satisfied that material conforming to the Specifications can be produced.

HMA mixture accepted by commercial evaluation and HMA constructed under conditions other than those listed above shall be compacted on the basis of a test point evaluation of the compaction train. The test point evaluation shall be performed in accordance with instructions from the Engineer. The number of passes with an approved compaction train, required to attain the maximum test point density, shall be used on all subsequent paving.

HMA for preleveling shall be thoroughly compacted. HMA that is used for preleveling wheel rutting shall be compacted with a pneumatic tire roller unless otherwise approved by the Engineer.

Test Results

For a sublot that has been tested with a nuclear density gauge that did not meet the minimum of 92 percent of the reference maximum density in a compaction lot with a CPF below 1.00 and thus subject to a price reduction or rejection, the Contractor may request that a core be used for determination of the relative density of the sublot. The relative density of the core will replace the relative density determined by the nuclear density gauge for the sublot and will be used for calculation of the CPF and acceptance of HMA compaction lot.

When cores are taken by the Contracting Agency at the request of the Contractor, they shall be requested by noon of the next workday after the test results for the sublot have been provided or made available to the Contractor. Core locations shall be outside of wheel paths and as determined by the Engineer. Traffic control shall be provided by the Contractor as requested by the Engineer. Failure by the Contractor to provide the requested traffic control will result in forfeiture of the request for cores. When the CPF for the lot based on the results of the HMA cores is less than 1.00, the cost for the coring will be deducted from any monies due or that may become due the Contractor under the Contract at the rate of $200 per core and the Contractor shall pay for the cost of the traffic control.

5-04.3(10)A HMA Compaction – General Compaction Requirements

Compaction shall take place when the mixture is in the proper condition so that no undue displacement, cracking, or shoving occurs. Areas inaccessible to large compaction equipment shall be compacted by other mechanical means. Any HMA that becomes loose, broken, contaminated, shows an excess or deficiency of asphalt, or is in any way defective, shall be removed and replaced with new hot mix that shall be immediately compacted to conform to the surrounding area.

The type of rollers to be used and their relative position in the compaction sequence shall generally be the Contractor's option, provided the specified densities are attained. Unless the Engineer has approved otherwise, rollers shall only be operated in the static mode when the internal temperature of the mix is less than 175°F. Regardless of mix temperature, a roller shall not be operated in a mode that results in checking or cracking of the mat. Rollers shall only be operated in static mode on bridge decks.

5-04.3(10)B HMA Compaction – Cyclic Density

Low cyclic density areas are defined as spots or streaks in the pavement that are less than 90 percent of the theoretical maximum density. At the Engineer's discretion, the Engineer may evaluate the HMA pavement for low cyclic density, and when doing so will follow WSDOT SOP 733. A $500 Cyclic Density Price Adjustment will be assessed for any 500-foot section with two or more density readings below 90 percent of the theoretical maximum density.

5-04.3(10)C Vacant

5-04.3(10)D HMA Nonstatistical Compaction

5-04.3(10)D1 HMA Nonstatistical Compaction – Lots and Sublots

HMA compaction which is accepted by nonstatistical evaluation will be based on acceptance testing performed by the Contracting Agency dividing the project into compaction lots.

A lot is represented by randomly selected samples of the same mix design that will be tested for acceptance. A lot is defined as the total quantity of material or work produced for each Job Mix Formula placed. Only one lot per JMF is expected. A sublot shall be equal to one day's production or 400 tons, whichever is less except that the final sublot will be a minimum of 200 tons and may be increased to 800 tons. Testing for compaction will be at the rate of 5 tests per sublot per WSDOT T 738.

The sublot locations within each density lot will be determined by the Engineer. For a lot in progress with a CPF less than 0.75, a new lot will begin at the Contractor's request after the Engineer is satisfied that material conforming to the Specifications can be produced.

HMA mixture accepted by commercial evaluation and HMA constructed under conditions other than those listed above shall be compacted on the basis of a test point evaluation of the compaction train. The test point evaluation shall be performed in accordance with instructions from the Engineer. The number of passes with an approved compaction train, required to attain the maximum test point density, shall be used on all subsequent paving.

HMA for preleveling shall be thoroughly compacted. HMA that is used to prelevel wheel ruts shall be compacted with a pneumatic tire roller unless otherwise approved by the Engineer.

5-04.3(10)D2 HMA Compaction Nonstatistical Evaluation – Acceptance Testing

The location of the HMA compaction acceptance tests will be randomly selected by the Engineer from within each sublot, with one test per sublot.

5-04.3(10)D3 HMA Nonstatistical Compaction – Price Adjustments

For each compaction lot with one or two sublots, having all sublots attain a relative density that is 92 percent of the reference maximum density the HMA shall be accepted at the unit Contract price with no further evaluation. When a sublot does not attain a relative density that is 92 percent of the reference maximum density, the lot shall be evaluated in accordance with Section 1-06.2 to determine the appropriate CPF. The maximum CPF shall be 1.00, however, lots with a calculated CPF in excess of 1.00 will be used to offset lots with CPF values below 1.00 but greater than 0.90. Lots with CPF lower than 0.90 will be evaluated for compliance per 5-04.3(11). Additional testing by either a nuclear moisture-density gauge or cores will be completed as required to provide a minimum of three tests for evaluation.

For compaction below the required 92% a Non-Conforming Compaction Factor (NCCF) will be determined. The NCCF equals the algebraic difference of CPF minus 1.00 multiplied by 40 percent. The Compaction Price Adjustment will be calculated as the product of CPF,

the quantity of HMA in the compaction control lot in tons, and the unit Contract price per ton of mix.

5-04.3(11) Reject Work

5-04.3(11)A Reject Work General

Work that is defective or does not conform to Contract requirements shall be rejected. The Contractor may propose, in writing, alternatives to removal and replacement of rejected material. Acceptability of such alternative proposals will be determined at the sole discretion of the Engineer. HMA that has been rejected is subject to the requirements in Section 1-06.2(2) and this specification, and the Contractor shall submit a corrective action proposal to the Engineer for approval.

5-04.3(11)B Rejection by Contractor

The Contractor may, prior to sampling, elect to remove any defective material and replace it with new material. Any such new material will be sampled, tested, and evaluated for acceptance.

5-04.3(11)C Rejection Without Testing (Mixture or Compaction)

The Engineer may, without sampling, reject any batch, load, or section of Roadway that appears defective. Material rejected before placement shall not be incorporated into the pavement. Any rejected section of Roadway shall be removed.

No payment will be made for the rejected materials or the removal of the materials unless the Contractor requests that the rejected material be tested. If the Contractor elects to have the rejected material tested, a minimum of three representative samples will be obtained and tested. Acceptance of rejected material will be based on conformance with the nonstatistical acceptance Specification. If the CPF for the rejected material is less than 0.75, no payment will be made for the rejected material; in addition, the cost of sampling and testing shall be borne by the Contractor. If the CPF is greater than or equal to 0.75, the cost of sampling and testing will be borne by the Contracting Agency. If the material is rejected before placement and the CPF is greater than or equal to 0.75, compensation for the rejected material will be at a CPF of 0.75. If rejection occurs after placement and the CPF is greater than or equal to 0.75, compensation for the rejected material will be at the calculated CPF with an addition of 25 percent of the unit Contract price added for the cost of removal and disposal.

5-04.3(11)D Rejection - A Partial Sublot

In addition to the random acceptance sampling and testing, the Engineer may also isolate from a normal sublot any material that is suspected of being defective in relative density, gradation or asphalt binder content. Such isolated material will not include an original sample location. A minimum of three random samples of the suspect material will be obtained and tested. The material will then be statistically evaluated as an independent lot in accordance with Section 1-06.2(2).

5-04.3(11)E Rejection - An Entire Sublot

An entire sublot that is suspected of being defective may be rejected. When a sublot is rejected a minimum of two additional random samples from this sublot will be obtained. These additional samples and the original sublot will be evaluated as an independent lot in accordance with Section 1-06.2(2).

5-04.3(11)F Rejection - A Lot in Progress

The Contractor shall shut down operations and shall not resume HMA placement until such time as the Engineer is satisfied that material conforming to the Specifications can be produced:

1. When the Composite Pay Factor (CPF) of a lot in progress drops below 1.00 and the Contractor is taking no corrective action, or
2. When the Pay Factor (PF) for any constituent of a lot in progress drops below 0.95 and the Contractor is taking no corrective action, or
3. When either the PFi for any constituent or the CPF of a lot in progress is less than 0.75.

5-04.3(11)G Rejection - An Entire Lot (Mixture or Compaction)

An entire lot with a CPF of less than 0.75 will be rejected.

5-04.3(12) Joints

5-04.3(12)A HMA Joints

5-04.3(12)A1 Transverse Joints

The Contractor shall conduct operations such that the placing of the top or wearing course is a continuous operation or as close to continuous as possible. Unscheduled transverse joints will be allowed and the roller may pass over the unprotected end of the freshly laid mixture only when the placement of the course must be discontinued for such a length of time that the mixture will cool below compaction temperature. When the Work is resumed, the previously compacted mixture shall be cut back to produce a slightly beveled edge for the full thickness of the course.

A temporary wedge of HMA constructed on a 20H:1V shall be constructed where a transverse joint as a result of paving or planing is open to traffic. The HMA in the temporary wedge shall be separated from the permanent HMA by strips of heavy wrapping paper or other methods approved by the Engineer. The wrapping paper shall be removed and the joint trimmed to a slightly beveled edge for the full thickness of the course prior to resumption of paving.

The material that is cut away shall be wasted and new mix shall be laid against the cut. Rollers or tamping irons shall be used to seal the joint.

5-04.3(12)A2 Longitudinal Joints

The longitudinal joint in any one course shall be offset from the course immediately below by not more than 6 inches nor less than 2 inches. All longitudinal joints constructed in the

wearing course shall be located at a lane line or an edge line of the Traveled Way. A notched wedge joint shall be constructed along all longitudinal joints in the wearing surface of new HMA unless otherwise approved by the Engineer. The notched wedge joint shall have a vertical edge of not less than the maximum aggregate size or more than ½ of the compacted lift thickness and then taper down on a slope not steeper than 4H:1V. The sloped portion of the HMA notched wedge joint shall be uniformly compacted.

5-04.3(13) Surface Smoothness

The completed surface of all courses shall be of uniform texture, smooth, uniform as to crown and grade, and free from defects of all kinds. The completed surface of the wearing course shall not vary more than ⅛ inch from the lower edge of a 10-foot straightedge placed on the surface parallel to the centerline. The transverse slope of the completed surface of the wearing course shall vary not more than ¼ inch in 10 feet from the rate of transverse slope shown in the Plans.

When deviations in excess of the above tolerances are found that result from a high place in the HMA, the pavement surface shall be corrected by one of the following methods:

1. Removal of material from high places by grinding with an approved grinding machine, or
2. Removal and replacement of the wearing course of HMA, or
3. By other method approved by the Engineer.

Correction of defects shall be carried out until there are no deviations anywhere greater than the allowable tolerances.

Deviations in excess of the above tolerances that result from a low place in the HMA and deviations resulting from a high place where corrective action, in the opinion of the Engineer, will not produce satisfactory results will be accepted with a price adjustment. The Engineer shall deduct from monies due or that may become due to the Contractor the sum of $500.00 for each and every section of single traffic lane 100 feet in length in which any excessive deviations described above are found.

When utility appurtenances such as manhole covers and valve boxes are located in the traveled way, the utility appurtenances shall be adjusted to the finished grade prior to paving. This requirement may be waived when requested by the Contractor, at the discretion of the Engineer or when the adjustment details provided in the project plan or specifications call for utility appurtenance adjustments after the completion of paving.

Utility appurtenance adjustment discussions will be included in the Pre-Paving planing (5-04.3(14)B3). Submit a written request to waive this requirement to the Engineer prior to the start of paving.

5-04.3(14) Planing (Milling) Bituminous Pavement

The planing plan must be approved by the Engineer and a pre planing meeting must be held prior to the start of any planing. See Section 5-04.3(14)B2 for information on planing submittals.

Locations of existing surfacing to be planed are as shown in the Drawings.

Where planing an existing pavement is specified in the Contract, the Contractor must remove existing surfacing material and to reshape the surface to remove irregularities. The finished product must be a prepared surface acceptable for receiving an HMA overlay.

Use the cold milling method for planing unless otherwise specified in the Contract. Do not use the planer on the final wearing course of new HMA.

Conduct planing operations in a manner that does not tear, break, burn, or otherwise damage the surface which is to remain. The finished planed surface must be slightly grooved or roughened and must be free from gouges, deep grooves, ridges, or other imperfections. The Contractor must repair any damage to the surface by the Contractor's planing equipment, using an Engineer approved method.

Repair or replace any metal castings and other surface improvements damaged by planing, as determined by the Engineer.

A tapered wedge cut must be planed longitudinally along curb lines sufficient to provide a minimum of 4 inches of curb reveal after placement and compaction of the final wearing course. The dimensions of the wedge must be as shown on the Drawings or as specified by the Engineer.

A tapered wedge cut must also be made at transitions to adjoining pavement surfaces (meet lines) where butt joints are shown on the Drawings. Cut butt joints in a straight line with vertical faces 2 inches or more in height, producing a smooth transition to the existing adjoining pavement.

After planing is complete, planed surfaces must be swept, cleaned, and if required by the Contract, patched and preleveled.

The Engineer may direct additional depth planing. Before performing this additional depth planing, the Contractor must conduct a hidden metal in pavement detection survey as specified in Section 5-04.3(14)A.

5-04.3(14)A Pre-Planing Metal Detection Check

Before starting planing of pavements, and before any additional depth planing required by the Engineer, the Contractor must conduct a physical survey of existing pavement to be planed with equipment that can identify hidden metal objects.

Should such metal be identified, promptly notify the Engineer.

See Section 1-07.16(1) regarding the protection of survey monumentation that may be hidden in pavement.

The Contractor is solely responsible for any damage to equipment resulting from the Contractor's failure to conduct a pre-planing metal detection survey, or from the Contractor's failure to notify the Engineer of any hidden metal that is detected.

5-04.3(14)B Paving and Planing Under Traffic

5-04.3(14)B1 General

In addition the requirements of Section 1-07.23 and the traffic controls required in Section 1-10, and unless the Contract specifies otherwise or the Engineer approves, the Contractor must comply with the following:

1. Intersections:

   a. Keep intersections open to traffic at all times, except when paving or planing operations through an intersection requires closure. Such closure must be kept to the minimum time required to place and compact the HMA mixture, or plane as appropriate. For paving, schedule such closure to individual lanes or portions thereof that allows the traffic volumes and schedule of traffic volumes required in the approved traffic control plan. Schedule work so that adjacent intersections are not impacted at the same time and comply with the traffic control restrictions required by the Traffic Engineer. Each individual intersection closure or partial closure, must be addressed in the traffic control plan, which must be submitted to and accepted by the Engineer, see Section 1-10.2(2).

   b. When planing or paving and related construction must occur in an intersection, consider scheduling and sequencing such work into quarters of the intersection, or half or more of an intersection with side street detours. Be prepared to sequence the work to individual lanes or portions thereof.

   c. Should closure of the intersection in its entirety be necessary, and no trolley service is impacted, keep such closure to the minimum time required to place and compact the HMA mixture, plane, remove asphalt, tack coat, and as needed.

   d. Any work in an intersection requires advance warning in both signage and a number of Working Days advance notice as determined by the Engineer, to alert traffic and emergency services of the intersection closure or partial closure.

   e. Allow new compacted HMA asphalt to cool to ambient temperature before any traffic is allowed on it. Traffic is not allowed on newly placed asphalt until approval has been obtained from the Engineer.

2. Temporary centerline marking, post-paving temporary marking, temporary stop bars, and maintaining temporary pavement marking must comply with Section 8-23.
3. Permanent pavement marking must comply with Section 8-22.

5-04.3(14)B2 Submittals – Planing Plan and HMA Paving Plan

The Contractor must submit a separate planing plan and a separate paving plan to the Engineer at least 5 Working Days in advance of each operation's activity start date. These plans must show how the moving operation and traffic control are coordinated, as they will be discussed at the pre-planing briefing and pre-paving briefing. When requested by the Engineer, the Contractor must provide each operation's traffic control plan on 24 x 36 inch

or larger size Shop Drawings with a scale showing both the area of operation and sufficient detail of traffic beyond the area of operation where detour traffic may be required. The scale on the Shop Drawings is 1 inch = 20 feet, which may be changed if the Engineer agrees sufficient detail is shown.

The planing operation and the paving operation include, but are not limited to, metal detection, removal of asphalt and temporary asphalt of any kind, tack coat and drying, staging of supply trucks, paving trains, rolling, scheduling, and as may be discussed at the briefing.

When intersections will be partially or totally blocked, provide adequately sized and noticeable signage alerting traffic of closures to come, a minimum 2 Working Days in advance. The traffic control plan must show where police officers will be stationed when signalization is or may be, countermanded, and show areas where flaggers are proposed.

At a minimum, the planing and the paving plan must include:

1. A copy of the accepted traffic control plan, see Section 1-10.2(2), detailing each day's traffic control as it relates to the specific requirements of that day's planing and paving. Briefly describe the sequencing of traffic control consistent with the proposed planing and paving sequence, and scheduling of placement of temporary pavement markings and channelizing devices after each day's planing, and paving.
2. A copy of each intersection's traffic control plan.
3. Haul routes from Supplier facilities, and locations of temporary parking and staging areas, including return routes. Describe the complete round trip as it relates to the sequencing of paving operations.
4. Names and locations of HMA Supplier facilities to be used.
5. List of all equipment to be used for paving.
6. List of personnel and associated job classification assigned to each piece of paving equipment.
7. Description (geometric or narrative) of the scheduled sequence of planing and of paving, and intended area of planing and of paving for each day's work, must include the directions of proposed planing and of proposed paving, sequence of adjacent lane paving, sequence of skipped lane paving, intersection planing and paving scheduling and sequencing, and proposed notifications and coordinations to be timely made. The plan must show HMA joints relative to the final pavement marking lane lines.
8. Names, job titles, and contact information for field, office, and plant supervisory personnel.
9. A copy of the approved Mix Designs.
10. Tonnage of HMA to be placed each day.
11. Approximate times and days for starting and ending daily operations.

5-04.3(14)B3 Pre-Paving and Pre-Planing Briefing

At least 2 Working Days before the first paving operation and the first planing operation, or as scheduled by the Engineer for future paving and planing operations to ensure the Contractor has adequately prepared for notifying and coordinating as required in the

Contract, the Contractor must be prepared to discuss that day's operations as they relate to other entities and to public safety and convenience, including driveway and business access, garbage truck operations, Metro transit operations and working around energized overhead wires, school and nursing home and hospital and other accesses, other contractors who may be operating in the area, pedestrian and bicycle traffic, and emergency services. The Contractor, and Subcontractors that may be part of that day's operations, must meet with the Engineer and discuss the proposed operation as it relates to the submitted planing plan and paving plan, approved traffic control plan, and public convenience and safety. Such discussion includes, but is not limited to:

1. General for both Paving Plan and for Planing Plan:
   a. The actual times of starting and ending daily operations.
   b. In intersections, how to break up the intersection, and address traffic control and signalization for that operation, including use of peace officers.
   c. The sequencing and scheduling of paving operations and of planing operations, as applicable, as it relates to traffic control, to public convenience and safety, and to other con-tractors who may operate in the Project Site.
   d. Notifications required of Contractor activities, and coordinating with other entities and the public as necessary.
   e. Description of the sequencing of installation and types of temporary pavement markings as it relates to planing and to paving.
   f. Description of the sequencing of installation of, and the removal of, temporary pavement patch material around exposed castings and as may be needed
   g. Description of procedures and equipment to identify hidden metal in the pavement, such as survey monumentation, monitoring wells, street car rail, and castings, before planing, see Section 5-04.3(14)B2.
   h. Description of how flaggers will be coordinated with the planing, paving, and related operations.
   i. Description of sequencing of traffic controls for the process of rigid pavement base repairs.
   j. Other items the Engineer deems necessary to address.
2. Paving – additional topics:
   a. When to start applying tack and coordinating with paving.
   b. Types of equipment and numbers of each type equipment to be used. If more pieces of equipment than personnel are proposed, describe the sequencing of the personnel operating the types of equipment. Discuss the continuance of operator personnel for each type equipment as it relates to meeting Specification requirements.
   c. Number of JMFs to be placed, and if more than one JMF how the Contractor will ensure different JMFs are distinguished, how pavers and MTVs are distinguished if more than one JMF is being placed at the time, and how pavers and MTVs are cleaned so that one JMF does not adversely influence the other JMF.
   d. Description of contingency plans for that day's operations such as equipment breakdown, rain out, and Supplier shutdown of operations.
   e. Number of sublots to be placed, sequencing of density testing, and other sampling and testing.

5-04.3(16) HMA Road Approaches

HMA approaches shall be constructed at the locations shown in the Plans or where staked by the Engineer. The Work shall be performed in accordance with Section 5-04.

5-04.3(18) Uses for HMA

(Special Provision) *New*

Uses for "HMA Class ½" PG58h-22" shall consist of new roadway pavement, roadway overlay, preleveling lifts, and side street paving, utility adjustment and temporary HMA for walkways. HMA will be accepted by commercial evaluation.

5-04.3(19) Incidental uses for HMA

(Special Provision) *New*

Incidental uses for Hot Mix Asphalt shall consist of restoration and adjustment to paved areas such as the back of sidewalks, sidewalk ramps, behind driveway approaches, placement of asphalt berms and other such uses as directed by the Project Engineer.

5-04.4 Measurement

(Special Provision) *Supplement*

The basis of measurement for "HMA Class ½" PG58H-22" and "Temporary HMA for Walkway" will be by the ton based on certified truck tickets collected by the inspector at the end of each working day, with no deduction being made for the weight of asphalt binder, blending sand, mineral filler, or any other component of the HMA.

Tickets will be accepted for payment after the end of each working day only when prior arrangements have been made with the inspector.

All costs for tack coat shall be considered incidental to and included in other unit Contract prices.

Preparation of Untreated Roadway will be considered incidental and included in the various bid items and no additional payment will be made.

Cold Mix, if used by the Contractor, will not be measured for separate payment and shall be considered incidental to the lump sum bid item "Other Project Temporary Traffic Control".

5-04.5 Payment

Incidental uses for HMA, shall be measured and paid under the "Commercial HMA" bid item.

(Special Provision) *Supplement*

Payment will be made in accordance with Section 1-04.1, for each of the following Bid items that are included in the Proposal:

HMA Cl ½" PG58H-22	**Per Ton**
Temporary HMA for Walkway	**Per Ton**

Items to be included in the bid price, but shall not necessarily be limited to all necessary materials, labor, and equipment to satisfactorily complete furnishing, hauling and placement of HMA, compaction, preparation of existing roadway surfaces, furnishing and applying tack coat as defined in the Standard Specifications and Special Provisions.

All costs associated with Preparation of Existing Surfaces, Tack Coat, and Longitudinal Joint Seals shall be considered included in the cost of the Hot Mix Asphalt furnished and installed.

The unit bid price for the above including all incidental work shall be full compensation for all labor, material, tools, and equipment necessary to satisfactorily complete the work as defined in the Standard Specifications and these Special Provisions.

END OF DIVISION 5

DIVISION 7: DRAINAGE STRUCTURES, STORM SEWERS, SANITARY SEWERS, WATER MAINS AND CONDUITS

7-00.1 GENERAL

(Special Provision) *New*

For the convenience of the Contractor the Plans show approximate locations of various existing utilities and other obstructions. This information, if shown, has been obtained from records and cannot be guaranteed accurate. The Contractor shall diligently check for interferences with existing utilities ahead of his or her work including exploration in advance of excavation.

The Contractor is further alerted to the provisions of RCW 19.122 and his or her responsibilities by performing excavation required by the Contractor Documents and Standard Specifications.

Structure Excavation Class B Including Haul for the installation and/or removal of underground utilities, pipes, and structures shall be considered **incidental** to and included in the structure

7-04 STORM SEWERS

7-04.1 Description

(Special Provision) *Supplement*

The work shall consist of all excavation, trenching, backfilling, and installation of the pipe where indicated on the Plans.

This work shall also include connecting existing pipe to new drainage structures.

7-04.2 Materials

(Special Provision) *Supplement*

Pipe bedding, pipe zone backfill material, and trench backfill shall be Crushed Surfacing Top Course and conform to Section 9-03.9(3) of the Standard Specification.

7-04.3 Construction Requirements

(Special Provision) *Supplement*

Connection of new storm drain pipe to existing storm drain pipe shall be considered **incidental** to the various storm drainage bid items and no additional compensation will be made.

The Contractor shall furnish a Fernco (or approved equal) coupling device at each connection to existing storm drain pipes. All costs for couplings shall be included in the unit price for storm drainage pipe installed and no additional compensation will be made.

All costs associated with providing temporary metal sheeting for temporary storm sewer trench cover shall be considered **incidental** to the various storm drainage bid items and no additional compensation will be made.

See Section 7-08 herein for further construction requirements.

7-04.3(2) Connections to Concrete Drainage Structures

(Special Provision) *New*

When connecting to a concrete structure, openings must be core-drilled or line drilled unless an existing knockout is available. Pipe connections shall be made with non-shrink Portland cement grout to make a watertight fit. Connections to existing and new drainage structures shall be included in the unit prices contained in the bid proposal and no additional payment will be made.

7-04.3(3) Utility Clearances

(Special Provision) *New*

Ethafoam HS 600 Plank foam board, or approved equal, shall be placed between the storm pipe and other utilities for vertical clearances less than six (6) inches and shall be **incidental** to other bid items.

7-04.5 Payment

(Special Provision) *Supplement*

that are included in the Proposal:

Ductile Iron Storm Sewer Pipe 8-inch. Diam	**Per Linear Foot**

The contract bid price above, including all incidental work, shall be full compensation for all labor, material, tools, equipment, and all costs associated with excavation, providing fittings and couplings for connections, cleaning and flushing, and testing to satisfactorily complete the Work as defined in the Standard Specifications and these Special Provisions.

Pipe bedding and backfill for ‘’Ductile Iron Storm Sewer Pipe 8 Inch Diam’’ will be Paid by ticketed ton as tracked by delivery tickets provided to the onsite inspector at the time of delivery under the item “Crushed Surfacing Top Course”.

7-05 MANHOLES, INLETS, CATCH BASINS, AND DRYWELLS

7-05.1 Description

(Special Provision) *Supplement*

This work consists of furnishing and installing curb inlets, catch basins, and manholes of the type and size shown in the Plans, the Standard Specifications, and the Standard Plans, in reasonably close conformity with the lines and grades as shown on Plans and staked by the Contractor's surveyor.

All work necessary to intercept existing storm drain lines for the installation of catch basins, inlets, or manholes as shown on the Plans or as directed by the Engineer, shall be considered **incidental** to the type and size of drainage structure installed.

This work shall also consist of replacing existing grates with solid lids, furnishing and installing new catch basin vaned frames and grates, and furnishing and installing new manhole frames and covers as indicated on the Plans.

7-05.2 Materials

(Special Provision) *Supplement*

New catch basins and inlets shall conform to the Standard Plans for the types and sizes specified. Included in the costs for all drainage structures shall be furnishing and installing frames and grates and solid covers as indicated on the Plans.

All new locking catch basin frames and grates shall have vaned grates, behind curb inlets, or solid lids, as indicated on the Plans. All frames and grates shall be the 18" x 24" size per WSDOT Standard Detail B-30.10-03.

Concrete adjustment rings shall conform to the ASTM C-32, Grade MA.

7-05.3 Construction Requirements

(Special Provision) *Supplement*

The Contractor is advised that the locations of gas, water, telephone, and cable service lines are not necessarily shown on the Plans. It will be the Contractor's responsibility to coordinate with franchise utilities so that services are adjusted and maintained per City standards. This will include coordination and making necessary arrangements with service providers for the reconnection or relocation of service lines away from the proposed storm drainage system.

All costs associated with temporarily plugging existing storm drain pipes so that new drainage structures can be installed shall be considered **incidental** to and included in the unit contract price for the type and size of structure installed.

New Catch Basin Adjustment to Grade

Newly installed drainage structures shall include at least one adjustment riser. If additional adjustment is required to achieve finished grade, the Contractor shall install a combination 2", 4", 6" and/or 12" precast risers so that no more than three risers are used at any one drainage structure.

Furnish and Install New Solid Locking Frame and Cover

Where indicated on the Plans, the Contractor shall remove existing frames, grates, and/or solid covers and install new locking ductile iron frame and covers and adjust the frame and cover to new finished grade as necessary. The removed catch basin grate shall become the property of the City and shall be delivered to the City Maintenance Shop. Work described in this section shall be paid under the item "Adjust Catch Basin".

Furnish and Install New Locking Catch Basin Frame and Vaned Grate

Where indicated on the Plans, the Contractor shall remove existing frames and grates and install new locking ductile iron frames and vaned grates on the existing catch basin and adjust the frame and grate to finished grade as necessary. The removed catch basin frame and grates shall become the property of the City and shall be delivered to the City Maintenance Shop. New frame and vaned grates shall be adjusted vertically and horizontally to match the flowline of the newly constructed concrete curb and gutter shall be completely grouted on the inside prior to exposure to traffic loads and prior to placing asphalt overlay. Work described in this section shall be paid under the bid item "Adjust Catch Basin".

Adjust and Install New Sanitary Sewer Manhole Frame and Cover

The Contractor shall remove existing frames and covers and install new ductile iron frames and covers on the existing sewer manhole and adjust the frame and cover to new finished grad as necessary, in locations on the Plans and/or as designated by the Engineer. The new

frames and covers will be furnished to the contractor by the City and will be available for pickup at the City Maintenance Shop. The removed manhole frames and covers shall become the property of the City and shall be delivered to the City Maintenance Shop.

7-05.3(1) Adjusting Manholes and Catch Basins to Grade

(Special Provision) *Supplement*

Jackhammer around the casting with a maximum clearance of twelve (12) inches. Following the removal of the asphalt and concrete around the structure, clean the castings and the inside of the structure, and remove all tack coat, asphalt, paper, and other debris. Remove failed, crushed, or defective brickwork down to solid full-width bricks. Provide and install new concrete brick or concrete riser sections, conforming to Section 9-12.2, to bring the frame to the proper finished grade and cross slope of the finished asphalt pavement. Set the casting on full-width bricks or risers, using shims to make final grade adjustment. Completely grout the inside and outside to fill any voids between riser bricks. Remove all wooden shims prior to final grout work. Place "HMA Cl ½'' PG58H-22" around the casting in compacted lifts to match into the adjacent finished pavement. Seal all asphalt joints. Compaction shall be done using a pneumatic or hydraulic 'pogo stick'.

Any utility structure lid, casting, cover, grate, or asphalt patch in the traveled way whose finished grade is higher or lower than the adjacent finished asphalt pavement, as measured by a six (6) foot straight edge, by ¼-inch or more shall be readjusted by the Contractor at his or her own expense.

Where utility casting are within cement concrete materials, expansion joint material shall be placed around the perimeter of the casting.

Utility castings shown on the drawings or designated by the Engineer for replacement shall be installed and adjusted to final grade in the above described manner.

Payment will be made once for each structure that a Locking Frame & Grate has been furnished, installed, and adjusted to finished grade. No payment will be made for lowering castings to or interim adjustments to accommodate roadway grinding or other construction sequencing.

Concrete adjustment rings shall conform to the ASTM C-32, Grade MA.

Solid catch basin covers located in the proposed sidewalk shall be coated in slip resistant material. The slip resistant lid shall be treated with:

1. Mebac #1 as manufactured by IKG Industries, or
2. SlipNOT Grade 3-coarse as manufactured by W.S. Molnar Co.

Work described in this section shall be paid under the bid item "Adjust Catch Basin or Manhole".

7-05.3(2)A Abandon Existing Storm Sewer Pipes

Where it is required that an existing storm sewer pipe be abandoned (or portions of pipe installed as part of this project which are to be abandoned as shown on the Plans), the structure shall be broken down to a depth of at least 4 feet below the revised surface elevation, all connections plugged, the manhole base shall be fractured to prevent standing water, and the manhole filled with sand and compacted to 90 percent density as specified in Section 2-03.3(14)C. Debris resulting from breaking the upper part of the manhole may be

mixed with the sand subject to the approval of the Engineer. The ring and cover shall be salvaged and all other surplus material disposed of.

A cement-based grout shall be used to fill the void of the abandoned storm sewer pipe. The grouting material must have a strength of at least 100 psi and shall have flow characteristics appropriate for filling a storm sewer. The grout mix designed and method of installation shall be approved by the Engineer prior to beginning the operation (See Section 9-03.22).

Work described in this section shall considered incidental to the various bid items and no separate unit of measurement or payment shall be made.

7-05.5 Payment

(Special Provision) *Supplement*

Payment will be made in accordance with Section 1-04.1, for each of the following Bid items that are included in the Proposal:

Adjust Catch Basin	**Per Linear Foot**
Concrete Inlet	**Per Each**
Connection to Drainage Structure	**Per Each**

The contract bid price above, including all incidental work, shall be full compensation for all labor, material, tools, equipment, and all costs associated with excavation, providing fittings and couplings for connections, cleaning and flushing, and testing to satisfactorily complete the Work as defined in the Standard Specifications and these Special Provisions.

Pipe bedding and backfill for ‘’Concrete Inlet’’ will be Paid by ticketed ton as tracked by delivery tickets provided to the onsite inspector at the time of delivery under the item “Crushed Surfacing Top Course”.

7-06 TRENCH DRAIN *(NEW SECTION)*

7-06.1 Description

(Special Provision) *Supplement*

The work shall consist of removing the existing trench drain, installing a new 12” Trench Drain across Driveway 1 (22+36 RT), and connecting it to the existing connection point.

7-06.2 Materials

(Special Provision) *Supplement*

The Trench Drain shall be Zurn Z882 system, product Z203N, or approved equal.

7-06.3 Construction Requirements

(Special Provision) *Supplement*

The width of the proposed trench drain shall be 12” and shall consist of a 1’ cement concrete collar around the perimeter.

Subsequent to installation of the Trench Drain, the Contractor shall submit shop drawing for approval by the Engineer and Contracting Agency.

Connection to the existing outlet shall be considered **incidental** to the trench drain construction and no additional compensation will be made.

The Contractor shall furnish a Fernco (or approved equal) coupling device at the outlet of the Trench Drain for connection to storm drain pipes. All costs for couplings shall be included in the unit price for Trench Drain installed and no additional compensation will be made.

The contractor shall clean and flush the installed trench drain. Cleaning and flushing the newly installed trench drain and drain pipe shall be considered **incidental** to the bid item and no additional payment shall be made.

All costs associated with providing temporary steel sheeting for temporary storm sewer trench cover shall be considered **incidental** to the various storm drainage bid items and no additional compensation will be made.

See Section 7-08 herein for further construction requirements.

7-06.5 Payment

(Special Provision) *Supplement*

Payment will be made in accordance with Section 1-04.1, for each of the following Bid items that are included in the Proposal:

Trench Drain	**Per Linear Foot**

The contract bid price above, including all incidental work, shall be full compensation for all labor, material, tools, equipment, and all costs associated with excavation, providing fittings and couplings for connections, installing bedding and backfill material for the installation of the trench drain, cleaning and flushing, and testing to satisfactorily complete the Work as defined in the Standard Specifications and these Special Provisions.

7-08 GENERAL PIPE INSTALLATION REQUIREMENTS

7-08.1 Description

(Special Provision) *Supplement*

Material excavated shall not be used as backfill and shall be hauled away to an approved waste site at the Contractor's expense.

Trench and structure excavation shall be considered **incidental** to and included in the unit contract price for pipe. Pipe bedding material, pipe backfill material, and structure backfill material will be paid for by the ton under a separate bid item. Trench shall be excavated to a sufficient width to allow for pipe installation, compaction equipment, and shoring when necessary. Paving width shall be shown on the City Standard Detail. No additional payment will be made for excavation and backfill of additional trench widths beyond the maximum trench width (nor for related quantities such as bedding, paving, imported backfill, rock excavation, etc.) unless extra trench width has been specifically directed by the Engineer.

Contractor shall pothole ahead of pipe-laying a sufficient distance for utility crossings and where noted on the plans to provide sufficient distance to make vertical adjustments as necessary to avoid existing utilities. Should the Contractor fail to pothole know utility

crossings, any subsequent adjustments necessary shall not be cause for additional cost or time claim.

All construction shall conform to these Specifications, to the lines, limits and grades shown on the drawings and as designated by the Engineer. Backfill shall be compacted to 95% dry density. Line and grade shall be provided by the Contractor.

7-08.2 Materials

(Special Provision) *Supplement*

Aggregates for foundation material, pipe zone bedding, pipe zone backfill, and trench backfill shall meet the requirements of Section 9-03.9(3) Crushed Surfacing Top Course.

7-08.3 Construction Requirements

7-08.3(1)B Shoring

(Special Provision) *Supplement*

Shoring design shall be the responsibility of the Contractor. No implication of methods, means or materials is implied within the Bid Documents.

7-08.3(1)C Bedding the Pipe

(Special Provision) *Supplement*

If foundation material at the base of structure excavation is unsuitable, it shall be removed and replaced per the provisions of 2-03.3(14)E of the standard specifications. Unsuitable material excavation shall be measured and paid under the bid item *"Unsuitable Foundation Excavation"* per these Special Provisions.

Crushed Surfacing Top Course for pipe bedding as indicated on the plans shall be in accordance with Section 9-03.9(3) of the Standard Specifications.

7-08.3(2)F Plugs and Connections

(Special Provision) *Supplement*

Plugging Existing Pipe

Plugging existing storm sewer or culvert pipe shall be considered **incidental** to and included in the unit contract price of the various bid items in the contract.

Connections

New storm sewer pipe shall be connected to existing catch basins and manholes per Section 7-05.3(3) Connections to Existing Manholes of the Standard Specifications.

Connection of an existing pipe to a new drainage structure shall be considered **incidental** and included in the various unit bid prices for catch basins and concrete inlets.

Connection of a new pipe to a new drainage structure shall be considered **incidental** and included in the various unit bid prices for catch basins and concrete inlets.

7-08.3(3) Backfilling

(Special Provision) *Supplement*

Select trench backfill material shall be:

Crushed Surfacing Top Course 9-03.9(3)

All trenches shall be backfilled with select materials which will be measured and paid as "Crushed Surfacing Top Course".

Crushed Surfacing Top Course shall be used for pipe zone bedding unless otherwise directed by the Engineer.

7-08.5 Payment

(Special Provision) *Supplement*

Crushed Surfacing Top Course for Pipe Zone Bedding shall be paid by ticketed ton as tracked by delivery tickets provided to the onsite inspector at the time of delivery under the item "Crushed Surfacing Top Course".

7-12 VALVES FOR WATER MAINS

7-12.1 Description

(Special Provision) *Supplement*

Adjusting Water Valves to Grade

Existing and new water valve boxes shall be adjusted to finished grade per the requirements of Adjusting Manholes and Catch Basins to Grade per 7-05.3(1) herein.

7-12.2 Materials

(Special Provision) *Supplement*

New water valve boxes (when needed to replace existing boxes) will be furnished to the Contractor by the City and will be available for pickup at the City Maintenance Shop.

7-12.5 Payment

(Special Provision) *Supplement*

Payment will be made in accordance with Section 1-04.1, for each of the following Bid items that are included in the Proposal:

Adjust Water Valve Box	**Per Each**

The unit bid price for the above including all incidental work shall be full compensation for all labor, material, tools, and equipment necessary to satisfactorily complete the work as defined in the Standard Specifications and these Special Provisions. Payment will only be made once per valve box upon adjustment to finished grade. Interim adjustments, if required, shall be included in the unit price bid for 'Adjust Water Valve Box'.

7-14 HYDRANTS

7-14.1 Description

(Special Provision) *Supplement*

This work shall consist of removing existing hydrants and installing a new hydrant assembly per the City of Mercer Island Standard Details W-24.

7-14.2 Materials

(Special Provision) *Supplement*

Pipe and Fittings

Unless otherwise indicated, all pipe and fittings shall be ductile iron in conformance with Sections 9-30.1(1) and 9-30.2(1), except that the thickness for other than restrained mechanical joint pipe shall be Standard Thickness Class 52. Pipe and fittings shall be double-thickness cement-mortar lined and seal coated with bituminous material conforming to ANSI A21.4 or AWWA C 104 and shall have exterior bituminous coating conforming to ANSI A21.4 or AWWA C 104.

Pipe joints shall be push-on joints unless otherwise shown or required. The pipe manufacturer shall supply a sufficient quantity of a non-toxic vegetable soap lubricant for installing the pipe.

Mechanical joints shall conform to ANSI A21.11 or AWWA C111. Bolts for mechanical joints shall be Dresserloy or Cor-Ten high strength, low-alloy steel conforming to ASTM A242 and A558.

Flanged joints shall conform to ANSI A21.10 or AWWA C110, or ANSI A21.12 or AWWA C115. Flanges shall be ductile iron. Gaskets for flanged joints shall be 1/8-inch thick, cloth-inserted rubber, conforming to applicable parts of ANSI B16.21 and AWWA C207. Gasket material shall be free from corrosive alkali or acid ingredients and suitable for use in potable water lines. Gaskets shall be one-piece, full-face with holes to pass bolts.

Mechanical joint long-pattern solid-sleeve cast iron fittings shall conform to ANSI A21.10 or AWWA C110. Solid sleeve minimum length shall be twelve (12) inches.

Restrained joints shall conform to Section 9-30.2(6). For special water main connections where blocking is not viable as determined by the Engineer, the Contractor may use Roma Grip or approved equal pipe joint restraint.

Hydrants

Hydrants shall conform to AWWA C502. Hydrants shall be break-flange or safety-top type. The inlet connection shall be mechanical joint. Nominal 5¼-inch compression type main valve opening with 6-inch bottom connections. Equip with two 2½-inch hose nozzles with American National Standard threads and one 4.88-inch nozzle with City of Mercer Island standard threads, and one 4-inch storz quick connection. Operating nut shall be 1½-inch National Standard Pentagon nut. The main valve shall be equipped with O-ring seals and shall open when turned counterclockwise.

Installation of hydrants shall conform to the provisions of AWWA C600. Locate hydrants to provide complete accessibility and to minimize the possibility of damage from vehicles or injury to pedestrians. A minimum 3-foot radius unobstructed working area shall be provided around all hydrants.

Set hydrants plumb and nozzles parallel with, or at right angles, to the curb or roadway, with the pumper nozzle facing the curb or roadway. Set hydrant so that the safety flange is two (2) inches above the elevation provided in the plans and bolts can be removed.

Place concrete block on firm, level sub-base to assure uniform support. Carefully place hydrant on base block to prevent the base block from breaking. Jointing procedures shall conform to AWWA C600. Strapping lugs shall not be used. After hydrant is in place and connected to the pipeline, place temporary blocks to maintain the hydrant in a plumb position during subsequent work.

Place drain rock around base block and hydrant bottom after hydrant has been blocked in place. Top of the drain rock shall not be less than 6-inches above hydrant drain opening.

After all installation and testing is complete, the gloss white paint as specified on City of Mercer Island Standard detail W-24A.

7-14.3 Construction Requirements

(Special Provision) *Supplement*

The Hydrant Assembly is defined as all work required to install a wet tapping tee into the existing water main, install new 6" ductile iron pipe, a new valve, and other work identified in the Standard Detail W-24A, as well as removing old fire hydrant and plugging existing hydrant tee on the main.

Incidental work included in the installation of a new hydrant assembly includes, but is not limited to, the filter fabric, drain rock, pipe restraints, blue reflector on the roadway centerline, and material required for blocking.

7-14.5 Payment

(Special Provision) *New Section*

Payment will be made in accordance with Section 1-04.1, for each of the following Bid items that are included in the Proposal:

Hydrant Assembly	**Per Each**

The unit bid price for the above including all incidental work shall be full compensation for all labor, material, tools, and equipment necessary to satisfactorily complete the work as defined in the Standard Specifications and these Special Provisions. "Furnish & Install New Hydrant Assembly" shall be full compensation for the removal of existing hydrant, new hydrant, new wet tapping tee and valve, and adjustment, backfill and all other items of material, tools and labor to satisfactorily place the new hydrant.

7-15 SERVICE CONNECTIONS

7-15.1 Description

(Special Provision) *Supplement*

This work shall consist of adjusting water meter boxes to final grade.

Should water meter boxes be adjust into a pedestrian route, the box shall be furnished with a non-skid surface.

7-15.2 Materials

(Special Provision) *Supplement*

Materials for installation of new service connections shall conform to the following:

- Meter boxes in non-traffic areas for 1-inch water services shall be Mid-States Plastic MSBCF1324-12 plastic box with ductile iron lid, MSCBC-1324-R.
- Meter boxes and covers in traffic areas for 1-inch water services shall be steel boxes with steel lids Fog Tite meter Seal Co. No. J20S tar-coated steel boxes and lids designed for H-20 loading.

7-15.5 Payment

(Special Provision) *Supplement*

Payment will be made in accordance with Section 1-04.1, for each of the following Bid items that are included in the Proposal:

Adjust Water Valve Box	**Per Each**

The unit bid price for the above including all incidental work shall be full compensation for all labor, material, tools, and equipment necessary to satisfactorily complete the work as defined in the Standard Specifications and these Special Provisions. Payment will only be made once per valve box upon adjustment to finished grade. Interim adjustments, if required, shall be included in the unit price bid for 'Adjust Water Valve Box'.

END OF DIVISION 7

DIVISION 8: MISCELLANEOUS CONSTRUCTION

8-01 EROSION CONTROL AND WATER POLLUTION CONTROL

8-01.1 Description

(Special Provision) *Supplement*

This section is supplemented with the following:

The Stormwater Pollution Prevention Plan (SWPPP) shall consist of the Contractor's complete requirement to comply with Section 8-01.3(1) of the Standard Specifications and these Special Provisions. The SWPPP shall update and modify as necessary the Site Preparation and Erosion Control Plan drawings provided as part of the Contract Plans to reflect the Contractor's actual sequence of work and BMP's to be utilized. The Contractor shall prepare, review, and modify the SWPPP as necessary to be consistent with the actual work schedule, sequencing, and construction methods that will be used on the project. The Contractor's SWPPP shall also incorporate the content and requirements for the Spill Prevention, Control and Countermeasures (SPCC) Plan in accordance with Section 1-07.15(1).

Water

The Contractor shall make, at the Contractor's expense, whatever arrangements may be necessary to ensure an adequate supply of water required for erosion control. The Contractor shall also furnish all necessary hose, equipment, attachments and accessories for the adequate irrigation of planted areas to be maintained through the one-year warranty period and as may be required to complete the work as specified. All costs shall be incidental to and included in the bid items involved and no additional compensation shall be made.

8-01.3 Construction Requirements

8-01.3(1)A Submittals

This section is supplemented with the following new subsection:

8-01.3(1)A1 Temporary Erosion and Sediment Control

(Special Provision) *Supplement*

This section is supplemented with the following:

General

The Contractor shall develop a new site specific TESC Plan with catch basin inserts and silt fences placed as shown in the Plans. Contractor TESC Plans shall include all high visibility fence delineation shown on the Contracting Agency Contract Plans. All TESC Plans shall meet the requirements of the current edition of the WSDOT Temporary Erosion and Sediment Control Manual M 3109 and be adaptively managed as needed throughout construction. The Contractor shall develop a schedule for implementation of the TESC work and incorporate it into the Contractor's progress schedule.

The Contractor shall submit their TESC Plan (either the adopted plan or new plan) and implementation schedule as Type 2 Working Drawings. At the request of the Engineer, updated TESC Plans shall be submitted as Type 1 Working Drawings.

The Contractor shall provide a Construction Stormwater Pollution Prevention Plan (SWPPP) to the Engineer for review, which will include the SPCC Plan and implementation and maintenance of all approved Best Management Practices (BMPs) throughout the duration of the project.

8-01.3(1)A General

(Special Provision) *Supplement*

This section is supplemented with the following:

The Contractor shall install and maintain all temporary erosion control measures and Best Management Practices (BMP's) in accordance with the Contract Provisions. Erosion and sedimentation control measures and BMP's shall comply with the King County Storm Water Management Manual.

When construction operations are such that debris from the work is deposited on the streets or sidewalks, the Contractor shall remove on a daily basis, any deposits or debris which may accumulate on these surfaces. Should daily removal be insufficient to keep the streets clean, the Contractor shall perform removal operations on a more frequent basis. If the Contractor fails to keep the streets free from deposits and debris resulting from the work, the Contractor shall, upon order of the Engineer, provide facilities for and remove all deposits from trucks or other equipment prior to travel over paved streets.

All fines for non-compliance with applicable stormwater-related permits shall be the sole responsibility of the Contractor. No payment will be made to the Contractor for fines resulting from permit violations.

8-01.3(1)B Erosion and Sediment Control (ESC) Lead

(Special Provision) *Replace*

Delete the second and third paragraphs and replace with the following:

The ESC Lead is responsible for ensuring the Contractor's compliance with all local, state, federal erosion and sediment control and water quality requirements. The ESC Lead shall prepare, maintain, and update the Stormwater Pollution Prevention Plan (SWPPP) and Spill Prevention and Countermeasures (SPCC) plan file on-site.

The ESC Lead shall implement the Construction SWPPP. Implementation shall include but is not limited to following:

1. Maintain an on-site SWPPP that reflects current site conditions and work methods. Provide weekly updates to the Project Engineer. The SWPPP shall be updated within seven (7) days of the following occurrences:

    a. Significant changes in the design, construction, operation, or maintenance at the construction site that have, or could have, a significant effect on the discharge of pollutants to waters of the state.
    b. Inspections or investigations by site staff or local or state officials determine

that the SWPPP is ineffective in controlling pollutants such that applicable discharge or surface water standards violations are apparent.

2. Identify arising needs for adaptive management and/or BMPs which were not originally identified in the SWPPP. Coordinate all proposed SWPPP activities with the Project Engineer.

3. Attend all weekly construction meetings and provide an update on current and planned SWPPP activities.

4. Ensure that all necessary Best Management Practices (BMP) are identified, implemented and maintained throughout construction.

5. Oversee the installation and maintenance of all BMP's to ensure continued performance of their intended function. Damaged or inadequate BMP's shall be corrected immediately through coordination with the Engineer.

6. The ESC Lead shall have the authority to act on behalf of the Contractor and shall be available, on-call, 24 hours a day throughout the project duration.

8-01.5 Payment

(Special Provision) *Supplement*

Payment will be made in accordance with Section 1-04.1 for the following bid item(s):

Erosion Control and Water Pollution Prevention	**Lump Sum**

The lump sum contract price for the “Erosion Control and Water Pollution Prevention” shall be full pay for all costs associated with complying with these Special Provisions and the Standard Specifications; including creating, submitting, modifying and maintaining a SPCC Plan, and SWPPP, and a Project TESC Plan; design and submittal of erosion and sediment control BMPs including providing, maintaining on site the standby equipment and materials to comply with current edition of the WSDOT Temporary Erosion and Sediment Control Manual M 3109 and Washington Administrative Code (WAC) Chapter 173-201A; providing an ECS lead and all stormwater monitoring and reporting, and other specified SWPPP requirements.

8-02 ROADSIDE RESTORATION

8-02.1 Description

(Special Provision) *Supplement*

This section is supplemented with the following:

This section also includes further items in Property Restoration as defined in Section 1-07.16. All existing structures outside of the back of walk limits requiring adjustments shall be addressed under this section.

This section also includes backfilling of Silva Cell units with topsoil.

8-02.2 Materials

(Special Provision) *Supplement*

Materials shall also meet the requirements of the following sections of these Special Provisions:

Topsoil Type A	9-14.2(1)
Seed	9-14.3
Fertilizer	9-14.4
Bark or Wood Chip Mulch	9-14.5(3)
Root Barrier	9-14.9
Tree Watering Bags	9-14.10

8-02.3(1) Responsibility During Construction

(Special Provision) *Supplement*

Throughout planting operations, the Contractor shall keep the premises clean, free of excess soils, plants, and other materials, including refuse and debris, resulting from his work. As pedestrians will be allowed continuous access the Contractor shall not stockpile materials or park equipment in any manner that may create a hazard and/or obstacles to pedestrians.

The Contractor shall be responsible for care and protection of all plant material temporarily stored on site prior to planting per Section 9-14.7(3).

At the end of each work day, and as each planting area is completed, it shall be neatly dressed, and all surrounding walks and paved areas shall be cleaned to the satisfaction of the Engineer. No flushing will be allowed without approval of the Engineer. At the conclusion of work, the Contractor shall remove surplus soils, materials, and debris from the construction site and shall leave project in a clean condition.

Landscape construction is anticipated to begin after all curbs, sidewalks, driveways, major utilities and associated roadside work is completed. Landscape materials shall not be installed until weather permits and installation has been authorized by the Engineer. If water restrictions are in force, planting landscape materials may be delayed.

The Contractor shall locate all underground utilities (both new and existing) prior to starting work and shall not disturb or damage them. Promptly notify the Engineer of any conflict between the proposed work and any obstructions. The Contractor shall be responsible for making any and all repairs for damage caused by his or her activities.

8-02.3(2)A Roadside Work Plan

(Special Provision) *Supplement*

The Work Plan shall be submitted to the Engineer at least one week prior to initiating proposed work. The use of chemical herbicides shall be considered on a case-by-case basis. The

Contractor must submit, as part of the Work Plan, the intent to use chemical herbicides to the Engineer for approval prior to use.

8-02.3(3)A Chemical Pesticides

(Special Provision) *Supplement*

No chemical herbicides will be allowed in planting areas without approval from the Engineer.

8-02.3(4) Topsoil

(Special Provision) *Supplement*

Subgrade will require review and approval by the Engineer prior to the placement of topsoil.

Thoroughly loosen subgrade in planting and seeding areas to six (6) inches depth or as noted in the plans otherwise. Scarified subgrade shall be inspected and approved by the Engineer prior to placement of topsoil. Remove all construction debris and rocks over two (2) inches in diameter prior to the placement of topsoil.

Within the dripline of existing trees to remain, or in areas where significant tree roots are encountered, no tilling of subgrade required.

Upon approval of the subgrade by Engineer, place Topsoil Type A to depth as indicated on the Plans.

In all Tree Planter areas, Topsoil Type A shall be installed in two lifts. The first six (6) inch lift shall be incorporated into the top six (6) inches of prepared subgrade by rototilling, then the remaining topsoil shall be installed in successive six (6) inch lifts to achieve the minimum depth as shown in the Plans. Materials shall be placed so that, after settlement, finish grade shall be one (1) inch plus the specified depth of mulch below the top of adjacent sidewalk/curb.

In Back-of-Walk Planter areas, and Roadway Planter areas, Topsoil Type A shall be installed in a single lift to depth required to bring finish grade to one (1) inch plus the specified depth of mulch below the top of adjacent sidewalk. Feather topsoil to create a smooth transition to the existing finish grade.

Lightly compact soil and establish a smooth and uniform finished grade that protects against obstruction to surface drainage and ponding.

The costs of removing all excess material and debris shall be considered incidental to and included in the unit contract prices of other items in this contract.

Contractor shall coordinate installation of root barrier with topsoil installation, where shown on the Plans. Root barrier shall conform to Section 9-14.9 of these Special Provisions.

For Topsoil Type A installation within Silva Cells units, see Appendix C of these Special Provisions.

8-02.3(6)B Fertilizer

(Special Provision) *Supplement*

Fertilizers must be delivered to job sites, mixed as specified, in standard size unopened containers, showing weight, analysis and name of manufacturer. Material shall be uniform in composition, free-flowing and suitable for application by mechanical equipment. All

elements shall be protected from the weather, particularly moisture, both on and off the job site.

Fertilizer shall conform to Section 9-14.4 of these special provisions and shall be supplied by a Contractor's supplied source, as approved by the Project Engineer.

Fertilize all plants at the rate recommended by the manufacturer. Fertilizer shall be considered incidental to and included in the unit contract price for plants.

8-02.3(8)B Plant Installation

(Special Provision) *Supplement*

All plants shall be planted as detailed on the Plans.

Scarify sides and bottom of all planting pits prior to planting. Sufficient planting soil shall be placed around the plant and compacted so as to ensure that the location of the ground line at the top of the root ball is the same as the nursery.

Set plants upright and face to give best appearance or relationship to adjacent structures and roadway and hold rigidly in position until planting soil has been backfilled and tamped firmly around the root ball or roots.

When the pit is backfilled halfway, place the specified quantity of fertilizer in planting pit, unless otherwise specified on the plans. Evenly spread fertilizer adjacent to the root system at a depth that is between the middle and the bottom of the root system. Do not injure root system. Place and compact planting topsoil carefully to avoid injury to roots; fill all voids.

Install Tree Watering Bags, one each per tree, per manufacturer's instructions. Tree Watering Bags shall conform to Section 9-14.10 of these special provisions and shall be supplied by a Contractor's supplied source, as approved by the Project Engineer.

8-02.3(11)B Bark or Wood Chip Mulch

(Special Provision) *Supplement*

Bark or Wood Chip Mulch shall meet the requirements of Section 9-14.5(3) of these Special Provisions and shall be supplied by a Contractor's supplied source, and as approved by the Engineer.

Bark or Wood Chip Mulch shall be installed to depth shown on the Plans. Keep mulch away from base of plants, and thoroughly water and hose down plants with a fine spray to wash the leaves immediately after application.

8-02.3(13) Plant Establishment

(Special Provision) *Supplement*

It shall be the Contractor's responsibility to maintain all the landscaped area of this contract, including Seeded Lawn areas, from the time of installation until the project is completed and accepted by the Engineer as complete. The plant establishment period shall begin when the planting and construction has been completed and accepted by the Engineer and shall be for a period of 365 calendar days. The contractor shall submit to the Engineer for approval

a Plant Establishment Monthly Maintenance Schedule, itemizing the maintenance work to be performed during each month for a one year period.

All plant material shall be watered, pruned, fertilized, sprayed and otherwise maintained and protected throughout the plant establishment period. Lawn areas shall be mowed regularly to maintain a tidy appearance. Rejected plant materials shall be replaced. Plant material for replacement shall be inspected and approved as equal plant material prior to replacement being made. Acquisition of replacements shall be the responsibility of the Contractor with replacements to be made normally during the planting season.

All seeded lawn areas shall be kept in a neat and presentable condition; maintenance shall include removal of litter, mowing, trimming, removal of grass clippings, edging, fertilization, weed control, watering and repair and reseeding of any and all damaged areas. Mowing shall be performed every week during the growing season.

All plant material and lawn areas shall be watered by thorough sprinkling and Tree Watering Bags refilled every week during the dry season (May 15th through October 1st) or more often as needed to keep the ground moist, the plants and lawn areas healthy, and to prevent wilting. It shall be the Contractor's responsibility to provide water, by watering truck or other means.

Pruning shall be performed as to maintain a neat, healthy appearance, in accordance with good practice for the type of tree or plant. All cuts 0.75-inch in diameter or greater shall be painted with a tree sealer by the Contractor.

All bark covered areas shall be kept weed free. Frequency of weeding shall be sufficient to keep weeds from going to seed, and shall be done at least once each month. Chemical herbicides shall not be used for a period of 60 calendar days after the installation of plant material, and shall be approved by the Engineer. When using chemical herbicides, manufacturer's recommended application rates shall be followed. Any plant material damaged by use of herbicides shall be replaced at the Contractor's expense.

