CONTRACT SPECIFICATIONS

For The Construction Of:

NACHES-TIETON ROAD IMPROVEMENT PROJECT
(COWICHE RD., N. TO NACHES RD., S.)
C 3114
Volume 1 of 2
FA# STPR-W391(001)
Yakima County Public Services Project
CERTIFICATE

I HEREBY CERTIFY THAT THE ATTACHED DOCUMENTS, PLANS, AND SPECIFICATIONS CONFORM TO ORIGINALS WHICH ARE ON FILE IN THE OFFICE OF THE COUNTY ENGINEER OF YAKIMA COUNTY, WASHINGTON.

COUNTY ENGINEER

DATE: 8/16/13
# TABLE OF CONTENTS

## VOLUME 1

### INFORMATIONAL BID DOCUMENTS

<table>
<thead>
<tr>
<th>Item</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>CERTIFICATE</td>
<td></td>
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<tr>
<td>INSTRUCTIONS TO BIDDERS</td>
<td>1</td>
</tr>
<tr>
<td>PROPOSAL (INFORMATIONAL)</td>
<td>2</td>
</tr>
<tr>
<td>LETTER OF RESPONSIBILITY (INFORMATIONAL)</td>
<td>6</td>
</tr>
<tr>
<td>DEFINITION OF TERMS</td>
<td>7</td>
</tr>
<tr>
<td>NON-COLLUSION DECLARATION</td>
<td>8</td>
</tr>
<tr>
<td>NOTICE TO ALL BIDDERS</td>
<td>8</td>
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<tr>
<td>LOCAL AGENCY CERTIFICATION FOR FEDERAL-AID CONTRACT</td>
<td>9</td>
</tr>
<tr>
<td>CERTIFICATION REGARDING DEBARMENT, ETC. (INFORMATIONAL)</td>
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<td>LOCAL AGENCY DISADVANTAGED BUSINESS ENTERPRISE</td>
<td>11</td>
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<td>LOCAL AGENCY SUBCONTRACTOR LIST</td>
<td>13</td>
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<td>CONTRACT (INFORMATIONAL)</td>
<td>14</td>
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<tr>
<td>PERFORMANCE BOND (INFORMATIONAL)</td>
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### AMENDMENTS TO THE STANDARD SPECIFICATIONS

#### DIVISION 1

**GENERAL REQUIREMENTS**

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
<th>Page</th>
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</thead>
<tbody>
<tr>
<td>1-01</td>
<td>DEFINITIONS AND TERMS</td>
<td>1</td>
</tr>
<tr>
<td>1-02</td>
<td>BID PROCEDURES AND CONDITIONS</td>
<td>2</td>
</tr>
<tr>
<td>1-03</td>
<td>AWARD AND EXECUTION OF CONTRACT</td>
<td>2</td>
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<tr>
<td>1-05</td>
<td>CONTROL OF WORK</td>
<td>2</td>
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<td>1-06</td>
<td>CONTROL OF MATERIAL</td>
<td>3</td>
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<tr>
<td>1-07</td>
<td>LEGAL RELATIONS AND RESPONSIBILITIES TO THE PUBLIC</td>
<td>4</td>
</tr>
<tr>
<td>1-08</td>
<td>PROSECUTION AND PROGRESS</td>
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<tr>
<td>1-09</td>
<td>MEASUREMENT AND PAYMENT</td>
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#### DIVISION 3

**AGGREGATE PRODUCTION AND ACCEPTANCE**

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-01</td>
<td>PRODUCTION FROM QUARRY AND PIT SITES</td>
<td>7</td>
</tr>
<tr>
<td>3-04</td>
<td>ACCEPTANCE OF AGGREGATE</td>
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</table>

#### DIVISION 5

**AGGREGATE PRODUCTION AND ACCEPTANCE**

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<tbody>
<tr>
<td>5-04</td>
<td>HOT MIX ASPHALT</td>
<td>9</td>
</tr>
</tbody>
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#### DIVISION 6

**STRUCTURE**

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>6-02</td>
<td>CONCRETE STRUCTURES</td>
<td>10</td>
</tr>
<tr>
<td>6-10</td>
<td>CONCRETE BARRIER</td>
<td>15</td>
</tr>
</tbody>
</table>
DIVISION 7
DRAINAGE STRUCTURES, STORM SEWERS, SANITARY SEWERS, WATER MAINS AND CONDUITS
SECTION 7-02, CULVERTS .......................................................... 16
SECTION 7-03, STRUCTURAL PLATE PIPE, PIPE ARCH, ARCH, AND UNDERPASS -- 16
SECTION 7-04, STORM SEWERS ................................................... 16
SECTION 7-05, MANHOLES, INLETS, CATCH BASINS, AND DRYWELLS ............. 17
SECTION 7-08, GENERAL PIPE INSTALLATION REQUIREMENTS .................... 17

DIVISION 8
MISCELLANEOUS CONSTRUCTION
SECTION 8-01, EROSION CONTROL AND WATER POLLUTION CONTROL .......... 17
SECTION 8-02, ROADSIDE RESTORATION ...................................... 26
SECTION 8-11, GUARDRAIL ..................................................... 27
SECTION 8-15, RIPRAP ............................................................ 28
SECTION 8-20, ILLUMINATION, TRAFFIC SIGNAL SYSTEMS AND ELECTRICAL --- 29
SECTION 8-21, PERMANENT SIGNING ......................................... 39
SECTION 8-22, PAVEMENT MARKING ........................................... 42

DIVISION 9
MATERIALS
SECTION 9-02, BITUMINOUS MATERIALS ....................................... 43
SECTION 9-03, AGGREGATES ..................................................... 46
SECTION 9-05, DRAINAGE STRUCTURES, CULVERTS, AND CONDUITS .......... 48
SECTION 9-06, STRUCTURAL STEEL AND RELATED MATERIALS .................. 51
SECTION 9-13, RIPRAP, QUARRY SPALLS, SLOPE PROTECTION, & ROCK ......... 51
SECTION 9-14, EROSION CONTROL AND ROADSIDE PLANTING ................... 51
SECTION 9-16, FENCE AND GUARDRAIL ...................................... 59
SECTION 9-20, CONCRETE PATCHING MATERIAL, GROUT AND MORTAR ......... 63
SECTION 9-23, CONCRETE CURING MATERIALS AND ADMIXTURES .............. 63
SECTION 9-28, SIGNING MATERIALS AND FABRICATION ......................... 63
SECTION 9-34, PERMANENT MARKING MATERIAL .................................. 97

SPECIAL PROVISIONS

DIVISION 1
GENERAL REQUIREMENTS
SECTION 1-01, DEFINITION AND TERMS ..................................... 2
SECTION 1-02, BID PROCEDURES AND CONDITIONS ............................ 4
SECTION 1-03, AWARD AND EXECUTION OF CONTRACT .......................... 9
SECTION 1-04, SCOPE OF WORK ............................................... 11
SECTION 1-05, CONTROL OF WORK ........................................... 11
SECTION 1-06, CONTROL OF MATERIAL ........................................ 15
SECTION 1-07, LEGAL RELATIONS AND RESPON. TO THE PUBLIC ................. 17
SECTION 1-08, PROSECUTION AND PROGRESS .................................. 51
SECTION 1-09, MEASUREMENT AND PAYMENT ................................... 55
SECTION 1-10, TEMPORARY TRAFFIC CONTROL .................................. 57

C3114
Naches Tieton Road Improvements
Page B
DIVISION 2
EARTHWORK
SECTION 2-01, CLEARING, GRUBBIN AND ROADSIDE CLEANUP -------------------------- 59
SECTION 2-02, REMOVAL OF STRUCTURES AND OBSTRUCTIONS ------------------------ 59
SECTION 2-03, ROADWAY EXCAVATION AND EMBANKMENT ----------------------------- 61
SECTION 2-05, EMBANKMENT SAFETY ------------------------------------------------ 61
SECTION 2-07, WATERING --------------------------------------------------------- 61
SECTION 2-09, STRUCTURE EXCAVATION -------------------------------------------- 62

DIVISION 3
PRODUCTION FROM QUARRY AND
PIT SITES AND STOCKPILING

SECTION 3-01, PRODUCTION FROM QUARRY AND PIT SITES ------------------------ 62

DIVISION 5
SURFACE TREATMENTS AND PAVEMENTS
SECTION 5-04, HOT MIX ASPHALT ----------------------------------------------- 63

DIVISION 7
DRAINAGE STRUCTURES, STORM SEWERS, SANITARY SEWERS, WATER
MAINS AND CONDUITS
SECTION 7-01, DRAINS ---------------------------------------------------------- 67
SECTION 7-02, CULVERTS --------------------------------------------------------- 68
SECTION 7-04, STORM SEWERS ---------------------------------------------------- 68
SECTION 7-05, MANHOLES, INLETS, CATCH BASINS AND DRYWELLS ------------------ 69
SECTION 7-08, GENERAL PIPE INSTALLATION REQUIREMENTS ------------------------ 70

DIVISION 8
MISCELLANEOUS CONSTRUCTION
SECTION 8-01, EROSION CONTROL AND WATER POLLUTION CONTROL ------------------ 71
SECTION 8-13, MONUMENT CASES -------------------------------------------------- 72
SECTION 8-18, MAILBOX SUPPORT -------------------------------------------------- 73
SECTION 8-20, ILLUMINATION, TRAFFIC SIGNAL SYSTEMS, AND ELECTRICAL -------- 74
SECTION 8-21, PERMANENT SIGNING --------------------------------------------- 77
SECTION 8-22, PAVEMENT MARKINGS --------------------------------------------- 77

DIVISION 9
MATERIALS
SECTION 9-03, AGGREGATES ----------------------------------------------- 78
SECTION 9-28, SIGNING MATERIALS AND FABRICATION ----------------------------- 79

APPENDICES -------------------------------------------------- 79
STANDARD PLANS --------------------------------------------- 79

APPENDIX A - REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION
CONTRACTS

APPENDIX B - PREVAILING WAGE RATES
Federal Wage Determinations for Highway Construction
Washington State Prevailing Wage Rates - Yakima County
Benefit Code Key
Supplement to Wage Rates

APPENDIX C - GEOLOGICAL INFORMATION

APPENDIX D- STANDARD PLANS

VOLUME 2 - IMPROVEMENT PLANS
INFORMATIONAL
BID DOCUMENTS
INSTRUCTIONS TO BIDDERS

DELIVERY OF PROPOSALS

Sealed bids will be received at the following location before the specified time:

Yakima County Public Services, Fourth Floor County Courthouse, 128 N. 2nd Street, Yakima, Washington 98901 until 2:00 p.m. of the bid opening date.

Each proposal, or bid shall be completely sealed in a separate package, addressed to the Engineer of Yakima County with the name of the improvements for which the bid is submitted plainly written on the outside of the package.

No oral, telephonic, facsimile, or telegraphic Bids or modifications shall be accepted.

DATE OF OPENING BIDS

The bid opening date for this project shall be **September 11, 2013**.

The bids shall be publicly opened and read after 2:00 p.m. on that date at the following location:

Yakima County Road Engineer’s Office, fourth floor, Yakima County Courthouse, 128 N. 2nd Street, Yakima, Washington 98901.

RIGHT TO REJECT BIDS:

The right is reserved to reject any and all proposals, to accept the proposal or proposals deemed best for the County or to advertise for new proposals when in the opinion of the Board the best interest of the County shall be promoted thereby.

PROPOSAL GUARANTY:

A certified check, cashiers check, cash or bid bond made payable to the Treasurer of the County of Yakima for an amount equal to at least five percent (5%) of the total amount bid must accompany each bid as evidence of good faith and as a guarantee that if awarded the Contract the bidder shall execute the Contract and give Bond as required.

FORM FURNISHED:

Each bid must be made on the form attached to these Specifications.

This project is a Federal-Aid funded project. Yakima County in accordance with Title VI of the Civil Rights Act of 1964, 78 Stat. 252, 42 U.S.C. 2000d to 2000-4 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 shall affirmatively insure that in any contract entered into pursuant to this advertisement, disadvantaged business enterprises shall be afforded full opportunity to submit bids in response to this invitation and shall not be discriminated against on the grounds of race, color or national origin in consideration for an award.

YAKIMA COUNTY IS AN EQUAL OPPORTUNITY EMPLOYER
This certifies that the undersigned has examined the location of the noted projects:

C 3114 – NACHES TIETON ROAD IMPROVEMENTS: COWICHE RD., N. TO NACHES RD., S.

And that the Plans, Specifications and Contract governing the work embraced in these improvements, and the method by which payment will be made for said work, is understood. The undersigned hereby proposes to undertake and complete the work embraced in these improvements, or as much as can be completed with the money available, in accordance with the said Plans, Specifications, and Contract, and the following schedule of rates and prices:

**NOTE:** Unit Prices for all items, all extensions, and total amount of bid shall be shown. Sales Tax shall be included in Unit Prices. No oral, telephonic, facsimile, or telegraphic Bids or modifications shall be considered or accepted.

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Description</th>
<th>Approx. Quantity</th>
<th>Unit</th>
<th>Unit Price</th>
<th>Total Item Amount</th>
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<td>DROP INLET TYPE 1</td>
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<td>SCHEDULE A APPROACH PIPE 12 IN. DIAM.</td>
<td>298</td>
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<td>$</td>
</tr>
<tr>
<td>16</td>
<td>SCHEDULE A CULV. PIPE 12 IN. DIAM.</td>
<td>622</td>
<td>L.F.</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>17</td>
<td>SCHEDULE A CULV. PIPE 18 IN. DIAM.</td>
<td>172</td>
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## PROPOSAL—Continued

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<th>Item No.</th>
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<th>Unit</th>
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<td>MONUMENT CASE AND COVER</td>
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<td>EACH</td>
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<td>ADJUST VALVE BOX</td>
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<td>EACH</td>
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<td>53</td>
<td>MINOR CHANGES</td>
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<td>F.A.</td>
<td>$15,000.00</td>
<td>$15,000.00</td>
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<td>54</td>
<td>PRIVATE PIPE CONNECTIONS AND RELOCATION</td>
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<td>F.A.</td>
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<td>SPCC PLAN</td>
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<td>L.S.</td>
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<td>56</td>
<td>MAIL BOX SUPPORT TYPE 1</td>
<td>1</td>
<td>EACH</td>
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**BID AMOUNT C 3114** $
PROPOSAL – Continued

The bidder is hereby advised that by signature of this proposal he/she is deemed to have acknowledged all requirements and signed all certificates contained herein.

A proposal guaranty in an amount of five percent (5%) of the total bid, based upon the approximate estimate of quantities at the above prices and in the form as indicated below, is attached hereto:

CASH [ ] IN THE AMOUNT OF _____________________________

CASHIER’S CHECK [ ] _______________________________ DOLLARS

CERTIFIED CHECK [ ] ($_______) PAYABLE TO THE COUNTY TREASURER

PROPOSAL BOND [ ] IN THE AMOUNT OF 5 PERCENT (5%) OF THE BID

Bidder acknowledges receipt of the following Addendums:

No. Date

The undersigned has telephoned the Office of the Yakima County Engineers for verification of the number of Addendums issued.

SIGNATURE OF AUTHORIZED OFFICIAL(S)

Title: ____________________________

Firm Name: ______________________

Address: ________________________

Phone No.: _______________________

Washington Registration No.: ______

Federal ID Tax No.: ______________

UBI No.: _________________________

E-Mail: _________________________

Signed and sworn (or affirmed) before me on ____________________ Date

__________________________________
NOTARY PUBLIC

My appointment expires ____________ (Seal and Stamp)

NOTE: (1) This proposal is not transferable and any alteration of the firm’s name entered hereon without prior permission from the County Engineer shall be cause for considering the proposal irregular and subsequent rejection of the bid.

(2) Please refer to Section 1-02.6 of the Standard Specifications, re: “Preparation of Proposal” or “Article 4” of the Instruction to Bidders for building construction jobs.

(3) Should it be necessary to modify this proposal either in writing or by electronic means, please make reference to the following proposal number in your communications C 3114.
LETTER OF RESPONSIBILITY

Date: __________
County Road Project No.: C 3114

TO:
BOARD OF COUNTY COMMISSIONERS OF YAKIMA COUNTY, WASHINGTON
(Party awarding principal contract)

Dear Sirs:

I hereby maintain that I am a responsible bidder as contemplated by the policies of the State of Washington (Chapter 157, Laws of Washington of 1937).

a. My permanent place of business is ________________________________, which I have maintained for _________ years.

b. I have adequate plant equipment to do expeditiously and properly the work contemplated for Yakima County, Washington.

DESCRIPTION OF WORK:

C 3114 – Naches Tieton Road Improvements: Cowiche Rd., W to Naches Rd., S.

I have the following equipment available for this work:

________________________________________________________

________________________________________________________

c. I have adequate funds to promptly meet obligations incident to this work.

Bank reference: ________________________________

________________________________________________________

d. I have had experience in this class of work, having constructed the following improvements.

I hereby certify that the above is a true and accurate statement.

Very truly yours,

________________________________________________________

Contractor

NOTE: This sheet need not be submitted, unless so requested by the Engineer subsequent to opening of bid. This "letter of responsibility" shall not be construed to be a request for Prequalification of bidder.
DEFINITION OF TERMS

In interpreting these specifications, the following definitions shall prevail:


SECRETARY OF TRANSPORTATION: Secretary of Transportation of the State of Washington.

BOARD: The Board of County Commissioners of Yakima County.

ENGINEER: County, or construction engineer, or his duly authorized assistants by whom all explanations and directions necessary for the satisfactory prosecution and completion of the work described in these specifications will be given.

CONTRACTOR AND/OR SUPPLIER: The person, firm, co-partnership or corporation, or any lawful agent of such person, firm, partnership or corporation constituting one of the principals to the contract and undertaking to perform the work herein specified.

CONTRACT: The Agreement between the Contractor and the County of Yakima acting through the Board of County Commissioners. The contract shall include the accepted “Proposal”, “Plans”, “Specifications” and “Contract Bond”, also any and all supplemental agreements which reasonably could be required to complete the construction of the work in a substantial and acceptable manner.

PROPOSAL: The written offer, or copy thereof of the bidder to perform the work proposed.

PLANS: The officially approved drawings, or reproductions thereof attached to this contract.

SPECIFICATIONS: The directions, provisions and requirements contained herein, together with all written agreements made, or to be made pertaining to the method and manner of performing the work, or to the quantities and qualities of materials to be furnished under the contract.

CONTRACT BOND: The approved form of security furnished by the Contractor and his surety as a guarantee of good faith on the part of the Contractor to execute the work in accordance with the terms of the contract.

LABORATORY: The laboratories of the Department of Transportation, or other laboratories designated by the engineer.

AMOUNT OF THE CONTRACT: For the purpose of awarding the contract and determining the amount of the bond, the lump sum bid, or the summation of the products of the approximate quantities shown on the plans or otherwise stated by the unit prices will be considered the total amount of the bid and the full amount of the contract price.
Failure to return this Declaration as part of the bid proposal package will make the bid nonresponsive and ineligible for award.

NON-COLLUSION DECLARATION

I, by signing the proposal, hereby declare, under penalty of perjury under the laws of the United States that the following statements are true and correct:

1. 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.

2. That by signing the signature page of this proposal, I am deemed to have signed and have agreed to the provisions of this declaration.

NOTICE TO ALL BIDDERS

To report bid rigging activities call:

1-800-424-9071

The U. S. Department of Transportation (USDOT) operates the above toll-free “hotline” Monday through Friday, 8:00 a.m. to 5:00 p.m., eastern time. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use the “hotline” to report such activities.

The “hotline” is part of USDOT’s continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the USDOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.
Local Agency Certification for Federal-Aid Contracts

The prospective participant certifies by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

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

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

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

The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed $100,000 and that all such subrecipients shall certify and disclose accordingly.
Certification Regarding
Debarment, Suspension, Ineligibility and Voluntary Exclusion
Lower Tier Covered Transactions

This certification is required by the regulations implementing Executive Order 12549, Debarment and Suspension, 29 CFR Part 98, Section 98.510, Participant’s responsibilities. The regulations were published as Part VII of the May 26, 1998 Federal Register (pages 19160-19211).

(BEFORE COMPLETING CERTIFICATION, READ ATTACHED INSTRUCTIONS WHICH ARE AN INTEGRAL PART OF THE CERTIFICATION)

(1) The prospective recipient of federal assistance funds certifies, by submission of this proposal, that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any federal department or agency.

(2) Where the prospective recipient of federal assistance funds is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

This certification is also applicable to violations to prevailing wage law (chapter 39.12 RCW), registration law (chapter 18.27 RCW), or industrial insurance law (chapter 51.48 RCW).

________________________________________
Name and Title of Authorized Representative

________________________________________  ________________
Signature                            Date
Local Agency Disadvantaged Business Enterprise Utilization Certification

To be eligible for award of this contract the bidder must fill out and submit, as part of its bid proposal, the following Disadvantaged Business Enterprise Utilization Certification relating to Disadvantaged Business Enterprise (DBE) requirements. The Contracting Agency shall consider as non-responsive and shall reject any bid proposal that does not contain a DBE Certification which properly demonstrates that the bidder will meet the DBE participation requirements in one of the manners provided for in the proposed contract. The Bidder must submit good faith effort documentation *only in the event* the bidder's efforts to solicit sufficient DBE participation has been unsuccessful. The successful bidder's Disadvantage Business Enterprise Utilization Certification shall be deemed a part of the resulting contract. Information on certified firms is available from OMWBE, telephone 360-664-9750 or Toll Free 1-866-208-1064.

Firms listed below have been contacted regarding participation on this project. If this bidder is successful on this project and is awarded the contract, it shall assure that subcontracts or supply agreements are executed with those firms where an "Amount to be Applied Towards Goal" is listed. (If necessary, use additional sheet.)

<table>
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<tr>
<th>Column 1</th>
<th>Column 2</th>
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<tbody>
<tr>
<td>Name of DBE Certificate Number</td>
<td>Project Role <em>(Prime, Joint Venture, Subcontractor, Manufacturer, Regular Dealer)</em></td>
<td>Description of Work</td>
<td>Amount to be Applied Towards Goal</td>
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Disadvantaged Business Enterprise Subcontracting Goal: 

\[
\text{Box 2} \quad \text{DBE Total} \quad \text{Box 3}
\]

* Regular Dealer status must be approved prior to bid submittal by the Office of Equal Opportunity, Wash. State Dept. of Transportation, on each contract.

** See the section "Crediting DBE Participation Toward Meeting the Goal" in the Contract Document.

*** The Contracting Agency will utilize this amount to determine whether or not the bidder has met the goal. In the event of an arithmetic difference between this total and the sum of the individual amounts listed above, then the sum of the amounts listed shall prevail and the total will be revised accordingly. Participation in excess of the goal amount will be considered voluntary or race-neutral participation.
Local Agency Disadvantaged Business Enterprise (DBE) Written Confirmation Document

As an authorized representative of the Disadvantaged Business Enterprise (DBE), I confirm that we have been contacted by the referenced bidder with regard to the referenced project and if the bidder is awarded the contract we will enter into an agreement with the bidder to participate in the project consistent with the information provided in the bidder's Disadvantaged Business Enterprise Utilization Certification.

Contract Title: ____________________________________________________________

Bidder's Business Name: __________________________________________________

DBE's Business Name: ___________________________________________________

DBE Signature: __________________________________________________________

DBE's Title: _____________________________________________________________

Date: __________________________________________________________________

The entries must be consistent with what is shown on the bidder's Disadvantaged Business Enterprise Utilization Certification. Failure to do so will result in bid rejection. See contract provision; Disadvantaged Business Enterprise Condition of Award Participation.

Description of Work: _____________________________________________________

Amount to be Applied Towards Goal: _______________________________________

SR
Local Agency Subcontractor List

Prepared in compliance with RCW 39.30.060 as amended

To Be Submitted with the Bid Proposal

Project Name ________________________________

Failure to list subcontractors with whom the bidder, if awarded the contract, will directly subcontract for performance of the work of heating, ventilation and air conditioning, plumbing, as described in Chapter 18.106 RCW, and electrical, as described in Chapter 19.28 RCW or naming more than one subcontractor to perform the same work will result in your bid being non-responsive and therefore void.

Subcontractor(s) with whom the bidder will directly subcontract that are proposed to perform the work of heating, ventilation and air conditioning, plumbing, as described in Chapter 18.106 RCW, and electrical as described in Chapter 19.28 RCW must be listed below. The work to be performed is to be listed below the subcontractor(s) name.

To the extent the Project includes one or more categories of work referenced in RCW 39.30.060, and no subcontractor is listed below to perform such work, the bidder certifies that the work will either (i) be performed by the bidder itself, or (ii) be performed by a lower tier subcontractor who will not contract directly with the bidder.

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<th>Subcontractor Name</th>
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* Bidder's are notified that is the opinion of the enforcement agency that PVC or metal conduit, junction boxes, etc, are considered electrical equipment and therefore considered part of electrical work, even if the installation is for future use and no wiring or electrical current is connected during the project.
CONTRACT

THIS AGREEMENT is made and entered into between Yakima County acting under and by virtue of Titles 36 and 39 RCW, hereinafter called the "COUNTY" and ______________, hereinafter called the "CONTRACTOR".

That in consideration of the terms and conditions contained herein and attached and made a part of this agreement, the parties hereto covenant and agree as follows:

I. The CONTRACTOR shall do all work and furnish all tools and equipment for C 3114 - Naches Tieton Road Improvements: Cowiche Rd., N. to Naches Rd., S. and shall perform any changes in the work in accordance with the Contract Documents, which include the Contract Form, Bidder's completed Proposal Form, Scope of Work, Contract Plans, Contract Provisions, Standard Specifications, Standard Plans, Addenda, various certifications and affidavits, supplemental agreements, and any change orders.

II. The CONTRACTOR shall provide and bear the expense of all equipment, material and labor of any sort whatsoever that may be required for the transfer of materials and for constructing and completing the work provided for in the Contract Documents except those items mentioned therein to be furnished by Yakima County.

III. The COUNTY hereby promises and agrees to pay the CONTRACTOR according to the conditions stated in the Contract Documents.

IV. The CONTRACTOR for itself, and for its heirs, executors, administrators, successors and assigns does hereby agree to the full performance of all the covenants herein contained upon the part of the CONTRACTOR.

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

VI. The parties agree that, for the purpose of this agreement, the CONTRACTOR is an independent contractor and neither the CONTRACTOR nor any employees of the CONTRACTOR is an employee of the COUNTY. Neither the CONTRACTOR nor any employee of the CONTRACTOR is entitled to any benefits that the COUNTY provides its employees. The CONTRACTOR is solely responsible for payment of any statutory workers compensation or employer's liability insurance as required by state law.

IN WITNESS WHEREOF, the CONTRACTOR has executed this instrument, on the date indicated below and Yakima County has caused this instrument to be executed in the name of said COUNTY by and through the Board of Yakima County Commissioners on the date indicated below.

CONTRACTOR:
Signed: ______________, 2013

Signature for

Print or Type Name of Person Signing

Title

Foregoing Contract approved and ratified
______________ , 20__

Surety

Attorney in fact

BOARD OF YAKIMA COUNTY COMMISSIONERS
Signed: ______________, 2013

Michael D. Leita, Chairman

Kevin J. Bouchey, Commissioner

J. Rand Elliott, Commissioner

ATTEST: Clerk of the Board

Tiera Girard

Approved as to form:

Deputy Prosecuting Attorney
KNOW ALL MEN BY THESE PRESENTS, That__________________________, as “PRINCIPAL”, and ________, a corporation authorized to do business in the State of Washington, as “SURETY”, are jointly and severally held and bound unto Yakima County, Washington in the penal sum_________________________Dollars ($_________________________ ) for the payment of which by these presents we jointly and severally bind ourselves, our heirs, executors, administrators, assigns, and successors.

THE CONDITION of this bond is such that WHEREAS, on ______________, 20____, the PRINCIPAL executed a certain Contract with the County, by the terms of which PRINCIPAL agrees to furnish all material and labor and will undertake and complete the construction of for C 3114 – Naches Tieton Road Improvements: Cowiche Rd., N. to Naches Rd., S., according to the maps, plans and specifications made a part of said Contract, which Contract is attached hereto and by this reference is incorporated herein and made a part hereof. FURTHER, the SURETY agrees to be bound by the laws of the State of Washington and subjected to the jurisdiction of the State of Washington.

NOW, THEREFORE, if the PRINCIPAL shall faithfully perform all the provisions of such contract and pay all laborers, mechanics, subcontractors and materialmen, and all persons who supply such persons or subcontractors with provisions or supplies for the carrying on of such work, then this obligation to be void, otherwise to remain in full force and effect.

Dated this _____ day of _____________________, 2013.

PRINCIPAL

By: _______________________________

Title: _____________________________

Chair of the Board of
Yakima County Commissioners

SURETY

By: _______________________________

Attorney-in-Fact

Date: _____________________________ 2013

Approved as to form:

Deputy Prosecuting Attorney

Name of Local Office of Agent

Address of Local Office Agent

BOND NUMBER

YAKIMA COUNTY CONTRACT NUMBER
AMENDMENTS TO THE
STANDARD SPECIFICATIONS
INTRODUCTION
The following Amendments and Special Provisions shall be used in conjunction with the 2012
Standard Specifications for Road, Bridge, and Municipal Construction.

AMENDMENTS TO THE STANDARD SPECIFICATIONS

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

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

DIVISION 1
GENERAL REQUIREMENTS

SECTION 1-01, DEFINITION AND TERMS
August 5, 2013

1-01.2(2) Items of Work and Units of Measurement
The following abbreviation in this section is deleted:

ATB Asphalt Treated Base

1-01.3 Definitions
The definition for “Bid Documents” is revised to read:
The component parts of the proposed Contract which may include, but are not limited to, the
Proposal Form, the proposed Contract Provisions, the proposed Contract Plans, Addenda,
and, for projects with Contracting Agency subsurface investigations, the Summary of
Geotechnical Conditions and subsurface boring logs (if any).

The definition for “Superstructures” is revised to read:
The part of the Structure above:

1. The bottom of the grout pad for the simple and continuous span bearing, or
2. The bottom of the block supporting the girder, or
3. Arch skewback and construction joints at the top of vertical abutment members or
   rigid frame piers.
Longitudinal limits of the Superstructure extend from end to end of the Structure in accordance with the following criteria:

1. From the face of end diaphragm abutting the bridge approach embankment for end piers without expansion joints, or

2. From the end pier expansion joint for bridges with end pier expansion joints.

Superstructures include, but are not limited to, the bottom slab and webs of box girders, the bridge deck and diaphragms of all bridges, and the sidewalks when shown on the bridge deck. The Superstructure also includes the girders, expansion joints, bearings, barrier, and railing attached to the Superstructure when such Superstructure components are not otherwise covered by separate unit measured or lump sum bid items.

Superstructures do not include endwalls, wingwalls, barrier and railing attached to the wingwalls, and cantilever barriers and railings unless supported by the Superstructure.

SECTION 1-02, BID PROCEDURES AND CONDITIONS
January 2, 2012

1-02.4(2) Subsurface Information
The first two sentences in the first paragraph are revised to read:

If the Contracting Agency has made subsurface investigation of the site of the proposed work, the boring log data, soil sample test data, and geotechnical recommendations reports obtained by the Contracting Agency will be made available for inspection by the Bidders at the location specified in the Special Provisions. The Summary of Geotechnical Conditions, as an appendix to the Special Provisions, and the boring logs shall be considered as part of the Contract.

SECTION 1-03, AWARD AND EXECUTION OF CONTRACT
April 2, 2012

1-03.1(1) Tied Bids
This section’s title is revised to read:

1-03.1(1) Identical Bid Totals

SECTION 1-05, CONTROL OF WORK
August 6, 2012

1-05.13(1) Emergency Contact List
The second sentence in the first paragraph is revised to read:
The list shall include, at a minimum, the Prime Contractor’s Project Manager, or equivalent, the Prime Contractor’s Project Superintendent, the Erosion and Sediment Control (ESC) Lead and the Traffic Control Supervisor.

SECTION 1-06, CONTROL OF MATERIAL

August 5, 2013

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

The last paragraph is revised to read the following two new paragraphs:

Aggregate materials that are not approved for use in the ASA database may be sampled and tested by the Agency, for a specified use on a project, from the source or from a processed stockpile of the material and all cost for the sampling and testing will be deducted from the Contract.

The Contractor agrees to authorize the Project Engineer to deduct the sampling and testing costs from any money due or coming due to the Contractor.