Cleanup shall be made immediately after and as part of the work done in the area. The cleanup shall include the entire area under this contract. The contract area shall be cleaned of litter and debris at least once each month. Such cleanup shall include the pickup and removal from the contract area of all clippings, trimmings, leaves, litter, and debris originating from any source whatsoever. Planting areas shall be neatly dressed and finished; walks and paved area shall be hosed off with water as necessary and otherwise kept clean and free from dirt, bark, and litter.

At the end of each month during the plant establishment period, the Contractor shall submit to the Engineer a Plant Establishment Monthly Statement of Maintenance form itemizing the maintenance work performed during the month. The list shall include a detailed account of the type of maintenance work performed, on what date, the materials used, and shall call to the attention of the Engineer any existing condition that may require special consideration or treatment.

Inspections of the project site will be performed by the Engineer. The Engineer will notify the Contractor in writing of any deficiencies in the maintenance work. The Contractor shall perform whatever additional maintenance work is necessary as directed by the Engineer. Failure by the Contractor to perform any additional work within the time limits specified may result in forfeiture of the quarterly payment or a portion thereof.

8-02.3(17) Property Restoration

(Special Provision) *New Section*

Property restoration shall consist of placement of additional plant materials, seed and bark mulch, and other work not currently identified on the Plans to restore adjacent land and property to suitable condition as directed by the Engineer. Only work not identified on the Plans or for which there is no bid item shall be considered for payment under the "Property Restoration" bid item.

Restore all disturbed areas to original condition or better. Grass areas shall be restored with hydroseed. Topsoil shall be Type A, and bark mulch shall be medium grade composted ground fir or hemlock bark.

Removal of tree roots outside the limits of construction, as directed by the Engineer and under the supervision of a certified arborist, shall be paid for under "Property Restoration".

All materials shall conform to Sections 9-14 of these Special Provisions and 9-15 of the Standard Specifications.

The force account provided for property restoration also includes any adjustments and or replacements of existing irrigation systems and modifying existing landscape lighting systems as may become necessary by these improvements.

The Contractor is advised that protecting existing private irrigation and lighting systems from damage does not constitute a basis for claim or extra work. "Property Restoration" has been provided as a basis for modifications or improvements to private lighting systems and irrigation systems that may become necessary, but could not be foreseen prior to construction.

The Contractor is specifically reminded that any unnecessary damage caused by construction activities will be repaired at the Contractor's expense.

8-02.4 Measurement

(Special Provision) *Supplement*

The pay quantities for plant materials will be determined by count of the number of satisfactory installed trees, shrubs, groundcover and other landscape materials accepted by the Engineer.

Topsoil and bark mulch shall be measured per cubic yard in the haul conveyance at the point of delivery.

Seeded lawn shall be measured per square yard along the ground-slope line.

Tree watering bags will be measured per each watering bag installed and accepted by the Engineer,

Root barrier will be measured by the linear foot of root barrier installed and accepted by the Engineer.

No specific unit of measurement shall apply to the force account for property restoration.

8-02.5 Payment

(Special Provision) *Supplement*

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

Property Restoration	**Per Force Account**
Topsoil Type A	**Per Cubic Yard**
Bark or Wood Chip Mulch	**Per Cubic Yard**
Seeded Lawn Installation	**Per Square Yard**
PSIPE _____	**Per Each**
Root Barrier	**Per Linear Foot**
Tree Watering Bag	**Per Each**

8-04 CURBS, GUTTERS, AND SPILLWAYS

8-04.1 Description

(Special Provision) *Supplement*

*"*Cement Conc. Curb and Gutter*"* shall be constructed per City of Mercer Island Standard Detail ST-14, in Appendix B.

All curbs and gutters shall be constructed per 8-04 of the Standard Specifications.

Depressed curb and gutter at driveway entrances and curb ramp opening shall be included in this section and paid as "Cement Concrete Curb and Gutter"

If depressed curb and gutter sections are poured concurrently with the adjacent driveway approaches, these sections of curb and gutter shall be included in the measurement and payment section for "*Cement Conc. Driveway Entrance"* and **NOT** under any other bid item.

8-04.2 Materials

(Special Provision) *Supplement*

Commercial concrete for integral curb & traffic curb & gutter will not be allowed.

8-04.3 Construction Requirements

8-04.3(1) Cement Concrete Curbs, Gutters, and Spillways

(Special Provision) *Supplement*

Cement concrete traffic curb & gutter shall be constructed with Class 4000 and meet 9-01.2(1) Portland Cement of the Standard Specifications.

Cement Conc. Traffic Curb and Gutter <u>SHALL NOT</u> be constructed with slip-form equipment.

Cement Conc. Traffic Curb <u>SHALL NOT</u> be constructed with slip-form equipment.

8-04.3(6) Adjustment of Curbs and Gutters

(Special Provision) *New Section*

The Contractor shall allow for inspection of curb forms or string lines at least 24 hours ahead of concrete delivery. Upon the direction of the Engineer, string lines or curb forms shall be adjusted a minor amount not to exceed 6" at the discretion of the engineer.

The Contractor's progress schedule shall include the 24 hour inspection time and adjustments to the lines and grades shall constitute no basis for claims of delay.

8-04.5 Payment

(Special Provision) *Supplement*

Payment will be made in accordance with Section 1-04.1, for each of the following Bid items that are included in the Proposal:

Cement Conc. Traffic Curb and Gutter	**Per Linear Foot.**

The contract bid prices above, including all incidental work, shall be full compensation for all labor, materials, tools, and equipment necessary, to satisfactorily complete the work as defined in the Standard Specifications and these Special Provisions.

8-06 DRIVEWAY ENTRANCE

8-06.1 Construction Requirements

(Special Provision) *Supplement*

This work shall also include notification and inspection by City and Engineer and subsequent adjustments to formwork, to ensure grades and driveway slopes best accommodate ingress and egress to parcel.

8-06.3 Construction Requirements

(Special Provision) *Supplement*

Each driveway shall be formed and inspected by City and Engineer 24 hours prior to placement. The contractor shall notify engineer 24 hours prior to inspection day. It shall be the responsibility of the Contractor to phase the work appropriately to allow for any adjustments to the formwork necessary from the inspection to best accommodate the ingress and egress of the parcels.

Cement Concrete Driveway Entrance

The pedestrian access route portion of the driveway entrance (unsloped) shall be scored in a 30''x30'' pattern matching the adjacent town center design.

8-06.4 Measurement

(Special Provision) *Supplement*

Measurement of Cement Conc. Driveway Entrance Type 1 shall be per square yard of inspected and installed driveway entrance. Driveways installed without inspection may not be measured for payment.

8-06.5 Payment

(Special Provision) *Supplement*

Payment will be made in accordance with Section 1-04.1, for each of the following Bid items that are included in the Proposal:

Cement Conc. Driveway Entrance Type 1	**Per Square Yard**

Included in the unit contract price for ''Cement Conc. Driveway Entrance Type 1'' shall be all labor, tools, equipment necessary to construct driveway entrances to the details in the plans. Included in this unit price shall be initial formwork set up for inspection by Engineer and City and any adjustment that may be directed to best accommodate the ingress and egress of the parcel.

8-09 RAISED PAVEMENT MARKERS

8-09.3 Construction Requirements

(Special Provision) *Supplement*

Color Blue Type 2 Raised Pavement Markers shall be installed at fire hydrant locations one foot off the center line to the side of the hydrant and shall be paid under the bid item “Raised Pavement Markings Type 2”.

8-09.4 Measurement

(Special Provision) *Supplement*

Measurement of Raised Pavement Markers, Type 1 and Type 2, will be per each for the type of marker furnished and installed.

8-09.5 Payment

(Special Provision) *Supplement*

Payment will be made in accordance with Section 1-04.1, for each of the following Bid items that are included in the Proposal:

Raised Pavement Marker Type 1	**Per Each**
Raised Pavement Marker Type 2	**Per Each**

The contract bid prices above, including all incidental work, shall be full compensation for all labor, materials, tools, and equipment necessary, to satisfactorily complete the work as defined in the Standard Specifications and these Special Provisions.

8-12 CHAIN LINK AND WIRE FENCE

8-12.1 Description

(Special Provision) *Supplement*

This work shall consist of installing handrailing as depicted in the Plans, at the locations shown in the Plans. This work shall consist of the contractor designing and fitting the handrail specifically to the intended use.

8-12.3 Construction Requirements

(Special Provision) *Supplement*

A field meeting with City staff and Engineer shall take place a minimum of 24 hours prior to, but no sooner than three days in advance of the handrail installation.

All handrail materials and shop drawings shall be submitted to Engineer for review a minimum of two weeks prior to installation.

8-12.4 Measurement

(Special Provision) *Supplement*

All handrails shall be measured by linear foot.

8-12.5 Payment

(Special Provision) *Supplement*

Payment will be made in accordance with Section 1-04.1, for each of the following Bid items that are included in the Proposal:

Permanent Safety Hand Railing	**Per Linear Feet**

Included in the unit contract price for 'Permanent Safety Hand Railing'' shall be all labor, materials, tools, and equipment necessary to design, fit, and construct the hand railing per the details in the Plans.

8-14 CEMENT CONCRETE SIDEWALKS

8-14.1 Description

(Special Provision) *Supplement*

This work shall consist of construction and installation scored cement concrete sidewalks, cement concrete sidewalk, and detectable warning surfaces.

This work shall also consist of adjusting any grades at driveways necessary to best accommodate the vehicle ingress and egress to the parcel while maintaining an accessible route.

This work shall also consist of forming and constructing thickened end sidewalk.

Cement Concrete sidewalk shall consist of cement concrete sidewalk that is finished per the standard specifications and the details in the Plans and shall match the adjacent Town Center scoring Pattern.

This work shall also consist of constructing cement concrete stairs at the locations in the Plans and per the details in the plans.

8-14.2 Materials

(Special Provision) *Supplement*

Commercial concrete for sidewalk will not be allowed.

Cement Conc. Stairs shall be CL 4000 cement concrete.

Decorative Paver shall be Camino Stone ''Boston Blend'' by Western Interlock. Camino Stone | Paving Stones Oregon & Washington | Western Interlock

8-14.3 Construction Requirements

(Special Provision) *Supplement*

Cement Concrete Sidewalk

Cement concrete sidewalk shall be scored in a 30''x30'' pattern matching the adjacent town center design.

Cement Concrete Stairs

Cement concrete stairs shall be finished with a medium broom finish.

8-14.3(5) Detectable Warning Surface

(Special Provision) *New Section*

Detectable warning surface shall be furnished and installed on all crosswalk landings at the intersection and as shown in the Plans.

All new detectable warning surfaces shall be Armor-Tile Cast in Place vitrified polymer composite in Federal Yellow, or approved equal.

8-14.3(7) Cement Concrete Curb Ramps and Landings

(Special Provision) *New Section*

Curb ramps and landings on this project may need to be modified from the standard details to fit the project conditions while meeting current ADA requirements.

Compliance with ADA Standards is taken very serious and minor modifications to the dimensions shown on the plans may be required to meet current standards. **Ramps poured which do not meet the current ADA standards shall be removed and replaced at the Contractors expense.**

Per the Standard Specifications, detectable warning surfaces shall be furnished and installed on each curb ramp landing.

Curb ramps shall be finished per the standard plans and specifications.

8-14.4 Measurement

(Special Provision) *Supplement*

No specific unit of measurement shall apply for the lump sum bid item ''Cement Conc. Stairs''.

8-14.5 Payment

(Special Provision) *Supplement*

Payment will be made in accordance with Section 1-04.1, for each of the following Bid items that are included in the Proposal:

Cement Conc. Stairs	**Per Lump Sum**
Cement Conc. Curb Ramp Type _____	**Per Each**
Cement Conc. Sidewalk	**Per Square Yard**
Detectable Warning Surface	**Per Square Yard**
Decorative Paver	**Per Square Foot**

Included in the unit contract price for ‘’Cement Conc. Stairs’’ shall be all labor, tools, equipment necessary to construct the cement concrete stairs per the details in the Plans.

Included in the unit contract price for ‘’Cement Conc. Sidewalk’’ shall be all labor, tools, equipment necessary to finish the sidewalk to match the Town Center scoring pattern. This unit contract price shall also be inclusive of approximately 175 linear feet of thickened edge sidewalk and shall include furnishing all labor, materials, formwork, equipment necessary to construct thickened edge sidewalk. This unit price shall also include the cement concrete band around the decorative pavers.

Included in the unit contract price for ‘’Decorative Paver’’ shall be all labor, tools, equipment necessary to remove and salvage pavers to city, furnish new pavers, and set the pavers around the luminaire poles to existing or better condition.

8-19 FRANCHISE UTILITIES

8-19.1 Description

(Special Provision) *Supplement*

This work shall consist of minor adjustments of franchise utility castings to fit within the proposed improvements.

This work shall also consist of any an all direct contractor coordination with respective utility owners to furnish new utility lids, castings, where the facilities are within the project limits.

8-19.4 Measurement

(Special Provision) *Supplement*

‘’Adjust Franchise Utility’’ shall be measure per each adjustment to final grade.

‘’Franchise Utility Vault Lid’’ shall be measured per each new lid furnished and installed.

8-19.5 Payment

(Special Provision) *Supplement*

Payment will be made in accordance with Section 1-04.1, for each of the following Bid items that are included in the Proposal:

Adjust Franchise Utility	**Per Each**
Franchise Utility Vault Lid	**Per Each**

The unit bid price for the above including all incidental work shall be full compensation for all labor, material, tools, and equipment necessary to satisfactorily complete the work as defined in the Standard Specifications and these Special Provisions. Payment will only be made once per utility casting upon adjustment to finished grade. Interim adjustments, if required, shall be included in the unit price bid for 'Adjust Franchise Utility'.

Included in the unit price for ''Franchise Utility Vault Lid'' shall be all contractor coordination with utility, furnishing and installation of new utility lid.

8-20 ILLUMINATION, TRAFFIC SIGNAL SYSTEMS, INTELLIGENT TRANSPORTATION SYSTEMS, AND ELECTRICAL

8-20.1 Description

(Special Provision) *Replacement*

The work associated with the Modifications to the Existing Illumination System and consists of furnishing and installation of luminaires, foundations, junction boxes, conduit, conductors, inspections, testing and other incidental materials as may be required to complete construction of the systems listed below and comply with the Plans and these Specifications.

The work shall consist of, but not necessarily be limited to:

- Installation of new or modifications to the existing Illumination System along 80th Ave SE.

Unless otherwise noted, the locations of foundations, poles, junction boxes and appurtenances shown in the Plans are approximate. The locations will be verified by the Engineer in the field.

8-20.1(1) Regulations and Codes

(Special Provision) *Supplement*

All required materials and methods, unless otherwise superseded herein, shall conform to the 2024 edition of the Washington State Department of Transportation Standard Specifications for Road, Bridge, and Municipal Construction (herein referred to as Standard Specifications), to the latest edition of the State of Washington Standard Plans for Road, Bridge, and Municipal Construction (herein referred to as the Standard Plans), to the State of Washington Sign Fabrication Manual, to the City of Renton Standards and Details, to the latest edition of the National Electric Code (NEC), and to the current edition of the Manual on Uniform Traffic Control Devices (MUTCD) as adopted by the State of Washington.

Where applicable, materials shall conform to the latest requirements of the Washington State Department of Labor and Industries and Puget Sound Energy.

Delete the first sentence of the first paragraph of Section 8-20.1(1) and replace with the following:

All electrical equipment shall conform to the standards of the National Electrical Manufacturers Association (NEMA), FHWA IP-78-16, the Radio Manufacturers Association, the American Society for Testing and Materials (ASTM), the American Association of State Highway and Transportation Officials (AASHTO), the American National Standards Institute (ANSI), the National Electrical Safety Code (NESC), the International Municipal Signal Association (IMSA), whichever is applicable, and to other codes listed herein.

8-20.1(2) Industry Codes and Standards

(Special Provision) *Supplement*

National Electrical Safety Code (NESC), Secretary NESC, NESC Committee, IEEE Post Office Box 1331, 445 Hoes Lane, Piscataway, NJ 08855-1331.

8-20.1(3) Permitting and Inspection

(Special Provision) *Supplement*

The Contractor shall be responsible for coordinating, obtaining, and paying for all permits, including electrical service applications, necessary to complete the work in a timely fashion. All costs to obtain and comply with electrical permits shall be included in the applicable bid items for the work involved. All required electrical permits shall be obtained before beginning trench excavation.

The Electrical Inspector shall inspect and approve the electrical portions of the project. The Contractor shall notify the Electrical Inspector at least 24 hours in advance of required field inspection. All costs associated with electrical inspection shall be included in the applicable bid items for the work involved. Before work begins, the Contractor shall contact City of Mercer Island Electrical Inspectors to coordinate a schedule of electrical inspection (call the request line at 206-275-7605). This project shall be accomplished in compliance with WAC 296-46B-010 Traffic Management Systems. This project shall conform to the current adopted version of the NEC.

Prior to PSE energizing service cabinets, a City Maintenance and Electrical Inspection must be passed with a copy of the electrical control permit and inspection sticker inside the cabinet.

Coordination with Associated Representatives

The Contractor shall contact following representatives for coordination with the below listed agencies:

For luminaire final testing:

City Maintenance Representative: Brian Hartvigson (206) 275-7809

8-20.1(4) Restrictions on the Schedule of Work

(Special Provision) *New Section*

1. Work in Roadway.

   The roadway shall be kept open to traffic at all times, except when specific tasks required by this Contract require construction in the roadway. All work within the traveled way of any roadway shall be limited to the hours as specified in Section 1-08.0(2) of these Special Provisions. Work shall be accomplished such that at least one lane of traffic is open in each direction on every leg during working hours. Exceptions to this will require a 3-day advance approval from the Engineer and approval of a special traffic control plan to be developed by the Contractor.

2. Illumination System Construction Impacts.

   Existing illumination system shall remain operational until the new system is activated. The Contractor shall include all illumination system changes and anticipated down time in their construction schedule. Any change in schedule for impacts to illumination systems shall be provided a minimum of 5 working days in advance. The Contractor shall meet with City staff to discuss all cutovers to work out a plan to minimize down time.

8-20.1(5) Errors and Omissions

(Special Provisions) *New Section*

The Contractor shall immediately notify the Engineer upon discovery of any errors or omissions in the Contract Documents, in the layout as given by survey points and instructions, or of any discrepancy between the Contract Documents and the physical conditions of the locality. If deemed necessary, the Engineer shall rectify the matter and advise the Contractor accordingly. Any work done after such discovery without authorization by the Engineer will be done at the Contractor's risk.

8-20.2 Materials

(Special Provisions) *Supplement*

The Engineer reserves the right to inspect the manufacturing process of all materials. Final inspection and acceptance of the installed materials will not be given until final installation and testing has been completed on the systems. Approval to install materials and equipment must be obtained from the Engineer at the job site before installation.

All materials shall be handled in loading, unloading and erecting in such a manner that they will not be damaged. Any parts that are damaged due to the Contractor's operations shall be repaired or replaced at the Contractor's expense. All repairs shall be to the approval of the Engineer.

The Contractor shall provide all manufacturer warranty documents to the City of Mercer Island.

When submitting material lists for approval, the Contractor shall identify all revisions or changes to manufacturer names, component names, and model numbers listed in these Special Provisions. The Contractor shall also include a brief justification for the revision or change.

Controlled density fill shall meet the requirements of Section 2-09.3(1)E of the Standard Specifications.

Crushed surfacing top course and crushed surfacing base course shall meet the requirements of Section 9-03.9(3) of the Standard Specifications.

Bedding material shall consist of 5/8-inch minus crushed rock free of any deleterious substances per Section 9-03.1(5)A of the Standard Specifications.

8-20.2(1) Equipment List and Drawings

(Special Provisions) *Supplement*

Manufacturer's technical information shall be submitted for all luminaires, poles, junction boxes, conduit, wiring, and all other items to be furnished by the Contractor on the Project.

The Engineer shall have 14 calendar days to review information for each submittal that is made.

Manufacturer's data for all electrical materials proposed for use in the Contract which require approval, shall be submitted in one complete package.

For each proposed material that is required to be submitted for approval using either the QPL or RAM process, the Contractor will be allowed to submit for approval three materials per material type at no cost. Additional materials may be submitted for approval and will be processed at a cost of $100.00 per material submitted by QPL submittal and $300.00 per material submitted by RAM. All costs for the processing of additional materials will be deducted from monies due or that may come due to the Contractor. Subject to a request by the Contractor and a determination by the Engineer, the costs for processing may be waived.

Any deficiencies will require additional time for approval based on the degree of the deficiency and the additional review time required. If the shop drawings are returned to the Contractor to correct deficiencies, an additional 10 calendar days may be required for the approval process.

All approvals by the Engineer must be received by the Contractor before material will be allowed on the job site.

Approval of shop drawings does not constitute final acceptance or guarantee of the material, but is solely to assist the Contractor in providing the specified materials.

8-20.3 Construction Requirements

8-20.3(1) General

(Special Provisions) *Supplement*

The Contractor shall follow specific requirements for electrical related work to be performed in the right-of-way as outlined in each applicable section of these Specifications.

All adjacent surfaces damaged by the Contractor's operations shall be repaired at the Contractor's expense.

All equipment shall be handled and protected so as to prevent damage. Damaged equipment, if any, shall be repaired or replaced by the Contractor to the satisfaction of the Engineer at no additional cost to the Owner.

No new foundations shall be constructed as part of this Contract that are in conflict with any existing utilities, or the code required thereby. It shall be the Contractor's responsibility to locate all utilities whether above, on, or below the ground, and to protect against any and all damages arising from work under this project. At least 48 hours before digging, the Contractor shall call the Utilities Underground Locator Center (telephone 1-800-424-5555). Contractor must maintain locates during the duration of the project once they have been identified.

Underground utilities of record will be shown on the Plans insofar as information is available. These, however, are shown for convenience only and the City assumes no responsibility for improper locations or failure to show utility locations on the construction plans.

The Contractor shall be responsible, if any conflicts with existing underground utilities are expected, for potholing to confirm underground utility locations prior to excavating for pole foundations. Any conflicts shall be brought to the attention of the Engineer for resolution.

The Contractor shall be entirely responsible for coordination with the utility companies and arranging for the movement or adjustment, either temporary or permanent, of their facilities within the project limits.

If a conflict is identified, the Contractor shall contact the Engineer. The Contractor and City shall determine alternative locations for poles, vaults or junction boxes. The Contractor shall get approval from the Engineer prior to installation. The Contractor may consider changing depth or alignment of conduit to avoid utility conflicts.

Before beginning any excavation work for foundations, junction boxes or conduit runs, the Contractor shall confirm that the location proposed on the Contract Plans does not conflict with utility location markings placed on the surface by the various utility companies. If a conflict is identified, the following process shall be used to resolve the conflict:

1. Contact the Engineer and determine if there is an alternative location for the foundation, junction box or conduit trench.

2. If an adequate alternate location is not obvious for the underground work, select a location that may be acceptable and pothole to determine the exact location of other utilities. Potholing must be approved by the Engineer.

3. If an adequate alternate alignment still cannot be identified following potholing operations, the pothole area should be restored and work in the area should stop until a new design can be developed.

The Contractor shall not attempt to adjust the location of an existing utility unless specifically agreed to by the utility owner and approved by the Engineer. Work associated with resolution of utility conflicts shall be paid per Section 8-33 of these Special Provisions.

The Contractor is advised that safe wiring labels required by the State of Washington Department of Labor and Industries shall apply on this project.

Power Source Coordination

The Contractor shall coordinate all of the installation details for the electrical service cabinet(s) with Puget Sound Energy. Within four (4) weeks after Notice to Proceed, the Contractor shall meet with a PSE Representative (call 1-888-321-7779) in the field to verify

the location of power source as shown in the Plans and shall notify the Engineer immediately if any conflicts exist. Except for the service connection, the PSE portion of the installation shall be completed prior to installation of the service cabinet by the Contractor.

8-20.3(2) Excavating and Backfilling

(Special Provisions) *Supplement*

Backfill for all trenches may consist of select native backfill from the excavation providing that such material is free of organic material, clay, or other deleterious material. If sufficient material from the excavation is not available, as determined by the Engineer, the Contractor shall furnish and install bank run gravel for trench backfill meeting the requirements of Section 9-03.19 of the Standard Specifications.

The Contractor warrants and represents awareness of the statutory provisions contained in RCW 19.122.010 through .900 that the Contractor has read and fully understands the same, and will comply with the requirements of these provisions which are incorporated by reference herein. The Contractor agrees that all trenching as well as excavating for all pole foundations shall be an “excavation” as defined under RCW Chapter 19.122 and that such utilities constitute underground facilities. The parties agree that remedies affected under RCW Chapter 19.122 are also incorporated by reference herein. Any cost to the Contractor as a result of this law shall be at the Contractor’s expense.

8-20.3(2)A Trench and Backfill

(Special Provisions) *New Section*

The Contractor shall provide trenching as specified herein, regardless of the material encountered, as necessary for complete and proper installation of electrical conduit. Trenching shall conform to the following:

A. Uniform Construction

Trenching for conduit runs shall be done in a neat manner, and the trench bottom shall be graded to provide a uniform grade, with a width and depth as specified herein. All trenches for placement of conduit shall be straight and as narrow in width as practical to provide a minimum of pavement disturbance.

B. Trench Inspection

No work shall be covered until it has been examined by the Engineer. Earth which fills around and over the conduit shall be free of rocks greater than 2 inches up to a depth of 6 inches. When trenching is being accomplished within the sidewalk area, the backfill can be made with acceptable materials from the excavation and shall be considered a necessary part of, and incidental to, the excavation in accordance with the Standard Specifications. Hauling and disposal of un-used excavation material shall be incidental to the cost of trenching or excavating. The compaction requirements for the roadway backfill shall apply.

C. Saw Cut for Trench

Trenches in all paved areas shall be saw cut. The saw cuts shall be a minimum of 2-inches deep and shall be parallel. Thoroughly clean saw cuts where necessary by the use of high pressure water (1,400 psi or greater). All wastewater shall be collected and disposed of in accordance with Section 1-07.15 of these Special

Provisions. Impervious surfaces contaminated from cutting operations shall be cleaned in accordance with Section 1-07.15 of these Special Provisions.

D. Pavement Removal

Pavement shall be removed in a manner approved by the Engineer. The Contractor shall take care in removing existing paving not to damage the pavement outside of the saw cut lines.

E. Trench Depth

Trench depth shall be in accordance with Section 8-20.3(5)D of the Standard Specifications, unless agreed to otherwise by the Engineer.

F. Trench Width

Trench width shall be in accordance with Section 8-20.3(5)E1 of the Standard Specifications, unless agreed to otherwise by the Engineer.

G. Trenching in Landscaped Areas

Trenches shall be placed to have minimum impact on existing landscaping and irrigation systems. Any damage due to the Contractor's operation shall be repaired or replaced by the Contractor at his own expense and to the satisfaction of the Engineer.

H. Trenching Through Concrete Sidewalk Areas

Trenching in these areas shall require removal and replacement of the concrete to the limits of the existing sidewalk joints. The costs for removal and replacement shall be incidental to the trenching.

8-20.3(3) Removing and Replacing Improvements

Section 8-20.3(3) is supplemented with the following:

Salvaged Equipment

All existing equipment that is to be removed shall not be stockpiled within the job site without the Engineer's approval. Existing concrete poles and luminaire fixtures to be salvaged to the City, shall be disconnected, dismantled, stacked separately and delivered to City of Mercer Island Maintenance Shop.

The Contractor shall give the Engineer seven (7) calendar days advance written notice prior to delivery of removed materials to the City.

The Contractor shall remove and dispose of following materials:

- Timber luminaire poles as directed on the Plans.
- All wires for discontinued circuits from the conduit system.
- Elbow sections of abandoned conduit entering junction boxes.
- Foundations as directed on the Plans

The Contractor shall backfill voids created by removal of foundations and junction boxes. Backfilling and compaction shall be performed in accordance with Standard Specifications Section 2-09.3(1)E.

8-20.3(4) Foundations

(Special Provision) *Supplement*

Electrical service cabinet foundation shall be per WSDOT Standard Plan J-10.10. Exact foundation location shall be coordinated with the Engineer in the field and potholed prior to excavation of illumination and feeder conduit trenching.

Luminaire Pole foundations shall be per City of Mercer Island Standard Detail IL-1B.

The anchor bolts shall match that of the device to be installed thereon.

Concrete shall be placed against undisturbed earth if possible. Disturbed earth or backfill material shall be compacted to ninety-five (95) percent of the material's maximum density. Before placing the concrete, the Contractor shall block-out around any other underground utilities that lie in the excavated base so that the concrete will not adhere to the utility line. Concrete foundations shall be troweled, brushed, edged and finished in a workmanship-like manner. Concrete shall be promptly cleaned from the exposed portion of the anchor bolts and conduit after placement. After the specified curing period, the Contractor may install the applicable device thereon.

All concrete pole foundations shall be constructed in the manner specified below:

- Where no sidewalks are to be installed, the grade for the top of the foundation shall match finished grade.

- Where sidewalks are to be constructed as a part of this project, the top of the foundation is to be poured to the bottom of the sidewalk. The Contractor shall verify with the Engineer in the field the TOF elevation prior to the foundation pour.

All concrete foundations shall be installed at locations per stationing on the Plans. Pole locations shall be staked by the Contractor and locations shall be field verified and approved by the Engineer in the field prior to excavation.

The Contractor shall secure the anchor bolts required for the item to be mounted on the foundation. The Contractor shall also securely locate all conduit required.

Location of all concrete foundations shall be approved by the Engineer prior to excavation.

Construction Sequence
All excavation for a single pile cap foundation in which the drilled shafts are to be constructed shall be completed before shaft construction begins. After shaft construction is completed, all loose or displaced materials shall be removed from around the shafts, leaving a clean solid surface to receive the footing concrete.

Shaft Excavation
Shafts shall be excavated to the required depth as shown in the Plans or as required by the Engineer. The excavation shall be completed in a continuous operation using equipment capable of excavating through the type of material expected to be encountered. The concrete shall be placed within two hours after the completion of shaft excavation and cleanout without any undue delay.

If the shaft excavation is stopped with the approval of the Engineer, the shaft shall be secured by the installation of a safety cover. It shall be the Contractor's responsibility to ensure the safety of the shaft and the surrounding soil and the stability of the sidewalls. A temporary casing should be used, if necessary, to ensure such safety and stability.

Where caving conditions are encountered, due to soft soils or water intrusion, no further excavation will be allowed until the Contractor selects a method to prevent ground movement. The Contractor may elect to place a temporary casing or use other methods approved by the Engineer.

The Contractor shall use appropriate means such as a clean-out bucket, to clean the bottom of the excavation such that a minimum of 50 percent of the base of each shaft will have less than 1-inch of sediment at the time of placement of the concrete. The maximum depth of sediment or any debris at any place on the base of the shaft shall not exceed 2 inches.

If unexpected obstructions which require specialized equipment and/or labor are encountered, the Contractor shall notify the Engineer promptly. Excavation shall be continued as approved by the Engineer.

Excavation Inspection

The Contractor shall provide equipment for checking the dimensions and alignment of each permanent shaft excavation. The dimensions and alignment shall be determined by the Contractor with the approval of the Engineer.

Final shaft depths shall be measured with a suitable weighted tape or other approved methods after final clean-out.

Shaft cleanliness will be determined by the Engineer, by visual inspection.

The excavated shaft shall be approved by the Engineer prior to placing any steel or concrete into the shaft.

Reinforcing Steel Cage Construction and Placement

The reinforcing steel cage consisting of longitudinal bars, ties, cage stiffener bars, spacers, centralizers, and other necessary appurtenances shall be completely assembled and placed as a unit immediately after the shaft excavation is inspected and accepted prior to concrete placement. The reinforcing cage shall be rigidly braced to retain its configuration during handling and when lowered into the shaft, during placement of concrete and extraction of the casing from the shaft. No loose bars will be permitted. The reinforcing steel fabricator shall include bracing and any extra reinforcing steel required to fabricate the cage in the shop drawings.

If the bottom of the constructed shaft elevation is lower than the bottom of the shaft elevation in the Plans, a minimum of one half of the longitudinal bars required in the upper portion of the shaft shall be extended the additional length. Tie bars shall be continued for the extra depth, spaced on 1-foot centers, and the stiffener bars shall be extended to the final depth. These bars may be lap spliced, or un-spliced bars of the proper length may be used. Welding to the planned reinforcing steel will not be permitted unless specifically shown in either the Plans or Special Provisions.

The reinforcing steel in the shaft shall be tied and supported so that the reinforcing steel will remain within allowable tolerances given in this specification. Concrete spacers or other approved non-corrosive spacing devices shall be used at sufficient intervals (near the bottom and at intervals not exceeding 5 feet up the shaft) to insure concentric spacing for the entire cage length. Spacers shall be constructed of approved material equal in quality and durability to the concrete specified for the shaft.

The elevation of the top of the steel cage shall be checked before and after the concrete is placed. If the rebar cage is not maintained within the specified tolerances, corrections shall be made by the Contractor as required by the Engineer. No additional shafts shall be constructed until the Contractor has modified his rebar cage support in a manner satisfactory to the Engineer.

Concrete Placement

Concrete placement shall commence within two (2) hours after completion of the excavation and shall be placed in one continuous operation to the top of the shaft. Concrete shall be placed through a tremie. The tremie used shall consist of a tube of one-piece construction. Concrete shall be placed through a hopper at the top of the tube so that the concrete is deposited through the center of the reinforcing steel to prevent segregation of the aggregates and splashing of concrete on the reinforcement cage. The Contractor's proposed method for depositing concrete shall have approval of the Engineer prior to concrete placement. The concrete on the top 5 feet of the shaft shall be vibrated.

Casing Removal

The casing shall be well coated with form oil prior to concrete placement. During casing removal, a minimum 5-foot head of concrete must be maintained to balance the soil and water pressure at the bottom of the casing.

Construction Tolerances

The centerline of the drilled shaft shall be within 3 inches of the Plan position in the horizontal plane, at the Plan elevation for the top of the shaft.

The vertical alignment of the shaft excavation shall not vary from the Plan alignment by more than 1/4 inch per foot of depth.

After all the concrete is placed, the top of the reinforcing steel cage shall be no more than 1/2 inch above and no more than 1/2 inch below the Plan position.

The minimum diameter of the drilled shaft shall be 1-inch less than the specified shaft diameter.

The top elevation of the shaft shall have a tolerance of ±1/2 inch from the Plan top of shaft elevation.

Excavation equipment and methods shall be designed so that the completed shaft excavation will have a flat bottom. The cutting edges of excavation equipment shall be normal to the vertical axis of the equipment within a tolerance of ±3/8 inch per 12 inches of diameter.

Drilled shaft excavations constructed in such a manner that the concrete shaft cannot be completed within the required tolerances are unacceptable. When approved, corrections may be made to an unacceptable drilled shaft excavation by any approved combination of the following methods:

Overdrill the shaft excavation to a larger diameter to permit accurate placement of the reinforcing steel cage with the required minimum concrete cover.

Increase the number and/or size of the steel reinforcement bars.

The approval of the correction procedures is dependent on analysis of the effect of the degree of misalignment and improper positioning. Correction methods may be approved as design analysis indicates. Redesign drawings and computations prepared by the Contractor's Engineer shall be signed by a Professional Engineer licensed in the State of Washington. Materials and work necessary, including Engineering analysis and redesign, to effect corrections for out of tolerance drilled shaft excavations shall be furnished at no cost to the Contracting Agency.

Submittals

Before placing the reinforcing steel, the Contractor shall submit shop drawings to the Engineer for the reinforcing cage.

Work shall not proceed until the appropriate submittals have been approved in writing by the Engineer.

8-20.3(5) Conduit

8-20.3(5)A General

(Special Provision) *Supplement*

The conduit runs shown on the Plans are schematic; exact alignment shall be approved by the Engineer prior to excavation. All conduits shall be installed within the City right-of-way. Runs may be revised, as directed by the Engineer, to allow for unforeseen conflicts or easements.

All covered underground conduit shall be capped during construction using manufactured seals to prevent entrance of water and debris. Prior to pulling wire, all conduits shall be cleaned with an approved sized mandrel and blown out with compressed air.

When conduit or casing is to be placed under pavement it shall be placed prior to the placement of a sub-base, base, surfacing, and pavement.

Spare conduit shall contain detectable pull tape and shall be labeled City of Mercer Island.

Where sidewalk panels need to be removed for the installation of conduit or junction boxes, the Contractor is responsible for restoring the area near the back of sidewalk as needed to repair damage from sidewalk panel formwork.

Where intercepting and splicing to an existing conduit is called out on the Plans, the Contractor shall verify the conduit size and schedule before ordering the new conduit sections. The size provided on the Plans is an estimation.

8-20.3(5)A3 Damaged or Blocked Conduits

(Special Provision) *New Section*

Damaged or blocked conduits shall be repaired by the Contractor. The Contractor shall attempt to remove debris in the conduit by blowing in air. The Contractor shall be careful not to blow air towards the service or controller cabinet. If the blockage doesn't break free, the

Contractor shall identify the potential blocked/damaged location using a fish tape. Once the blockage location is identified, the Contractor shall attempt to remove the existing cabling (if any) from the conduit. If the cabling is removed, the Contractor shall attempt to pass a fish tape through the conduit again. If the fish tape passes through the conduit past the identified blockage point easily, the Contractor shall attempt to reinstall all existing cabling along with the new cabling called out in the Contract Plans.

If the existing cabling cannot be removed, or reinstalled after removal, the Contractor shall excavate down to the conduit blockage point and repair the conduit break. The Contractor shall obtain approval from the Engineer prior to removing existing cabling or beginning excavation. All cabling shall be removed from the conduit prior to repairing the broken conduit. Once the conduit is repaired, the Contractor shall restore the disturbed area. The removal of cable, excavation, conduit repair, and surface restoration will be paid for by change order or Minor Change as determined by the Engineer. The cost for other work needed to identify and remedy blocked conduits as described in this Section shall be incidental.

8-20.3(6) Junction Boxes, Cable Vaults, and Pull boxes

(Special Provision) *Supplement*

The Contractor shall supply all junction boxes. Junction boxes shall conform to the requirements of the following:

Junction box Type 1 and Type 2: Standard Plan J-40.10

Junction box Type 8: Standard Plan J-40.30

Junction box Type 4: Standard Plan J-40.20

The locations of the junction boxes as shown on the Plans are approximate and the exact locations shall be determined in the field by the Engineer. The new junction boxes shall not interfere with any other previous or relocated installation. Junction boxes shall be located outside roadways, wheelchair ramps and landings, construction joints and driveways except where noted on the Plans.

If the junction boxes are placed in the pedestrian pathway, they shall have slip resistant lids and shall not be placed closer than 12 inches from the edge of any sidewalk or sidewalk joint. All junction box lids shall be set flush with the finished grade.

Prior to the use of any existing junction box, the Contractor shall verify that sufficient bending radius, as defined by the Code, is available both approaching and within the box for the cable being installed. If such is not the case, the Contractor shall notify the Engineer, who shall be the sole judge of whether new conduit bends or a new junction box shall be installed.

When using an existing junction box, the Contractor shall modify the junction box such that it will be bonded to the grounding system. All junction box lids shall be grounded in a manner that will allow removal of the lid without breaking the ground.

Existing junction boxes shall either be replaced or raised to match the new elevation of the sidewalk or shoulder. Wiring shall be replaced if sufficient slack as specified in Section 8-20.3(8) is not maintained. The six-inch gravel pad required in Standard Plans J-40.10 shall be maintained. When existing junction boxes do not have this gravel pad, it shall be installed as part of the adjustment to finished grade.

The Contractor shall not damage any existing conduits when replacing or excavating existing junction boxes. The Contractor is to maintain the integrity of all junction boxes during reconfiguration of the conduits, installation of new conduits or when excavating.

Wiring shall not be pulled into any conduit until all associated junction boxes have been adjusted to or installed in their final grade and location unless installation is necessary to maintain system operation. If wire is installed for this reason, sufficient slack shall be left to allow for final adjustment.

8-20.3(8) Wiring

(Special Provision) *Supplement*

All wire splices shall be made in the presence of the Engineer.

For installing new cables in existing occupied or empty conduit, the Contractor shall be responsible for the following steps:

1. Install a new pull rope using a rod/fish tape in the conduit for pulling in the new cabling if a pull rope does not already exist.
2. If the Contractor cannot get the rod/fish tape to pass through the conduit, the Contractor shall blow air through the conduit to remove any debris blocking the rod/fish tape path. The Contractor shall be careful not to blow air into service cabinets.
3. If the rod/fish tape still does not pass through the conduit after blowing air, the Contractor shall disconnect a single existing wire as agreed to by the Engineer (if the conduit is occupied) and use that wire to pull the new wiring plus a new cable to replace the existing cable that is being used for pulling.
4. If no existing wire can be used to pull in the new wire, the Contractor shall try another conduit run if one exists or pull out all existing wiring from the conduit and use to pull in the new wiring plus all new cabling to replace existing cabling. Rodding, fish taping, blowing air, and disconnecting/ reconnecting cable shall be the Contractor's cost responsibility. In an event that none of these steps led to successful wire installation, the Contractor shall install new conduit as directed by the Engineer.

When removing existing cabling, if the cable won't initially move, the Contractor shall attempt to blow air through the conduit to loosen debris around the cable. Blowing air into the conduit is considered incidental to the cable removal. If the cable will not move after blowing air into the conduit, the Contractor shall contact the Engineer.

8-20.3(9) Bonding, Grounding

(Special Provision) *Supplement*

Contractor shall provide and install bonding and grounding wires as described in Standard Specifications and the National Electric Code for any new metallic junction boxes and any modified existing junction boxes. For the purposes of this section, a box shall be considered "modified" if new current-carrying conductors are installed or modified, including low-voltage conductors.

At points where shields of shielded conductors are grounded, the shields shall be neatly wired and terminated on suitable grounding lugs.

Junction box lids and frames shall be grounded in accordance with Department of Labor and Industries standards and shall be grounded so that the ground will not break when the lid is removed and laid on the ground next to the junction box.

Location wires shall not be connected to the equipment-grounding system.

8-20.3(10) Service, Transformer, and Intelligent Transportation System (ITS) Cabinets

(Special Provision) *Supplement*

Electrical service cabinet shall be single phase 120/240 Volt, 3 wire 60 cycle A.C. (with street lighting contactors and grounded neutral service).

The service points shall be as noted on the Plans and shall be verified with the electrical servicing utility (the Contractor to coordinate a power service point availability, with a power company).

The Contractor shall install new conduit, as shown on the Plans, from the new electrical service cabinet to PSE power source (coordinate work with Puget Sound Energy prior to cabinet base installation). In addition, the Contractor shall provide service conductors from the electrical service to the power source with at least 20 feet of service wire coiled and coordinate the connection with PSE Representative. All connections and interfacing with Puget Sound Energy shall conform to PSE requirements.

The Contractor shall have all services inspected by Transportation Maintenance Representative and the Electrical Inspector and shall be solely responsible for coordination with the power company to have the service energized. The Contractor shall notify the Electrical Inspector when the service is ready for connection and shall coordinate with PSE. The Contractor shall pay all connection fees.

All service cabinets shall be shipped and delivered to the job site in a protective covering with suitable dunnage to prevent damage to the exterior surface.

8-20.3(11) Testing

(Special Provision) *Supplement*

All work shall be completed in a manner that provides the Inspector and Engineer with full knowledge of the construction. The work shall proceed in accordance with the approved construction schedule previously supplied to and approved by the Engineer. The Inspector and Engineer may, at their option, require work completed without their knowledge or inspection to be dismantled so that it can be inspected to their satisfaction.

8-20.3(13) Illumination Systems

(Special Provision) *Supplement*

Light Standards shall be erected in accordance with Standard Specifications Section 8-20.3(4).

The illumination system shall be energized from a single existing photoelectric cell mounted on the service cabinet.

8-20.3(13)A Light Standards

(Special Provision) *Supplement*

Light standards shall be fabricated in conformance with the methods and materials specified on the pre-approved Plans and outlined in the Standard Specifications and these Special Provisions and Mercer Island Standard Detail IL-1B.

Anchor bolts shall extend through the top heavy-hex nut two full threads to the extent possible while conforming to the specified base clearance requirements. Anchor bolts shall be tightened by the Turn-Of-Nut Tightening Method in accordance with Standard Specifications Sections 6-03.3(33) and 8-20.3(4).

The hand hole shall be located at 90 degrees to the luminaire arm on the side away from traffic.

A grounding lug or nut shall be provided in the handhole frame or inside the handhole frame or inside the pole shaft to attach a ground bonding strap.

All poles and luminaire arms shall be designed to support a luminaire weight of 50 lbs. or less and to withstand pressures caused by wind loads of 110 MPH with gust factor of 1.3.

Miscellaneous Hardware:
All hardware (bolts, nuts, screws, washers, etc.) needed to complete the installation shall be stainless steel.

I.D. (Identification for poles):
The Contractor shall provide a small nameplate on each pole. The letter and numbers combination shall be mounted above pole handhole, facing away from approaching traffic. Legends shall be sealed with transparent film, resistant to dust, weather and ultraviolet exposure. The decal markers shall be either:

- 3-inch square with gothic gold or white reflectorized 2-inch legend on a black background, or

- 3-inch square with black 2-inch legend on a white reflectorized background.

The I.D. number will be assigned to each pole at the end of the Contract or project by the City of Mercer Island Transportation Maintenance Manager. Cost for the decals shall be considered incidental to the Contract Bid.

The pole shaft shall be provided with a 2-1/8" x 8" flush handhole near the base and a metal cover secured with stainless steel hex head bolts.

The pole shall be adjusted for plumb after all needed equipment has been installed thereon. After pole is installed and plumbed, nuts shall be tightened on anchor bolts using proper sized sockets, open end, or box wrenches. Use of pliers, pipe wrenches, or other tools that can damage galvanizing will not be permitted. Tools shall be of sufficient size to achieve adequate torquing of the nuts. The space between the concrete foundation and the bottom of the pole base plate shall be filled with a dry pack mortar grout and troweled to a smooth finish conforming to the contour of the pole base plate.

Dry pack mortar grout shall consist of a 1:3 mixture of Portland cement and fine sand with just enough water so that the mixture will stick together on being molded into a ball by hand and will not exude moisture when so pressed. A one-half-inch drain hole shall be left in the bottom of the grout pad.

8-20.3(13)C Luminaires

(Special Provision) *Supplement*

All luminaires shall be per these Special Provisions, Section 9-29.10(2) Decorative Luminaires, provided with markers for positive identification of light source type and wattage. Markers shall conform to ANSI C136.15-2011 "American National Standard for Roadway and Area Lighting Equipment – Luminaire Field Identification.

Each Roadway luminaire shall be installed with a 7-pin shorting cap on each individual luminaire fixture.

8-20.3(17) "As-Built" Plans

(Special Provision) *Supplement*

Upon completion of the construction, the Contractor shall furnish "as-built" plans of the intersection showing all cabinets, pole locations, junction boxes, miscellaneous equipment, conduit, conductors and with a special symbol identifying those items that have been changed from the original Contract Drawings. All items shall be located within 1-foot horizontal distance and 6 inches vertical distance above, below, or at the surface.

8-20.4 Measurement

(Special Provision) *Revised*

When shown as lump sum in the Proposal as illumination system, no specific unit of measurement will apply, but measurement will be for the sum total of all items for a complete system to be furnished and installed.

All costs for adjustment of junction boxes, both to the final grade and any grade adjustments required for the various construction stages proposed in the Contract, or for alternative stages proposed by the Contractor, shall be included in the lump sum items and no separate measurement will be made.

Temporary surface restoration items required for resuming pedestrian and vehicular traffic prior to final surfacing, including steel sheeting, crushed rock, and cold mix asphalt, shall be incidental to the lump sum items and no separate measurement will be made.

Sawcutting required shall be incidental to lump sum item and no separate measurement will be made.

Conduit bedding and crushed surfacing top course (CSTC) required for trench backfill shall be incidental to the lump sum items and no separate measurement will be made.

The cost of conduit trenching, backfilling, compaction and landscape restoration outside of paved areas and trenching and backfill for the pipe zone within paved areas shall be included in the above listed bid items lump sums.

Bidders are cautioned to include in the lump sum bid items for "Systems Complete", all costs related to protection of items to remain, removal and disposal costs of removed items not specified to be salvaged, and costs associated with obtaining electrical inspection and testing as required.

''Adjust Junction Box'' shall be measured per each existing junction box adjusted to finished sidewalk grade

8-20.5 Payment

(Special Provision) *Revised*

Payment will be made in accordance with Section 1-04.1 for the following bid item(s) when included in the proposal:

- **Replacement of Existing Illumination System, Complete, Per Lump Sum**

The lump sum Contract price for the above listed lump sum bid items shall be full payment for all labor, materials, tools and equipment necessary or incidental to the furnishing and installation of a complete permanent illumination system as described in these Plans and Specifications. The lump sum Contract price shall include, but is not limited to, the furnishing and installation of electrical service cabinet and foundation and conduit and wiring to the cabinet and re-routing of existing circuits along SE 28th street to existing service cabinet, concrete roadway luminaire poles, shoebox style luminaires and arms, painting of components, potholing for foundations, excavation, foundations, junction boxes, trenching, backfill, conduit, pull rope and wiring. The lump sum Contract price shall include the removal of existing illumination systems, including, but not limited to, the removal of existing luminaire poles and foundations, luminaires, junction boxes, conduit and wiring, backfilling and compacting voids, salvaging existing materials, and restoring facilities damaged or destroyed during construction. The lump sum Contract price shall include coordination with local agencies, obtaining permits, electrical inspections, testing, temporary traffic control, preparing as-built plans and all other work necessary or incidental to constructing a complete system.

- **Temporary Illumination During Construction, Complete, Per Lump Sum**

The lump sum Contract price for the above listed lump sum bid items shall be full payment for all labor, materials, tools and equipment necessary or incidental to the maintenance of temporary illumination system during the construction. The Contractor shall submit Type 2 Working Drawings showing method to providing a temporary illumination system during the nighttime hours during the construction to the Engineer for review. Some of the methods might include direct tap to existing transformer (coordination with PSE Representative shall be required), use of light plants (whisper quiet generator) or temporary rerouting of existing circuits. The existing or higher illumination levels shall be maintained during the construction until the Contractor has energized the new illumination system.

- **Adjust Junction Box, Per Each**

The per each Contract price for the above listed bid item shall be full payment for all labor, materials, tools and equipment necessary or incidental to the adjustment of junction boxes to finished sidewalk grades.

8-21 PERMANENT SIGNING

8-21.1 Description

(Special Provision) *Supplement*

Permanent Signing shall include all work to reset, relocate, remove, and install new signage within the project limits as identified in the Plans.

8-21.3 Construction Requirements

(Special Provision) *Supplement*

Sign Code Numbers indicated on the Plans are in reference to the Washington State Department of Transportation Sign Fabrication Manual and the Manual on Uniform Traffic Control Devices (MUTCD).

Upon completion of the project, the Contractor shall reset all signs, which have been disturbed or removed during the construction, in their permanent location to the satisfaction of the Owner. Existing concrete at the base of the sign post shall be removed prior to installation in new concrete.

Relocated signs shall be installed on new posts per the standard detail, unless otherwise directed by the engineer.

All signs shall be mounted on 2'' X 2'', 14 Guage metal posts otherwise indicated on the Plans or directed by the Engineer. Relocated signs shall be installed on new posts.

Locations are subject to adjustment by the Engineer.

All stop and yield signs to be installed and/or replaced shall be installed on 4'' x 4'' pressure treated posts. All posts shall be unpainted unless otherwise indicated on the plans.

Posts shall have 3' minimum embedment into finished grade.

8-21.4 Measurement

(Special Provision) *Supplement*

There shall be no unit of measurement for the lump sum bid item ''Permanent Signing''. Measurement will be based on a completed and accepted signage installation in accordance with the Plans and as directed by the Engineer.

8-21.5 Payment

(Special Provision) *Supplement*

Payment will be made in accordance with Section 1-04.1, for each of the following Bid items that are included in the Proposal:

Permanent Signing	**Lump Sum**

The lump sum contract price for above listed bid items shall be measured for the total of all labor, materials, tools and equipment necessary or incidental to the completed and accepted signage installation in accordance with the Plans and as directed by the Engineer.

8-22 PAVEMENT MARKING

8-22.1 Description

(Special Provision) *Supplement*

Pavement markings in conflict with the proposed improvements shall be removed.

8-22.2 Materials

(Special Provision) *Supplement*

All channelization work to be performed under this contract shall be done in conformance with the "Manual on Uniform Traffic Control Devices" as is currently adopted by the Washington State Department of Transportation or as modified by the Plans and these Special Provisions.

This work shall consist of furnishing and installing pavement markings upon the roadway surface at locations shown in the Plans or as directed by the Engineer. Prior to installing pavement markings the Contractor shall pre-mark the layout of all channelization and receive approval from the Engineer. See Section 8-22.3(1) Preliminary Spotting herein.

Materials for pavement markings shall be paint, plastic, or retroreflective film as noted on the Plans and herein. Paint and sprayed or extruded plastic materials shall be applied with a top dressing of glass beads.

The following markings shall meet Type A Liquid Hot Applied Thermoplastic per 9-34.3(1) of the Standard Specifications:

- Plastic Stop Lines
- Plastic Crosswalk Lines

Refer to the current Qualified Products List (QPL) for manufacturers.

8-22.3 Construction Requirements

(Special Provision) *Supplement*

Contractor shall coordinate with the Engineer to field mark the channelization to be removed. Part of this effort will include the Contractor field locating the proposed channelization to verify that the proposed channelization matches the existing channelization to remain. Contractor shall be responsible for coordinating this effort with the Engineer. Engineer shall approve the channelization removal extents before the Contractor conducts actual removal.

8-22.4 Measurement

(Special Provision) *Supplement*

No specific unit of measurement shall be applied to the Bid item "Remove Pavement Markings". All conflicting channelization shall be removed and any other channelization directed by the engineer.

8-22.5 Payment

(Special Provision) *Supplement*

Payment will be made in accordance with Section 1-04.1, for each of the following Bid items that are included in the Proposal:

Remove Pavement Markings	**Lump Sum**
Plastic Stop Line	**Per Linear Foot**
Plastic Crosswalk Line	**Per Square Foot**
Plastic Traffic Arrow	**Per Each**

The lump sum cost for "Remove Pavement Markings" shall be full compensation for all labor, tools, equipment, and materials necessary or incidental to removing the pavement markings in conflict with the proposed improvements or as necessary to ensure that the proposed pavement markings line up with the existing pavement markings.

8-23 TEMPORARY PAVEMENT MARKINGS

8-23.3 Construction Requirements

(Special Provision) *Supplement*

Placement of temporary pavement markings shall mimic existing channelization and side streets by the end of each work day.

8-23.5 Payment

(Special Provision) *Supplement*

Payment will be made in accordance with Section 1-04.1, for each of the following Bid items that are included in the Proposal:

Temporary Pavement Markings	**Per Lump Sum**

The lump sum cost for "Temporary Pavement Markings" shall be full compensation for all labor, tools, equipment, and materials necessary or incidental to removing the pavement markings in conflict with the proposed improvements or as necessary to ensure that the proposed pavement markings line up with the existing pavement markings.

8-27 SITE FURNITURE

8-27.1 Description

(Special Provision) *Supplement*

This work shall include furnishing and installing trash receptacles (2) in the locations shown in the Plans as well as salvaging, storing and reinstalling stone benches (2) and a bike rack (1) as directed by the City.

8-27.2 Materials

(Special Provision) *Supplement*

Trash receptacle shall be Pennsylvania Avenue – Model 102 from Canterbury Designs, 32-gallon size, cast aluminum body, powder coated, color: RAL 6005.

8-27.4 Measurement

(Special Provision) *Supplement*

Measurement for ‘’Trash Receptacle’’ shall be per each installed trach receptacle.

Measurement for “Reinstall Stone Bench” shall be per each salvaged and reinstalled bench.

Measurement for “Reinstall Bike Rack” shall be per each salvaged and reinstalled bike rack.

8-27.5 Payment

(Special Provision) *Supplement*

Payment will be made in accordance with Section 1-04.1, for each of the following Bid items that are included in the Proposal:

Trash Receptacle	**Per Each**
Reinstall Stone Bench	**Per Each**
Reinstall Bike Rack	**Per Each**

The per each price for “Trash Receptacle” shall be full compensation for all labor, tools, equipment, and materials necessary or incidental to furnishing and installing the trash receptacle.

The per each price for “Reinstall Stone Bench” and “Reinstall Bike Rack” shall be full compensation for all labor, tools, equipment, and materials necessary or incidental to salvaging, storing and reinstalling the benches and bike rack.

8-28 MODULAR SOIL CELL

8-28.1 Description

(Special Provision) *Supplement*

This section include the furnishing and installation of Silva Cells and all associated materials where shown on the Plans per the details in the Plans and Contract documents. It shall also include protection and security of soil cell area. Contractor shall be responsible for ensuring area is safe to the travelling public.

8-28.2 Materials

(Special Provision) *Supplement*

Backfill material outside of the modular soil cells shall be crushed surfacing top course per 4-04.

Material inside of modular soil cells shall be Topsoil Type A.

Soil Cell structure materials shall be Deeproot ‘’Silva Cell System’’ per Appendix C.

8-28.3 Construction Requirements

(Special Provision) *Supplement*

A pre-installation meeting shall be schedule with Landscape Architect, City Street Engineer, City Arborist, Project Engineer, and City inspector prior to installing modular soil cells.

Compaction of backfill material shall be achieved by using a pneumatic ‘’jumping jack’’, pneumatic ‘’pogo stick’’ or other means to safely achieve suitable compaction.

8-28.4 Measurement

(Special Provision) *Supplement*

Modular Soil Cells shall be measured by square foot of installed soil cell unit and/or soil cell bank. Measurements shall be taken alongside the outer edges of completed soil cells to establish the total area. Measurement shall be inclusive of total soil cell bank from outer plastic edge to out plastic edge.

8-28.5 Payment

(Special Provision) *Supplement*

Payment will be made in accordance with Section 1-04.1, for each of the following Bid items that are included in the Proposal:

Modular Soil Cells	**Per Square Foot**

The square foot contract bid price for ‘’Modular Soil Cell’’ shall include, but not be limited to, all labor, material, hauling, equipment necessary for preparing the soil cell area, furnishing, arranging and rearranging to maximize soil cell volume, and installing soil cell structures, geotextile fabric, anchoring spikes, cable ties, geogrid, utility modifications around silva cells, compaction, all other requirements and work described in this section, and manufacturer recommendations and guidelines outlined in the Appendix C.

Excavation and hauling of material for installation of soil cells shall be paid under the ‘Roadway Excavation Incl Haul’ bid item.

Crushed surfacing top course material, hauling, placement and compaction used for backfill and base material for soil cell installation shall paid under the ‘Crushed Surfacing Top Course’’ item. Topsoil Type A used for soil cell infill for soil cell installation shall not be paid as part of ‘’Modular Soil Cells’’ per square unit contract price and shall be paid with other bid items.

END OF DIVISION 8

DIVISION 9: MATERIALS

9-03 AGGREGATES

9-03.8(2) HMA Test Requirements

(March 10, 2010 APWA GSP) *Supplement*

Section 9-03.8(2) is supplemented with the following:

ESAL's

The number of ESAL's for the design and acceptance of the HMA shall be *** 2 *** million.

9-03.8(7) HMA Tolerances and Adjustments

(March 10, 2010 APWA GSP) *Revision*

Delete Item 1 and replace it with the following:

1. **Job Mix Formula Tolerances**. After the JMF is determined as required in 5-04.3(7)A, the constituents of the mixture at the time of acceptance shall conform to the following tolerances:

	Nonstatistical Evaluation	**Commercial Evaluation**
Aggregate, percent passing		
1", ¾", ½", and 3/8" sieves	±6%	±8%
U.S. No. 4 sieve	±6%	±8%
U.S. No. 8 sieve	±6%	±8%
U.S. No. 200 sieve	±2.0%	±3.0%
Asphalt Binder	±0.5%	±0.7%

These tolerance limits constitute the allowable limits as described in Section 1-06.2. The tolerance limit for aggregate shall not exceed the limits of the control points section, except the tolerance limits for sieves designated as 100% passing will be 99-100. The tolerance limits on sieves shall only apply to sieves with control points.

9-14 EROSION CONTROL AND ROADSIDE PLANTING

9-14.1(1) Topsoil Type A

(Special Provision) *Supplement*

Topsoil Type A mix shall be a 50%/50% mixture of pure compost, and sand, sandy loam or silty sand. The soil shall be high in organic content and compromised of fully composted and mature organic materials.

Refer to Section 9-14.4(8) Compost of the Standard Specifications for compost requirements. No fresh sawdust or other fresh wood by-products shall be added to extend the volume after the composting process.

Chemical and physical characteristic of Topsoil Type A shall comply with the following:

Screen Size 7/16" Maximum

(Approximate Particle Size)	
Total Nitrogen	0.25% Minimum
Organic Matter	10% Minimum
pH Range	5.5 to 7.5
Conductivity	5 mmhos/cm Maximum

The Contractor shall provide a complete analysis of Topsoil Type A with one cubic foot sample for review and approval.

9-14.2 Seed

(Special Provision) *Supplement*

The grass seed dealer shall mix the grass seed only. The Contractor shall furnish the Engineer with a dealer's guaranteed statement of the composition, mixture, and the percentage of purity and germination of each variety.

"Seeded Lawn Mix" shall be composed of the following varieties mixed in the proportions indicated:

Mixture Proportions			
Name	**% by Weight**	**% Purity**	**% Germination**
Chewings Fescue (Longfellow, Waldorf, Bargreen)	30%	98%	90%
Hard Fescue	20%	98%	90%
Perennial Rye (blend of two – Fiesta II, Prelude II, Palmer II, Commander)	50%	95%	90%

All seed mixes shall be certified as 99% weed-free and 90% viable seeds by germination tests and by age specifications by species. Apply hydroseed mulch, tackifier, seed and fertilizer per supplier's recommendations.

9-14.3 Fertilizer

(Special Provision) *Supplement*

All Fertilizer applications for grass or trees and shrubs shall follow Washington State University, National Arborist Association or other accepted agronomic or horticultural standards.

Fertilizer for trees and shrubs shall be Best-Paks Biodegradable Packet, 20-10-5, or City of Mercer Island approved equal. Apply per manufacturer's recommendations.

9-14.4(3) Bark or Wood Chips

(Special Provision) *Supplement*

Bark mulch shall be medium grade composted ground fir or hemlock bark.

The bark shall be uniform in color, free from weed seeds, sawdust and splinters. The mulch shall not contain resin, tannin, wood fiber or other compounds detrimental to plant life. The moisture content of bagged mulch shall not exceed 22%. The acceptable size range of bark mulch material is ½" to 1" with maximum of 20% passing the ½" screen.

9-14.7(2) Quality

Section 9-14.7(2) is supplemented with the following:

Plant material shall be free from disfiguring knots, swollen grafts, sunscald injuries, bark abrasions, evidence of improper pruning or other objectionable disfigurement.

Potted and container stock shall be well rooted and vigorous enough to ensure survival and healthy growth. Shrubs shall have full foliage (not leggy). Container stock shall be grown in its delivery container for not less than six (6) months, but not for more than two (2) years. Root bound or broken containers will not be accepted. Bare root, liner and root stock with dried or shriveled roots from exposure will not be accepted.

Trees shall meet WSDOT standard "Street Tree Grade" and will be provided with untapped, straight, single leaders, and shall be free of branches to minimum six (6) feet above ground line. Trees shall have full crowns and balanced branching.

Measurements, caliper, branching, grading, quality, balling and burlapping shall follow the Code of Standards of the American Associate of Nurserymen in the American Standard for Nursery Stock, ANSI 260.1, latest edition. Measurements shall be taken with all branches in their normal growing position. Plants shall not be pruned prior to delivery to site.

9-14.7(3) Handling and Shipping

Section 9-14.7(3) is supplemented with the following:

All plant material shall be transported to planting locations with care to prevent damage. Tie back branches as necessary and protect bark from chafing with burlap bags. Do not drag plant materials along ground without proper protection of roots and branches. Protect rootballs from environmental or mechanical damage and water as necessary to keep roots moist.

All plant material shall be legibly tagged. Tagging may be by species or variety with minimum of one tag per ten trees, shrubs, groundcovers. Remove all tagging prior to final acceptance.

The Contracting Agency shall reserve the option of selecting and inspecting plant material at the nursery. The Contractor shall provide the Contracting Agency with at least one week notice prior to preparing plants for shipping and delivery. The Contractor shall neither deliver to site nor install plant materials until authorized by the Contracting Agency.

Cold storage of plants shall not be permitted.

If planting is delayed more than 24 hours after delivery, set balled and burlapped plants on the ground, well protected with soil or wet peat. Adequately cover all roots of bare root material with soil or wet peat. Protect rootballs from freezing, sun, drying winds or mechanical damage. Water plant material as necessary until planted.

Plants shall not be stored for more than one week. Longer storage period at project site will result in rejection of plant materials by the Contracting Agency.

Add New Section 9-14.9:

9-14.9 Root Barrier

(Special Provision) *New Section*

Root Barrier shall be 24" depth, flexible interlocking panels with half-inch (1/2") raised vertical reinforcing ribs, horizontal ground-lock tabs to prevent lifting and double top edge. Panels shall be made from injection molded High Impact Polypropylene (HIPP) with built-in UV inhibitors and a minimum thickness of 0.080 inches.

9-14.10 Tree Watering Bag System

(Special Provision) *New Section*

Tree watering bag system shall be commercially available, 15-gallon, slow-release watering bag with two (2) water-release points per bag. Materials: UV-stabilized polyethylene with nylon zipper and polypropylene handle straps; color: green.

9-14.11 Silva Cells

(Special Provision) *New Section*

Materials shall conform to those outlined in Appendix C.

9-29 ILLUMINATION, SIGNAL, ELECTRICAL

9-29.1 Conduit, Innerduct, and Outerduct

(Special Provision) *Supplement*

Cabinet conduit sealing shall be one of the following:

1. Duo-fill 400 – self expanding waterproof foam
2. Jackmoon – Triplex Duct Plugs
3. O-Z Gedney – Conduit Sealing Bushings

Mechanical plugs shall be installed per manufacturer's recommendations.

9-29.1(4)C HDPE Conduit

(Special Provision) *Supplement*

If the Contractor elects to directional bore, bored conduit shall be High Density Polyethylene (HDPE). All piping system components shall be the products of one manufacturer. The conduit and fittings shall be free, within commercial tolerances of objectionable lines, striations, bubbles, welds or other manufacturing defects which would impair the service of the conduit or fittings. Conduit shall be appropriate for the stress generated by the selected

equipment and field conditions. Bored conduit couplings shall meet or exceed all ASTM strength and composition standards for the particular type used. All couplings shall be leak proof. Drilling fluid used for directional boring shall be an inert mixture of water and bentonite clay conforming to the drilling equipment manufacturer's recommendations.

Expansion fittings, deflection fittings, and expansion/deflection fittings embedded in concrete shall be PVC coated.

9-29.2 Junction Boxes, Cable Vaults, and Pull Boxes

9-29.2(1)A Standard Duty Junction Boxes

(Special Provision) *Supplement*

Junction boxes, cable vaults and pull boxes which are placed within the sidewalk shall have slip resistant lids which meet the requirements of Americans with Disabilities Act (ADA) and Public Right-of-Way Accessibility Guideline (PROWAG).

Grounding lugs shall be stainless steel and shall be mechanically and electrically bonded.

Junction boxes shall be marked with "SL" for Street Lighting.

(September 3, 2019 WSDOT GSP)

Slip-Resistant Surfacing for Junction Boxes, Cable Vaults, and Pull Boxes

Where slip-resistant junction boxes, cable vaults, or pull boxes are required, each box or vault shall have slip-resistant surfacing material applied to the steel lid and frame of the box or vault. Where the exposed portion of the frame is ½ inch wide or less, slip-resistant surfacing material may be omitted from that portion of the frame.

Slip-resistant surfacing material shall be identified with a permanent marking on the underside of each box or vault lid where it is applied. The permanent marking shall be formed with a mild steel weld bead, with a line thickness of at least 1/8 inch. The marking shall include a two-character identification code for the type of material used and the year of manufacture or application. The following materials are approved for application as slip-resistant material, and shall use the associated identification codes:

1. Harsco Industrial IKG, Mebac #1 - Steel: M1

2. W. S. Molnar Co., SlipNOT Grade 3 – Coarse: S3

3. Thermion, SafTrax TH604 Grade #1 – Coarse: T1

9-29.6 Light and Signal Standards

(Special Provision) *Supplement*

All poles shall be designed in accordance with the "2009 AASHTO Standard Specification for Structural Supports for Highway Signs, Luminaires and Traffic Signals", as revised.

Scratching, marking, chipping, or other damage to poles and fittings at the point of delivery shall be cause for rejection.

9-29.6(6) Concrete Luminaire Poles

(Special Provision) *Supplement*

All new poles on this project shall be Stresscrete P-250-BPT-G-E40-AG-DR spun concrete poles, square and tapered, per City of Mercer Island Standard Detail IL-1B (or approved equal) and shall include flush GFCI duplex weatherproof receptacle with a metal cover (paint: natural gray finish).

9-29.10(2) Decorative Luminaires

(Special Provision) *New*

Luminaires and arms shall be Cooper Lighting Solutions Galleon GLEON with quick mount short arm, spill control and photocontrol 7-pin receptacle (with shorting cap), or equal approved by the Engineer. Luminaires shall be LED and shall meet the requirements on the Plans for wattages, distribution, and color temperature. Access shall be toolless to enable easy entry into electrical chamber. The luminaire shall be minimum IP66 rated. Custom color of the housing and arm shall be Bronze.

9-29.11(2) Photoelectric Controls

(Special Provision) *Supplement*

The photocell to control the system shall be mounted on the service/contactor cabinet. Photoelectric controls shall be a plug-in device, rated to operate on 120 volts, 60 Hz. The unit shall consist of a light sensitive element connected to necessary control relays. The unit shall be so designed that a failure of any electronic component will energize the lighting circuit.

The photocell shall be a solid-state device with stable turn on values in the temperature range of -55 degrees C to +70 degrees C. The photocell shall be rated for a 20-year (or higher) life expectancy.

9-29.24 Service Cabinets

(Special Provision) *Supplement*

The electrical service cabinet shall be Type D 200A per WSDOT Standard Plan J-10.21 with meter socket install on the outside of the cabinet and the breaker configuration shall be per the panel schedules as shown on the Plans.

All electrical conductors, buss bars and conductor terminals shall be copper or brass.

The cabinet shall be fabricated from aluminum with mill finish. The interior shall be given a finish coat of exterior grade of white metal enamel.

Door hinges shall be the continuous concealed piano type and no screws, rivets or bolts shall be visible outside the enclosure. The cabinet door shall be fitted for a Best internal type lock. The cabinet shall have ventilation louvers on the lower and upper sides complete with screens, filters and have rain tight gaskets. The cabinet door shall have a one-piece weather-proof neoprene gasket.

The service cabinet shall have a 24V blue indicator light.

END OF DIVISION 9

APPENDIX A

PREVAILING MINIMUM HOURLY WAGE RATES

State of Washington
Department of Labor & Industries

Prevailing Wage Section - Telephone 360-902-5335
PO Box 44540, Olympia, WA 98504-4540

Washington State Prevailing Wage

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

Journey Level Prevailing Wage Rates for the Effective Date: 06/26/2024

County	Trade	Job Classification	Wage	Holiday	Overtime	Note	*Risk Class
King	Asbestos Abatement Workers	Journey Level	$59.07	5D	1H		View
King	Boilermakers	Journey Level	$74.29	5N	1C		View
King	Brick Mason	Journey Level	$69.07	7E	1N		View
King	Brick Mason	Pointer-Caulker-Cleaner	$69.07	7E	1N		View
King	Building Service Employees	Janitor	$29.33	5S	2F		View
King	Building Service Employees	Traveling Waxer/Shampooer	$29.78	5S	2F		View
King	Building Service Employees	Window Cleaner (Non-Scaffold)	$32.93	5S	2F		View
King	Building Service Employees	Window Cleaner (Scaffold)	$33.93	5S	2F		View
King	Cabinet Makers (In Shop)	Journey Level	$22.74		1		View
King	Carpenters	Acoustical Worker	$74.96	15J	4C		View
King	Carpenters	Bridge, Dock And Wharf Carpenters	$74.96	15J	4C		View
King	Carpenters	Floor Layer & Floor Finisher	$74.96	15J	4C		View
King	Carpenters	Journey Level	$74.96	15J	4C		View
King	Carpenters	Scaffold Erector	$74.96	15J	4C		View
King	Cement Masons	Application of all Composition Mastic	$72.87	15J	4U		View
King	Cement Masons	Application of all Epoxy Material	$72.37	15J	4U		View
King	Cement Masons	Application of all Plastic Material	$72.87	15J	4U		View
King	Cement Masons	Application of Sealing Compound	$72.37	15J	4U		View
King	Cement Masons	Application of Underlayment	$72.87	15J	4U		View
King	Cement Masons	Building General	$72.37	15J	4U		View
King	Cement Masons	Composition or Kalman Floors	$72.87	15J	4U		View
King	Cement Masons	Concrete Paving	$72.37	15J	4U		View
King	Cement Masons	Curb & Gutter Machine	$72.87	15J	4U		View
King	Cement Masons	Curb & Gutter, Sidewalks	$72.37	15J	4U		View
King	Cement Masons	Curing Concrete	$72.37	15J	4U		View
King	Cement Masons	Finish Colored Concrete	$72.87	15J	4U		View
King	Cement Masons	Floor Grinding	$72.87	15J	4U		View
King	Cement Masons	Floor Grinding/Polisher	$72.37	15J	4U		View
King	Cement Masons	Green Concrete Saw, self-powered	$72.87	15J	4U		View
King	Cement Masons	Grouting of all Plates	$72.37	15J	4U		View
King	Cement Masons	Grouting of all Tilt-up Panels	$72.37	15J	4U		View
King	Cement Masons	Gunite Nozzleman	$72.87	15J	4U		View
King	Cement Masons	Hand Powered Grinder	$72.87	15J	4U		View
King	Cement Masons	Journey Level	$72.37	15J	4U		View
King	Cement Masons	Patching Concrete	$72.37	15J	4U		View
King	Cement Masons	Pneumatic Power Tools	$72.87	15J	4U		View
King	Cement Masons	Power Chipping & Brushing	$72.87	15J	4U		View
King	Cement Masons	Sand Blasting Architectural Finish	$72.87	15J	4U		View
King	Cement Masons	Screed & Rodding Machine	$72.87	15J	4U		View
King	Cement Masons	Spackling or Skim Coat Concrete	$72.37	15J	4U		View
King	Cement Masons	Troweling Machine Operator	$72.87	15J	4U		View
King	Cement Masons	Troweling Machine Operator on Colored Slabs	$72.87	15J	4U		View
King	Cement Masons	Tunnel Workers	$72.87	15J	4U		View
King	Divers & Tenders	Bell/Vehicle or Submersible Operator (Not Under Pressure)	$129.71	15J	4C		View
King	Divers & Tenders	Dive Supervisor/Master	$93.94	15J	4C		View

King	Divers & Tenders	Diver	$129.71	15J	4C	8V	View
King	Divers & Tenders	Diver On Standby	$88.94	15J	4C		View
King	Divers & Tenders	Diver Tender	$80.82	15J	4C		View
King	Divers & Tenders	Hyperbaric Worker - Compressed Air Worker 0-30.00 PSI	$93.26	15J	4C		View
King	Divers & Tenders	Hyperbaric Worker - Compressed Air Worker 30.01 - 44.00 PSI	$98.26	15J	4C		View
King	Divers & Tenders	Hyperbaric Worker - Compressed Air Worker 44.01 - 54.00 PSI	$102.26	15J	4C		View
King	Divers & Tenders	Hyperbaric Worker - Compressed Air Worker 54.01 - 60.00 PSI	$107.26	15J	4C		View
King	Divers & Tenders	Hyperbaric Worker - Compressed Air Worker 60.01 - 64.00 PSI	$109.76	15J	4C		View
King	Divers & Tenders	Hyperbaric Worker - Compressed Air Worker 64.01 - 68.00 PSI	$114.76	15J	4C		View
King	Divers & Tenders	Hyperbaric Worker - Compressed Air Worker 68.01 - 70.00 PSI	$116.76	15J	4C		View
King	Divers & Tenders	Hyperbaric Worker - Compressed Air Worker 70.01 - 72.00 PSI	$118.76	15J	4C		View
King	Divers & Tenders	Hyperbaric Worker - Compressed Air Worker 72.01 - 74.00 PSI	$120.76	15J	4C		View
King	Divers & Tenders	Manifold Operator	$80.82	15J	4C		View
King	Divers & Tenders	Manifold Operator Mixed Gas	$85.82	15J	4C		View
King	Divers & Tenders	Remote Operated Vehicle Operator/Technician	$80.82	15J	4C		View
King	Divers & Tenders	Remote Operated Vehicle Tender	$75.41	15J	4C		View
King	Dredge Workers	Assistant Engineer	$79.62	5D	3F		View
King	Dredge Workers	Assistant Mate (Deckhand)	$79.01	5D	3F		View
King	Dredge Workers	Boatmen	$79.62	5D	3F		View
King	Dredge Workers	Engineer Welder	$81.15	5D	3F		View
King	Dredge Workers	Leverman, Hydraulic	$82.77	5D	3F		View
King	Dredge Workers	Mates	$79.62	5D	3F		View
King	Dredge Workers	Oiler	$79.01	5D	3F		View
King	Drywall Applicator	Journey Level	$75.73	15O	11S		View
King	Drywall Tapers	Journey Level	$75.73	15O	11S		View
King	Electrical Fixture Maintenance Workers	Journey Level	$38.69	5L	1E		View
King	Electricians - Inside	Cable Splicer	$109.35	7C	4E		View
King	Electricians - Inside	Cable Splicer (tunnel)	$117.52	7C	4E		View
King	Electricians - Inside	Certified Welder	$105.63	7C	4E		View
King	Electricians - Inside	Certified Welder (tunnel)	$113.43	7C	4E		View
King	Electricians - Inside	Construction Stock Person	$51.53	7C	4E		View
King	Electricians - Inside	Journey Level	$101.92	7C	4E		View
King	Electricians - Inside	Journey Level (tunnel)	$109.35	7C	4E		View
King	Electricians - Motor Shop	Journey Level	$48.68	5A	1B		View
King	Electricians - Powerline Construction	Cable Splicer	$93.00	5A	4D		View
King	Electricians - Powerline Construction	Certified Line Welder	$85.42	5A	4D		View
King	Electricians - Powerline Construction	Groundperson	$55.27	5A	4D		View
King	Electricians - Powerline Construction	Heavy Line Equipment Operator	$85.42	5A	4D		View
King	Electricians - Powerline Construction	Journey Level Lineperson	$85.42	5A	4D		View
King	Electricians - Powerline Construction	Line Equipment Operator	$73.35	5A	4D		View
King	Electricians - Powerline Construction	Meter Installer	$55.27	5A	4D	8W	View
King	Electricians - Powerline Construction	Pole Sprayer	$85.42	5A	4D		View
King	Electricians - Powerline Construction	Powderperson	$63.50	5A	4D		View
King	Electronic Technicians	Journey Level	$65.66	7E	1E		View
King	Elevator Constructors	Mechanic	$111.26	7D	4A		View
King	Elevator Constructors	Mechanic In Charge	$120.27	7D	4A		View
King	Fabricated Precast Concrete Products	All Classifications - In-Factory Work Only	$21.34	5B	1R		View
King	Fence Erectors	Fence Erector	$50.07	15J	11P	8Y	View
King	Fence Erectors	Fence Laborer	$50.07	15J	11P	8Y	View
King	Flaggers	Journey Level	$50.07	15J	11P	8Y	View
King	Glaziers	Journey Level	$79.16	7L	1Y		View
King	Heat & Frost Insulators And Asbestos Workers	Journey Level	$87.15	15H	11C		View
King	Heating Equipment Mechanics	Journey Level	$96.42	7F	1E		View

King	Hod Carriers & Mason Tenders	Journey Level	$62.49	15J	11P	8Y	View
King	Industrial Power Vacuum Cleaner	Journey Level	$16.28		1		View
King	Inland Boatmen	Boat Operator	$61.41	5B	1K		View
King	Inland Boatmen	Cook	$56.48	5B	1K		View
King	Inland Boatmen	Deckhand	$57.48	5B	1K		View
King	Inland Boatmen	Deckhand Engineer	$58.81	5B	1K		View
King	Inland Boatmen	Launch Operator	$58.89	5B	1K		View
King	Inland Boatmen	Mate	$57.31	5B	1K		View
King	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Cleaner Operator	$49.48	15M	11O		View
King	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Foamer Operator	$49.48	15M	11O		View
King	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Grout Truck Operator	$49.48	15M	11O		View
King	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Head Operator	$47.41	15M	11O		View
King	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Technician	$41.20	15M	11O		View
King	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	TV Truck Operator	$44.31	15M	11O		View
King	Insulation Applicators	Journey Level	$74.96	15J	4C		View
King	Ironworkers	Journeyman	$87.80	15K	11N		View
King	Laborers	Air, Gas Or Electric Vibrating Screed	$59.07	15J	11P	8Y	View
King	Laborers	Airtrac Drill Operator	$60.90	15J	11P	8Y	View
King	Laborers	Ballast Regular Machine	$59.07	15J	11P	8Y	View
King	Laborers	Batch Weighman	$50.07	15J	11P	8Y	View
King	Laborers	Brick Pavers	$59.07	15J	11P	8Y	View
King	Laborers	Brush Cutter	$59.07	15J	11P	8Y	View
King	Laborers	Brush Hog Feeder	$59.07	15J	11P	8Y	View
King	Laborers	Burner	$59.07	15J	11P	8Y	View
King	Laborers	Caisson Worker	$60.90	15J	11P	8Y	View
King	Laborers	Carpenter Tender	$59.07	15J	11P	8Y	View
King	Laborers	Cement Dumper-paving	$60.15	15J	11P	8Y	View
King	Laborers	Cement Finisher Tender	$59.07	15J	11P	8Y	View
King	Laborers	Change House Or Dry Shack	$59.07	15J	11P	8Y	View
King	Laborers	Chipping Gun (30 Lbs. And Over)	$60.15	15J	11P	8Y	View
King	Laborers	Chipping Gun (Under 30 Lbs.)	$59.07	15J	11P	8Y	View
King	Laborers	Choker Setter	$59.07	15J	11P	8Y	View
King	Laborers	Chuck Tender	$59.07	15J	11P	8Y	View
King	Laborers	Clary Power Spreader	$60.15	15J	11P	8Y	View
King	Laborers	Clean-up Laborer	$59.07	15J	11P	8Y	View
King	Laborers	Concrete Dumper/Chute Operator	$60.15	15J	11P	8Y	View
King	Laborers	Concrete Form Stripper	$59.07	15J	11P	8Y	View
King	Laborers	Concrete Placement Crew	$60.15	15J	11P	8Y	View
King	Laborers	Concrete Saw Operator/Core Driller	$60.15	15J	11P	8Y	View
King	Laborers	Crusher Feeder	$50.07	15J	11P	8Y	View
King	Laborers	Curing Laborer	$59.07	15J	11P	8Y	View
King	Laborers	Demolition: Wrecking & Moving (Incl. Charred Material)	$59.07	15J	11P	8Y	View
King	Laborers	Ditch Digger	$59.07	15J	11P	8Y	View
King	Laborers	Diver	$60.90	15J	11P	8Y	View
King	Laborers	Drill Operator (Hydraulic, Diamond)	$60.15	15J	11P	8Y	View
King	Laborers	Dry Stack Walls	$59.07	15J	11P	8Y	View
King	Laborers	Dump Person	$59.07	15J	11P	8Y	View
King	Laborers	Epoxy Technician	$59.07	15J	11P	8Y	View
King	Laborers	Erosion Control Worker	$59.07	15J	11P	8Y	View
King	Laborers	Faller & Bucker Chain Saw	$60.15	15J	11P	8Y	View
King	Laborers	Fine Graders	$59.07	15J	11P	8Y	View
King	Laborers	Firewatch	$50.07	15J	11P	8Y	View
King	Laborers	Form Setter	$60.15	15J	11P	8Y	View
King	Laborers	Gabian Basket Builders	$59.07	15J	11P	8Y	View
King	Laborers	General Laborer	$59.07	15J	11P	8Y	View
King	Laborers	Grade Checker & Transit Person	$62.49	15J	11P	8Y	View

King	Laborers	Grinders	$59.07	15J	11P	8Y	View
King	Laborers	Grout Machine Tender	$59.07	15J	11P	8Y	View
King	Laborers	Groutmen (Pressure) Including Post Tension Beams	$60.15	15J	11P	8Y	View
King	Laborers	Guardrail Erector	$59.07	15J	11P	8Y	View
King	Laborers	Hazardous Waste Worker (Level A)	$60.90	15J	11P	8Y	View
King	Laborers	Hazardous Waste Worker (Level B)	$60.15	15J	11P	8Y	View
King	Laborers	Hazardous Waste Worker (Level C)	$59.07	15J	11P	8Y	View
King	Laborers	High Scaler	$60.90	15J	11P	8Y	View
King	Laborers	Jackhammer	$60.15	15J	11P	8Y	View
King	Laborers	Laserbeam Operator	$60.15	15J	11P	8Y	View
King	Laborers	Maintenance Person	$59.07	15J	11P	8Y	View
King	Laborers	Manhole Builder-Mudman	$60.15	15J	11P	8Y	View
King	Laborers	Material Yard Person	$59.07	15J	11P	8Y	View
King	Laborers	Mold Abatement Worker	$59.07	15J	11P	8Y	View
King	Laborers	Motorman-Dinky Locomotive	$62.59	15J	11P	8Y	View
King	Laborers	nozzleman (concrete pump, green cutter when using combination of high pressure air & water on concrete & rock, sandblast, gunite, shotcrete, water blaster, vacuum blaster)	$62.49	15J	11P	8Y	View
King	Laborers	Pavement Breaker	$60.15	15J	11P	8Y	View
King	Laborers	Pilot Car	$50.07	15J	11P	8Y	View
King	Laborers	Pipe Layer (Lead)	$62.49	15J	11P	8Y	View
King	Laborers	Pipe Layer/Tailor	$60.15	15J	11P	8Y	View
King	Laborers	Pipe Pot Tender	$60.15	15J	11P	8Y	View
King	Laborers	Pipe Reliner	$60.15	15J	11P	8Y	View
King	Laborers	Pipe Wrapper	$60.15	15J	11P	8Y	View
King	Laborers	Pot Tender	$59.07	15J	11P	8Y	View
King	Laborers	Powderman	$60.90	15J	11P	8Y	View
King	Laborers	Powderman's Helper	$59.07	15J	11P	8Y	View
King	Laborers	Power Jacks	$60.15	15J	11P	8Y	View
King	Laborers	Railroad Spike Puller - Power	$60.15	15J	11P	8Y	View
King	Laborers	Raker - Asphalt	$62.49	15J	11P	8Y	View
King	Laborers	Re-timberman	$60.90	15J	11P	8Y	View
King	Laborers	Remote Equipment Operator	$60.15	15J	11P	8Y	View
King	Laborers	Rigger/Signal Person	$60.15	15J	11P	8Y	View
King	Laborers	Rip Rap Person	$59.07	15J	11P	8Y	View
King	Laborers	Rivet Buster	$60.15	15J	11P	8Y	View
King	Laborers	Rodder	$60.15	15J	11P	8Y	View
King	Laborers	Scaffold Erector	$59.07	15J	11P	8Y	View
King	Laborers	Scale Person	$59.07	15J	11P	8Y	View
King	Laborers	Sloper (Over 20")	$60.15	15J	11P	8Y	View
King	Laborers	Sloper Sprayer	$59.07	15J	11P	8Y	View
King	Laborers	Spreader (Concrete)	$60.15	15J	11P	8Y	View
King	Laborers	Stake Hopper	$59.07	15J	11P	8Y	View
King	Laborers	Stock Piler	$59.07	15J	11P	8Y	View
King	Laborers	Swinging Stage/Boatswain Chair	$50.07	15J	11P	8Y	View
King	Laborers	Tamper & Similar Electric, Air & Gas Operated Tools	$60.15	15J	11P	8Y	View
King	Laborers	Tamper (Multiple & Self-propelled)	$60.15	15J	11P	8Y	View
King	Laborers	Timber Person - Sewer (Lagger, Shorer & Cribber)	$60.15	15J	11P	8Y	View
King	Laborers	Toolroom Person (at Jobsite)	$59.07	15J	11P	8Y	View
King	Laborers	Topper	$59.07	15J	11P	8Y	View
King	Laborers	Track Laborer	$59.07	15J	11P	8Y	View
King	Laborers	Track Liner (Power)	$60.15	15J	11P	8Y	View
King	Laborers	Traffic Control Laborer	$53.54	15J	11P	9C	View
King	Laborers	Traffic Control Supervisor	$56.73	15J	11P	9C	View
King	Laborers	Truck Spotter	$59.07	15J	11P	8Y	View
King	Laborers	Tugger Operator	$60.15	15J	11P	8Y	View
King	Laborers	Tunnel Work-Compressed Air Worker 0-30 psi	$175.79	15J	11P	9B	View
King	Laborers	Tunnel Work-Compressed Air Worker 30.01-44.00 psi	$180.82	15J	11P	9B	View

King	Laborers	Tunnel Work-Compressed Air Worker 44.01-54.00 psi	$184.50	15J	11P	9B	View
King	Laborers	Tunnel Work-Compressed Air Worker 54.01-60.00 psi	$190.20	15J	11P	9B	View
King	Laborers	Tunnel Work-Compressed Air Worker 60.01-64.00 psi	$192.32	15J	11P	9B	View
King	Laborers	Tunnel Work-Compressed Air Worker 64.01-68.00 psi	$197.42	15J	11P	9B	View
King	Laborers	Tunnel Work-Compressed Air Worker 68.01-70.00 psi	$199.32	15J	11P	9B	View
King	Laborers	Tunnel Work-Compressed Air Worker 70.01-72.00 psi	$201.32	15J	11P	9B	View
King	Laborers	Tunnel Work-Compressed Air Worker 72.01-74.00 psi	$203.32	15J	11P	9B	View
King	Laborers	Tunnel Work-Guage and Lock Tender	$62.59	15J	11P	8Y	View
King	Laborers	Tunnel Work-Miner	$62.59	15J	11P	8Y	View
King	Laborers	Vibrator	$60.15	15J	11P	8Y	View
King	Laborers	Vinyl Seamer	$59.07	15J	11P	8Y	View
King	Laborers	Watchman	$45.51	15J	11P	8Y	View
King	Laborers	Welder	$60.15	15J	11P	8Y	View
King	Laborers	Well Point Laborer	$60.15	15J	11P	8Y	View
King	Laborers	Window Washer/Cleaner	$45.51	15J	11P	8Y	View
King	Laborers - Underground Sewer & Water	General Laborer & Topman	$59.07	15J	11P	8Y	View
King	Laborers - Underground Sewer & Water	Pipe Layer	$60.15	15J	11P	8Y	View
King	Landscape Construction	Landscape Construction/Landscaping Or Planting Laborers	$45.51	15J	11P	8Y	View
King	Landscape Construction	Landscape Operator	$82.25	15J	11G	8X	View
King	Landscape Maintenance	Groundskeeper	$17.87		1		View
King	Lathers	Journey Level	$75.73	15O	11S		View
King	Marble Setters	Journey Level	$69.07	7E	1N		View
King	Metal Fabrication (In Shop)	Fitter/Certified Welder	$42.17	15I	11E		View
King	Metal Fabrication (In Shop)	General Laborer	$30.07	15I	11E		View
King	Metal Fabrication (In Shop)	Mechanic	$43.63	15I	11E		View
King	Metal Fabrication (In Shop)	Welder/Burner	$39.28	15I	11E		View
King	Millwright	Journey Level	$76.51	15J	4C		View
King	Modular Buildings	Cabinet Assembly	$16.28		1		View
King	Modular Buildings	Electrician	$16.28		1		View
King	Modular Buildings	Equipment Maintenance	$16.28		1		View
King	Modular Buildings	Plumber	$16.28		1		View
King	Modular Buildings	Production Worker	$16.28		1		View
King	Modular Buildings	Tool Maintenance	$16.28		1		View
King	Modular Buildings	Utility Person	$16.28		1		View
King	Modular Buildings	Welder	$16.28		1		View
King	Painters	Journey Level	$51.71	6Z	11J		View
King	Pile Driver	Crew Tender	$80.82	15J	4C		View
King	Pile Driver	Journey Level	$75.41	15J	4C		View
King	Plasterers	Journey Level	$70.91	7Q	1R		View
King	Plasterers	Nozzleman	$74.91	7Q	1R		View
King	Playground & Park Equipment Installers	Journey Level	$16.28		1		View
King	Plumbers & Pipefitters	Journey Level	$103.19	6Z	1G		View
King	Power Equipment Operators	Asphalt Plant Operators	$83.62	15J	11G	8X	View
King	Power Equipment Operators	Assistant Engineer	$78.65	15J	11G	8X	View
King	Power Equipment Operators	Barrier Machine (zipper)	$82.88	15J	11G	8X	View
King	Power Equipment Operators	Batch Plant Operator: concrete	$82.88	15J	11G	8X	View
King	Power Equipment Operators	Boat Operator	$83.95	7A	11H	8X	View
King	Power Equipment Operators	Bobcat	$78.65	15J	11G	8X	View
King	Power Equipment Operators	Brokk - Remote Demolition Equipment	$78.65	15J	11G	8X	View
King	Power Equipment Operators	Brooms	$78.65	15J	11G	8X	View
King	Power Equipment Operators	Bump Cutter	$82.88	15J	11G	8X	View
King	Power Equipment Operators	Cableways	$83.62	15J	11G	8X	View
King	Power Equipment Operators	Chipper	$82.88	15J	11G	8X	View
King	Power Equipment Operators	Compressor	$78.65	15J	11G	8X	View
King	Power Equipment Operators	Concrete Finish Machine - Laser Screed	$78.65	15J	11G	8X	View

King	Power Equipment Operators	Concrete Pump - Mounted Or Trailer High Pressure Line Pump, Pump High Pressure	$82.25	15J	11G	8X	View
King	Power Equipment Operators	Concrete Pump: Truck Mount With Boom Attachment Over 42 M	$83.62	15J	11G	8X	View
King	Power Equipment Operators	Concrete Pump: Truck Mount With Boom Attachment Up To 42m	$82.88	15J	11G	8X	View
King	Power Equipment Operators	Conveyors	$82.25	15J	11G	8X	View
King	Power Equipment Operators	Cranes Friction: 200 tons and over	$86.48	7A	11H	8X	View
King	Power Equipment Operators	Cranes, A-frame: 10 tons and under	$78.95	7A	11H	8X	View
King	Power Equipment Operators	Cranes: 100 tons through 199 tons, or 150' of boom (including jib with attachments)	$84.77	7A	11H	8X	View
King	Power Equipment Operators	Cranes: 20 tons through 44 tons with attachments	$83.20	7A	11H	8X	View
King	Power Equipment Operators	Cranes: 200 tons- 299 tons, or 250' of boom including jib with attachments	$85.66	7A	11H	8X	View
King	Power Equipment Operators	Cranes: 300 tons and over or 300' of boom including jib with attachments	$86.48	7A	11H	8X	View
King	Power Equipment Operators	Cranes: 45 tons through 99 tons, under 150' of boom(including jib with attachments)	$83.95	7A	11H	8X	View
King	Power Equipment Operators	Cranes: Friction cranes through 199 tons	$85.66	7A	11H	8X	View
King	Power Equipment Operators	Cranes: through 19 tons with attachments, a-frame over 10 tons	$82.56	7A	11H	8X	View
King	Power Equipment Operators	Crusher	$82.88	15J	11G	8X	View
King	Power Equipment Operators	Deck Engineer/Deck Winches (power)	$82.88	15J	11G	8X	View
King	Power Equipment Operators	Derricks, On Building Work	$83.62	15J	11G	8X	View
King	Power Equipment Operators	Dozers D-9 & Under	$82.25	15J	11G	8X	View
King	Power Equipment Operators	Drill Oilers: Auger Type, Truck Or Crane Mount	$82.25	15J	11G	8X	View
King	Power Equipment Operators	Drilling Machine	$84.46	15J	11G	8X	View
King	Power Equipment Operators	Elevator and man-lift: permanent and shaft type	$78.65	15J	11G	8X	View
King	Power Equipment Operators	Finishing Machine, Bidwell And Gamaco & Similar Equipment	$82.88	15J	11G	8X	View
King	Power Equipment Operators	Forklift: 3000 lbs and over with attachments	$82.25	15J	11G	8X	View
King	Power Equipment Operators	Forklifts: under 3000 lbs. with attachments	$78.65	15J	11G	8X	View
King	Power Equipment Operators	Grade Engineer: Using Blue Prints, Cut Sheets, Etc	$82.88	15J	11G	8X	View
King	Power Equipment Operators	Gradechecker/Stakeman	$78.65	15J	11G	8X	View
King	Power Equipment Operators	Guardrail Punch	$82.88	15J	11G	8X	View
King	Power Equipment Operators	Hard Tail End Dump Articulating Off- Road Equipment 45 Yards. & Over	$83.62	15J	11G	8X	View
King	Power Equipment Operators	Hard Tail End Dump Articulating Off-road Equipment Under 45 Yards	$82.88	15J	11G	8X	View
King	Power Equipment Operators	Horizontal/Directional Drill Locator	$82.25	15J	11G	8X	View
King	Power Equipment Operators	Horizontal/Directional Drill Operator	$82.88	15J	11G	8X	View
King	Power Equipment Operators	Hydralifts/Boom Trucks Over 10 Tons	$82.56	7A	11H	8X	View
King	Power Equipment Operators	Hydralifts/boom trucks: 10 tons and under	$78.95	7A	11H	8X	View
King	Power Equipment Operators	Leverman	$85.33	15J	11G	8X	View
King	Power Equipment Operators	Loader, Overhead, 6 Yards. But Not Including 8 Yards	$83.62	15J	11G	8X	View
King	Power Equipment Operators	Loaders, Overhead Under 6 Yards	$82.88	15J	11G	8X	View
King	Power Equipment Operators	Loaders, Plant Feed	$82.88	15J	11G	8X	View
King	Power Equipment Operators	Loaders: Elevating Type Belt	$82.25	15J	11G	8X	View
King	Power Equipment Operators	Locomotives, All	$82.88	15J	11G	8X	View
King	Power Equipment Operators	Material Transfer Device	$82.88	15J	11G	8X	View
King	Power Equipment Operators	Mechanics: All (Leadmen - $0.50 per hour over mechanic)	$84.46	15J	11G	8X	View
King	Power Equipment Operators	Motor Patrol Graders	$83.62	15J	11G	8X	View
King	Power Equipment Operators	Mucking Machine, Mole, Tunnel Drill, Boring, Road Header And/or Shield	$83.62	15J	11G	8X	View
King	Power Equipment Operators	Oil Distributors, Blower Distribution & Mulch Seeding Operator	$78.65	15J	11G	8X	View
King	Power Equipment Operators	Outside Hoists (Elevators and Manlifts), Air Tuggers, Strato	$82.25	15J	11G	8X	View
King	Power Equipment Operators	Overhead, bridge type Crane: 20 tons through 44 tons	$83.20	7A	11H	8X	View
King	Power Equipment Operators	Overhead, bridge type: 100 tons and over	$84.77	7A	11H	8X	View

King	Power Equipment Operators	Overhead, bridge type: 45 tons through 99 tons	$83.95	7A	11H	8X	View
King	Power Equipment Operators	Pavement Breaker	$78.65	15J	11G	8X	View
King	Power Equipment Operators	Pile Driver (other Than Crane Mount)	$82.88	15J	11G	8X	View
King	Power Equipment Operators	Plant Oiler - Asphalt, Crusher	$82.25	15J	11G	8X	View
King	Power Equipment Operators	Posthole Digger, Mechanical	$78.65	15J	11G	8X	View
King	Power Equipment Operators	Power Plant	$78.65	15J	11G	8X	View
King	Power Equipment Operators	Pumps - Water	$78.65	15J	11G	8X	View
King	Power Equipment Operators	Quad 9, Hd 41, D10 And Over	$83.62	15J	11G	8X	View
King	Power Equipment Operators	Quick Tower: no cab, under 100 feet in height base to boom	$82.88	15J	11G	8X	View
King	Power Equipment Operators	Remote Control Operator On Rubber Tired Earth Moving Equipment	$83.62	15J	11G	8X	View
King	Power Equipment Operators	Rigger and Bellman	$78.95	7A	11H	8X	View
King	Power Equipment Operators	Rigger/Signal Person, Bellman(Certified)	$82.56	7A	11H	8X	View
King	Power Equipment Operators	Rollagon	$83.62	15J	11G	8X	View
King	Power Equipment Operators	Roller, Other Than Plant Mix	$78.65	15J	11G	8X	View
King	Power Equipment Operators	Roller, Plant Mix Or Multi-lift Materials	$82.25	15J	11G	8X	View
King	Power Equipment Operators	Roto-mill, Roto-grinder	$82.88	15J	11G	8X	View
King	Power Equipment Operators	Saws - Concrete	$82.25	15J	11G	8X	View
King	Power Equipment Operators	Scraper, Self Propelled Under 45 Yards	$82.88	15J	11G	8X	View
King	Power Equipment Operators	Scrapers - Concrete & Carry All	$82.25	15J	11G	8X	View
King	Power Equipment Operators	Scrapers, Self-propelled: 45 Yards And Over	$83.62	15J	11G	8X	View
King	Power Equipment Operators	Service Engineers: Equipment	$82.25	15J	11G	8X	View
King	Power Equipment Operators	Shotcrete/Gunite Equipment	$78.65	15J	11G	8X	View
King	Power Equipment Operators	Shovel, Excavator, Backhoe, Tractors Under 15 Metric Tons	$82.25	15J	11G	8X	View
King	Power Equipment Operators	Shovel, Excavator, Backhoe: Over 30 Metric Tons To 50 Metric Tons	$83.62	15J	11G	8X	View
King	Power Equipment Operators	Shovel, Excavator, Backhoes, Tractors: 15 To 30 Metric Tons	$82.88	15J	11G	8X	View
King	Power Equipment Operators	Shovel, Excavator, Backhoes: Over 50 Metric Tons To 90 Metric Tons	$84.46	15J	11G	8X	View
King	Power Equipment Operators	Shovel, Excavator, Backhoes: Over 90 Metric Tons	$85.33	15J	11G	8X	View
King	Power Equipment Operators	Slipform Pavers	$83.62	15J	11G	8X	View
King	Power Equipment Operators	Spreader, Topsider & Screedman	$83.62	15J	11G	8X	View
King	Power Equipment Operators	Subgrader Trimmer	$82.88	15J	11G	8X	View
King	Power Equipment Operators	Tower Bucket Elevators	$82.25	15J	11G	8X	View
King	Power Equipment Operators	Tower Crane: over 175' through 250' in height, base to boom	$85.66	7A	11H	8X	View
King	Power Equipment Operators	Tower crane: up to 175' in height base to boom	$84.77	7A	11H	8X	View
King	Power Equipment Operators	Tower Cranes: over 250' in height from base to boom	$86.48	7A	11H	8X	View
King	Power Equipment Operators	Transporters, All Track Or Truck Type	$83.62	15J	11G	8X	View
King	Power Equipment Operators	Trenching Machines	$82.25	15J	11G	8X	View
King	Power Equipment Operators	Truck Crane Oiler/Driver: 100 tons and over	$83.20	7A	11H	8X	View
King	Power Equipment Operators	Truck crane oiler/driver: under 100 tons	$82.56	7A	11H	8X	View
King	Power Equipment Operators	Truck Mount Portable Conveyor	$82.88	15J	11G	8X	View
King	Power Equipment Operators	Vac Truck (Vactor Guzzler, Hydro Excavator)	$82.88	15J	11G	8X	View
King	Power Equipment Operators	Welder	$83.62	15J	11G	8X	View
King	Power Equipment Operators	Wheel Tractors, Farmall Type	$78.65	15J	11G	8X	View
King	Power Equipment Operators	Yo Yo Pay Dozer	$82.88	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Asphalt Plant Operators	$83.62	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Assistant Engineer	$78.65	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Barrier Machine (zipper)	$82.88	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Batch Plant Operator, Concrete	$82.88	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Boat Operator	$83.95	7A	11H	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Bobcat	$78.65	15J	11G	8X	View

King	Power Equipment Operators- Underground Sewer & Water	Brokk - Remote Demolition Equipment	$78.65	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Brooms	$78.65	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Bump Cutter	$82.88	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Cableways	$83.62	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Chipper	$82.88	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Compressor	$78.65	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Concrete Finish Machine - Laser Screed	$78.65	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Concrete Pump - Mounted Or Trailer High Pressure Line Pump, Pump High Pressure	$82.25	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Concrete Pump: Truck Mount With Boom Attachment Over 42 M	$83.62	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Concrete Pump: Truck Mount With Boom Attachment Up To 42m	$82.88	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Conveyors	$82.25	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Cranes Friction: 200 tons and over	$86.48	7A	11H	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Cranes, A-frame: 10 tons and under	$78.95	7A	11H	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Cranes: 100 tons through 199 tons, or 150' of boom (including jib with attachments)	$84.77	7A	11H	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Cranes: 20 tons through 44 tons with attachments	$83.20	7A	11H	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Cranes: 200 tons- 299 tons, or 250' of boom including jib with attachments	$85.66	7A	11H	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Cranes: 300 tons and over or 300' of boom including jib with attachments	$86.48	7A	11H	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Cranes: 45 tons through 99 tons, under 150' of boom(including jib with attachments)	$83.95	7A	11H	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Cranes: Friction cranes through 199 tons	$85.66	7A	11H	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Cranes: through 19 tons with attachments, a-frame over 10 tons	$82.56	7A	11H	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Crusher	$82.88	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Deck Engineer/Deck Winches (power)	$82.88	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Derricks, On Building Work	$83.62	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Dozers D-9 & Under	$82.25	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Drill Oilers: Auger Type, Truck Or Crane Mount	$82.25	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Drilling Machine	$84.46	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Elevator and man-lift: permanent and shaft type	$78.65	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Finishing Machine, Bidwell And Gamaco & Similar Equipment	$82.88	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Forklift: 3000 lbs and over with attachments	$82.25	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Forklifts: under 3000 lbs. with attachments	$78.65	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Grade Engineer: Using Blue Prints, Cut Sheets, Etc	$82.88	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Gradechecker/Stakeman	$78.65	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Guardrail Punch	$82.88	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Hard Tail End Dump Articulating Off- Road Equipment 45 Yards. & Over	$83.62	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Hard Tail End Dump Articulating Off-road Equipment Under 45 Yards	$82.88	15J	11G	8X	View

King	Power Equipment Operators- Underground Sewer & Water	Horizontal/Directional Drill Locator	$82.25	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Horizontal/Directional Drill Operator	$82.88	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Hydralifts/boom trucks: 10 tons and under	$78.95	7A	11H	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Hydralifts/boom trucks: over 10 tons	$82.56	7A	11H	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Leverman	$85.33	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Loader, Overhead, 6 Yards. But Not Including 8 Yards	$83.62	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Loaders, Overhead Under 6 Yards	$82.88	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Loaders, Plant Feed	$82.88	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Loaders: Elevating Type Belt	$82.25	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Locomotives, All	$82.88	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Material Transfer Device	$82.88	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Mechanics: All (Leadmen - $0.50 per hour over mechanic)	$84.46	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Motor Patrol Graders	$83.62	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Mucking Machine, Mole, Tunnel Drill, Boring, Road Header And/or Shield	$83.62	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Oil Distributors, Blower Distribution & Mulch Seeding Operator	$78.65	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Outside Hoists (Elevators and Manlifts), Air Tuggers, Strato	$82.25	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Overhead, bridge type Crane: 20 tons through 44 tons	$83.20	7A	11H	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Overhead, bridge type: 100 tons and over	$84.77	7A	11H	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Overhead, bridge type: 45 tons through 99 tons	$83.95	7A	11H	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Pavement Breaker	$78.65	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Pile Driver (other Than Crane Mount)	$82.88	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Plant Oiler - Asphalt, Crusher	$82.25	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Posthole Digger, Mechanical	$78.65	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Power Plant	$78.65	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Pumps - Water	$78.65	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Quad 9, Hd 41, D10 And Over	$83.62	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Quick Tower: no cab, under 100 feet in height base to boom	$82.88	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Remote Control Operator On Rubber Tired Earth Moving Equipment	$83.62	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Rigger and Bellman	$78.95	7A	11H	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Rigger/Signal Person, Bellman(Certified)	$82.56	7A	11H	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Rollagon	$83.62	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Roller, Other Than Plant Mix	$78.65	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Roller, Plant Mix Or Multi-lift Materials	$82.25	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Roto-mill, Roto-grinder	$82.88	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Saws - Concrete	$82.25	15J	11G	8X	View

King	Power Equipment Operators- Underground Sewer & Water	Scraper, Self Propelled Under 45 Yards	$82.88	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Scrapers - Concrete & Carry All	$82.25	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Scrapers, Self-propelled: 45 Yards And Over	$83.62	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Shotcrete/Gunite Equipment	$78.65	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Shovel, Excavator, Backhoe, Tractors Under 15 Metric Tons	$82.25	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Shovel, Excavator, Backhoe: Over 30 Metric Tons To 50 Metric Tons	$83.62	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Shovel, Excavator, Backhoes, Tractors: 15 To 30 Metric Tons	$82.88	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Shovel, Excavator, Backhoes: Over 50 Metric Tons To 90 Metric Tons	$84.46	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Shovel, Excavator, Backhoes: Over 90 Metric Tons	$85.33	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Slipform Pavers	$83.62	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Spreader, Topsider & Screedman	$83.62	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Subgrader Trimmer	$82.88	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Tower Bucket Elevators	$82.25	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Tower Crane: over 175' through 250' in height, base to boom	$85.66	7A	11H	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Tower crane: up to 175' in height base to boom	$84.77	7A	11H	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Tower Cranes: over 250' in height from base to boom	$86.48	7A	11H	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Transporters, All Track Or Truck Type	$83.62	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Trenching Machines	$82.25	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Truck Crane Oiler/Driver: 100 tons and over	$83.20	7A	11H	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Truck crane oiler/driver: under 100 tons	$82.56	7A	11H	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Truck Mount Portable Conveyor	$82.88	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Vac Truck (Vactor Guzzler, Hydro Excavator)	$82.88	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Welder	$83.62	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Wheel Tractors, Farmall Type	$78.65	15J	11G	8X	View
King	Power Equipment Operators- Underground Sewer & Water	Yo Yo Pay Dozer	$82.88	15J	11G	8X	View
King	Power Line Clearance Tree Trimmers	Journey Level In Charge	$57.22	5A	4A		View
King	Power Line Clearance Tree Trimmers	Spray Person	$54.32	5A	4A		View
King	Power Line Clearance Tree Trimmers	Tree Equipment Operator	$57.22	5A	4A		View
King	Power Line Clearance Tree Trimmers	Tree Trimmer	$51.18	5A	4A		View
King	Power Line Clearance Tree Trimmers	Tree Trimmer Groundperson	$38.99	5A	4A		View
King	Refrigeration & Air Conditioning Mechanics	Journey Level	$95.89	6Z	1G		View
King	Residential Brick Mason	Journey Level	$69.07	7E	1N		View
King	Residential Carpenters	Journey Level	$36.44		1		View
King	Residential Cement Masons	Journey Level	$46.64		1		View
King	Residential Drywall Applicators	Journey Level	$74.96	15J	4C		View
King	Residential Drywall Tapers	Journey Level	$36.36		1		View
King	Residential Electricians	Journey Level	$48.80		1		View
King	Residential Glaziers	Journey Level	$28.93		1		View
King	Residential Insulation Applicators	Journey Level	$28.18		1		View
King	Residential Laborers	Journey Level	$29.73		1		View
King	Residential Marble Setters	Journey Level	$27.38		1		View
King	Residential Painters	Journey Level	$23.47		1		View
King	Residential Plumbers & Pipefitters	Journey Level	$45.40		1		View

King	Residential Refrigeration & Air Conditioning Mechanics	Journey Level	$96.42	7F	1E		View
King	Residential Sheet Metal Workers	Journey Level	$96.42	7F	1E		View
King	Residential Soft Floor Layers	Journey Level	$57.11	5A	3J		View
King	Residential Sprinkler Fitters (Fire Protection)	Journey Level	$63.61		1		View
King	Residential Stone Masons	Journey Level	$69.07	7E	1N		View
King	Residential Terrazzo Workers	Journey Level	$62.36	7E	1N		View
King	Residential Terrazzo/Tile Finishers	Journey Level	$24.39		1		View
King	Residential Tile Setters	Journey Level	$21.04		1		View
King	Roofers	Journey Level	$64.45	5A	3H		View
King	Roofers	Using Irritable Bituminous Materials	$67.39	5A	3H		View
King	Sheet Metal Workers	Journey Level (Field or Shop)	$96.42	7F	1E		View
King	Shipbuilding & Ship Repair	New Construction Boilermaker	$51.85	7X	4J		View
King	Shipbuilding & Ship Repair	New Construction Carpenter	$51.85	7X	4J		View
King	Shipbuilding & Ship Repair	New Construction Crane Operator	$43.16	7V	1		View
King	Shipbuilding & Ship Repair	New Construction Electrician	$51.85	7X	4J		View
King	Shipbuilding & Ship Repair	New Construction Heat & Frost Insulator	$87.15	15H	11C		View
King	Shipbuilding & Ship Repair	New Construction Laborer	$51.85	7X	4J		View
King	Shipbuilding & Ship Repair	New Construction Machinist	$51.85	7X	4J		View
King	Shipbuilding & Ship Repair	New Construction Operating Engineer	$43.16	7V	1		View
King	Shipbuilding & Ship Repair	New Construction Painter	$51.95	7X	4J		View
King	Shipbuilding & Ship Repair	New Construction Pipefitter	$51.85	7X	4J		View
King	Shipbuilding & Ship Repair	New Construction Rigger	$51.85	7X	4J		View
King	Shipbuilding & Ship Repair	New Construction Sheet Metal	$51.85	7X	4J		View
King	Shipbuilding & Ship Repair	New Construction Shipwright	$51.85	7X	4J		View
King	Shipbuilding & Ship Repair	New Construction Warehouse/Teamster	$43.16	7V	1		View
King	Shipbuilding & Ship Repair	New Construction Welder / Burner	$51.85	7X	4J		View
King	Shipbuilding & Ship Repair	Ship Repair Boilermaker	$51.85	7X	4J		View
King	Shipbuilding & Ship Repair	Ship Repair Carpenter	$51.85	7X	4J		View
King	Shipbuilding & Ship Repair	Ship Repair Crane Operator	$45.06	7Y	4K		View
King	Shipbuilding & Ship Repair	Ship Repair Electrician	$51.85	7X	4J		View
King	Shipbuilding & Ship Repair	Ship Repair Heat & Frost Insulator	$87.15	15H	11C		View
King	Shipbuilding & Ship Repair	Ship Repair Laborer	$51.85	7X	4J		View
King	Shipbuilding & Ship Repair	Ship Repair Machinist	$51.85	7X	4J		View
King	Shipbuilding & Ship Repair	Ship Repair Operating Engineer	$45.06	7Y	4K		View
King	Shipbuilding & Ship Repair	Ship Repair Painter	$51.95	7X	4J		View
King	Shipbuilding & Ship Repair	Ship Repair Pipefitter	$51.85	7X	4J		View
King	Shipbuilding & Ship Repair	Ship Repair Rigger	$51.85	7X	4J		View
King	Shipbuilding & Ship Repair	Ship Repair Sheet Metal	$51.85	7X	4J		View
King	Shipbuilding & Ship Repair	Ship Repair Shipwright	$51.85	7X	4J		View
King	Shipbuilding & Ship Repair	Ship Repair Warehouse / Teamster	$45.06	7Y	4K		View
King	Sign Makers & Installers (Electrical)	Journey Level	$58.04	0	1		View
King	Sign Makers & Installers (Non-Electrical)	Journey Level	$37.08	0	1		View
King	Soft Floor Layers	Journey Level	$66.32	15J	4C		View
King	Solar Controls For Windows	Journey Level	$16.28		1		View
King	Sprinkler Fitters (Fire Protection)	Journey Level	$95.49	5C	1X		View
King	Stage Rigging Mechanics (Non Structural)	Journey Level	$16.28		1		View
King	Stone Masons	Journey Level	$69.07	7E	1N		View
King	Street And Parking Lot Sweeper Workers	Journey Level	$19.09		1		View
King	Surveyors	Assistant Construction Site Surveyor	$82.56	7A	11H	8X	View
King	Surveyors	Chainman	$78.95	7A	11H	8X	View
King	Surveyors	Construction Site Surveyor	$83.95	7A	11H	8X	View
King	Surveyors	Drone Operator (when used in conjunction with survey work only)	$78.95	7A	11H	8X	View
King	Surveyors	Ground Penetrating Radar Operator	$78.95	7A	11H	8X	View
King	Telecommunication Technicians	Journey Level	$65.66	7E	1E		View
King	Telephone Line Construction - Outside	Cable Splicer	$40.36	5A	2B		View
King	Telephone Line Construction - Outside	Hole Digger/Ground Person	$26.92	5A	2B		View
King	Telephone Line Construction - Outside	Telephone Equipment Operator (Light)	$33.74	5A	2B		View
King	Telephone Line Construction - Outside	Telephone Lineperson	$38.15	5A	2B		View
King	Terrazzo Workers	Journey Level	$62.36	7E	1N		View
King	Tile Setters	Journey Level	$62.36	7E	1N		View

King	Tile, Marble & Terrazzo Finishers	Finisher	$53.19	7E	1N		View
King	Traffic Control Stripers	Journey Level	$89.54	15L	1K		View
King	Truck Drivers	Asphalt Mix Over 16 Yards	$74.95	15J	11M	8L	View
King	Truck Drivers	Asphalt Mix To 16 Yards	$74.02	15J	11M	8L	View
King	Truck Drivers	Dump Truck	$74.02	15J	11M	8L	View
King	Truck Drivers	Dump Truck & Trailer	$74.95	15J	11M	8L	View
King	Truck Drivers	Other Trucks	$74.95	15J	11M	8L	View
King	Truck Drivers - Ready Mix	Transit Mix	$74.95	15J	11M	8L	View
King	Well Drillers & Irrigation Pump Installers	Irrigation Pump Installer	$17.71		1		View
King	Well Drillers & Irrigation Pump Installers	Oiler	$16.28		1		View
King	Well Drillers & Irrigation Pump Installers	Well Driller	$18.00		1		View

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Overtime Codes

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

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

B. All hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

C. The first two (2) hours after eight (8) regular hours Monday through Friday and the first ten (10) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All other overtime hours and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

D. The first two (2) hours before or after a five-eight (8) hour workweek day or a four-ten (10) hour workweek day and the first eight (8) hours worked the next day after either workweek shall be paid at one and one-half times the hourly rate of wage. All additional hours worked and all worked on Sundays and holidays shall be paid at double the hourly rate of wage.