1-06.1(4) Fabrication Inspection Expense

The first paragraph is revised to read:

In the event the Contractor elects to have items fabricated beyond 300 miles from Seattle, Washington, the Contracting Agency will deduct from payment due the Contractor costs to perform fabrication inspection on the following items:

- Bridge Bearings (Cylindrical, Disc, Fabric Pad, Pin, Pendulum, Rocker, and Spherical)
- Cantilever Sign Structures and Sign Bridges
- Epoxy-Coated Reinforcing Steel
- Metal Bridge Railing and Handrail
- Modular Expansion Joints
- Painted Piling and Casing
- Painted and Powder-Coated Luminaire and Signal Poles
- Precast Concrete Catch Basins, Manholes, Inlets, Drywells, and Risers
- Precast Concrete Drain, Perforated Underdrain, Culvert, Storm Sewer, and Sanitary Sewer Pipe
- Precast Concrete Three Sided Structures
- Precast Concrete Junction Boxes, Pull Boxes, Cable Vaults, Utility Vaults, and Box Culverts
- Precast Concrete Traffic Barrier
- Precast Concrete Marine Pier Deck Panels
- Precast Concrete Floor Panels
- Precast Concrete Structural Earth Walls, Noise Barrier Walls, and Wall Stem Panels
- Precast Concrete Retaining Walls, including Lagging Panels
• Prestressed Concrete Girders and Precast Bridge Components
• Prestressed Concrete Piles
• Seismic Retrofit Earthquake Restainers
• Soldier Piles
• Steel Bridges and Steel Bridge Components
• Steel Column Jackets
• Structural Steel for Ferry Terminals, including items such as Dolphins, Wingwalls, and Transfer Span
• Treated Timber and Lumber 6-inch by 6-inch or larger
• Timber
• Additional items as may be determined by the Engineer

The footnote below the table is revised to read:

* An inspection day includes any calendar day or portion of a calendar day spent by one inspector inspecting, on standby, or traveling to and from a place of fabrication. An additional cost per inspection day will be assessed for each additional inspector. Reimbursement will be assessed at $280.00 per day for weekends and holidays for each on site inspector in travel status, but not engaged in inspection or travel activities when fabrication activities are not taking place.

SECTION 1-07, LEGAL RELATIONS AND RESPONSIBILITIES TO THE PUBLIC
April 1, 2013

1-07.1 Laws to be Observed
The following two sentences are inserted after the first sentence in the third paragraph:
In particular the Contractor’s attention is drawn to the requirements of WAC 296.800 which requires employers to provide a safe workplace. More specifically WAC 296.800.11025 prohibits alcohol and narcotics from the workplace.

1-07.9(2) Posting Notices
This section is revised to read:

Notices and posters shall be placed in areas readily accessible to read by employees. The Contractor shall ensure the following are posted:

2. FHWA-1022 (revised 11/11) - NOTICE Federal-Aid Project published by Federal Highway Administration (FHWA). Post for projects with federal-aid funding
3. WH 1321 (revised 04/09) - Employee Rights under the Davis-Bacon Act published by US Department of Labor. Post for projects with federal-aid funding
4. WHD 1088 (revised 07/09) - Employee Rights under the Fair Labor Standards Act published by US Department of Labor. Post on all projects

5. WHD - 1420 (revised 01/09) - Employee Rights and Responsibilities under The Family and Medical Leave Act published by US Department Of Labor. Post on all projects

6. WHD-1462 (revised 01/12) – Employee Polygraph Protection Act published by US Department of Labor. Post on all projects

7. F416-081-909 (revised 12/12) - Job Safety and Health Law published by Washington State Department of Labor and Industries. Post on all projects

8. F242-191-909 (revised 12/12) - Notice to Employees published by Washington State Department of Labor and Industries. Post on all projects

9. F700-074-909 (revised 12/12) - Your Rights as a Worker in Washington State by Washington State Department of Labor and Industries (L&I). Post on all projects

10. EMS 9874 (revised 04/12) - Unemployment Benefits published by Washington State Employee Security Department. Post on all projects

11. Post one copy of the approved “Statement of Intent to Pay Prevailing Wages” for the Contractor, each Subcontractor, each lower tier subcontractor, and any other firm (Supplier, Manufacturer, or Fabricator) that falls under the provisions of RCW 39.12 because of the definition of “Contractor” in WAC 296-127-010

12. Post one copy of the prevailing wage rates for the project

1-07.9(5) Required Documents

Item number 2. in the first paragraph is revised to read:

2. A copy of an approved “Affidavit of Prevailing Wages Paid”, State L&I’s form number F700-007-000. The Contracting Agency will not grant Completion until all approved Affidavit of Wages paid for Contractor and all Subcontractors have been received by the Project Engineer. The Contracting Agency will not release to the Contractor any funds retained under RCW 60.28.011 until all of the “Affidavit of Prevailing Wages Paid” forms have been approved by State L&I and a copy of all the approved forms have been submitted to the Engineer.

1-07.14 Responsibility for Damage

The fifth paragraph is revised to read:

Pursuant to RCW 4.24.115, if such claims, suits, or actions result from the concurrent negligence of (a) the indemnitee or the indemnitee’s agents or employees and (b) the Contractor or the Contractor’s agent or employees, the indemnity provisions provided in the
preceding paragraphs of this Section shall be valid and enforceable only to the extent of the Contractor’s negligence or the negligence of its agents and employees.

1-07.15 Temporary Water Pollution/Erosion Control
The third paragraph is deleted.

SECTION 1-08, PROSECUTION AND PROGRESS
April 1, 2013

1-08.1 Subcontracting
In the eighth paragraph, “Contracting Agency” is revised to read “WSDOT”.

1-08.3(1) General Requirements
The following new paragraph is inserted after the first paragraph:

Total float belongs to the project and shall not be for the exclusive benefit of any party.

1-08.5 Time for Completion
The last paragraph in this section is supplemented with the following:

e. Copies of the approved “Affidavit of Prevailing Wages Paid” for the Contractor and all Subcontractors

1-08.7 Maintenance During Suspension
The second paragraph is revised to read:

At no expense to the Contracting Agency, the Contractor shall provide through the construction area safe, smooth, and unobstructed roadways and pedestrian access routes for public use during the suspension (as required in Section 1-07.23 or the Special Provisions.) This may include a temporary road, alternative pedestrian access route or detour.

SECTION 1-09, MEASUREMENT AND PAYMENT
April 1, 2013

1-09.1 Measurement of Quantities
The following new sentence is inserted after the sentence “‘Ton’:2,000 pounds of avoirdupois weight”:

Items of payment that have “Lump Sum” or “Force Account” in the Bid Item of Work shall have no specific unit of measurement requirement.

1-09.2(5) Measurement
The second sentence in the first paragraph is revised to read:
The frequency of verification checks will be such that at least one test weekly is performed for each scale used in weighing contract items of Work.

1-09.6 Force Account
In item No. 3. For Equipment, the last sentence in the third sub-paragraph is revised to read:

In the event that prior quotations are not obtained and the vendor is a firm independent from the Contractor or Subcontractor, then after-the-fact quotations may be obtained by the Engineer from the open market in the vicinity and the lowest such quotation may be used in place of submitted invoice.

DIVISION 3
AGGREGATE PRODUCTION AND ACCEPTANCE

SECTION 3-01, PRODUCTION FROM QUARRY AND PIT SITES
August 5, 2013

3-01.1 Description
In the first paragraph, “asphalt treated base” is deleted.

SECTION 3-04, ACCEPTANCE OF AGGREGATE
August 5, 2013

3-04.3(7)D4 An Entire Lot
The last sentence is deleted.

3-04.3(8) Price Adjustments for Quality of Aggregate
The calculation in the first paragraph is revised to read:

Aggregate Compliance Price Adjustment = (Composite Pay Factor – 1.00)
(quantity of material) (unit bid price or Contingent Unit Price as shown in Table 1, whichever is higher.)

3-04.5 Payment
In the second paragraph, the reference “Section 3-04.3(6)C“ is revised to read “Section 3-04.3(8)“.

In Table 1, the top two rows are revised to read the following three new rows:

<table>
<thead>
<tr>
<th>9-03.1</th>
<th>Concrete Aggregate (except pavement)</th>
<th>2000</th>
<th>1000</th>
<th>$15.00</th>
<th>$30.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>9-03.1</td>
<td>Concrete Aggregate (pavement)</td>
<td>4000</td>
<td>2000</td>
<td>$15.00</td>
<td>$30.00</td>
</tr>
</tbody>
</table>
In Table 1, the row containing the item “Gravel Borrow for Geosynthetic Retaining Wall” is revised to read:

| 9-03.14(4) | Gravel Borrow for Structural Earth Walls | 4000 | 2000 | $30 | $60 |

The footnotes below the Table 1 are revised to read:

1. Based on 1000 CY of Concrete.

2. Price adjustment only applies to the actual quantity of aggregate used in the concrete.

3. Contingent unit price per S.Y. is $0.30.

In Table 2, the first row is revised to read:

| 9-03.1 | Concrete Aggregate (all concrete aggregate - including pavement) | 2 | 2 | 2 | 10 | 20 |

In Table 2, the row containing the item “Gravel Backfill for Foundations Class A” is revised to read:

| 9-03.12(1)A | Gravel Backfill for Foundations Class A³ |

In Table 2, the row containing the item “Gravel Borrow for Geosynthetic Retaining Wall” is revised to read:

| 9-03.14(4) | Gravel Borrow for Structural Earth Walls | 2 | 2 | 5 | 5 | 10 | Other⁴ |

Item 1 in the footnotes below Table 2 is revised to read:

1. For Aggregate, the nominal maximum size sieve is the largest standard sieve opening listed in the applicable specification upon which more than 1-percent of the material by weight is permitted to be retained. For concrete aggregate, the nominal maximum size sieve is the smallest standard sieve opening through which the entire amount of aggregate is permitted to pass.

The footnotes below the Table 2 are supplemented with the following:

3. Use the price adjustment factors for the material that is actually used.
Resistivity 10, pH 10, Chlorides 5, and Sulfates 5.

DIVISION 5
SURFACE TREATMENTS AND PAVEMENTS

SECTION 5-04, HOT MIX ASPHALT
April 1, 2013

5-04.2 Materials
The following material reference is deleted from this section:

Blending Sand 9-03.8(4)

The fourth paragraph is revised to read:

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

5-04.3(7)A1 General
This section is supplemented with the following:

The Contractor shall include the brand and type of anti-stripping additive in the mix design submittal and provide certification from the asphalt binder manufacture that the anti-stripping additive is compatible with the crude source and formulation of asphalt binder proposed in mix design.

5-04.3(7)A3 Commercial Evaluation
The second sentence in the second paragraph is deleted.

5-04.3(10)B3 Longitudinal Joint Density
The section including title is revised to read:

5-04.3(10)B3 Vacant

5-04.3(11)D General
The last sentence in the first paragraph is deleted.

5-04.3(12)A Transverse Joints
In the second paragraph “planning” is revised to read “planing”.

5-04.3(20) Anti-Stripping Additive
This section is revised to read:
Anti-stripping additive shall be added to the liquid asphalt by the asphalt supplier prior to shipment to the asphalt mixing plant. For HMA accepted by statistical and nonstatistical evaluation the anti-stripping additive shall be added in the amount designated in the WSDOT mix design/anti-strip evaluation report provided by the Contracting Agency. For HMA accepted by commercial evaluation the Project Engineer will determine the amount of anti-strip to be added; paving shall not begin before the anti-strip requirements have been provided to the Contractor.

5-04.4 Measurement
The first sentence in the first paragraph is revised to read:

HMA Cl. ___ PG __, HMA for ___ Cl. ___ PG __, and Commercial HMA will be measured by the ton in accordance with Section 1-09.2, with no deduction being made for the weight of asphalt binder, mineral filler, or any other component of the mixture.

The last paragraph is deleted.

5-04.5 Payment
The bid item “Longitudinal Joint Density Price Adjustment”, by calculation and paragraph following bid item are deleted.

DIVISION 6
STRUCTURES

SECTION 6-02, CONCRETE STRUCTURES
January 7, 2013

6-02.3(2) Proportioning Materials
The Lean Concrete value in the column “Minimum Cementitious Content (pounds)” in the table titled “Cementitious Requirement for Concrete” is revised to read:

****145

The following new note is inserted after the note “*** No maximum specified” in the table titled “Cementitious Requirement for Concrete”:

****Maximum of 200 pounds

The paragraph following the table “Cementitious Requirements for Concrete” is revised to read:

When both ground granulated blast furnace slag and fly ash are included in the concrete mix, the total weight of both these materials is limited to 40 percent by weight of the total
cementitious material for concrete Class 4000D and 4000A, and 50 percent by weight of the
total cementitious material for all other classes of concrete.

6-02.3(2)B Commercial Concrete
The second paragraph is revised to read:

Where concrete Class 3000 is specified for items such as, culvert headwalls, plugging culverts, concrete pipe collars, pipe anchors, monument cases, Type PPB, PS, I, FB and RM signal standards, pedestals, cabinet bases, guardrail anchors, fence post footings, sidewalks, curbs, and gutters, the Contractor may use commercial concrete. If commercial concrete is used for sidewalks, curbs, and gutters, it shall have a minimum cementitious material content of 564 pounds per cubic yard of concrete, shall be air entrained, and the tolerances of Section 6-02.3(5)C shall apply.

6-02.3(2)D Lean Concrete
This section is revised to read:

Lean concrete shall meet the cementitious requirements of Section 6-02.3(2) and have a maximum water/cement ratio of 2.

6-02.3(4)A Qualification of Concrete Suppliers
The first paragraph is revised to read:

Batch Plant Prequalification requires a certification by the National Ready Mix Concrete Association (NRMCA). Information concerning NRMCA certification may be obtained from the NRMCA at 900 Spring Street, Silver Springs, MD 20910 or online at www.nrmca.org. The NRMCA certification shall be valid for a 2-year period from the date of certificate. The following documentation shall be submitted to the Project Engineer; a copy of the current NRMCA Certificate of Conformance, the concrete mix design(s) (WSDOT Form 350-040), along with copies of the truck list, batch plant scale certification, admixture dispensing certification, and volumetric water batching devices (including water meters) verification.

6-02.3(5)G Sampling and Testing Frequency for Temperature, Consistency, and Air Control
The last sentence in the second paragraph is revised to read:

Sampling shall be performed in accordance with WSDOT FOP for WAQTC TM 2 and random samples shall be selected in accordance with WSDOT TM 716.

6-02.3(14)C Pigmented Sealer for Concrete Surfaces
This section is revised to read:

The Contractor shall submit the pigmented sealer manufacturer’s written instructions covering, at a minimum, the following:
1. Surface preparation

2. Application methods

3. Requirements for concrete curing prior to sealer application

4. Temperature, humidity and precipitation limitations for application

5. Rate of application and number of coats to apply

The Contractor shall not begin applying pigmented sealer to the surfaces specified to receive the sealer until receiving the Engineer’s approval of the submittal.

All surfaces specified in the Plans to receive pigmented sealer shall receive a Class 2 surface finish (except that concrete barrier surfaces shall be finished in accordance with Section 6-02.3(11)A). The Contractor shall not apply pigmented sealer from a batch greater than 12 months past the initial date of color sample approval of that batch by the Engineer.

The pigmented sealer color or colors for specific concrete surfaces shall be as specified in the Special Provisions.

The final appearance shall be even and uniform without blotchiness, streaking or uneven color. Surface finishes deemed unacceptable by the Engineer shall be re-coated in accordance with the manufacturer’s recommendations at no additional expense to the Contracting Agency.

For concrete surfaces such as columns, retaining walls, pier walls, abutments, concrete fascia panels, and noise barrier wall panels, the pigmented sealer shall extend to 1 foot below the finish ground line, unless otherwise shown in the Plans.

6-02.3(16) Plans for Falsework and Formwork

Item No. 4 in the seventh paragraph is revised to read:

4. Conditions required by other Sections of 6-02.3(17), Falsework and Formwork.

Item’s No. 5, 6, 7, and 8 in the seventh paragraph are deleted.

The following paragraph is inserted after the seventh paragraph:

Plan approval can be done by the Project Engineer for footings and walls 4 to 8 feet high (excluding pedestal height) provided:

1. Concrete placement rate is 4 feet per hour or less.

2. Facing is ™-inch plywood with grades as specified per Section 6-02.3(17)I.
3. Studs, with plywood face grain perpendicular, are 2 by 4's spaced at 12 inches.

4. Walers with 3,000 pound safe working load ties spaced at 24 inches are two 2 by 4's spaced at 24 inches.

6-02.3(17)F Bracing
In the first paragraph, the phrase “per Section 6-02.3(17)I” is revised to read “in accordance with Section 6-02.3(17)I”.

This section is supplemented with the following new sub-section:

6-02.3(17)F5 Temporary Bracing for Bridge Girders During Diaphragm and Bridge Deck Concrete Placement
Prestressed concrete girders shall be braced to resist forces that would cause rotation or torsion in the girders caused by the placing of precast concrete deck panels and concrete for the bridge deck.

Bracing shall be designed and detailed by the Contractor and shall be shown in the falsework/formwork plans submitted to the Engineer for approval. These braces shall be furnished, installed, and removed by the Contractor at no additional cost to the Contracting Agency. The Contractor may consider the bracing effects of the diaphragms in developing the falsework/formwork plans. The Contractor shall account for the added load from concrete finishing machines and other construction loadings in the design of the bracing.

Falsework support brackets and braces shall not be welded to structural steel bridge members or to steel reinforcing bars.

6-02.3(17)F4 Temporary Bracing for Bridge Girders
This section including title is revised to read:

6-02.3(17)F4 Temporary Bracing for Bridge Girders During Erection
Steel girders shall be braced in accordance with Section 6-03.3(7)A.

Prestressed concrete girders shall be braced sequentially during girder erection. The bracing shall be designed and detailed by the Contractor and shall be shown in the falsework/formwork plans submitted to the Engineer for approval. The Contractor shall furnish, install, and remove the bracing at no additional cost to the Contracting Agency.

At a minimum, the Contractor shall brace girders at each end and at midspan to prevent lateral movement or rotation. This bracing shall be placed prior to the release of each girder from the erection equipment. If the bridge is constructed with cast-in-place concrete diaphragms, the bracing may be removed once the concrete in the diaphragms has been placed and cured for a minimum of 24 hours.

6-02.3(17)H Formwork Accessories
The first paragraph is deleted and replaced with the following two new paragraphs:
Formwork accessories such as form ties, form anchors, form hangers, anchoring inserts, and similar hardware shall be specifically identified in the formwork plans including the name and size of the hardware, manufacturer, safe working load, and factor of safety. The grade of steel shall also be indicated for threaded rods, coil rods, and similar hardware. Wire form ties shall not be used. Welding or clamping formwork accessories to Contract Plan reinforcing steel will not be allowed. Driven types of anchorages for fastening forms or form supports to concrete, and Contractor fabricated “J” hooks shall not be used. Field drilling of holes in prestressed girders is not allowed.

Taper ties may be used provided the following conditions are met:

1. The structure is not designed to resist water pressure (pontoons, floating dolphins, detention vaults, etc.)

2. After the taper tie is removed, plugs designed and intended for plugging taper tie holes shall be installed at each face of concrete. The plug shall be installed a minimum of 1 1/2” clear from the face of concrete.

3. After the plug is installed, the hole shall be cleaned of all grease, contamination and foreign matter.

4. Holes on the exposed faces of concrete shall be patched and finished to match the surrounding concrete.

6-02.3(25)N Prestressed Concrete Girder Erection
The third sentence in the fifth paragraph is revised to read:

The girders shall be braced in accordance with Sections 6-02.3(17)F4 and 6-02.3(17)F5.

6-02.3(26)E5 Leak Tightness Testing
The first sentence in the first paragraph is revised to read:

The Contractor shall test each completed duct assembly for leak tightness after placing concrete but prior to placing post tensioning reinforcement.

The second paragraph is revised to read:

Prior to testing, all grout caps shall be installed and all vents, grout injection ports, and drains shall either be capped or have their shut-off valves closed. The Contractor shall pressurize the completed duct assembly to an initial air pressure of 50 psi. This pressure shall be held for five minutes to allow for internal adjustments within the assembly. After five minutes, the air supply valve shall be closed. The Contractor shall monitor and measure the pressure maintained within the closed assembly, and any subsequent loss of pressure, over a period of one minute following the closure of the air supply valve. The maximum pressure loss for duct assemblies equal to or less than 150 feet in length shall be 25 psig.
The maximum pressure loss for duct assemblies greater than 150 feet in length shall be 15 psig. If the pressure loss exceeds the allowable, locations of leakage shall be identified, repaired or reconstructed using methods approved by the Engineer. The repaired system shall then be retested. The cycle of testing, repair and retesting of each completed duct assembly shall continue until the completed duct assembly completes a test with pressure loss within the specified amount.

SECTION 6-10, CONCRETE BARRIER
August 5, 2013

6-10.3 Construction Requirements
This section is supplemented with the following:

Steel welded wire reinforcement deformed, conforming to Section 9-07.7, may be substituted in concrete barrier in place of deformed steel bars conforming to Section 9-07.2, subject to the following conditions:

1. Steel welded wire reinforcement spacing shall be the same as the deformed steel bar spacing as shown in the Standard Plans.

2. The minimum cross sectional area for steel welded wire reinforcement shall be no less than 86 percent of the cross sectional area for the deformed steel bars being substituted.


6-10.3(6) Placing Concrete Barriers
The first and second sentences in the first paragraph are revised to read:

Precast concrete barrier Types 2 and 4, precast single slope barrier, and transitions shall rest on a paved foundation shaped to a uniform grade and section. The foundation surface for precast concrete barrier Types 2 and 4, precast single slope barrier, and transitions shall meet this test for uniformity:

6-10.5 Payment
In the second paragraph, the bid item “Conc. Class 4000” is revised to read:

“Conc. Class 4000___”
DIVISION 7
DRAINAGE STRUCTURES, STORM SEWERS, SANITARY SEWERS,
WATER MAINS, AND CONDUITS

SECTION 7-02, CULVERTS
August 6, 2012

7-02.2 Materials
Note 3 in the table titled, “Culvert Pipe Schedules” is revised to read:

3Polypropylene pipe, 12 inch to 30 inch diameters approved for Schedule A and Schedule B,
36 inch to 60 inch diameters approved for Schedule A only.

7-02.5
The bid item “Steel Rib Reinforced Polyethylene Culvert Pipe _____ In. Diam.”, per linear foot
is revised to read:

“St. Rib Reinf Polyethylene Culv. Pipe _____ In. Diam.”, per linear foot

SECTION 7-03, STRUCTURAL PLATE PIPE, PIPE ARCH, ARCH, AND UNDERPASS
August 6, 2012

7-03.3(1) Foundations, General
This section is supplemented with the following:

When aluminum pipe or pipe arch is in contact with cement concrete, two coats of paint
shall be applied in accordance with Section 7-08.3(2)D.

7-03.3(5) Headwalls
This section is supplemented with the following:

When aluminum pipe or pipe arch is in contact with cement concrete, two coats of paint
shall be applied in accordance with Section 7-08.3(2)D.

SECTION 7-04, STORM SEWERS
August 6, 2012

7-04.3(1)B Exfiltration Test – Storm Sewers
The fifth column title “PE4" is revised to read "PP4” from the table titled, “Storm Sewer Pipe
Schedules”.

Note 4 in the table titled, “Storm Sewer Pipe Schedules” is revised to read:
PP = Polypropylene Pipe, 12 inch to 30 inch approved for Schedule A and Schedule B, 36
inch to 60 inch diameters approved for Schedule A only.

7-04.5
The bid item “Steel Rib Reinforced Polyethylene Storm Sewer Pipe _____ In Diam”, per linear
foot is revised to read:

“St. Rib Reinf Polyethylene Storm Sewer Pipe _____ In. Diam”, per linear foot

SECTION 7-05, MANHOLES, INLETS, CATCH BASINS, AND DRYWELLS
April 2, 2012

7-05.3 Construction Requirements
The third paragraph is supplemented with the following:

Leveling and adjustment devices that do not modify the structural integrity of the metal
frame, grate or cover, and do not void the originating foundry’s compliance to these
specifications and warranty is allowed. Approved leveling devices are listed in the
Qualified Products List. Leveling and adjusting devices that interfere with the backfilling,
backfill density, grouting and asphalt density will not be allowed. The hardware for leveling
and adjusting devices shall be completely removed when specified by the Project Engineer.

SECTION 7-08, GENERAL PIPE INSTALLATION REQUIREMENTS
August 6, 2012

7-08.3(2)D Pipe Laying – Steel or Aluminum
The following new sentence is inserted after the first sentence in the second paragraph:

The paint shall cover all the surface in contact with the concrete and extend one inch beyond
the point of contact.

DIVISION 8
MISCELLANEOUS CONSTRUCTION

SECTION 8-01, EROSION CONTROL AND WATER POLLUTION CONTROL
August 5, 2013

8-01.2 Materials
The first paragraph is revised to read:

Materials shall meet the requirements of the following sections:
8-01.3(1) General
The last two sentences in the first paragraph are deleted.

In the seventh paragraph, "perimeter silt fencing" is revised to read "silt fencing".

8-01.3(2)D Mulching
The following two new paragraphs are inserted after the fourth paragraph:

Short-Term Mulch shall be hydraulically applied at the rate of 2500 pounds per acre and may be applied in one lift.

Moderate-Term Mulch and Long-Term Mulch shall be hydraulically applied at the rate of 3500 pounds per acre with no more than 2000 pounds applied in any single lift.

8-01.3(2)E Soil Binders and Tackling Agents
This section including title is revised to read:

8-01.3(2)E Tackifiers
Tackifiers applied using a hydroseeder shall have a mulch tracer added to visibly aid uniform application. This tracer shall not be harmful to plant, aquatic, or animal life. A minimum of 125 pounds per acre and a maximum of 250 pounds per acre of Short-Term Mulch shall be used as a tracer. Tackifier shall be mixed and applied in accordance with the manufacturer’s recommendations.

Soil Binding Using Polyacrylamide (PAM) – The PAM shall be applied on bare soil completely dissolved and mixed in water or applied as a dry powder. Dissolved PAM shall be applied at a rate of not more than ½ pound per 1,000 gallons of water per acre. A minimum of 200 pounds per acre of Short-Term Mulch shall be applied with the dissolved PAM. Dry powder applications may be at a rate of 5 pounds per acre using a hand-held fertilizer spreader or a tractor-mounted spreader.

PAM shall be applied only to areas that drain to completed sedimentation control BMPs in accordance with the TESC Plan. PAM may be reapplied on actively worked areas after a 48-hour period.
PAM shall not be applied during rainfall or to saturated soils

8-01.3(2)F Dates for Application of Final Seed, Fertilizer, and Mulch
In the first paragraph, “Engineer” is revised to read “Project Engineer”.

Note 1 of the table in the first paragraph is revised to read:

Where Contract timing is appropriate, seeding, fertilizing, and mulching shall be accomplished during the fall period listed above

The third paragraph is deleted.

8-01.3(3) Placing Erosion Control Blanket
This section including title is revised to read:

8-01.3(3) Placing Biodegradable Erosion Control Blanket
Biodegradable Erosion Control Blankets are used as an erosion prevention device and to enhance the establishment of vegetation. Erosion control blankets shall be installed according to the manufacturer’s recommendations.

Seeding and fertilizing shall be done prior to blanket installation.

Select erosion control blanket material for an area based on the intended function: slope or ditch stabilization, and site specific factors including soil, slope gradient, rainfall, and flow exposure. Erosion Control Blankets shall not be used on slopes or in ditches that exceed the manufacturer’s recommendations.

8-01.3(4) Placing Compost Blanket
This section is revised to read:

Compost blanket shall be placed to a depth of 3 inches over bare soil. Compost blanket shall be placed prior to seeding or other planting. An organic tackifier shall be placed over the entire composted area when dry or windy conditions are present or expected before the final application of mulch or erosion control blanket. The tackifier shall be applied immediately after the application of compost to prevent compost from leaving the composted area.

Compost shall be Medium Compost.

8-01.3(5) Placing Plastic Covering
This section including title is revised to read:

Plastic Covering
Erosion Control - Plastic coverings used to temporarily cover stock piled materials, slopes or bare soils shall be installed and maintained in a way that prevents water from intruding under the plastic and prevents the plastic cover from blowing open in the
wind. Plastic coverings shall be placed with at least a 12-inch overlap of all seams and be a minimum of 6 mils thick.

Containment - Plastic coverings used to line concrete washout areas, contain wastewaters, or used in secondary containment to prevent spills, shall be seamless to prevent infiltration and be a minimum of 10 mils thick.

Vegetation Management - Plastic covering placed over areas that have been seeded shall be clear and where vegetative growth is to inhibited it shall be black and be a minimum of 4 mils thick.

8-01.3(6) Check Dams
This section is revised to read:

Check dams are used as an erosion and sediment control device in channels or conveyance areas. Check dams shall be installed as soon as construction will allow, or when designated by the Project Engineer. The Contractor may substitute a different check dam material, in lieu of what is specified in the contract, with approval of the Project Engineer. Check dam materials shall meet the requirements in Section 9-14.5(4). Straw bales shall not be used as check dams. The check dam is a temporary or permanent structure, built across a minor channel placed perpendicular to the flow of water. Water shall not flow freely through the check dam structure. Check dams shall be constructed in a manner that creates a ponding area upstream of the dam to allow pollutants to settle, with water from increased flows channeled over a spillway in the check dam. The check dam shall be constructed to prevent erosion in the area below the spillway. The outer edges shall extend up the sides of the conveyance to prevent water from going around the check dam. Check dams shall be of sufficient height to maximize detention, without causing water to leave the ditch.

Wattles, coir logs and compost sock used as check dams shall not be trenched in and shall be installed as shown in the Standard Plans.

When wattles, coir logs, and compost socks are used as check dams they shall be measured and paid as check dam in accordance with Section 8-01.4 and 8-01.5.

8-01.3(6)A Geotextile-Encased Check Dam
This sections content including title is deleted.

8-01.3(6)B Quarry Spall Check Dam
This sections content including title is deleted.

8-01.3(6)C Sandbag Check Dam
This sections content including title is deleted.

8-01.3(6)D Wattle Check Dam
This sections content including title is deleted.
8-01.3(6)E Coir Log
This section including title and section number is revised to read:

8-01.3(6)A Coir Log
Coir logs are used as erosion and sediment control or bank stabilizing device. Coir logs shall
be laid out, spaced, staked and installed in accordance with the Standard Plans.

Live stakes in accordance with Section 9-14.6(1) can be used in addition to, but not as a
replacement for, wooden stakes.

8-01.3(7) Stabilized Construction Entrance
The first paragraph is revised to read:

Temporary stabilized construction entrance shall be constructed in accordance with the
Standard Plans, prior to beginning any clearing, grubbing, embankment or excavation. All
quarry spill material used for stabilized construction entrance shall be free of extraneous
materials that may cause or contribute to track out.

8-01.3(9)A Silt Fence
This section and all sub-sections including title is revised to read:

8-01.3(9)A Fencing

8-01.3(9)A1 High Visibility Fencing
High visibility fencing (HVF) shall be orange in color and installed along the site
preservation lines shown in the Plans or as specified by the Engineer. Post spacing and
attachment of the fencing material to the posts shall be as shown in the Standard Plans
and in accordance with Section 9-14.5(8). The HVF shall not be fastened to trees.

8-01.3(9)A2 Silt Fence
Silt fence shall be black in color and used as a sediment control device to prevent
sediment laden water from leaving project boundaries, to manage stormwater within the
site, or to create small detention areas. Silt fence shall be installed at locations shown
in the Plans. The geotextile shall be securely attached to the posts and support system.
Post spacing and attachments shall be as shown in Standard Plans.

Geotextile material shall meet the requirements of Section 9-33.2(1), Table 6 and be
sewn together at the point of manufacture, or at a location approved by the Engineer, to
form geotextile lengths as required. All sewn seams and overlaps shall be located at a
support post.

Posts shall be either wood or steel. Wood posts shall have minimum dimensions of 1¼
by 1¼ inches by the minimum length shown in the Plans.

When sediment deposits reach approximately ½ the height of the silt fence, the deposits
shall be removed and stabilized in accordance with Section 8-01.3(15).
If trenching is not feasible due to rocky soils or not advisable due to proximity to a
downslope sensitive area, a different sediment control device that does not require
 trenching shall be used in place of silt fence.

Silt Fence with Backup Support
Where backup support is needed for silt fence in areas where extra strength may be
required, such as the toe of steep cut or fill slopes or areas where equipment may push
excessive soils toward the fence. When backup support is used, wire shall have a
maximum mesh spacing of 2 inches, and the plastic mesh shall be as resistant to
ultraviolet radiation as the geotextile it supports. The strength of the wire or plastic
mesh shall be equivalent to or greater than as required in Section 9-33.2(1), Table 6, for
unsupported geotextile (i.e., 180 lbs. grab tensile strength in the machine direction).
Post spacing and attachments shall be as shown in Standard Plans.

8-01.3(9)A3 High Visibility Silt Fence
High visibility silt fence (HVSF) shall be orange in color and only be used for the dual
purpose of demarcating site preservation lines and a sediment control device in a
location where high visibility mesh fence and black silt fence would otherwise be used
together at same location. If use of HVSF is allowed the geotextile material shall meet
the material requirements of Section 9-33.2(1), Table 6. Post spacing and attachments
shall be as shown in Standard Plans.