E. The first two (2) hours after eight (8) regular hours Monday through Friday and the first eight (8) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All other hours worked Monday through Saturday, and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

F. The first two (2) hours after eight (8) regular hours Monday through Friday and the first ten (10) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All other overtime hours worked, except Labor Day, shall be paid at double the hourly rate of wage. All hours worked on Labor Day shall be paid at three times the hourly rate of wage.

G. The first ten (10) hours worked on Saturdays and the first ten (10) hours worked on a fifth calendar weekday in a four-ten hour schedule, shall be paid at one and one-half times the hourly rate of wage. All hours worked in excess of ten (10) hours per day Monday through Saturday and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

H. All hours worked on Saturdays (except makeup days if work is lost due to inclement weather conditions or equipment breakdown) shall be paid at one and one-half times the hourly rate of wage. All hours worked Monday through Saturday over twelve (12) hours and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

I. All hours worked on Sundays and holidays shall also be paid at double the hourly rate of wage.

J. The first two (2) hours after eight (8) regular hours Monday through Friday and the first ten (10) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked over ten (10) hours Monday through Saturday, Sundays and holidays shall be paid at double the hourly rate of wage.

K. All hours worked on Saturdays and Sundays shall be paid at one and one-half times the hourly rate of wage. All hours worked on holidays shall be paid at double the hourly rate of wage.

M. All hours worked on Saturdays (except makeup days if work is lost due to inclement weather conditions) shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

Overtime Codes Continued

1. N. All hours worked on Saturdays (except makeup days) shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

O. The first ten (10) hours worked on Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays, holidays and after twelve (12) hours, Monday through Friday and after ten (10) hours on Saturday shall be paid at double the hourly rate of wage.

P. All hours worked on Saturdays (except makeup days if circumstances warrant) and Sundays shall be paid at one and one-half times the hourly rate of wage. All hours worked on holidays shall be paid at double the hourly rate of wage.

Q. The first two (2) hours after eight (8) regular hours Monday through Friday and up to ten (10) hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All hours worked in excess of ten (10) hours per day Monday through Saturday and all hours worked on Sundays and holidays (except Christmas day) shall be paid at double the hourly rate of wage. All hours worked on Christmas day shall be paid at two and one-half times the hourly rate of wage.

R. All hours worked on Sundays and holidays shall be paid at two times the hourly rate of wage.

U. All hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays and holidays (except Labor Day) shall be paid at two times the hourly rate of wage. All hours worked on Labor Day shall be paid at three times the hourly rate of wage.

V. All hours worked on Sundays and holidays (except Thanksgiving Day and Christmas day) shall be paid at one and one-half times the hourly rate of wage. All hours worked on Thanksgiving Day and Christmas day shall be paid at double the hourly rate of wage.

W. All hours worked on Saturdays and Sundays (except make-up days due to conditions beyond the control of the employer)) shall be paid at one and one-half times the hourly rate of wage. All hours worked on holidays shall be paid at double the hourly rate of wage.

X. The first four (4) hours after eight (8) regular hours Monday through Friday and the first twelve (12) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked over twelve (12) hours Monday through Saturday, Sundays and holidays shall be paid at double the hourly rate of wage. When holiday falls on Saturday or Sunday, the day before Saturday, Friday, and the day after Sunday, Monday, shall be considered the holiday and all work performed shall be paid at double the hourly rate of wage.

Y. All hours worked outside the hours of 5:00 am and 5:00 pm (or such other hours as may be agreed upon by any employer and the employee) and all hours worked in excess of eight (8) hours per day (10 hours per day for a 4 x 10 workweek) and on Saturdays and holidays (except labor day) shall be paid at one and one-half times the hourly rate of wage. (except for employees who are absent from work without prior approval on a scheduled workday during the workweek shall be paid at the straight-time rate until they have worked 8 hours in a day (10 in a 4 x 10 workweek) or 40 hours during that workweek.) All hours worked Monday through Saturday over twelve (12) hours and all hours worked on Sundays and Labor Day shall be paid at double the hourly rate of wage.

Z. All hours worked on Saturdays and Sundays shall be paid at one and one-half times the hourly rate of wage. All hours worked on holidays shall be paid the straight time rate of pay in addition to holiday pay.

Overtime Codes Continued

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

   B. All hours worked on holidays shall be paid at one and one-half times the hourly rate of wage.

   F. The first eight (8) hours worked on holidays shall be paid at the straight hourly rate of wage in addition to the holiday pay. All hours worked in excess of eight (8) hours on holidays shall be paid at double the hourly rate of wage.

   M. This code appears to be missing. All hours worked on Saturdays, Sundays and holidays shall be paid at double the hourly rate of wage.

   R. All hours worked on Sundays and holidays and all hours worked over sixty (60) in one week shall be paid at double the hourly rate of wage.

   U. All hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All hours worked over 12 hours in a day or on Sundays and holidays shall be paid at double the hourly rate of wage.

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

   F. All hours worked on Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sunday shall be paid at two times the hourly rate of wage. All hours worked on paid holidays shall be paid at two and one-half times the hourly rate of wage including holiday pay.

   H. All work performed on Sundays between March 16th and October 14th and all Holidays shall be compensated for at two (2) times the regular rate of pay. Work performed on Sundays between October 15th and March 15th shall be compensated at one and one half (1-1/2) times the regular rate of pay.

   J. All hours worked between the hours of 10:00 pm and 5:00 am, Monday through Friday, and all hours worked on Saturdays shall be paid at a one and one-half times the hourly rate of wage. All hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

   K. Work performed in excess of eight (8) hours of straight time per day, or ten (10) hours of straight time per day when four ten (10) hour shifts are established, or forty (40) hours of straight time per week, Monday through Friday, or outside the normal 5 am to 6pm shift, and all work on Saturdays shall be paid at one and one-half times the hourly rate of wage. All work performed after 6:00 pm Saturday to 5:00 am Monday and Holidays, and all hours worked in excess of twelve (12) hours in a single shift shall be paid at double the hourly rate of wage.

   After an employee has worked eight (8) hours at an applicable overtime rate, all additional hours shall be at the applicable overtime rate until such time as the employee has had a break of eight (8) hours or more. When an employee returns to work without at least eight (8) hours time off since their previous shift, all such time shall be a continuation of shift and paid at the applicable overtime rate until he/she shall have the eight (8) hours rest period.

Overtime Codes Continued

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

A. All hours worked in excess of eight (8) hours per day or forty (40) hours per week shall be paid at double the hourly rate of wage. All hours worked on Saturdays, Sundays and holidays shall be paid at double the hourly rate of wage

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

D. All hours worked in excess of eight (8) hours per day or forty (40) hours per week shall be paid at double the hourly rate of wage. All hours worked on Saturday, Sundays and holidays shall be paid at double the hourly rate of pay. Rates include all members of the assigned crew.

EXCEPTION:
On all multipole structures and steel transmission lines, switching stations, regulating, capacitor stations, generating plants, industrial plants, associated installations and substations, except those substations whose primary function is to feed a distribution system, will be paid overtime under the following rates:

The first two (2) hours after eight (8) regular hours Monday through Friday of overtime on a regular workday, shall be paid at one and one-half times the hourly rate of wage. All hours in excess of ten (10) hours will be at two (2) times the hourly rate of wage. The first eight (8) hours worked on Saturday will be paid at one and one-half (1-1/2) times the hourly rate of wage. All hours worked in excess of eight (8) hours on Saturday, and all hours worked on Sundays and holidays will be at the double the hourly rate of wage.

All overtime eligible hours performed on the above described work that is energized, shall be paid at the double the hourly rate of wage.

E. The first two (2) hours after eight (8) regular hours Monday through Friday and the first eight (8) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All other hours worked Monday through Saturday, and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

On a four-day, ten-hour weekly schedule, either Monday thru Thursday or Tuesday thru Friday schedule, all hours worked after ten shall be paid at double the hourly rate of wage. The Monday or Friday not utilized in the normal four-day, ten hour work week, and Saturday shall be paid at one and one half (1½) times the regular shift rate for the first eight (8) hours. All other hours worked Monday through Saturday, and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

G. All hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All hours worked Monday through Saturday over twelve (12) hours and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

I. The First eight (8) hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All hours worked in excess of eight (8) per day on Saturdays shall be paid at double the hourly rate of wage. All hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

Overtime Codes Continued

4. J. The first eight (8) hours worked on a Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked in excess of eight (8) hours on a Saturday shall be paid at double the hourly rate of wage. All hours worked over twelve (12) in a day, and all hours worked on Sundays and Holidays shall be paid at double the hourly rate of wage.

K. All hours worked on a Saturday shall be paid at one and one-half times the hourly rate of wage, so long as Saturday is the sixth consecutive day worked. All hours worked over twelve (12) in a day Monday through Saturday, and all hours worked on Sundays and Holidays shall be paid at double the hourly rate of wage.

L. The first twelve (12) hours worked on a Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked on a Saturday in excess of twelve (12) hours shall be paid at double the hourly rate of pay. All hours worked over twelve (12) in a day Monday through Friday, and all hours worked on Sundays shall be paid at double the hourly rate of wage. All hours worked on a holiday shall be paid at one and one-half times the hourly rate of wage, except that all hours worked on Labor Day shall be paid at double the hourly rate of pay.

S. On a four (4) day ten (10) hour workweek scheduled Monday through Thursday, or Tuesday through Friday, work performed in excess of (10) hours shall be paid at one and one half (1-1/2) times the hourly rate of pay. On Monday through Friday, work performed outside the normal work hours of 6:00 a.m. and 6:00 p.m. shall be paid at one and one-half (1-1/2) times the straight time rate, (except for special shifts or multiple shift operations).

All hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All work performed on Sundays and holidays shall be paid at double the hourly rate of wage. When an employee returns to work without at least eight (8) hours time off since their previous shift, all such time shall be a continuation of shift and paid at the applicable overtime rate until such time as the employee has had a break of eight (8) hours.

Multiple Shift Operations: When the first shift of a multiple shift (a two or three shift) operation is started at the basic straight time rate or at a specific overtime rate, all shifts of that day's operation shall be completed at that rate. Special Shifts: The Special Shift Premium is the basic hourly rate of pay plus $2.00 an hour. When due to conditions beyond the control of the employer or when an owner (not acting as the contractor), a government agency or the contract specifications require more than four (4) hours of a special shift can only be performed outside the normal 6am to 6pm shift then the special shift premium will be applied to the basic straight time for the entire shift. When an employee works on a special shift, they shall be paid the special shift premium for each hour worked unless they are in overtime or double-time status. (For example, the special shift premium does not waive the overtime requirements for work performed on Saturday or Sunday).

U. The first four (4) hours after eight (8) regular hours Monday through Friday and the first twelve (12) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. (Except on makeup days if work is lost due to inclement weather, then the first eight (8) hours on Saturday may be paid the regular rate.) All hours worked over twelve (12) hours Monday through Saturday, and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

Overtime Codes Continued

4. X. All hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays and holidays shall be paid at double the hourly rate of wage. Work performed outside the normal shift of 6 am to 6pm shall be paid at one and one-half the straight time rate, (except for special shifts or three shift operations). All work performed on Sundays and holidays shall be paid at double the hourly rate of wage. Shifts may be established when considered necessary by the Employer.

   The Employer may establish shifts consisting of eight (8) or ten (10) hours of work (subject to WAC 296-127-022), that shall constitute a normal forty (40) hour work week. The Employer can change from a 5-eight to a 4-ten hour schedule or back to the other. All hours of work on these shifts shall be paid for at the straight time hourly rate. Work performed in excess of eight hours (or ten hours per day (subject to WAC 296-127-022) shall be paid at one and one-half the straight time rate.

   When due to conditions beyond the control of the Employer, or when contract specifications require that work can only be performed outside the regular day shift, then by mutual agreement a special shift may be worked at the straight time rate, eight (8) hours work for eight (8) hours pay. The starting time shall be arranged to fit such conditions of work.

   When an employee returns to work without at a break of eight (8) hours since their previous shift, all such time shall be a continuation of shift and paid at the applicable overtime rate until such time as the employee has had a break of eight (8) hours.

Overtime Codes Continued

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

   B After an employee has worked eight (8) hours, all additional hours worked shall be paid at the applicable overtime rate until such time as the employee has had a break of eight (8) hours or more.

   C The first two (2) hours after eight (8) regular hours Monday through Friday and the first eight (8) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All other overtime hours worked, except Labor Day, and all hours on Sunday shall be paid at double the hourly rate of wage. All hours worked on Labor Day shall be paid at three times the hourly rate of wage. All non-overtime and non-holiday hours worked between 4:00 pm and 5:00 am, Monday through Friday, shall be paid at a premium rate of 15% over the hourly rate of wage.

   D. All hours worked on Saturdays and holidays shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays shall be paid at double the hourly rate of wage.

   After an employee has worked eight (8) hours, all additional hours worked shall be paid at the applicable overtime rate until such time as the employee has had a break of eight (8) hours or more.

   E. The first two (2) hours after eight (8) regular hours Monday through Friday, the first ten (10) hours on Saturday, and the first ten (10) hours worked on Holidays shall be paid at one and one-half times the hourly rate of wage. All hours worked over ten (10) hours Monday through Saturday, and Sundays shall be paid at double the hourly rate of wage.

   After an employee has worked eight (8) hours, all additional hours worked shall be paid at the applicable overtime rate until such time as the employee has had a break of eight (8) hours or more.

Overtime Codes Continued

11. F. The first two (2) hours after eight (8) regular hours Monday through Friday and the first eight (8) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All other hours worked Monday through Saturday, and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

On a four-day, ten-hour weekly schedule, either Monday thru Thursday or Tuesday thru Friday schedule, all hours worked after ten shall be paid at double the hourly rate of wage. The Monday or Friday not utilized in the normal four-day, ten hour work week, and Saturday shall be paid at one-half times the hourly rate of wage for the first eight (8) hours. All other hours worked Monday through Saturday, and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

G. Work performed in excess of eight (8) hours of straight time per day, or ten (10) hours of straight time per day when four ten (10) hour shifts are established, or forty (40) hours of straight time per week, Monday through Friday, or outside the normal 5 am to 6pm shift, and all work on Saturdays shall be paid at one and one-half times the hourly rate of wage.

All work performed after 6:00 pm Saturday to 5:00 am Monday and Holidays, and all hours worked in excess of twelve (12) hours in a single shift shall be paid at double the hourly rate of wage.

After an employee has worked eight (8) hours at an applicable overtime rate, all additional hours shall be at the applicable overtime rate until such time as the employee has had a break of nine (9) hours or more. When an employee returns to work without at least nine (9) hours time off since their previous shift, all such time shall be a continuation of shift and paid at the applicable overtime rate until he/she shall have the nine (9) hours rest period.

H. Work performed in excess of eight (8) hours of straight time per day, or ten (10) hours of straight time per day when four ten (10) hour shifts are established, or forty (40) hours of straight time per week, Monday through Friday, or outside the normal 5 am to 6pm shift, and all work on Saturdays shall be paid at one and one-half times the hourly rate of wage.

All work performed after 6:00 pm Saturday to 5:00 am Monday and Holidays, and all hours worked in excess of twelve (12) hours in a single shift shall be paid at double the hourly rate of wage.

After an employee has worked eight (8) hours at an applicable overtime rate, all additional hours shall be at the applicable overtime rate until such time as the employee has had a break of ten (10) hours or more. When an employee returns to work without at least ten (10) hours time off since their previous shift, all such time shall be a continuation of shift and paid at the applicable overtime rate until he/she shall have the ten (10) hours rest period.

J. All hours worked on holidays shall be paid at double the hourly rate of wage.

K. On Monday through Friday hours worked outside 4:00 am and 5:00 pm, and the first two (2) hours after eight (8) hours worked shall be paid at one and one-half times the hourly rate. All hours worked over 10 hours per day Monday through Friday, and all hours worked on Saturdays, Sundays, and Holidays worked shall be paid at double the hourly rate of wage.

L. An employee working outside 5:00 am and 5:00 pm shall receive an additional two dollar ($2.00) per hour for all hours worked that shift. All hours worked on holidays shall be paid at one and one-half times the hourly rate of wage. All hours worked on holidays shall be paid at one and one-half times the hourly rate of wage.

Overtime Codes Continued

11. M. On Monday through Friday, the first four (4) hours of overtime after eight (8) hours of straight time work shall be paid at one and one half (1-1/2) times the straight time rate of pay, unless a four (4) day ten (10) hour workweek has been established. On a four (4) day ten (10) hour workweek scheduled Monday through Thursday, or Tuesday through Friday, the first two (2) hours of overtime after ten (10) hours of straight time work shall be paid at one and one half (1-1/2) times the straight time rate of pay.

Work performed outside the normal work hours of 5:00 a.m. and 6:00 p.m. shall be paid at one and one-half (1-1/2) times the straight time rate, (except for special shifts or multiple shift operations). When the first shift of a multiple shift (a two or three shift) operation is started at the basic straight time rate or at a specific overtime rate, all shifts of that day's operation shall be completed at that rate. When due to conditions beyond the control of the Employer or when contract specifications require that work can only be performed outside the regular day shift of 5:00 am to 6:00 pm, then a special shift may be worked at the straight time rate, plus the shift pay premium when applicable. The starting time of work will be arranged to fit such conditions of work. Such shift shall consist of eight (8) hours work for eight (8) hours pay or ten (10) hours work for ten (10) hours pay for four ten shifts.

On Saturday, the first twelve (12) hours of work shall be paid at one and one half (1-1/2) times the straight time rate of pay. All work performed after 6:00 pm Saturday to 5:00 am Monday, all work performed over twelve (12) hours, and all work performed on holidays shall be paid at double the straight time rate of pay.

Shift Pay Premium: In an addition to any overtime already required, all hours worked between the hours of 6:00 pm and 5:00 am shall receive an additional two dollars ($2.00) per hour.

N. All work performed over twelve hours in a shift and all work performed on Sundays and Holidays shall be paid at double the straight time rate.

Any time worked over eight (8) hours on Saturday shall be paid double the straight time rate, except employees assigned to work six 10-hour shifts per week shall be paid double the straight time rate for any time worked on Saturday over 10 hours.

O. All work performed on Saturdays, Sundays, and Holidays shall be paid at one and one half (1-1/2) times the straight time rate of pay.

Overtime Codes Continued

11. P. Work performed in excess of ten (10) hours of straight time per day when four ten (10) hour shifts are established and all work on Saturdays, except for make-up days shall be paid at time and one-half (1 ½) the straight time rate.

Work performed outside the normal work hours of 5:00 a.m. and 6:00 p.m. shall be paid at one and one-half (1-1/2) times the straight time rate, (except for special shifts or multiple shift operations). When the first shift of multiple shift (a two or three shift) operation is started at the basic straight time rate or at a specific overtime rate, all shifts of that day's operation shall be completed at that rate. When due to conditions beyond the control of the Employer or when contract specifications require that work can only be performed outside the regular day shift of 5:00 a.m. to 6:00 p.m., then a special shift may be worked at the straight time rate, plus the shift pay premium when applicable. The starting time of work will be arranged to fit such conditions of work. Such shifts shall consist of eight (8) hours work for eight (8) hours pay or ten (10) hours work for ten (10) hours pay for four ten-hour shifts.

In the event the job is down due to weather conditions, then Saturday may, be worked as a voluntary make-up day at the straight time rate. However, Saturday shall not be utilized as a make-up day when a holiday falls on Friday. All work performed on Sundays and holidays and work in excess of twelve (12) hours per day shall be paid at double (2x) the straight time rate of pay.

After an employee has worked eight (8) hours at an applicable overtime rate, all additional hours shall be at the applicable overtime rate until such time as the employee has had a break of eight (8) hours.

When an employee returns to work without a break of eight (8) hours since their previous shift, all such time shall be a continuation of shift and paid at the applicable overtime rate until such time as the employee has had a break of eight (8) hours.

Q. All hours worked between the hours of 6:00 pm and 6:00 am, Monday through Saturday, shall be paid at a premium rate of 35% over the hourly rate of wage. Work performed on Sundays shall be paid at double time. All hours worked on holidays shall be paid at double the hourly rate of wage.

R On Monday through Saturday hours worked outside 6:00 am and 7:00 pm, and all hours after eight (8) hours worked shall be paid at one and one-half times the hourly rate. All hours worked on Sundays and Holidays shall be paid at double the hourly rate of wage.

When a holiday falls on a Saturday, the Friday before shall be the observed holiday. When a holiday falls on a Sunday, the following Monday shall be the observed holiday.

S. The first ten (10) hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. In the event the job is down due to weather conditions, or other conditions beyond the control of the Employer, then Saturday may be worked at the straight time rate, for the first eight (8) hours, or the first ten (10) hours when a four day ten hour workweek has been established.

All hours worked Monday through Saturday over twelve (12) hours and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

When an employee returns to work without a break of eight (8) hours since their previous shift, all such time shall be a continuation of shift and paid at the applicable overtime rate until such time as the employee has had a break of eight (8) hours.

Holiday Codes

5. A. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, and Christmas Day (7).

B. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, the day before Christmas, and Christmas Day (8).

C. Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (8).

D. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, And Christmas Day (8).

H. Holidays: New Year's Day, Memorial Day, Independence Day, Thanksgiving Day, the Day after Thanksgiving Day, And Christmas (6).

I. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day (6).

K. Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday After Thanksgiving Day, The Day Before Christmas, And Christmas Day (9).

L. Holidays: New Year's Day, Martin Luther King Jr. Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, And Christmas Day (8).

N. Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Veterans' Day, Thanksgiving Day, The Friday After Thanksgiving Day, And Christmas Day (9).

P. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday And Saturday After Thanksgiving Day, The Day Before Christmas, And Christmas Day (9). If A Holiday Falls On Sunday, The Following Monday Shall Be Considered As A Holiday.

Q. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day (6).

R. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Day After Thanksgiving Day, One-Half Day Before Christmas Day, And Christmas Day. (7 1/2).

S. Paid Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, And Christmas Day (7).

Z. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (8).

Holiday Codes Continued

6. G. Paid Holidays: New Year's Day, Martin Luther King Jr. Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Veterans' Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Day, and Christmas Eve Day (11).

H. Paid Holidays: New Year's Day, New Year's Eve Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday After Thanksgiving Day, Christmas Day, The Day After Christmas, And A Floating Holiday (10).

T. Paid Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, The Friday After Thanksgiving Day, The Last Working Day Before Christmas Day, And Christmas Day (9).

Z. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, And Christmas Day (7). If a holiday falls on Saturday, the preceding Friday shall be considered as the holiday. If a holiday falls on Sunday, the following Monday shall be considered as the holiday.

Holiday Codes Continued

7. A. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, And Christmas Day (8). Any Holiday Which Falls On A Sunday Shall Be Observed As A Holiday On The Following Monday. If any of the listed holidays falls on a Saturday, the preceding Friday shall be a regular work day.

B. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, And Christmas Day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

C. Holidays: New Year's Day, Martin Luther King Jr. Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

D. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (8). Unpaid Holidays: President's Day. Any paid holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any paid holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

E. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (7). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

F. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, the last working day before Christmas day and Christmas day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

Holiday Codes Continued

7. G. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day (6). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday.

H. Holidays: New Year's Day, Martin Luther King Jr. Day, Independence Day, Memorial Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, the Last Working Day before Christmas Day and Christmas Day (9). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

I. Holidays: New Year's Day, President's Day, Independence Day, Memorial Day, Labor Day, Thanksgiving Day, The Friday After Thanksgiving Day, The Day Before Christmas Day And Christmas Day (9). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

J. Holidays: New Year's Day, Independence Day, Memorial Day, Labor Day, Thanksgiving Day and Christmas Day (6). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

K. Holidays: New Year's Day, Memorial Day, Independence Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, And Christmas Day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

L. Holidays: New Year's Day, Memorial Day, Labor Day, Independence Day, Thanksgiving Day, the Last Work Day before Christmas Day, And Christmas Day (7). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

N. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (7). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. When Christmas falls on a Saturday, the preceding Friday shall be observed as a holiday.

P. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, And Christmas Day (7). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday.

Q. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, the Last Working Day before Christmas Day and Christmas Day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. If any of the listed holidays falls on a Saturday, the preceding Friday shall be a regular work day.

S. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, Christmas Day, the Day after Christmas, and A Floating Holiday (9). If any of the listed holidays falls on a Sunday, the day observed by the Nation shall be considered a holiday and compensated accordingly.

V. Holidays: New Year's Day, President's Birthday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Day, the day before or after Christmas, and the day before or after New Year's Day. If any of the above listed holidays falls on a Sunday, the day observed by the Nation shall be considered a holiday and compensated accordingly.

W. Holidays: New Year's Day, Day After New Year's, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Eve Day, Christmas Day, the day after Christmas, the day before New Year's Day, and a Floating Holiday.

Holiday Codes Continued

7. X. Holidays: New Year's Day, Day before or after New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Day, and the day before or after Christmas day. If a holiday falls on a Saturday or on a Friday that is the normal day off, then the holiday will be taken on the last normal workday. If the holiday falls on a Monday that is the normal day off or on a Sunday, then the holiday will be taken on the next normal workday.

Y. Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, and Christmas Day. (8) If the holiday falls on a Sunday, then the day observed by the federal government shall be considered a holiday and compensated accordingly.

Z. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, Christmas Eve, and Christmas Day (9). Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday. Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday.

Holiday Codes Continued

15. G. New Year's Day, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, The Friday After Thanksgiving Day, the last scheduled workday before Christmas, and Christmas Day (9). If any of the listed holidays falls on a Sunday, the day observed by the Nation shall be considered a holiday and compensated accordingly.

H. Holidays: New Year's Day, Martin Luther King Jr. Day, Independence Day, Memorial Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, the Last Working Day before Christmas Day and Christmas Day (9). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

I. Holidays: New Year's Day, President's Day, Independence Day, Memorial Day, Labor Day, Thanksgiving Day, The Friday After Thanksgiving Day, The Day Before Christmas Day And Christmas Day (9). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

J. Holidays: New Year's Day, Martin Luther King Jr. Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, and Christmas Day (9). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. If any of the listed holidays falls on a Saturday, the preceding Friday shall be a regular work day.

K. Holidays: New Year's Day, Memorial Day, Independence Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, And Christmas Day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

L. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, the Friday after Thanksgiving Day, and Christmas Day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. If any of the listed holidays falls on a Saturday, the preceding Friday shall be a regular work day.

M. Holidays: New Year's Day, Martin Luther King Jr. Day, Independence Day, Memorial Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Eve Day and Christmas Day (9). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. If any of the listed holidays falls on a Saturday, the preceding Friday shall be a regular work day.

Holiday Codes Continued

15. N. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, the Friday after Thanksgiving Day, and Christmas Day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday.

O. Holidays: New Year's Day, Martin Luther King Jr. Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, the day before Christmas day, and Christmas Day (10). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday.

Note Codes

8. D. Workers working with supplied air on hazmat projects receive an additional $1.00 per hour.

L. Workers on hazmat projects receive additional hourly premiums as follows -Level A: $0.75, Level B: $0.50, And Level C: $0.25.

M. Workers on hazmat projects receive additional hourly premiums as follows: Levels A & B: $1.00, Levels C & D: $0.50.

N. Workers on hazmat projects receive additional hourly premiums as follows -Level A: $1.00, Level B: $0.75, Level C: $0.50, And Level D: $0.25.

S. Effective August 31, 2012 – A Traffic Control Supervisor shall be present on the project whenever flagging or spotting or other traffic control labor is being utilized. Flaggers and Spotters shall be posted where shown on approved Traffic Control Plans or where directed by the Engineer. All flaggers and spotters shall possess a current flagging card issued by the State of Washington, Oregon, Montana, or Idaho. This classification is only effective on or after August 31, 2012.

T. Effective August 31, 2012 – A Traffic Control Laborer performs the setup, maintenance and removal of all temporary traffic control devices and construction signs necessary to control vehicular, bicycle, and pedestrian traffic during construction operations. Flaggers and Spotters shall be posted where shown on approved Traffic Control Plans or where directed by the Engineer. All flaggers and spotters shall possess a current flagging card issued by the State of Washington, Oregon, Montana, or Idaho. This classification is only effective on or after August 31, 2012.

U. Workers on hazmat projects receive additional hourly premiums as follows – Class A Suit: $2.00, Class B Suit: $1.50, And Class C Suit: $1.00. Workers performing underground work receive an additional $0.40 per hour for any and all work performed underground, including operating, servicing and repairing of equipment. The premium for underground work shall be paid for the entire shift worked. Workers who work suspended by a rope or cable receive an additional $0.50 per hour. The premium for work suspended shall be paid for the entire shift worked. Workers who do "pioneer" work (break open a cut, build road, etc.) more than one hundred fifty (150) feet above grade elevation receive an additional $0.50 per hour.

Note Codes Continued

8. V. In addition to the hourly wage and fringe benefits, the following depth and enclosure premiums shall be paid. The premiums are to be calculated for the maximum depth and distance into an enclosure that a diver reaches in a day. The premiums are to be paid one time for the day and are not used in calculating overtime pay.

   Depth premiums apply to depths of fifty feet or more. Over 50' to 100' - $2.00 per foot for each foot over 50 feet. Over 101' to 150' - $3.00 per foot for each foot over 101 feet. Over 151' to 220' - $4.00 per foot for each foot over 220 feet. Over 221' - $5.00 per foot for each foot over 221 feet.

   Enclosure premiums apply when divers enter enclosures (such as pipes or tunnels) where there is no vertical ascent and is measured by the distance travelled from the entrance. 25’ to 300’ - $1.00 per foot from entrance. 300’ to 600’ - $1.50 per foot beginning at 300’. Over 600’ - $2.00 per foot beginning at 600’.

   W. Meter Installers work on single phase 120/240V self-contained residential meters. The Lineman/Groundmen rates would apply to meters not fitting this description.

   X. Workers on hazmat projects receive additional hourly premiums as follows - Class A Suit: $2.00, Class B Suit: $1.50, Class C Suit: $1.00, and Class D Suit: $0.50. Special Shift Premium: Basic hourly rate plus $2.00 per hour.

   When due to conditions beyond the control of the Employer or when an owner (not acting as the contractor), a government agency or the contract specifications requires that work can only be performed outside the normal 5 am to 6pm shift, then the special shift premium will be applied to the basic hourly rate. When an employee works on a special shift, they shall be paid a special shift premium for each hour worked unless they are in OT or Double-time status. (For example, the special shift premium does not waive the overtime requirements for work performed on Saturday or Sunday.)

   Y. Tide Work: When employees are called out between the hours of 6:00 p.m. and 6:00 a.m. to work on tide work (work located in the tide plane) all time worked shall be at one and one-half times the hourly rate of pay.

   Swinging Stage/Boatswains Chair: Employees working on a swinging state or boatswains chair or under conditions that require them to be tied off to allow their hands to be free shall receive seventy-five cents ($0.75) per hour above the classification rate.

   Z. Workers working with supplied air on hazmat projects receive an additional $1.00 per hour.

   Special Shift Premium: Basic hourly rate plus $2.00 per hour. When due to conditions beyond the control of the Employer or when an owner (not acting as a contractor), a government agency or the contract specifications require that more than (4) hours of a special shift can only be performed outside the normal 6 am to 6pm shift, then the special shift premium will be applied to the basic straight time for the entire shift. When an employee works on a special shift, they will be paid a special shift premium for each hour worked unless they are in overtime or double-time status. (For example, the special shift premium does not waive the overtime requirements for work performed on Saturday or Sunday.)

Note Codes Continued

9. A. Workers working with supplied air on hazmat projects receive an additional $1.00 per hour.

Special Shift Premium: Basic hourly rate plus $2.00 per hour. When due to conditions beyond the control of the Employer or when an owner (not acting as the contractor), a government agency or the contract specifications require that more than four (4) hours of a special shift can only be performed outside the normal 6 am to 6pm shift, then the special shift premium will be applied to the basic straight time for the entire shift. When an employee works on a special shift, they shall be paid a special shift premium for each hour worked unless they are in overtime or double-time status. (For example, the special shift premium does not waive the overtime requirements for work performed on Saturday or Sunday.)

Certified Crane Operator Premium: Crane operators requiring certifications shall be paid $0.50 per hour above their classification rate.

Boom Pay Premium: All cranes including tower shall be paid as follows based on boom length:

(A) – 130’ to 199’ – $0.50 per hour over their classification rate.
(B) – 200’ to 299’ – $0.80 per hour over their classification rate.
(C) – 300’ and over – $1.00 per hour over their classification rate.

B. The highest pressure registered on the gauge for an accumulated time of more than fifteen (15) minutes during the shift shall be used in determining the scale paid.

Tide Work: When employees are called out between the hours of 6:00 p.m. and 6:00 a.m. to work on tide work (work located in the tide plane) all time worked shall be at one and one-half times the hourly rate of pay. Swinging Stage/Boatswains Chair: Employees working on a swinging stage or boatswains chair or under conditions that require them to be tied off to allow their hands to be free shall receive seventy-five cents ($0.75) per hour above the classification rate.

C. Tide Work: When employees are called out between the hours of 6:00 p.m. and 6:00 a.m. to work on tide work (work located in the tide plane) all time worked shall be at one and one-half times the hourly rate of pay. Swinging Stage/Boatswains Chair: Employees working on a swinging stage or boatswains chair or under conditions that require them to be tied off to allow their hands to be free shall receive seventy-five cents ($0.75) per hour above the classification rate.

Effective August 31, 2012 – A Traffic Control Supervisor shall be present on the project whenever flagging or spotting or other traffic control labor is being utilized. A Traffic Control Laborer performs the setup, maintenance and removal of all temporary traffic control devices and construction signs necessary to control vehicular, bicycle, and pedestrian traffic during construction operations. Flaggers and Spotters shall be posted where shown on approved Traffic Control Plans or where directed by the Engineer. All flaggers and spotters shall possess a current flagging card issued by the State of Washington, Oregon, Montana, or Idaho. These classifications are only effective on or after August 31, 2012.

D. Industrial Painter wages are required for painting within industrial facilities such as treatment plants, pipelines, towers, dams, bridges, power generation facilities and manufacturing facilities such as chemical plants, etc., or anywhere abrasive blasting is necessary to prepare surfaces, or hazardous materials encapsulation is required.

E. Heavy Construction includes construction, repair, alteration or additions to the production, fabrication or manufacturing portions of industrial or manufacturing plants, hydroelectric or nuclear power plants and atomic reactor construction. Workers on hazmat projects receive additional hourly premiums as follows -Level A: $1.00, Level B: $0.75, Level C: $0.50, And Level D: $0.25.

Note Codes Continued

9. F. Industrial Painter wages are required for painting within industrial facilities such as treatment plants, pipelines, towers, dams, power generation facilities and manufacturing facilities such as chemical plants, etc., or anywhere abrasive blasting is necessary to prepare surfaces, or hazardous materials encapsulation is required.

H. One (1) person crew shall consist of a Party Chief. (Total Station or similar one (1) person survey system). Two (2) person survey party shall consist of a least a Party Chief and a Chain Person. Three (3) person survey party shall consist of at least a Party Chief, an Instrument Person, and a Chain Person.

Washington State Department of Labor and Industries
Policy Statement
(Regarding the Production of "Standard" or "Non-standard" Items)

Below is the department's (State L&I's) list of criteria to be used in determining whether a prefabricated item is "standard" or "non-standard". For items not appearing on WSDOT's predetermined list, these criteria shall be used by the Contractor (and the Contractor's subcontractors, agents to subcontractors, suppliers, manufacturers, and fabricators) to determine coverage under RCW 39.12. The production, in the State of Washington, of non-standard items is covered by RCW 39.12, and the production of standard items is not. The production of any item outside the State of Washington is not covered by RCW 39.12.

1. Is the item fabricated for a public works project? If not, it is not subject to RCW 39.12. If it is, go to question 2.

2. Is the item fabricated on the public works jobsite? If it is, the work is covered under RCW 39.12. If not, go to question 3.

3. Is the item fabricated in an assembly/fabrication plant set up for, and dedicated primarily to, the public works project? If it is, the work is covered by RCW 39.12. If not, go to question 4.

4. Does the item require any assembly, cutting, modification or other fabrication by the supplier? If not, the work is not covered by RCW 39.12. If yes, go to question 5.

5. Is the prefabricated item intended for the public works project typically an inventory item which could reasonably be sold on the general market? If not, the work is covered by RCW 39.12. If yes, go to question 6.

6. Does the specific prefabricated item, generally defined as standard, have any unusual characteristics such as shape, type of material, strength requirements, finish, etc? If yes, the work is covered under RCW 39.12.

Any firm with questions regarding the policy, WSDOT's Predetermined List, or for determinations of covered and non-covered workers shall be directed to State L&I at (360) 902-5330.

WSDOT's
Predetermined List for
Suppliers - Manufactures - Fabricator

Below is a list of potentially prefabricated items, originally furnished by WSDOT to Washington State Department of Labor and Industries, that may be considered non-standard and therefore covered by the prevailing wage law, RCW 39.12. Items marked with an X in the "YES" column should be considered to be non-standard and therefore covered by RCW 39.12. Items marked with an X in the "NO" column should be considered to be standard and therefore not covered. Of course, exceptions to this general list may occur, and in that case shall be evaluated according to the criteria described in State and L&I's policy statement.

	ITEM DESCRIPTION	YES	NO
1.	Metal rectangular frames, solid metal covers, herringbone grates, and bi-directional vaned grates for Catch Basin Types 1, 1L, 1P, and 2 and Concrete Inlets. See Std. Plans		X
2.	Metal circular frames (rings) and covers, circular grates, and prefabricated ladders for Manhole Types 1, 2, and 3, Drywell Types 1, 2, and 3 and Catch Basin Type 2. See Std. Plans		X
3.	Prefabricated steel grate supports and welded grates, metal frames and dual vaned grates, and Type 1, 2, and 3 structural tubing grates for Drop Inlets. See Std. Plans.		X
4.	Concrete Pipe - Plain Concrete pipe and reinforced concrete pipe Class 2 to 5 sizes smaller than 60 inch diameter.		X
5.	Concrete Pipe - Plain Concrete pipe and reinforced concrete pipe Class 2 to 5 sizes larger than 60 inch diameter.		X
6.	Corrugated Steel Pipe - Steel lock seam corrugated pipe for culverts and storm sewers, sizes 30 inch to 120 inches in diameter. May also be treated, 1 thru 5.		X
7.	Corrugated Aluminum Pipe - Aluminum lock seam corrugated pipe for culverts and storm sewers, sizes 30 inch to 120 inches in diameter. May also be treated, #5.		X

	ITEM DESCRIPTION	YES	NO
8.	Anchor Bolts & Nuts - Anchor Bolts and Nuts, for mounting sign structures, luminaries and other items, shall be made from commercial bolt stock. See Contract Plans and Std. Plans for size and material type.		X
9.	Aluminum Pedestrian Handrail - Pedestrian handrail conforming to the type and material specifications set forth in the contract plans. Welding of aluminum shall be in accordance with Section 9-28.14(3).	X	
10.	Major Structural Steel Fabrication - Fabrication of major steel items such as trusses, beams, girders, etc., for bridges.	X	
11.	Minor Structural Steel Fabrication - Fabrication of minor steel Items such as special hangers, brackets, access doors for structures, access ladders for irrigation boxes, bridge expansion joint systems, etc., involving welding, cutting, punching and/or boring of holes. See Contact Plans for item description and shop drawings.	X	
12.	Aluminum Bridge Railing Type BP - Metal bridge railing conforming to the type and material specifications set forth in the Contract Plans. Welding of aluminum shall be in accordance with Section 9-28.14(3).		X
13.	Concrete Piling--Precast-Prestressed concrete piling for use as 55 and 70 ton concrete piling. Concrete to conform to Section 9-19.1 of Std. Spec..	X	
14.	Precast Manhole Types 1, 2, and 3 with cones, adjustment sections and flat top slabs. See Std. Plans.		X
15.	Precast Drywell Types 1, 2, and with cones and adjustment Sections. See Std. Plans.		X
16.	Precast Catch Basin - Catch Basin type 1, 1L, 1P, and 2 With adjustment sections. See Std. Plans.		X

	ITEM DESCRIPTION	YES	NO
17.	Precast Concrete Inlet - with adjustment sections, See Std. Plans		X
18.	Precast Drop Inlet Type 1 and 2 with metal grate supports. See Std. Plans.		X
19.	Precast Grate Inlet Type 2 with extension and top units. See Std. Plans		X
20.	Metal frames, vaned grates, and hoods for Combination Inlets. See Std. Plans		X
21.	Precast Concrete Utility Vaults - Precast Concrete utility vaults of various sizes. Used for in ground storage of utility facilities and controls. See Contract Plans for size and construction requirements. Shop drawings are to be provided for approval prior to casting		X
22.	Vault Risers - For use with Valve Vaults and Utilities X Vaults.		X
23.	Valve Vault - For use with underground utilities. See Contract Plans for details.		X
24.	Precast Concrete Barrier - Precast Concrete Barrier for use as new barrier or may also be used as Temporary Concrete Barrier. Only new state approved barrier may be used as permanent barrier.		X
25.	Reinforced Earth Wall Panels – Reinforced Earth Wall Panels in size and shape as shown in the Plans. Fabrication plant has annual approval for methods and materials to be used. See Shop Drawing. Fabrication at other locations may be approved, after facilities inspection, contact HQ. Lab.	X	
26.	Precast Concrete Walls - Precast Concrete Walls - tilt-up wall panel in size and shape as shown in Plans. Fabrication plant has annual approval for methods and materials to be used	X	

	ITEM DESCRIPTION	YES	NO
27.	Precast Railroad Crossings - Concrete Crossing Structure Slabs.	X	
28.	12, 18 and 26 inch Standard Precast Prestressed Girder – Standard Precast Prestressed Girder for use in structures. Fabricator plant has annual approval of methods and materials to be used. Shop Drawing to be provided for approval prior to casting girders. See Std. Spec. Section 6-02.3(25)A	X	
29.	Prestressed Concrete Girder Series 4-14 - Prestressed Concrete Girders for use in structures. Fabricator plant has annual approval of methods and materials to be used. Shop Drawing to be provided for approval prior to casting girders. See Std. Spec. Section 6-02.3(25)A .	X	
30.	Prestressed Tri-Beam Girder - Prestressed Tri-Beam Girders for use in structures. Fabricator plant has annual approval of methods and materials to be used. Shop Drawing to be provided for approval prior to casting girders. See Std. Spec. Section 6-02.3(25)A	X	
31.	Prestressed Precast Hollow-Core Slab – Precast Prestressed Hollow-core slab for use in structures. Fabricator plant has annual approval of methods and materials to be used. Shop Drawing to be provided for approval prior to casting girders. See Std. Spec. Section 6-02.3(25)A.	X	
32.	Prestressed-Bulb Tee Girder - Bulb Tee Prestressed Girder for use in structures. Fabricator plant has annual approval of methods and materials to be used. Shop Drawing to be provided for approval prior to casting girders. See Std. Spec. Section 6-02.3(25)A	X	
33.	Monument Case and Cover See Std. Plan.		X

	ITEM DESCRIPTION	YES	NO
34.	Cantilever Sign Structure - Cantilever Sign Structure fabricated from steel tubing meeting AASHTO-M-183. See Std. Plans, and Contract Plans for details. The steel structure shall be galvanized after fabrication in accordance with AASHTO-M-111.	X	
35.	Mono-tube Sign Structures - Mono-tube Sign Bridge fabricated to details shown in the Plans. Shop drawings for approval are required prior to fabrication.	X	
36.	Steel Sign Bridges - Steel Sign Bridges fabricated from steel tubing meeting AASHTO-M-138 for Aluminum Alloys. See Std. Plans, and Contract Plans for details. The steel structure shall be galvanized after fabrication in accordance with AASHTO-M-111.	X	
37.	Steel Sign Post - Fabricated Steel Sign Posts as detailed in Std Plans. Shop drawings for approval are to be provided prior to fabrication		X
38.	Light Standard-Prestressed - Spun, prestressed, hollow concrete poles.	X	
39.	Light Standards - Lighting Standards for use on highway illumination systems, poles to be fabricated to conform with methods and materials as specified on Std. Plans. See Specia Provisions for pre-approved drawings.	X	
40.	Traffic Signal Standards - Traffic Signal Standards for use on highway and/or street signal systems. Standards to be fabricated to conform with methods and material as specified on Std. Plans. See Special Provisions for pre-approved drawings	X	
41.	Precast Concrete Sloped Mountable Curb (Single and DualFaced) See Std. Plans.		X

	ITEM DESCRIPTION	YES	NO
42.	Traffic Signs - Prior to approval of a Fabricator of Traffic Signs, the sources of the following materials must be submitted and approved for reflective sheeting, legend material, and aluminum sheeting. **NOTE:** *** Fabrication inspection required. Only signs tagged "Fabrication Approved" by WSDOT Sign Fabrication Inspector to be installed	X	X
		Custom Message	Std Signing Message
43.	Cutting & bending reinforcing steel		X
44.	Guardrail components	X	X
		Custom End Sec	Standard Sec
45.	Aggregates/Concrete mixes	Covered by WAC 296-127-018	
46.	Asphalt	Covered by WAC 296-127-018	
47.	Fiber fabrics		X
48.	Electrical wiring/components		X
49.	treated or untreated timber pile		X
50.	Girder pads (elastomeric bearing)	X	
51.	Standard Dimension lumber		X
52.	Irrigation components		X

ITEM DESCRIPTION	YES	NO
53. Fencing materials		X
54. Guide Posts		X
55. Traffic Buttons		X
56. Epoxy		X
57. Cribbing		X
58. Water distribution materials		X
59. Steel "H" piles		X
60. Steel pipe for concrete pile casings		X
61. Steel pile tips, standard		X
62. Steel pile tips, custom	X	

Prefabricated items specifically produced for public works projects that are prefabricated in a county other than the county wherein the public works project is to be completed, the wage for the offsite prefabrication shall be the applicable prevailing wage for the county in which the actual prefabrication takes place.

It is the manufacturer of the prefabricated product to verify that the correct county wage rates are applied to work they perform.

See RCW 39.12.010
(The definition of "locality" in RCW 39.12.010(2) contains the phrase "wherein the physical work is being performed." The department interprets this phrase to mean the actual work site.

WSDOT's List of State Occupations not applicable to Heavy and Highway Construction Projects

This project is subject to the state hourly minimum rates for wages and fringe benefits in the contract provisions, as provided by the state Department of Labor and Industries.
The following list of occupations, is comprised of those occupations that are not normally used in the construction of heavy and highway projects.
When considering job classifications for use and / or payment when bidding on, or building heavy and highway construction projects for, or administered by WSDOT, these Occupations will be excepted from the included "Washington State Prevailing Wage Rates For Public Work Contracts" documents.

- Building Service Employees
- Electrical Fixture Maintenance Workers
- Electricians - Motor Shop
- Heating Equipment Mechanics
- Industrial Engine and Machine Mechanics
- Industrial Power Vacuum Cleaners
- Inspection, Cleaning, Sealing of Water Systems by Remote Control
- Laborers - Underground Sewer & Water
- Machinists (Hydroelectric Site Work)
- Modular Buildings
- Playground & Park Equipment Installers
- Power Equipment Operators - Underground Sewer & Water
- Residential *** ALL ASSOCIATED RATES ***
- Sign Makers and Installers (Non-Electrical)
- Sign Makers and Installers (Electrical)
- Stage Rigging Mechanics (Non Structural)

The following occupations may be used only as outlined in the preceding text concerning "WSDOT's list for Suppliers - Manufacturers - Fabricators"

- Fabricated Precast Concrete Products
- Metal Fabrication (In Shop)

Definitions for the Scope of Work for prevailing wages may be found at the Washington State Department of Labor and Industries web site and in WAC Chapter 296-127.

Washington State Department of Labor and Industries
Policy Statements
(Regarding Production and Delivery of Gravel, Concrete, Asphalt, etc.)

WAC 296-127-018 Agency filings affecting this section

Coverage and exemptions of workers involved in the production and delivery of gravel, concrete, asphalt, or similar materials.

(1) The materials covered under this section include but are not limited to: Sand, gravel, crushed rock, concrete, asphalt, or other similar materials.

(2) All workers, regardless of by whom employed, are subject to the provisions of chapter 39.12 RCW when they perform any or all of the following functions:

(a) They deliver or discharge any of the above-listed materials to a public works project site:

(i) At one or more point(s) directly upon the location where the material will be incorporated into the project; or

(ii) At multiple points at the project; or

(iii) Adjacent to the location and coordinated with the incorporation of those materials.

(b) They wait at or near a public works project site to perform any tasks subject to this section of the rule.

(c) They remove any materials from a public works construction site pursuant to contract requirements or specifications (e.g., excavated materials, materials from demolished structures, clean-up materials, etc.).

(d) They work in a materials production facility (e.g., batch plant, borrow pit, rock quarry, etc.,) which is established for a public works project for the specific, but not necessarily exclusive, purpose of supplying materials for the project.

(e) They deliver concrete to a public works site regardless of the method of incorporation.

(f) They assist or participate in the incorporation of any materials into the public works project.

(3) All travel time that relates to the work covered under subsection (2) of this section requires the payment of prevailing wages. Travel time includes time spent waiting to load, loading, transporting, waiting to unload, and delivering materials. Travel time would include all time spent in travel in support of a public works project whether the vehicle is empty or full. For example, travel time spent returning to a supply source to obtain another load of material for use on a public works site or returning to the public works site to obtain another load of excavated material is time spent in travel that is subject to prevailing wage. Travel to a supply source, including travel from a public works site, to obtain materials for use on a private project would not be travel subject to the prevailing wage.

(4) Workers are not subject to the provisions of chapter 39.12 RCW when they deliver materials to a stockpile.

(a) A "stockpile" is defined as materials delivered to a pile located away from the site of incorporation such that the stockpiled materials must be physically moved from the stockpile and transported to another location on the project site in order to be incorporated into the project.

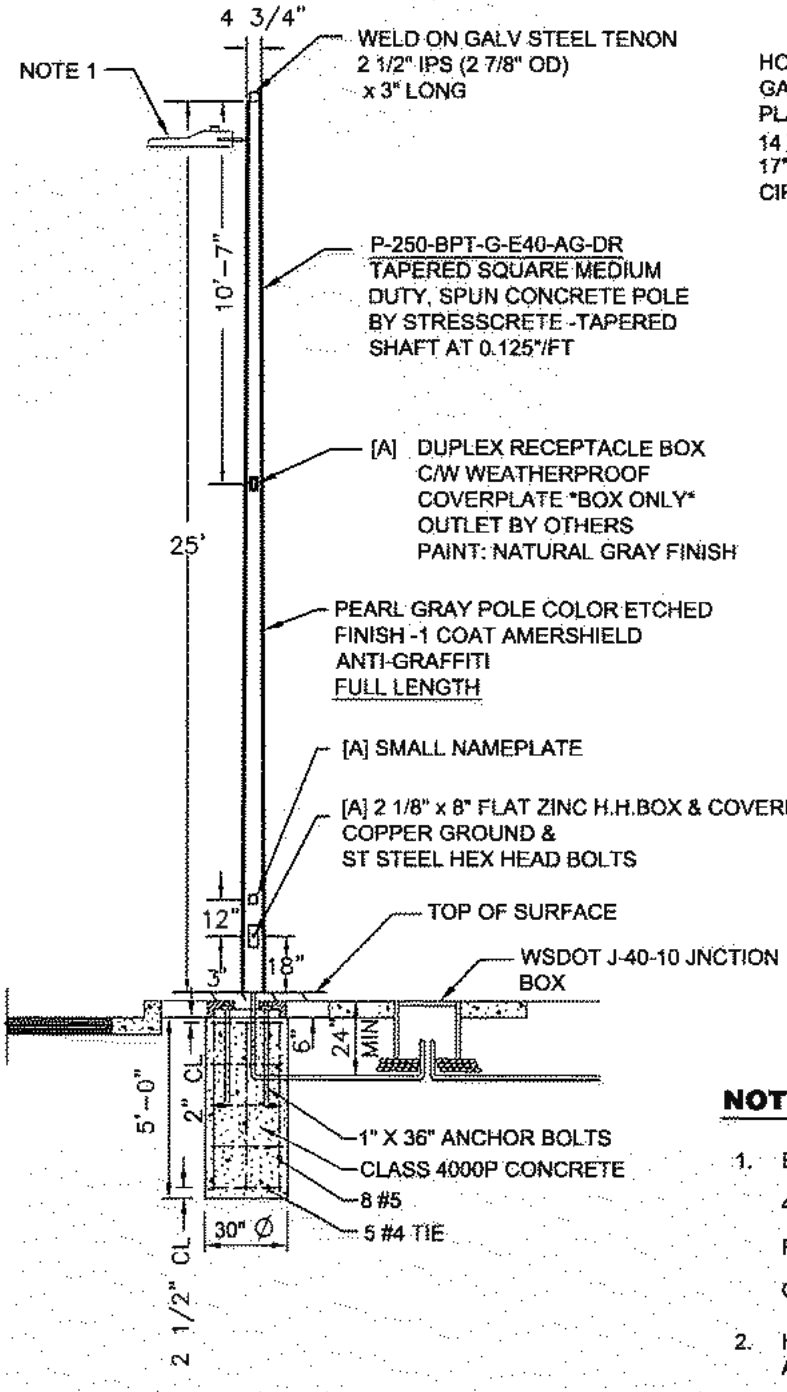
(b) A stockpile does not include any of the functions described in subsection (2)(a) through (f) of this section; nor does a stockpile include materials delivered or distributed to multiple locations upon the project site; nor does a stockpile include materials dumped at the place of incorporation, or adjacent to the location and coordinated with the incorporation.

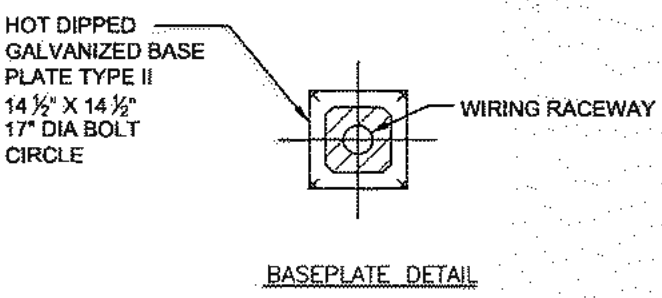
(5) The applicable prevailing wage rate shall be determined by the locality in which the work is performed. Workers subject to subsection (2)(d) of this section, who produce such materials at an off-site facility shall be paid the applicable prevailing wage rates for the county in which the off-site facility is located. Workers subject to subsection (2) of this section, who deliver such materials to a public works project site shall be paid the applicable prevailing wage rates for the county in which the public works project is located.

[Statutory Authority: Chapter 39.12 RCW, RCW 43.22.051 and 43.22.270. 08-24-101, § 296-127-018, filed 12/2/08, effective 1/2/09. Statutory Authority: Chapters 39.04 and 39.12 RCW and RCW 43.22.270. 92-01-104 and 92-08-101, § 296-127-018, filed 12/18/91 and 4/1/92, effective 8/31/92.]

APPENDIX B

STANDARD DETAILS





BASEPLATE DETAIL

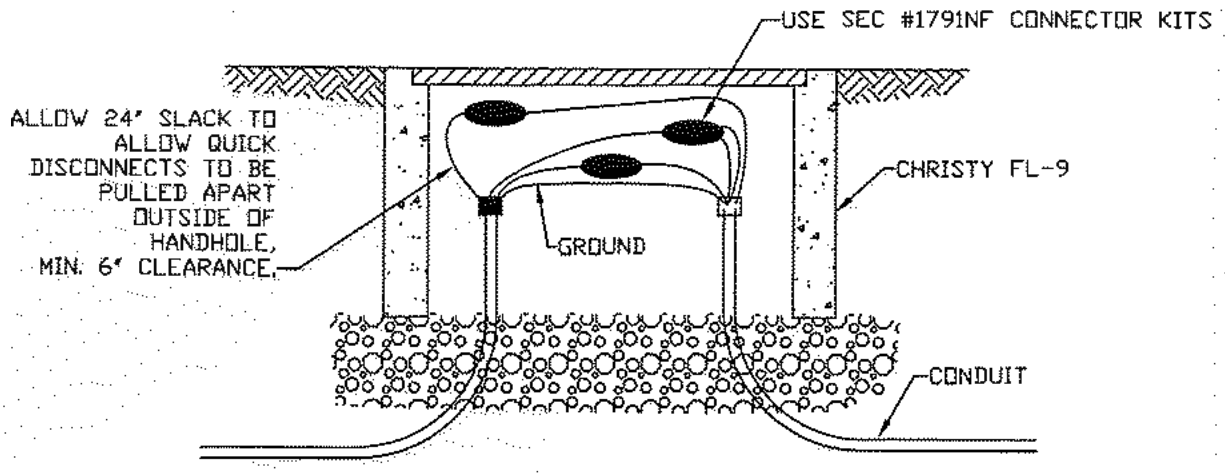
NOTES

1. EATON, STREETWORKS GAA GALLEON LED LUMINARIE 480V TYPE III WITH SPILL CONTROL, PHOTO CONTROL RECEPTACLE, AND MAST ARM ADAPTER CUSTOM COLOR BRONZE
2. HOUSE SIDE SHIELDS SHALL BE INSTALLED WHEN ABUTTING RESIDENTIAL STRUCTURES
3. EACH FIXTURE SHALL INCLUDE A PHOTOCELL OR GROUNDING CAP BASED ON EXISTING CIRCUIT CONFIGURATION.
4. A PULL STRING FURNISHED FROM BASEPLATE TO POLE TOP

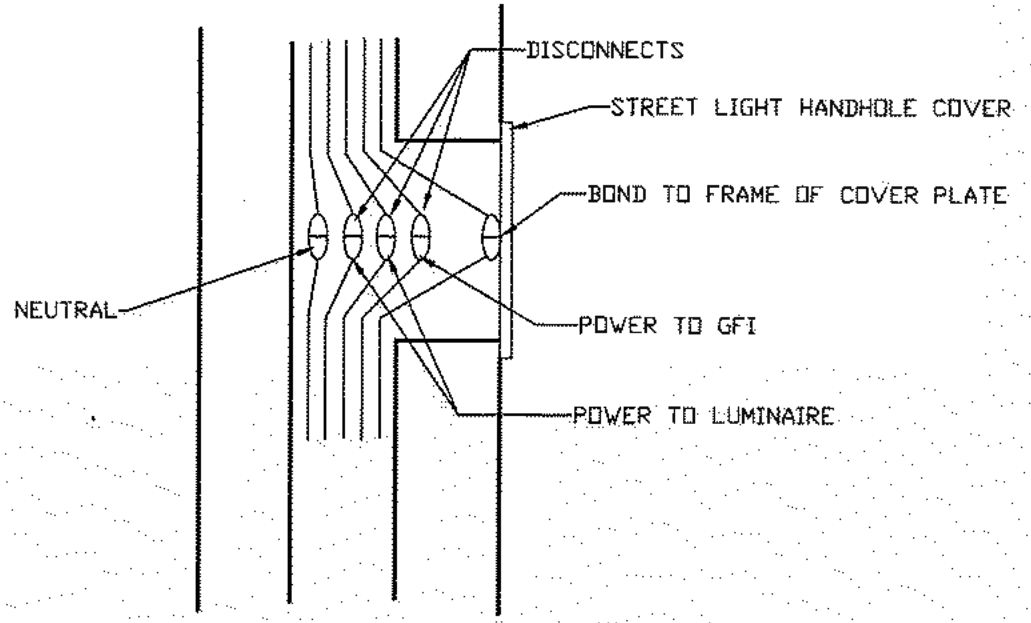
CITY OF MERCER ISLAND
STANDARD DETAILS
ILLUMINATION

CONCRETE POLE LIGHTING DETAIL W/FOUNDATION

6/17/2022	NO SCALE	**IL-1B**



JUNCTION BOX DETAIL

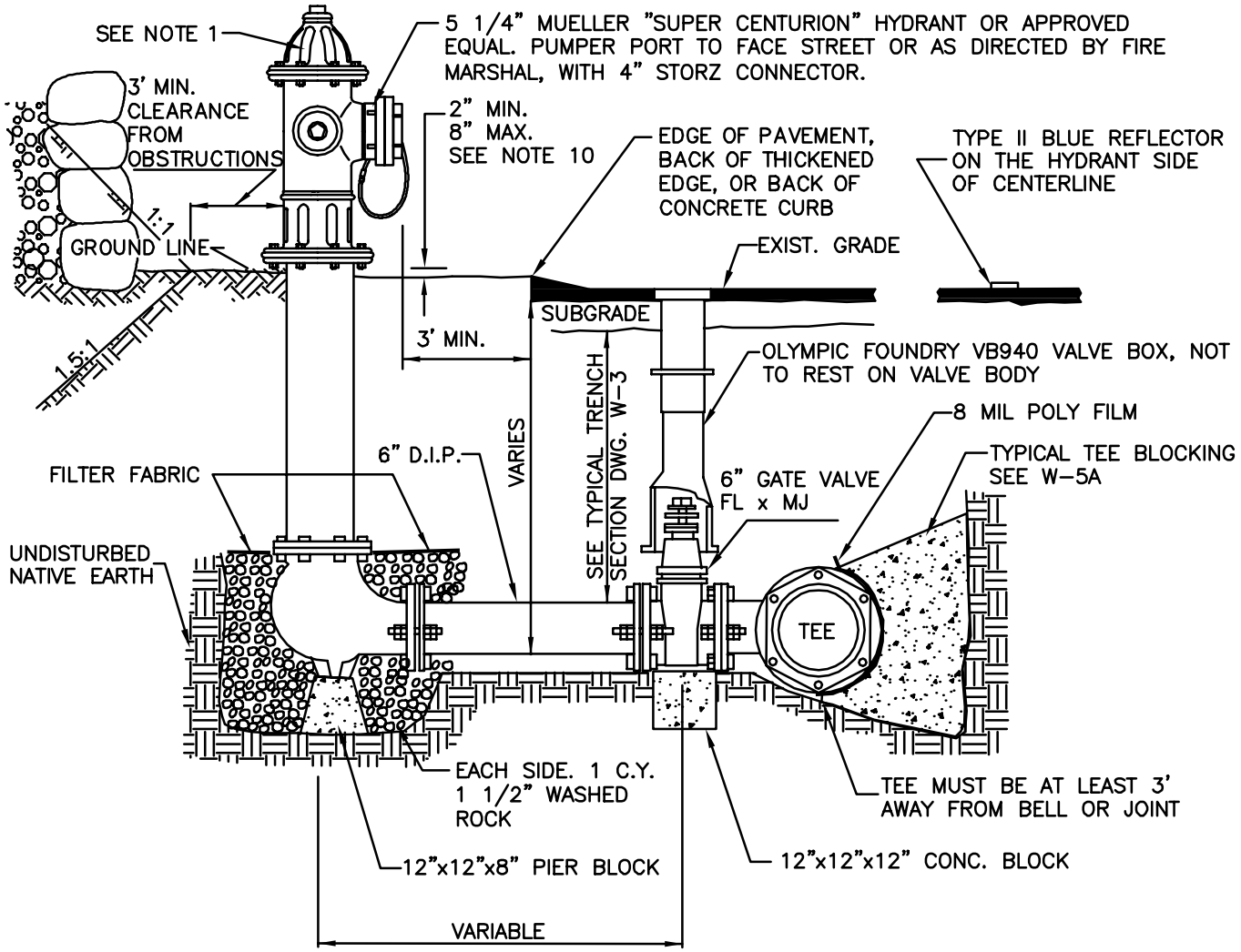


LIGHT STANDARD WIRING DETAIL

CITY OF MERCER ISLAND
STANDARD DETAILS
ILLUMINATION

JUNCTION BOX DETAIL

02/02/2000	NO SCALE	**IL-4**



NOTE:

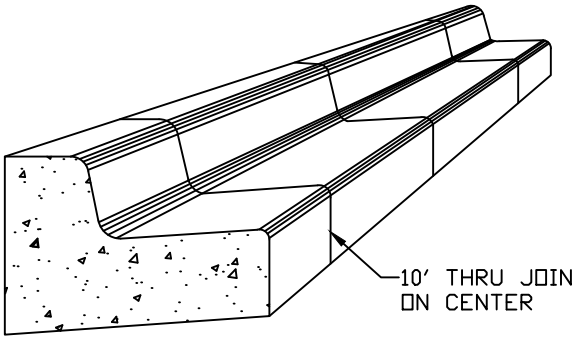
1. 1–5 1/4" M.V.O. HYDRANT WITH 2–2 1/2" N.T.S. M.J. INLET WITH LUGS, BRASS–TO–BRASS SUB–SEAT AND 1–4 1/2" PUMPER, SEATTLE STANDARD PIPE THREAD WITH 4" STORZ CONNECTOR HARRINGTON MODEL NO. HPHA40–40–004/CAP, SIZE 4.875–INCH BY 6–INCH.
2. NO DOMESTIC CONNECTIONS CAN BE MADE TO THE FIRE HYDRANT RUNS.
3. ANY FIRE HYDRANT RUN OVER 18 FEET IN LENGTH OF PIPE SHALL HAVE RESTRAINED JOINT GASKETS.
4. USE ROMA GRIP, OR APPROVED EQUAL, PIPE RESTRAINERS AT VALVE AND HYDRANT BASE.
5. HYDRANT SHALL BE PAINTED WITH 2 COATS OF FARWEST #250 HIGH GLOSS WHITE PAINT, OR APPROVED EQUAL, APPLIED WITH A PAINT BRUSH. DO NOT APPLY PAINT TO STORZ FITTING, BRASS PORT THREADS, OR BELOW SAFETY FLANGE.
6. BOLLARDS MAY BE USED TO PROTECT THE HYDRANT WHEN NO CURBS ARE PRESENT OR IN EXPOSED AREAS OF PARKING LOTS.
7. STRAIGHT PIPE TO HYDRANTS FROM MAIN, NO BENDS.
8. REMOVE CHAINS FROM HYDRANT CAPS.
9. VALVE AND HYDRANT MUST BE PLUMB.
10. THIS DISTANCE IS MEASURED FROM BOTTOM OF SAFETY FLANGE TO LEVEL OF FINISH GRADE BELOW HYDRANT.

CITY OF MERCER ISLAND
STANDARD DETAILS
WATER

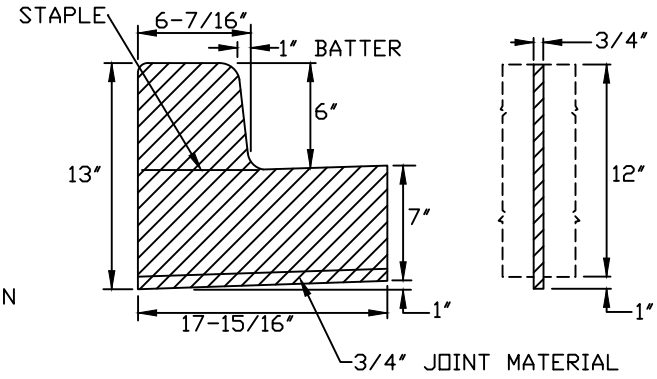
FIRE HYDRANT CONNECTION

02–23–2021	NO SCALE	**W-24**

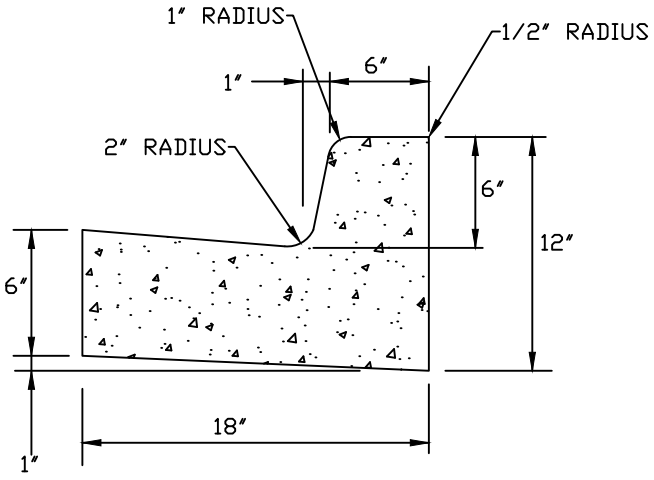
REV	DATE						APPROVED



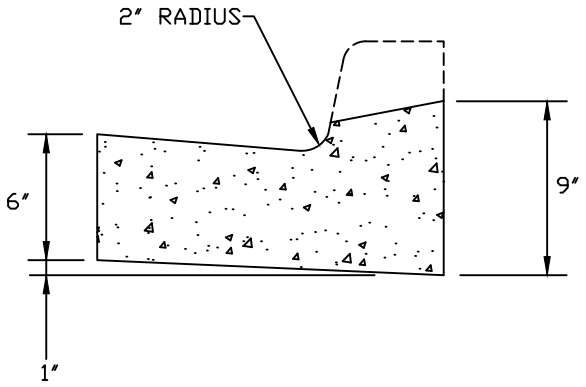
TYPICAL SECTION



JOINT DETAIL



CONCRETE CURB AND GUTTER



CONCRETE CURB AND GUTTER AT DRIVEWAY

NOTES

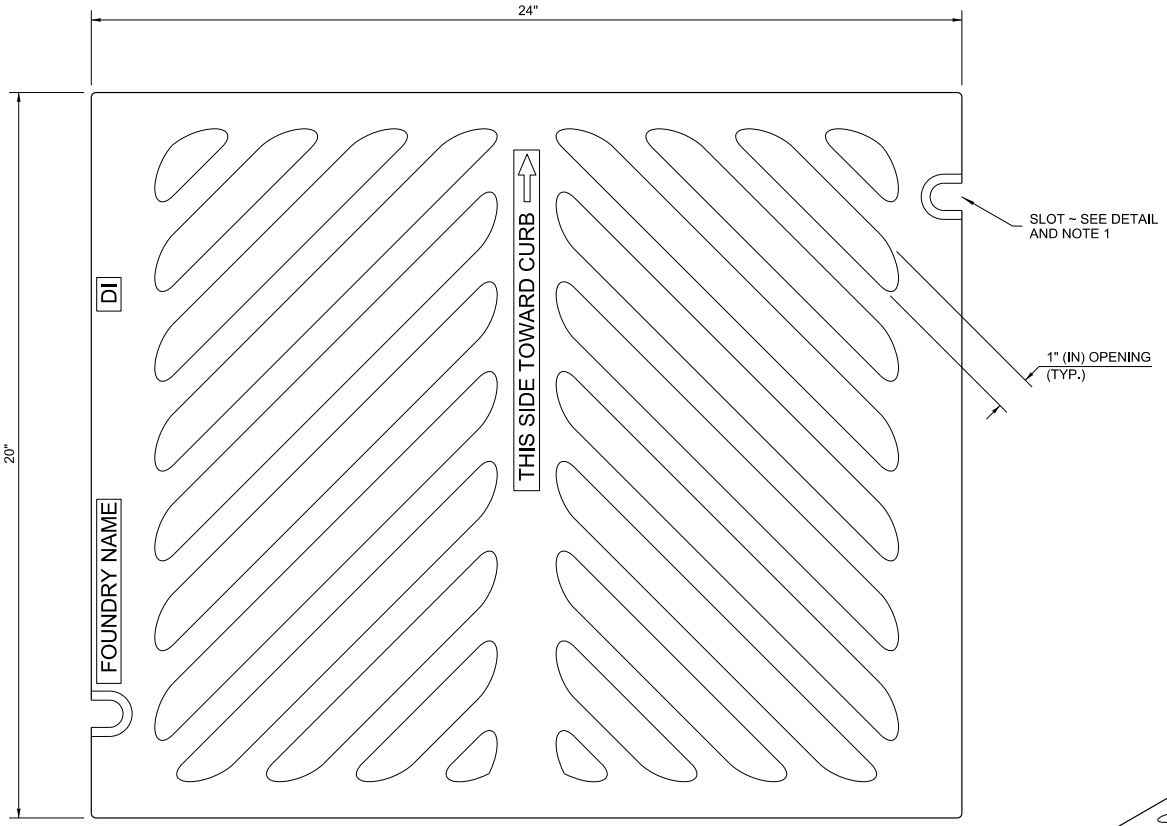
1. FORMS SHALL BE STEEL AND SET TRUE TO LINE AND GRADE AND SECURELY STAKED. INSPECTION IS REQUIRED PRIOR TO PLACEMENT OF CONCRETE.
2. CONCRETE SHALL BE CEMENT CONCRETE CLASS 5-3/4 SACK OR 6 SACK, 4,000 P.S.I.
3. THE 1" RADIUS ON UPPER FACE OF CURB MAY BE FORMED BY EDGER OR BUILT INTO FACE OF FORM. 1" RADIUS ON LOWER FACE OF CURB WILL BE FORMED BY THE FACE FORM.
4. DUMMY JOINS OF NOT LESS THAN 3/16" THICKNESS SHALL BE OF THE SAME DIMENSIONS AS THE CURB AND GUTTER EXCEPT THAT IT SHALL EXTEND ON 2-1/4" INTO GUTTER SECTION.
5. DUMMY JOINTS SHALL BE PLACE NOT TO EXCEED 15' O.C. NOR LESS THAN 10' O.C. THRU JOINTS SHALL BE PLACED ONLY AT POINTS OF TANGENCY ON STREETS, ALLEY AND DRIVEWAY RETURNS. ALL JOINTS SHALL BE CLEAN AND IN THE GUTTER SECTION THEY SHALL BE EDGED.
6. MATERIALS AND PROCEDURES FOR FORMS, FORM SETTING, PLACING, FINISHING AND CURING SHALL BE AS OUTLINED IN THESE SPECIFICATIONS.

CITY OF MERCER ISLAND
STANDARD DETAILS
STREETS

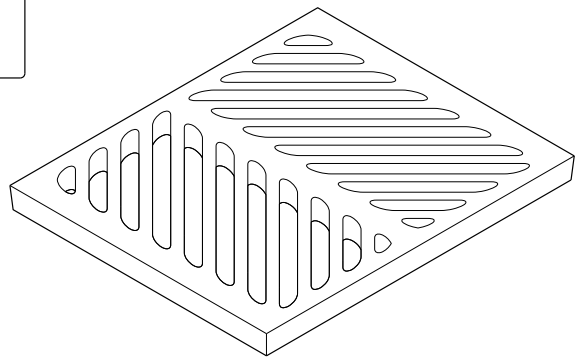
CEMENT CONCRETE CURB AND GUTTER TYPE "A"

1-1-2000	NO SCALE	ST-14

DRAWN BY: FERN LIDDELL



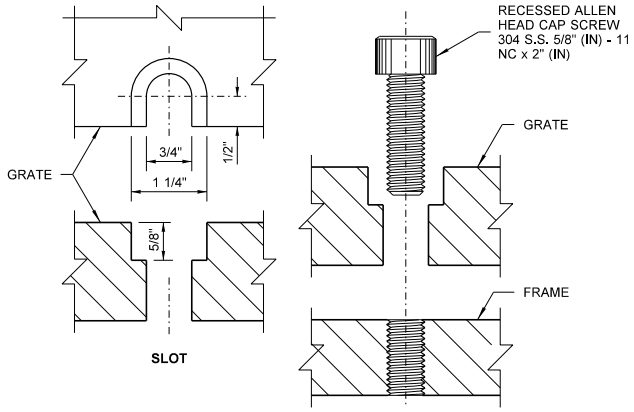
TOP



ISOMETRIC

NOTES

1. Bolt-down capability is required on all frames, grates, and covers, unless specified otherwise in the Contract. Provide 2 holes in the frame that are vertically aligned with the grate or cover slots. The frame shall accept the 304 Stainless Steel (S.S.) 5/8" (in) - 11 NC × 2" (in) allen head cap screw by being tapped, or other approved mechanism. Location of bolt-down holes varies by manufacturer.
2. Refer to **Standard Specification section 9-05.15,** and **9-05.15(2)** for additional requirements.
3. For frame details, see **Standard Plan B-30.10**.
4. The thickness of the grate shall not exceed 1 5/8" (in).



BOLT-DOWN DETAILS
SEE NOTE 1

JULIE HEILMAN
STATE OF WASHINGTON
41819
REGISTERED
PROFESSIONAL ENGINEER

RECTANGULAR HERRINGBONE GRATE

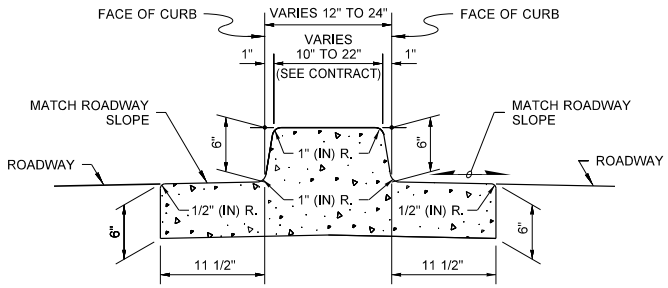
STANDARD PLAN B-30.50-03

SHEET 1 OF 1 SHEET

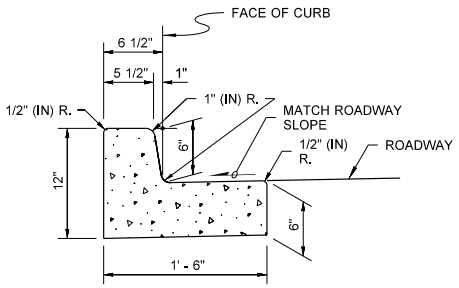
APPROVED FOR PUBLICATION

STATE DESIGN ENGINEER

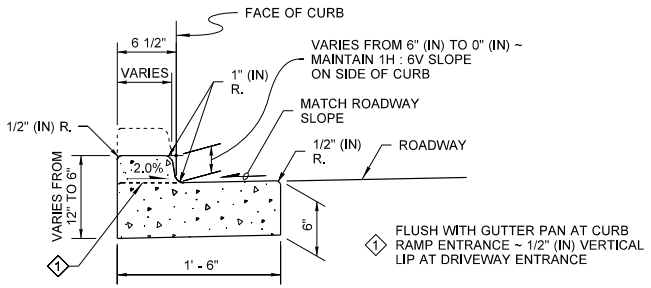
Washington State Department of Transportation



DUAL-FACED CEMENT CONCRETE TRAFFIC CURB AND GUTTER



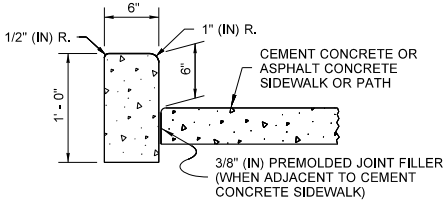
CEMENT CONCRETE TRAFFIC CURB AND GUTTER



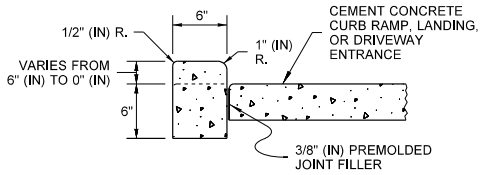
DEPRESSED CURB AND GUTTER SECTION

AT CURB RAMPS AND DRIVEWAY ENTRANCES

DRAWN BY: FERN LIDDELL



CEMENT CONCRETE PEDESTRIAN CURB

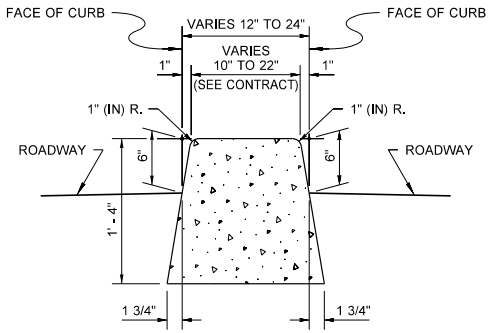


CEMENT CONCRETE PEDESTRIAN CURB

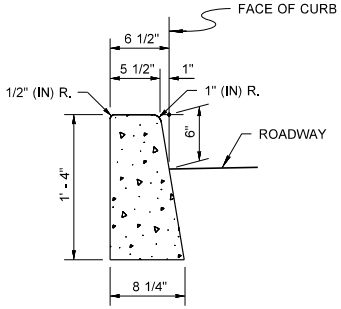
AT CURB RAMPS, LANDINGS, AND DRIVEWAY ENTRANCES

NOTE

1. See **Standard Plan F-30.10** for Curb Expansion and Contraction Joint spacing. See **Standard Specification, Sections 8-04 and 9-04** for additional requirements.



DUAL-FACED CEMENT CONCRETE TRAFFIC CURB



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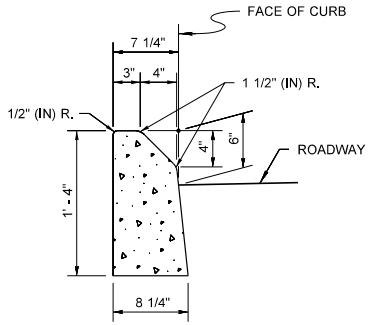


MOUNTABLE CEMENT CONCRETE TRAFFIC CURB

Michael S Fleming

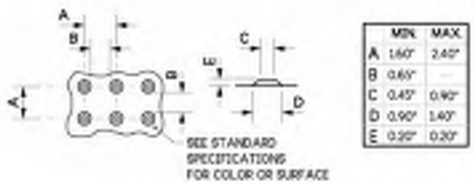
Digitally signed by Michael S Fleming
Date: 2020.09.24 07:39:38 -07'00'

CEMENT CONCRETE CURBS

STANDARD PLAN F-10.12-04

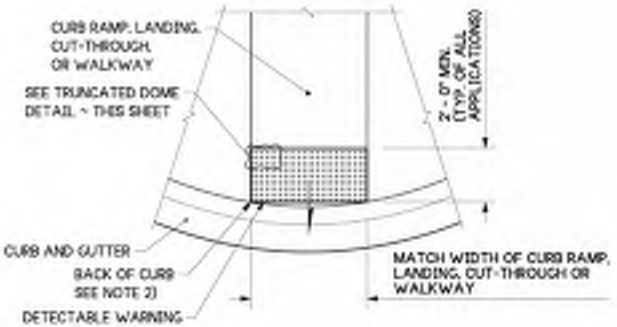
SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION
Date: 2020.09.24 07:57:43 -07'00'
STATE DESIGN ENGINEER
Washington State Department of Transportation

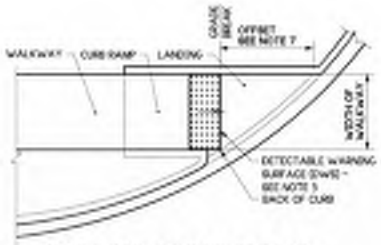


	MIN.	MAX.
A	1.60"	2.40"
B	0.65"	—
C	0.45"	0.90"
D	0.90"	1.40"
E	0.20"	0.20"

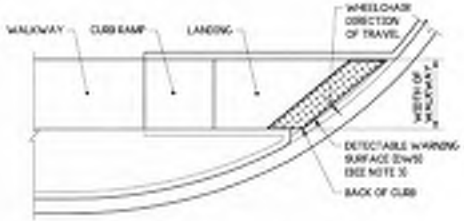
TRUNCATED DOME DETAILS
SEE NOTE 3



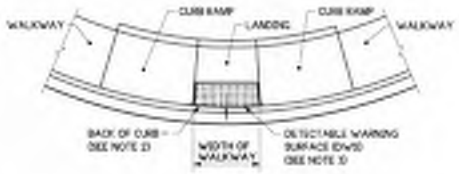
DETECTABLE WARNING SURFACE DETAIL



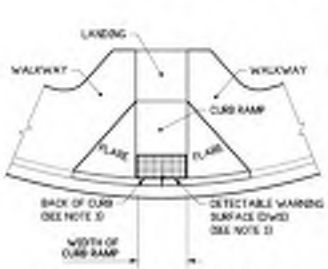
SINGLE DIRECTION CURB RAMP
(GRADE BREAK BETWEEN CURB AND LANDING < 5 FEET FROM BACK OF CURB)
(SEE NOTE 5)



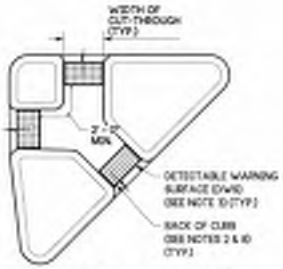
SINGLE DIRECTION CURB RAMP
(GRADE BREAK BETWEEN CURB AND LANDING > 5 FEET FROM BACK OF CURB)
(SEE NOTE 5)



PARALLEL CURB RAMP
(SEE NOTE 6)

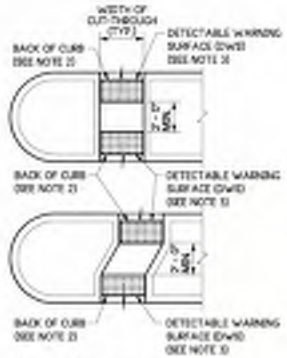


PERPENDICULAR CURB RAMP
(SEE NOTE 6)

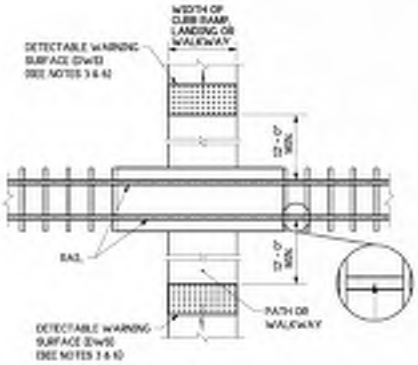


ISLAND CUT-THROUGH

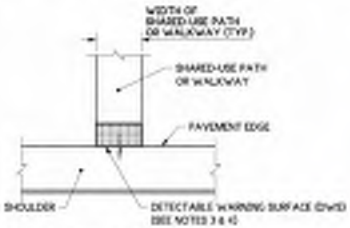
ROUNDABOUT SPLITTER ISLAND



MEDIAN CUT-THROUGH



PEDESTRIAN RAILROAD CROSSING



SHARED-USE PATH CONNECTION

NOTES

1. Permanent Detectable Warning Surfaces (DWS) shall extend the full width of the curb ramp, landing, or other roadway entrance as applicable. Exception: If the manufacturer of the DWS requires a concrete border around the DWS, a variance of up to 2" (in) on each side of the DWS is permitted.
2. Permanent Detectable Warning Surfaces (DWS) shall be placed on a minimum 4" (in) thick concrete pad. The DWS panel shall be placed adjacent to the back of the curb and with no more than a 2" (in) gap between the DWS and the back of the curb measured at the center of the DWS panel. Exception: If the Manufacturer of the selected DWS requires a concrete border around the DWS, a variance of up to 2" (in) from the back of the curb is permitted (measured at the leading corners of the DWS panel).
3. The rows of truncated domes shall be aligned to be parallel to the direction of travel, and perpendicular to the grade break or the back of curb.
4. If curb and gutter are not present, such as a shared-use path connection, the Detectable Warning Surface shall be placed at the pavement edge.
5. See Standard Plans for sidewalk and curb ramp details.
6. If a curb ramp is required, the location of the Detectable Warning Surface must be at the bottom of the ramp and within the required distance from the rail crossing.
7. When the grade break between the curb ramp and the landing is less than or equal to 5 feet from the back of curb at all points, place the Detectable Warning Surface on the bottom of the curb ramp directly above the grade break.
8. Glued or stick down Detectable Warning Surfaces are allowed only for temporary work zone applications.

Oct 13, 2023

DETECTABLE WARNING SURFACE

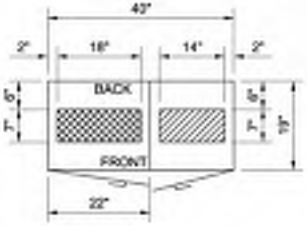
STANDARD PLAN F-45.10-04

SHEET 1 OF 1 SHEET

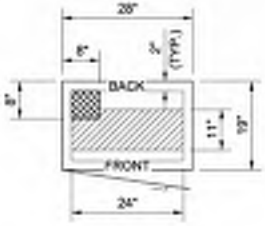
APPROVED FOR PUBLICATION
Mark A. Reiner Oct 16, 2023
STATE DESIGN ENGINEER

Washington State Department of Transportation

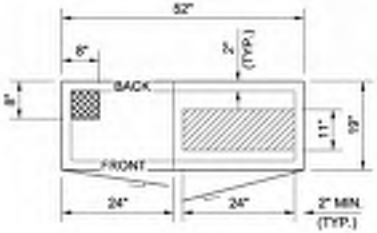
CRAWN BY: BILL KERENS



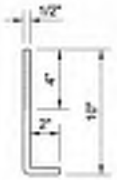
TYPE B MODIFIED SERVICE CABINET



TYPE D SERVICE CABINET



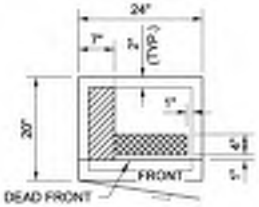
TYPE E SERVICE CABINET



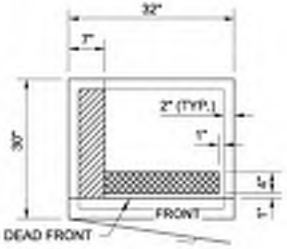
ANCHOR BOLT
(SEE NOTE 1)

CONDUIT PLACEMENT LOCATION AREA

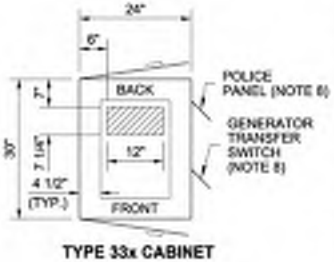
SERVICE: UTILITY CONDUIT AREA
TRANSFORMER: HIGH VOLTAGE CONDUIT AREA



XFMR-S (TRANSFORMER - SMALL) (UP TO 12.5 KVA)



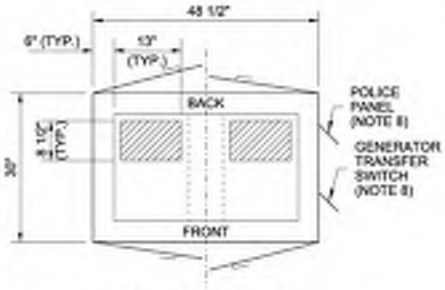
XFMR-L (TRANSFORMER - LARGE) (12.6 TO 37.5 KVA)



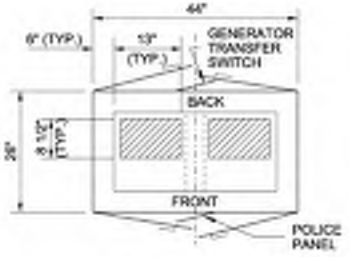
TYPE 33x CABINET

CABINET REFERENCE TABLE			
SERVICE CABINETS	**SIZE W × D (IN)**	**CAPACITY CONDUIT DIAMETER (IN)**	**STANDARD PLAN**
TYPE B MOD.	40" x 19"	52"	J-10.20
TYPE D	28" x 19"	24"	J-10.21
TYPE E	52" x 19"	48"	J-10.22
TRANSFORMER CABINETS	**SIZE W × D (IN)**		
XFMR-S (UP TO 12.5 KVA)	24" × 20"	12"	J-10.25
XFMR-L (12.6 TO 37.5 KVA)	32" × 30"	15"	J-10.25
SIGNAL AND ITS CABINETS	**SIZE W × D (IN)**		
TYPE 33x	24" × 30"	12"	J-12.15
TYPE 33xD	48.5" × 30"	24" ①	J-12.16
TYPE 342LX	44" × 28"	24" ①	J-12.16
NEMA P44	44" × 28"	15"	N/A

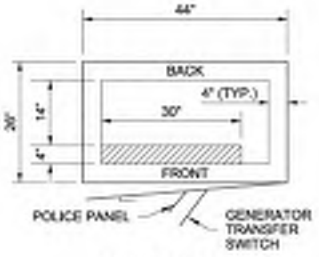
① 12" (IN) OF CONDUIT IN EACH LOCATION SHOWN



TYPE 33xD CABINET



TYPE 342LX CABINET



NEMA P44 CABINET

PLAN VIEWS
CABINET ORIENTATION, FOOTPRINT, AND CONDUIT PLACEMENT LOCATIONS

GENERAL NOTES

1. Each pad mounted cabinet shall be attached to the foundation with four 1/2" (in.) x 10" (in.) x 2" (in.) x 4" (in.) anchor bolts (see Anchor Bolt Detail this Sheet). Bolts, washers, and nuts shall be hot-dip galvanized in accordance with **AASHTO M232** and meet the requirements of Standard Specification 9-06.5(1). Stainless steel epoxy anchors may be used as an alternative, and shall be 1/2" (in.) diameter x 9" (in.) or 5/8" (in.) diameter x 8" (in.). Epoxy anchors shall use Type 304 stainless steel hardware: ASTM F593 all threaded rod, ASTM A240 washers, and ASTM F594 nuts. Anchor bolts shall extend 1 1/2" (in.) min. to 2" (in.) max. above the concrete pad.
2. All reinforcing steel shall be embedded 2" (in.) below the surface of concrete.
3. A 1/2" (in.) bead of silicone is required between each cabinet and the concrete foundation.
4. Concrete shall be Class 3000, in accordance with **Standard Specification 8-20.3(4)**. All concrete corners shall have a 1" (in.) chamfer, unless abutting sidewalk, where it shall be square and seaparated from the sidewalk with joint filler.
5. Foundations installed in, or adjacent to, sidewalks shall be constructed with the top flush with the sidewalk surface and grade, not including concrete risers for cabinets.
6. Foundations require additional level clear space to achieve a minimum of 4 feet of level clear space between the face of any cabinet or cabinet riser and the edge of the level clear space. Clear space beyond the edge of the concrete pad shall be made up of crushed surfacing meeting the requirements of **Standard Specification 9-03.9(1)**. Special design may be required where slopes are 3H : 1V or steeper. As an alternative, the concrete pad may be extended out to provide the required clear space.
7. Verify overall pad and concrete riser dimensions with the Engineer prior to placing concrete.
8. Not all Type 33x and 33xD cabinets have a police panel and/or a generator transfer switch (GTS) panel. See Contract for specific cabinet requirements.

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Jackson, Flint
Aug 24 2020 9:36 AM

CABINET ORIENTATION CONDUIT LAYOUT AND FOUNDATION DETAIL
STANDARD PLAN J-10.10-04

SHEET 1 OF 6 SHEETS

APPROVED FOR PUBLICATION
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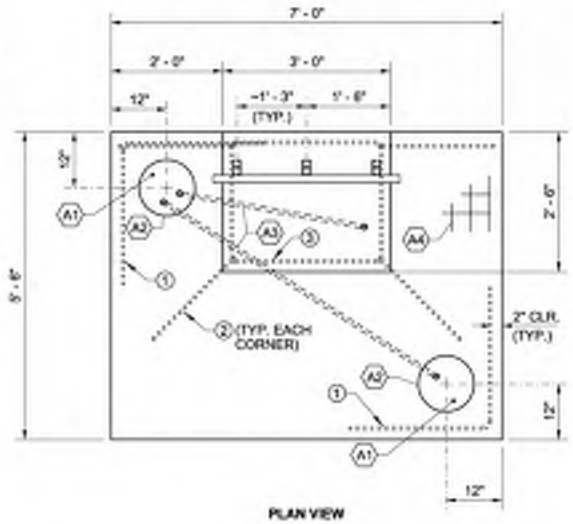
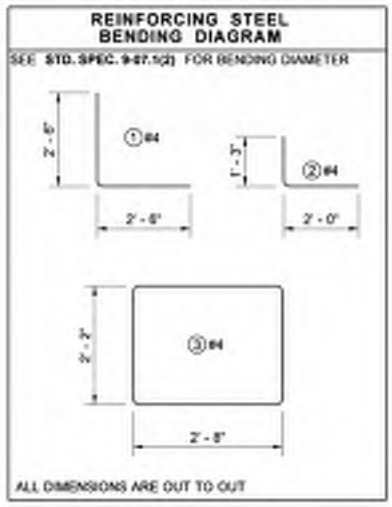
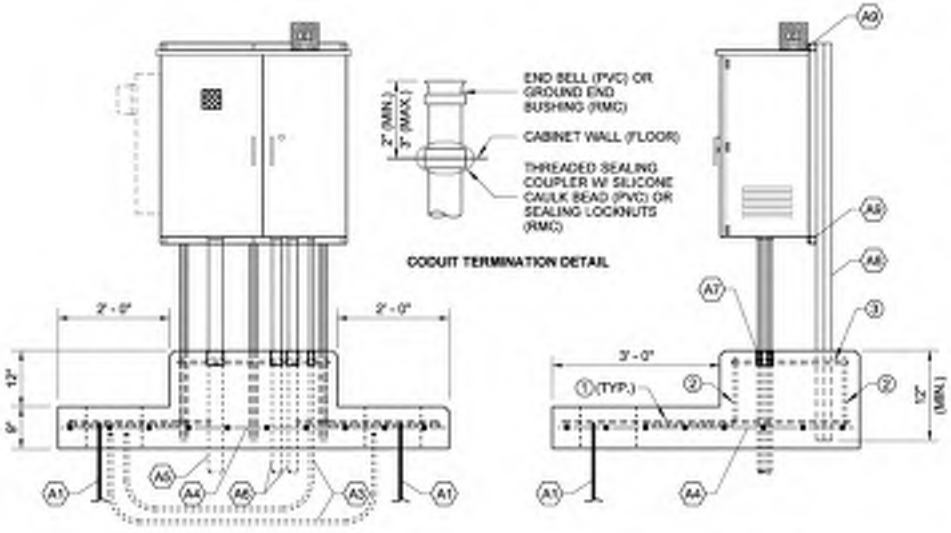
STATE DESIGN ENGINEER
Washington State Department of Transportation

DRAWN BY: BILL BERENS



PLAN VIEW





FRONT ELEVATION VIEW

RIGHT SIDE ELEVATION VIEW

STRUT MOUNT SERVICE CABINET
(TYPE B MODIFIED SERVICE CABINET SHOWN)

NOTES - SINGLE STRUT MOUNT CABINET (SHEET 2 OF 6)

A1. Drive gound rods before placing concrete. Ground rods shall be a minimum of 8 feet apart. **See Standard Plan J-60.06** for additional details.

A2. Welded Wire Fabric (WWF) shall be 4.0 (in.) x 4.0 (in.) ~ W4.0 x W4.0 ~ meeting the requirements of **Standard Specification 9-07.7**. As an alternative, a grid of #3 rebar may be used, with bars spaced at 1'- 0" centers laterally and longitudinally.

A3. Install conduit couplings on all conduits. Couplers shall be installed with the top of the coupler flush with the top of concrete. For PVC conduits, the conduit segment above the coupler shall not be glued to the coupler.

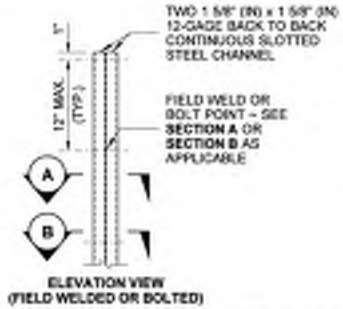
A4. Vertical steel supports shall be two continuous 1 5/8" (in.) x 1 5/8" (in.) 12-gage slotted steel channels installed back-to-back (3 pairs required) ~ see Strut Mount Support Details this sheet for connection details. As an alternative, continuous 1 5/8" (in.) x 3 1/4" (in.) 12-gage slotted steel channel may be used in place of each channel pair. Channels shall be embedded a minimum of 12" (in.) into the concrete foundation. Supports shall be evenly spaced, with the center support centered in the concrete riser, and the outer supports tied to the riser rebar hoop.

A5. Horizontal steel supports shall be continuous 1 5/8" (in.) x 1 5/8" (in.) 12-gage slotted steel channels (two required).

A6. Cabinet height shall be determined by the required height of the utility meter - verify height with serving utility (typically 5 to 6 feet).

A7. Serving utility may require meter socket to be installed on the outside of the cabinet. Utility feeder conduit shall still terminate in the utility section of the cabinet unless otherwise required by the utility.

A8. Additional gravel pad not shown. Gravel pad shall extend two feet in front of the concrete pad for the full width of the concrete pad. If the utility meter socket is installed on the outside of the service cabinet, gravel pad shall also extend three feet from the utility side of the cabinet pad. Final gravel area shall be a rectangle.



ELEVATION VIEW
(FIELD WELDED OR BOLTED)

STRUT MOUNT SUPPORT DETAILS
(SEE NOTE A4)

KEY NOTES - SHEET 2 OF 6

- A1 Ground rod ~ See Note A1, this sheet.
- A2 Ground rod well (Ground tile) - 12" diameter concrete
- A3 Service ground electrode conduits.
- A4 Welded wire fabric ~ See Note A2, this sheet.
- A5 Utility entrance conduit. Conduit shall terminate in the utility section of the service cabinet.
- A6 Conduits to field equipment. Conduits shall terminate in the customer section of the service cabinet.
- A7 Conduit couplers ~ See Note A3, this sheet.
- A8 Vertical support steel channel ~ See Note A4, this sheet.
- A9 Horizontal support steel channel ~ See Note A5, this sheet.

Jackson, Flint
Aug 24 2020 9:37 AM

CABINET ORIENTATION CONDUIT LAYOUT AND FOUNDATION DETAIL

STANDARD PLAN J-10.10-04

SHEET 2 OF 6 SHEETS

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Washington State Department of Transportation

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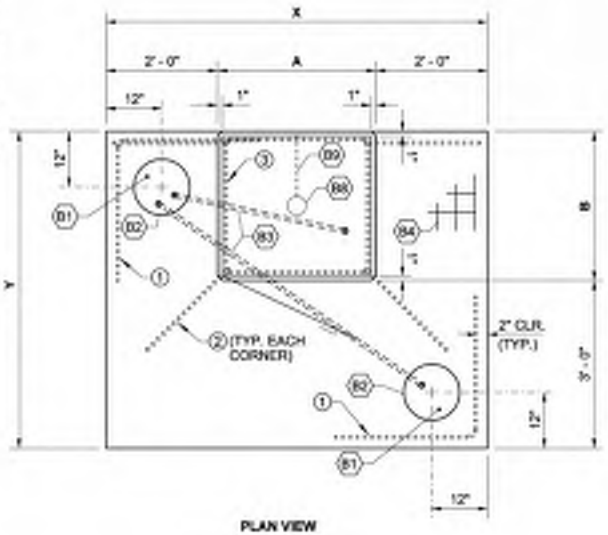


PLAN VIEW

KEY NOTES - SHEET 3 OF 6

(B1) Ground rod – See Note B1, this sheet.

(B2) Ground rod well (Ground tile) - 12" diameter concrete

(B3) Service ground electrode conduits.

(B4) Welded wire fabric – See Note B2, this sheet.

(B5) Utility entrance (service cabinet) or input power (transformer cabinet) conduit. Conduit shall terminate in the utility or high-voltage section of the cabinet (as applicable).

(B6) Conduits to field equipment. Conduits shall terminate in the customer section (service cabinet) or low-voltage (transformer cabinet) of the cabinet.

(B7) Conduit couplers – See Note B4, this sheet.

(B8) 4" (in.) diam. x 1/2" (in.) deep sump.Slope foundation within cabinet footprint toward sump.

(B9) 3/8" (in.) diam. polyethylene or copper tubing for drain. Tubing shall be straight, but slope downward a minimum of 1" (in.).

NOTES - SINGLE PAD MOUNT SERVICE OR TRANSFORMER CABINET (SHEET 3 OF 6)

B1. Drive gound rods before placing concrete. Ground rods shall be a minimum of 6 feet apart. See **Standard Plan J-60.05** for additional details.

B2. Welded Wire Fabric (WWF) shall be 4.0 (in.) x 4.0 (in.) – W4.0 x W4.0 – meeting the requirements of **Standard Specification 9-07.7**. As an alternative, a grid of #3 rebar may be used, with bars spaced at 1'-0" centers laterally and longitudinally.

B3. Omit concrete riser and bar #3 for Type D and Type E service cabinets.

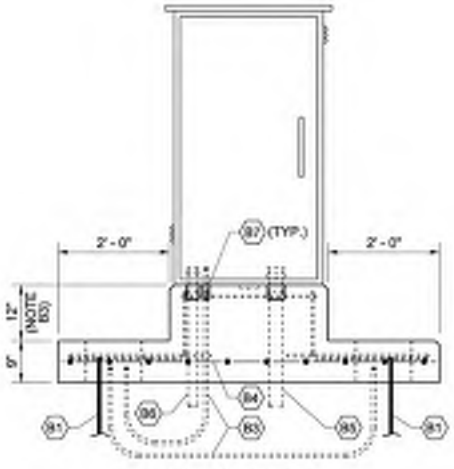
B4. Install conduit couplings on all conduits. Couplers shall be installed with the top of the coupler flush with the top of concrete. For PVC conduits, the conduit segment above the coupler shall not be glued to the coupler.

B5. Conduits shall extend a minimum of 2" (in.) and a maximum of 3" (in.) into the cabinet, as measured from the concrete surface to the top of the end bell (PVC) or ground bushing (RMC).

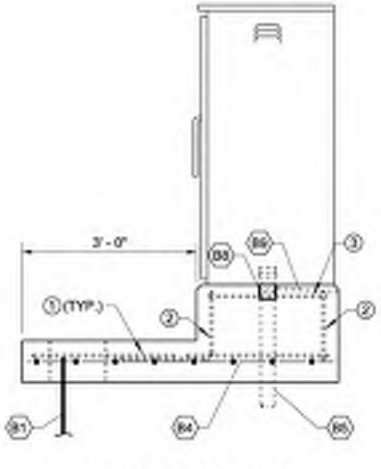
B6. Serving utility may require meter socket to be installed on the outside of the cabinet. Utility feeder conduit shall still terminate in the utility section of the cabinet unless otherwise required by the utility.

B7. Additional gravel pad not shown. Gravel pad shall extend two feet in front of the concrete pad for the full width of the concrete pad. If the utility meter socket is installed on the outside of the service cabinet, gravel pad shall also extend three feet from the side of the cabinet pad where the meter is installed. Final gravel area shall be a rectangle.

B8. See **Standard Plan J-10.14** for additional details when service or transformer cabinet is installed in fence line.



FRONT ELEVATION VIEW



RIGHT SIDE ELEVATION VIEW

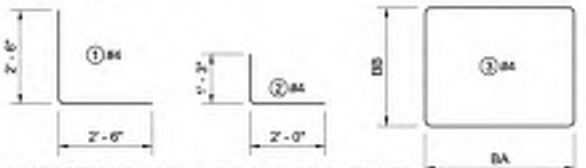
SINGLE PAD MOUNT
SERVICE OR TRANSFORMER CABINET
(XFMR-L CABINET SHOWN)

FOUNDATION SIZE REFERENCE TABLE

SERVICE CABINETS	PAD WIDTH (X)	PAD DEPTH (Y)	RISER WIDTH (A)	RISER DEPTH (B)	HOOP ③ WIDTH (BA)	HOOP ③ DEPTH (BB)
TYPE D	6' - 4"	3' - 8"	N/A	N/A	N/A	N/A
TYPE E	8' - 4"	3' - 8"	N/A	N/A	N/A	N/A
TRANSFORMER CABINETS	**PAD WIDTH (X)**	**PAD DEPTH (Y)**	**RISER WIDTH (A)**	**RISER DEPTH (B)**	**HOOP ③ WIDTH (BA)**	**HOOP ③ DEPTH (BB)**
XFMR-S (UP TO 12.5 KVA)	6' - 2"	4' - 11"	2' - 2"	1' - 11"	1' - 10"	1' - 7"
XFMR-L (12.6 TO 37.5 KVA)	6' - 10"	5' - 8"	2' - 10"	2' - 6"	2' - 6"	2' - 4"

REINFORCING STEEL BENDING DIAGRAM

SEE STD. SPEC. 9-07.1(2) FOR BENDING DIAM. ALL DIMENSIONS ARE OUT TO OUT



NOTE: BAR 3 DIMENSIONS ARE ALWAYS FOUR INCHES SMALLER THAN THEIR ASSOCIATED CONCRETE RISER DIMENSIONS.

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CABINET ORIENTATION CONDUIT LAYOUT AND FOUNDATION DETAIL

STANDARD PLAN J-10.10-04

SHEET 3 OF 6 SHEETS

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Washington State Department of Transportation

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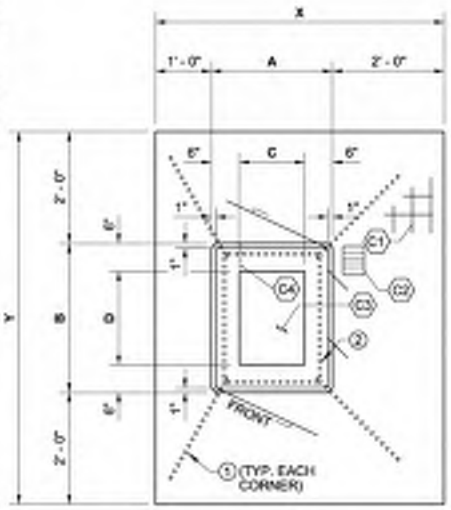


PLAN VIEW

KEY NOTES - SHEET 4 OF 6

(C1) Welded wire fabric ~ See Note C1, this sheet.

(C2) Generator Tie-Down Anchor ~ See Note C2, this sheet.

(C3) Cabinet Well ~ See Note C3, this sheet.

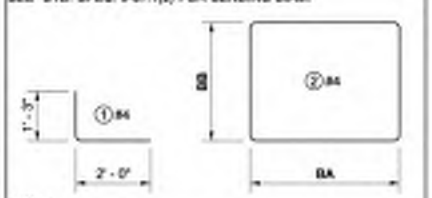
(C4) 3/8" (in.) diam. polyethylene or copper tubing for drain. Tubing shall be straight, but slope downward a minimum of 1" (in.)

(C5) Conduits ~ See Contract Plans for number, type, and function.

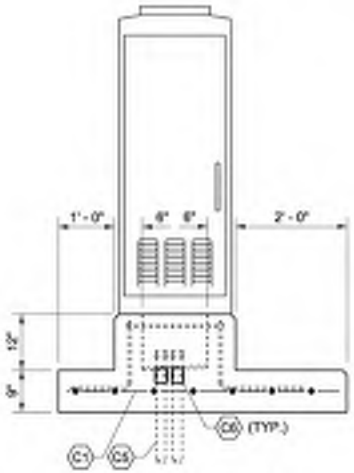
(C6) Conduit couplers ~ See Note C4, this sheet.

REINFORCING STEEL BENDING DIAGRAM

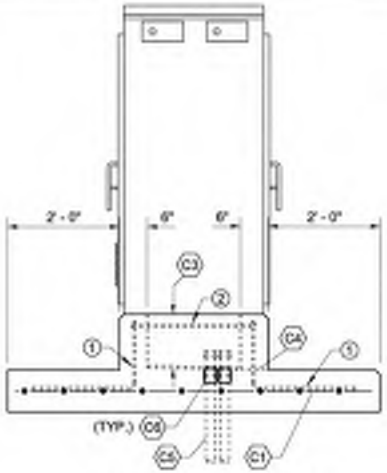
SEE STD. SPEC. 9-07.1(2) FOR BENDING DIAM.



NOTE:
ALL DIMENSIONS ARE OUT TO OUT.
BAR 3 DIMENSIONS ARE ALWAYS FOUR INCHES SMALLER THAN THEIR ASSOCIATED CONCRETE RISER DIMENSIONS.

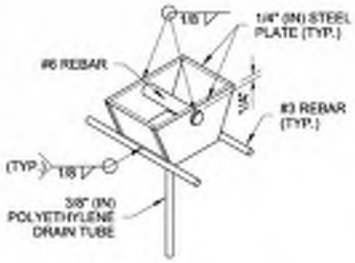


FRONT ELEVATION VIEW

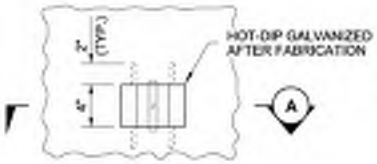


RIGHT SIDE ELEVATION VIEW

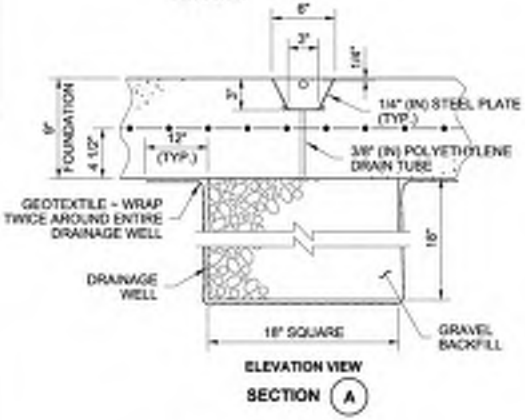
SINGLE PAD MOUNT TRAFFIC SIGNAL OR ITS CABINET
(TYPE 33x CABINET SHOWN)



ISOMETRIC VIEW



PLAN VIEW



ELEVATION VIEW

SECTION (A)

GENERATOR TIE-DOWN ANCHOR
(FABRICATE IF NOT AVAILABLE COMMERCIALLY)

NOTES - SINGLE PAD MOUNT TRAFFIC SIGNAL OR ITS CABINET (SHEET 4 OF 6)

C1. Welded Wire Fabric (WWF) shall be 4.0 (in.) x 4.0 ~ W4.0 (in.) x W4.0 ~ meeting the requirements of **Standard Specification 9-07.7**. As an alternative, a grid of #3 rebar may be used, with bars spaced at 1'- 0" centers laterally and longitudinally.

C2. Generator Tie-Down Anchors are only required for cabinets with Generator Transfer Switches (GTS). Anchor shall along the side of the cabinet near the back corner of the cabinet riser as shown.

C3. Cabinet well shall be a nominal 10" (in.) deep, sloping towards the corner where the drain tube is installed. Well dimensions are 12" (in.) smaller than the riser length and width dimensions (**A** and **B**). See Cabinet Well Reference Table, this sheet.

C4. Install conduit couplings on all conduits. Couplers shall be installed with the top of the coupler flush with the top of concrete. For PVC conduits, the conduit segment above the coupler shall not be glued to the coupler.

C5. Conduits shall extend a minimum of 2" (in.) and a maximum of 3" (in.) into the cabinet, as measured from the concrete surface to the top of the end bell (PVC) or ground bushing (RMC).

C6. Additional gravel pad not shown. Gravel pad shall extend two feet beyond the front, right, and back of the cabinet pad where the pad is two feet wide. Final gravel area shall be a rectangle.

CABINET WELL REFERENCE TABLE

SIGNAL AND ITS CABINETS	WELL WIDTH (C)	WELL LENGTH (D)
TYPE 33x	1' - 2"	1' - 8"
TYPE 33xD	3' - 2"	1' - 8"
TYPE 342LX / NEMA P44	2' - 10"	1' - 4"

FOUNDATION SIZE REFERENCE TABLE

SIGNAL AND ITS CABINETS	PAD WIDTH (X)	PAD DEPTH (Y)	RISER WIDTH (A)	RISER DEPTH (B)	HOOP (2) WIDTH (BA)	HOOP (2) DEPTH (BB)
TYPE 33x	5' - 2"	6' - 8"	2' - 2"	2' - 8"	1' - 10"	2' - 4"
TYPE 33xD	6' - 3"	6' - 8"	4 - 3"	2' - 8"	3' - 11"	2' - 4"
TYPE 342LX / NEMA P44	5' - 10"	6' - 4"	3' - 10"	2' - 4"	3' - 6"	2' - 0"

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CABINET ORIENTATION CONDUIT LAYOUT AND FOUNDATION DETAIL

STANDARD PLAN J-10.10-04

SHEET 4 OF 6 SHEETS

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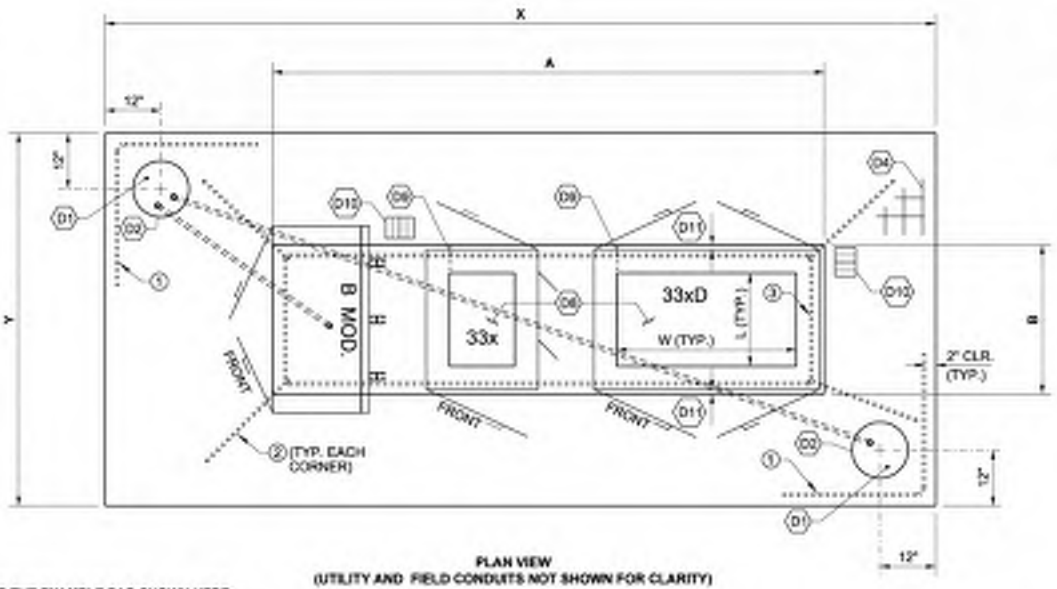
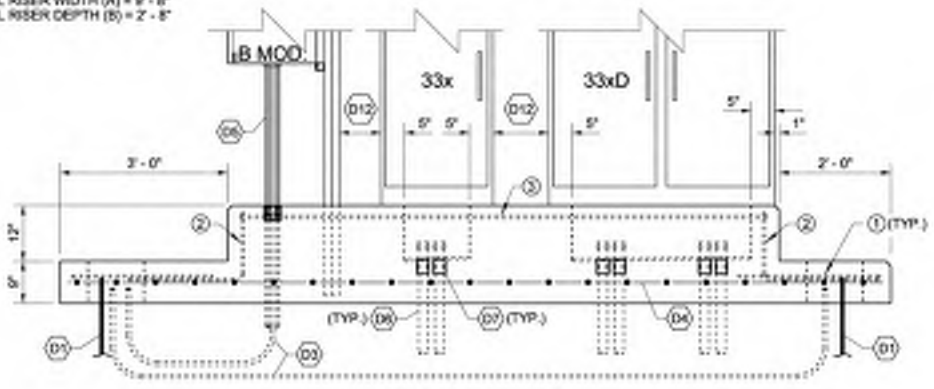


PLAN VIEW
(UTILITY AND FIELD CONDUITS NOT SHOWN FOR CLARITY)

FOR THE EXAMPLE PAD SHOWN HERE:
- SPACE BETWEEN TYPE B MOD. CABINET AND 33x CABINET IS 0" (IN.)
- SPACE BETWEEN 33x AND 33xD CABINET IS 1' - 0"
- OVERALL PAD WIDTH (X) = 14' - 8"
- OVERALL PAD DEPTH (Y) = 6' - 8"
- OVERALL RISER WIDTH (A) = 9' - 8"
- OVERALL RISER DEPTH (B) = 2' - 8"

FOUNDATION PAD DIMENSIONS X, Y, A, AND B SHOULD BE PROVIDED IN THE CONTRACT PLANS.