High Visibility Silt Fence with Backup Support
Where backup support is needed for high visibility silt fence (HVSF) in areas where
extra strength may be required, such as the toe of steep cut or fill slopes or areas where
equipment may push excessive soils toward the sensitive or protected areas. When
backup support is used, wire shall have a maximum mesh spacing of 2 inches, and the
plastic mesh shall be as resistant to ultraviolet radiation as the geotextile it supports.
The strength of the wire or plastic mesh shall be equivalent to or greater than as
required in Section 9-33.2(1), Table 6, for unsupported geotextile (i.e., 180 lbs. grab
tensile strength in the machine direction). Post spacing shall be as shown in Standard
Plans.

When sediment deposits reach approximately 1/3 the height of the silt fence, or 8
inches whichever is lower, the deposits shall be removed and stabilized in accordance
with Section 8-01.3(15).

8-01.3(9)B Gravel Filter, Wood Chip, or Compost Berm
The first paragraph is revised to read:

Filter berms shall retain sediment and direct flows. The gravel filter berm shall be a
minimum of 1 foot in height and shall be maintained at this height for the entire time they
are in use. Rock material used for filter berms shall meet the grading requirements in
Section 9-03.9(2), but shall not include any recycled materials as outlined in Section 9-
03.21.
The last sentence in the third paragraph is revised to read:

Compost shall be Medium Compost.

8-01.3(9)C Straw Bale Barrier
This section including title is revised to read:

8-01.3(9)C Vacant

8-01.3(10) Wattles
This section is revised to read:

Wattles are used as a flow control and sediment control device. Wattles shall be installed as soon as construction will allow or when designated by the Engineer. Wattle installation and trenching shall begin from the base of the slope and work uphill prior to any topsoil or compost placement. Excavated material from trenching shall be spread evenly along the uphill slope and be compacted using hand tamping or other method approved by the Engineer. On gradually sloped or clay-type soils trenches shall be 2 to 3 inches deep. On loose soils, in high rainfall areas, or on steep slopes, trenches shall be 3 to 5 inches deep, or half the thickness of the wattle, whichever is greater.

Wattles shall be laid out, spaced and staked in accordance with the Standard Plans. Live stakes in accordance with Section 9-14.6(1) can be used in addition to, but not as a replacement for, wooden stakes. If trenching and staking is not possible due to rocky soils, compost socks shall be used instead of wattles.

The Contractor shall exercise care when installing wattles to ensure the method of installation minimizes disturbance and prevents sediment or pollutant discharge into water bodies.

8-01.3(11) Vacant
This section including title is revised to read:

8-01.3(11) Outlet Protection
Outlet protection shall prevent scour at the outlets of ponds, pipes, ditches or other conveyances. All quarry spall material used for outlet protection shall be free of extraneous material and meet the gradation requirements in Section 9-13.6.

8-01.3(12) Compost Socks
This section is revised to read:

Compost socks are used as a flow control and sediment control device. Compost socks shall be installed as soon as construction will allow or when designated by the Project Engineer. Compost socks shall be installed prior to any mulching or compost placement. Compost socks shall be laced together end-to-end with coir rope or ends shall be securely overlapped to create a continuous length. Terminal ends of the continuous length shall be curved 2 to 4
feet upward into the slope to prevent concentrated flows from going around the terminal ends. Finished grades shall be of a natural appearance with smooth transitions. Compost for compost socks shall be Medium Compost.

Compost sock shall be laid out, spaced and staked in accordance with the Standard Plans. Live stakes in accordance with Section 9-14.6(1) can be used in addition to, but not as a replacement for, wooden stakes. If staking is not possible or if the compost sock is being used on concrete, heavy blocks or an equivalent item shall be used to weigh down and secure the sock. Compost socks shall be laid out, spaced and staked in accordance with the Standard Plans.

The Contractor shall exercise care when installing compost socks to ensure that the method of installation minimizes disturbance of waterways and prevents sediment or pollutant discharge into water bodies. Stakes shall be removed to minimize soil disturbance.

8-01.3(13) Temporary Curb
This section is revised to read:

Temporary curbs shall divert or redirect water around erodible soils.

Temporary curbs shall be installed along pavement edges to prevent runoff from flowing onto erodible slopes. Water shall be directed to areas where erosion can be controlled. The temporary curbs shall be a minimum of 4 inches in height. Ponding shall not be in roadways.

8-01.3(16) Removal
The first sentence in the first paragraph is revised to read:

When the Project Engineer determines that an erosion control BMP is no longer required, the Contractor shall remove the BMP and all associated hardware from the project limits.

The first and second sentences in the second paragraph are revised to read:

The Contractor shall remove BMPs and associated hardware in a way that minimizes soil disturbance. The Contractor shall permanently stabilize all bare and disturbed soil after removal of BMP’s.

8-01.4 Measurement
The third paragraph is revised to read:

Check dams will be measured per linear foot one time only along the completed check dam. No additional measurement will be made for check dams that are required to be rehabilitated or replaced due to wear.

The ninth paragraph is deleted.
The twelfth paragraph (after the preceding amendment is applied) is revised to read:

Seeding, fertilizing, liming, mulching, mowing, and tackifier will be measured by the acre by ground slope measurement or through the use of design data.

The fifteenth paragraph (after the preceding amendment is applied) is revised to read:

Fencing will be measured by the linear foot along the ground line of the completed fence.

This section is supplemented with the following:

Outlet Protection will be measured per each initial installation at an outlet location.

8-01.5 Payment

The paragraph following the bid item, “Plastic Covering”, per square yard is revised to read:

The unit Contract price per square yard for “Plastic Covering” shall be full payment to perform the Work as specified in Section 8-01.3(5) and as shown in the Plans, including removal and disposal at an approved disposal site.

The bid item “Straw Bale”, per each is deleted.

The bid item “___Erosion Control Blanket”, per square yard is deleted.

The bid item “Soil Binder or Tacking Agent”, per acre is deleted.

This section is supplemented with the following:

“Outlet Protection”, per each.
The unit Contract price per each for “Outlet Protection” shall be full payment for all costs incurred to complete the Work.

“Tackifier”, per acre.
The unit Contract price per acre for “Tackifier” shall be full payment for all costs incurred to complete the Work.

“Biodegradable Erosion Control Blanket”, per square yard.
The unit Contract price per square yard for “Biodegradable Erosion Control Blanket” shall be full pay for all costs to complete the specified Work.

“High Visibility Silt Fence”, per linear foot.
SECTION 8-02, ROADSIDE RESTORATION
August 5, 2013

In this section, “psiPE” is revised to read “PSIPE”.

8-02.3(2) Roadside Work Plan
The first sentence in the second paragraph is revised to read:

The Roadside Work Plan shall also include a copy of the approved progress schedule.

The sub paragraph titled “Progress Schedule” is deleted.

8-02.3(4)C Topsoil Type C
In this section, “9-14.1(2)” is revised to read “9-14.1(3)”.

8-02.3(8) Planting
Item number 1 in the second paragraph is revised to read:

1. Non-Irrigated Plant Material
   - West of the summit of the Cascade Range - October 1 to March 1.
   - East of the summit of the Cascade Range - October 1 to November 15.

8-02.4 Measurement
The first sentence is revised to read:

Topsoil, mulch and soil amendments will be measured by the acre along the grade and slope
of the area covered immediately after application.

The seventh sentence is revised to read:

Compost will be measured by the acre along the grade and slope of the area covered immediately after application.

8-02.5 Payment
The bid item “Topsoil Type _____”, per cubic yard and following paragraph are revised to read:

“Topsoil Type _____”, per acre.

The unit contract price per acre for “Topsoil Type _____” shall be full pay for providing the
source of material for topsoil Type A and C, for pre-excavation weed control, excavating,
loading, hauling, intermediate windrowing, stockpiling, weed control on stockpiles or
windrows, and removal, placing, spreading, processing, cultivating, and compacting topsoil
Type A, Type B, and Type C.

The bid item “Fine Compost”, per cubic yard is revised to read:
“Fine Compost”, per acre.

The bid item “Medium Compost”, per cubic yard is revised to read:

“Medium Compost”, per acre.

The bid item “Coarse Compost”, per cubic yard and following paragraph are revised to read:

“Coarse Compost”, per acre.

The unit contract price per cubic yard for “Fine Compost”, Medium Compost” or “Coarse Compost” shall be full pay for furnishing and spreading the compost onto the existing soil.

The bid item “Soil Amendment”, per cubic yard and following paragraph are revised to read:

“Soil Amendment”, per acre.

The unit contract price per acre for “Soil Amendment” shall be full pay for furnishing and spreading the mulch onto the existing soil.

The bid item “Bark or Wood Chip Mulch”, per cubic yard and following paragraph are revised to read:

“Bark or Wood Chip Mulch”, per acre.

The unit contract price per acre for “Bark or Wood Chip Mulch” shall be full pay for furnishing and spreading the mulch onto the existing soil.

SECTION 8-11, GUARDRAIL
August 5, 2013

8-11.2 Materials
The following material reference is deleted from this section:

Weathering Steel Beam Guardrail 9-16.8

8-11.3(1)B Erection of Rail
The last sentence in the first paragraph is revised to read:

All holes shall be painted with two coats of paint conforming to Section 9-08.1(2)B.

The fourth paragraph is revised to read:
Galvanized steel rail plates shall be fastened to the posts with galvanized bolts, washers, and
nuts of the size and kind shown in the Plans.

The last paragraph is deleted.

8-11.3(1)D Removing Guardrail and Guardrail Anchor
The first two sentences in the first paragraph are revised to read:

Removal of the various types of guardrail shall include removal of the rail, cable elements,
hardware, and posts, including transition sections, expansion sections, terminal sections and
the rail element of anchor assemblies. Removal of the various types of guardrail anchors
shall include removal of the anchor assembly, including concrete bases, rebar, steel tubes,
and any other appurtenances in the anchor assembly.

8-11.4 Measurement
The seventh paragraph is revised to read:

Measurement of removal of guardrail will be by the linear foot measured along the line of
guardrail removed including transition sections, expansion sections, guardrail anchor rail
elements and terminal sections.

8-11.5 Payment
The bid item “Weathering St. Beam Guardrail Type _____”, per linear foot is deleted.

The second paragraph is revised to read:

The unit Contract price per linear foot for “Beam Guardrail Type _____”, “Beam Guardrail
Type 1-_____ Ft. Long Post”, and “Beam Guardrail Type 31-_____ Ft. Long Post”, shall be
full payment for all costs to obtain and provide materials and perform the Work as described
in Sections 8-11.3(1)A and 8-11.3(1)B, including costs for additional rail elements when
nested rail is required, and when connections to concrete masonry Structures are required.

The paragraph following the bid item “Removing Guardrail Anchor”, per each is revised to read:

The unit Contract price per each for “Removing Guardrail Anchor” shall be full payment for
all costs to perform the Work as described in Section 8-11.3(1)D, including rail removal, if
there isn’t a Bid Item for Removing Guardrail in the run of guardrail connecting to the
anchor.

SECTION 8-15, RIPRAP
April 2, 2012

8-15.1 Description
The second paragraph is revised to read:
Riprap will be classified as heavy loose riprap, light loose riprap, and hand placed riprap.

SECTION 8-20, ILLUMINATION, TRAFFIC SIGNAL SYSTEMS, AND ELECTRICAL
August 5, 2013

8-20.3(4) Foundations
The first paragraph is revised to read:

Foundation concrete shall conform to the requirements for the specified class, be cast-in-place concrete and be constructed in accordance with Sections 6-02.2 and 6-02.3. Concrete for Type II, III, IV, V, and CCTV signal standards and light standard foundations shall be Class 4000P. Concrete for pedestals and cabinets, Type PPB, PS, I, FB, and RM signal standards and other foundations shall be Class 3000. Concrete placed into an excavation where water is present shall be placed using an approved tremie. If water is not present, the concrete shall be placed such that the free-fall is vertical down the center of the shaft without hitting the sides, the steel reinforcing bars, or the steel reinforcing bar cage bracing. The Section 6-02.3(6) restriction for 5-feet maximum free-fall shall not apply to placement of Class 4000P concrete into a shaft. Steel reinforcing bars for foundations shall conform to Section 9-07.

8-20.3(5) Conduit
This sections content is deleted and replaced with the following new sub-sections:

8-20.3(5)A General
The ends of all conduit, metallic and nonmetallic, shall be reamed to remove burrs and rough edges. Field cuts shall be made square and true. The ends of unused conduits shall be capped. When conduit caps are removed, the threaded ends of metal conduit shall be provided with approved conduit bushings and non-metal conduit shall be provided with end bells.

Reducing couplings will not be permitted.

Existing conduit in place scheduled for installation of new conductor(s) shall first have any existing conductor(s) removed and a cleaning mandrel shall be pulled through. The existing conduit shall then be prepared subject to the same requirements outlined in this paragraph, for new conduit and innerduct, unless otherwise indicated in the plans. All new conduit and all innerduct shall be blown clean with compressed air. Then in the presence of the Engineer, an 80 percent sizing mandrel, correctly sized for the raceway, shall be pulled through to ensure that the raceway has not been deformed. This shall be done prior to pulling wire or fiber optic cable and after final assembly is in place. Existing conductor(s) shall be reinstalled unless otherwise indicated in the Plans.

As soon as the sizing mandrel has been pulled through innerduct, a 200-lb minimum tensile strength pull string shall be installed and attached to duct plugs at both ends. When conduit is installed for future use, as soon as the bushing or end bell has been installed and the sizing
mandrel has been pulled through, the ground wire shall be installed and both ends shall be
capped.

8-20.3(5)A1 Fiber Optic Conduit
Where conduit to contain fiber optic cable or conduit identified to contain future fiber
optic cable is installed by open trenching, Detectable Underground Warning Tape shall
be placed 12-inches above the conduit unless otherwise detailed in the Plans.
Detectable Underground Warning Tape shall extend 2-feet into boxes or vaults. Splicing
of the tape shall be in accordance with tape manufacturer’s recommended materials and
procedures.
Location Wire shall be installed with all nonmetallic conduit that contains fiber optic
cable and all conduits identified to contain future fiber optic cable. When open
trenching is used, the location wire shall be placed in continuous lengths directly above
the conduit. Where conduit is installed by other methods, the Location Wire shall be
attached to the outside of the conduit with electrical tape placed at minimum 18-inch
intervals. Location Wire shall extend 12-feet into boxes or vaults. Splices shall be
crimped using a non-insulated butt splice, soldered and covered with moisture-blocking
heat shrink.

8-20.3(5)A2 ITS and Cabinet Outer and Inner Duct Conduit
ITS conduit and both ends of conduit runs entering cabinets, with the exception of the
½ inch grounding conduit, shall be sealed with self expanding water proof foam or
mechanical plugs; unless otherwise required. At other locations conduit shall be sealed
with Duct Seal.

Outer-duct conduit with non factory assembled innerduct shall be sealed around the
innerduct with self-expanding waterproof foam. Outer-duct conduit with factory
assembled innerduct shall be sealed around the innerduct with a multiplex expansion
plug. Innerduct containing one cable shall be plugged using an expandable split plug.
Innerduct with multiple cables shall be sealed with self-expanding waterproof foam.
Duct plugs shall be installed in allunused inner-duets (those that are specified as
empty) at the time of conduit installation. Duct plugs shall be installed in all used
inner-duets (as specified in the Plans), at the time of conduit installation, unless cable
pulling for those inner-duets will commence within 48-hours. Installation shall
conform to the manufacturer’s recommendations.

Foam sealant shall be installed with the following additional requirements:

1. Penetration of the sealant into the conduit or duct shall be limited using a high
temperature backer rod material or rag.
2. Penetration of the sealant into the conduit shall be limited to 1-inch.
3. The foam sealant shall not project outside the end of the conduit or duct.

Where open trenching is allowed and conduit with innerduct is installed, a maximum of
1000-feet of continuous open trench will be allowed unless otherwise approved by the
Engineer.
8-20.3(5)B Conduit Type
Conduit shall be PVC, high density polyethylene (HDPE), rigid metal conduit (RMC) or liquid tight flexible metal depending on the application.

Rigid metal conduit (RMC) shall be installed at the following locations:

1. Within railroad right of way.

2. All pole risers, except when otherwise required by owning utilities.

3. All surface-mounted conduit, with the exception of electrical service utility poles.

4. All runs within slip form placed concrete.

Service lateral runs shall be Schedule 80 PVC except when otherwise required by owning utilities. Conduit installed using the plowing method, shall be schedule 80 high-density polyethylene (HDPE).

Conduit runs, including outer-duct, that enter the traveled way or shoulders, shall be Schedule 80 high-density polyethylene (HDPE), Schedule 80 PVC, or rigid metal conduit (RMC).

Conduit runs, including outer-duct, which do not enter the traveled way or shoulders, shall be Schedule 80 high-density polyethylene (HDPE), Schedule 40 PVC or rigid metal conduit (RMC).

Liquid tight flexible metal conduit is allowed only at locations called for in the Plans.

Except as described under Non-Metallic Conduit, unless otherwise indicated in the Plans or Standard Plans, the same type of conduit shall be used for the entire length of the run, from outlet to outlet.

Innerduct shall have a smooth wall non ribbed interior surface, with factory pre-lubricated coating.

Innerduct within the Traveled Way or Shoulders and innerduct which is not factory installed shall be schedule 40 high-density polyethylene (HDPE). The innerduct shall be continuous with no splices. Innerduct which is pulled into the outer duct in the field shall be installed with an extra 2 feet of conduit beyond each end of the outer-duct and shall be allowed to finish contracting for 21 calendar days before it is terminated. Innerduct shall be terminated with end bells flush to ¼ inch out of the outer-duct and the space between the outer-duct and innerduct shall be sealed with rodent and moisture resistant foam designed for this application and installed in accordance with the manufacturer’s recommendations.
8-20.3(5)B1 Rigid Metal Conduit
Slip joints or running threads will not be permitted for coupling metallic conduit; however, running threads will be permitted in traffic signal head spiders and rigid metal conduit (RMC) outer-duct. When installing rigid metal conduit (RMC), if a standard coupling cannot be used, an approved three-piece coupling shall be used. Conduit bodies, fittings and couplings for rigid metal conduit (RMC) shall be cleaned first and then painted with one coat of paint conforming to Section 9-08.1(2)B. The paint shall have a minimum wet film thickness of 3-mils. The painted coating shall cover the entire coupling or fitting. The threads on all metal conduit shall be rust-free, clean, and painted with colloidal copper suspended in a petroleum vehicle before couplings are made. All metallic couplings shall be tightened so that a good electrical connection will be made throughout the entire length of the conduit run. If the conduit has been moved after assembly, it shall be given a final tightening from the ends prior to backfilling.

Rigid metal conduit (RMC) ends shall be terminated with grounded end bushings. Rigid metal conduit (RMC) entering cable vaults or pull boxes shall extend 2-inches beyond the inside wall face. (for the installation of grounded end bushing and bonding.)

Rigid metal conduit (RMC) entering concrete shall be wrapped in 2-inch-wide pipe wrap tape with a minimum 1-inch overlap for 12-inches on each side of the concrete face. Pipe wrap tape shall be installed in accordance with the manufacturer’s recommendations.

Rigid metal conduit (RMC) bends shall have a radius consistent with the requirements of Code Article 344.24 and other articles of the Code. Where factory bends are not used, conduit shall be bent, using an approved conduit bending tool employing correctly sized dies, without crimping or flattening, using the longest radius practicable.

Where the coating on galvanized conduit has been damaged in handling or installing, such damaged areas shall be thoroughly painted with paint conforming to Section 9-08.1(2)B.

Metal conduit ends shall be threaded and protected with a snug fitting plastic cap that covers the threads until wiring is started.

8-20.3(5)B2 Non-Metallic Conduit
Where non-metallic conduit is installed, care shall be used in excavating, installing, and backfilling, so that no rocks, wood, or other foreign material will be left in a position to cause possible damage.

PVC conduit ends shall be terminated with end bell bushings. PVC or HDPE conduit entering cable vaults and pull boxes shall terminate with the end bell flush with the inside walls of the Structure.

Non-metallic conduit bends, where allowed, shall conform to Article 352.24 of the Code. Eighteen-inch radius elbows shall be used for PVC conduit of 2-inch nominal
diameter or less. Standard sweep elbows shall be used for PVC conduit with greater
than 2-inch nominal diameter unless otherwise specified in the Plans. In nonmetallic
conduit less than 2-inch nominal diameter, pull ropes or flat tapes for wire installation
shall be not less than ¼-inch diameter or width. In nonmetallic conduit of 2-inch
nominal diameter or larger, pull ropes or flat tapes for wire installation shall be not less
than ⅞-inch diameter or width. When HDPE conduit is used for directional boring, it
shall be continuous, with no joints, for the full length of the bore. The conduit run shall
be extended to the associated outlets with the same schedule HDPE or PVC conduit.
Entry into associated junction box outlets shall be with the same schedule PVC conduit
and elbows. The same requirements apply for extension of an existing HDPE conduit
crossing.

PVC conduit and elbows shall be connected to HDPE conduit with an approved
mechanical coupling. The connection shall have minimum pullout strength of 700-
ponds. Prior to installation of a mechanical coupling, the HDPE conduit shall first be
prepared with a clean, straight edge. A water-based pulling lubricant may be applied to
the threaded end of the mechanical coupling before installation. Solvent cement or
epoxy shall not be used on the threaded joint when connecting the HDPE conduit to the
mechanical coupling. The mechanical coupling shall be rotated until the HDPE conduit
seats approximately ⅜ of the distance into the threaded coupling depth.

For PVC installation through a directional bore, the PVC shall be in rigid sections
assembled to form a watertight bell and spigot-type mechanical joint with a solid
retaining ring around the entire circumference of the conduit installed in accordance
with the manufacturer’s recommendations. The conduit run shall be extended beyond
the length of the bore, to the associated outlets with the same mechanical coupled PVC
or with standard PVC conduit of the same schedule. The same requirements apply for
extension of an existing PVC conduit Roadway crossing.

PVC conduit shall be assembled using the solvent cement specified in Section 9-29.1.

Conduit ends shall be protected with a snug fitting plastic cap until wiring is started.

Conduit caps, end bells and the section of PVC between the coupling and end bell
bushing in cabinet foundations shall be installed without glue.

8-20.3(5)C Conduit Size
The size of conduit used shall be as shown in the Plans. Conduits smaller than 1-inch
electrical trade size shall not be used unless otherwise specified, except that grounding
conductors at service points may be enclosed in ½-inch-diameter conduit.
Conduit between light standards, PPB, PS, or Type 1 poles and the nearest junction box shall
be the diameter specified in the Plans. Larger size conduit is not allowed at these locations.
At other locations it shall be the option of the Contractor, at no expense to the Contracting
Agency, to use larger size conduit if desired, provided that junction box or vault capacity is
not exceeded. Where larger size conduit is used, it shall be for the entire length of the run
from outlet to outlet.
Conduit runs with innerduct, shall have 4-inch outer-duct and shall be installed with four 1-inch innerduct unless otherwise indicated in the plans.

8-20.3(5)D Conduit Placement
Conduit shall be laid so that the top of the conduit is a minimum depth of:

1. 24-inches below the bottom of curb in the sidewalk area.
2. 24-inches below the top of the roadway base.
3. 48-inches below the bottom of ties under railroad tracks unless otherwise specified by the railroad company.
4. 36-inches below finish grade when installed using conduit plowing method.
5. 24-inches below the finish grade in all other areas.

Conduit entering through the bottom of a junction box shall be located near the end walls to leave the major portion of the box clear. At all outlets, conduit shall enter from the direction of the run, terminating 6 to 8-inches below the junction box lid and within 3-inches of the box wall nearest its entry location.

Conduit runs shown in the Plans are for Bidding purposes only and may be relocated with approval of the Engineer, to avoid obstructions.

8-20.3(5)D1 Surface Mounting
Where surface mounting of conduit is required, supports shall consist of channel with clamps sized for the conduit. Support spacing shall comply with the Code, with the exception that spacing of channel supports for conduit shall not exceed 5-feet. The minimum distance between adjacent clamps and between the clamp and the end of the channel supports shall be 1-inch. Channel supports shall be installed with stops, to prevent clamps from sliding out of the ends.

8-20.3(5)D2 Structures
All conduits attached to or routed within bridges, retaining walls, and other structures shall be equipped with approved expansion, deflection, and/or combination expansion/deflection fittings at all expansion joints and at all other joints where structure movement is anticipated, including locations where the Contractor, due to construction method, installs expansion and/or construction joints with movement. All conduit fittings shall have movement capacity appropriate for the anticipated movement of the Structure at the joint. Approved deflection fittings shall also be installed at the joint between the bridge end and the retaining wall end, and the transition from bridge, wall, or other structure to the underground section of conduit pipe.
8-20.3(5)E Method of Conduit Installation
Conduit shall be placed under existing pavement by approved directional boring, jacking, or drilling methods at locations approved by the Engineer. The pavement shall not be disturbed unless allowed in the Plans or with the approval of the Engineer in the event obstructions or impenetrable soils are encountered. High density polyethylene (HDPE) conduit runs, which enter the traveled way or shoulders, shall be installed using the directional boring method.

8-20.3(5)E1 Open Trenching
When open trenching is allowed, trench construction shall conform to the following:

1. The pavement shall be saw-cut a minimum of 3-inches deep. The cuts shall be parallel to each other and extend 2-feet beyond the edge of the trench.

2. Pavement shall be removed in an approved manner.

3. Trench depth shall provide a minimum cover for conduit of 24-inches below the top of the roadway base

4. Trench width shall be 8-inches or the conduit diameter plus 2-inches, whichever is larger.

5. Trenches located within paved Roadway areas shall be backfilled with Controlled density fill (CDF) meeting the requirements of Section 2-09.3(1)E. The controlled density fill shall be placed level to, and at the bottom of, the existing pavement. The pavement shall be replaced with paving material that matches the existing pavement.

6. On new construction, conduit shall be placed prior to placement of base course pavement.

8-20.3(5)E2 Conduit Plowing
All conduit plowing shall be supervised by a licensed electrical Contractor.
The starting point shall be anchored or held such that conduit movement at the start of the plowing operation is kept to a minimum. The conduit reel shall be mounted on the vehicle such that conduit movement is kept to a minimum once it is in the ground. Use of a stationary reel is not allowed. The feed shoe shall have rollers which conform to the conduit at a radius of not less than 15 times the diameter of the conduit. The conduit will not be permitted to pass over stationary guides nor over rollers or sheaves, which will permit a bend radius of less than 15 times conduit diameter. The width of the tooth and feed shoe shall not exceed the conduit diameter by more than 2-inches The conduit shall be installed using a continuous reel, with no joints, for the full length of the conduit run, unless conduit splicing is allowed as indicated below.

If an obstruction is encountered that cannot be plowed through, the following remedies shall be attempted in order:
1. Contractor shall stop the plowing operation and attempt to remove the obstruction. If the obstruction is removed, plowing operations shall continue along the approved path.

2. Deviations of up to one foot from the projected path may be authorized by the Engineer, provided the new route does not result in total conduit run bends exceeding NEC requirements. Deviations in excess of one foot from the projected path are not allowed and the maximum taper rate is 1-inch per linear foot of conduit.

3. The Contractor may request approval to intercept the installed conduit and route another section of HDPE to avoid the obstruction, provided the new route does not result in total conduit run bends exceeding NEC requirements. Connection between the sections shall be accomplished using an approved fusion splicing method, which is compatible with the conduit manufacturer's recommendations.

4. Where none of the above remedies are successful, all conduit installed so far in that run shall be removed and a new plow path established to avoid the obstruction.

In the event of a breakage, all conduit installed in that run shall be removed.

The conduit run shall be extended to the associated outlets, subject to the same requirements indicated when HDPE is installed using the directional boring method.

The depth of installation shall be continually adjusted as necessary to compensate for changes in terrain.

Plowed conduit shall be laid so that the top of the conduit is a minimum depth of 36-inches below the finish grade with the exception that the conduit shall be swept up to enter the knock outs of associated pull boxes or cable vaults.

The plow placing the conduit shall be marked at a proper distance above the plow's conduit exit point to indicate when the minimum installation depth is not met. The mark shall be visible from a safe distance from the plowing operation when it is exposed above ground. While plowing this mark must remain below ground level at all times, with the exception of the entry and exit points at the end of the run, in order to ensure that minimum burial depth of the conduit is achieved.

If the depth mark on the plow comes above ground, the Contractor shall stop the plowing operation and attempt to correct the placement depth. If the conduit depth can be verified to meet the minimum burial requirements at the location where the depth mark came above ground, the plowing operation shall resume subject to the Engineers approval.
The compacted surface shall be firm, non-yielding, and result in a finished surface that matches the lines and grades of the terrain prior to plowing.

**8-20.3(5)E3 Boring**

Bore pits shall be backfilled and compacted in accordance with Section 2-09.3(1)E. Directional boring, jacking or drilling pits shall be a minimum of 2-feet from the edge of any type of pavement, unless otherwise approved by the engineer. Excessive use of water that might undermine the pavement or soften the Subgrade will not be permitted.

When approved by the Engineer, small test holes may be cut in the pavement to locate obstructions. When the Contractor encounters obstructions or is unable to install conduit because of soil conditions, as determined by the Engineer, additional Work to place the conduit will be paid in accordance with Section 1-04.4.

**8-20.3(5)E4 Directional Boring**

Directional boring for electrical installations shall be supervised by a licensed electrical contractor in accordance with Section 8-20.1(1). Where directional boring is called for, conduit shall be installed using a surface-launched, steerable drilling tool. Drilling shall be accomplished using a high-pressure fluid jet tool-head. The drilling fluid shall be used to maintain the stability of the tunnel, reduce drag on the conduit, and provide backfill between the conduit and tunnel. A guidance system that measures the depth, lateral position, and roll shall be used to guide the tool-head when creating the pilot hole. Once the pilot hole is established, a reamer and swivel shall be used to install the conduit. Reaming diameter shall not exceed 1.5 times the diameter of the conduits being installed. Conduit that is being pulled into the boring shall be installed in such a manner that the conduit is not damaged during installation. The pullback force on the conduit shall be controlled to prevent damage to the conduit. A vacuum spoils extraction system shall be used to remove any excess spoils generated during the installation. Excess drilling fluid and spoils shall be disposed of. The method and location used for disposal of excess drilling fluid and spoils shall be subject to the Engineer’s approval. Drilling fluid returns (caused by fracturing of formations) at locations other than the entry and exit points shall be minimized. Any drilling fluid that surfaces through fracturing shall be cleaned up immediately. Mobile spoils-removal equipment capable of quickly removing spoils from entry or exit pits and areas with returns caused by fracturing shall be used as necessary during drilling operations.

**8-20.3(5)E5 Boring with Casing**

Where boring with casing is called for, the casing shall be placed using an auger inside the casing to remove the soil as the casing is jacked forward. The auger head shall proceed no more than 4-inches ahead of the pipe being jacked. Boring operations shall be conducted to prevent caving ahead of the pipe. Installed casing pipe shall be free from grease, dirt, rust, moisture, and any other deleterious contaminants.

The space between the conduit and casing shall be plugged with sandbags and a grout seal 12-inches thick at each end of the casing. Casing abandoned due to an encountered
obstruction shall be grout sealed in the same manner. Grout shall conform to Section 9-
20.3(4).

In lieu of sandbags and grout, unopened prepackaged concrete and grout may be used
to seal the casing.

Material shall not be removed from the boring pit by washing or sluicing.
All joints shall be welded by a Washington State certified welder. Welding shall
conform to AWS D 1.1-80 Structural Welding Code, Section 3, Workmanship.

8-20.3(8) Wiring
The fifteenth through seventeenth paragraphs are revised to read:

When conductors, either cable or single, are being installed, the Contractor shall not exceed
the tension limitations recommended by the manufacturer. Conductors may be pulled
directly by hand, or with mechanical assistance. If conductors are pulled by any mechanical
means, a dynamometer with drop-needle hand shall be used on every mechanically assisted pull.

On mechanically assisted pulls, insulation shall be stripped off the individual conductor and
the conductor formed into a pulling eye and firmly attached to the pulling rope/tape, or a
cable grip shall be used. The Contractor shall determine the maximum allowable pulling
tension, taking into account the direction of the pull, type of raceway, cable geometry,
weight of the cable, the coefficient of friction, and side wall pressure, using the information
from the cable manufacturer. If there are bends in the raceway or sheaves are used for the
cable pull, the Contractor shall use the cable manufacture's side wall pressure limits to
determine the maximum pulling tension. The maximum pulling force applied directly to the
conductor when pulling eyes are used or when the conductor is formed into a loop, shall be
limited to that shown in the following table for copper conductor. When a cable grip is
applied over nonmetallic sheathed cables, the maximum pulling force shall be limited to
1,000-pounds provided this is not in excess of the force as determined above.