FRONT ELEVATION VIEW

TYPE A (NARROW) MULTI-CABINET FOUNDATION PAD
(TYPE B MODIFIED SERVICE CABINET, TYPE 33x CABINET, AND TYPE 33xD CABINET SHOWN)

NOTES - TYPE A (NARROW) AND TYPE B (WIDE) MULTI-CABINET FOUNDATION PAD (SHEETS 5 AND 6 OF 6)

D1. Drive ground rods before placing concrete. Ground rods shall be a minimum of 8 feet apart. See **Standard Plan J-60.05** for additional details.

D2. Welded Wire Fabric (WWF) shall be 4.0 (in.) x 4.0 (in.) ~ W4.0 x W4.0 ~ meeting the requirements of **Standard Specification 9-07.7**. As an alternative, a grid of #3 rebar may be used, with bars spaced at 1'-0" centers laterally and longitudinally.

D3. See Sheet 3 for reinforcing steel bending diagrams.

D4. Concrete riser shall not include Type D or Type E Service Cabinets.

D5. Install conduit couplings on all conduits. Couplers shall be installed with the top of the coupler flush with the top of concrete. For PVC conduits, the conduit segment above the coupler shall not be glued to the coupler.

D6. Conduits shall extend a minimum of 2" (in.) and a maximum of 3" (in.) into the cabinet, as measured from the concrete surface to the top of the end bell (PVC) or ground bushing (RMC).

D7. Serving utility may require meter socket to be installed on the outside of the cabinet. Utility feeder conduit shall still terminate in the utility section of the cabinet unless otherwise required by the utility.

D8. Additional gravel pad not shown. Gravel pad shall extend two feet in front of the concrete pad for the full width of the concrete pad. If the utility meter socket is installed on the outside of the service cabinet, gravel pad shall also extend three feet from the side of the cabinet pad where the meter is installed. Final gravel area shall be a rectangle.

D9. Cabinet wells shall be provided for all Type 33x, Type 33xD, Type 342LX, and NEMA P44 Cabinets. See Note C3 on sheet 4 for Cabinet Well dimensions.

D10. At least one Generator Tie-Down Anchor shall be provided for each multi-cabinet pad foundation. A second Anchor shall be provided if there is a second cabinet with a Generator Transfer Switch (GTS). If a service or transformer cabinet is present, install one Anchor at either of the locations shown, closest to the cabinet with the GTS. If there is no service or transformer cabinet, install Anchors only at the ends of the cabinet riser.

KEY NOTES - SHEET 5 OF 6

(D1) Ground rod ~ See Note D1, this sheet.
(D2) Ground rod well (Ground tile) - 12" diameter concrete
(D3) Service ground electrode conduits.
(D4) Welded wire fabric ~ See Note D2, this sheet.
(D5) Utility entrance (service cabinet) or input power (transformer cabinet) conduit. Conduit shall terminate in the utility or high voltage section of the cabinet (as applicable).
(D6) Conduits to field equipment. Conduits shall terminate in the customer section (service cabinet) or low-voltage (transformer cabinet) of the cabinet.
(D7) Conduit couplers ~ See Note D5, this sheet.
(D8) Cabinet Well ~ See Note D9, this sheet.
(D9) 3/8" (in.) diam. polyethylene or copper tubing for drain. Tubing shall be straight, but slope downward a minimum of 1" (in.)
(D10) Generator Tie-Down Anchor ~ See Note D10, this sheet.
(D11) Riser lip shall be 1" (in.) from the base edge of the largest cabinet to the face of the concrete riser. Smaller cabinets shall be positioned so that the front riser lip is 1" (in.) wide.
(D12) For a Type A (Narrow) Pad, cabinet spacing shall be as follows:
a. 12" (in.) between cabinets where at least one cabinet has a police panel or GTS door.
b. 6" (in.) between cabinets where no police panel or GTS door is present.

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CABINET ORIENTATION CONDUIT LAYOUT AND FOUNDATION DETAIL

STANDARD PLAN J-10.10-04

SHEET 5 OF 6 SHEETS

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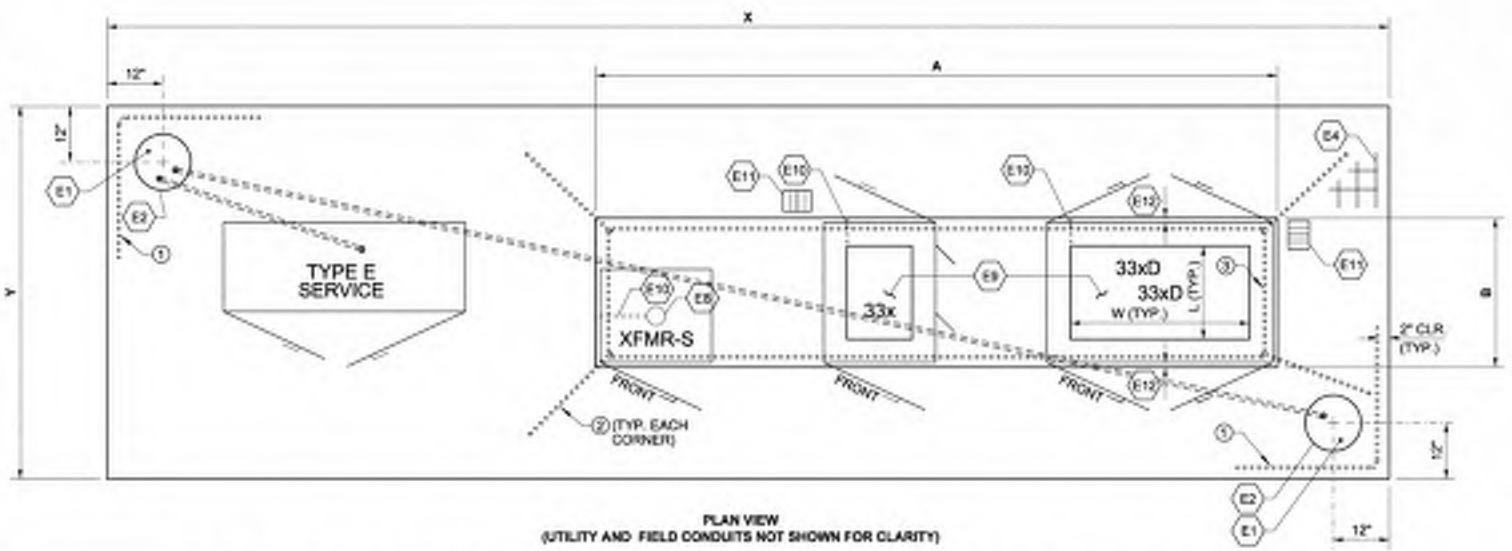


PLAN VIEW
(UTILITY AND FIELD CONDUITS NOT SHOWN FOR CLARITY)

CABINET CLEARANCE REFERENCE TABLE

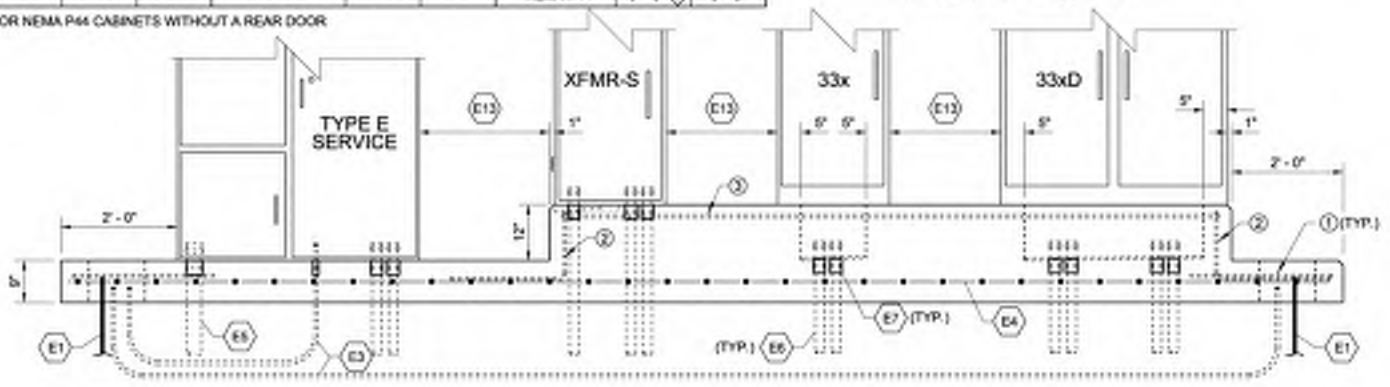
SERVICE CABINETS	LEFT SIDE	RIGHT SIDE	TRANSFORMER CABINETS	LEFT SIDE	RIGHT SIDE	SIGNAL AND ITS CABINETS	LEFT SIDE	RIGHT SIDE
TYPE B MOD.	1' - 10"	1' - 6"	XFMR-S (UP TO 12.5 KVA)	2' - 0"	6"	TYPE 33x	2' - 0"	2' - 0"
TYPE D	2' - 4"	6"				TYPE 33xD	2' - 0"	2' - 0"
TYPE E	2' - 0"	2' - 4"	XFMR-L (12.6 TO 37.5 KVA)	3' - 6"	6"	TYPE 342LX	1' - 10"	1' - 10"
						NEMA P44	3' - 6" ①	3' - 6"

① 6" FOR NEMA P44 CABINETS WITHOUT A REAR DOOR

FOR THE EXAMPLE PAD SHOWN HERE:

- SPACE BETWEEN TYPE E CABINET AND FACE OF CONCRETE RISER IS 2' - 4"
- SPACE BETWEEN XFMR-S CABINET AND 33x CABINET IS 2' - 0"
- SPACE BETWEEN 33x AND 33xD CABINET IS 2' - 0"
- OVERALL PAD WIDTH (X) = 22' - 11"
- OVERALL PAD DEPTH (Y) = 6' - 8"
- OVERALL RISER WIDTH (A) = 12' - 3"
- OVERALL RISER DEPTH (B) = 2' - 8"

FOUNDATION PAD DIMENSIONS X, Y, A, AND B SHOULD BE PROVIDED IN THE CONTRACT PLANS.



FRONT ELEVATION VIEW

TYPE B (WIDE) MULTI-CABINET FOUNDATION PAD
(TYPE E SERVICE CABINET, XFMR-S CABINET, TYPE 33x CABINET, AND TYPE 33xD CABINET SHOWN)

KEY NOTES - SHEET 6 OF 6

- E1 Ground rod ~ See Note D1, Sheet 5 of 6.
- E2 Ground rod well (Ground tile) - 12" diameter concrete
- E3 Service ground electrode conduits.
- E4 Welded wire fabric ~ See Note D2, Sheet 5 of 6.
- E5 Utility entrance (service cabinet) or input power (transformer cabinet) conduit. Conduit shall terminate in the utility or high voltage section of the cabinet (as applicable).
- E6 Conduits to field equipment. Conduits shall terminate in the customer section (service cabinet) or low-voltage (transformer cabinet) of the cabinet.
- E7 Conduit couplers ~ See Note D5, Sheet 5 of 6.
- E8 4" (in.) diam. x 1/2" (in.) deep sump. Slope foundation within cabinet footprint toward sump.
- E9 Cabinet Well ~ See Note D9, Sheet 5 of 6.
- E10 3/8" (in.) diam. polyethylene or copper tubing for drain. Tubing shall be straight, but slope downward a minimum of 1" (in.)
- E11 Generator Tie-Down Anchor ~ See Note D10, Sheet 5 of 6.
- E12 Riser lip shall be 1" (in.) from the base edge of the largest cabinet to the face of the concrete riser. Smaller cabinets shall be positioned so that the front riser lip is 1" (in.) wide.
- E13 For a **Type B** (Wide) Pad, spacing between the cabinets shall match the widest door of the two adjacent cabinets. For **Type D** and **Type E** Service Cabinets, the clearance is to the face of the adjacent concrete riser (when present). See left and right clearance table this sheet.

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CABINET ORIENTATION CONDUIT LAYOUT AND FOUNDATION DETAIL

STANDARD PLAN J-10.10-04

SHEET 6 OF 6 SHEETS

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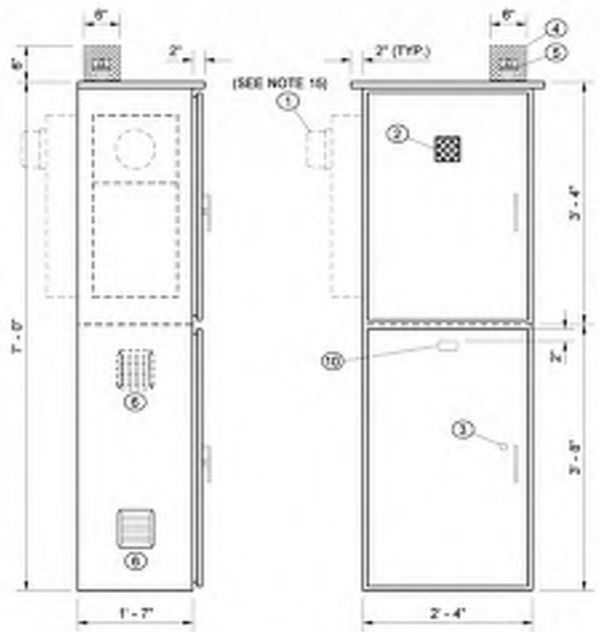
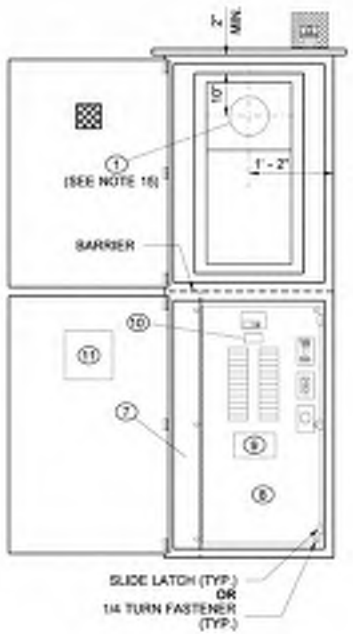


SERVICE CABINET DETAIL

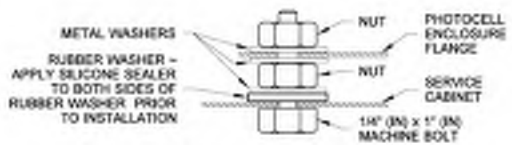


FRONT
(SHOWN WITH DOORS OPEN AND DEAD FRONT CLOSED)

SERVICE CABINET INTERIOR

KEY

1. METER SOCKET/BASE PANEL PER UTILITY REQUIREMENTS ~ UTILITY MAY REQUIRE METER TO BE INSTALLED ON THE OUTSIDE OF THE CABINET INSTEAD OF INSIDE THE UTILITY SECTION OF THE CABINET
2. UTILITY SECTION DOOR ~ HINGED FRONT FACING DOOR WITH 4" (IN) x 4" (IN) MINIMUM POLISHED WIRE GLASS WINDOW
3. CUSTOMER SECTION DOOR WITH BEST CX 6-PIN LOCK CORE
4. PHOTOCELL ENCLOSURE ~ SEE PHOTOCELL MOUNTING DETAIL ~ ENCLOSURE SHALL BE FABRICATED FROM EITHER:
   A. 5/8" (IN) EXPANDED STEEL MESH WITH WELDED SEAMS AND MOUNTING FLANGES ~ HOT-DIP GALVANIZED AFTER FABRICATION ~ OR ~
   B. TYPE 5052 - H32 ALUMINUM WITH 5/8" (IN) x 5/8" (IN) OPENINGS EQUIVALENT TO 5/8" (IN) EXPANDED STEEL MESH
5. PHOTOELECTRIC CONTROL ~ SEE **STANDARD SPECIFICATION, SECTION 9-29.11(2).**
6. SCREENED VENTS ~ TWO REQUIRED, ONE EACH SIDE ~ LOUVERED PLATES
7. 6" (IN) x 6" (IN) MIN. UTILITY WIREWAY ~ BACK LEFT CORNER OF CUSTOMER SECTION ~ SHALL REQUIRE TOOLS TO OPEN ~ LABEL WITH "UTILITY WIREWAY"
8. HINGED DEAD FRONT WITH 1/4 TURN FASTENERS OR SLIDE LATCHES ~ DEAD FRONT PANEL BOLTS SHALL NOT EXTEND INTO VERTICAL LIMITS OF THE BREAKER ARRAY(S)
9. ARC FLASH AND SHOCK HAZARD LABEL (FIELD INSTALLED) ~ SEE DETAIL
10. CABINET BUSSWORK RATING LABEL
11. METAL WIRING DIAGRAM HOLDER



PHOTOCELL ENCLOSURE MOUNTING DETAIL

NOTES

1. See **Standard Specification Section 9-29.24** (Service Cabinets).
2. Cabinet shall be rated NEMA 3R and shall include two rain-tight vents.
3. Dimensions shown are minimum and shall be adjusted to accommodate the various sizes of equipment installed. A 1% tolerance is allowed for all dimensions.
4. Doors shall be pad-lockable and gasketed. Customer side door shall include a Best CX 6-pin Construction core lock. Each door shall use either a continuous piano hinge, three two-piece hinges, or two heavy-duty lift-off type hinges.
5. Hinges with pins shall have stainless steel or brass pins - see **Standard Plan J-10.20** door hinge details. When using two piece hinge type on galvanized enclosure, remove hinge pin prior to welding hinge to cabinet and prior to hot-dip galvanizing. After galvanizing, replace pin with brass pin and solder in place.
6. Equipment identified by Key Numbers **14**, **16**, **17**, **18**, **19**, **20**, **21**, **22**, **23**, and **28** shall have an appropriately engraved phenolic name plate attached with screws or rivets. The name plate for Key Number 21 (Test Switch only) shall read as follows:
   "PHOTOCELL BYPASS TEST ON" AND "PHOTOCELL TEST OFF - AUTOMATIC."
   See service cabinet detail.
7. All busswork shall be **ASTM B187** copper and shall have a minimum rating of 250 amps. All breakers shall bolt on to the busswork. Jumpering of breakers shall not be allowed. Busswork shall accommodate all future equipment as shown in the Breaker Schedule.
8. All nuts, bolts, and washers used for mounting the photocell enclosure shall be stainless steel.
9. The photocell unit shall be centered in the photocell enclosure to permit 360 degree rotation of the photocell without removal of the photocell unit or the photocell enclosure.
10. All internal wire runs shall be identified with "TO - FROM" coded tags labeled with the code letters and/or numbers shown on the Schedules. Approved PVC or polyolefin wire marking sleeves shall be used.
11. Key items **23**, **24**, and **25** shall be connected to the cabinet main bonding jumper assembly by appropriately sized wire.
12. See Contract for Breaker and Contactor Schedule.
13. Buss bars shall be sized to accommodate up to #4 AWG wires.
14. The meter base portion of this service was designed to meet metering portion of **EUSERC Drawing 309** requirements.
15. Metering arrangements vary with different serving Utilities. The Utility may require meter base mounting in the enclosure, on the side, or on the back of the enclosure. The Utility may require the dimension between the door and the front of the safety socket box to be less than the 11" (in) shown in the Left Side - Safety Socket Box Mounting Detail. The Contractor shall verify the serving Utility's requirements prior to fabrication and installation of the service equipment.
16. Verify the meter setback position with the utility and adjust the meter socket backplate to the required position. For cabinets with separate metering, remove the meter socket or install shunts in the meter socket.

ARC FLASH AND SHOCK HAZARD LABEL DETAIL
(9)

Aug 18, 2021

SERVICE CABINET TYPE D (0 - 200 AMP TYPE 120/240 VOLT SINGLE PHASE)

STANDARD PLAN J-10.21-02

SHEET 1 OF 2 SHEETS

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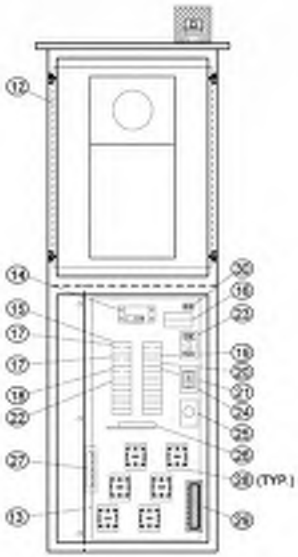
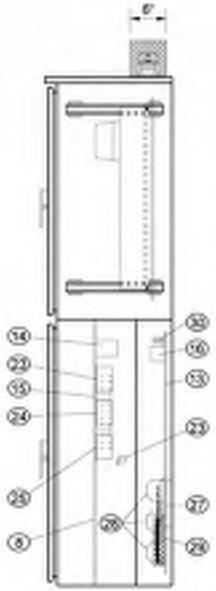
KEY (CONTINUED)

(12) ALUMINUM BACKPLATE FOR METER SOCKET/BASE
(13) 18" (IN) WIDE BY 40" (IN) TALL ALUMINUM BACKPLATE FOR CUSTOMER SECTION EQUIPMENT
(14) MAIN BREAKER – DPST – SIZE PER BREAKER SCHEDULE
(15) 24-CIRCUIT PANEL BOARD – MINIMUM SIZE WITH SEPARATE MAIN BREAKER
(16) 20 KA TYPE 1 OR TYPE 2 SURGE PROTECTION DEVICE – DIN RAIL MOUNT WITH PLUG-IN MODULE(S)
(17) DPST BRANCH BREAKER – SEE BREAKER SCHEDULE
(18) SPARE BRANCH BREAKER – 20 AMP DPST – OMIT IF BREAKER ARRAY IS FULL (SEE BREAKER SCHEDULE)
(19) PHOTOCELL BREAKER – SPST 15 AMP
(20) RECEPTACLE BREAKER – SPST 20 AMP
(21) HEATER BREAKER – SPST 15 AMP
(22) SPST BRANCH BREAKER – SEE BREAKER SCHEDULE
(23) SINGLE GANG BOX WITH TEST SWITCH – 120/277 VOLT 15 AMP SPDT SNAP ACTION - POSITIVE CLOSE - "T" RATED
(24) SINGLE GANG BOX WITH RECEPTACLE (GROUNDED) – 125 VOLT 20 AMP GFCI
(25) SINGLE GANG BOX WITH THERMOSTAT CONTROL – 40° F CLOSURE - 3 DIFFERENTIAL
(26) ISOLATED NEUTRAL BUSS – 14 LUG COPPER (SEE NOTE 12)
(27) CABINET MAIN BONDING JUMPER ASSEMBLY – BUSS SHALL BE 14 LUG TINNED COPPER (SEE NOTE 12) – SEE CABINET MAIN BONDING JUMPER ASSEMBLY DETAIL
(28) CONTACTOR (BEHIND DEAD FRONT) – SEE BREAKER SCHEDULE
(29) STRIP HEATER (100 WATT NOMINAL) WITH EXPANDED STEEL MESH ENCLOSURE FOR TOUCH PROTECTION
(30) THREE POSITION DIN RAIL MOUNTED TERMINAL BLOCK – TERMINAL BLOCK SECTIONS SHALL BE BLACK, WHITE, AND RED AS SHOWN IN CABINET WIRING DIAGRAM.

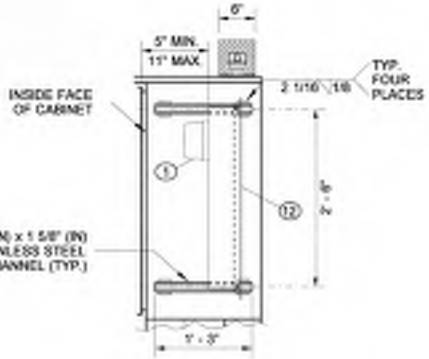


FRONT
(SHOWN WITH DEAD FRONT REMOVED)



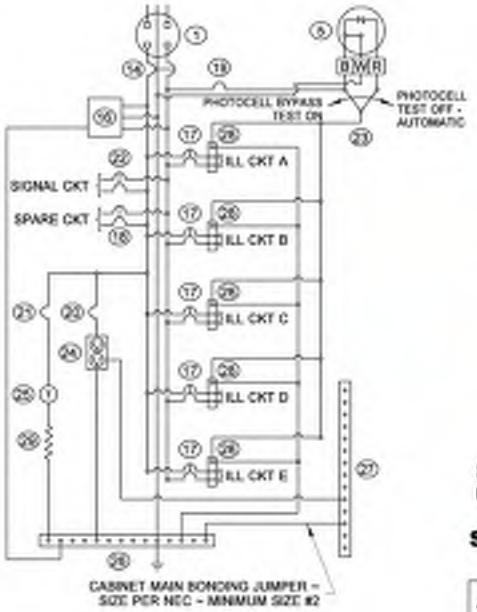
INTERIOR END VIEW
(SUPPORT FRAMES FOR EQUIPMENT NOT SHOWN)

SERVICE CABINET INTERIOR DETAIL

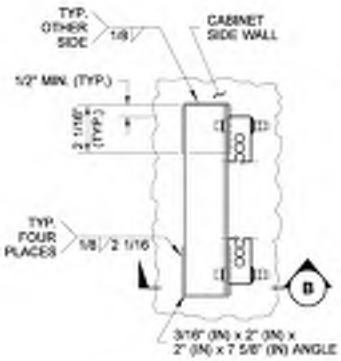


UTILITY SECTION DETAIL

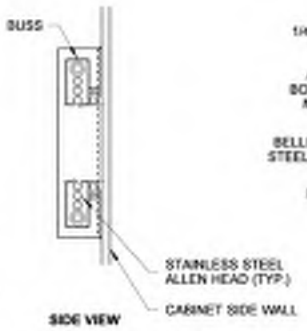
TEST SWITCH LABEL DETAIL



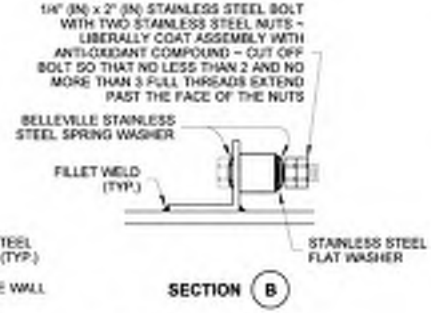
WIRING SCHEMATIC



ELEVATION VIEW



SIDE VIEW



SECTION (B)

CABINET MAIN BONDING JUMPER ASSEMBLY DETAIL

Aug 18, 2021

SERVICE CABINET TYPE D (0 - 200 AMP TYPE 120/240 VOLT SINGLE PHASE)

STANDARD PLAN J-10.21-02

SHEET 2 OF 2 SHEETS

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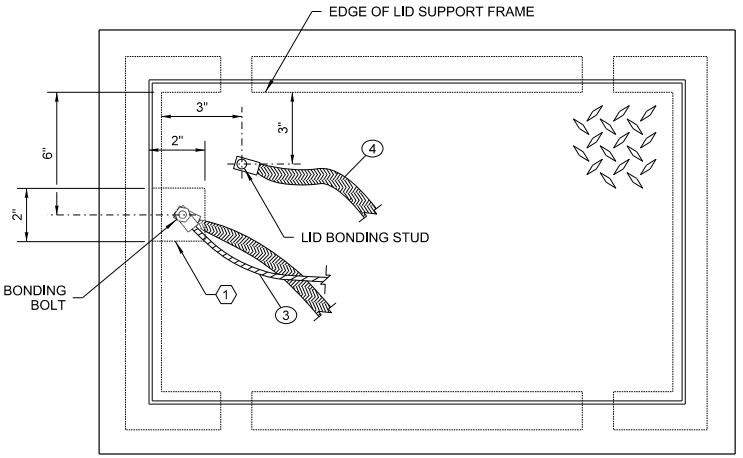
① 3/8" (in) × 2" (in) × 2" (in) Frame Bonding Stud Plate with 1/4 NC × 1" Stainless Steel Bonding Stud.
- Weld Bonding Stud to Frame Bonding Plate.
- Weld to lid support frame.
- 1/4" (in) weld ~ 3 sides.
- Grind lid bearing surface flat after welding.
- All corners rounded. Corners along exposed sheared or cut edges shall be broken by light grinding to achieve an approximate 1/16" (in) chamfer or rounding.
- Protect conductors with fireproof cloth prior to welding.
- Omit Frame Bonding Stud Plate if the Frame Bonding point already exists.

② Weld all around lid bonding stud ~ 1/4 NC × 1" stainless steel ~ liberally coat entire assembly w/ anti-seize compound.



PLAN

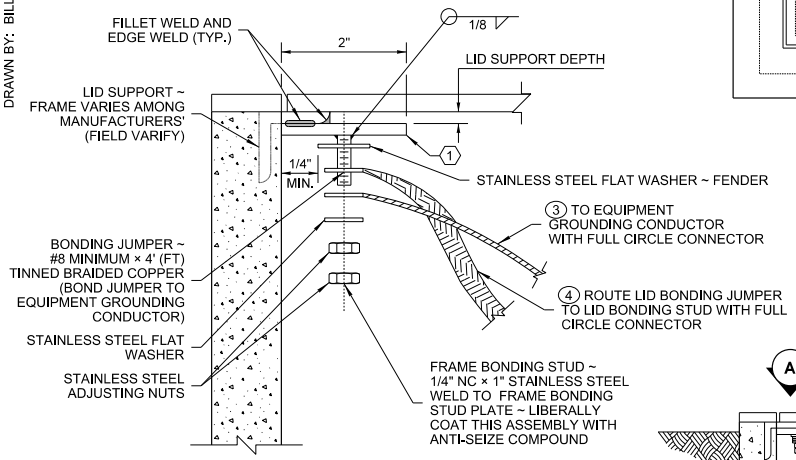
KEY

① BONDING JUMPER

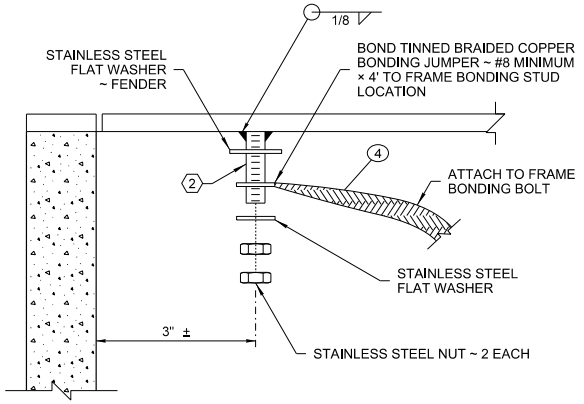
② EQUIPMENT GROUNDING CONDUCTOR

③ BONDING JUMPER ATTACHED TO BOX WALL COUPLING NUT

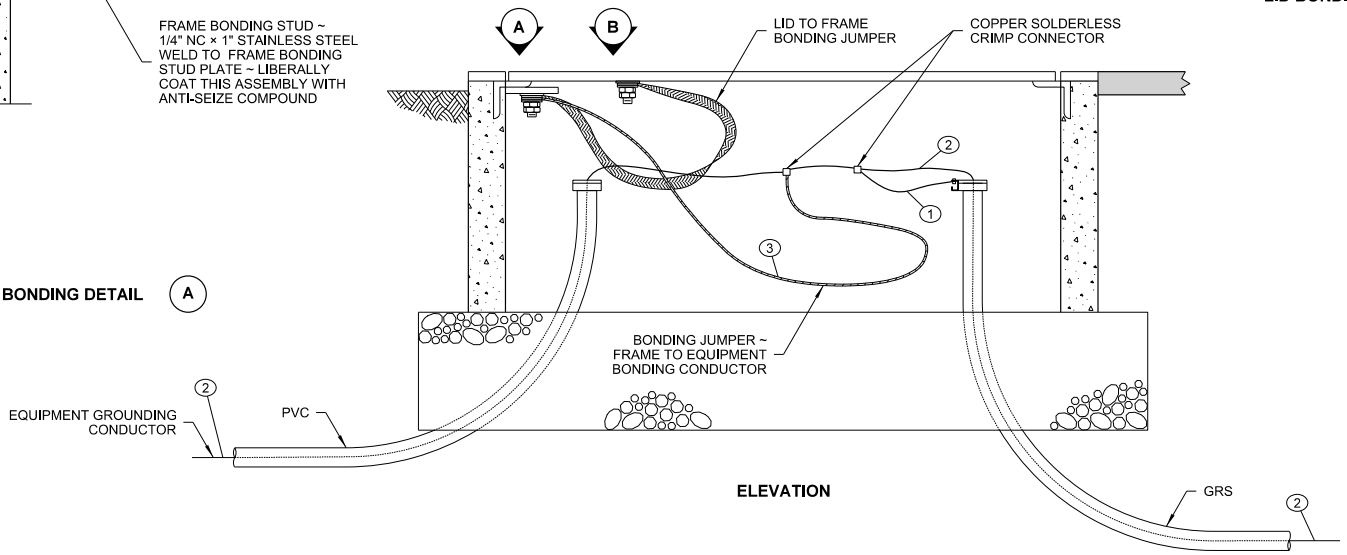
④ BONDING JUMPER ATTACHED TO BOX LID(S) GROUND STUD. # 8 AWG (MIN.) × 4' (FT) TINNED BRAIDED COPPER.



FRAME BONDING DETAIL (A)



LID BONDING DETAIL (B)



ELEVATION

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EXISTING JUNCTION BOX RETROFIT GROUNDING DETAILS

STANDARD PLAN J-40.05-00

SHEET 1 OF 1 SHEET

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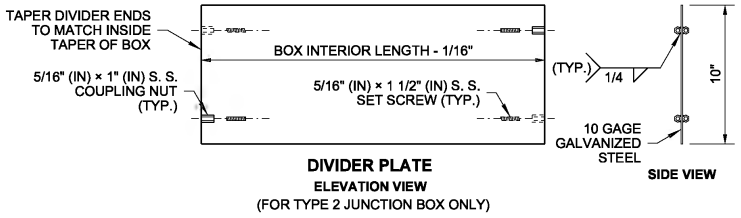
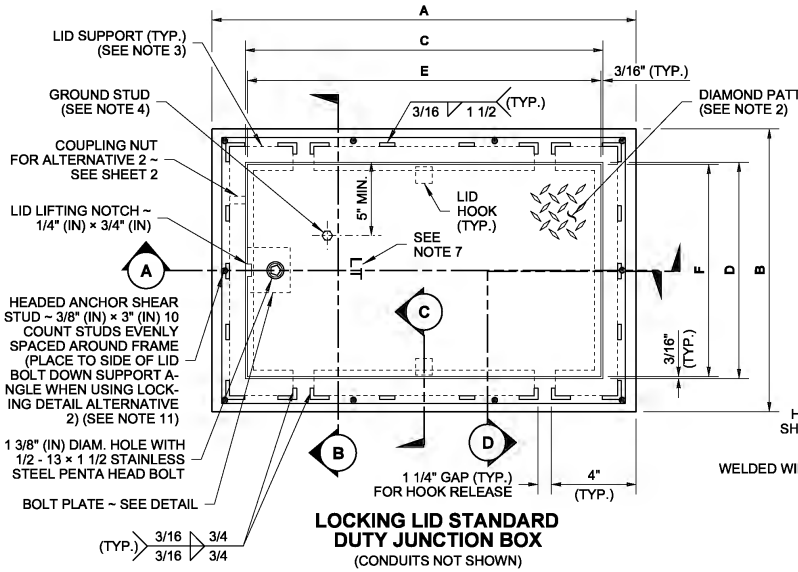


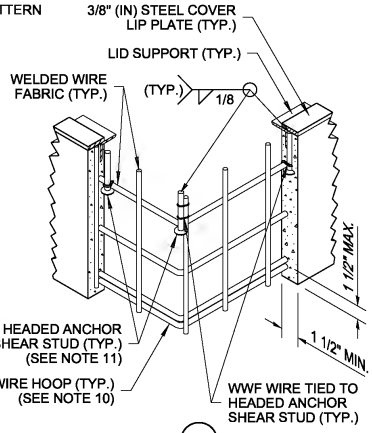
DIVIDER PLATE
ELEVATION VIEW
(FOR TYPE 2 JUNCTION BOX ONLY)

JUNCTION BOX DIMENSION TABLE

MARK	ITEM	BOX TYPE	
		TYPE 1	TYPE 2
A	OUTSIDE LENGTH OF JUNCTION BOX	22"	33"
B	OUTSIDE WIDTH OF JUNCTION BOX	17"	22 1/2"
C	INSIDE LENGTH OF JUNCTION BOX	18" ~ 19"	28" ~ 29"
D	INSIDE WIDTH OF JUNCTION BOX	13" ~ 14"	17" ~ 18"
E	LID LENGTH	17 5/8"	28 5/8"
F	LID WIDTH	12 5/8"	18 1/8"
	CAPACITY ~ CONDUIT DIAMETER	6"	12"



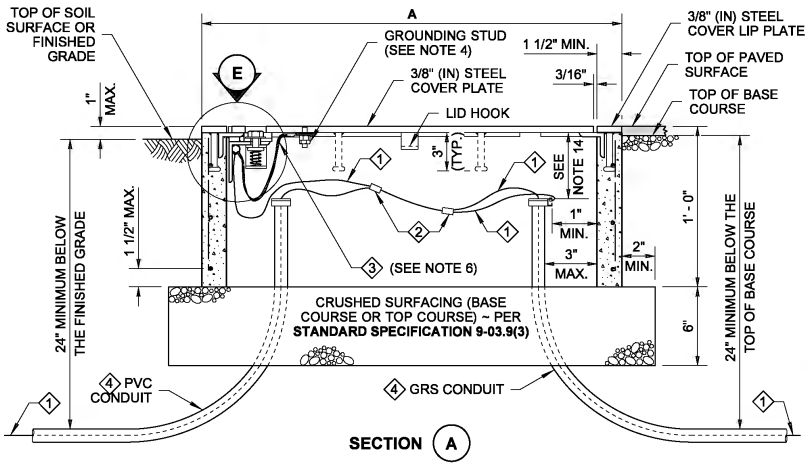
LOCKING LID STANDARD DUTY JUNCTION BOX
(CONDUITS NOT SHOWN)



SECTION (D)
PERSPECTIVE VIEW

NOTES

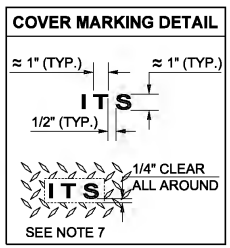
1. All box dimensions are approximate. Exact configurations vary among manufacturers.
2. Minimum lid thickness shown. Junction Boxes installed in sidewalks, walkways, and shared-use paths shall have a slip-resistant coating on the lid and lip cover plate, and shall be installed with the surface flush with and matched to the grade of the sidewalk, walkway, or shared-use path. The non-slip lid shall be identified with permanent markings on the underside, indicating the type of surface treatment (see Contract Documents for details) and the year of manufacture. The permanent marking shall be 1/8" (in) line thickness formed with a mild steel weld bead and shall be placed prior to hot-dip galvanizing.
3. Lid support members shall be 3/16" (in) minimum thick steel C, L, or T shape, welded to the frame.
4. A 1/4-20 NC × 3/4" (in) stainless steel ground stud shall be welded to the bottom of the lid; include (2) stainless steel nuts and (2) stainless steel flat washers.
5. Bolts and nuts shall be liberally coated with anti-seize compound.
6. Equipment Bonding Jumper shall be # 8 AWG min. × 4' (ft) of tinned braided copper.
7. The System Identification letters shall be 1/8" (in) line thickness formed with a mild steel weld bead. See Cover Marking detail. Grind off diamond pattern before forming letters. For System Identification details, see **Standard Specification 9-29.2(4)**.
8. When required in the Contract, provide a 10" (in) x 27 1/2" (in), 10 gage divider plate, complete, with fasteners, in each Type 2 Junction Box where specified.
9. When required in Contract, provide a 12" (in) deep extension for each Type 2 Junction Box where specified.
10. See the **Standard Specifications** for alternative reinforcement and class of concrete.
11. Headed Anchor Shear Studs must be welded to the Steel Cover Lip Plate and wire tied in two places to the vertical Welded Wire Fabric when in contact with each other. Wire tie all other Headed Anchor Shear Studs to the horizontal Welded Wire Fabric.
12. Lid Bolt Down Attachment Tab provides a method of retrofitting by using a mechanical process in lieu of welding. Attachment Tab shown depicts a typical component arrangement; actual configurations of assembly will vary among manufacturers. See approved manufacturers' shop drawings for specifics.
13. Unless otherwise noted in the plans or approved by the Engineer, Junction Boxes, Cable Vaults, and Pull Boxes shall not be placed within the sidewalks, walkways, shared use paths, traveled ways or paved shoulders. All Junction Boxes, Cable Vaults, and Pull Boxes placed within the traveled way or paved shoulders shall be Heavy-Duty.
14. Distance between the top of the conduit and the bottom of the Junction Box lid shall be 6" (in) min. to 8" (in) max. for final grade of new construction only. See **Standard Specification 8-20.3(5)**. Where adjustments are to be made to existing Junction Boxes, or for interim construction stages during the contract, the limits shall be from 6" (in) min. to 10" (in) max. See **Standard Specification 8-20.3(6)**.

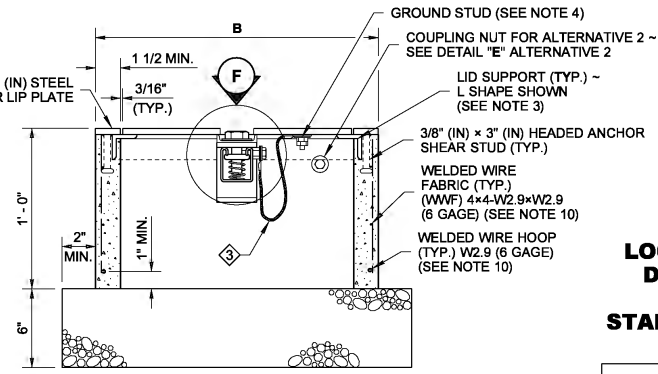


SECTION (A)

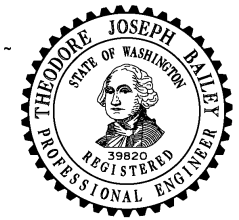
① Equipment Grounding Conductor
② Copper Solderless Crimp Connector
③ Equipment Bonding Jumper (See Note 6)
④ See Contract for conduit size and number

COVER MARKING DETAIL





SECTION (B)
(CONDUITS NOT SHOWN)



LOCKING LID STANDARD DUTY JUNCTION BOX TYPES 1 & 2 STANDARD PLAN J-40.10-04

SHEET 1 OF 2 SHEETS

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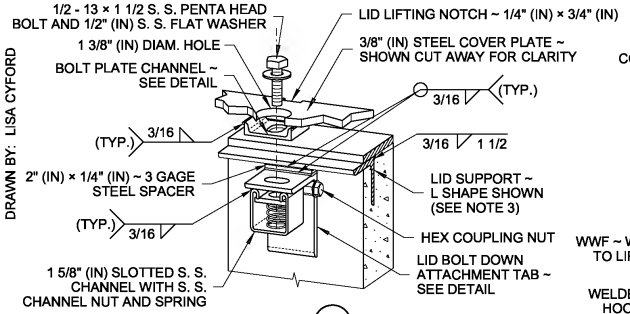
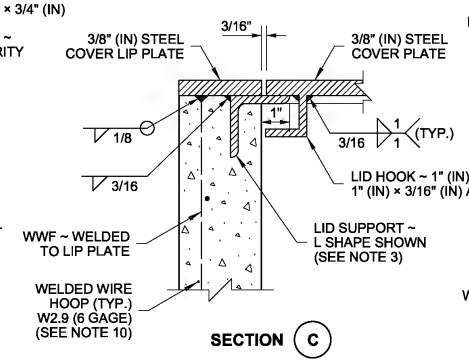
Washington State Department of Transportation

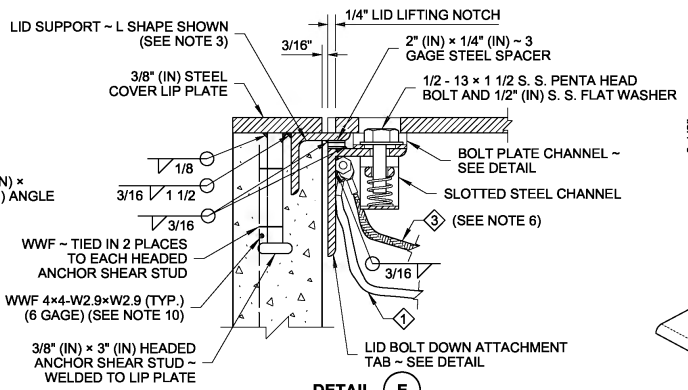
DRAWN BY: LISA CYFORD



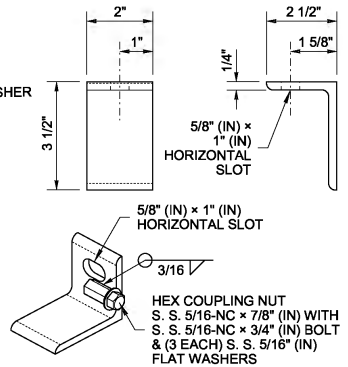
DETAIL (F)
ALTERNATIVE 1 SHOWN PERSPECTIVE VIEW



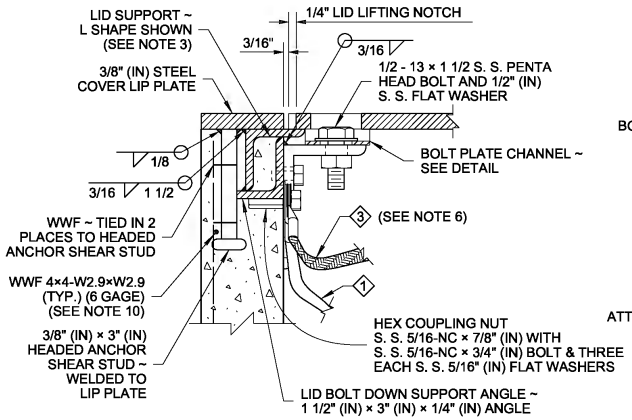
SECTION (C)



DETAIL (E)
ALTERNATIVE 1 SHOWN



ALTERNATIVE 1
LID BOLT DOWN ATTACHMENT TAB
(SEE NOTE 12)



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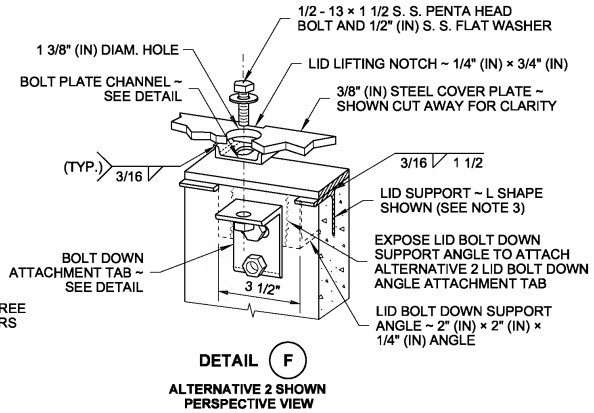

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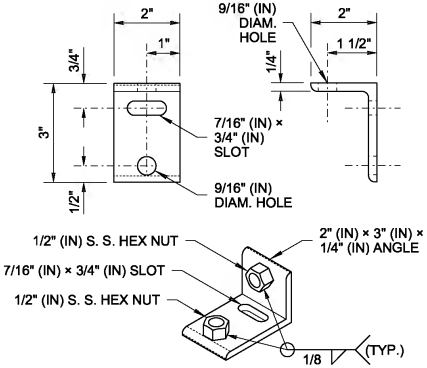
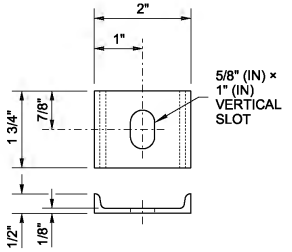
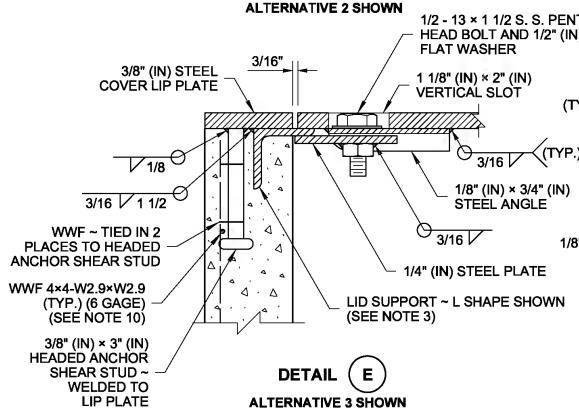
ALTERNATIVE 2 SHOWN PERSPECTIVE VIEW



ALTERNATIVE 2
LID BOLT DOWN ATTACHMENT TAB
(SEE NOTE 12)



BOLT PLATE CHANNEL



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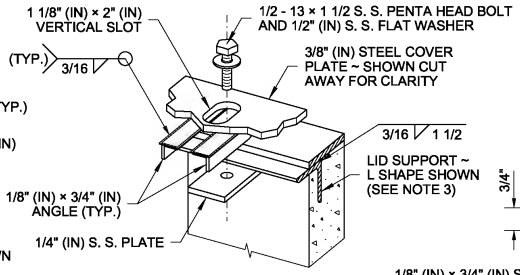
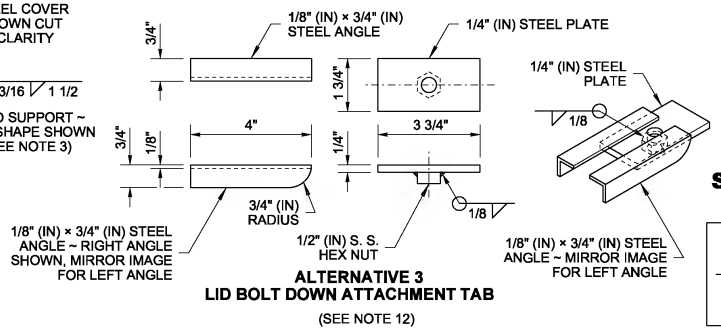


DETAIL (F)
ALTERNATIVE 3 SHOWN PERSPECTIVE VIEW



ALTERNATIVE 3
LID BOLT DOWN ATTACHMENT TAB
(SEE NOTE 12)

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LOCKING LID STANDARD DUTY JUNCTION BOX TYPES 1 & 2 STANDARD PLAN J-40.10-04

SHEET 2 OF 2 SHEETS

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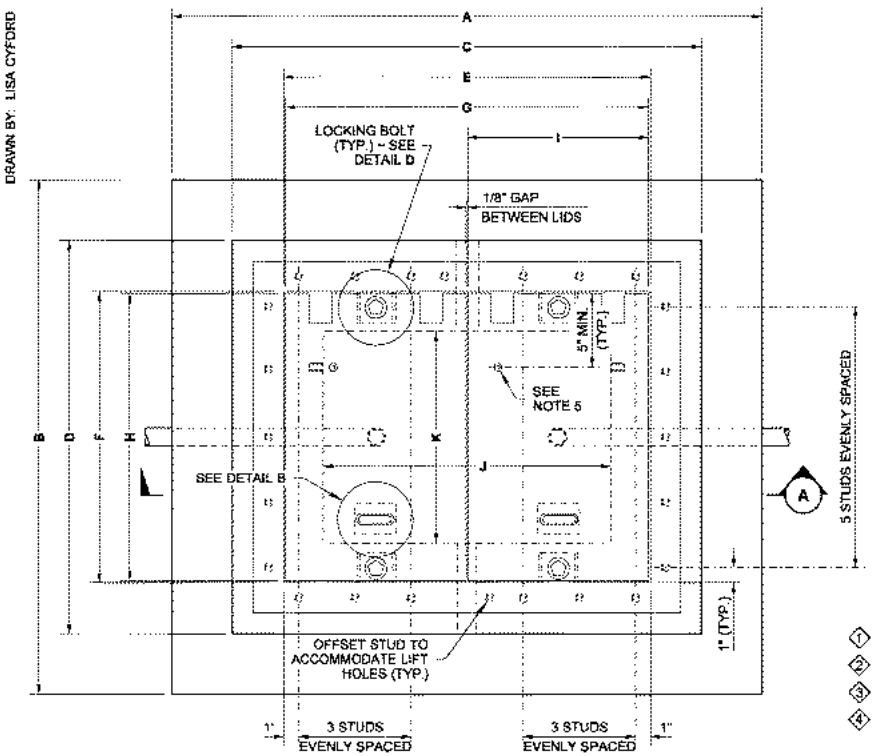
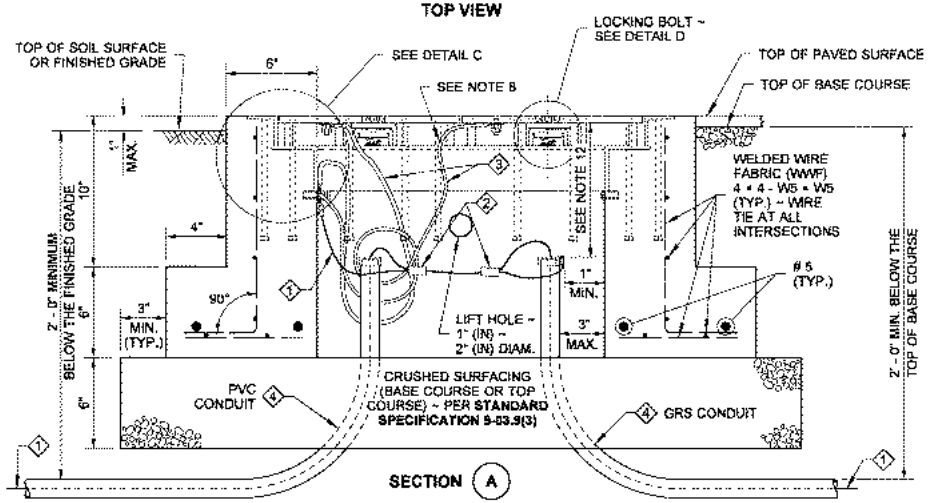


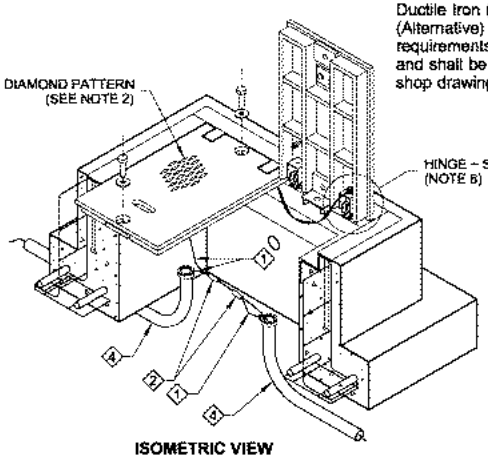
TOP VIEW

JUNCTION BOX DIMENSION TABLE				
MARK	ITEM	BOX TYPE		
		TYPE 4	TYPE 5	TYPE 6
A	OVERALL LENGTH	39"	48"	56"
B	OVERALL WIDTH	34"	37"	44"
C	JUNCTION BOX LENGTH	31"	40"	48"
D	JUNCTION BOX WIDTH	26"	29"	36"
E	LID OPENING LENGTH	24"	33 1/8"	41 1/8"
F	LID OPENING WIDTH	19"	22 1/8"	29 1/4"
G	TYPE 4 LID LENGTH	24"	——	——
H	TYPE 4, 5 & 6 LID WIDTH	19"	21 7/8"	29"
I	TYPE 5 & 6 LID LENGTH	——	16 3/8"	20 3/8"
J	INSIDE BOX LENGTH	19"	28"	36"
K	INSIDE BOX WIDTH	14"	17"	24"
X	STIFFENER SPACING	VARIES	VARIES	VARIES
Y	STIFFENER SPACING	VARIES	VARIES	VARIES
Z	STIFFENER LENGTH	18 1/4"	21 1/8"	28 1/4"
CAPACITY ~ CONDUIT DIAM.		8"	12"	24"

1. Equipment Grounding Conductor
2. Copper Solderless Crimp Connector
3. Equipment Bonding Jumper (See Note 8)
4. See Contract Plans and Special Provisions for conduit size and number



SECTION (A)



ISOMETRIC VIEW
TYPE 5 AND 6 SHOWN

NOTES

1. All box dimensions are approximate. Exact configurations vary among manufacturers.
2. All lid thicknesses are minimum.
3. Lid perimeter shall bear on frame. Mill to bearing seat and lid perimeter for full even contact after fabrication of frame and lid. Lid and frame units with uneven bearing will be rejected.
4. The installed lid and frame shall fit with full even contact around the perimeter of a junction box after installation. Care shall be taken to prevent debris accumulation on the contact surfaces.
5. A 1/4-20 NC × 1" (in) S. S. ground stud shall be welded to the bottom of each lid: Include (2) each S. S. nuts and (3) each S. S. flat washers.
6. The hinges shall allow the lids to open 180°. When lid assembly is Ductile Iron (Alternative) and equipped with Safety Bars, lids shall open 110°.
7. Bolts and nuts shall be liberally coated with anti-seize compound.
8. Connect Equipment Bonding Jumper to ground stud on lid. As an alternative to ground stud connection, the Equipment Bonding Jumper shall be attached to the front face of the hinge pocket with a 5/16-20 NC × 1" (in) S. S. bolt, (2) each S. S. nuts, and (3) each S. S. flat washers. Equipment bonding jumper shall be #8 AWG min. × 4' (ft) of tinned braided copper.
9. The System Identification letters shall be 1/8" (in) line thickness formed by a mild steel weld bead. See Cover Marking details. Grind off diamond pattern before forming letters. Ductile iron lid lettering shall be recessed, 1/8" (in) line thickness. See **Standard Specification 9-29.2(4)** for details.
10. See **Standard Specification 9-29.2(1)B** for class of concrete.
11. Unless otherwise noted in the plans or approved by the Engineer, Junction Boxes, Cable Vaults, and Pull Boxes shall not be placed within the traveled way or paved shoulders. All Junction Boxes, Cable Vaults, and Pull Boxes placed within the traveled way or paved shoulders shall be Heavy-Duty. Heavy-Duty Junction Boxes shall not be installed in sidewalks, walkways, and shared use paths.
12. Distance between the top of the conduit and the bottom of the Junction Box lid shall be 6" (in) min. to 8" (in) max., for final grade of new construction only. See **Standard Specification 8-20.3(5)**. Where adjustments are to be made to existing Junction Boxes, or for interim construction stages during the contract, the limits shall be from 6" min. to 10" (in) max. See **Standard Specification 8-20.3(6)**.
13. Junction Box Types 4, 5, or 6 may be equipped with Ductile Iron (Alternative) Lid(s) and a Cast Iron (Alternative) Frame. Junction box shall meet the requirements of **Standard Specification 9-29.2** and shall be in accordance with approved shop drawings.

THEODORE JOSEPH BAILEY — STATE OF WASHINGTON — 39820 — REGISTERED PROFESSIONAL ENGINEER

HEAVY-DUTY JUNCTION BOX TYPES 4, 5, & 6

STANDARD PLAN J-40.20-03

SHEET 1 OF 2 SHEETS

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Washington State Department of Transportation

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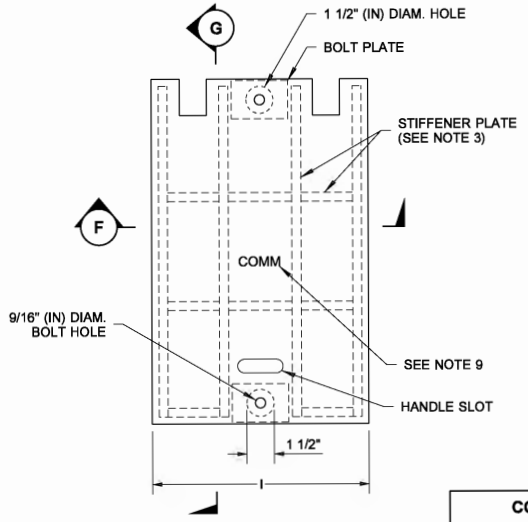
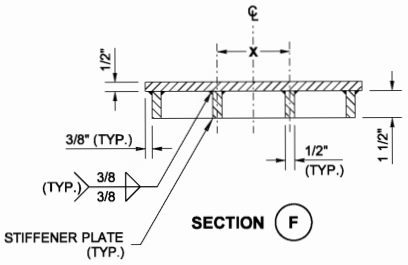
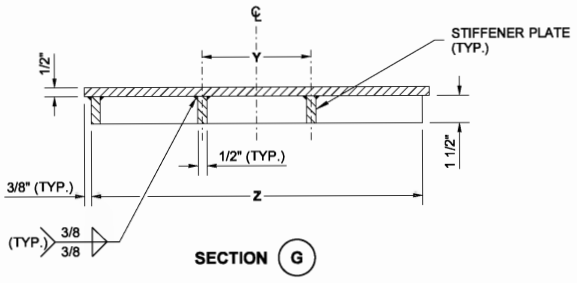


PLAN VIEW
LID
TYPE 5 AND 6 SHOWN

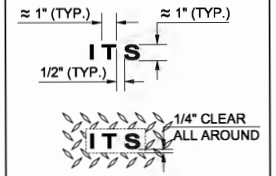


SECTION (F)

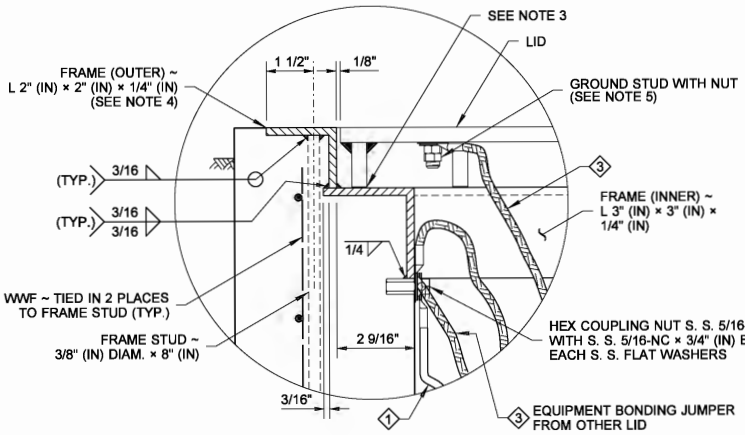


SECTION (G)

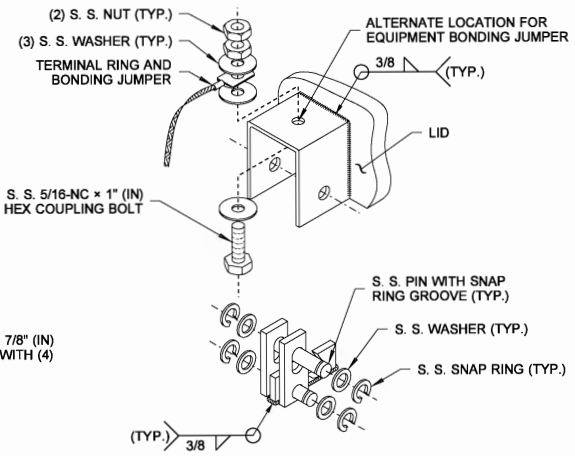
COVER MARKING DETAIL



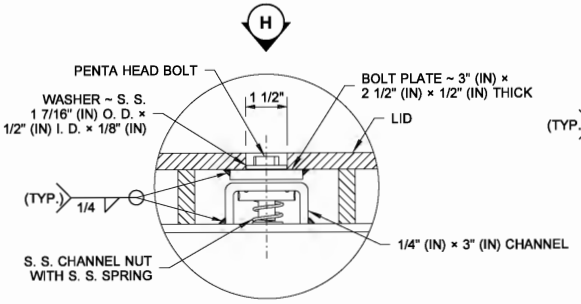
SEE NOTE 9



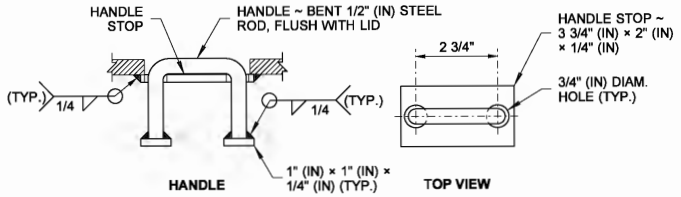
DETAIL (C)



DETAIL (E)
HINGE

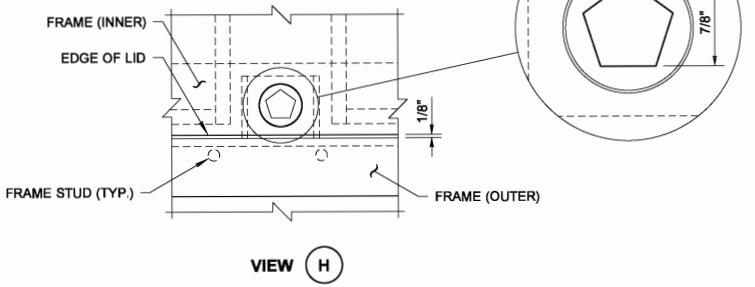


DETAIL (D)
LOCKING BOLT



HANDLE **TOP VIEW**

DETAIL (B)



VIEW (H)

THEODORE JOSEPH BAILEY
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PROFESSIONAL ENGINEER

HEAVY-DUTY JUNCTION BOX TYPES 4, 5, & 6

STANDARD PLAN J-40.20-03

SHEET 2 OF 2 SHEETS

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Washington State Department of Transportation

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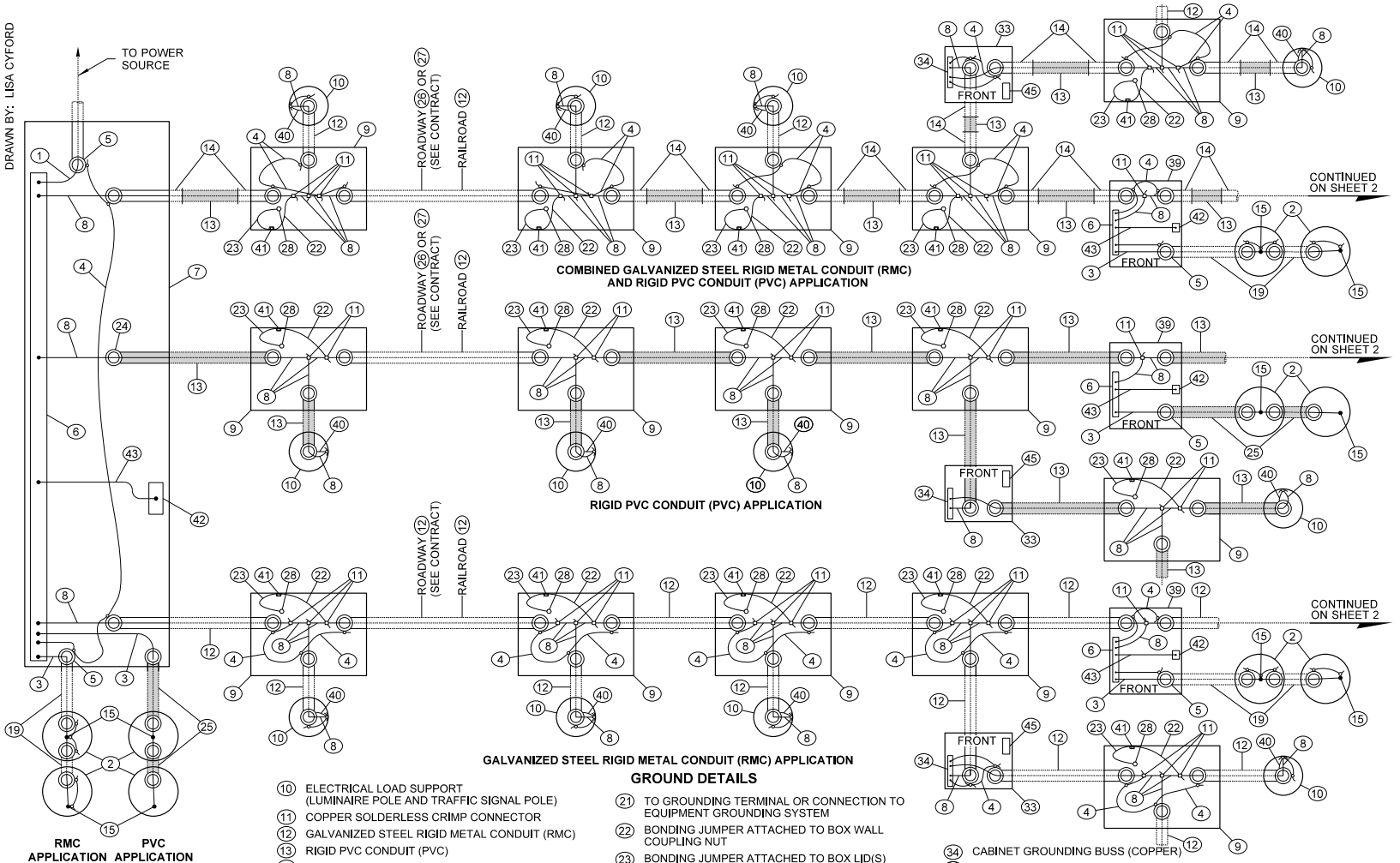

KEY

1. SERVICE NEUTRAL
2. SERVICE GROUND
3. GROUNDING ELECTRODE CONDUCTOR
4. BONDING JUMPER
5. GROUNDING BUSHING (TYP. ALL RMC CONDUIT TERMINATIONS)
6. GROUNDED NEUTRAL BUS (COPPER)
7. SERVICE ENCLOSURE
8. EQUIPMENT GROUNDING CONDUCTOR
9. JUNCTION BOX
10. ELECTRICAL LOAD SUPPORT (LUMINAIRE POLE AND TRAFFIC SIGNAL POLE)
11. COPPER SOLDERLESS CRIMP CONNECTOR
12. GALVANIZED STEEL RIGID METAL CONDUIT (RMC)
13. RIGID PVC CONDUIT (PVC)
14. OPTION A - 10' RMC WITH FIELD BEND
    - APPROVED ADAPTER FITTING
    - GROUNDING BUSHING

    OPTION B - 10' RMC
    - GS FACTORY ELBOWS
    - APPROVED ADAPTER FITTING
    - GS COUPLING
    - GROUNDING BUSHING
15. GROUND ROD
16. EDGE OF FOUNDATION, POLE OR SERVICE SUPPORT
17. CLAMP
18. JUNCTION BOX OR 8" DRAIN TILE WITH APPROVED CONCRETE COVER
19. CODE SIZE RMC
20. TO SERVICE NEUTRAL BUS

GROUND DETAILS

21. TO GROUNDING TERMINAL OR CONNECTION TO EQUIPMENT GROUNDING SYSTEM
22. BONDING JUMPER ATTACHED TO BOX WALL COUPLING NUT
23. BONDING JUMPER ATTACHED TO BOX LID(S) GROUND STUD. # 8 AWG (MIN.) × 4' (FT) TINNED BRAIDED COPPER.
24. END BELL BUSHING (TYP. ALL NON-METALLIC CONDUIT TERMINATIONS)
25. CODE SIZED PVC
26. HIGH-DENSITY POLYETHYLENE CONDUIT (HDPE)
27. NON-METALLIC CONDUIT (PVC) SCHEDULE 80
28. BOX LID(S) GROUND STUD
29. CABLE VAULT
30. PULL BOX
31. ITS CABINET
32. EDGE OF FOUNDATION
33. TRAFFIC SIGNAL CABINET
34. CABINET GROUNDING BUSS (COPPER)
35. RIGID PVC OUTERDUCT WITH PVC OR PE INNERDUCT
36. GALVANIZED STEEL RIGID METAL CONDUIT OUTERDUCT WITH PVC OR PE INNERDUCT
37. EQUIPMENT GROUNDING CONDUCTOR CONNECTION POINT IN CABLE VAULT OR PULL BOX BETWEEN SEPERATE SERVICES
38. DETECTABLE UNDERGROUND WARNING TAPE. COIL 2' INSIDE CABINET, CABLE VAULT, OR PULL BOX
39. TRANSFORMER CABINET
40. GROUNDING CONDUCTOR NON-INSULATED (FROM REINFORCING CAGE)
41. BOX FRAME BONDING ATTACHMENT POINT
42. GROUND LUG WELDED TO CABINET WALL (W/ TINNED COPPER BUSS)
43. CABINET MAIN BONDING JUMPER
44. ITS CAMERA, RAMP METER, TRAFFIC DATA STATION, HIGHWAY ADVISORY RADIO
45. UNGROUNDED CABINET NEUTRAL BUSS (COPPER)

NOTES

1. If parallel circuits of different sizes are contained in one conduit, the size of the grounding conductor shall be determined on the basis of the largest conductor. Only one grounding conductor is required for each conduit, regardless of the number of circuits contained.
2. Service ground per serving utility requirement. If the utility uses aluminum service conductors, an approved Al-Cu pressure-type ground connector shall be used to secure the service neutral to the copper neutral bar in the service enclosure. Except for the above, all grounding conductors shall be copper.
3. Equipment grounding conductors and grounding electrode conductors shall be sized in accordance with the National Electrical Code (No. 8 minimum).

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TYPICAL GROUNDING DETAILS

STANDARD PLAN J-60.05-01

SHEET 1 OF 3 SHEETS

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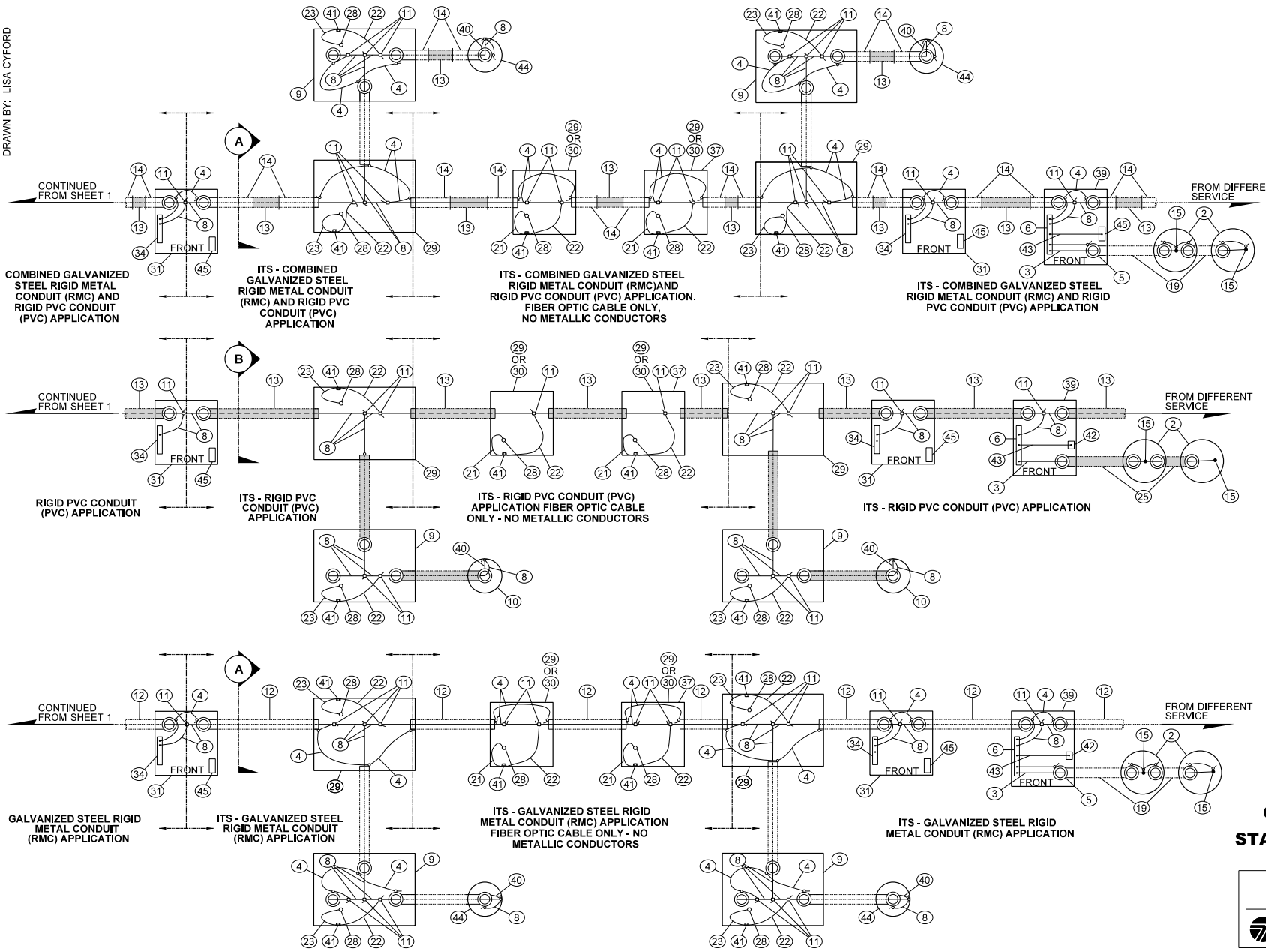
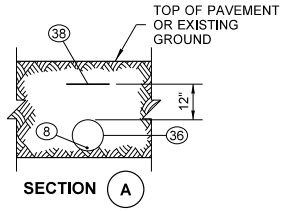
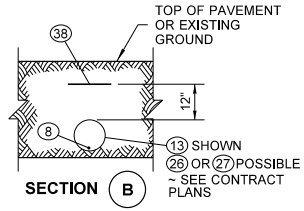
Washington State Department of Transportation

DRAWN BY: LISA CYFORD







THEODORE JOSEPH BAILEY
STATE OF WASHINGTON
39820
REGISTERED
PROFESSIONAL ENGINEER

TYPICAL GROUNDING DETAILS

STANDARD PLAN J-60.05-01

SHEET 2 OF 3 SHEETS

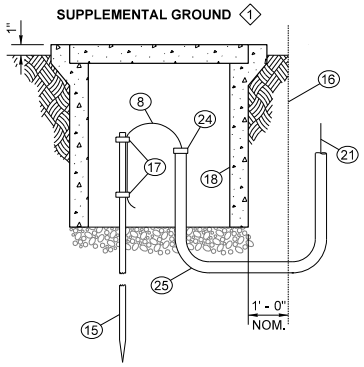
APPROVED FOR PUBLICATION

STATE DESIGN ENGINEER

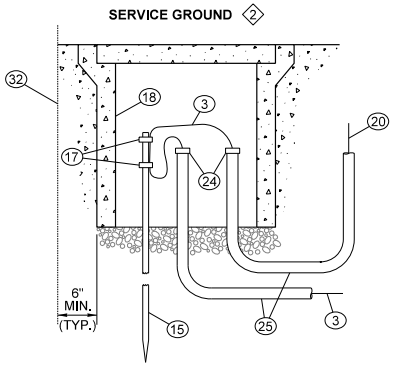
Washington State Department of Transportation

DRAWN BY: LISA CYFORD

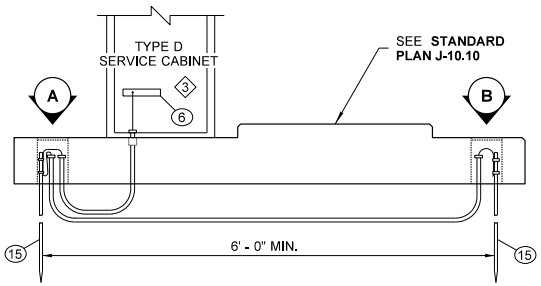
SUPPLEMENTAL GROUND (1)



SERVICE GROUND (2)

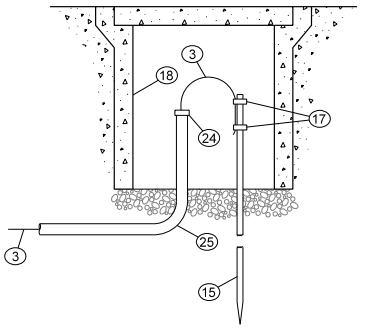


DETAIL (A)



RIGID PVC CONDUIT (PVC) APPLICATION

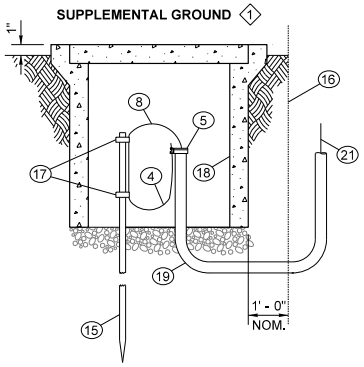
SERVICE GROUND (2)



DETAIL (B)

SEE KEY ON SHEET 1 FOR PARTS

SUPPLEMENTAL GROUND (1)



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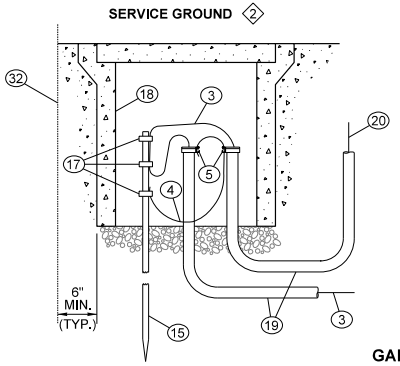
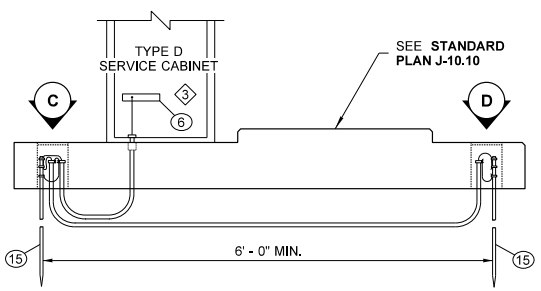
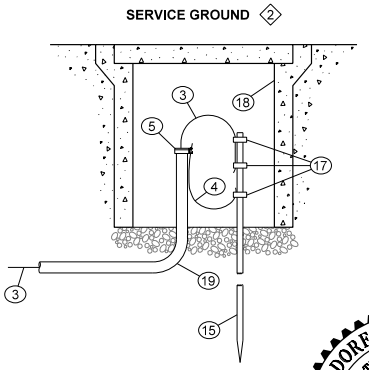


DETAIL (C)



GALVANIZED STEEL RIGID METAL CONDUIT (RMC) APPLICATION

SERVICE GROUND (2)



DETAIL (D)

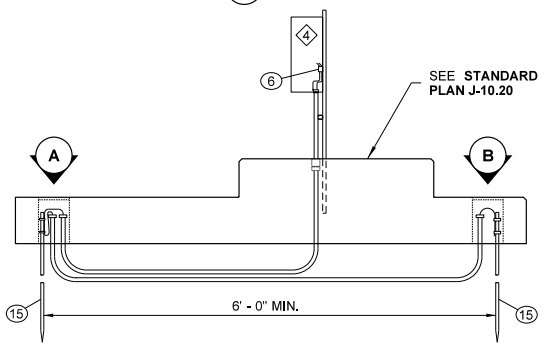
(1) Required to supplement equipment grounding for luminaire standards with direct burial aerial feeds, or where required in the plans

(2) Required at all service and separately derived systems

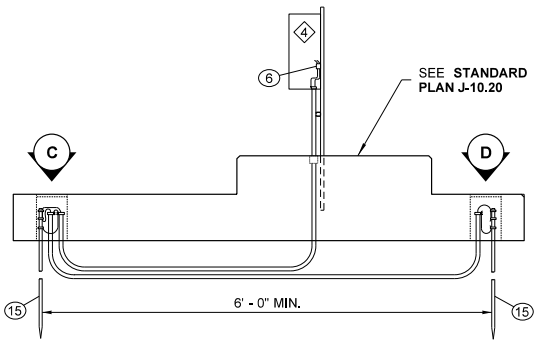
(3) Type D service cabinet shown. Use this concept for Type E cabinet or transformer. Type D service cabinet shall be installed on lower surface of foundation only. Type B service cabinet and transformer cabinet shall be installed on raised surface of foundation only.

(4) Type B modified service cabinet

(5) Grounding electrode conductor and equipment grounding conductor shall not be routed through lug on grounding bushing.



RIGID PVC CONDUIT (PVC) APPLICATION



GALVANIZED STEEL RIGID METAL CONDUIT (RMC) APPLICATION

THEODORE JOSEPH BAILEY
STATE OF WASHINGTON
39820
REGISTERED
PROFESSIONAL ENGINEER

TYPICAL GROUNDING DETAILS

STANDARD PLAN J-60.05-01

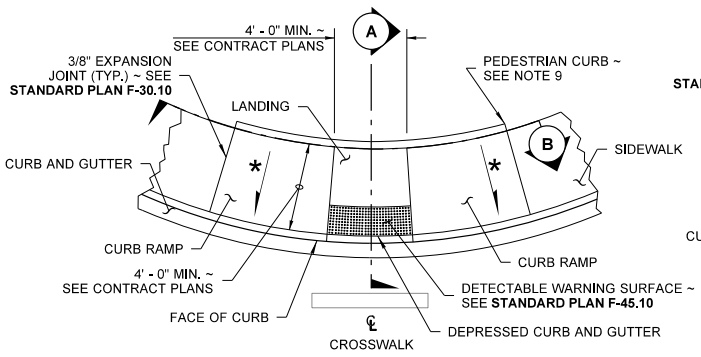
SHEET 3 OF 3 SHEETS

APPROVED FOR PUBLICATION

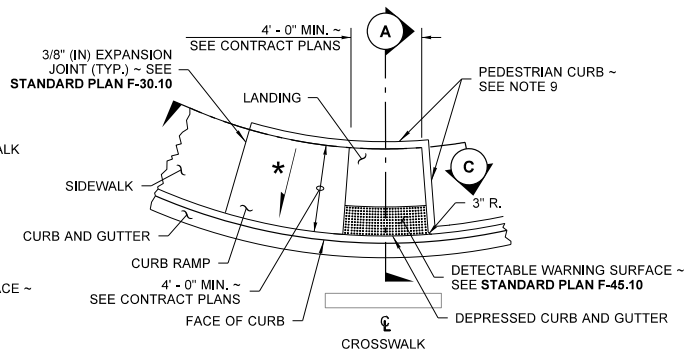
STATE DESIGN ENGINEER

Washington State Department of Transportation

DRAWN BY: FERN LIDDELL

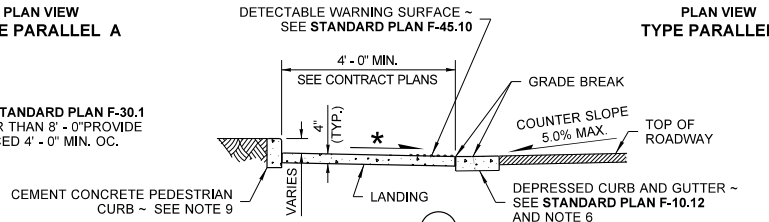


PLAN VIEW
TYPE PARALLEL A

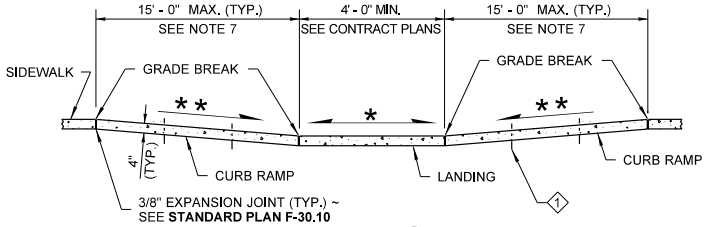


PLAN VIEW
TYPE PARALLEL B

1 CONTRACTION JOINT (TYP.) ~ SEE **STANDARD PLAN F-30.1** FOR CURB RAMP LENGTHS GREATER THAN 8' - 0"PROVIDE CONTRACTION JOINT EQUALLY SPACED 4' - 0" MIN. OC.

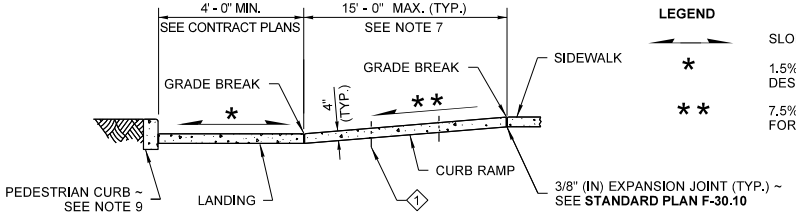


SECTION (A)



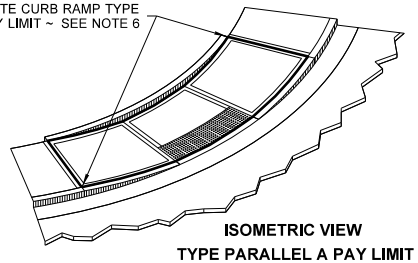
SECTION (B)

(ALONG INSIDE RADIUS AT BACK OF WALKWAY)

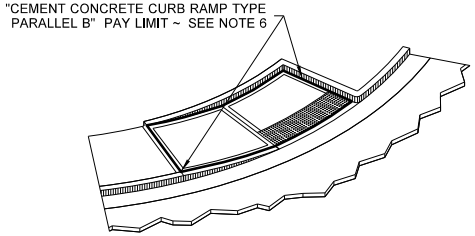


SECTION (C)

(ALONG INSIDE RADIUS AT BACK OF WALKWAY)



ISOMETRIC VIEW
TYPE PARALLEL A PAY LIMIT



ISOMETRIC VIEW
TYPE PARALLEL B PAY LIMIT

NOTES

1. At marked crosswalks, the connection between the landing and the roadway must be contained within the width of the crosswalk markings.
2. Where "GRADE BREAK" is called out, the entire length of the grade break between the two adjacent surface planes shall be flush.
3. Do not place Gratings, Junction Boxes, Access Covers, or other appurtenances on any part of the Curb Ramp or Landing, or in the Depressed Curb and Gutter where the Landing connects to the roadway.
4. See Contract Plans for the curb design specified. See **Standard Plan F-10.12** for Curb, Curb and Gutter, Depressed Curb and Gutter, and Pedestrian Curb details.
5. See **Standard Plan F-30.10** for Cement Concrete Sidewalk Details. See Contract Plans for width and placement of sidewalk.
6. The Bid Item "Cement Concrete Curb Ramp Type __" does not include the adjacent Curb, Curb and Gutter, Depressed Curb and Gutter, Pedestrian Curb, or Sidewalks.
7. The Curb Ramp length is not required to exceed 15 feet (unless otherwise shown in the Contract Plans). When applying the 15-foot max. length, the running slope of the curb ramp is allowed to exceed 8.3%. Use a single constant slope from bottom of ramp to top of ramp to match into the sidewalk over a horizontal distance of 15 feet. Do not include abutting landing(s) in the15-foot max. measurement. When a ramp is constructed on a radius, the 15-foot max. length is measured on the inside radius along the back of the walkway.
8. Curb Ramps and Landings shall receive a broom finish. See **Standard Specifications 8-14.**
9. Pedestrian Curb may be omitted if the ground surface at the back of the Curb Ramp and/or Landing will be at the same elevation as the Curb Ramp or Landing and there will be no material to retain.

LEGEND

◇	SLOPE IN EITHER DIRECTION
*	1.5% OR FLATTER RECOMMENDED FOR DESIGN/FORMWORK (2% MAX.)
**	7.5% OR FLATTER RECOMMENDED FOR DESIGN/ FORMWORK (8.3% MAX.) ~ SEE NOTE 7

R. SCOTT ZELLER
STATE OF WASHINGTON
28680
REGISTERED
PROFESSIONAL ENGINEER

PARALLEL CURB RAMP

STANDARD PLAN F-40.12-03

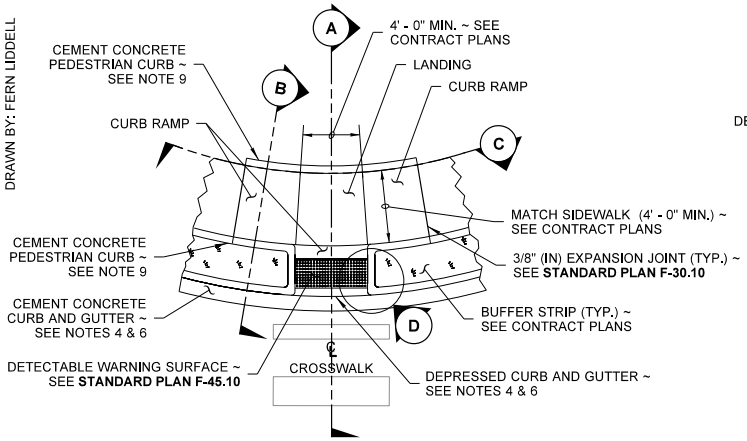
SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

STATE DESIGN ENGINEER

Washington State Department of Transportation

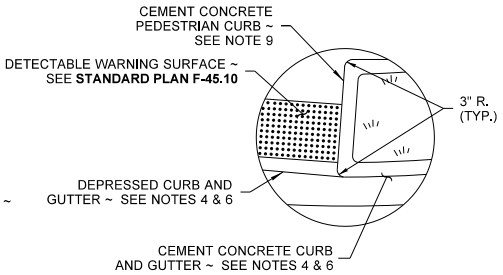
DRAWN BY: FERN LIDDELL



PLAN VIEW

TYPE COMBINATION

WITH BUFFER



DETAIL (D)

CURB RADIUS DETAIL

NOTES

1. At marked crosswalks, the connection between the curb ramp and the roadway must be contained within the width of the crosswalk markings.
2. Where "GRADE BREAK" is called out, the entire length of the grade break between the two adjacent surface planes shall be flush.
3. Do not place Gratings, Junction Boxes, Access Covers, or other appurtenances on any part of the Curb Ramp or Landing, or in the Depressed Curb and Gutter where the landing connects to the roadway.
4. See Contract Plans for the curb design specified. See **Standard Plan F-10.12** for Curb, Curb and Gutter, Depressed Curb, Gutter and Pedestrian Curb details.
5. See **Standard Plan F-30.10** for Cement Concrete Sidewalk Details. See Contract Plans for width and placement of sidewalk.
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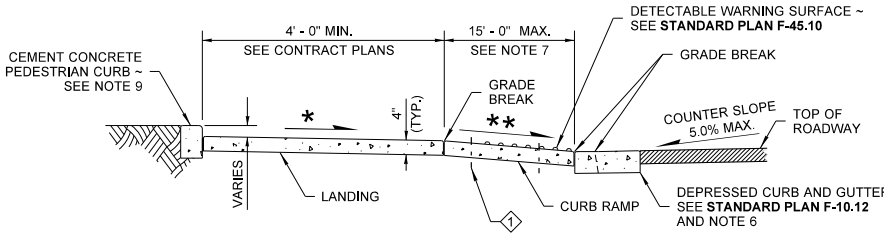
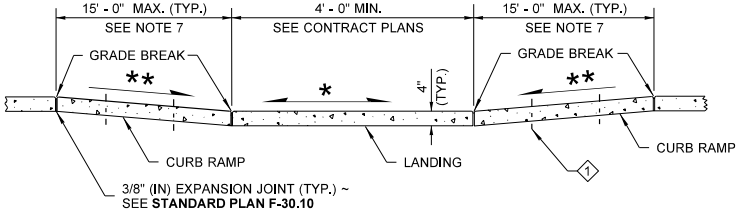
8. Curb Ramps and Landings shall receive a broom finish. See **Standard Specifications 8-14.**
9. Pedestrian Curb may be omitted if the ground surface at the back of the Curb Ramp and/or Landing will be at the same elevation as the Curb Ramp or Landing and there will not be material to retain.



SECTION (A)



SECTION (C)

(ALONG INSIDE RADIUS AT BACK OF WALKWAY)

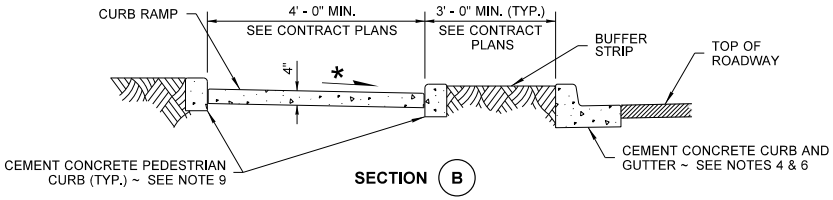
LEGEND

SLOPE IN EITHER DIRECTION

* 1.5 OR FLATTER RECOMMENDED FOR DESIGN/FORMWORK (2% MAX.)

** 7.5% OR FLATTER RECOMMENDED FOR DESIGN/FORMWORK (8.3% MAX.)

1 CONTRACTION JOINT (TYP.) ~ SEE **STANDARD PLAN F-30.10** FOR CURB RAMP LENGTHS GREATER THAN 8' - 0" PROVIDE CONTRACTION JOINT EQUALLY SPACED 4' - 0" MIN. OC.



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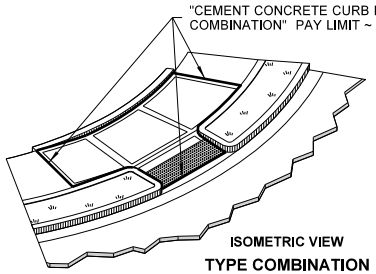


ISOMETRIC VIEW

TYPE COMBINATION PAY LIMIT

R. SCOTT ZELLER
STATE OF WASHINGTON
28680
REGISTERED
PROFESSIONAL ENGINEER

COMBINATION CURB RAMP

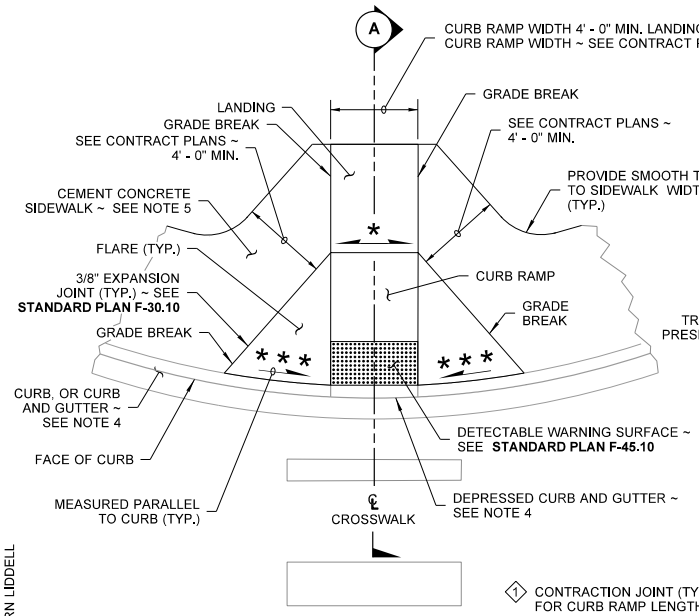
STANDARD PLAN F-40.14-03

SHEET 1 OF 1 SHEET

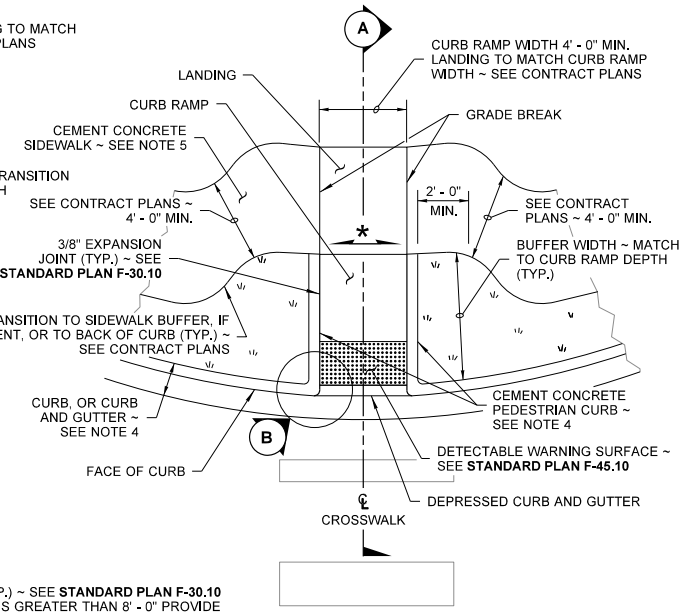
APPROVED FOR PUBLICATION

STATE DESIGN ENGINEER

Washington State Department of Transportation

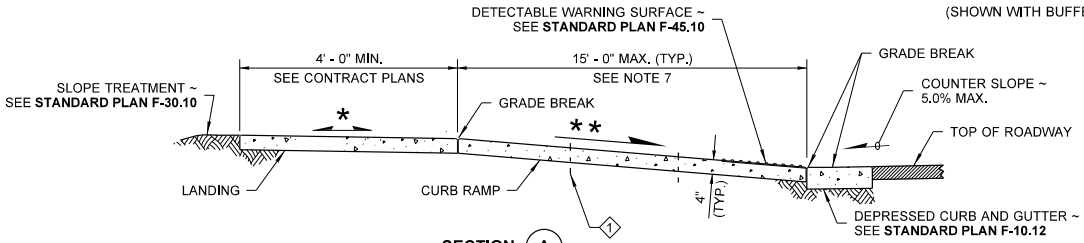


PLAN VIEW
TYPE PERPENDICULAR A



PLAN VIEW
TYPE PERPENDICULAR B
(SHOWN WITH BUFFER)

1 CONTRACTION JOINT (TYP.) ~ SEE **STANDARD PLAN F-30.10** FOR CURB RAMP LENGTHS GREATER THAN 8' - 0" PROVIDE CONTRACTION JOINT EQUALLY SPACED 4' - 0" MIN. OC.



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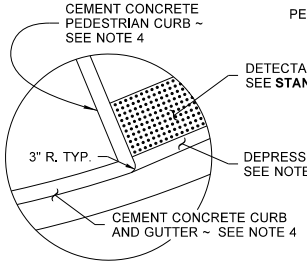
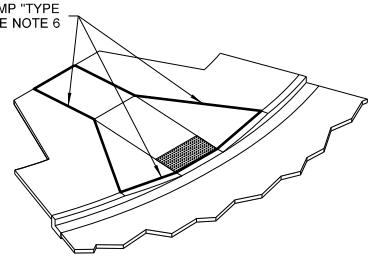
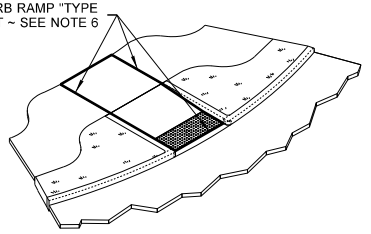


CURB RADIUS DETAIL (B)



ISOMETRIC VIEW
TYPE PERPENDICULAR A PAY LIMIT



ISOMETRIC VIEW
TYPE PERPENDICULAR B PAY LIMIT

NOTES

1. At marked crosswalks, the connection between the curb ramp and the roadway must be contained within the width of the crosswalk markings.
2. Where "GRADE BREAK" is called out, the entire length of the grade break between the two adjacent surface planes shall be flush.
3. Do not place Gratings, Junction Boxes, Access Covers, or other appurtenances on any part of the Curb Ramp or Landing, or in front of the Curb Ramp where it connects to the roadway.
4. See Contract Plans for the curb design specified. See **Standard Plan F-10.12** for Curb, Curb and Gutter, Depressed Curb and Gutter, and Pedestrian Curb details.
5. See **Standard Plan F-30.10** for Cement Concrete Sidewalk Details. See Contract Plans for width and placement of sidewalk.
6. The Bid Item "Cement Concrete Curb Ramp Type __" does not include the adjacent Curb, Curb and Gutter, Depressed Curb and Gutter, Pedestrian Curb, or Sidewalks.
7. The Curb Ramp length is not required to exceed 15 feet (unless shown otherwise in the Contract Plans). When applying the 15-foot max. length, the running slope of the Curb Ramp is allowed to exceed 8.3%. Use a single constant slope from bottom of ramp to top of ramp to match into the landing over a horizontal distance of 15 feet. Do not include the abutting landing in the 15-foot max. measurement.
8. Curb Ramps and Landings shall receive a broom finish. See **Standard Specifications 8-14.**
9. Pedestrian Curb may be omitted if the ground surface at the back of the Curb Ramp and/or Landing will be at the same elevation as the Curb Ramp or Landing and there will not be material to retain.

LEGEND

◥◤	SLOPE IN EITHER DIRECTION
*	1.5% OR FLATTER RECOMMENDED FOR DESIGN/FORMWORK (2% MAX.)
* *	7.5% OR FLATTER RECOMMENDED FOR DESIGN/FORMWORK (8.3% MAX.)
* * *	9.5% OR FLATTER RECOMMENDED FOR DESIGN/FORMWORK (10% MAX.)

DRAWN BY: FERN LIDDELL

R. SCOTT ZELLER
STATE OF WASHINGTON
28680
REGISTERED
PROFESSIONAL ENGINEER

Digitally signed by R. Scott Zeller
Date: 2020.09.22 13:23:53 -07'00'

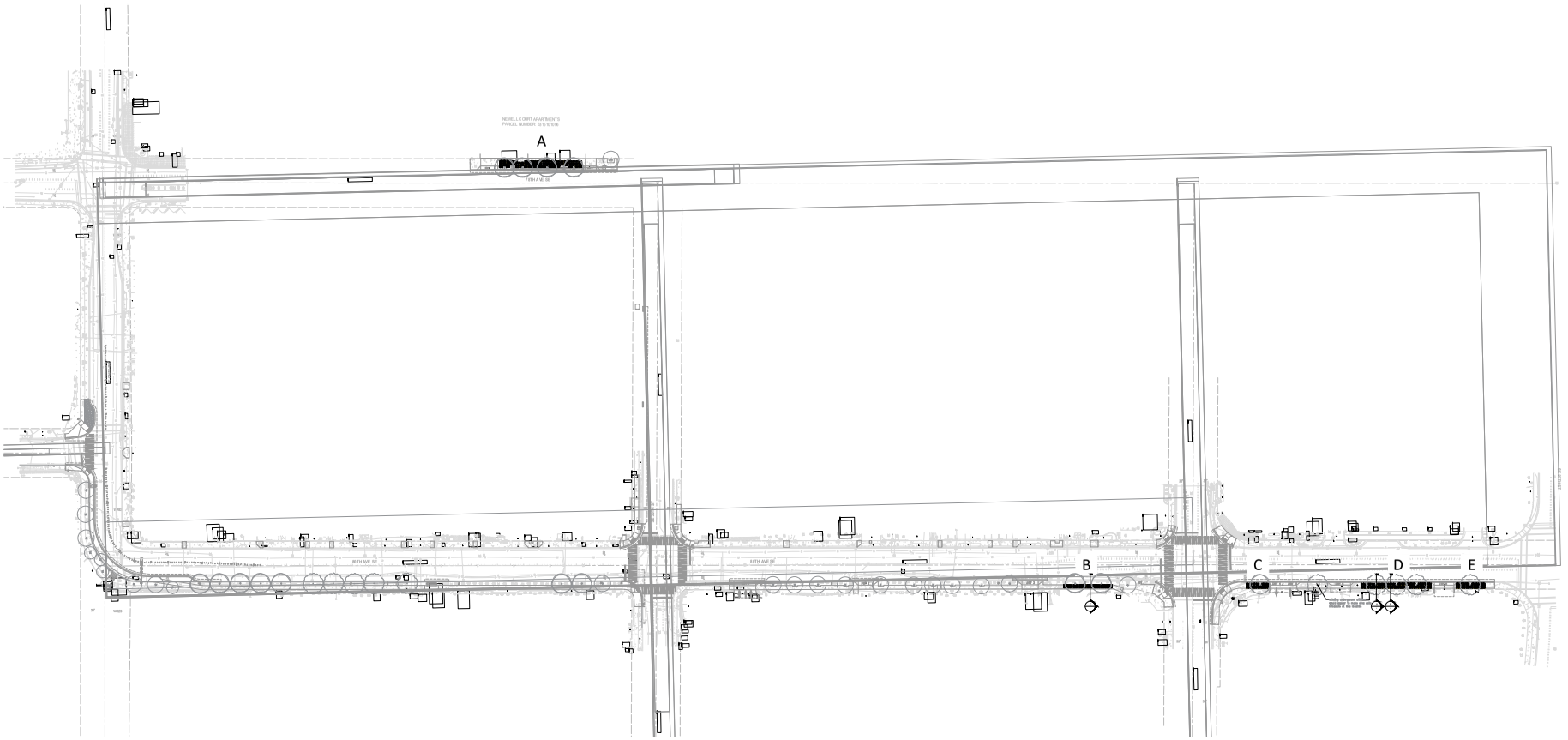
PERPENDICULAR CURB RAMP

STANDARD PLAN F-40.15-04

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION
Date: 2020.09.25 14:44:37 -07'00'
STATE DESIGN ENGINEER
Washington State Department of Transportation

APPENDIX C
MODULAR SOILCELLS (SILVA CELLS)



deeproot

www.deeproot.com

DeepRoot Green Infrastructure, LLC
1032 Irving Street, #614
San Francisco, CA 94122-2200
info@deeproot.com
Tel: 800 458 7668 or 415 781 9700
Fax: 800 277 7668 or 415 781 0191

80TH AVE SE PEDESTRIAN IMPROVEMENTS

Mercer Island, WA
US-24-0404

May 29, 2024

SILVA CELL LAYOUT

197
1X Silva Cells

DISCLAIMER:
Silva Cell 2 layouts are preliminary, and are based on the accuracy of the provided base information. Layouts use 6" spacing by default. Spacing between Silva Cells can vary between 1-6". Field adjustment may be required.

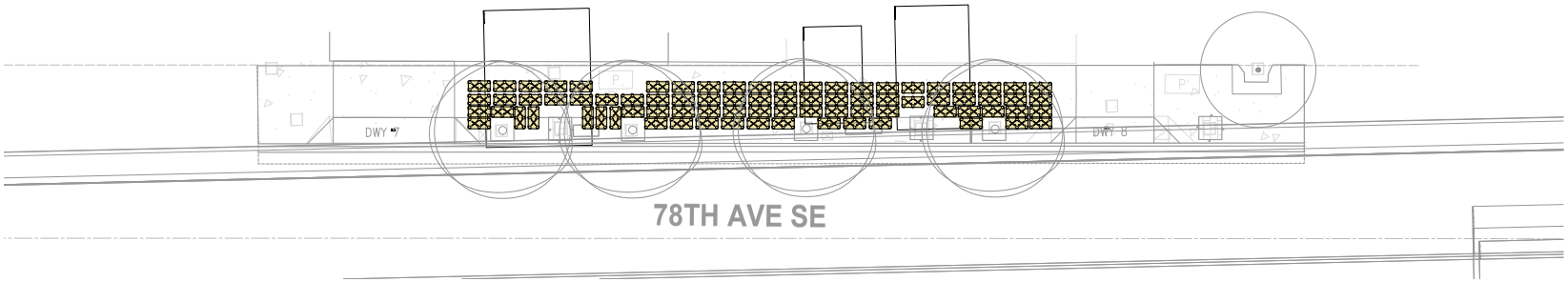
Client/Contractor is responsible for verifying location of structures and utilities that may be in conflict with this proposed Silva Cell 2 layout. When determining size of excavation, allow space for Cells, spacing between frames, and backfill.

It is the contractor's responsibility to confirm proposed elevations with the engineer of record.

NOT TO SCALE

NEWELL COURT APARTMENTS
PARCEL NUMBER: 5315101096

A



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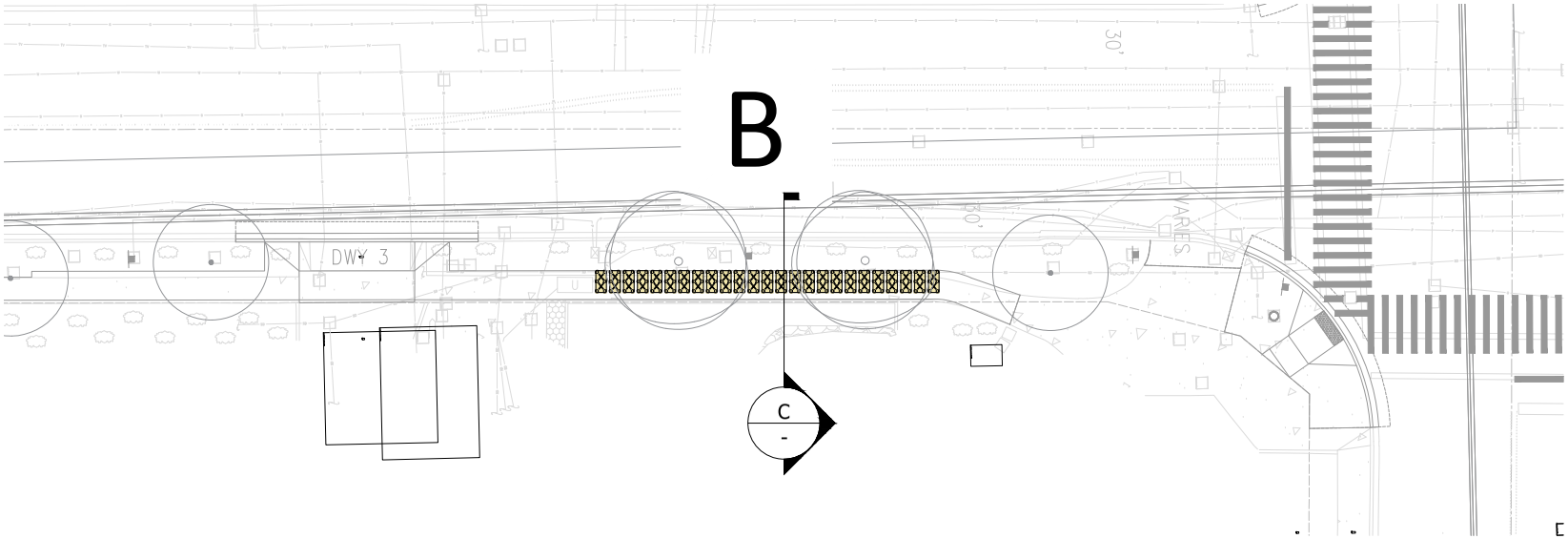

deeproot
www.deeproot.com

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San Francisco, CA 94122-2200
info@deeproot.com
Tel: 800 458 7668 or 415 781 9700
Fax: 800 277 7668 or 415 781 0191

80TH AVE SE PEDESTRIAN IMPROVEMENTS

Mercer Island, WA
US-24-0404

May 29, 2024

SILVA CELL LAYOUT

197
1X Silva Cells

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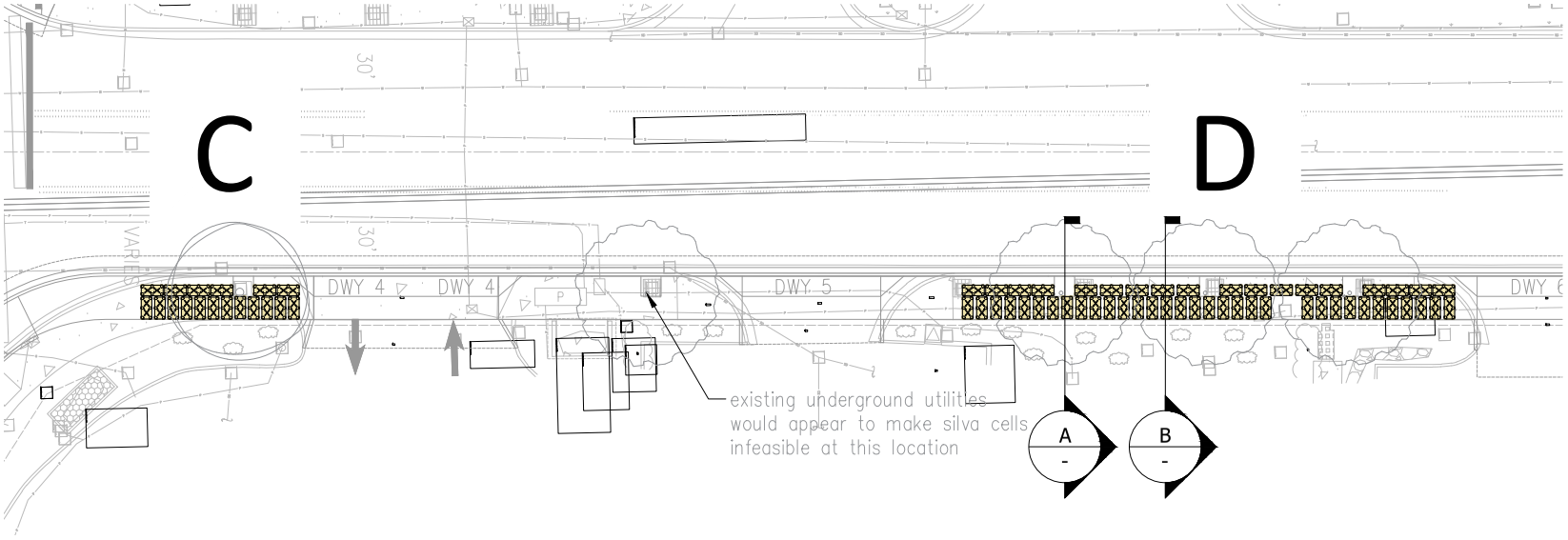
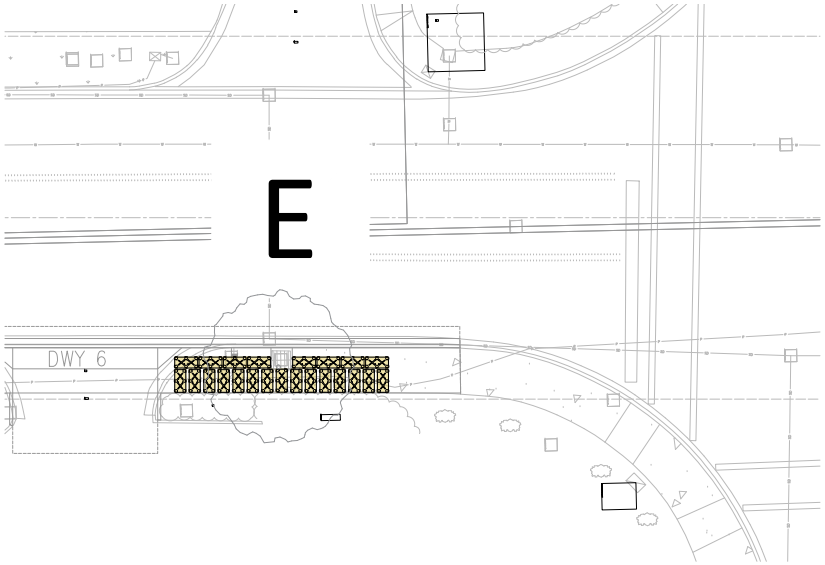
NOT TO SCALE





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info@deeproot.com
Tel: 800 458 7668 or 415 781 9700
Fax: 800 277 7668 or 415 781 0191

80TH AVE SE PEDESTRIAN IMPROVEMENTS

Mercer Island, WA
US-24-0404

May 29, 2024

SILVA CELL LAYOUT

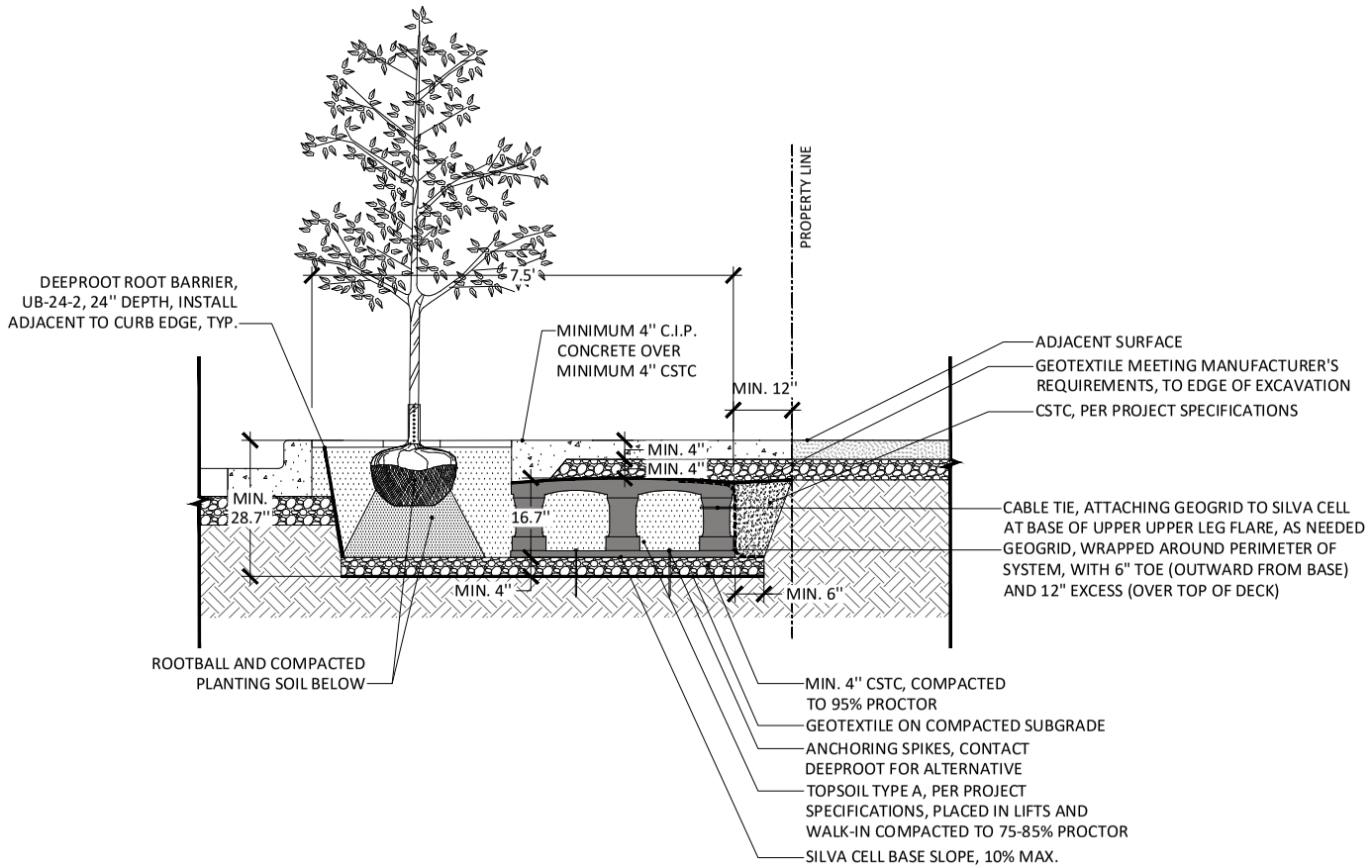
197
1X Silva Cells

DISCLAIMER:
Silva Cell 2 layouts are preliminary, and are based on the accuracy of the provided base information. Layouts use 6" spacing by default. Spacing between Silva Cells can vary between 1-6". Field adjustment may be required.