<table>
<thead>
<tr>
<th>Conductor</th>
<th>Pounds</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>132</td>
</tr>
<tr>
<td>6</td>
<td>210</td>
</tr>
<tr>
<td>4</td>
<td>334</td>
</tr>
<tr>
<td>3</td>
<td>421</td>
</tr>
<tr>
<td>2</td>
<td>531</td>
</tr>
</tbody>
</table>
Adequate lubrication of the proper type to reduce friction in conduit and duct pulls shall be utilized. The grease and oil-type lubricants used on lead sheathed cables shall not be used on nonmetallic sheathed cables.

8-20.3(9) Bonding, Grounding
The first sentence in the second paragraph is replaced with the following two sentences:

All conduit installed shall have an equipment ground conductor installed in addition to the conductors noted in the Contract. Conduit with innerducts shall have an equipment ground conductor installed in each innerduct that has an electrical conductor.

SECTION 8-21, PERMANENT SIGNING
January 7, 2013

8-21.2 Materials
The third sentence is revised to read:

Materials for sign mounting shall conform to Section 9-28.11.

8-21.3(9)A Fabrication of Steel Structures
The first sentence in the first paragraph is revised to read:

Fabrication shall conform to the applicable requirements of Section 6-03 and 9-06.

This section is supplemented with the following:

All fabrication, including repairs, adjustments or modifications of previously fabricated sign structure members and connection elements, shall be performed in the shop, under an Engineer approved shop drawing prepared and submitted by the Contractor for the original
fabrication or the specific repair, adjustment or modification. Sign structure fabrication repair, adjustment or modification of any kind in the field is not permitted. If fabrication repair, adjustment or modification occurs after a sign structure member or connection element has been galvanized, the entire member or element shall be re-galvanized in accordance with AASHTO M 111.

8-21.3(9)B Vacant

This section including title is revised to read:

8-21.3(9)B Erection of Steel Structures

Erection shall conform to the applicable requirements of Sections 6-03 and 8-21.3(9)F. Section 8-21.3(9)F notwithstanding, the Contractor may erect a sign bridge prior to completion of the shaft cap portion of one foundation for one post provided the following conditions are satisfied:

1. The Contractor shall submit design calculations and working drawings of the temporary supports and falsework supporting the sign bridge near the location of the incomplete foundation to the Engineer for approval in accordance with Section 6-01.9. The submittal shall include the method of releasing and removing the temporary supports and falsework without inducing loads and stress into the sign bridge.

2. The Contractor shall submit the method used to secure the anchor bolt array in proper position with the sign bridge while casting the shaft cap concrete to complete the foundation.

3. The Contractor shall erect the sign bridge and temporary supports and falsework, complete the remaining portion of the incomplete foundation, and remove the temporary supports and falsework, in accordance with the working drawing submittals as approved by the Engineer.

8-21.3(9)F Foundations

The following new paragraph is inserted after the second paragraph:

Concrete placed into an excavation where water is present shall be placed using an approved tremie. If water is not present, the concrete shall be placed such that the free-fall is vertical down the center of the shaft without hitting the sides, the steel reinforcing bars, or the steel reinforcing bar cage bracing. The Section 6-02.3(6) restriction for 5-feet maximum free-fall shall not apply to placement of Class 4000P concrete into a shaft.

The ninth paragraph (after implementing the preceding Amendment) is replaced with the following three new paragraphs:

After construction of concrete foundations for sign bridge and cantilever sign structures, the Contractor shall survey the foundation locations and elevations, the anchor bolt array locations and lengths of exposed threads. The Contractor shall confirm that the survey
conforms to the sign structure post, beam, span and foundation design geometry shown in
the Plans, and shall identify any deviations from the design geometry shown in the Plans.
When deviations are identified, the Contractor shall notify the Engineer, and such notice
shall be accompanied by the Contractor’s proposed method(s) of addressing the deviations,
including removal and reconstruction of the shaft cap portion of the affected concrete
foundation as outlined in this Section, or fabrication repair, adjustment or modification, with
associated shop drawings, in accordance with Section 8-21.3(9)A.

If the Contractor’s survey indicates that a concrete foundation has been constructed
incorrectly for a sign structure that has already been fabricated, the Contractor may remove
and reconstruct the shaft cap portion of the foundation, in accordance with Section 1-07.13,
provided the following conditions are satisfied:

1. The Contractor shall submit the method and equipment to be used to remove the
portion of the concrete foundation to be removed and reconstructed to the Engineer
for approval in accordance with Section 1-05.3. The submittal shall include
confirmation that the equipment and the method of operation is appropriate to
ensure that the existing anchor bolt array and primary shaft vertical steel
reinforcing bars will not be damaged.

2. All steel reinforcing bars, except for steel reinforcing bars extending from the
bottom portion of the foundation to remain, shall be removed and disposed of in
accordance with Sections 2-02.3 and 2-03.3(7)C, and shall be replaced with new
steel reinforcing bars conforming to the size, dimensions and geometry shown in
the Plans. All concrete of the removed portion of the foundation shall be removed
and disposed of in accordance with Sections 2-02.3 and 2-03.3(7)C.

3. The Contractor shall adjust the primary shaft vertical steel reinforcing bars as
necessary in accordance with Section 6-02.3(24)C to provide clearance for the
anchor bolt array.

Sign structures shall not be erected on concrete foundations until the Contractor confirms
that the foundations and the fabricated sign structures are either compatible with each other
and the design geometry shown in the Plans, or have been modified in accordance with this
Section and as approved by the Engineer to be compatible with each other, and the
foundations have attained a compressive strength of 2,400-psi.

Item number 4 in the twelfth paragraph (after implemented the preceding Amendments) is
revised to read:

4. Concrete shall be Class 4000P, except as otherwise specified. The concrete for the shaft
cap (the portion containing the anchor bolt array assemblies above the construction
joint at the top of the shaft) shall be Class 4000.

Item number 3 in the thirteenth paragraph (after implemented the preceding Amendments) is
revised to read:
3. Unless otherwise shown in the Plans, concrete shall be Class 4000P.

8-21.5 Payment
This section is supplemented with the following:

All costs in connection with surveying completed concrete foundations for sign bridges and cantilever sign structures shall be included in the lump sum contract price for “Structure Surveying”, except that when no Bid item is included in the Proposal for “Structure Surveying” then such costs shall be included in the lump sum contract price(s) for “Sign Bridge No. ___” and “Cantilever Sign Structure No. ___”.

SECTION 8-22, PAVEMENT MARKING
January 7, 2013

8-22.3(3)D Line Applications
The last paragraph is supplemented with the following:

Grooved line pavement marking shall not be constructed on bridge decks or on bridge approach slabs.

8-22.3(6) Removal of Pavement Markings
The following two new sentences are inserted after the first sentence:

Grinding to remove painted markings is not allowed. Grinding to remove plastic marking is allowed to a depth just above the pavement surface, then water blasting or shot blasting shall be required to remove the remaining markings.

8-22.4 Measurement
The items “Painted Wide Line” and “Plastic Wide Line” are deleted from the fourth paragraph.

The sixth paragraph is revised to read:

Diagonal lines used to delineate parking stalls that are constructed of painted or plastic 4-inch lines will be measured as “Paint Line” or “Plastic Line” by the linear foot of line installed. Crosswalk line will be measured by the square foot of marking installed.

The following two new paragraphs are inserted after the sixth paragraph:

Crosshatch markings used to delineate median and gore areas will be measured by the completed linear foot as “Painted Crosshatch Marking” or “Plastic Crosshatch Marking”.

The measurement for “Painted Crosshatch Marking” and for “Plastic Crosshatch Marking” will be based on the total length of each 8-inch or 12-inch wide line installed.
8-22.5 Payment
The bid items “Painted Wide Line”, per linear foot and “Plastic Wide Line”, per linear foot are
deleted from this section.

This section is supplemented with the following two new bid items:

“Painted Crosshatch Marking”, per linear foot.
“Plastic Crosshatch Marking”, per linear foot.

The following new paragraph is inserted after the last bid item in this section:

The unit Contract price for the aforementioned Bid items shall be full payment for all costs
to perform the Work as described in Section 8-22.

DIVISION 9
MATERIALS

SECTION 9-02, BITUMINOUS MATERIALS
August 5, 2013

In this section, “Asphalt Emulsion” is revised to read “Emulsified Asphalt”.

9-02.1 Asphalt Material, General
In this section, “Cationic Emulsified Asphalt” is revised to read “Emulsified Asphalt”.

The first paragraph is revised to read:

Asphalt furnished under these Specifications shall not have been distilled at a temperature
high enough to produce flecks of carbonaceous matter, and upon arrival at the Work, shall
show no signs of separation into lighter and heavier components.

9-02.1(6) Cationic Emulsified Asphalt
The “Cationic Emulsified Asphalt Table” is revised to read:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Type AASHTO Test Method</th>
<th>Rapid Setting</th>
<th>Medium Setting</th>
<th>Slow Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>CRS-1 Min. x</td>
<td>CMS-2S Min. x.</td>
<td>CSS-1 Min. x.</td>
</tr>
<tr>
<td>Tests on</td>
<td></td>
<td>CRS-2 Min. x.</td>
<td>CMS-2 Min. x.</td>
<td>CSS-1 Min. x.</td>
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<td>MS-2 Min. x.</td>
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<td>MS-2h Min. x.</td>
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<td>CSS-1 Min. x.</td>
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<td>CSS-1h Min. x.</td>
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</tbody>
</table>

C 3114 Naches Tieton Road Improvements A 43 AMENDMENTS
<table>
<thead>
<tr>
<th>Property</th>
<th>T 59</th>
<th>20</th>
<th>100</th>
<th>150</th>
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<td>Viscosity SFS @ 77°F (25°C)</td>
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<td>Viscosity SFS @ 122°F (50°C)</td>
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<td>Storage stability test 1 day %</td>
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<td>Demulsibility 35 ml</td>
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<td>0.8% sodium dioctyl</td>
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<td>Sulfosuccinate, %</td>
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<td>Particle charge test</td>
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<td>Sieve Test, %</td>
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<td>Cement mixing test, %</td>
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<td>Distillation:</td>
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<tr>
<td>Oil distillate by vol. of</td>
<td></td>
<td>3</td>
<td>1.5</td>
<td>3</td>
<td>20</td>
<td>12</td>
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<td>Emulsions %</td>
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<tr>
<td>Residue, %</td>
<td>T 59</td>
<td>60</td>
<td>65</td>
<td>60</td>
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<td>57</td>
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<td>Tests on residue from distillation tests:</td>
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<tr>
<td>Penetration, 77°F (25°C)</td>
<td>T 49</td>
<td>100</td>
<td>250</td>
<td>100</td>
<td>250</td>
<td>100</td>
<td>250</td>
<td>90</td>
<td>100</td>
<td>250</td>
<td>40</td>
<td>90</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Ductility, 77°F (25°C) 5 cm/min., cm</td>
<td>T 51</td>
<td>40</td>
<td>40</td>
<td>40</td>
<td>40</td>
<td>40</td>
<td>40</td>
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<tr>
<td>Solubility in trichloroethylene, %</td>
<td>T 44</td>
<td>97.5</td>
<td>97.5</td>
<td>97.5</td>
<td>97.5</td>
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</tbody>
</table>

a The demulsibility test shall be made within 30 days from date of shipment.

b If the particle charge test for CSS-1 and CSS-1h is inconclusive, material having a maximum pH value of 6.7 will be acceptable.

9-02.1(6)A Polymerized Cationic Emulsified Asphalt CRS-2P
The first paragraph (except for the table) is revised to read:

CRS-2P shall be a polymerized cationic emulsified asphalt. The polymer shall be milled into the asphalt or emulsion during the manufacturing of the emulsified asphalt. CRS-2P shall meet the following requirements:

Footnote 1 below the table is revised to read:

1. Distillation modified to use 300 grams of emulsified asphalt heated to 350°F ± 9°F and maintained for 20 minutes.

9-02.1(8) Flexible Bituminous Pavement Marker Adhesive
The fifth row in the table is revised to read:
9-02.4 Anti-Stripping Additive
This section is revised to read:

Anti-stripping additive shall be a product listed in the current WSDOT Qualified Products List (QPL).

SECTION 9-03, AGGREGATES
April 1, 2013

9-03.1(1) General Requirements
The eighth paragraph is deleted.

9-03.8(4) Blending Sand
This sections including title is revised to read:

Vacant

9-03.13 Backfill for Sand Drains
This section is supplemented with the following:

That portion of backfill retained on a No. 4 sieve shall not contain more than 0.05 percent by weight of wood waste.

9-03.13(1) Sand Drainage Blanket
The last paragraph is revised to read:

That portion of backfill retained on a No. 4 sieve shall not contain more than 0.05 percent by weight of wood waste.

9-03.14(1) Gravel Borrow
Note 1 is deleted, including the reference in the table.

9-03.14(2) Select Borrow
Note 1 is deleted.

Note 2 is re-numbered Note 1, including the reference in the table.

9-03.14(4) Gravel Borrow for Geosynthetic Retaining Wall
This section including title is revised to read:

Gravel Borrow for Structural Earth Wall
All backfill material within the reinforced zone for structural earth walls shall consist of granular material, either naturally occurring or processed, and shall be free draining, free
from organic or otherwise deleterious material. The material shall be substantially free of
shale or other soft, poor durability particles, and shall not contain recycled materials, such as
glass, shredded tires, portland cement concrete rubble, or asphaltic concrete rubble. The
backfill material shall meet the following requirements for grading and quality:

<table>
<thead>
<tr>
<th>Sieve Size</th>
<th>Geosynthetic Reinforcement</th>
<th>Metallic Reinforcement</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Percent Passing</td>
<td>99-100</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>75-100</td>
</tr>
<tr>
<td>1 ¾ &quot;1&quot;</td>
<td>99-100</td>
<td></td>
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<tr>
<td>1&quot;</td>
<td>90-100</td>
<td></td>
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<tr>
<td>No. 4</td>
<td>50-80</td>
<td>50-80</td>
</tr>
<tr>
<td>No. 40</td>
<td>30 max.</td>
<td>30 max.</td>
</tr>
<tr>
<td>No. 200</td>
<td>7.0 max.</td>
<td>7.0 max.</td>
</tr>
<tr>
<td>Sand Equivalent</td>
<td>50 min.</td>
<td>50 min.</td>
</tr>
</tbody>
</table>

All percentages are by weight

<table>
<thead>
<tr>
<th>Property</th>
<th>Test Method</th>
<th>Geosynthetic Reinforcement Requirements</th>
<th>Metallic Reinforcement Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Los Angeles Wear 500 rev.</td>
<td>AASHTO T 96</td>
<td>35 percent max.</td>
<td>35 percent max</td>
</tr>
<tr>
<td>Degradation Factor</td>
<td>WSDOT Test Method T 113</td>
<td>15 min.</td>
<td>15 min.</td>
</tr>
<tr>
<td>Resistivity</td>
<td>WSDOT Test Method T 417</td>
<td>3,000 ohm-cm, min.</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>WSDOT Test Method 113</td>
<td>4.5-9</td>
<td>5-10</td>
</tr>
<tr>
<td>Chlorides</td>
<td>AASHTO T 291</td>
<td>100 ppm max.</td>
<td></td>
</tr>
<tr>
<td>Sulfates</td>
<td>AASHTO T 290</td>
<td>200 ppm max.</td>
<td></td>
</tr>
</tbody>
</table>

If the resistivity of the gravel borrow equals or exceeds 5,000 ohm-cm, the specified
chloride and sulfate limits may be waived.

Wall backfill material satisfying these grading and property requirements shall be classified
as nonaggressive.

9-03.21(1) General Requirements
The first sentence in the first paragraph is revised to read:

Hot Mix Asphalt, Concrete Rubble, Recycled Glass (glass cullet), and Steel Furnace Slag
may be used as, or blended uniformly with naturally occurring materials for aggregates.
9-03.21(1)C Vacant
This section including title is revised to read:

9-03.21(1)C Recycled Glass (Glass Cullet)
Glass Cullet shall meet the requirements of AASHTO M 318 with the additional
requirement that the glass cullet is limited to the maximum amounts set in Section 9-
03.21(1)E for recycled glass. Prior to use the Contractor shall provide certification to the
Project Engineer that the recycled glass meets the physical properties and deleterious
substances requirements in AASHTO M-318.

9-03.21(1) E Table on Maximum Allowable Percent (By Weight) of Recycled Material
The column heading “Recycled Glass” is revised to read “Recycled Glass (Glass Cullet) in the
table.

In the column “Recycled Glass (Glass Cullet)” all amounts are revised to read “20” beginning
with the item “Ballast” and continuing down until the last item in the table.

SECTION 9-05, DRAINAGE STRUCTURES, CULVERTS, AND CONDUCTS
January 7, 2013

9-05.0 Acceptance by Manufacturer’s Certification
This section including title is revised to read:

9-05.0 Acceptance and Approval of Drainage Structures, and Culverts
The Drainage Structure or Culvert may be selected from the Qualified Products List, or
submitted using a Request for Approval of Materials (RAM) in accordance with Section 1-
06.

Certain drainage materials may be accepted by the Engineer based on a modified acceptance
criteria when materials are selected from the Qualified Products List (QPL). The modified
acceptance criteria are defined in the QPL for each material.

9-05.1(6) Corrugated Polyethylene Drain Pipe, Couplings, and Fittings (Up to 10 Inch)
This section is supplemented with the following:

Corrugated polyethylene drain pipe manufacturers shall participate in the National
Transportation Product Evaluation Program (NTPEP) work plan for HDPE (High Density
Polyethylene) Thermoplastic Pipe and be listed on the NTPEP audit website displaying they
are NTPEP compliant.

9-05.1(7) Corrugated Polyethylene Drain Pipe, Couplings, and Fittings (12 Inch Through
60 Inch)
This section is supplemented with the following:
Corrugated polyethylene drain pipe manufacturers shall participate in the National Transportation Product Evaluation Program (NTPEP) work plan for HDPE (High Density Polyethylene) Thermoplastic Pipe and be listed on the NTPEP audit website displaying they are NTPEP compliant.

9-05.2(7) Perforated Corrugated Polyethylene Underdrain Pipe (Up to 10 Inch)
This section is supplemented with the following:
Perforated corrugated polyethylene underdrain pipe manufacturers shall participate in the National Transportation Product Evaluation Program (NTPEP) work plan for HDPE (High Density Polyethylene) Thermoplastic Pipe and be listed on the NTPEP audit website displaying they are NTPEP compliant.

9-05.2(8) Perforated Corrugated Polyethylene Underdrain Pipe (12-Inch Through 60 Inch Diameter Maximum), Couplings, and Fittings
This section is supplemented with the following:
Perforated corrugated polyethylene underdrain pipe manufacturers shall participate in the National Transportation Product Evaluation Program (NTPEP) work plan for HDPE (High Density Polyethylene) Thermoplastic Pipe and be listed on the NTPEP audit website displaying they are NTPEP compliant.

9-05.19 Corrugated Polyethylene Culvert Pipe, Couplings, and Fittings
The word “producer” is revised to read “manufacturer”.

The second paragraph is revised to read:
Joints for corrugated polyethylene culvert pipe shall be made with either a bell/bell or bell and spigot coupling and shall incorporate the use of a gasket conforming to the requirements of ASTM D 1056 Type 2 Class B Grade 3 or ASTM F 477. All gaskets shall be factory installed on the coupling or on the pipe by the qualified manufacturer.

This section is supplemented with the following:
Corrugated polyethylene culvert pipe manufacturers shall participate in the National Transportation Product Evaluation Program (NTPEP) work plan for HDPE (High Density Polyethylene) Thermoplastic Pipe and be listed on the NTPEP audit website displaying they are NTPEP compliant.

9-05.20 Corrugated Polyethylene Storm Sewer Pipe, Couplings, and Fittings
The word “producer” is revised to read “manufacturer”.

The first paragraph is revised to read:
Corrugated polyethylene storm sewer pipe, couplings, and fittings shall meet the requirements of AASHTO M 294 Type S or D. The maximum pipe diameter for corrugated
polyethylene storm sewer pipe shall be the diameter for which a manufacturer has
submitted. Fittings shall be blow molded, rotational molded, or factory welded.

This section is supplemented with the following:

Corrugated polyethylene culvert pipe manufacturers shall participate in the National
Transportation Product Evaluation Program (NTPEP) work plan for HDPE (High Density
Polyethylene) Thermoplastic Pipe and be listed on the NTPEP audit website displaying they
are NTPEP compliant.

9-05.24 Polypropylene Culvert Pipe, Polypropylene Storm Sewer Pipe, and Polypropylene
Sanitary Sewer Pipe
This section's content is deleted and replaced with the following:

All joints for polypropylene pipe shall be made with a bell/bell or bell and spigot coupling
and shall conform to ASTM D 3212 using elastomeric gaskets conforming to ASTM F 477.
All gaskets shall be factory installed on the pipe in accordance with the producer's
recommendations.

Qualification for each producer of polypropylene storm sewer pipe requires joint system
conformance to ASTM D 3212 using elastomeric gaskets conforming to ASTM F 477 and a
formal quality control plan for each plant proposed for consideration.

A Manufacturer's Certificate of Compliance shall be required and shall accompany the
materials delivered to the project. The certificate shall clearly identify production lots for all
materials represented. The Contracting Agency may conduct verification tests of pipe
stiffness or other properties it deems appropriate.

This section is supplemented with the following new sub-sections:

9-05.24(1) Polypropylene Culvert Pipe and Storm Sewer Pipe
Polypropylene culvert and storm sewer pipe shall conform to the following requirements:

1. For dual wall pipe sizes up to 30 inches: ASTM F2736.

2. For triple wall pipe sizes from 30 to 60 inches: ASTM F2764.

3. For dual wall profile pipe sizes 36 to 60 inches: AASHTO MP 21, Type S or Type
   D.

4. Fittings shall be factory welded, injection molded or PVC.

9-05.24(2) Polypropylene Sanitary Sewer Pipe
Polypropylene sanitary sewer pipe shall conform to the following requirements:

1. For pipe sizes up to 30 inches: ASTM F2736.
2. For pipe sizes from 30 to 60 inches: ASTM F2764.

3. Fittings shall be factory welded, injection molded or PVC.

SECTION 9-06, STRUCTURAL STEEL AND RELATED MATERIALS
April 1, 2013

9-06.5(3) High Strength Bolts
In this section, “AASHTO M 291” is revised to read “ASTM A 563”, “AASHTO M 164” is revised to read “ASTM A 325”, “AASHTO M 293” is revised to read “ASTM F 436”, “AASHTO M 253” is revised to read “ASTM A 490”, and “AASHTO M 298” is revised to read “ASTM B 695”.

9-06.5(4) Anchor Bolts
In this section, “AASHTO M 291” is revised to read “ASTM A 563”.

SECTION 9-07, REINFORCING STEEL
August 6, 2012

9-07.7 Wire Mesh
The first sentence in the first paragraph is revised to read:

Wire mesh for concrete reinforcement shall conform to the requirements of AASHTO M 55, Welded Steel Wire Fabric for Concrete Reinforcement or AASHTO M 221, Steel Welded Wire Reinforcement, Deformed for Concrete.

SECTION 9-13, RIPRAP, QUARRY SPALLS, SLOPE PROTECTION, & ROCK FOR EROSION AND SCOUR PROTECTION AND ROCK WALLS
April 1, 2013

9-13.5(1) Semi-Open Concrete Masonry Units Slope Protection
In this section, “ASTM C 90” is revised to read “ASTM C 1319”.

SECTION 9-14, EROSION CONTROL AND ROADSIDE PLANTING
August 5, 2013

9-14.3 Fertilizer
The second sentence in the first paragraph is revised to read:

It may be separate or in a mixture containing the percentage of total nitrogen, available phosphoric acid, and water-soluble potash or sulfur in the amounts specified.
9-14.4(2) Hydraulically Applied Erosion Control Products (HECPs)

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

All HECPs shall be furnished premixed by the manufacturer with Organic or Synthetic Tackifier as specified in Section 9-14.4(7).

The third and fourth rows in Table 1 is revised to read:

<table>
<thead>
<tr>
<th>Heavy Metals</th>
<th>EPA 6020A Total Metals</th>
<th>Antimony – &lt; 4 mg/kg</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Arsenic – &lt; 6 mg/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Barium – &lt; 80 mg/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Boron – &lt; 160 mg/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cadmium – &lt; 2 mg/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total Chromium – &lt; 4 mg/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Copper – &lt; 10 mg/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lead – &lt; 5 mg/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mercury – &lt; 2 mg/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nickel – &lt; 2 mg/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Selenium – &lt; 10 mg/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Strontium – &lt; 40 mg/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Zinc – &lt; 30 mg/kg</td>
</tr>
</tbody>
</table>

| Water Holding Capacity | ASTM D 7367 | 800 percent minimum |

9-14.4(2A) Long Term Mulch

In the first paragraph, the phrase “within 2 hours of application” is deleted.

9-14.4(4) Wood Strand Mulch

The last sentence in the second paragraph is deleted.

This section is supplemented with the following new paragraph:

The Contractor shall provide Material Safety Data Sheet (MSDS) that demonstrates that the product is not harmful to plant life and a test report performed in accordance with WSDOT Test Method 125 demonstrating compliance to this specification prior to acceptance.

9-14.4(8) Compost

The second paragraph is revised to read:

Compost production and quality shall comply with WAC 173-350 and for biosolids composts, WAC 173-308.

The third paragraph is to read:

Compost products shall meet the following physical criteria:
1. Compost material shall be tested in accordance with U.S. Composting Council Testing Methods for the Examination of Compost and Composting (TMECC) 02.02-B, “Sample Sieving for Aggregate Size Classification”.

Fine compost shall meet the following gradation:

<table>
<thead>
<tr>
<th>Sieve Size</th>
<th>Percent Passing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Minimum</td>
</tr>
<tr>
<td>1”</td>
<td>100</td>
</tr>
<tr>
<td>5/8”</td>
<td>90</td>
</tr>
<tr>
<td>1/4”</td>
<td>75</td>
</tr>
</tbody>
</table>

Note: Maximum particle length of 4 inches.

Medium compost shall meet the following gradation:

<table>
<thead>
<tr>
<th>Sieve Size</th>
<th>Percent Passing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Minimum</td>
</tr>
<tr>
<td>1”</td>
<td>100</td>
</tr>
<tr>
<td>5/8”</td>
<td>85</td>
</tr>
<tr>
<td>1/4”</td>
<td>70</td>
</tr>
</tbody>
</table>

Note: Maximum particle length of 4 inches. Medium compost shall have a carbon to nitrogen ratio (C:N) between 18:1 and 35:1. The carbon to nitrogen ratio shall be calculated using dry weight of “Organic Carbon” using TMECC 04.01A divided by the dry weight of “Total N” using TMECC 04.02D.

Coarse compost shall meet the following gradation:

<table>
<thead>
<tr>
<th>Sieve Size</th>
<th>Percent Passing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Minimum</td>
</tr>
<tr>
<td>2”</td>
<td>100</td>
</tr>
<tr>
<td>1”</td>
<td>90</td>
</tr>
<tr>
<td>3/4”</td>
<td>70</td>
</tr>
<tr>
<td>1/4”</td>
<td>40</td>
</tr>
</tbody>
</table>

Note: Maximum particle length of 6 inches. Coarse compost shall have a carbon to nitrogen ratio (C:N) between 25:1 and 35:1. The carbon to nitrogen ratio shall be calculated using the dry weight of “Organic Carbon” using TMECC 04.01A divided by the dry weight of “Total N” using TMECC 04.02D.

2. The pH shall be between 6.0 and 8.5 when tested in accordance with U.S. Composting Council TMECC 04.11-A, “1:5 Slurry pH”.
3. Physical contaminants, defined in WAC 173-350 (plastic, concrete, ceramics, metal, etc.) shall be less than 0.5 percent by weight as determined by U.S. Composting Council TMECC 03.08-A “Classification of Inerts by Sieve Size”.

4. Minimum organic matter shall be 40 percent by dry weight basis as determined by U.S. Composting Council TMECC 05.07A “Loss-On-Ignition Organic Matter Method (LOI)”.

5. Soluble salt contents shall be less than 4.0 mmhos/cm when tested in accordance with U.S. Composting Council TMECC 04.10 “Electrical Conductivity.”

6. Maturity shall be greater than 80 percent in accordance with U.S. Composting Council TMECC 05.05-A, “Germination and Root Elongation”.

7. Stability shall be 7-mg CO2/C/g OM/day or below in accordance with U.S. Composting Council TMECC 05.08-B “Carbon Dioxide Evolution Rate”.

8. The compost product shall originate from organic feedstocks as defined in WAC 173 350 as “Wood waste”, “Yard debris”, “Post-consumer food waste”, “Pre-consumer animal-based wastes”, and/or “Pre-consumer vegetative waste”. The Contractor shall provide a list of feedstock sources by percentage in the final compost product.

9. The Engineer may also evaluate compost for maturity using U.S. Composting Council TMECC 05.08-E “Solvita® Maturity Index”. Fine compost shall score a number 6 or above on the Solvita® Compost Maturity Test. Medium and Coarse compost shall score a 5 or above on the Solvita® Compost Maturity Test.

9-14.4(8)A Compost Approval
This section’s title is revised to read:

9-14.4(8)A Compost Submittal Requirements

The first sentence in this section up until the colon is revised to read:

The Contractor shall submit the following information to the Engineer for approval:

Item No. 2 in the first paragraph is revised to read:

2. A copy of the Solid Waste Handling Permit issued to the manufacturer by the Jurisdictional Health Department in accordance with WAC 173-350 (Minimum Functional Standards for Solid Waste Handling) or for biosolid composts a copy of the Coverage Under the General Permit for Biosolids Management issued to the manufacturer by the Department of Ecology in accordance with WAC 173-308 (Biosolids Management).
9-14.5 Erosion Control Devices

This section is supplemented with the following new sub-section:

### 9-14.5(9) High Visibility Silt Fence

High visibility silt fence shall be a minimum of 5 feet in height, high visibility orange, UV stabilized and shall meet the geotextile requirements in Section 9-33 Table 6. Support posts shall be in accordance with the Standard Plans. The posts shall have sufficient strength and durability to support the fence through the life of the project.

---

### 9-14.5(1) Polyacrylamide (PAM)

The fourth sentence is replaced with the following two new sentences:

The minimum average molecular weight shall be greater than 5-mg/mole. The charge density shall be no less than 15 percent and no greater than 30 percent.

---

### 9-14.5(2) Erosion Control Blanket

This section including title is deleted in its entirety and replaced with the following:

#### 9-14.5(2) Biodegradable Erosion Control Blanket

Biodegradable erosion control blankets shall be made of natural plant fibers, and all netting material, if present, shall biodegrade within a life span not to exceed 2 years.

The Contractor shall provide independent test results from the National Transportation Product Evaluation Program (NTPEP) meeting the requirements of Section 9-14.5(2)B, 9-14.5(2)C and 9-14.5(2)D.

---

#### 9-14.5(2)A Approval and Acceptance of Biodegradable Erosion Control Blankets

The erosion control blanket may be selected from the Qualified Products List, or submitted using a Request for Approval of Materials (RAM) in accordance with Section 1-06. Erosion control blankets may be accepted by the Engineer based on the modified acceptance criteria when materials are selected from the QPL. The modified acceptance criteria are defined in the QPL for each material.

---

#### 9-14.5(2)B Biodegradable Erosion Control Blanket for Slopes Steeper than 3:1 (H:V)

---

**Table 6**

<table>
<thead>
<tr>
<th>Properties</th>
<th>ASTM Test Method</th>
<th>Requirements for Slopes Steeper than 3:1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protecting Slopes from Rainfall-Induced Erosion</td>
<td>ASTM D 6459</td>
<td>C factor = 0.04 maximum for cumulative R-Factor&lt;231</td>
</tr>
<tr>
<td></td>
<td>Soil tested shall be sandy loam as defined by NRCS**</td>
<td></td>
</tr>
<tr>
<td>Properties</td>
<td>ASTM Test Method</td>
<td>Slope Flatter than 3:1 Requirements</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>------------------</td>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Protecting Slopes from Rainfall-Induced Erosion</td>
<td>ASTM D 6459</td>
<td>C factor = 0.15 maximum for cumulative R-Factor&lt;231</td>
</tr>
<tr>
<td></td>
<td>Soil tested shall be sandy loam as defined by the NRCS**</td>
<td>Soil Texture Triangle</td>
</tr>
<tr>
<td>Mass Per Unit Area</td>
<td>ASTM D 6475</td>
<td>7.6 oz./sq. yd. minimum</td>
</tr>
<tr>
<td>Light Penetration</td>
<td>ASTM D 6567</td>
<td>40% maximum</td>
</tr>
<tr>
<td>Tensile Strength MD x XD*</td>
<td>ASTM D 6818</td>
<td>6.5 x 2.3 pounds/inch minimum</td>
</tr>
<tr>
<td>Tensile Elongation MD x XD*</td>
<td>ASTM D 6818</td>
<td>38% x 33% maximum</td>
</tr>
<tr>
<td>Properties</td>
<td>Test Method</td>
<td>Requirements</td>
</tr>
<tr>
<td>--------------------------------------------------------</td>
<td>--------------------------------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>Performance in Protecting Earthen Channels from Stormwater-Induced Erosion</td>
<td>ASTM D 6460 Soil tested shall be sandy loam as defined by the NRCS** Soil Texture Triangle</td>
<td>Limiting Shear ($T_{Limit}$) = 2.0 psf minimum. Limiting Velocity ($V_{Limit}$) = 7.5 ft/sec flow minimum.</td>
</tr>
<tr>
<td>Mass per Unit Area</td>
<td>ASTM D 6475</td>
<td>7.4 oz./sq. yd. minimum</td>
</tr>
<tr>
<td>Light Penetration</td>
<td>ASTM D 6567</td>
<td>65 % maximum</td>
</tr>
<tr>
<td>Tensile Strength MD x XD*</td>
<td>ASTM D 6818</td>
<td>9.6 x 3.2 lbs/inch minimum</td>
</tr>
<tr>
<td>Tensile Elongation MD x XD*</td>
<td>ASTM D 6818</td>
<td>38% x 33% maximum</td>
</tr>
</tbody>
</table>

*MD is Machine Design and XD is Cross Direction
**Natural Resource Conservation Services

9-14.5(2)D Biodegradable Erosion Control Blanket for Ditches

Table 8

9-14.5(3) Clear Plastic Covering
This section including title is revised to read:

Plastic Covering
Plastic covering shall meet the requirements of ASTM D 4397 for polyethylene sheeting.