Client/Contractor is responsible for verifying location of structures and utilities that may be in conflict with this proposed Silva Cell 2 layout. When determining size of excavation, allow space for Cells, spacing between frames, and backfill.

It is the contractor's responsibility to confirm proposed elevations with the engineer of record.

NOT TO SCALE



A SILVA CELL SYSTEM BELOW C.I.P. CONCRETE SIDEWALK AT TREE PLANTING, 1x SYSTEM

NOT TO SCALE

NOTE: FIELD ADJUST THE SILVA CELLS IF NEEDED TO ENSURE THAT THE EXCAVATION REMAINS WITHIN THE ROW LIMIT.

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SILVA CELL SECTIONS

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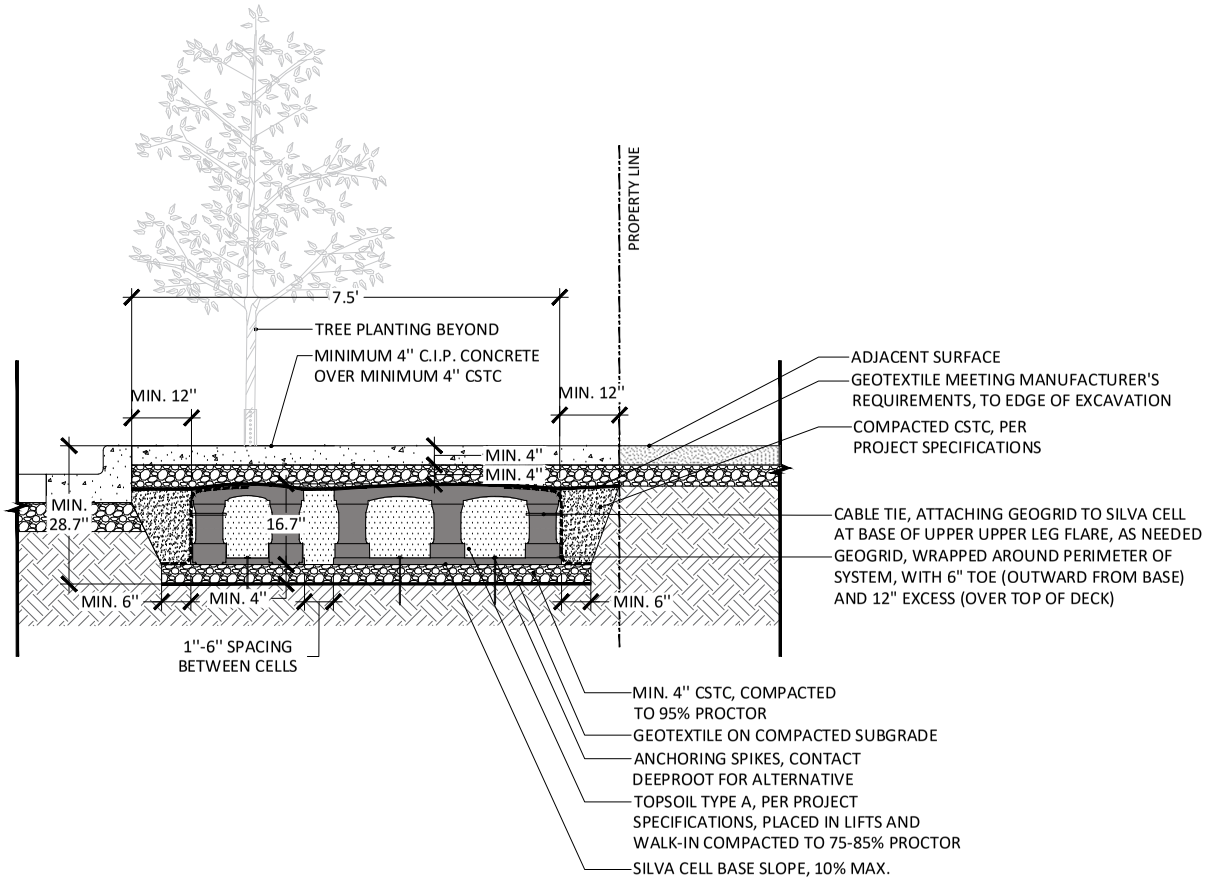
It is the contractor's responsibility to confirm proposed elevations with the engineer of record.

NOT TO SCALE



B SILVA CELL SYSTEM BELOW C.I.P. CONCRETE SIDEWALK AT CURB, 1x SYSTEM

NOT TO SCALE

NOTE: FIELD ADJUST THE SILVA CELLS IF NEEDED TO ENSURE THAT THE EXCAVATION REMAINS WITHIN THE ROW LIMIT.

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Mercer Island, WA
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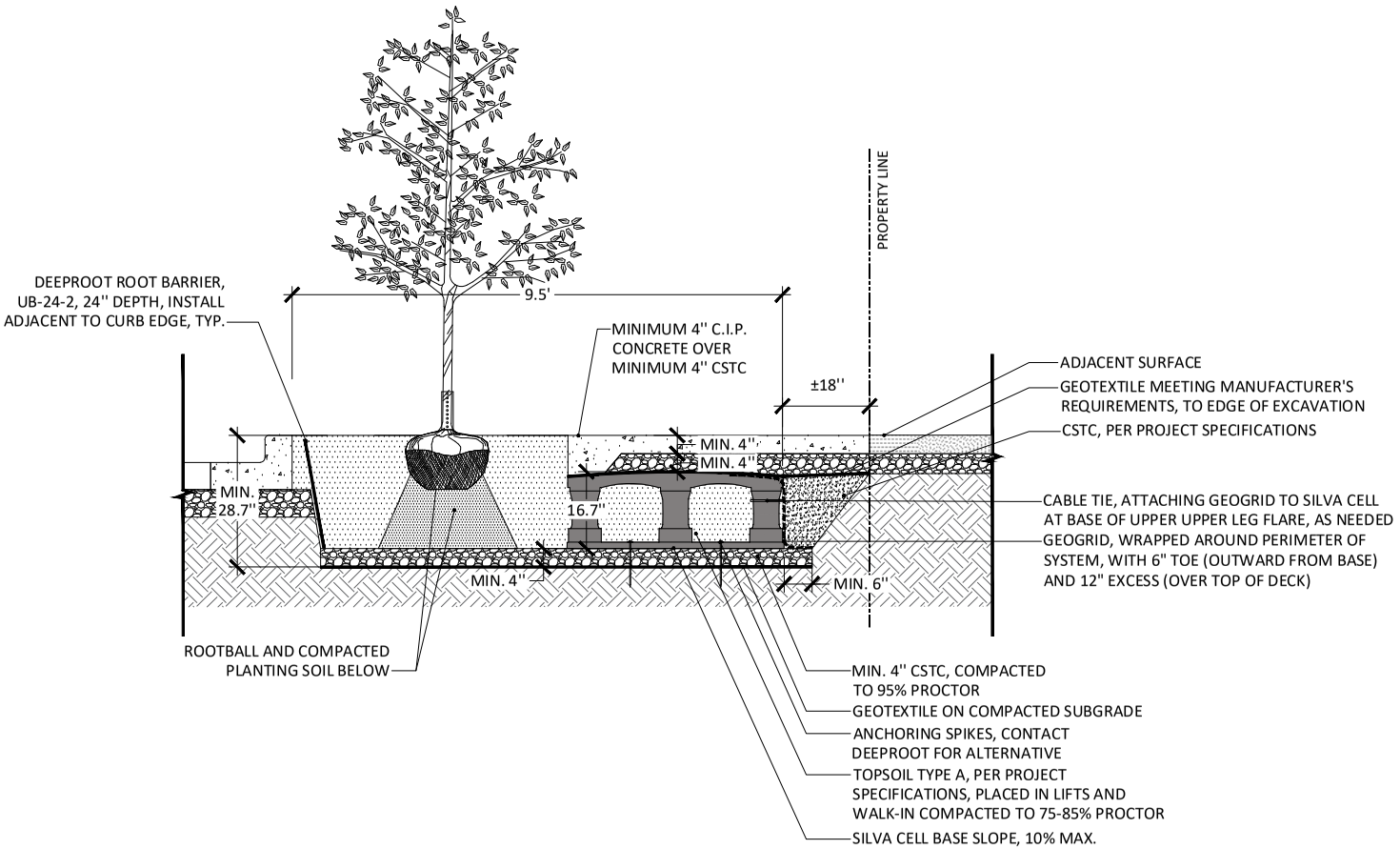
It is the contractor's responsibility to confirm proposed elevations with the engineer of record.

NOT TO SCALE



C SILVA CELL SYSTEM BELOW C.I.P. CONCRETE SIDEWALK AT OPEN PLANTER, 1x SYSTEM

NOT TO SCALE

NOTE: FIELD ADJUST THE SILVA CELLS IF NEEDED TO ENSURE THAT THE EXCAVATION REMAINS WITHIN THE ROW LIMIT.

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SILVA CELL SECTIONS

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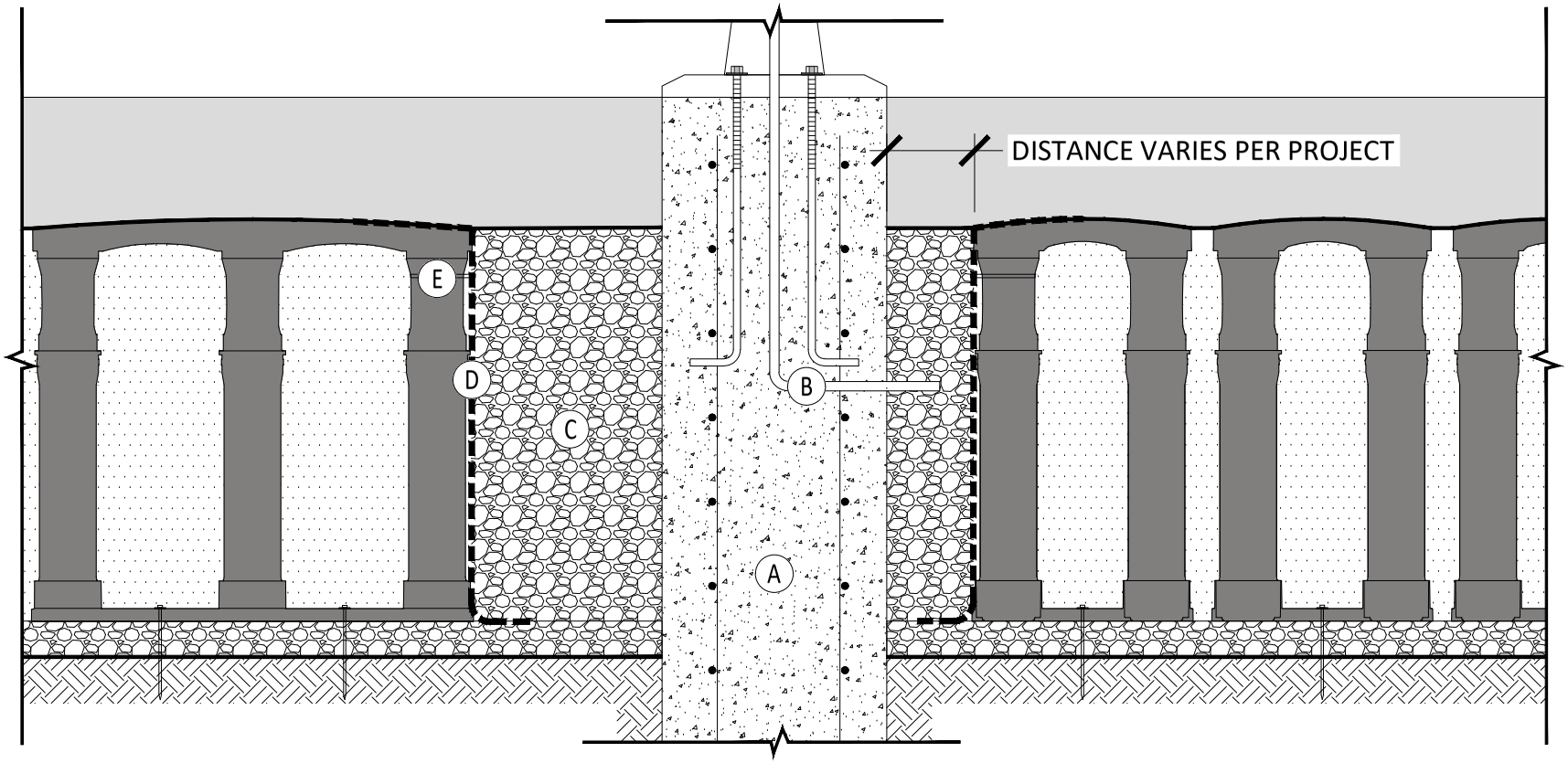
Client/Contractor is responsible for verifying location of structures and utilities that may be in conflict with this proposed Silva Cell 2 layout. When determining size of excavation, allow space for Cells, spacing between frames, and backfill.

It is the contractor's responsibility to confirm proposed elevations with the engineer of record.

NOT TO SCALE

WHEN TO USE THIS DETAIL:
Often there will be lamp posts or other footings within a Silva Cell installation. This detail shows how to bridge around these footings using compacted aggregate as fill material.



(A) CONCRETE FOOTING

(B) CONDUIT

(C) WASHED STONE WITHOUT FINES

(D) GEOGRID TO LINE PERIMETER OF WASHED STONE WITH 6" TOE (FOLDED INWARD) AND 12" EXCESS FOLDED OVER ADJACENT DECKS

(E) CABLE TIE, ATTACHING GEOGRID TO SILVA CELL AT BASE OF UPPER POST FLARE

RELEASE DATE: AUGUST 2021

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SUPPLEMENTAL DETAILS
BRIDGING AROUND FOOTING

NOT TO SCALE

This guide specification was prepared utilizing 3-part format recommended by the Construction Specifications Institute (CSI), and generally incorporates recommendations from their SectionFormat™/Page Format™, and MasterFormat®, latest Editions, insofar as practicable.

Carefully review and edit the text to meet the Project requirements and coordinate this Section with the remainder of the Specifications and the Drawings.

Where bracketed text is indicated, e.g. [text], make appropriate selection and delete the remainder of text within additional brackets, highlighting, and bold face type, if any.

This specification defines material and performance requirements for the "Silva Cell System". The Specifier should adapt these specifications to reflect specific project requirements.

Consult the manufacturer for assistance in editing this guide specification for specific Project applications where necessary, including conventional applications, and for assistance evaluating and sizing design elements for Silva Cell stormwater applications.

This Specification was current at the time of publication but is subject to change. Please confirm the accuracy of these specifications with the manufacturer prior to use.

Some elements in these specifications require coordination with Project drawings; these items are noted "as indicated on plans or drawings" or similar phrases.

Refer to the DeepRoot website, www.deeproot.com for additional information.

SECTION 32 94 51
SOIL CELLS
("SILVA CELL SYSTEM")

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:
   1. Silva Cell system for planting and paving, including Silva Cell assemblies and related accessories.
   2. Other materials including, but not limited to, geotextile, geogrid, aggregate, subbase material, backfill, root barrier, Water + Air System, and planting soil.

SPECIFIER: Delete paragraph below if planting soils will be installed under a separate contract.

B. Materials Installed But Not Furnished Under This Section:
   1. Planting soils are furnished in Section 32 94 56 - Planting Soil for Silva Cells.

C. Related Requirements:
   1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

SPECIFIER: Revise Section numbers and titles in subparagraphs below per CSI MasterFormat and Project requirements.

2. Section 01 33 00 - Submittal Procedures: For administrative and procedural requirements for processing of submittals during the construction phase.
3. Section 01 77 00 - Closeout Procedures: For administrative and procedural requirements for completion of the Work.

SPECIFIER: Sections listed below are examples only; revise Section numbers and titles in subparagraphs below to suit Project requirements.

4. Section 32 12 16 - Asphalt Paving
5. Section 32 13 13 - Concrete Paving
6. Section 32 14 00 - Unit Paving
7. Section 32 84 00 - Planting Irrigation
8. Section 32 93 00 - Plants

1.02 REFERENCES

A. Definitions:
1. AGGREGATE BASE COURSE: Aggregate material between the paving and the top of the Silva Cell deck below, designed to distribute loads across the top of the deck.

SPECIFIER: Delete subparagraph below if pavers are not a part of the Project.

2. AGGREGATE SETTING BED FOR PAVERS: Aggregate material between the aggregate base course and unit surface pavers, designed to act as a setting bed for the pavers.
3. AGGREGATE SUBBASE: Aggregate material between the bottom of the Silva Cell base and the compacted subgrade below, designed to distribute loads from the Silva Cell bases to the subgrade.
4. BACKFILL: The earth used to replace or the act of replacing earth in an excavation beside the Silva Cell system to the excavation extents.
5. FINISH GRADE: Elevation of finished surface of planting soil or paving.
6. PLANTING SOIL: Soil as defined in Division 32, Section 32 94 56 - Planting Soil for Silva Cells, intended to fill the Silva Cell system and other planting spaces.
7. SILVA CELL SYSTEM:
   a. Silva Cell: One assembled unit made up of 1 base, 6 post assemblies, and 1 Silva Cell deck.
   b. Silva Cell System: Two or more Silva Cells used in combination with each other and with required accessories.
8. SUBGRADE: Surface or elevation of subsoil remaining after completing excavation, or top surface of a fill or backfill.
9. WALK-THROUGH COMPACTION: A process for light compaction of soils by walking through the soil following placement.
   a. Walk through compaction shall result in 75-85 percent of maximum dry density in accordance with ASTM D698, Standard Proctor Method. Do not exceed root limiting compaction for the given soil type.

B. Reference Standards:

SPECIFIER: Use care when indicating the edition date of the referenced standards; these standards are subject to regular review, and updated accordingly.

1. American Association of State Highway and Transportation Officials (AASHTO):
   a. AASHTO H-20

2. ASTM International (ASTM):

a. ASTM D448-12, Standard Classification for Sizes of Aggregate for Road and Bridge Construction
b. ASTM D698-12e1, Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12 400 ft-lbf/ft^3 [600 kN-m/m^3])
c. ASTM D1241-07, Standard Specification for Materials for Soil-Aggregate Subbase, Base, and Surface Courses
d. ASTM D3786/D3786M-13, Standard Test Method for Bursting Strength of Textile Fabrics-Diaphragm Bursting Strength Tester Method
e. ASTM D4491-99a(2014)e1, Standard Test Methods for Water Permeability of Geotextiles by Permittivity
f. ASTM D4533-D4533M-15, Standard Test Method for Trapezoid Tearing Strength of Geotextiles
g. ASTM D4632-D4632M-15, Standard Test Method for Grab Breaking Load and Elongation of Geotextiles
h. ASTM D4751-12, Standard Test Method for Determining Apparent Opening Size of a Geotextile
i. ASTM D4833/D4833M-07(2013)e1, Standard Test Method for Index Puncture Resistance of Geomembranes and Related Products
j. ASTM D5262-07(2012), Standard Test Method for Evaluating the Unconfined Tension Creep and Creep Rupture Behavior of Geosynthetics
k. ASTM D6241-14, Standard Test Method for Static Puncture Strength of Geotextile and Geotextile-Related Products Using a 50mm Probe
l. ASTM D6637-11, Standard Test Method for Determining Tensile Properties of Geogrids by the Single or Multi-Rib Tensile Method

SPECIFIER: Delete reference below if Project is not located in Canada.

3. Ontario Provincial Standard Specification (OPSS)

1.03 ADMINISTRATIVE REQUIREMENTS

SPECIFIER: Select either "Landscape Architect", "Architect" or "Engineer" in paragraph below as applicable.

A. Preinstallation Conference: Prior to installation of the Silva Cell system and associated Work, meet with the Contractor, Silva Cell system installer and their field supervisor, manufacturer's technical representative, the [**Landscape Architect**] [**Architect**] [**Engineer**], the Owner at the Owner's discretion, and other entities concerned with the Silva Cell system performance.
   1. Provide at least 72 hours advance notice to participants prior to convening preinstallation conference.
   2. Introduce and provide a roster of individuals in attendance with contact information.
   3. The preinstallation conference agenda will include, but is not limited to the review of:
      a. Required submittals both completed and yet to be completed.
      b. The sequence of installation and the construction schedule.
      c. Coordination with other trades.
      d. Details, materials and methods of installation.
         1) Review requirements for substrate conditions, special details, if any, installation procedures.
         2) Installation layout, procedures, means and methods.
      e. Mock-up requirements.

B. Sequencing and Scheduling:
   1. General: Prior to beginning Work of this Section, prepare a detailed schedule of the Work involved for coordination with other trades.
   2. Schedule utility installations prior to beginning Work of this Section.
   3. Where possible, schedule the installation of the Silva Cell system after the area is no longer required for use by other trades and Work. Where necessary to prevent damage, protect installed system if Work must occur over or adjacent to the installed Silva Cell system.

1.04 SUBMITTALS

A. Action Submittals: Submit in accordance with Section **[01 33 00] [other]**:

SPECIFIER: Select paragraph A above if detailed submittal requirements are specified in Division 01 and revise Section number if necessary to match that used in the Project Manual, or; select paragraph A below if Division 01 is not a part of the Project Manual; keep subparagraphs 1 through 5 with either paragraph A selected.

Select either "Landscape Architect", "Architect", or "Engineer" in the paragraph below as applicable.

A. Action Submittals: Submit these to the [**Landscape Architect**] [**Architect**] [**Engineer**] for review and acceptance not less than 45 days prior to start of installation of materials and products specified in this Section.
   1. Product Data: For each type of product, submit manufacturer's product literature with technical data sufficient to demonstrate that the product meets these specifications.
   2. Test and Evaluation Reports:
      a. Submit results of compaction testing required by the Specifications for approval.
      b. Include analysis of bulk materials including soils and aggregates, by a recognized laboratory that demonstrates that the materials meet the Specification requirements.

   3. Samples:
      a. One full size sample of an assembled Silva Cell (copy of manufacturers brochure with images of product may be accepted in lieu of product sample).
      b. Manufacturer's product data/specification sheet for geogrid.
      c. Manufacturer's product data/specification sheet for geotextile.
      d. Manufacturer’s product data/specification sheet for Water+Air System components (when specified as part of the system)

   4. Manufacturer's Report: Submit Silva Cell system manufacturer's letter of review and approval of the Project, including Drawings and Specifications, Addenda, Clarifications and Modifications, and for compliance with product installation requirements.
   5. Qualification Statements:
      a. Manufacturer:
         1) Submit list of completed projects demonstrating durability and longevity of in-place systems.
            a) Include project name, location, and date of completion.

SPECIFIER: Delete subparagraph below if system is not being designed for stormwater management.

         2) Submit list of third party approval for stormwater management projects.

      b. Installer:
         1) Submit documentation of the qualifications of the Silva Cell system installer and their field supervisor, sufficient to demonstrate that both meet the requirements specified in Article 1.05 QUALITY ASSURANCE.
         2) Submit list of completed projects of similar scope and scale demonstrating capabilities and experience.

B. Closeout Submittals: Submit in accordance with Section **[01 33 00] [other]**:

SPECIFIER: Select paragraph B above if detailed submittal requirements are specified in Division 01 and revise Section number if necessary to match that used in the Project Manual, or; select paragraph B below if Division 01 is not a part of the Project Manual.

Select either "Landscape Architect", "Architect", or "Engineer" in the paragraph below as applicable.

B. Closeout Submittals: Submit these to the [**Landscape Architect**] [**Architect**] [**Engineer**] at completion of installation.
   1. Warranty: Submit manufacturer's warranty, fully executed.

1.05 QUALITY ASSURANCE

A. Comply with applicable requirements of the laws, codes, ordinances and regulations of Federal, State and Municipal authorities having jurisdiction. Obtain necessary permits/approvals from these authorities.
B. Manufacturer Qualifications:
   1. A manufacturer whose product is manufactured in an ISO/TS 16949 compliant and ISO 9001 - 2008 registered factory.
   2. A manufacturer with not less than 100 Silva Cell systems in-place, in the United States. Each system in use for not less than 7 years, confirming durability and longevity of the system.
   3. A manufacturer with documented written approval of their product for use as a stormwater treatment device by a minimum of 3 governmental jurisdictions.
   4. A manufacturer with an established and demonstrated utility service and repair process, including written procedure and photographs demonstrating work.
   5. A manufacturer with a published operating and maintenance manual

C. Installer Qualifications: A qualified installer with not less than 5 years of successful experience installing Silva Cell systems or related products and materials, and whose work has resulted in successful installation of underground piping, chambers and vault structures, planting soils, and planter drainage systems of a similar scope and scale in dense urban areas.

SPECIFIER: Select either "Landscape Architect", "Architect" or "Engineer" in paragraph below as applicable.

D. Installer's Field Supervisor: A full-time supervisor employed by the installer with not less than 5 years of successful experience similar to that of the installer and present at the Project site when Work is in progress. Utilize the same field supervisor throughout the Project, unless a substitution is submitted to and approved in writing by the [**Landscape Architect**] [**Architect**] [**Engineer**].
E. Mock-Up: Prior to the installation of the Silva Cell system, construct a mock-up of the complete installation at the Project site in the presence of the Landscape Architect.
   1. Size and Extent: Minimum of 100 sq. ft. (10 sq. m.) in area and including the complete Silva Cell system installation with subbase, aggregate subbase, drainage installation, Silva Cell decks, posts, and bases, base course aggregate, geotextile, geogrid, backfill, planting soil, and necessary accessories.
   2. The mock-up area may remain as part of the installed Work at the end of the Project provided that it remains undamaged and meets the requirements of the Drawings and Specifications.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Silva Cell System: Protect Silva Cell system components from damage during delivery, storage and handling.
   1. Store components on smooth surfaces, free from dirt, mud and debris. Store under tarp to protect from sunlight when time from delivery to installation exceeds one week.
   2. Perform handling with equipment appropriate to the size (height) of Silva Cells and site conditions; equipment may include, hand, handcart, forklifts, extension lifts, or small cranes, with care given to minimize damage to Silva Cell bases, posts, decks and adjacent assembled Silva Cells.

B. Packaged Materials: Deliver packaged materials in original, unopened containers indicating weight, certified analysis, name and address of manufacturer, and indication of conformance with State and Federal laws, if applicable. Protect materials from deterioration during delivery and while on the Project site.

1. Do not deliver or place backfill, soils, or soil amendments in frozen, wet, or muddy conditions.
2. Provide protection including tarps, plastic and/or matting between bulk materials and finished surfaces sufficient to protect the finish material.
3. Bring planting soil to the site using equipment and methods that do not overly mix and further damage soil peds within the soil mix.

D. Provide erosion-control measures to prevent erosion or displacement of bulk materials and discharge of soil-bearing water runoff or airborne dust to adjacent properties, water conveyance systems, and walkways. Provide additional sediment control to retain excavated material, backfill, soil amendments and planting mix within the Project limits as needed.

1.07 FIELD CONDITIONS

A. Existing Conditions: Do not proceed with Work when subgrades, soils and planting soils are in a wet, muddy or frozen condition.

1.08 WARRANTY

SPECIFIER: This Warranty gives the Owner specific legal rights, and the Owner may also have other legal rights, which vary from state to state, or in Canada, from province to province. Some states do not allow the exclusion of incidental or consequential damages, so the stated limitations and exclusions may not apply.

A. The Contractor shall warrant the Silva Cell system to be free of faults and defects in accordance with the General Conditions, except that the warranty shall be extended by manufacturer's written warranty against defects in materials and workmanship as follows:
   1. DeepRoot® warrants to the original purchaser of its Silva Cell™ product that such product will be free from defects in materials and workmanship, and perform to DeepRoot's written specifications for the warranted product, when installed and used as specifically provided in the product's installation guidelines for a period of 20 years from the date of purchase. This warranty does not cover wear from normal use, or damage caused by abuse, mishandling, alterations, improper installation and/or assembly, accident, misuse, or lack of reasonable care of the product. This warranty does not apply to events and conditions beyond DeepRoot's control, such as ground subsidence or settlement, earthquakes and other natural events, acts of third parties, and/or Acts of God. If this warranty is breached, DeepRoot® will provide a replacement product. Incurred costs, such as labor for removal of the original product, installation of replacement product, and the cost of incidental or other materials or expenses are not covered under this warranty.
   2. Deeproot® makes no other warranties, express or implied, and specifically disclaims the warranty of merchantability or fitness for a particular purpose. Deeproot® shall not be liable either in tort or in contract for any direct, incidental or consequential damages, lost profits, lost revenues, loss of use, or any breach of any express or implied warranty.

PART 2 - PRODUCTS

2.01 MANUFACTURER

A. Acceptable Manufacturers:

DeepRoot Green Infrastructure, LLC
101 Montgomery Street, Suite 2850
San Francisco, CA, 94104

Phone: 415.781.9700
Toll Free: 800.458.7668
Fax: 415.781.0191
www.deeproot.com

B. Substitutions: Manufacturers seeking approval of their products are required to receive prior approval 7 days prior to bid opening.

SPECIFIER: Select paragraph B below for a specification when substitutions are NOT allowed and delete the above paragraph above.

B. No substitutions are allowed.

2.02 DESCRIPTION

SPECIFIER: The Silva Cell System is designed to support AASHTO H-20 loading (United States) CSA-S6 87.5 (Canada). The entire assembly as described in this specification is necessary in order to meet this loading performance. Alternative assemblies may void Silva Cell warranty.

Contact DeepRoot Green Infrastructure, LLC for approval of alternative assemblies.

A. The term Silva Cell shall be used to refer to a single Silva Cell.
B. Silva Cells shall be designed for the purpose of growing healthy trees and providing stormwater management.
C. Silva Cells shall be modular, structural systems.
D. Each Silva Cell shall be structurally-independent from all adjacent Silva Cells for incorporating utilities and other site features as well as for future repairs.
E. Silva Cells shall be capable of supporting loads up to and including AASHTO H-20 (United States) or CSA-S6 87.5 kN (Canada) when used in conjunction with approved pavement profiles.
F. Silva Cells shall be open on all vertical faces and horizontal planes and shall have no interior walls or diaphragms.
G. Silva Cells shall be capable of providing a large, contiguous, continuous volume of planting soil that does not inhibit or prevent the following:
    1. Placement of planting soil
    2. Walk through compaction
    3. Compaction testing of planting soil, once in place
    4. Movement and growth of roots
    5. Movement of water within the provided soil volume, including lateral capillary movement
    6. Installation and maintenance of utilities placed within, adjacent to, or below the Silva Cell.

H. Silva Cells shall be able capable of being filled with a variety of soil types and soils that include peds 2 inches (50 mm) or larger in diameter as is appropriate for the application, location of the installation, and tree species.

2.03 SILVA CELL MATERIALS AND ACCESSORIES

A. Silva Cell System Components: Each "Silva Cell" soil cell module (hereafter Silva Cell or "cell") is composed of one base, 6 post assemblies, and one deck.

SPECIFIER: Select one or more of the Silva Cell assemblies specified below as applicable to your Project design.

[1. 1x Silva Cell System:
a. Components: One base, six 1x posts, and one deck.
b. Assembled Dimensions (Each Cell): 47.2 inches long by 23.6 inches wide by 16.7 inches high (1200 mm long by 600 mm wide by 424 mm high).]

[2. 2x Silva Cell System:
a. Components: One base, six 2x posts, and one deck.
b. Assembled Dimensions (Each Cell): 47.2 inches long by 23.6 inches wide by 30.9 inches high (1200 mm long by 600 mm wide by 784 mm high).]

[3. 3x Silva Cell System:

a. Components: One base, six 3x posts (a combination of six 1x posts and six 2x posts), and one deck.
b. Assembled Dimensions (Each Cell): 47.2 inches long by 23.6 inches wide by 43 inches high (1200 mm long by 600 mm wide by 1092.2 mm high).]

B. Silva Cell Materials and Fabrication:
1. Bases and Posts: Homopolymer polypropylene.
2. Decks: Fiberglass reinforced, chemically-coupled, impact modified polypropylene.

C. Manufacturer's Related Silva Cell Installation Accessories:
1. Strongbacks: An accessory designed to stabilize the Silva Cell posts temporarily, during soil placement, and removed for reuse prior to placing decks.
2. Anchoring Spikes: 10” landscape spike for securing assembled Silva Cells to subbase.

2.04 RELATED PRODUCTS

A. Root Barrier: Recyclable, black, injection molded panels manufactured with a minimum 50 percent post-consumer recycled polypropylene plastic with UV inhibitors, and integrated zipper joining system which allows instant assembly by sliding one panel into another; for redirecting tree roots down and away from hardscapes.
1. Panel Sizes:
a. No. UB12-2: 24 inches long by 12 inches deep by 0.080 inches thick (61 cm long by 30 cm deep by 2.03 mm thick); for use with 1x systems and for pavement profiles less than 12 inches (30 cm) deep.
b. No. UB18-2: 24 inches long by 18 inches deep by 0.080 inches thick (61 cm long by 46 cm deep by 2.03 mm thick); for use with 2x and 3x systems, and for pavement profiles 12 inches or more in depth.

2. Products meeting this specification:
a. DeepRoot Tree Root Barrier (DeepRoot Green Infrastructure, LLC)

SPECIFIER: Select one or more of the Water+Air System assemblies specified below as applicable to your Project design.

B. Water+Air System: Used as a standalone system or in conjunction with the Silva Cell, the Water+Air System enables water and air to be directly added to tree roots and the surrounding soil system.

[1. Water+Air System 01:
a. Cast aluminum body
b. Stainless steel grate
c. Height -3 ¾” (85mm)
d. Compatible with 3” and 4” (80mm and 100mm) pipe

[2. Water+Air System 02:
a. Cast aluminum body
b. Stainless steel gate
c. Threaded for adjustable height
d. Height- adjustable 3 ½” (89mm) – 10 ½” (267mm)
e. Compatible with 3” and 4” (80mm and 100mm) diameter pipe

SPECIFIER: The Following pipe is an optional component of Water+Air System 01 and 02 assemblies specified above.

[f. Pipe
1. High density polyethylene corrugated pipe
2. Compliant with ASTM F405 and F667, SCS 606 and AASHTO M252
3. Knife cut perforations

[3. Water+Air System (Root Ball)
a. 3" diameter pipe (length per size of tree opening), compatible tee, flexible transition, and heavy-duty plastic grate

5. Products meeting this specification:
   a. DeepRoot Water+Air System (DeepRoot Green Infrastructure, LLC)

SPECIFIER: The following products may be provided by DeepRoot Green Infrastructure, LLC, or by other sources.

B. Geogrid: Net-shaped woven polyester fabric with PVC coating, uniaxial or biaxial geogrid, inert to biological degradation, resistant to naturally occurring chemicals, alkalis, and acids; used to provide a stabilizing force within soil structure as the fill interlocks with the grid.
   1. Tensile strength at ultimate (ASTM D6637):
      a. 1850 lbs/ft (27.0 kN/m) minimum
   2. Creep reduced strength (ASTM D5262):
      a. 1000 lbs/ft (14.6 kN/m) minimum
   3. Long term allowable design load (GRI GG-4):
      a. 950 lbs/ft (13.9 kN/m) minimum
   4. Grid aperture size (MD):
      a. 0.8 inch (20 mm) minimum
   5. Grid aperture size (CD):
      a. 1.28 inch (32 mm) maximum
   6. Roll size: 6-foot (1.8-m) width is preferred, up to 18-foot (5.4-m).
   7. Products meeting this specification:
      a. Stratagrid SG 150; http://www.geogrid.com
      b. Miragrid 2XT; http://www.tencate.com
      c. Fortrac 35 Geogrid; (http://www.hueskerinc.com
      d. SF 20 Biaxial Geogrid; http://www.synteen.com

C. Geotextile: composed of high tenacity polypropylene yarns which are woven into a network such that the yarns retain their relative position and is inert to biological degradation and resistant to naturally encountered chemicals, alkalis, and acids.

   1. Tensile strength at ultimate (ASTM D4595):
      a. 4800 lbs/ft (70.0 KN/m) MD minimum
      b. 4800 lbs/ft (70.0 KN/m) CD minimum
   2. Tensile strength at 5% strain (ASTM D4595)
      a. 2400 lbs/ft (35.0 KN/m) MD minimum
      b. 2700 lbs/ft (43.8 KN/m) CD minimum
   3. Flow rate (ASTM D4491):
      a. 30 gal/min/ft2 (2648 l/min/m2) minimum
   4. Apparent opening size (ASTM D4751):
      a. 30 sieve (0.60 mm)
   5. UV Resistance (at 500 hours):
      a. 80 percent strength retained
   6. Products meeting this specification:
      a. Mirafi HP570; http://www.tencate.com
      b. Geolon PP40; http://www.tencate.com
      c. Nilex Woven 2044 (Nilex); http://www.nilex.com

D. Plastic Cable Ties: A tensioning device or tool used to tie similar or different materials together with a specific degree of tension.

2.05 OTHER RELATED MATERIALS

A. Wood Blocking: Nominal dimensioned untreated lumber used for spacing assembled Silva Cells.
B. Drain and Distribution Pipes:

SPECIFIER: Consult with Project Engineer for proper selection and add information below or refer to their Specification Section.

1. [**Insert applicable drain pipe selection**] [**Refer to Section 32 84 00**] [**insert other Section title**]

C. Aggregate Subbase (Below Silva Cell Base):
1. Aggregate meeting one of the following specifications:

SPECIFIER: Consult with Project Engineer for proper selection and edit accordingly.

a. Complying ASTM D1241, Type I, Gradation B; Type I mixtures shall consist of stone, gravel, or slag with natural or crushed sand and fine mineral particles passing a No. 200 sieve.

Sieve	Percent Passing
1-1/2 inches (37.5 mm)	100
1 inch (25 mm)	75 to 95
3/8 inch (9.5 mm)	40 to75
No 4 (4.75 mm)	30 to 60
No 10 (2 mm)	20 to 45
No 40 (425 µm)	15 to 30
No 200 (75 µm)	5 to 15

b. Local Department of Transportation (DOT) virgin aggregate that most closely meets the gradation of ASTM D1241.
c. Ontario Provincial Standard Specification (OPSS) 1010 Granular A. Dense graded aggregates intended for use as granular base within the pavement structure, granular shouldering, and backfill.

Sieve	Percent Passing
26.5 mm	100
19 mm	85 to100
13.2 mm	65 to90
9.5 mm	50 to73
4.75 mm	35 to55
1.18 mm	15 to 40
300 µm	5 to 22
75 µm	2 to 8

D. Aggregate Base Course (Above Silva Cell Deck):
1. Same as aggregate subbase specified above.

E. Aggregate Base Course for Porous Pavement (Above Silva Cell Deck):
1. Aggregate complying with ASTM D448, No. 57.

Sieve	Percent Passing
1-1/2 inches (37.5 mm)	100
1 inch (25 mm)	95 to 100
1/2 inch (12.5 mm)	25 to 60
No 4 (4.75 mm)	0 to 10
No 8 (2.36 mm)	0 to 5

F. Setting Bed for Unit Pavers (Above Silva Cell Deck):
1. Aggregate complying with ASTM D448, No. 8.

Sieve	Percent Passing
1/2 inch (12.5 mm)	100
3/8 inch (9.5 mm)	85 to 100
No 4 (4.75 mm)	10 to 30
No 8 (2.36 mm)	0 to 10
No 16 (1.18 mm)	0 to 5

G. Backfill Material (Adjacent to Silva Cells): Clean, compactable, coarse grained fill soil free of organic material, trash and other debris, and free of toxic material injurious to plant growth.
H. Planting Soil: Refer to Section 32 94 56 - Planting Soil for Silva Cells.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine the conditions under which the Silva Cells are to be installed.
   1. Carefully check and verify dimensions, quantities, and grade elevations.
   2. Carefully examine the Drawings to become familiar with the existing underground conditions before digging. Verify the location of aboveground and underground utility lines, infrastructure, other improvements, and existing trees, shrubs, and plants to remain including their root system.

SPECIFIER: Select either "Landscape Architect", "Architect", or "Engineer" in the subparagraph below as applicable.

   3. Notify the Contractor and the [**Landscape Architect**] [**Architect**] [**Engineer**] in writing in the event of conflict between existing and new improvements, of discrepancies, and other conditions detrimental to proper and timely completion of the installation.
   4. Obtain written approval of changes to the Work prior to proceeding. Proceed with installation only after changes have been made and unsatisfactory conditions have been corrected.

3.02 PREPARATION

A. Take proper precautions as necessary to avoid damage to existing improvements and plantings.
B. Prior to the start of Work, layout and stake the limits of excavation and horizontal and vertical control points sufficient to install the complete Silva Cell system.
C. Coordinate installation with other trades that may impact the completion of the Work.

3.03 TEMPORARY PROTECTION

A. Protect open excavations and Silva Cell system from access and damage both when Work is in progress and following completion, with highly visible construction tape, fencing, or other means until related construction is complete.
B. Do not drive vehicles or operate equipment over the Silva Cell system until the final surface material has been installed.

3.04 EXCAVATION

A. General: Excavate to the depths and shapes indicated on the Drawings. Provide smooth and level excavation base free of lumps and debris.
B. Confirm that the depth of the excavation is accurate and includes the full section of materials required to place the subbase aggregate, Silva Cell, and pavement profile as indicated on the Drawings.
C. Over-excavate beyond the perimeter of the Silva Cell to allow for:
   1. The extension of aggregate subbase beyond the Silva Cell layout as shown on the Drawings.
   2. Adequate space for proper compaction of backfill around the Silva Cell system.

D. If unsuitable subgrade soils are encountered, consult the Owner's geotechnical consultants for directions on how to proceed.

SPECIFIER: Select either "Landscape Architect", "Architect", or "Engineer" in the paragraph below as applicable.

E. If conflicts arise during excavation, notify the [**Landscape Architect**] [**Architect**] [**Engineer**] in writing and make recommendations for action. Proceed with Work only when action is approved in writing.

3.05 SUBGRADE COMPACTION

A. Compact subgrade with a minimum of 3 passes with a vibratory plate compactor; or as directed by the project geotechnical consultant.
B. Do not exceed 10 percent slope for subgrade profile in any one direction. If the 10 percent slope is exceeded, contact manufacturer's representative for directions on how to proceed.

3.06 INSTALLATION OF GEOTEXTILE OVER SUBGRADE

A. Install geotextile over compacted subgrade.
   1. Lay geotextile flat with no folds or creases.
   2. Install the geotextile with a minimum joint overlap of 18 inches (450 mm).

3.07 INSTALLATION OF AGGREGATE SUBBASE BELOW SILVA CELL BASES

A. Install aggregate subbase to the depths indicated on the Drawings.
B. Extend subbase aggregate a minimum of 6 inches (150 mm) beyond the base of the Silva Cell layout.
C. Compact aggregate subbase to a minimum of 95 percent of maximum dry density at optimum moisture content in accordance with ASTM D698, Standard Proctor Method.
D. Do not exceed 10 percent slope on the surface of the subbase. Where proposed grades are greater than 10 percent, step the Silva Cells to maintain proper relation to the finished grade.

3.08 INSTALLATION OF SILVA CELL BASE

A. Install the Silva Cell system in strict accordance with manufacturer's instructions and as specified herein; where requirements conflict or are contradictory, follow the more stringent requirements.
B. Layout and Elevation Control:
   1. Provide layout and elevation control during installation of the Silva Cell system to ensure that layout and elevations are in accordance with the Drawings.

C. Establish the location of the tree openings in accordance with the Drawings. Once the trees are located, mark the inside dimensions of the tree openings on the prepared subbase.
D. Locate and mark other Project features located within the Silva Cell layout (e.g. light pole bases, utility pipes). Apply marking to identify the extent of the Silva Cell layout around these features. Follow the layout as shown on the Drawings to ensure proper spacing of the Silva Cell bases. Refer to the Drawings for offsets between these features and the Silva Cells.
E. Check each Silva Cell component for damage prior to placement. Reject cracked or chipped units.

SPECIFIER: Select either "Landscape Architect", "Architect", or "Engineer" in the paragraph below as applicable.

F. Place the Silva Cell bases on the compacted aggregate subbase. Start at the tree opening and place Silva Cell bases around the tree openings as shown on the Drawings.
G. Working from tree opening to tree opening, place Silva Cell bases to fill in the area between tree openings.

1. Maintain spacing no less than 1 inch (25 mm) and no more than 6 inches (150 mm) apart, assuming geotextile covering the decks meets the specifications in section 2.04 paragraph C.

SPECIFIER: Select either "Landscape Architect", "Architect", or "Engineer" in the paragraph below as applicable.

H. Follow the Silva Cell layout plan as shown on the Drawings.
I. Install Silva Cell bases around, over, or under existing or proposed utility lines, as indicated on the Drawings.
J. Level each Silva Cell base as needed to provide full contact with subbase. Adjust subbase material, including larger pieces of aggregate, so each base sits solidly on the surface of the subbase. Silva Cell bases that rock or bend over any stone or other obstruction protruding above the surface of the subbase material are not allowed. Silva Cell bases which bend into dips in the subbase material are not allowed. The maximum tolerance for deviations in the plane of the subbase material under the bottom of the horizontal beams of each Silva Cell base is 1/4 inch in 4 feet (6 mm in 1200 mm).
K. Anchor Silva Cell base with 2 anchoring spikes per base.
   1. For applications where Silva Cells are installed over waterproofed structures, use wood blocking or similar spacing system consistent with requirements of the waterproofing system to maintain required spacing.

3.09 INSTALLATION OF SILVA CELL POSTS

SPECIFIER: Select either "1x", "2x", or "3x" or a combination of "1x", "2x", or "3x" in the paragraphs below as applicable.

A. [**1x Silva Cell System:**
   1. Attach 1x posts to the installed Silva Cell base. Each base will receive six 1x posts. Place the end of the post with tabs into the base. Rotate post clockwise to snap in place.]

A. [**2x Silva Cell System:**
   1. Attach 2x posts to the installed Silva Cell base. Each base will receive six 2x posts. Place the end of the post with tabs into the base. Rotate post clockwise to snap in place.]

A. [**3x Silva Cell System:**
   1. Attach 2x posts to the installed Silva Cell base. Each base will receive six 2x posts. Place the end of the post with tabs into the base. Rotate post clockwise to snap in place.
   2. Following the placement of backfill and planting soil within the 2x posts, add a 1x post extension as described herein. A 2x post, used in combination with a 1x post is considered a 3x post assembly.]

3.10 INSTALLATION OF STRONGBACKS, GEOGRID, BACKFILL AND PLANTING SOIL

SPECIFIER: Delete the first paragraph below if there are no drain lines within the system.

A. For Silva Cell systems that have a perforated drain line located inside or adjacent to the system, consult Drawings for layout and details for requirements.
B. Install strongbacks on top of the Silva Cell posts by snapping into place over installed posts prior to installing planting soil and backfill.
   1. Strongbacks are required only during the placement and compaction of the planting soil and backfill.
   2. Move strongbacks as the Work progresses across the installation.
   3. Remove strongbacks prior to the installation of the Silva Cell decks.

C. Install geogrid around the perimeter of the Silva Cell system where the compacted backfill and planting soil interface.
   1. Do not place geogrid between the edge of the Silva Cells and adjacent planting areas.
   2. Cut the geogrid to allow for a 6-inch (150-mm) overlap at the Silva Cell base and a 12-inch (300-mm) overlap at the Silva Cell deck.
   3. Provide a minimum 12-inch (300-mm) overlap between adjacent sheets of geogrid.
   4. Secure geogrid with cable ties below the top of the posts, along the post ridges.

D. Place the first lift of backfill material loosely around the perimeter of the Silva Cell system, between the geogrid and the sides of the excavation. Place backfill to approximately the midpoint of the Silva Cell post. Do not compact.

E. Place the first lift of planting soil in the Silva Cell system to approximately the midpoint of the Silva Cell post.
   1. Level the planting soil throughout the system.
   2. Walk-through the placed planting soil to remove air pockets and settle the soil.
      a. Lightly compact soils by walking through the soil following placement.
      b. Walk through compaction shall result in 75-85 percent of maximum dry density in accordance with ASTM D698, Standard Proctor Method. Do not exceed root limiting compaction for the given soil type.

F. Compact the first lift of backfill material, previously spread, to 95 percent of maximum dry density in accordance with ASTM D698, Standard Proctor Method or in accordance with Project Specifications for hardscape areas, whichever is greater.

G. Add and compact additional backfill material so that the final finished elevation is at approximately the same level of the placed planting soil within the Silva Cells.
   1. Maintain the geogrid between the Silva Cell system and the backfill material at all times.

H. Place the second lift of backfill material loosely around the perimeter of the Silva Cell system, between the geogrid and the sides of the excavation so that the material is 2 to 3 inches below the top of the posts. Do not compact.

I. Place the second lift of planting soil inside of the Silva Cell to the bottom of the strongbacks. Walk through compact.

SPECIFIER: For 1x or 2x System, skip to Article 3.11 - INSTALLATION OF IRRIGATION AND WATER HARVESTING SYSTEM.

SPECIFIER: For 3x System, continue below.

J. Remove strongbacks, place one 1x posts into each of the previously-installed 2x posts. Rotate clockwise to snap in place, forming a 3x post assembly.

K. Immediately reinstall strongbacks on top of the post assembly.

L. Repeat process of alternately placing backfill and planting soil so that elevation of the compacted backfill and the walked-through compacted planting soil are just below the level of the strongbacks.

3.11 INSTALLATION OF IRRIGATION AND WATER HARVESTING SYSTEM (including but not limited to Deeproot Water+Air System components)

SPECIFIER: Water is critical to the success of the Silva Cell system; trees planted in the Silva Cell system must receive adequate water to ensure survival of the living system during periods of drier weather. Harvest of natural rainwater or supplemental water must be a part of the system, either through pressurized or non-pressurized systems, within the soil of the Silva Cell system. Coordinate with required irrigation installations. Irrigation should be installed within the entire soil system, not only at the tree openings.

A. Install irrigation and water harvesting system in accordance with the Drawings and Specifications. Remove only the minimum number of strongbacks needed to accommodate the Work and reinstall them immediately upon completion to maintain alignment of posts.

3.12 INSTALLATION OF SILVA CELL DECK

SPECIFIER: Select either "Landscape Architect", "Architect", or "Engineer" in the paragraph below as applicable.

A. Obtain final approval by the [**Landscape Architect**] [**Architect**] [**Engineer**] of planting soil installation prior to installation of the Silva Cell decks.
B. Remove strongbacks, level out the planting soil, and immediately install decks over the posts below. Place deck over the top of the posts. Push decks down until the deck clips lock into the posts, snapping the deck into place.
C. Fold the 12 inches (300 mm) of geogrid onto the top of the decks.

3.13 FINAL BACKFILL PLACEMENT AND COMPACTION

A. Place and compact final lift of backfill material to 95 percent of maximum dry density in accordance with ASTM D698, Standard Proctor Method, such that the backfill is flush with the top of the installed deck. Do not allow compacting equipment to come in contact with the decks.

3.14 INSTALLATION OF GEOTEXTILE AND AGGREGATE BASE COURSE OVER THE DECK

A. Ensure geotextile meets the specifications in section 2.04 paragraph C.
B. Place geotextile over the top of the deck and extend to the edge of the excavation. Overlap joints a minimum of 18 inches (450 mm). Leave enough slack in the geotextile for the aggregate base course to push the geotextile down in the gaps in between the decks.
C. Install the aggregate base course (including aggregate setting bed if installing unit pavers) over the geotextile immediately after completing the installation of the fabrics. Work the aggregate from one side of the layout to the other so that the fabric and aggregate conform to the Silva Cell deck contours.
D. Maintain equipment used to place aggregate base course completely outside the limits of the Silva Cell excavation area to prevent damage to the installed system.
E. For large or confined areas, where aggregate cannot easily be placed from the edges of the excavated area, obtain approval for the installation procedure and types of equipment to be used in the installation from the Silva Cell manufacturer.
F. Compact aggregate base course(s) to 95 percent of maximum dry density in accordance with ASTM D698, Standard Proctor Method. Utilize a vibration or plate compactor with a maximum weight of 800 lbs (362.87 kg).
G Do not drive vehicles or operate equipment over the completed aggregate base course.

3.15 INSTALLATION OF CONCRETE CURBS AT TREE OPENINGS, AGGREGATE SUBBASE AND PAVEMENT ABOVE THE SILVA CELL SYSTEM

A. Place concrete curbs along planting areas and tree openings as shown on the Drawings to retain the aggregate base course from migrating into the planting soil.
B. When staking concrete forms (e.g. curbs around the tree openings), prevent stakes from penetrating the Silva Cell decks.
C. Turn down edge of concrete paving to the Silva Cell deck along the edges of tree openings or planting areas to retain the aggregate base course material.
D. When paving type is a unit paver or other flexible material, provide a concrete curb under the paving at the edge of the Silva Cell deck to retain the aggregate base course material at the tree opening.
E. Place paving material over Silva Cell system in accordance with the Drawings.
    1. The Silva Cell system does not fully meet loading strength until the final paving is installed. Do not operate construction equipment on top of the Silva Cell system until paving installation has been completed.

F. Use care when placing paving or other backfill on top of Silva Cell system to prevent damage to the Silva Cell system or its components.

3.16 INSTALLATION OF ROOT BARRIERS

A. Install root barrier in accordance with manufacturer's installation instructions.

3.17 INSTALLATION OF PLANTING SOIL WITHIN THE TREE PLANTING AREA

A. Remove rubble, debris, dust and silt from the top of the planting soil within the tree opening that may have accumulated after the initial installation of the planting soil within the Silva Cells.
B. Install additional planting soil within the tree openings, to the depths indicated on the Drawings.
   1. Use the same soil used within the Silva Cells for planting soil within the tree openings.

C. Compact planting soil under the tree root ball as needed to prevent settlement of the root ball.
D. Place trees in accordance with the Drawings.

3.18 PROTECTION

A. Keep construction traffic away from the limits of the Silva Cells until the final pavement profile is in place. The Silva Cell system does not fully meet loading strength until the final paving is installed.
   1. Do not operate equipment directly on top of the Silva Cell system until paving installation has been completed.
   2. Provide fencing and other barriers to prevent vehicles from entering into the Silva Cell area.

B. When the Silva Cell installation is completed and the permanent pavement is in place, limit traffic and construction related activities to only loads less than the design loads.

3.19 CLEAN UP

A. Perform clean up during installation and upon completion of the Work. Maintain the site free of soil, sediment, trash and debris. Remove excess soil materials, debris, and equipment from the site following completion of the Work of this Section.
B. Repair damage to adjacent materials and surfaces resulting from installation of this Work using mechanics skilled in remedial work of the construction type and trades affected.

END OF SECTION