9-14.5(4) Geotextile Encased Check Dam
This section including title is revised to read:
9-14.5(4) Check Dams
All materials used for check dams shall be non-toxic and not pose a threat to wildlife when installed.

This section is supplemented with the following new sub-sections:

9-14.5(4)A Biodegradable Check Dams
Biodegradable check dams shall meet the following requirements:

<table>
<thead>
<tr>
<th>Biodegradable Check Dams</th>
<th>Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wattle Check Dam</td>
<td>9-14.5(5)</td>
</tr>
<tr>
<td>Compost Sock Check Dam</td>
<td>9-14.5(6)</td>
</tr>
<tr>
<td>Coir Log Check Dam</td>
<td>9-14.5(7)</td>
</tr>
</tbody>
</table>

The Contractor may substitute a different biodegradable check dam as long as it complies with the following and is approved by the Engineer:

1. Made of natural plant fiber.
2. Netting if present shall be biodegradable.
3. Straw bales shall not be used as check dams.

9-14.5(4)B Non-biodegradable Check Dams
Non-biodegradable check dams shall meet the following requirements:

1. Geotextile materials shall conform to section 9-33 for silt fence.
2. Other such devices that fulfill the requirements of section 9-14.5(4) and shall be approved by the Engineer prior to installation.

9-14.5(5) Wattles
The second sentence in the first paragraph is revised to read:

Wattle shall be a minimum of 8-inches in diameter.

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

Compost filler shall be Medium Compost and shall meet the material requirements as specified in Section 9-14.4(8).

The last paragraph is revised to read:

Wood stakes for wattles shall be made from untreated Douglas fir, hemlock, or pine species. Wood stakes shall be 2 by 2-inch nominal dimension and a minimum 24 inches in length.
9-14.5(6) Compost Socks
In this section, “Coarse Compost” is revised to read “Medium Compost”.

The last paragraph is revised to read:

Wood stakes for compost socks shall be made from untreated Douglas fir, hemlock, or pine species. Wood stakes shall be 2 by 2-inch nominal dimension and a minimum 24 inches in length.

9-14.5(8) High Visibility Fencing
The first paragraph is revised to read:

High visibility fence shall be UV stabilized, orange, high-density polyethylene or polypropylene mesh.

9-14.6(1) Description
In item No. C in the fourth paragraph, “22-inch” is revised to read “2-inch”.

SECTION 9-16, FENCE AND GUARDRAIL
August 5, 2013

9-16.1(1)A Post Material for Chain Link Fence
The first paragraph is revised to read:

Except as noted otherwise, post material shall conform to the requirements of AASHTO M 181, Type 1 (zinc-coated steel), Grade 1 or 2, and shall include all round and roll-formed material (line posts, brace posts, end posts, corner posts, and pull posts).

The last sentence in the fourth paragraph is deleted.

9-16.1(1)C Tension Wire and Tension Cable
This section including title is revised to read:

9-16.1(1)C Tension Wire
Tension wire shall meet the requirements of AASHTO M 181. Tension wire galvanizing shall be Class 1.

9-16.1(1)D Fittings and Hardware
The second sentence in the first paragraph is deleted.

The last paragraph is deleted.

9-16.1(2) Approval
This section is deleted.
9-16.2(2) Approval
This section is deleted.

9-16.3(2) Posts and Blocks
The first sentence in the first paragraph is revised to read:

Posts and blocks may be of creosote, pentachlorophenol, waterborne chromate copper arsenate (CCA), or ammoniacal copper zinc arsenate (ACZA), treated timber, or galvanized steel (galvanized steel posts only – no blocks).

The following reference is deleted from the third paragraph:

ACA 0.50 lbs. pcf

The sixth paragraph is deleted.

9-16.4(2) Wire Mesh
This section is revised to read:

The galvanized wire mesh shall be a Style 1 double-twisted hexagonal mesh conforming to ASTM A 975 with 8 by 10 opening, except when a colorized, polyvinyl chloride coating is required then the Style shall be a Style 3.

The longitudinal edges of the wire mesh fabric shall have knuckled selvedges with continuous selvedge wire as specified in ASTM A 975.

9-16.4(3) Wire Rope
This section is revised to read:

Wire rope shall be ¾- inch-diameter, independent wire rope class (IWRC) 6x19, extra improved plow steel (EIP) wire rope galvanized in accordance with ASTM A1023. Each lot of wire rope shall be accompanied by a Manufacturer’s Certificate of Compliance, a mill certificate, and a test report showing the wire rope meets the minimum breaking force requirements of ASTM A 1023.

9-16.4(4) Hardware
This section is revised to read:

Weldless steel rings shall be drop-forged steel and heat treated after forging; have a single pull, working load limit of at least 10,000 lbs; and meet performance requirements of Federal Specification RR-C-271D Type VI.

Thimbles required for all wire rope loops shall be standard weight, galvanized, and meet performance requirements of Federal Specification FF-T-276b Type II.
Wire rope clips shall have drop-forged steel bases, be galvanized, and meet performance requirements of Federal Specification FF-C-450 Type I Class 1.

9-16.4(5) Hog Rings and Tie Wire
This section including title is revised to read:

9-16.4(5) Fasteners and Lacing Wire
Fasteners shall consist of 11 gauge high tensile steel. Lacing wire shall consist of 9 gauge, zinc-coated steel wire conforming to ASTM A 641.

9-16.4(6) Grout
This section including title is deleted.

9-16.4(7) Anchor
This section including title and section number is revised to read:

9-16.4(6) Ground Anchors
Threaded bar ground anchors shall be deformed, continuously threaded, steel reinforcement bars conforming to either Section 9-07.2 or Section 9-07.11. Threaded bar ground anchors shall be either epoxy-coated in accordance with Sections 6-02.3(24)H and 9-07.3 or galvanized after fabrication in accordance with ASTM A 767 Class I.

Hollow-core anchor bars shall have continuous threads/deformations and be fabricated from steel tubing conforming to ASTM A 519. Couplers and nuts shall provide 100% of the guaranteed minimum tensile strength of the hollow core anchor bars.

Bearing plates shall conform to ASTM A 572 Grade 50 and shall be galvanized after fabrication in accordance with AASHTO M 111. Nuts shall conform to either AASHTO M 291 Grade B, hexagonal, or Section 9-07.11. Nuts shall be galvanized after fabrication in accordance with AASHTO M 111 for plate washers and AASHTO M 232 for all other hardware.

Grout for ground anchors shall be Grout Type 2 for Nonshrink Applications, conforming to Section 9-20.3(2).

Concrete for soil anchor deadmen shall be either commercial concrete conforming to Section 6-02.3(2)B or Class 3000 conforming to Section 6-02.

Steel reinforcing bars for soil anchor deadmen shall conform to Section 9-07.2, and shall be epoxy-coated in accordance with Sections 6-02.3(24)H and 9-07.3.

9-16.6(3) Posts
This section is revised to read:

Line posts for Types 1 and 2 glare screens shall be 2 inch inside diameter galvanized steel pipe with a nominal weight of 3.65 pounds per linear foot. End, corner, brace, and pull posts
for Type 1 Design A and B and Type 2 shall be 2 ½ inch inside diameter galvanized steel pipe with a nominal weight of 5.79 pounds per linear foot. Intermediate pull posts (braced line posts) shall be as specified for line posts.

The base material for the manufacture of steel pipes used for posts shall conform to the requirements of ASTM A 53, except the weight tolerance on tubular posts shall be applied as provided below.

Posts provided for glare screen will have an acceptance tolerance on the weight per linear foot, as specified, equal to plus or minus 5 percent. This tolerance will apply to each individual post.

All posts shall be galvanized in accordance with AASHTO M 181 Section 32. The minimum average zinc coating is per square foot of surface area. This area is defined as the total area inside and outside. A sample for computing the average of mass of coating is defined as a 12-inch piece cut from each end of the galvanized member.

9-16.6(5) Cable

This section including title is revised to read:

9-16.6(5) Vacant

9-16.6(6) Cable and Tension Wire Attachments

This section including title is revised to read:

9-16.6(6) Tension Wire Attachments

All tension wire attachments shall be galvanized steel conforming to the requirements of AASHTO M 232 unless otherwise specified. Eye bolts shall have either a shoulder or a back-up nut on the eye end and be provided with an eye nut where needed or standard hex nut and lock washer ¾-inch diameter for tension wire and of sufficient length to fasten to the type of posts used. Turnbuckles shall be of the shackle end type, ½ inch diameter, with standard take-up of 6 inches and provided with ¾ inch diameter pins.

9-16.6(9) Fabric Bands and Stretcher Bars

The first paragraph is revised to read:

Fabric bands shall be ½ inch by 1inch nominal. Stretcher bars shall be 3/16 inch by ¾ inch nominal or 5/16 inch diameter round bar nominal. A 5/16 inch diameter round stretcher bar shall be used with Type 1. Nominal shall be construed to be the area of the cross section of the shape obtained by multiplying the specified width by thickness. A variation of minus 5-percent from this theoretical area shall be construed as “nominal” size. All shall be galvanized to meet the requirements of ASTM F 626.

9-16.7 Vacant

This section including title is deleted in its entirety.
9-16.8 Weathering Steel Beam Guardrail
This section including title is deleted in its entirety.

SECTION 9-20, CONCRETE PATCHING MATERIAL, GROUT, AND MORTAR
January 2, 2012

9-20.3(3) Grout Type 3 for Unconfined Bearing Pad Applications
This section is revised to read:
Grout Type 3 shall be a prepackaged material meeting the requirements of ASTM C 928 – 
Table 1, R2 Concrete or Mortar.

9-20.3(4) Grout Type 4 for Multipurpose Applications
In the third sentence of the first paragraph, the reference “0.40” is revised to read “0.45”.

SECTION 9-23, CONCRETE CURING MATERIALS AND ADMIXTURES
August 5, 2013

9-23.2 Liquid Membrane-Forming Concrete Curing Compounds
In the first paragraph, “moisture loss” is revised to read “water retention”.

9-23.6(9) Type S Specific Performance Admixtures
The first sentence is revised to read the following two new sentences:
Type S Specific Performance admixtures are limited to ASR-mitigating, viscosity
modifying, shrinkage reducing, rheology-controlling, and workability-retaining admixtures.
They shall conform to the requirements of ASTM C 494 Type S.

SECTION 9-28, SIGNING MATERIALS AND FABRICATION
April 1, 2013

9-28.14(2) Steel Structures and Posts
“AASHTO M 291” is revised to read “ASTM A 563” and “AASHTO M 293” is revised to read
“ASTM F 436”.

SECTION 9-29, ILLUMINATION, SIGNAL, ELECTRICAL
August 5, 2013

9-29.1(4) Non-Metallic Conduit
This section is supplemented with the following new sub-section:
9-29.1(4)D Deflection Fittings
Deflection Fittings for use with rigid PVC conduit shall be as described in 9-29.1(2)A

9-29.2 Junction Boxes, Cable Vaults, and Pull Boxes
The section is supplemented with the following:

The Contractor shall perform quality control inspection. The Contracting Agency intends to perform Quality Assurance Inspection. By its inspection, the Contracting Agency intends only to verify the quality of that Work. This inspection shall not relieve the Contractor of any responsibility for identifying and replacing defective material and workmanship. Prior to the start of production of the precast concrete units, the Contractor shall advise the Engineer of the production schedule. The Contractor shall give the Inspector safe and free access to the Work. If the Inspector observes any nonspecification Work or unacceptable quality control practices, the Inspector will advise the plant manager. If the corrective action is not acceptable to the Engineer, the unit(s) will be rejected.

9-29.2(1) Standard Duty and Heavy-Duty Junction Boxes
The third paragraph is deleted and replaced with the following new paragraphs:

The Contractor shall provide shop drawings for all components, hardware, lid, frame, reinforcement, and box dimensions. The shop drawings shall be prepared by (or under the supervision of) a Professional Engineer, licensed under Title 18 RCW, State of Washington, in the branch of Civil or Structural, and each sheet shall include the following:

1. Professional Engineer's original signature, date of signature, original seal, registration number, and date of expiration.

2. The initials and dates of all participating design professionals

3. Clear notation of all revisions including identification of who authorized the revision, who made the revision, and the date of the revision.

4. Design calculations shall carry on the cover page, the Professional Engineer's original signature, date of signature, original seal, registration number, and date of expiration.

For each type of junction box, or whenever there is a change to the junction box design, a proof test, as defined in this Specification, shall be performed and new shop drawings submitted.

9-29.2(1)A Standard Duty Junction Boxes
The first paragraph is supplemented with the following:

All Standard Duty Junction Boxes placed in sidewalks, walkways, and shared use paths shall have slip resistant surfaces. Non-slip lids and frames shall be hot dip galvanized in accordance with AASHTO M 111.
The sub-paragraph’s titled “Concrete Junction Boxes” are revised to read:

Concrete Junction Boxes
The Standard Duty Concrete Junction Box steel frame, lid support, and lid shall be painted with a black paint containing rust inhibitors or painted with a shop applied, inorganic zinc primer in accordance with Section 6-07.3, or hot-dip galvanized in accordance with AASHTO M 111.

Concrete used in Standard Duty Junction Boxes shall have a minimum compressive strength of 6,000 psi when reinforced with a welded wire hoop, or 4,000 psi when reinforced with welded wire fabric or fiber reinforcement. The frame shall be anchored to the box by welding headed studs ½ by 3 inches long, as specified in Section 9-06.15, to the frame. The wire fabric shall be attached to the studs and frame with standard tie practices. The box shall contain ten studs located near the centerline of the frame and box wall. The studs shall be placed one anchor in each corner, one at the middle of each width and two equally spaced on each length of the box.

Materials for Type 1, 2, and 8 Concrete Junction Boxes shall conform to the following:

<table>
<thead>
<tr>
<th>Materials</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concrete</td>
<td>Section 6-02</td>
</tr>
<tr>
<td>Reinforcing Steel</td>
<td>Section 9-07</td>
</tr>
<tr>
<td>Fiber Reinforcing</td>
<td>ASTM C 1116, Type III</td>
</tr>
<tr>
<td>Lid</td>
<td>ASTM A 786 diamond plate steel</td>
</tr>
<tr>
<td>Slip Resistant Lid</td>
<td>ASTM A 36 steel</td>
</tr>
<tr>
<td>Frame</td>
<td>ASTM A 786 diamond plate steel or ASTM A36 steel</td>
</tr>
<tr>
<td>Slip Resistant Frame</td>
<td>ASTM A 36 steel</td>
</tr>
<tr>
<td>Lid Support</td>
<td>ASTM A 36, or ASTM A1011 Grade SS</td>
</tr>
<tr>
<td>Handle &amp; Handle support</td>
<td>ASTM A 36 steel or ASTM A1011 Grade CS or SS</td>
</tr>
<tr>
<td>Anchors (studs)</td>
<td>Section 9-06.15</td>
</tr>
<tr>
<td>Bolts, Studs, Nuts, Washers</td>
<td>ASTM F 593 or A 193, Type 304 or 316, or Stainless Steel grade 302, 304, or 316 steel in accordance with approved shop drawing</td>
</tr>
<tr>
<td>Locking and Latching Mechanism Hardware and Bolts</td>
<td>In accordance with approved shop drawings</td>
</tr>
</tbody>
</table>
Heavy-Duty Junction Boxes shall be concrete and have a minimum vertical load rating of 46,000 pounds without permanent deformation and 60,000 pounds without failure when tested in accordance with Section 9-29.2(1)C.

The Heavy-Duty Junction Box steel frame, lid support and lid shall be painted with a shop applied, inorganic zinc primer in accordance with Section 6-07.3.

Materials for Type 4, 5, and 6 Concrete Junction Boxes shall conform to the following:

<table>
<thead>
<tr>
<th>Materials</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concrete</td>
<td>Section 6-02</td>
</tr>
<tr>
<td>Reinforcing Steel</td>
<td>Section 9-07</td>
</tr>
<tr>
<td><strong>Lid</strong></td>
<td><strong>ASTM A 786 diamond plate steel, rolled from plate complying with ASTM A 572, grade 50 or ASTM A 588, and having a min. CVN toughness of 20 ft-lb at 40 degrees F.</strong></td>
</tr>
<tr>
<td>Frame and stiffener plates</td>
<td><strong>ASTM A 572 grade 50 or ASTM A 588, both with min. CVN toughness of 20 ft-lb at 40 degrees F</strong></td>
</tr>
<tr>
<td>Handle</td>
<td><strong>ASTM A 36 steel or ASTM A 1011 Grade CS or SS</strong></td>
</tr>
<tr>
<td>Anchors (studs)</td>
<td>Section 9-06.15</td>
</tr>
<tr>
<td>Bolts, Studs, Nuts, Washers</td>
<td><strong>ASTM F 593 or A 193, Type 304 or 316, or Stainless steel grade 302, 304, or 316 in accordance with approved shop drawing</strong></td>
</tr>
<tr>
<td>Hinges and Locking and</td>
<td><strong>In accordance with approved shop drawings</strong></td>
</tr>
<tr>
<td>Latching Mechanism</td>
<td></td>
</tr>
<tr>
<td>Hardware and Bolts</td>
<td></td>
</tr>
</tbody>
</table>

The lid stiffener plates shall bear on the frame, and be milled so that there is full even contact, around the perimeter, between the bearing seat and lid stiffener plates, after fabrication of the frame and lid. The bearing seat and lid perimeter bar shall be free from burrs, dirt, and other foreign debris that would prevent solid seating. Bolts and nuts shall be liberally coated with anti-seize compound. Bolts shall be installed snug tight. The bearing seat and lid perimeter bar shall be machined to allow a minimum of 75 percent of the bearing areas to be seated with a tolerance of 0.0 to 0.005 inches measured with a feeler gage. The bearing area percentage will be measured for each side of the lid as it bears on the frame.

9-29.2(1)C  Testing Requirements
The first paragraph is revised to read:
The Contractor shall provide for testing of junction boxes, cable vaults and pull boxes. Junction boxes, cable vaults and pull boxes shall be tested by an independent materials testing facility, and a test report issued documenting the results of the tests performed.

The second paragraph is revised to read:

For concrete junction boxes, vaults and pull boxes, the independent testing laboratory shall meet the requirements of AASHTO R 18 for Qualified Tester and Verified Test Equipment. The test shall be conducted in the presence of a Professional Engineer, licensed under Title 18 RCW, State of Washington, in the branch of Civil or Structural, and each test sheet shall have the Professional Engineer’s original signature, date of signature, original seal, registration number, and date of expiration. One copy of the test report shall be furnished to the Contracting Agency certifying that the box and cover meet or exceed the loading requirements for a concrete junction box, and shall include the following information:

1. Product identification.
2. Date of testing.
3. Description of testing apparatus and procedure.
4. All load deflection and failure data.
5. Weight of box and cover tested.
6. Upon completion of the required test(s) the box shall be loaded to failure.
7. A brief description of type and location of failure.

The third paragraph is revised to read:

For non-concrete junction boxes the independent testing laboratory shall meet the requirements of AASHTO R 18 for Qualified Tester and Verified Test Equipment. The test shall be conducted in the presence of a Professional Engineer, licensed under Title 18 RCW, State of Washington, in the branch of Civil or Structural, and each test sheet shall have the Professional Engineer’s original signature, date of signature, original seal, registration number, and date of expiration. One copy of the test report shall be furnished to the Contracting Agency certifying that the box and cover meet or exceed the loading requirements for a non-concrete junction box, and shall include the following information:

1. Product identification.
2. Date of testing.
3. Description of testing apparatus and procedure.
4. All load deflection data.

5. Weight of box and cover tested.

The first paragraph following the title “Testing for the Standard Duty Non-Concrete Junction Boxes” is revised to read:

Non-concrete Junction Boxes shall be tested as defined in the ANSI/SCTE 77-2007 Tier 15 test method with test load minimum of 22,500 lbs. In addition, the Contractor shall provide a Manufacture Certificate of Compliance for each non-concrete junction box installed.

9-29.2(2) Standard Duty and Heavy-Duty Cable Vaults and Pull Boxes

This section is revised to read:

Standard Duty and Heavy-Duty Cable Vaults and Pull Boxes shall be constructed as a concrete box and as a concrete lid. The lid for the Heavy-Duty and Standard Duty Cable Vaults and Pull Boxes shall be interchangeable and both shall fit the same box as shown in the Standard Plans.

The Contractor shall provide shop drawings for all components, including concrete box, Cast Iron Ring, Ductile Iron Lid, Steel Rings, and Lid. In addition, the shop drawings shall show placement of reinforcing steel, knock outs, and any other appurtenances. The shop drawing shall be prepared by or under the direct supervision of a Professional Engineer, licensed under Title 18 RCW, State of Washington, in the branch of Civil or Structural, and each sheet shall carry the following:

1. Professional Engineer’s original signature, date of signature, original seal, registration number, and date of expiration.

2. The initials and dates of all participating design professionals

3. Clear notation of all revisions including identification of who authorized the revision, who made the revision, and the date of the revision.

4. Design calculations shall carry on the cover page, the Professional Engineer’s original signature, date of signature, original seal, registration number, and date of expiration.

For each type of box or whenever there is a change to the Cable Vault or Pull box design, a proof test, as defined in this Specification, shall be performed and new shop drawings submitted.

9-29.2(2)A Standard Duty Cable Vaults and Pull Boxes

This section is revised to read:
Standard Duty Cable Vaults and Pull boxes shall be concrete and have a minimum load rating of 22,500 pounds and be tested in accordance with Section 9-29.2(1)C for concrete Standard Duty Junction Boxes.

Concrete for standard duty cable vaults and pull boxes shall have a minimum compressive strength of 4,000 psi. The lid frame shall be anchored to the vault/box concrete lid by welding headed studs ¾ by 3 inches long, as specified in Section 9-06.15, to the frame. The wire fabric shall be attached to the studs and frame with standard tie practices. The vault/box concrete lid shall contain ten studs located near the centerline of the frame and wall. Studs shall be placed one anchor in each corner, one at the middle of each width and two equally spaced on each length of the vault/box. The steel frame, lid support, and lid shall be painted with a black paint containing rust inhibitors or painted with a shop applied, inorganic zinc primer in accordance with Section 6-07.3 or hot-dip galvanized in accordance with ASTM M 111.

All Standard Duty Cable Vaults and Pull Boxes placed in sidewalks, walkways, and shared-use paths shall have slip-resistant surfaces. The steel frame, lid support, and lid for the Standard Duty Cable Vaults and Pull Boxes shall be hot-dip galvanized.

Materials for Standard Duty Cable Vaults and Pull Boxes shall conform to the following:

<table>
<thead>
<tr>
<th>Materials</th>
<th>Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concrete</td>
<td>Section 6-02</td>
</tr>
<tr>
<td>Reinforcing Steel</td>
<td>Section 9-07</td>
</tr>
<tr>
<td>Lid</td>
<td>ASTM A 786 diamond plate steel</td>
</tr>
<tr>
<td>Slip Resistant Lid</td>
<td>ASTM A 36 Steel</td>
</tr>
<tr>
<td>Frame</td>
<td>ASTM A 786 diamond plate steel or ASTM A 36</td>
</tr>
<tr>
<td>Slip Resistant Frame</td>
<td>ASTM A 36 Steel</td>
</tr>
<tr>
<td>Lid Support</td>
<td>ASTM A 36 Steel, or ASTM A 1011 Grade SS</td>
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<tr>
<td>Handle &amp; Handle Support</td>
<td>ASTM A 36 steel or ASTM A 1011 Grade CS or SS</td>
</tr>
<tr>
<td>Anchors (studs)</td>
<td>Section 9-06.15</td>
</tr>
<tr>
<td>Bolts, Studs, Nuts, Washers</td>
<td>ASTM F593 or A 193, type 304 or 316, or Stainless steel grade 302, 304, 316 per approved shop drawing</td>
</tr>
<tr>
<td>Hinges and Locking Mechanism Hardware and Bolts</td>
<td>In accordance with approved shop drawings</td>
</tr>
</tbody>
</table>

9-29.2(2)B  Heavy-Duty Cable Vaults and Pull Boxes

This section is revised to read:
Heavy-Duty Cable Vaults and Pull Boxes shall be constructed of concrete having a minimum compressive strength of 4,000 psi, and have a minimum vertical load rating of 46,000 pounds without permanent deformation and 60,000 pounds without failure when tested in accordance with Section 9-29.2(1)C for Heavy-Duty Junction Boxes.

Materials for Heavy Duty Cable Vaults and Pull boxes shall conform to the following:

<table>
<thead>
<tr>
<th>Materials</th>
<th>Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concrete</td>
<td>Section 6-02</td>
</tr>
<tr>
<td>Reinforcing Steel</td>
<td>Section 9-07</td>
</tr>
<tr>
<td>Cover</td>
<td>Section 9-05.15(1)</td>
</tr>
<tr>
<td>Ring</td>
<td>Section 9-05.15(1)</td>
</tr>
<tr>
<td>Anchors (studs)</td>
<td>Section 9-06.15</td>
</tr>
<tr>
<td>Bolts, Nuts, Washers</td>
<td>ASTM F 593 or A 193, Type 304 or 316, or Stainless steel grade 302, 304, 316 in accordance with approved shop drawing</td>
</tr>
</tbody>
</table>

9-29.6(2) Slip Base Hardware

“AASHTO M 291” is revised to read “ASTM A 563”, “AASHTO M 164” is revised to read “ASTM A 325”, and “AASHTO M 293” is revised to read “ASTM F 436.”

9-29.6(5) Foundation Hardware

“AASHTO M 291” is revised to read “ASTM A 563.”

9-29.10 Luminaires

The third paragraph is revised to read:

All luminaires shall be provided with markers for positive identification of light source type and wattage in accordance with ANSI C136.15-2011. Legends shall be sealed with transparent film resistant to dust, weather, and ultraviolet exposure.

9-29.10(2) Decorative Luminaries

The second sentence in the third paragraph is deleted.

9-29.13 Traffic Signal Controllers

This section and all sub-sections including title is revised to read:

9-29.13 Control Cabinet Assemblies

Control cabinet assemblies shall include all necessary equipment and auxiliary equipment for controlling the operation of traffic signals, programmable message signs, illumination systems, ramp meters, data stations, CCTV, and similar systems as required for the specific application. Traffic Signal Controller Cabinet Assemblies shall meet the requirements of the NEMA TS1 and TS2 specification or the California Department of Transportation “Transportation Electrical Equipment Specifications” (TEES) dated March 12, 2009 as defined in this specification.
9-29.13(1) Environmental, Performance, and Test Standards for Solid-State Traffic Controller Assemblies
The scope of this Specification includes the controller of solid-state design installed in a weatherproof controller cabinet. The controller assembly includes the cabinet, controller unit, load switches, signal conflict monitoring circuitry, accessory logic circuitry, AC line filters, vehicle detectors, coordination equipment and interface, and preemption equipment. NEMA control assemblies shall meet or exceed current NEMA TS 1 Environmental Standards. Normal operation will be required while the control assembly is subjected to any combination of high and low environmental limits (such as low voltage at high temperature with high repetition noise transients). All other control equipment shall meet the environmental requirements of California Department of Transportation “Transportation Electrical Equipment Specifications” (TEES) dated March 12, 2009.

The Contractor shall furnish to the Contracting Agency all guarantees and warranties furnished as a normal trade practice for all control equipment provided.

9-29.13(2) Manufacturing Quality
The fabricator of the Control, cabinet Assemblies shall perform quality control (QC) inspections based on their QC program. Their QC program shall be submitted and approved by WSDOT at least annually. The fabricator of the controller shall certify that the controller meets all requirements of the Standard Specifications and Special Provisions for the specific application.

The QC program shall include, but not be limited to, the following:

1. Quality Statement
2. Individual responsible for quality (organizational chart)
3. Fabrication procedures
4. Test procedures
5. Documented inspection reports
6. Documented test reports
7. Certification package

9-29.13(2)A Traffic Signal Controller Assembly Testing
Each traffic signal controller assembly shall be tested as follows. The supplier shall:
1. Seven days prior to shipping, arrange appointment for controller cabinet assembly, and testing at the WSDOT Materials Laboratory or the facility designated in the Special Provisions.

2. Assembly shall be defined as but not limited to tightening all screws, nuts and bolts, verifying that all wiring is clear of moving parts and properly secured, installing all pluggables, connecting all cables, Verify that all Contract required documents are present, proper documentation is provided, and all equipment required by the Contract is installed.

3. The assembly shall be done at the designated WSDOT facility in the presence of WSDOT personnel.

4. The supplier shall demonstrate that all of the functions required by this Specification and the Contract Plans and Special Provisions perform as intended. Demonstration shall include but not be limited to energizing the cabinet and verifying that all 8 phases, 4 pedestrian movements, 4 overlaps (as required by the Contract Provisions) operate in accordance with Section 9-29.13. The supplier shall place the controller in minimum recall with interval timing set at convenient value for testing purposes. Upon a satisfactory demonstration the controller assembly will then be accepted by WSDOT for testing.

5. If the assembly and acceptance for testing is not complete within 5 working days of delivery, the Project Engineer may authorize the return of the assembly to the supplier, with collect freight charges to the supplier.

6. The Contractor will be notified when the testing is complete, and where the assembly is to be picked-up for delivery to the project.

7. The supplier has 5 working days to repair or replace any components that fail during the testing process at no cost to the Contracting Agency. A failure shall be defined as a component that no longer functions as intended under the conditions required or does not meet the requirements of the Contract Specifications and is at the sole discretion of WSDOT.

8. Any part or component of the controller assembly, including the cabinet that is rejected shall not be submitted for use by WSDOT or any City or County in the State of Washington.

9-29.13(3) Traffic Signal Controller
The traffic signal controller shall conform to the Contract requirements and the applicable Specifications as listed below: All solid-state electronic traffic-actuated controllers and their supplemental devices shall employ digital timing methods.
A. NEMA control and all auxiliary equipment shall conform to current NEMA TS1 or TS2 Specification. Every pin of every connecting plug shall be utilized as described within the NEMA requirement, except that those pins identified as “spare” or “future” shall remain unused.

B. Type 170E controllers shall conform to the TEES. The 170E controller shall be provided with a program card, one blank ROM chip, and two 64K non-volatile memory chips.

C. Type 170E/HC-11 controllers shall conform to the current Oregon Department of Transportation Specification for model 170E/HC-11 controller. The 170E controller with the HC11 chip shall be compatible with the software specified in the Contract. The controller shall be provided with one ROM chip and one 64K non-volatile memory chip.

D. Vacant

E. Type 2070 controllers shall conform to the TEES. The standard 2070 controller shall consist of the following:

<table>
<thead>
<tr>
<th></th>
<th>2070</th>
<th>2070E</th>
<th>2070N1</th>
</tr>
</thead>
<tbody>
<tr>
<td>2070-5 VME cage</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2070-1E CPU Card</td>
<td>2070-1E CPU Card</td>
<td>2070-1E CPU Card</td>
<td></td>
</tr>
<tr>
<td>2070-3B Front Panel</td>
<td>2070-3B Front Panel</td>
<td>2070-3B Front Panel</td>
<td></td>
</tr>
<tr>
<td>2070-4 Power Supply</td>
<td>2070-4 Power Supply</td>
<td>2070-4 Power Supply</td>
<td></td>
</tr>
<tr>
<td>2070-2A Field I/O</td>
<td>2070-2A Field I/O</td>
<td>2070-2B Field I/O</td>
<td></td>
</tr>
<tr>
<td>X</td>
<td>X</td>
<td>2070-8 Interface</td>
<td></td>
</tr>
</tbody>
</table>

9-29.13(4) Traffic-Signal Controller Software

All traffic signal controllers shall operate with software specified in the contract.

Traffic-actuated controllers shall be electronic devices which, when connected to traffic detectors or other means of actuation, or both, shall operate the electrical traffic signal system at one or more intersections.

If the complete traffic controller defined in the Special Provision requires NTCIP compliance the following are the minimum requirements for NTCIP operation.

Communication

The traffic controller hardware and software shall communicate with the central computer in a polled multi-drop operation. In the polled multi-drop operation, several
traffic controllers shall share the same communication channel, with each controller assigned a unique ID number. Controller ID numbers shall conform to the NTCIP requirements for address numbers. A traffic controller shall only reply to messages labeled with its ID. In polled multi-drop mode, traffic controllers never initiate communication, but merely transmit their responses to messages from the central computer.

A laptop computer connected to the traffic controller’s local communication port shall have the same control and diagnostic capabilities as the central computer. However, local laptop control capability shall be limited to that traffic controller.

**NTCIP Requirements**

The traffic controller software shall comply with the National Transportation Communications for ITS Protocol (NTCIP) documents and all related errata sheets published before July 1, 1999 and as referenced herein.

The traffic controller software shall support the following standards:

1. NTCIP 1101, *Simple Transportation Management Framework* (STMF), Conformance Level 1 (Simple Network Management Protocol (SNMP))

2. NTCIP 2001, *Class B Profile*. All serial ports on the device shall support communications according to these standards.


4. NTCIP 2201, *NTCIP TP-Null Transport Profile Null* (TP-NULL)

The traffic controller software shall implement all mandatory objects of all mandatory conformance groups as defined in NTCIP 1201, *Global Object Definitions*, and NTCIP 1202, *Object Definitions for Actuated Traffic Signal Controller Units*. Software shall implement the following conformance groups:

**NTCIP 1202, Object Definitions for ASC**

<table>
<thead>
<tr>
<th>Conformance Group</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Configuration</td>
<td>1201</td>
</tr>
<tr>
<td>Time Management</td>
<td>2.2</td>
</tr>
<tr>
<td>Time Base Event Schedule</td>
<td></td>
</tr>
<tr>
<td>Report</td>
<td>2.5</td>
</tr>
<tr>
<td>Phase</td>
<td>1202</td>
</tr>
<tr>
<td>Rings</td>
<td>2.8</td>
</tr>
<tr>
<td>Detector</td>
<td>2.3</td>
</tr>
<tr>
<td>Unit</td>
<td>2.4</td>
</tr>
<tr>
<td>Preempt</td>
<td>2.7</td>
</tr>
<tr>
<td>Time Base</td>
<td>2.6</td>
</tr>
</tbody>
</table>
The software shall implement the following optional objects:

Objects required by these specifications shall support all values within its standardized range. The standardized range is defined by a size, range, or enumerated listing indicated in the object’s SYNTAX field and/or through descriptive text in the object’s description field. The following list indicates the modified object requirements for these objects.

<table>
<thead>
<tr>
<th>Object Name</th>
<th>Object ID</th>
<th>Minimum Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global Configuration</td>
<td>moduleType</td>
<td>Value 3</td>
</tr>
<tr>
<td>Database Management</td>
<td>dBCreateTransaction</td>
<td>All Values</td>
</tr>
<tr>
<td></td>
<td>dBErrorType</td>
<td>All values</td>
</tr>
<tr>
<td>Time Management</td>
<td>globsIDaylightSavings</td>
<td>Values 2 and 3</td>
</tr>
<tr>
<td>Timebase Events Schedule</td>
<td>maxTimeBaseScheduleEntries</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>MaxDayPlans</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>MaxDayEvents</td>
<td>10</td>
</tr>
<tr>
<td>Report</td>
<td>maxEventLogCongifs</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>MventConfigMode</td>
<td>Values 2 thru 5</td>
</tr>
<tr>
<td></td>
<td>MventConfigAction</td>
<td>Values 2 and 3</td>
</tr>
<tr>
<td></td>
<td>MaxEventLogSize</td>
<td>255</td>
</tr>
<tr>
<td></td>
<td>MaxEventClasses</td>
<td>7</td>
</tr>
<tr>
<td>PMPP</td>
<td>maxGroupAddress</td>
<td>2</td>
</tr>
<tr>
<td>ASC Phase</td>
<td>maxPhases</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>pPhaseStartp</td>
<td>Values 2 thru 6</td>
</tr>
<tr>
<td></td>
<td>phaseOptions</td>
<td>All Values</td>
</tr>
<tr>
<td></td>
<td>maxPhaseGroups</td>
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</tr>
<tr>
<td>Rings</td>
<td>maxRings</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>maxSequences</td>
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<td>Detector</td>
<td>maxVehicleDetectors</td>
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<tr>
<td></td>
<td>vehicleDetectorOptions</td>
<td>All Values</td>
</tr>
<tr>
<td></td>
<td>maxPedestrianDetector</td>
<td>8</td>
</tr>
<tr>
<td>Unit</td>
<td>unitAutoPedestrianClear</td>
<td>All Values</td>
</tr>
<tr>
<td></td>
<td>unitControlStatus</td>
<td>All Values</td>
</tr>
<tr>
<td></td>
<td>unitFlashStatus</td>
<td>All Values</td>
</tr>
<tr>
<td></td>
<td>unitControl</td>
<td>All Values</td>
</tr>
<tr>
<td></td>
<td>maxAlarmGroups</td>
<td>1</td>
</tr>
<tr>
<td>Special Function</td>
<td>maxSpecialFunctionsOutputs</td>
<td>8</td>
</tr>
<tr>
<td>Coordination</td>
<td>coordCorrectionMode</td>
<td>Values 2 thru 4</td>
</tr>
<tr>
<td></td>
<td>coordMaximumMode</td>
<td>Values 2 thru 4</td>
</tr>
<tr>
<td></td>
<td>coordForceMode</td>
<td>Values 2 and 3</td>
</tr>
</tbody>
</table>
maxPatterns 48  
patternTableType Either 2,3 or 4  
maxSplits 16 
splitMode Values 2 thru 7  
localFreeStatus Values 2 thru 11 
Time Base maxTimebaseAscAction 48  
Preempt maxPreempts 4  
preemptControl All Values 
preemptState Values 2 thru 9  
Overlaps maxOverlaps 4 
overlapType Value 2 and 3  
maxOverlapstatusGroup 1 
Channels maxChannels 16 
channelControlGroup Values 2 thru 4 
channelFlash Value 0,2,4,6,8,10,12 and 14 
channelDim Values 0 thru 15 
maxChannelStatusGroup 2 
TS 2 Port 1 maxPortAddresses 18 
port1Table Values 2 and 3 

* values in excess of the minimum requirement are considered to meet the specification.

**Documentation**
Software shall be supplied with all documentation on a CD. ASCII versions of the following Management Information Base (MIB) files in Abstract Syntax Notation 1 (ASN.1) format shall be provided on CD-ROM:

1. The official MIB Module referenced by the device functionality.

2. A manufacturer-specific version of the official MIB Module with the non-standardized range indicated in the SYNTAX field. The filename shall match the official MIB Module, with the extension “spc”.

3. A MIB Module of all manufacturer-specific objects supported by the device with accurate and meaningful DESCRIPTION fields and the supported ranges indicated in the SYNTAX field.

**9-29.13(5) Flashing Operations**
All traffic signals shall be equipped for flashing operation of signal displays. Controllers and cabinets shall be programmed for flashing red displays for all approaches. During flashing operation, all pedestrian circuits shall be de-energized.
Actuated traffic signal control mechanisms shall be capable of entry into flash operation and return to stop-and-go operation as follows:

1. **Terminal Strip Input (Remote Flash).** When called as a function of a terminal strip input, the controller shall provide both sequenced entry into flash and sequenced return to normal operation consistent with the requirements of the latest edition of the Manual on Uniform Traffic Control Devices.

2. **Police Panel Switch.** When the flash-automatic switch located behind the police panel door is turned to the flash position, the signals shall immediately revert to flash; and, the controller shall have a stop time input applied. When the switch is placed on automatic, the controller shall immediately time an 6 second all red period then resume stop-and-go operations at the beginning of major street green.

3. **Controller Cabinet Switches.** When the flash-automatic switch located inside the controller cabinet is placed in the flash position, the signals shall immediately revert to flash; however, the controller shall not have a stop time input applied. When the flash-automatic switch is placed in the automatic position, the controller shall immediately time a 6 second all red period, then resume stop-and-go operation at the beginning of the major green.

4. **Power Interruption.** On “NEMA” controllers any power interruption longer than 475 plus or minus 25 milliseconds, signals shall re-energize consistent with No. 2 above to ensure an 6-second flash period prior to the start of major street green. A power interruption of less than 475 plus or minus 25 milliseconds shall not cause resequencing of the controller and the signal displays shall re-energize without change. Type 170 controllers shall re-energize consistent with No. 2 above after a power interruption of 1.75 plus or minus 0.25 seconds. The 6-second flash period will not be required. Any power interruption to a 2070 type controller shall result in a 6 second flash period once power is restored.

5. **Conflict Monitor.** Upon detecting a fault condition the conflict monitor shall immediately cause the signal to revert to flash and the controller to stop time. After the conflict monitor has been reset, the controller shall immediately take command of the signal displays at the beginning of major street green.

**9-29.13(6) Emergency Preemption**
Immediately after a valid call has been received, the preemption equipment shall cause the controller to terminate the appropriate phases as necessary with the required clearance intervals and enter any programed subsequent preemption sequence. Preemption sequences shall be as noted in the Contract.
9-29.13(7) Wiring Diagrams
Schematic wiring diagrams of the controllers, cabinets and auxiliary equipment shall be submitted when the assemblies are delivered. The diagram shall show in detail all circuits and parts. The parts shall be identified by name or number in a manner readily interpreted. Two hard copies of the cabinet wiring diagram and component wiring diagrams shall be furnished with each cabinet and a pdf file of the cabinet wiring and component drawings. The schematic drawing shall consist of a single sheet, detailing all circuits and parts, not to exceed 52-inches by 72-inches. The cabinet wiring diagram shall indicate and identify all wire terminations, all plug connectors, and the locations of all equipment in the cabinet. Included in the diagram shall be an intersection sketch identifying all heads, detectors, and push buttons and a phase diagram.

9-29.13(8) Generator Transfer Switch
When specified in the contract, a generator transfer switch shall be included. The Generator Transfer Switch shall be capable of switching power from a utility power source to an external generator power source.

The Transfer Switch enclosure shall be of identical materials and dimensions and installation methods as the Police Panel type enclosure specified in the first paragraph of Special Provision 9-29.13(10)D except that the enclosure door shall include a spring loaded construction core lock capable of accepting a Best 6-pin CX series core. The core lock shall be installed with a green construction core. Upon contract completion, two master keys for the construction core shall be delivered to the Engineer.

The enclosure shall include the following Transfer Switch equipment:

   1. One Nema L5-30P Flanged Inlet generator connector

   2. One Utility power indicator light

   3. One generator indicator light

   4. Two 30 amp, 120 volt, single pole, single phase, circuit breakers. One circuit breaker shall be labeled “Generator” and the other circuit breaker shall be labeled “Utility”. Both labels shall be engraved phenolic name plates.

   5. A mechanical lock out feature that prevents the Utility circuit breaker and the Generator circuit breaker from being in the ON position at the same time. The circuit breakers shall be capable of being independently switched.

   6. The conductors from the Generator Transfer Switch enclosure to the cabinet circuit breaker shall be enclosed in nylon mesh sleeve.

   7. The enclosure door shall be labeled with the letters “GTS”.
9-29.13(9) Vacant

9-29.13(10) NEMA, Type 170E, 2070 Controllers and Cabinets

9-29.13(10)A Auxiliary Equipment for NEMA Controllers

The following auxiliary equipment shall be furnished and installed in each cabinet for NEMA traffic-actuated controllers:

1. A solid-state Type 3 NEMA flasher with flash-transfer relay which will cut in the flasher and isolate the controller from light circuits. See Section 9-29.13(5) for operational requirements.

2. Modular solid state relay load switches of sufficient number to provide for each vehicle phase (including future phases if shown in the plans), each pedestrian phase and preemption sequence indicated in the Contract. Type P & R cabinets shall include a fully wired 16-position back panel. Solid-state load switches shall conform to NEMA standards except only optically isolated load switches will be allowed. Load switches shall include indicator lights on the input and output circuits. The controller cabinet shall have all cabinet wiring installed for eight vehicle phases, four pedestrian phases, four emergency pre-empt, four overlaps (OL A, B, C, D).

3. A power panel with:

   a. A control-display breaker sized to provide 125 percent overload protection for all control equipment and signal displays, 20 ampere minimum.

   b. A 15 ampere accessory breaker wired parallel to the control display breaker. The breaker will carry accessory loads, including vent fan, cabinet light, plug receptacle, etc.

   c. A busbar isolated from ground and unfused for the neutral side of power supply.

   d. A radio interference suppressor installed at the input power point. Interference suppressers shall be of a design which will minimize interference in both broadcast and aircraft frequencies, and shall provide a minimum attenuation of 50 decibels over a frequency range of 200 kilohertz to 75 megahertz when used in connection with normal installations. The interference filters furnished shall be hermetically sealed in a substantial case filled with a suitable insulating compound. Terminals shall be nickel plated, 10-24 brass studs of sufficient external length to provide space to connect two 8...
AWG wires, and shall be so mounted that they cannot be turned in the case.

Ungrounded terminals shall be insulated from each other and shall maintain a surface leakage distance of not less than \( \frac{1}{2} \)-inch between any exposed current conductor and any other metallic parts with an insulation factor of 100-200 megohms dependent on external circuit conditions.

Suppressers shall be designed for operations on 50 amperes, 125 volts, 60 cycles, single wire circuits, and shall meet standards of the Underwriters' Laboratories and the Radio Manufacturers Association.

e. A Surge Protection Device connected to the controller power circuit for protection against voltage abnormalities of 1 cycle or less duration. The Surge Protection Device shall be a solid state high energy circuit containing no spark gap, gas tube, or crow bar component. The device shall provide transient protection between neutral and ground, line and ground, as well as line and neutral. If the protection circuits fail, they shall fail to an open circuit condition. The minimum interrupting capacity shall be 10,000 Amps. The Voltage Protection Rating shall be 600 volts or less when subjected to an impulse of 6,000 volts, 3,000 amp source impedance, 8.0/20 microsecond waveform as described in UL 1449. In addition, the device shall dissipate a 13,000 Amp or greater repeated single peak 8/20 microsecond current impulse, and withstand, without failure or permanent damage, one full cycle at 264 volts RMS. The device shall contain circuitry to prevent self-induced regenerative ringing. There shall be a failure warning indicator which shall illuminate a red light or extinguish a green light when the device has failed and is no longer operable.

f. Cabinet ground busbar independent (150K ohms minimum) of neutral.

4. A police panel located behind the police panel door with a flash automatic switch and a control-display power line on-off switch. See Section 9-29.13(5) for operational requirements.

5. An auxiliary control panel located inside the controller cabinet with a flash-automatic switch and a controller on-off switch. See Section 9-29.13(5) for operational requirements. A three wire 15 ampere plug receptacle with grounding contact and 15 ampere ground fault interrupter shall also be provided on the panel.
6. A conflict monitor conforming to NEMA standards. See Section 9-29.13(5) for operational requirements. The unit shall monitor conflicting signal indications at the field connection terminals. The unit shall be wired in a manner such that the signal will revert to flash if the conflict monitor is removed from service.

   Supplemental loads not to exceed 10 watts per monitored circuit or other means, shall be provided to prevent conflict monitor actuation caused by dimming or lamp burn-out. Supplemental loads shall be installed on the control side of the field terminals. Conflict monitors shall include a minimum of one indicator light for each phase used. The monitoring capacity of the unit shall be compatible with the controller frame size. Conflict monitors shall include a program card.

7. A “Detector Panel”, as specified in Standard Specification Section 9-29.13(10)B, shall be installed. The panel shall be mounted on the inside of the front cabinet door. The detector panel shall be constructed as a single unit. Detector switches with separate operate, test, and off positions shall be provided for each field detector input circuit. A high intensity light emitting diode (LED) shall be provided for each switch. The lamp shall energize upon vehicle, pedestrian or test switch actuation. The test switch shall provide a spring loaded momentary contact that will place a call into the controller. When in the OFF position, respective detector circuits will be disconnected. In the operate position, each respective detector circuit shall operate normally. Switches shall be provided on the panel with labels and functions as follows:

   a. Display On — Detector indicator lights shall operate consistent with their respective switches.

   b. Display Off — detector indicator lights shall be de-energized.

A means of disconnecting all wiring entering the panel shall be provided. The disconnect shall include a means to jumper detection calls when the display panel is disconnected. All switches on the panel shall be marked with its associated Plan detector number. All markers shall be permanent.

8. Insulated terminal blocks of sufficient number to provide a termination for all field wiring. A minimum of 12 spare terminals shall be provided. Field wire connection terminal blocks shall be 600 volt, heavy duty, barrier type, except loop detector lead-ins, which may be 300 volt. The 600 volt type-terminal strips shall be provided with a field-side and a control-side connector separated by a marker strip. The 300 volt type shall have a marker strip, installed on the right side of vertical terminal strips or below horizontal terminal strips. The marker strip shall bear the circuit number indicated in the plans and shall be engraved. Each connector shall
be a screw type with No. 8 post capable of accepting no less than three 12 AWG wires fitted with spade tips.

9. A vent fan with adjustable thermostat. The minimum CFM rating of the fan shall exceed three times the cabinet volume.

10. VACANT

11. All wiring within the cabinet, exclusive of wiring installed by the signal controller manufacturer, shall have insulation conforming to the requirements of Section 9-29.3. Cabinet wiring shall be trimmed to eliminate all slack and shall be laced or bound together with nylon wraps or equivalent. All terminals, shall be numbered and permanently identified with PVC or polyolefin wire marking sleeve consistent with the cabinet wiring diagram provided by the signal controller manufacturer and the Contract. The cabinet will be completely wired so that the only requirement to make a field location completely operational is to attach field power and ground wiring. Internal cabinet wiring shall not utilize the field side connections of the terminal strip intended for termination of field wires.

12. Cabinet wiring diagram and component wiring diagrams meeting the requirements of 9-29.13(7) shall be furnished with each cabinet. Each cabinet shall be equipped with a shelf mounted roll out drawer mounted directly below the controller to house one or more cabinet wiring diagrams. The cabinet wiring diagram shall indicate and identify all wire terminations, all plug connectors, and the locations of all equipment in the cabinet. Included in the diagram shall be an intersection sketch identifying all heads, detectors, and push buttons; and a phase diagram.

13. Each vehicle detector amplifier, video detection output channel pedestrian call isolation unit, phase selector, discriminator, and load switch shall be identified with semi-permanent stick-on type label. The following information shall be included:

a. Vehicle Detector Amplifier Channel

   1. Loop number

   2. Assigned phase(s)

b. Ped Call Isolation Unit

   1. Push button number

   2. Assigned phase(s)
c. Load Switches

1. Signal head number
2. Assigned phase(s)

d. Phase Selectors

1. Circuit Letter
2. Phase(s) called

The label shall be placed on the face of the unit. It shall not block any switch, light, or operational words on the unit. The lettering on this label shall be neat, legible, and easily read from a distance of approximately 6-feet.

9-29.13(10)B Auxiliary Equipment for Type 170E, 2070 Assemblies
The following requirements apply to required auxiliary equipment furnished with Type 170E, 170E-HC-11 and 2070 controllers:

A. Flashers, flash transfer relays, conflict monitor, AC isolators, DC isolators, discriminator modules, program modules, modem modules, breakers, buses, police panel switches, receptacle requirement, vent fan and auxiliary control panel switches shall conform to the requirements noted in the TEES.

B. Flashing operation shall conform to Section 9-29.13(5), except the 6-second flash period described in Item 2 of that section will not be required. Emergency preemption shall conform to Section 9-29.13(6).

C. Input and output terminals shall be installed with a marking strip with field wire numbers noted in the Contract embossed on the strip. All cabinet and field conductor shall have a PVC or polyolefin wire marking sleeve installed, matching the input and output terminals above. Marking on sleeves shall be embossed or type written.

D. The input panel terminal blocks TB 2 through TB 9 and associated cable to the input files as described in the TEES shall be provided in all control assemblies.

E. Supplemental load resistor, not less than 2000 ohms and not greater than 5000 ohms not to exceed 10 watts per monitored circuit, shall be provided to prevent conflict monitor actuation caused by dimming or lamp burn-out.
An individual supplemental load resistor shall be installed within the output file, and shall be installed on each of the following terminal circuits:

<table>
<thead>
<tr>
<th>FT1-105 (SP 4P-Y)</th>
<th>FT1-111 (SP 8P-Y)</th>
<th>FT2-114 (SP 2P-Y)</th>
<th>FT2-120 (SP 6P-Y)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FT2-117 (SP 3-Y)</td>
<td>FT2-118 (SP 3-G)</td>
<td>FT2-123 (SP 7-Y)</td>
<td>FT2-124 (SP 7-G)</td>
</tr>
<tr>
<td>FT3-126 (SP 1-Y)</td>
<td>FT3-127 (SP 1-G)</td>
<td>FT3-132 (SP 5-Y)</td>
<td>FT3-133 (SP 5-G)</td>
</tr>
</tbody>
</table>

F. Load switches of sufficient quantity to fully populate the output files shall conform to TEES and shall have indicator lights on input and output circuits.

G. A detection panel, which shall be constructed as a single unit. Detector switches with separate operate, test, and off positions shall be provided for each field detector input circuit. A high intensity light emitting diode (LED) shall be provided for each switch. The lamp shall energize upon vehicle, pedestrian or test switch actuation. The test switch shall provide a spring loaded momentary contact that will place a call into the controller. When in the OFF position, respective detector circuits will be disconnected. In the operate position, each respective detector circuit shall operate normally. Switches shall be provided on the panel with labels and functions as follows:

a. Display On — Detector indicator lights shall operate consistent with their respective switches.

b. Display Off — detector indicator lights shall be de-energized.

A means of disconnecting all wiring entering the panel shall be provided. The disconnect shall include a means to jumper detection calls when the display panel is disconnected. All switches on the panel shall be marked with its associated Plan detector number. All markers shall be permanent.

H. A “Detector Termination and Interface Panel” shall be provided. When viewing the cabinet from the back, the panel shall be located on the upper left hand side of the cabinet. The panel shall be electrically located between the “detection Panel” and the C-1 connector. The panel shall utilize insulated terminal blocks and each connector shall be a screw type with post.

I. Each switchpack socket shall have pin 11 common to Nutral.

J. The AC input Service Panel Assembly (SPA), line voltage filter, transient surge protection and all neutral bus bars and equipment ground bus bars shall be on the right side of the cabinet, mounted no more that 18 inches
from the bottom of the cabinet when viewed from the rear, and meet the
requirements described in TEES.

K. The PED yellow terminals on the CMU edge connector shall be extended
with a 2 foot wire, coiled, heat shrink tipped and labeled for the correct
corresponding terminal as CH-13Y/CMU-8, CH-14Y/CMU-11, CH-
15Y/CMU-K, CH-16Y/CMU-N.

L. An “Absence Of Red Programming Assembly” shall be provided. There
shall be provided on the back panel of the output file, 17 accessible
jumper plug attachment areas, made up of three male pins per position
(one, for each conflict monitor channel and one for red enable function).
Each jumper plug shall be a two position connector. It shall be possible,
by inserting and positioning one of the 16 connectors on the right two
pins on the monitor board, to apply 120 VAC into a corresponding
channel of the conflict monitor red channels. The connection between the
red monitor board and the conflict monitor shall be accomplished via a 20
pin ribbon cable and the industry standard P-20 connector that attaches on
the front panel of the monitor. It shall be possible, by inserting and
positioning one of the 16 jumper plugs on the two left pins on the monitor
board, to enable the corresponding channel to monitor for red fault by the
conflict monitor. There shall be installed on the red monitor board a red
fail monitor disable function that controls the 120 VAC red enable signal
into the conflict monitor. During stop-and-go operation, 120VAC is sent
via pin #20 on the P20 connector to enable red failure monitoring on the
conflict monitor by having the connector moved to the side labeled “Red
Enable”. If this is disengaged by moving the connector to the side labeled
“Red Relay”, then 120VAC is removed from pin #20, and the conflict
monitor will no longer monitor for red fail faults. The red enable function
will also be wired such that if the traffic signal is in cabinet flash, then
there will be no voltage on pin #20, and the conflict monitor will not
monitor for red fail faults.

M. Each cabinet shall be provided with at least 20 empty neutral connections
to accommodate field wiring. The neutral bus bars shall be of the style in
which a lug is not needed to be applied to the neutral field wire(s). All of
the neutral bars shall be secured in accordance with the TEES. All neutral
bars shall be at the same electrical potential.

N. The main breaker on the SPA shall be provided with a cover to prevent
accidental tripping. The cover shall be removable and replaceable without
the use of tools. VACANT

O. **Equipment Branch Breaker**—The duplex receptacle on the rear of either
PDA #2L or 3L shall be wired in parallel with the ground fault current
interrupt receptacle on the front of the power supply. The ground fault
current interrupt receptacle being in the “Test” mode shall not remove power to the rear receptacle.

9-29.13(10)C NEMA Controller Cabinets
Each NEMA traffic controller shall be housed in a weatherproof cabinet conforming to the following requirements:

1. Construction shall be of 0.073-inch minimum thickness series 300 stainless steel or 0.125 minimum thickness 5052 H32 ASTM B209 alloy aluminum. The stainless steel shall be annealed or one-quarter-hardness complying with ASTM A666 stainless steel sheet. Cabinets may be finished inside with an approved finish coat of exterior white enamel. If no other coating is specified in the Contract Provisions the exterior of all cabinets shall be bare metal. All controller cabinets shall be furnished with front and rear doors.

2. The cabinet shall contain shelving, brackets, racks, etc., to support the controller and auxiliary equipment. All equipment shall set squarely on shelves or be mounted in racks and shall be removable without turning, tilting, or rotating or relocating one device to remove another. A 24 slot rack or racks shall be installed. The rack(s) shall be wired for 2 channel loop detectors and as follows. Slots 1 & 2 phase 1 loop detectors. Slots 3, 4, & 5 phase 2 loop detectors. Slots 6 & 7 phase 3 loop detectors. Slots 8, 9, & 10 phase 4 loop detectors. Slots 11 & 12 phase 5 loop detectors. Slots 13, 14, & 15 phase 6 loop detectors. Slots 16 & 17 phase 7 loop detectors. Slots 18, 19 & 20 phase 8 loop detectors. Slot 21 upper phase 1 loop detector. Slot 21 lower phase 5 detector. Slot 22 wired for a 2 channel discriminator channels A, C. Slot 23 wired for a 2 channel discriminator, channels B, D. Slot 24 wired for a 4 channel discriminator, wired for channel A, B, C, and D. All loop detector slots shall be wired for presence/pulse detection/extension. If an external power supply is required in order for the entire rack(s) to be powered it shall be installed. All rack(s) slots shall be labeled with engraved identification strips.

3. Additional detection utilizing the “D” connector shall be installed in accordance with the Contract. The cabinet shall be of adequate size to properly house the controller and all required appurtenances and auxiliary equipment in an upright position with a clearance of at least 3-inches from the vent fan and filter to allow for proper air flow. In no case shall more than 70 percent of the cabinet volume be used. There shall be at least a 2-inch clearance between shelf mounted equipment and the cabinet wall or equipment mounted on the cabinet wall.

4. The cabinet shall have an air intake vent on the lower half of the front door, with a 12-inch by 16-inch by 1-inch removable throw away filter, secured in place with a spring-loaded framework.
5. The cabinet door(s) shall be provided with:
   a. Cabinet doors shall each have a three point latch system. Locks shall be spring loaded construction locks capable of accepting a Best 6 pin core. A 6 pin construction core of type (blue, green, or Red) specified in the contract shall be installed in each core lock. One core removal key and two standard keys shall be included with each cabinet and delivered to the Engineer.
   b. A police panel assembly shall be installed in the front door and shall have a stainless steel hinge pin and a police panel lock. Two police keys with shafts a minimum of 1¾-inches long shall be provided with each cabinet.
   c. All doors and police panel door shall have one piece, closed cell, neoprene gaskets.
   d. A two position doorstop assembly.

6. Fluorescent fixtures or LED light strips (only one type per cabinet) for cabinet lighting. Color temperature shall be 4100K (cool white) or higher. Fluorescent fixtures shall use 12 inch (nominal), 8W, type T5 shatterproof tubular bulbs. LED light strips shall be approximately 12 inches long, and have a minimum output of 320 lumens. Lighting shall be ceiling mounted and oriented parallel to the door face. Lighting shall not interfere with the proper operation of any other ceiling mounted equipment. All lighting fixtures shall energize whenever any door is opened. Each door switch shall be labeled “Light”.

9-29.13(10)D Cabinets for Type 170E and 2070 controllers
Type 170E and 2070 controllers shall be housed in a model 332L cabinet unless specified otherwise in the contract. Type 332L cabinets shall be constructed in accordance with TEES with the following modifications:

1. Each door shall be furnished with the equipment listed in Standard Specifications 9-29.13(10)C item 5 above.

2. The cabinet shall be furnished with auxiliary equipment described in Standard Specification 9-29.13(10)B.

3. The cabinet shall be fabricated of stainless steel or sheet aluminum in accordance with Section 9-29.13(10)C, Item 1 above. Painted steel, painted or anodized aluminum is not allowed.
4. A disposable paper filter element with dimensions of 12” x 6” x 1” shall be provided in lieu of a metal filter. The filter shall be secured in the filter holder with a louvered aluminum cover. The maximum depth of the cover shall not be more than 0.5” inch to provide the filter to be flush against the door. No incoming air shall bypass the filter element.

5. Field wire terminals shall be labeled in accordance with the Field Wiring Chart.

6. Fluorescent fixtures or LED light strips (only one type per cabinet) for cabinet lighting. Fluorescent fixtures shall use 12 inch (nominal), 8W, type T5 tubular bulbs. Tubular bulbs shall be contained within a shatterproof lamp cover. Led strips shall be approximately 12 inches long, and have a minimum output of 320 lumens. There shall be one fixture for each rack within the cabinet. Lighting shall be ceiling mounted and oriented perpendicular to the door face. Rack mounted lights are not allowed. Lighting shall be positioned such that the fixture is centered between the front and rear of the cabinet. Lighting shall not interfere with the proper operation of any other ceiling mounted equipment. Each lighting fixture shall energize automatically when either door to that respective rack is opened. Each door switch shall be labeled "Light".

7. One drawer shelf, as shown in the TEES

8. 332D Controller Cabinet

   a. The 332D Controller cabinet shall have the appearance of two Type 332 controller cabinets joined at opposing sides. The outside Dimensions of the cabinet shall be 67” High X 48 1/2” Wide X 30 1/4” Deep.

   b. The right side of the cabinet, as viewed from the front, shall be considered the Signal Control side. The left side of the cabinet, when viewed from the front, shall be considered the ITS/COMM side.

   c. One police access panel shall be installed on the right side of the cabinet, as viewed from the front.

   d. Two cabinet lights shall be provided one on each side and as described in section 9-29.13(10)D.6

   e. Vacant

   f. The Traffic Signal Control side of the cabinet shall contain the Traffic Signal Controller assembly and shall be furnished with
equipment as described in the contract specifications. The Traffic Signal Control side of the cabinet shall also meet all the additional equipment requirements of the Type 332 Signal Controller cabinet as indicated in the contract specifications.

g. The ITS/COMM side of the cabinet shall contain ITS and Communication equipment and shall be furnished with the following:

1. One controller shelf unit, mounted 36 inches from the bottom of the cabinet opening to the front of the cabinet and attaching to the front rails of the EIA rack, shall be provided. The shelf shall be fabricated from aluminum and shall contain a rollout flip-top drawer for storage of wiring diagrams and manuals.

2. One aluminum sheet metal panel, 1/8" x 15" x 54", shall be installed to the rear of the cabinet on the right hand (when facing the front) side raling.

3. Additional ITS and Communication equipment as described in the Contract Plans and the ITS section of the Contract Special Provisions.

9-29.13(11) Traffic Data Accumulator and Ramp Meters

All cabinets designated for use as a traffic data or ramp meter shall be Type 334L cabinets furnished to meet the TEES with the modifications listed in Section 9-29.13(10)D and include the following accessories:

1. Each cabinet shall be equipped with a fully operable controller equipped as specified in the Contract Provisions.

2. Two input files, shall be provided.

3. The PDA #3L shall contain three Model 200 Load Switches.
   A second transfer relay, Model 430, shall be mounted on the rear of the PDA #3L and wired as shown in the Plans.

4. Police Panel shall contain only one DPDT toggle switch. The switch shall be labeled POLICE CONTROL, ON-OFF.

5. Display Panel

   A. General

   Each cabinet shall be furnished with a display panel. The panel shall be mounted, showing and providing detection for inputs and specified controller outputs, at the top of the front rack above the controller unit. The display panel
shall be fabricated from brushed aluminum and constructed according to the
detail in the Plans.

B. Text
All text on the detector panel shall be black in color and silk screened directly
to the panel except the Phenolic detector and cabinet nameplates.

A nameplate for each loop shall be engraved with a ¼-inch nominal text
according to the ITS Field Wiring Charts. The nameplates shall be
permanently affixed to the detector panel.

C. LEDs
The LEDs for the display panel shall meet the following Specifications:

Case size  T 1-¾
Viewing angle  50° minimum
Brightness  8 Milli candelas

LEDs with RED, YELLOW or GREEN as part of their labels shall be red,
yellow or green in color. All other LEDs shall be red. All LEDs shall have
tinted diffused lenses.

D. Detector panel Control Switch
Each display panel shall be equipped with one detector display control switch
on the panel with labels and functions as follows:

ON
Detector panel LEDs shall operate consistent with their separate switches.

OFF
All detector indicator LEDs shall be de-energized. Detector calls shall
continue to reach the controller.

TEST
All detector indicator LEDs shall illuminate and no calls shall be placed
to the controller.

E. Advance Warning Sign Control Switch
Each display panel shall be equipped with one advance warning sign control
switch on the panel with labels and functions as follows:

AUTOMATIC
Sign Relay shall energize upon ground true call from controller.

SIGN OFF
Sign Relay shall de-energize.
SIGN ON
Sign Relay shall energize.

F. Sign Relay
The sign relay shall be plugged into a socket installed on the rear of the
display panel. The relay shall be wired as shown in the Plans. The relay coil
shall draw (or sink) 50 milliamperes ± 10% from the 170E/HC11 controller
and have a DPDT contact rating not less than 10 amperes. A 1N4004 diode
shall be placed across the relay coil to suppress voltage spikes. The anode
terminal shall be connected to terminal #7 of the relay as labeled in the Plans.
The relay shall energize when the METERING indicator LED is lit.

G. Detector Input Indicators
One LED and one spring-loaded two-position SPST toggle switch shall be
provided for each of the 40 detection inputs. These LEDs and switches shall
function as follows:

TEST
When the switch is in the test position, a call shall be placed to the
controller and energize the associated LED. The switch shall
automatically return to the run position when it is released.

RUN
In the run position the LEDs shall illuminate for the duration of each call
to the controller.

H. Controller Output Indicators
The display panel shall contain a series of output indicator LEDs mounted
below the detection indicators. The layout shall be according to the detail in
the Plans. These LEDs shall illuminate upon a ground true output from the
controller via the C5 connector.

The output indicator LEDs shall have resistors in series to drop the voltage
from 24 volts DC to their rated voltage and limit current below their rated
current. The anode connection of each LED to +24 VDC shall be wired
through the resistor.

I. Connectors
Connection to the display panel shall be made by three connectors, one pin
(labeled P2) and one socket (labeled P1) and one labeled C5. The P1 and P2
connectors shall be 50-pin cannon D series, or equivalent 50 pin connectors
and shall be compatible such that the two connectors can be connected directly
to one another to bypass the input detection. Wiring for the P1, P2 and C5
connectors shall be as shown in the Plans.
The Contractor shall install wire connectors P1, P2, C1P, C2, C4, C5 and C6 according to the pin assignments shown in the Plans.

6. **Model 204 Flasher Unit**
   Each Model 334 ramp meter cabinet shall be supplied with one Model 204 sign flasher unit mounted on the right rear side panel. The flasher shall be powered from T1-2. The outputs from the flasher shall be wired to T1-5 and T1-6.

7. **Fiber Optic Patch Panel**
   The Contractor shall provide and install a rack-mounted fiber optic patch panel as identified in the Plans.

Cabinet Wiring
Terminal blocks TB1 through TB9 shall be installed on the Input Panel. Layout and position assignment of the terminal blocks shall be as noted in the Plans.

Terminals for field wiring in traffic data and/or ramp metering controller cabinet shall be labeled, numbered and connected in accordance with the following:

<table>
<thead>
<tr>
<th>Terminal Block Pos.</th>
<th>Terminal and Wire Numbers</th>
<th>Connection Identification</th>
</tr>
</thead>
<tbody>
<tr>
<td>TBS</td>
<td>501-502</td>
<td>AC Power, Neutral</td>
</tr>
<tr>
<td>T1-2</td>
<td>641</td>
<td>Sign on</td>
</tr>
<tr>
<td>T1-4</td>
<td>643</td>
<td>Sign off</td>
</tr>
<tr>
<td>T1-5</td>
<td>644</td>
<td>Flasher Output NC</td>
</tr>
<tr>
<td>T1-6</td>
<td>645</td>
<td>Flasher Output NO</td>
</tr>
<tr>
<td>T4-1</td>
<td>631</td>
<td>Lane 3 - Red</td>
</tr>
<tr>
<td>T4-2</td>
<td>632</td>
<td>Lane 3 – Yellow</td>
</tr>
<tr>
<td>T4-3</td>
<td>633</td>
<td>Lane 3 – Green</td>
</tr>
<tr>
<td>T4-4</td>
<td>621</td>
<td>Lane 2 - Red</td>
</tr>
<tr>
<td>T4-5</td>
<td>622</td>
<td>Lane 2 - Yellow</td>
</tr>
<tr>
<td>T4-6</td>
<td>623</td>
<td>Lane 2 – Green</td>
</tr>
<tr>
<td>T4-7</td>
<td>611</td>
<td>Lane 1 – Red</td>
</tr>
<tr>
<td>T4-8</td>
<td>612</td>
<td>Lane 1 – Yellow</td>
</tr>
<tr>
<td>T4-9</td>
<td>613</td>
<td>Lane 1 – Green</td>
</tr>
</tbody>
</table>

Loop lead-in cables shall be labeled and connected to cabinet terminals according to the ITS Field Wiring Chart. This chart will be provided by the Engineer within 20 days of the Contractor's request.
9-29.13(12) ITS cabinet:
Basic ITS cabinets shall be Model 334L Cabinets, unless otherwise specified in the Contract. Type 334L Cabinets shall be constructed in accordance with the TEES, with the following modifications:

1. The basic cabinet shall be furnished with only Housing 1 B, Mounting Cage 1, Service Panel #1, a Drawer Shelf, and Controller Unit Supports. Additional equipment may be specified as part of the cabinet function-specific standards.

2. Housing aluminum shall be 5052 alloy with mill finish. Painted or anodized aluminum is not allowed.

3. The door air filter shall be a disposable paper filter element of at least 180 square inches.

4. Locks shall be spring loaded construction core locks capable of accepting a Best 6-pin core. A 6-pin construction core of the type (Blue, Green, or Red) specified in the Contract shall be installed in each core lock. One core removal key and two standard keys (properly marked) shall be included with each cabinet and delivered to the Engineer upon Contract completion.

5. Each cabinet shall include a 120VAC electric strip heater with a rating of 100 watts, which shall be thermostat controlled. The heater strip shall be fed by wire with a temperature rating of 400°F or higher, and shall be shielded to prevent contact with wiring, equipment, or personnel. If the heater thermostat is separate from the fan thermostat, the heater thermostat must meet the same requirements as the fan thermostat as defined in TEES.

6. Fluorescent fixtures or LED light strips (only one type per cabinet) for cabinet lighting. Color temperature shall be 4100K (cool white) or higher. Fluorescent fixtures shall use 12 inch (nominal), 8W, type T5 tubular bulbs contained within a shatterproof lamp cover. LED light strips shall be approximately 12 inches long, and have a minimum output of 320 lumens. There shall be two fixtures for each rack within the cabinet. Lighting shall be ceiling mounted and oriented parallel to the door face – rack mounted lighting is not permitted. Lighting shall not interfere with the proper operation of any other ceiling mounted equipment. All lighting fixtures above a rack shall energize whenever either door to that respective rack is opened. Each door switch shall be labeled “Light”.

7. Each cabinet shall be equipped with a power distribution assembly (PDA) mounted in a standard EIA 19-inch (ANSI/EIA RS-310-C) rack utilizing no more than five Rack Mounting Units (RMU) (8.75 inches). The PDA shall include the following equipment:

   a. One duplex NEMA 5-15R GFCI receptacle on the front of the PDA.
b. Four duplex NEMA 5-15R receptacles on the rear of the PDA. These receptacles shall remain energized on a trip or failure of the GFCI receptacle.

c. Four 1P-15A, 120VAC Equipment/Field Circuit Breakers.

d. Line filter meeting the requirements of 9-29.13(10)A.d.

PDA components shall be mounted in or on the PDA such that they are readily accessible, provide dead front safety, and all hazardous voltage points are protected to prevent inadvertent contact.

8. Service Panel #1 shall include a service terminal block labeled “TBS”, a Tesco TES-10B or equivalent surge suppressor connected to provide power in line surge suppression, and a 1P-30A Main Breaker. The Service Panel Assembly (SPA) shown in the TEES shall not be included.

9. Each cabinet shall include a rack mounted fiber optic patch panel of the type specified in the Contract.

Cabinet drawings and wiring diagrams shall be provided in the drawer shelf. Additionally, an electronic (PDF format) copy of all drawings and wiring diagrams shall be provided.

9-29.16(1)A1 Conventional Optical System
This section’s title is revised to read:

9-29.16(1)A1 Non-LED Optical System

9-29.16(1)D1 Electrical - Conventional
This section’s title is revised to read:

9-29.16(1)D1 Electrical – Non-LED

9-29.20 Pedestrian Signals
This section is revised to read:

Pedestrian signals shall be Light Emitting Diods (LED) type.

The LED pedestrian signal module shall be operationally compatible with controllers and conflict monitors. The LED lamp unit shall contain a disconnect that will show an open switch to the conflict monitor when less than 60 percent of the LEDs in the unit are operational.

The Pedestrian signal heads shall be on the QPL or the Contractor shall submit a Manufacturer’s Certificate of Compliance, in accordance with Standard Specification 1-
06.3, with each type of signal head. The certificate shall state that the lot of pedestrian signal heads meet the following requirements:

1. All pedestrian signal heads shall be a Walk/Don’t Walk module with a countdown display.

2. All pedestrian displays shall comply with the MUTCD and ITE publication ST 011B, VTCSH2 or current ITE Specification and shall have an incandescent appearance. The Contractor shall provide test results from a Nationally Recognized Testing Laboratory documenting that the LED display conforms to the current ITE and the following requirements:
   a. All pedestrian signals supplied to any one project shall be from the same manufacturer and type but need not be from the same manufacturer as the vehicle heads.
   b. Each pedestrian signal face shall be a single unit housing with the signal indication size, a nominal 16 inch x 18 inch with side by side symbol messages with countdown display.
   c. Housings shall be green polycarbonate or die-cast aluminum and the aluminum housings shall be painted with two coats of factory applied traffic signal green enamel (Federal Standard 595-14056). All hinges and latches and interior hardware shall be stainless steel.

3. Optical units for traffic signal displays shall conform to the following:
   a. Pedestrian “RAISED HAND” and “WALKING PERSON” modules shall be the countdown display type showing the time remaining in the pedestrian change interval. When the pedestrian change interval is reduced due to a programming change, the display may continue to show the previous pedestrian change interval for one signal cycle. During the following pedestrian change interval the countdown shall show the revised time, or shall be blank. In the event of an emergency vehicle preemption, during the following two cycles, the display shall show the programmed pedestrian change interval or be blank. In the event the controller is put in stop time during the pedestrian change interval, during the following two cycles the display shall show the programmed clearance or be blank. In the event there is railroad preempt during the pedestrian change interval, during the following two cycles the display shall show the programmed clearance or be blank. Light emitting diode (LED) light sources having the incandescent appearance are required for Portland Orange Raised Hand and the Lunar White Walking Person.

4. LED displays shall conform to the following:

b. Voltage: The operating voltages shall be between 85 VAC and 135 VAC.

c. Temperature: Temperature range shall be -35° F to +165° F.

d. LED pedestrian heads shall be supplied with Z crate visors. Z crate visors shall have 21 members at 45 degrees and 20 horizontal members.

9-29.20(1) LED Pedestrian Displays
This section is deleted.

9-29.20(2) Neon Grid Type
This section is deleted.

9-29.24 Service Cabinets
In the first paragraph, the lettered items A-J are re-lettered to read B-K respectfully.

The first paragraph is supplemented with the following new lettered item:

A. Display an arc flash warning label that meets the requirements of ANSI Z535.

9-29.25 Amplifier, Transformer, and Terminal Cabinets
In item No. 2.C., “Transformer 23.1 to 12.5 KVA” is revised to read “Transformer 3.1 to 12.5 KVA” and the height column value of 40” is revised to read “48”.

The first and second sentences in the first paragraph are revised to read:

Amplifier and terminal and transformer cabinets shall be NEMA 3R and the following:

Item number 5 is revised to read:

5. All cabinets shall provide a gasketed door flange

Item number 7 is revised to read:

7. Insulated terminal blocks shall be 600 volt, heavy-duty, barrier type. The terminal blocks shall be provided with a field-side and a control-side connector separated by a marker strip. One spare 12-position insulated terminal block shall be installed in each terminal cabinet and amplifier cabinet.

Item number 8 is revised to read:

8. Each non-pad mounted Terminal, Amplifier and Transformer cabinet shall have 1/4 inch drain holes in back corners. Each pad mounted Terminal, Amplifier and
Transformer cabinet shall drain to a sump and through a 3/8 inch diameter drain pipe to grade as detailed in the Standard Plans.

Item number 10 is revised to read:

10. Transformer cabinets shall have two separate compartments, one for the transformer and one for the power distribution circuit breakers. Each compartment shall be enclosed with a dead front. Each breaker shall be labeled with the device name by means of a screwed or riveted engraved name plate.

SECTION 9-34, PAVEMENT MARKING MATERIAL
August 5, 2013

9-34.2 Paint
The second paragraph is revised to read:

Blue and black paint shall comply with the requirements for yellow paint in Section 9-34.2(4) and Section 9-34.2(5), with the exception that blue and black paints do not need to meet the requirements for titanium dioxide, directional reflectance, and contrast ration.

9-34.3(4) Type D – Liquid Cold Applied Methyl Methacrylate
The column headings in the table titled “98:2 Formulations Type D – Liquid Cold Applied Methyl Methacrylate” are revised to read:

<table>
<thead>
<tr>
<th>Property Test Method</th>
<th>D-1</th>
<th>D-2</th>
<th>D-3</th>
<th>D-4</th>
<th>D-5</th>
<th>D-6</th>
</tr>
</thead>
</table>
SPECIAL PROVISIONS
INTRODUCTION TO THE SPECIAL PROVISIONS

(July 31, 2007 APWA GSP)

The work on this project shall be accomplished in accordance with the *Standard Specifications for Road, Bridge and Municipal Construction*, 2012 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 the Amendments to the Standard Specifications and 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 date of the GSP and its source, as follows:

(May 18, 2007 APWA GSP)
(August 7, 2006 WSDOT GSP)

Also incorporated into the Contract Documents by reference are:

- *Standard Plans for Road, Bridge and Municipal Construction*, WSDOT/APWA, current edition
- Yakima County Standard Plans

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

(March 13, 1995)

The work to be performed under this Contract consists of the improvement of approximately 1.5 miles of Naches Tieton Road, from Cowiche Rd., N. to Naches Rd., S. These improvements consists of grading, drainage, placing and compacting top and base course, placing HMA pavement, placing concrete barrier, and other work, in accordance with the attached Plans, these Special Provisions and the 2012 Standard Specifications and Amendments thereto.

The quantities of work indicated in the proposal are to be considered as estimates and are for comparative bidding purposes only. All payments shall be made on the basis of actual field measurement of Contract work completed.

C 3114 Naches Tieton Road Improvements SP 1 SPECIAL PROVISIONS
Funds

Federal Funds and Yakima County Road funds are involved in the construction of these improvements.

Division 1
General Requirements

Section 1-01, Definition and Terms

1-01.3 Definitions

(March 8, 2013 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, Amendments, or WSDOT General Special Provisions, to the terms “State”, “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 “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 final payment form established by the Contracting Agency.

The venue of all causes of action arising from the advertisement, award, execution, and performance of the contract shall be in the Superior Court of the County where the Contracting Agency’s headquarters are located.

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.

SECTION 1-02, BID PROCEDURES AND CONDITIONS

1-02.1 Prequalification of Bidders
Delete this Section and replace it with the following:

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

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

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

Delete this section and replace it with the following:

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

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

<table>
<thead>
<tr>
<th>To Prime Contractor</th>
<th>No. of Sets</th>
<th>Basis of Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduced plans (11&quot; x 17&quot;)</td>
<td>10</td>
<td>Furnished automatically upon award.</td>
</tr>
<tr>
<td>Contract Provisions</td>
<td>10</td>
<td>Furnished automatically upon award.</td>
</tr>
</tbody>
</table>
Large plans (e.g., 22" x 34") | 0 | Furnished only upon request.

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

1-02.4(2) Subsurface Information

Section 1-02.4(2) is supplemented with the following:

(January 2, 2012)
The soils information used for study and design of this project is available for review by the bidder at the following location:

******
128 N. 2nd Street, Fourth Floor Courthouse, Yakima, Washington

The soils information includes the following:

******
Preliminary Geotechnical Engineering Study Naches-Tieton Road Realignment
Geotechnical Engineering Study Naches-Tieton Road Grade Improvements

(March 8, 2013 APWA GSP)
The second sentence in the first paragraph is revised to read:

The Summary of Geotechnical Conditions and the boring logs, if and when included as an appendix to the Special Provisions, shall be considered as part of the Contract.

1-02.5 Proposal Forms

(June 27, 2011 APWA GSP)

Delete this section and replace it with the following:

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

1-02.6 Preparation Of Proposal
(June 27, 2011  APWA GSP)

Supplement the second paragraph with the following:

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

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

Delete the last paragraph, and replace it with the following:

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

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

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

A bid by a joint venture shall be executed in the joint venture name and signed by a member of the joint venture. A copy of the joint venture agreement shall be submitted with the bid form if any D/W/MBE requirements are to be satisfied through such an agreement.

Section 1-02.6 is supplemented with the following:

(May 7, 2012)
The Bidder shall submit with the Bid a completed Disadvantaged Business Enterprise (DBE) Utilization Certification, when required by the Special Provisions. For each and every DBE firm listed on the Bidder’s completed Disadvantaged Business Enterprise Utilization Certification, the Bidder shall submit written confirmation from that DBE firm that the DBE is in agreement with the DBE participation commitment that the Bidder has made in the Bidder’s completed Disadvantaged Business Enterprise Utilization Certification. WSDOT Form 422 031 EF (Disadvantaged Business Enterprise Written Confirmation Document) is to be used for this purpose.

Bidder must submit good faith effort documentation only in the event the bidder’s efforts to solicit sufficient DBE participation have been unsuccessful. Directions for delivery of the Disadvantaged Business Enterprise Written Confirmation Documents and Disadvantaged Business Enterprise Good Faith Effort documentation are included in Sections 1-02.9.
1-02.7 Bid Deposit
(March 8, 2013 APWA GSP)

Supplement this section with the following:

1. 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

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

1-02.9 Delivery of Proposal
(August 15, 2012 APWA GSP, Option A)

Delete this section and replace it with the following:

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

If the project has FHWA funding and requires DBE Written Confirmation Documents or
Good Faith Effort Documentation, then to be considered responsive, the Bidder shall submit
with their Bid Proposal, written Confirmation Documentation from each DBE firm listed on
the Bidder’s completed DBE Utilization Certification, form 272-056A EF, as required by
Section 1-02.6.

The Contracting Agency will not open or consider any Bid Proposal that is received after the
time specified in the Call for Bids for receipt of Bid Proposals, or received in a location other
than that specified in the Call for Bids.

1-02.12 Public Opening of Proposals
(May 4, 2012 APWA GSP)

Delete this section and replace it with the following:
Proposals will be opened and publicly read at the time indicated in the Call for Bids, after the
deadline(s) for submitting all elements of the Bid Proposal including DBE Written
Confirmation Documents and/or Good Faith Effort Documentation, unless the Bid opening
has been delayed or canceled. Bidders, their authorized agents, and other interested parties
are invited to be present.

1-02.13 Irregular Proposals
(March 13, 2012 APWA GSP)

Revise item 1 to read:

1. A proposal will be considered irregular and will be rejected if:
   a. The Bidder is not prequalified when so required;
   b. The authorized proposal form furnished by the Contracting Agency is not used or
      is altered;
   c. The completed proposal form contains any unauthorized additions, deletions,
      alternate Bids, or conditions;
   d. The Bidder adds provisions reserving the right to reject or accept the award, or
      enter into the Contract;
   e. A price per unit cannot be determined from the Bid Proposal;
   f. The Proposal form is not properly executed;
   g. The Bidder fails to submit or properly complete a Subcontractor list, if applicable,
      as required in Section 1-02.6;
   h. The Bidder fails to submit or properly complete a Disadvantaged Business
      Enterprise Certification, if applicable, as required in Section 1-02.6;
   i. The Bidder fails to submit written confirmation from each DBE firm listed on the
      Bidder’s completed DBE Utilization Certification that they are in agreement with
      the bidders 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 Bid Proposal does not constitute a definite and unqualified offer to meet the
      material terms of the Bid invitation; or
   l. More than one proposal is submitted for the same project from a Bidder under the
      same or different names.

1-02.15 Pre Award Information
(October 1, 2005 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. A copy of State of Washington Contractor's Registration, or
8. Any other information or action taken that is deemed necessary to ensure that the bidder is the lowest responsible bidder.

SECTION 1-03, AWARD AND EXECUTION OF CONTRACT

1-03.1 Consideration of Bids
(January 23, 2006 APWA GSP)

Revise the first paragraph to read:

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

1-03.3 Execution of Contract
(October 1, 2005 APWA GSP)

Revise this section to read:

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, and a satisfactory bond as required by law and Section 1-03.4. 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

(October 1, 2005 APWA GSP)

Revise the first paragraph to read:

The successful bidder shall provide an executed contract bond for the full contract amount. This contract bond shall:
1. Be on a Contracting Agency-furnished form;
2. Be signed by an approved surety (or sureties) that:
   a. Is registered with the Washington State Insurance Commissioner, and
   b. Appears on the current Authorized Insurance List in the State of Washington published by the Office of the Insurance Commissioner,
3. Be conditioned upon the faithful performance of the contract by the Contractor within the prescribed time;
4. Guarantee that the surety shall indemnify, defend, and protect the Contracting Agency against any claim of direct or indirect loss resulting from the failure:
   a. Of the Contractor (or any of the employees, subcontractors, or lower tier subcontractors of the Contractor) to faithfully perform the contract, or
   b. Of the Contractor (or the subcontractors or lower tier subcontractors of the Contractor) to pay all laborers, mechanics, subcontractors, lower tier subcontractors, material person, or any other person who provides supplies or provisions for carrying out the work;
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 must be signed by the president or vice-president, unless accompanied by written proof of the authority of the individual signing the bond to bind the corporation (i.e., corporate resolution, power of attorney or a letter to such effect by the president or vice-president).

Section 1-03.4 is supplemented with the following:

(August 5, 2013)
Release of Contract Bond will be 60 days following the Contract Completion date and Notice of Completion (NOC) being sent to the Washington State Department of Labor and

C 3114 Naches Tieton Road Improvements  SP 10  SPECIAL PROVISIONS
Industries, Washington State Department of Revenue and Washington State Employment Security Department, provided the following conditions are met:

1. Payment to the State with respect to taxes imposed pursuant to Title 82, RCW on Contracts totaling more than $35,000, a release has been obtained from the Washington State Department of Revenue.

2. Affidavits of Wages Paid for the Contractor and all Subcontractors are on file with the Contracting Agency (RCW 39.12.040).

3. A certificate of Payment of Contributions Penalties and Interest on Public Works Contract is received from the Washington State Employment Security Department.

4. Washington State Department of Labor and Industries (per Section 1-07.10) shows the Contractor, Subcontractor(s) and any lower tier Subcontractor(s) are current with payments of industrial insurance and medical aid premiums.

5. All claims, as provided by law, filed against the Contract Bond have been resolved.

SECTION 1-04, SCOPE OF WORK

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

(March 13, 2012 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. Amendments to the Standard Specifications,
6. Standard Specifications,
7. Contracting Agency’s Standard Plans or Details (if any), and
8. WSDOT Standard Plans for Road, Bridge, and Municipal Construction.

SECTION 1-05, CONTROL OF 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.

1-05.13 Superintendents, Labor and Equipment of Contractor
(March 25, 2009 APWA GSP)

Revise the seventh paragraph to read:

Whenever the Contracting Agency evaluates the Contractor’s qualifications pursuant to
Section 1-02.14, it will take these performance reports into account.

1-05.14 Cooperation with Other Contractors

Section 1-05.14 is supplemented with the following:

(March 13, 1995)

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

- Utility work by franchise utility companies relocating overhead and
  underground facilities within the project limits. Yakima Tieton Irrigation
  District will be relocating irrigation lines during construction. No additional
  payment will be made for this utility coordination.
1-05.15 Method of Serving Notices
(March 25, 2009 APWA GSP)

Revise the second paragraph to read:

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

Add the following new section:

1-05.16 Water and Power
(October 1, 2005 APWA GSP)

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

Add the following new section:

1-05.17 Oral Agreements
(October 1, 2005 AWPA GSP)

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.

SECTION 1-06, CONTROL OF MATERIAL

Section 1-06 is supplemented with the following:

(August 6, 2012)
In accordance with Buy America requirements contained in 23 CFR 635.410, the major quantities of steel and iron construction material that is permanently incorporated into the project shall consist of American-made materials only. Buy America does not apply to temporary steel items, e.g., temporary sheet piling, temporary bridges, steel scaffolding and falsework.
Minor amounts of foreign steel and iron may be utilized in this project provided the cost of
the foreign material used does not exceed one-tenth of one percent of the total contract cost
or $2,500.00, whichever is greater.

American-made material is defined as material having all manufacturing processes
occurring domestically. To further define the coverage, a domestic product is a
manufactured steel material that was produced in one of the 50 States, the District of
Columbia, Puerto Rico, or in the territories and possessions of the United States.

If domestically produced steel billets or iron ingots are exported outside of the area of
coverage, as defined above, for any manufacturing process then the resulting product does
not conform to the Buy America requirements. Additionally, products manufactured
domestically from foreign source steel billets or iron ingots do not conform to the Buy
America requirements because the initial melting and mixing of alloys to create the material
occurred in a foreign country.

Manufacturing begins with the initial melting and mixing, and continues through the coating
stage. Any process which modifies the chemical content, the physical size or shape, or the
final finish is considered a manufacturing process. The processes include rolling, extruding,
machining, bending, grinding, drilling, welding, and coating. The action of applying a
coating to steel or iron is deemed a manufacturing process. Coating includes epoxy coating,
galvanizing, aluminizing, painting, and any other coating that protects or enhances the value
of steel or iron. Any process from the original reduction from ore to the finished product
constitutes a manufacturing process for iron.

Due to a nationwide waiver, Buy America does not apply to raw materials (iron ore and
alloys), scrap (recycled steel or iron), and pig iron or processed, pelletized, and reduced iron
ore.

The following are considered to be steel manufacturing processes:

1. Production of steel by any of the following processes:
   a. Open hearth furnace.
   b. Basic oxygen.
   c. Electric furnace.
   d. Direct reduction.

2. Rolling, heat treating, and any other similar processing.

3. Fabrication of the products.
a. Spinning wire into cable or strand.

b. Corrugating and rolling into culverts.

c. Shop fabrication.

A certification of materials origin will be required for any items comprised of, or containing, steel or iron construction materials prior to such items being incorporated into the permanent work. The certification shall be on DOT Form 350-109EF provided by the Engineer, or such other form the Contractor chooses, provided it contains the same information as DOT Form 350-109EF.

SECTION 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 Taxes

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

1-07.2 State Sales Tax

(June 27, 2011 APWA GSP)

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

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

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

1-07.2(1) State Sales Tax — Rule 171

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

1-07.2(2) State Sales Tax — Rule 170

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

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

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

1-07.2(3) Services

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

(June 27, 2011)
The Contracting Agency will release the Contract Bond only if the Contractor has obtained from the State Department of Revenue a certificate showing that all Contract-related taxes have been paid.

1-07.6 Permits and Licenses

Section 1-07.6 is supplemented with the following:

(September 20, 2010)
The Contracting Agency has obtained the below-listed permit(s) for this project. A copy of the permit(s) is attached as an appendix for informational purposes. All contacts with the permitting agency concerning the below-listed permit(s) shall be through the Engineer. The Contractor shall obtain additional permits as necessary. All costs to obtain and comply with additional permits shall be included in the applicable bid items for the work involved. Copies of these permits are required to be onsite at all times.

- Dept of Ecology’s Construction Stormwater General Permit

1-07.7 Load Limits

Section 1-07.7 is supplemented with the following:

(March 13, 1995)
Except for the load limit restrictions specified in Section 1-07.7(2), the Contractor may operate vehicles which exceed the legal gross weight limitations without special permits or
payment of additional fees provided such vehicles are employed in the construction and
within the limits of this project.

Subparagraph 1 of the second paragraph of Section 1-07.7(1) is deleted.

1-07.9  Wages

1-07.9(1)  General

Section 1-07.9(1) is supplemented with the following:

(January 8, 2013)
The Federal wage rates incorporated in this contract have been established by the
Secretary of Labor under United States Department of Labor General Decision No.
WA130001.

The State rates incorporated in this contract are applicable to all construction activities
associated with this contract.

April 2, 2007)
Application of Wage Rates for the Occupation of Landscape Construction
State prevailing wage rates for public works contracts are included in this contract and
show a separate listing for the occupation:

Landscape Construction, which includes several different occupation descriptions
such as: Irrigation and Landscape Plumbers, Irrigation and Landscape Power
Equipment Operators, and Landscaping or Planting Laborers.

In addition, federal wage rates that are included in this contract may also include
occupation descriptions in Federal Occupational groups for work also specifically
identified with landscaping such as:

Laborers with the occupation description, Landscaping or Planting, or

Power Equipment Operators with the occupation description, Mulch Seeding
Operator.

If Federal wage rates include one or more rates specified as applicable to landscaping
work, then Federal wage rates for all occupation descriptions, specific or general, must
be considered and compared with corresponding State wage rates. The higher wage
rate, either State or Federal, becomes the minimum wage rate for the work performed in
that occupation.

Contractors are responsible for determining the appropriate crafts necessary to perform
the contract work. If a classification considered necessary for performance of the work
is missing from the Federal Wage Determination applicable to the contract, the
Contractor shall initiate a request for approval of a proposed wage and benefit rate. The Contractor shall prepare and submit Standard Form 1444, Request for Authorization of Additional Classification and Wage Rate available at http://www.wdol.gov/docs/sf1444.pdf, and submit the completed form to the Project Engineer’s office. The presence of a classification wage on the Washington State Prevailing Wage Rates For Public Works Contracts does not exempt the use of form 1444 for the purpose of determining a federal classification wage rate.

1-07.9(5) Required Documents
(January 24, 2011 APWA GSP)

Supplement this section with the following:

The Contractor or subcontractor directly contracting for “Off-Site, Prefabricated, Non-Standard, Project Specific Items” as defined below shall identify and report information required on the addendum to the “Affidavit of Wages Paid” form filed with the Department of Labor and Industries [form F700-164-000]. The Contractor shall include language in its subcontracts requiring subcontractors and lower-tier subcontractors to comply with the reporting requirements for “Off-Site, Prefabricated, Non-Standard, Project Specific Item” on the Affidavit of Wages Paid form addendum.

The reporting requirement for Items shall apply for all public works contracts estimated to cost over $1 million entered into by the Contracting Agency and Contractor between September 1, 2010 through December 31, 2013.

"Off-site, prefabricated, nonstandard, project specific items" means products or items that are:

1. Made primarily of architectural or structural precast concrete, fabricated steel, pipe and pipe systems, or sheet metal and sheet metal duct work; and
2. Produced specifically for this Project and not considered to be regularly available shelf items; and
3. Produced or manufactured by labor expended to assemble or modify standard items; and
4. Produced at an off-site location outside the State of Washington.

The Contractor or subcontractor shall comply with the reporting requirements and instructions on the Affidavit of Wages Paid form, and shall report the following information on the Affidavit of Wages Paid form submitted to the Department of Labor and Industries in order to comply with the reporting requirements for use of “Off-Site, Prefabricated, Non-Standard, Project Specific” items:

1. The estimated cost of the project;
2. The name of the Contracting Agency and the project title;
3. The contract value of the off-site, prefabricated, nonstandard, project specific items produced outside of Washington State, including labor and materials; and
4. The name, address, and federal employer identification number of the contractor that produced the off-site, prefabricated, nonstandard, project specific items.
The Contracting Agency may direct the Contractor, at no additional cost to the Contracting Agency, to remove and substitute any subcontractor(s) found to be out of compliance with the "Off-Site Prefabricated Non-Standard Project Specific Items" reporting requirements more than one time as determined by the Department of Labor and Industries.

1-07.11 Requirements for Nondiscrimination

Section 1-07.11 is supplemented with the following:

(August 5, 2013)

Requirement for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246)


2. The goals and timetables for minority and female participation set by the Office of Federal Contract Compliance Programs, expressed in percentage terms for the Contractor's aggregate work force in each construction craft and in each trade on all construction work in the covered area, are as follows:

Women - Statewide

<table>
<thead>
<tr>
<th>Timetable</th>
<th>Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Until further notice</td>
<td>6.9%</td>
</tr>
</tbody>
</table>

Minorities - by Standard Metropolitan Statistical Area (SMSA)

Spokane, WA:

SMSA Counties:
- Spokane, WA
- WA Spokane.

Non-SMSA Counties
- WA Adams; WA Asotin; WA Columbia; WA Ferry; WA Garfield; WA Lincoln, WA Pend Oreille; WA Stevens; WA Whitman.

Richland, WA

SMSA Counties:
- Richland Kennewick, WA
- WA Benton; WA Franklin.

Non-SMSA Counties
- WA Walla Walla.
Yakima, WA:

SMSA Counties:

Yakima, WA
WA Yakima

Non-SMSA Counties

WA Chelan; WA Douglas; WA Grant; WA Kittitas; WA Okanogan.

Seattle, WA:

SMSA Counties:

Seattle Everett, WA
WA King; WA Snohomish.

Tacoma, WA

WA Pierce.

Non-SMSA Counties

WA Clallam; WA Grays Harbor; WA Island; WA Jefferson; WA Kitsap;
WA Lewis; WA Mason; WA Pacific; WA San Juan; WA Skagit; WA
Thurston; WA Whatcom.

Portland, OR:

SMSA Counties:

Portland, OR-WA

WA Clark.

Non-SMSA Counties

WA Cowlitz; WA Klickitat; WA Skamania; WA Wahkiakum.

These goals are applicable to each nonexempt Contractor's total on-site construction workforce, regardless of whether or not part of that workforce is performing work on a Federal, or federally assisted project, contract, or subcontract until further notice.

Compliance with these goals and time tables is enforced by the Office of Federal Contract compliance Programs.

The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, in each construction craft and in each trade, and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goal shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4.

Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Office of Federal Contract Compliance Programs (OFCCP) within 10 working days of award of any construction subcontract in excess of $10,000 or more that are Federally funded, at any tier for
construction work under the contract resulting from this solicitation. The notification
shall list the name, address and telephone number of the Subcontractor; employer
identification number of the Subcontractor; estimated dollar amount of the subcontract;
estimated starting and completion dates of the subcontract; and the geographical area in
which the contract is to be performed. The notification shall be sent to:

U.S. Department of Labor
Office of Federal Contract Compliance Programs Pacific Region
Attn: Regional Director
San Francisco Federal Building
90 – 7th Street, Suite 18-300
San Francisco, CA 94103 (415) 625-7800 Phone
(415) 625-7799 Fax

Additional information may be found at the U.S. Department of Labor website:
http://www.dol.gov/ofccp/TAguides/ctaguide.htm

4. As used in this Notice, and in the contract resulting from this solicitation, the Covered
Area is as designated herein.

(Executive Order 11246)

1. As used in these specifications:

   a. Covered Area means the geographical area described in the solicitation from
      which this contract resulted;

   b. Director means Director, Office of Federal Contract Compliance Programs,
      United States Department of Labor, or any person to whom the Director
      delegates authority;

   c. Employer Identification Number means the Federal Social Security number
      used on the Employer’s Quarterly Federal Tax Return, U. S. Treasury
      Department Form 941;

   d. Minority includes:

      (1) Black, a person having origins in any of the Black Racial Groups of
      Africa.

      (2) Hispanic, a fluent Spanish speaking, Spanish surnamed person of
      Mexican, Puerto Rican, Cuban, Central American, South American,
      or other Spanish origin.
3. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or Subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or Subcontractor's failure to take good faith effort to achieve the Plan goals and timetables.

4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7a through 7p of this Special Provision. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered construction contractors performing construction work in geographical areas where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.

5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.

6. In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor.
during the training period, and the Contractor must have made a commitment to employ
the apprentices and trainees at the completion of their training, subject to the
availability of employment opportunities. Trainees must be trained pursuant to training
programs approved by the U.S. Department of Labor.

7. The Contractor shall take specific affirmative actions to ensure equal employment
opportunity. The evaluation of the Contractor's compliance with these specifications
shall be based upon its effort to achieve maximum results from its action. The
Contractor shall document these efforts fully, and shall implement affirmative action
steps at least as extensive as the following:

a. Ensure and maintain a working environment free of harassment, intimidation,
and coercion at all sites, and in all facilities at which the Contractor's
employees are assigned to work. The Contractor, where possible, will assign
two or more women to each construction project. The Contractor shall
specifically ensure that all foremen, superintendents, and other on-site
supervisory personnel are aware of and carry out the Contractor's obligation to
maintain such a working environment, with specific attention to minority or
female individuals working at such sites or in such facilities.

b. Establish and maintain a current list of minority and female recruitment
sources, provide written notification to minority and female recruitment
sources and to community organizations when the Contractor or its unions
have employment opportunities available, and maintain a record of the
organizations' responses.

c. Maintain a current file of the names, addresses and telephone numbers of each
minority and female off-the-street applicant and minority or female referral
from a union, a recruitment source or community organization and of what
action was taken with respect to each such individual. If such individual was
sent to the union hiring hall for referral and was not referred back to the
Contractor by the union or, if referred, not employed by the Contractor, this
shall be documented in the file with the reason therefor, along with whatever
additional actions the Contractor may have taken.

d. Provide immediate written notification to the Director when the union or
unions with which the Contractor has a collective bargaining agreement has
not referred to the Contractor a minority person or woman sent by the
Contractor, or when the Contractor has other information that the union
referral process has impeded the Contractor's efforts to meet its obligations.

e. Develop on-the-job training opportunity and/or participate in training
programs for the area which expressly include minorities and women,
including upgrading programs and apprenticeship and trainee programs
relevant to the Contractor's employment needs, especially those programs
f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with on-site supervisory personnel such as Superintendents, General Foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.

i. Direct its recruitment efforts, both oral and written to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

j. Encourage present minority and female employees to recruit other minority persons and women and where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's work force.

k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.
l. Conduct, at least annually, an inventory and evaluation of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.

m. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.

n. Ensure that all facilities and company activities are nonsegregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.

p. Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.

8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7a through 7p). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the Contractor is a member and participant, may be asserted as fulfilling any one or more of the obligations under 7a through 7p of this Special Provision provided that the Contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensure that the concrete benefits of the program are reflected in the Contractor's minority and female work-force participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrate the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.

9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).
10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.

11. The Contractor shall not enter into any subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.

12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspensions, terminations and cancellations of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.

13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of this Special Provision, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.

14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the government and to keep records. Records shall at least include, for each employee, their name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, the Contractors will not be required to maintain separate records.

15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

16. Additional assistance for Federal Construction Contractors on contracts administered by Washington State Department of Transportation or by Local Agencies may be found at:

   Washington State Dept. of Transportation
   Office of Equal Opportunity
(April 1, 2013)

Disadvantaged Business Enterprise Condition of Award Participation

The Disadvantaged Business Enterprise (DBE) requirements of 49 CFR Part 26 apply to this Contract. Demonstrating compliance with these specifications is a Condition of Award (COA) of this Contract. Failure to comply with the requirements of this specification may result in your bid being found to be nonresponsive and may be rejected.

DBE COA Goal

The Contracting Agency has established a COA Contract goal in the amount of:

5%.

DBE Eligibility/Selection of DBEs

A Directory of Certified DBE Firms denoting the Description of Work the DBE Contractors are certified to perform is available at:


The directory provides plain language on the Description of Work that the listed DBE’s have been certified by the Office of Minority and Women’s Business Enterprises (OMWBE) to perform. The Bidder shall use the Directory of Certified DBE Firms to confirm if a DBE is certified for the “Description of Work” the Bidder lists on the DBE Utilization Certification form # 272-056 EF (see form instructions) and therefore qualifies for credit towards the COA goal.

Crediting DBE Participation

Joint Venture

When a DBE performs as a participant in a joint venture, only that portion of the total dollar value of the Contract equal to the distinct, clearly defined portion of the Work that the DBE performs with its own forces shall be credited.

DBE Prime Contractor

A DBE Prime Contractor may only take credit for that portion of the total dollar value of the Contract equal to the distinct, clearly defined portion of the Work that the DBE Prime performs with its own forces.
DBE Subcontractor
When a DBE firm participates as a Subcontractor only that portion of the total dollar value of the Contract equal to the distinct, clearly defined portion of the Work that the DBE performs with its own forces shall be credited.

- Include the cost of supplies and materials obtained by the DBE for the Work in the Contract including supplies purchased or equipment leased by the DBE.
  - However, you may not take credit for supplies, materials, and equipment the DBE Subcontractor purchases or leases from the Prime Contractor or its affiliate. In addition, Work performed by a DBE, utilizing resources of the Prime Contractor or its affiliates shall not be credited.

- In very rare situations, a DBE firm may utilize equipment and/or personnel from a non-DBE firm other than the Prime Contractor or its affiliates. Should this situation arise the arrangement must be short-term and have prior written approval from the Office of Equal Opportunity (OEO).

- Count the entire value of fees or commissions charged by a DBE firm for providing a bona fide service, such as professional, technical, consultant, managerial services, or for providing bonds or insurance.

- When a DBE subcontracts to another firm, the value of the subcontracted Work may be counted as participation only if the DBE’s lower tier Subcontractor is also a DBE. Work that a DBE subcontracts to a non-DBE firm shall not be credited.

- When non-DBE Subcontractor further subcontracts to a lower-tier Subcontractor or supplier who is a certified DBE, then that portion of the Work further subcontracted may be credited as DBE participation, provided it is a distinct clearly defined portion of the Work that the DBE is certified to perform and the DBE Subcontractor performs the Work with its own forces.

- If a firm is not certified as a DBE at the time of the execution of the contract, their participation cannot be counted toward any DBE goals.

Trucking
Use the following factors in determining DBE credit and whether a DBE trucking company is performing a commercially useful function:

1. The DBE must be responsible for the management and supervision of the entire trucking operation for which credit is being claimed.
2. The DBE must itself own and, with its own workforce, operate at least one fully licensed, insured, and operational truck used on the Contract.

3. The DBE receives credit only for the value of the transportation services it provides on the Contract using trucks it owns or leases, licenses, insures, and operates with drivers it employs. For purposes of this requirement a lease must indicate that the DBE has exclusive use of and control over the truck. This does not preclude the leased truck from working for others provided it is with the consent of the DBE and the lease provides the DBE first priority for use of the leased truck. Leased trucks must display the name and identification number of the DBE.

4. The DBE may lease trucks from another DBE firm including an owner-operator provided they are certified as a DBE for trucking. The DBE who leases trucks from another DBE may claim participation for the total value of the transportation services the lessee DBE provides on the Contract.

5. The DBE may also lease trucks from a non-DBE firm and may enter into an agreement with an owner-operator who is a non-DBE. The DBE shall only receive credit for the number of additional non-DBE trucks equal or less than the number of DBE trucks the firms owns or has leased/subcontracted through another DBE trucking company. The DBE must control the work of the non-DBE trucks. If the non-DBE is performing the work without supervision of that work by the DBE, the DBE is not performing a Commercially Useful Function (CUF).

6. In any lease or owner-operator situation, as described in requirement #4 and #5 above, the following rules shall apply:

   a. A written lease/rental agreement is required for all trucks leased or rented; documenting the ownership and the terms of the agreement. The agreements must be submitted and approved by the Contracting Agency prior to the beginning of the Work. The agreement must show the lessee's name, truck description and agreed upon amount and method of payment (hour, ton, or per load). All lease agreements shall be for a long-term relationship, rather than for the individual project. (This requirement does not apply to owner-operator arrangements.)

   b. Only the vehicle, (not the operator) may be leased or rented. (This requirement does not apply to owner-operator arrangements.)
7. Credit may only be claimed for DBE trucking firms operating under a subcontract or a written agreement approved by the Contracting Agency prior to performing Work.

Expenditures paid to other DBEs
Expenditures paid to other DBEs for materials or supplies may be counted toward DBE goals as provided in the following:

Manufacturer
You may claim DBE credit for 100 percent of value of the materials or supplies obtained from a DBE manufacturer.

A manufacturer is a firm that operates or maintains a factory or establishment that produces, on the premises, the materials, supplies, articles, or equipment required under the contract. A manufacturer shall include firms that produce finished goods or products from raw or unfinished material or that purchases and substantially alters goods and materials to make them suitable for construction use before reselling them.

In order to receive credit as a DBE Manufacturer, the firm must be certified by OMWBE as a manufacturer in a NAICS code that falls within the 31XXXX to 33XXXXX classification.

Regular Dealer
You may claim credit for 60 percent of the value of the materials or supplies purchased from a DBE regular dealer. Rules applicable to regular dealer status are contained in 49 CFR Part 26.55.e.2.

To be considered a regular dealer you must meet the following criteria:

- WSDOT considers and recognizes a regular dealer, as a firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials or supplies required for the performance of the Contract and described by the specifications of the Contract are bought, kept in stock and regularly sold or leased to the public in the usual course of business.

- Sixty percent (60%) of the cost of materials or supplies purchased from an approved regular dealer may be credited as DBE participation.

Regular dealer status is granted on a contract-by-contract basis. A firm wishing to be approved as a regular dealer for WSDOT contracted projects or Highways & Local Program administered projects must submit a request in writing to OEO for approval, no later than seven days prior to bid opening.
Once the OEO has received the request, an onsite review will be set up with the firm and a review conducted to determine the firm’s qualifications. If it is determined that the firm qualifies as a regular dealer the OEO will list the firm on an Approved Regular Dealers List. The list may be accessed through the OEO Home website is at:

[website link]

Note: Requests to be listed as a regular dealer will only be processed if the requesting firm is certified by the Office of Minority and Women’s Business Enterprises in a NAICS code that fall within the 42XXXX NAICS Wholesale code section.

Materials or Supplies Purchased from a DBE
With regard to materials or supplies purchased from a DBE who is neither a manufacturer nor a regular dealer you may claim credit for the following:

1. Fees or commissions charged for assistance in the procurement of the materials and supplies.

2. Fees or transportation charges for the delivery of materials or supplies.

In either case you may not take credit for any part of the cost of the materials and supplies.

Commerciably Useful Function (CUF)
The Prime Contractor has a responsibility and must treat the working relationship with the DBE such that the DBE is performing a commercially useful function. The Prime Contractor may only take credit for Work performed by a DBE that is determined to be performing a commercially useful function.

- A DBE performs a commercially useful function when it is responsible for execution of a distinct element of Work and is carrying out its responsibilities by performing, managing and supervising the Work involved. The DBE must also be responsible with respect to materials and supplies used on the Contract. For example; negotiating price, determining quality, determining quantities, ordering, installing (if applicable) and paying for the material itself.

- A DBE does not perform a commercially useful function if its role is limited to that of an extra participant in a transaction, Contract, or project through which funds are passed.
Joint Checking Allowance
Prime Contractors and DBEs must receive pre-approval by the OEO before using a joint check. Joint check requests shall be submitted by the Prime Contractor to the Contracting Agency for approval.

When requesting approval for use of a joint checking allowance, the Contractor must distribute a written joint check agreement among the parties (including the suppliers involved) providing full and prompt disclosure of the expected use of the joint checks. The agreement shall contain all the information concerning the parties' obligations and consequences or remedies if the agreement is not fulfilled or a breach occurs. The joint check request shall be submitted to the Contracting Agency for approval prior to signing the contract agreement.

The following are some general conditions that must be met by all parties regarding joint check use:

a. It is understood that the Prime Contractor acts solely as the guarantor of a joint check.

b. The DBE's own funds are used to pay supplier of materials. The Prime Contractor does not make direct payment to supplier. In order to be performing a Commercially Useful Function (CUF), the DBE must release the check to the supplier (paying for the materials itself and not be an extra participant in a transaction).

c. If the Prime Contractor makes joint checks available to one DBE Subcontractor, the service must be made available to all Subcontractors (DBE and non-DBE).

d. The relationship between the DBE and its suppliers should be established independently of and without interference by the Prime Contractor. The DBE has final decision-making responsibility concerning the procurement of materials and supplies, including which supplier to use.

e. The Prime Contractor and DBE shall be able to provide receipts, invoices, cancelled checks and/or certification statements of payment if requested by the Contracting Agency.

f. The DBE remains responsible for all other elements of 49 CFR 26.55(c)(1).

Failure by the Prime Contractor to request and receive prior approval of a joint check arrangement will result in the joint check amount not counting towards the Prime Contractor's DBE goal.
Disadvantaged Business Enterprise Utilization Certification FORM # 272-056

EF

To be eligible for award of the Contract, the Bidder shall properly complete and submit a Disadvantaged Business Enterprise Utilization Certification with the Bidder's sealed Bid Proposal, as specified Section 1-02.9 Delivery of Proposal. The Bidder's Disadvantaged Business Enterprise Utilization Certification must clearly demonstrate how the Bidder intends to meet the DBE COA goal. A Disadvantaged Business Enterprise Utilization Certification (form # 272-056 EF) is included in your Proposal package for this purpose as well as instructions on how to properly fill out the form.

In the event of arithmetic errors in completing the Disadvantaged Business Enterprise Utilization Certification the amount listed to be applied towards the goal for each DBE shall govern and the DBE total amount shall be adjusted accordingly.

Note: The Contracting Agency shall consider as non-responsive and shall reject any Bid Proposal submitted that does not contain a Disadvantaged Business Enterprise Utilization Certification that accurately demonstrates how the Bidder intends to meet the COA goal.

Disadvantaged Business Enterprise (DBE) Written Confirmation Document(s)
FORM # 422-031 EF

The Bidder shall submit a complete and accurate Disadvantaged Business Enterprise (DBE) Written Confirmation Document for each DBE firm listed in the Bidder's completed Disadvantaged Business Enterprise Utilization Certification as submitted with the bid. Failure to do so will result in the associated participation being disallowed, which may result in bid rejection.

A Disadvantaged Business Enterprise (DBE) Written Confirmation Document (form No. 422-031 EF) is included in your Proposal package for this purpose.

The form(s) shall be received as specified in the special provisions for Section 1-02.9 Delivery of Proposal.

It is prohibited for the Bidder to require a DBE to submit a Written Confirmation Document with any part of the form left blank. Should the Contracting Agency determine that a Written Confirmation Document was signed by a DBE that was not complete; the validity of the document comes into question and the associated DBE Participation may not receive credit.

Selection of Successful Bidder/Good Faith Efforts (GFE)
The successful Bidder shall be selected on the basis of having submitted the lowest responsive Bid, which demonstrates a good faith effort to achieve the DBE COA goal. Achieving the goal may be accomplished in one of two ways, as follows:
1. By meeting the goal
   The best indication of good faith efforts is to document, through
   submission of the Disadvantaged Business Enterprise Utilization
   Certification and supporting Disadvantaged Business Enterprise (DBE)
   Written Confirmation Document(s) that the Bidder has obtained enough
   DBE participation to meet or exceed the assigned DBE COA contract goal.
   That being the case no additional GFE documentation is required. Or;

2. By documentation that it made adequate GFE to meet the goal
   The Bidder may demonstrate a GFE in whole or part through GFE
   documentation ONLY IN THE EVENT a Bidder’s efforts to solicit
   sufficient DBE participation have been unsuccessful. In this case, the
   Bidder must supply GFE documentation in addition to the Disadvantaged
   Business Enterprise Utilization Certification, and supporting
   Disadvantaged Business Enterprise (DBE) Written Confirmation
   document(s).

   Note: In the case where the Bidder was awarded the contract based on
   demonstrating adequate GFE the advertised DBE goal will not be reduced
   to the Bidder’s partial commitment. The Bidder shall demonstrate a GFE
   during the life of the Contract to attain the DBE Condition of Award
   (COA) Goal as assigned to the project.

Good Faith Efforts (GFE) Documentation
GFE documentation shall be received, as specified in the special provisions for
Section 1-02.9 Delivery of Proposal.

Based upon all the relevant documentation submitted in Bid or as supplement to
Bid, the Contracting Agency shall determine whether the Bidder has demonstrated
a sufficient GFE to achieve DBE participation. The Contracting Agency will make
a fair and reasonable judgment of whether a Bidder that did not meet the goal
through participation, made adequate good faith efforts as demonstrated by the
GFE documentation.

The following is a list of types of actions, which would be considered as part of the
Bidder’s GFE to achieve DBE participation. It is not intended to be a mandatory
checklist, nor is it intended to be exclusive or exhaustive. Other factors or types of
efforts may be relevant in appropriate cases:

1. Attendance by the Bidder at any pre-solicitation or pre-Bid meetings that
   were scheduled by the Contracting Agency to inform DBEs of contracting
   and subcontracting or material supply opportunities available on the
   project;
2. Contacting local Tribes, Tribal Employment Rights Offices (TERO)
   concerning the subcontracting or supply opportunities in sufficient time to
   allow the enterprises to participate effectively;
3. Selection by the Bidder of specific economically feasible units of the project to be performed by DBEs in order to increase the likelihood of participation by DBEs even if the Bidder preferred to perform these Work items as the Prime Contractor;

4. Advertising by the Bidder in general circulation, trade association minority and trade oriented, women focus publications, concerning the subcontracting or supply opportunities;

5. Providing written notice from the Bidder to a reasonable number of specific DBEs, identified from the OMWBE Directory of Certified DBE Firms for the selected subcontracting or material supply Work, in sufficient time to allow the enterprises to participate effectively;

6. Follow-up by the Bidder of initial solicitations of interest by contacting the DBEs to determine with certainty whether they were interested. Documentation of this kind of action shall include the information outlined below:

   a. The names, addresses, telephone numbers of DBEs who were contacted, the dates of initial contact, and whether initial solicitations of interest were followed-up by contacting the DBEs to determine with certainty whether the DBEs were interested;

   b. A description of the information provided to the DBEs regarding the plans, specifications, and estimated quantities for portions of the Work to be performed;

   c. Documentation of each DBE contacted but rejected and the reason(s) for that rejection;

7. Providing, to interested DBEs, adequate information about the plans, specifications, and requirements for the selected subcontracting or material supply Work;

8. Negotiating in good faith with the DBE firms, and not, without justifiable reason, rejecting as unsatisfactory, Bids that are prepared by any DBE. The DBE's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations - union vs. non-union employee status - are not legitimate causes for the rejection or non-solicitation of bids in the Prime Contractor's efforts to meet the project goal;

9. Advertising and making efforts to obtain DBE participation that were reasonably expected to produce a level of participation sufficient to meet the goal or requirements of the Contracting Agency;
10. Making any other efforts to obtain DBE participation that were reasonably expected to produce a level of participation sufficient to meet the goal or requirements of the Contracting Agency;

11. Using the services of minority community organizations, minority contractor groups, local, State, and federal minority business assistance offices and other organizations identified by WSDOT and advocates for disadvantaged, minority, and women businesses that provide assistance in the recruitment and placement of disadvantaged, minority, and women business enterprises; and

12. Using the WSDOT OEO DBE Supportive Services to assist you. For more information please contact the OEO by calling toll free at (888) 259-9143 or emailing dbess@wsdot.wa.gov.

Administrative Reconsideration of GFE Documentation
Any Bidder has the right to reconsideration but only for the purpose of reassessing their GFE documentation that was determined to be inadequate.

- The Bidder must request and schedule a reconsideration hearing within seven calendar days of notification of being nonresponsive or forfeit the right to reconsideration.

- The reconsideration decision on the adequacy of the Bidder’s GFE documentation shall be made by an official who did not take part in the original determination.

- The Bidder shall have the opportunity to meet in person with the official for the purpose of setting forth the Bidder’s position as to why the GFE documentation demonstrates a sufficient effort.

- The reconsideration official shall provide the Bidder with a written decision on reconsideration within five business days of the hearing explaining the basis for their finding.

Procedures between Award and Execution
After Award and prior to Execution the Bidder shall provide the additional information described below. Failure to comply shall result in the forfeiture of the Bidder’s Proposal bond or deposit.

1. Additional information for all successful DBE’s as shown on the Disadvantaged Business Enterprise Utilization Certification:

   a. Correct business name, federal employee identification number (if available), and mailing address.
b. List of all Bid items assigned to each successful DBE firm, including unit prices and extensions.

c. Description of partial items (if any) to be sublet to each successful DBE firm specifying the distinct elements of Work under each item to be performed by the DBE and including the dollar value of the DBE portion.

Total amounts shown for each DBE shall not be less than the amount shown on the Disadvantaged Business Enterprise Utilization Certification. A breakdown that does not conform to the Disadvantaged Business Enterprise Utilization Certification or that demonstrates a lesser amount of DBE participation than that included in the Disadvantaged Business Enterprise Utilization Certification will be returned for correction.

2. A list of all firms who submitted a Bid or quote in an attempt to participate in this project whether they were successful or not. Include the business name and a mailing address.

Note: The firms identified by the Prime Contractor may be contacted by the Contracting Agency to solicit general information as follows: age of the firm and average of its gross annual receipts over the past three-years.

Procedures after Execution

Crediting DBE Participation toward Meeting the Goal

Reporting

All DBE work whether COA or race neutral participation is reported. The Prime Contractor shall submit a Quarterly Report of Amounts Credited as DBE Participation form (422-102 EF) on a quarterly basis for any calendar quarter in which DBE has accomplished Work or upon completion of the project, as appropriate. The dollars are to be reported as specified herein.

In the event that the payments to a DBE have been made by an entity other than the Prime Contractor, as in the case of a lower-tier Subcontractor or supplier, then the Prime Contractor shall obtain the quarterly report, including the signed affidavit, from the paying entity and submit the report to the Contracting Agency.

Changes in DBE COA participation

Owner initiated Change Orders

The Prime Contractor shall demonstrate a GFE to substitute COA DBE participation when the Contracting Agency deletes Work items by change order that impact a COA DBE’s Work.
When the Contract allows alternate Work methods which serve to delete or create under-runs in COA DBE Work then the Prime Contractor must provide documentation of negotiating the change with the DBE that was to perform the reduced Work and demonstrate a GFE to substitute other DBE COA participation.

**Original Quantity Under runs**
In the event that Work committed to a DBE firm as part of the COA under runs the original planned quantities the Prime Contractor shall demonstrate a GFE to substitute other DBE COA participation.

**Contractor-Initiated Proposals—General**
The Contractor cannot reduce the amount of work committed to a DBE firm at contract award without good cause and only with written concurrence from the OEO. Reducing a COA DBE's Work is viewed as a partial DBE termination, subject to the procedures below.

**DBE Termination**
A COA DBE Subcontractor may only be terminated in whole or part with the approval of the Contracting Agency (in coordination with OEO). Approval will be granted provided the Prime Contractor demonstrates that the termination is based on good cause.

Good cause typically includes situations where the DBE Subcontractor is unable or has failed to perform the work of its subcontract in accordance with normal industry standards. While not all inclusive, some examples of good cause include the following circumstances:

Good cause may exist if:

- The listed DBE Subcontractor fails or refuses to execute a written contract.
- The listed DBE Subcontractor fails or refuses to perform the work of its subcontract in a way consistent with normal industry standards.
- The listed DBE Subcontractor fails or refuses to meet the Prime Contractor’s reasonable, nondiscriminatory bond requirements.
- The listed DBE Subcontractor becomes bankrupt, insolvent, or exhibits credit unworthiness.
- The listed DBE Subcontractor is ineligible to work on public works projects because of suspension and debarment proceedings.
pursuant 2 CFR Parts 180, 215 and 1,200 or applicable state law.

- The listed DBE Subcontractor voluntarily withdraws from the project and provides to you written notice of its withdrawal.

- The listed DBE is ineligible to receive DBE credit for the type of work required.

- A DBE owner dies or becomes disabled with the result that the listed DBE is unable to complete its work on the contract.

Good cause does not exist if:

- The Prime Contractor seeks to terminate a COA DBE so that the Prime can self-perform the Work.

- The Prime Contractor seeks to terminate a COA DBE so the Prime Contractor can substitute another DBE or non-DBE after contract award.

- The failure or refusal of the DBE Subcontractor to perform its work on the subcontract results from the bad faith or discriminatory action of the Prime Contractor (e.g., the failure of the Prime Contractor to make timely payments or the unnecessary placing of obstacles in the path of the DBE’s Work).

Prior to requesting termination, the Prime Contractor must give notice in writing to the DBE Subcontractor with a copy to the Contracting Agency of its intent to request to terminate DBE work and the reasons for doing so. The DBE Subcontractor shall have five (5) days to respond to the prime Contractor’s notice. The DBE’s response shall either support the termination or advise the Contracting Agency and the Prime Contractor of the reasons it objects to the termination of its subcontract.

When a COA DBE firm is “terminated” from a Contract (or fails to complete its Subcontract for any reason), the Prime Contractor shall make every good faith effort to substitute another DBE Firm (ref.to 49 CFR 26.53(g)).

Graduation
When a DBE firm “graduates” from the DBE program (during the course of an executed subcontract), the DBE participation of that firm “may” continue to count towards the contract DBE goal.

Decertification
When a COA DBE firm who has a signed subcontract in place with a Prime, later becomes “decertified” (during the course of that subcontract) – the DBE
participation of that firm “may” continue to count towards the Contract DBE goal.

**Counting payments**
Payments to a DBE firm will count toward DBE goals only if the participation is in accordance with these specifications.

**Prompt Payment**
Prompt payment to all Subcontractors shall be in accordance with Section 1-08.1(1) of these Contract special provisions.

**Payment**
Compensation for all costs involved with complying with the conditions of this specification and any other associated DBE requirements is included in payment for the associated Contract items of Work.

**Damages for Noncompliance**
The Prime Contractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this Contract. The Prime Contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of Contracts, which contain funding assistance from the United States Department of Transportation. Failure by the Prime Contractor to carry out these requirements is a material breach of this Contract, which may result in the Termination of this Contract or such other remedy as the Contracting Agency deems appropriate.

If the Prime Contractor does not comply with any part of its Contract as required under 49 CFR part 26, and/or any other applicable law or regulation regarding DBE, the Contracting Agency may withhold payment, suspend the ability of the Prime Contractor to participate in future Contracting Agency contracts, impose sanctions or Terminate the Contract, and subject the Prime Contractor to civil penalties of up to ten percent of the amount of the Contract for each violation. In the case of WSDOT Contracts, prequalification may be suspended pursuant to WAC 468-16-180, and continuous violations (exceeding a single violation) may also disqualify the Prime Contractor from further participation in WSDOT Contracts for a period of up to three years.

An apparent low Bidder must be in compliance with these Contract Provisions as a condition precedent to the granting of a notice of award by the Contracting Agency. The Prime Contractor is entitled to request an adjudicative proceeding with respect to the Contracting Agency’s determination of Contract violation and assessed penalties by filing a written application within thirty days of receipt of notification. The adjudicative proceeding, if requested, will be conducted by an administrative law judge pursuant to the procedures set forth in RCW 34.05 and Chapter 10.08 of the Washington Administrative Code.
(July 1, 2013)
Small Business Enterprise Participation

The Small Business Enterprise (SBE) Program is an element of the Disadvantaged Business Enterprise (DBE) Program in accordance with the requirements of 49 CFR Part 26.39. As such, the requirements of this contract establish affirmative efforts to utilize SBE certified firms on construction projects. No preference will be included in the evaluation of Bids/Proposals. No minimum level of SBE participation shall be required as a Condition of Award and Bids/Proposals may not be rejected or considered non-responsive on that basis.

Voluntary SBE Goals
A voluntary goal amount of ten percent of the Contract bid amount is established.

The goal is voluntary, but achievement of the goal is encouraged. No preference will be included in the evaluation of bids/proposals. Bidders may contact the Washington State Office of Minority and Women’s Business Enterprises (OMWBE) at 360-664-9750 or visit www.omwbe.wa.gov to obtain information on certified SBE firms.

Required SBE Participation Plan
The Contractor shall submit a SBE Participation Plan prior to commencing contract work. Although the goal is voluntary, the outreach efforts to provide SBE maximum practicable opportunities are not.

For SBE Participation Plan Drafting Guidelines, please visit:

www.wsdot.wa.gov/equalopportunity.

Definitions
Regardless of race or gender, a SBE is one certified by OMWBE as such, where the firm’s:

- Three year averaged gross receipts are less than $22.41 million dollars, with smaller industry standards applicable
- Is at least 51% owned and controlled by an individual or individuals with a personal net worth less than $1.32 million dollars
- A Micro Small Business Enterprise is a firm certified as an SBE with average gross receipts for three years less than one million dollars

1-07.12 Federal Agency Inspection

Section 1-07.12 is supplemented with the following:
(July 30, 2012)

Required Federal Aid Provisions

The Required Contract Provisions Federal Aid Construction Contracts (FHWA 1273) Revised May 1, 2012 supersede any conflicting provisions of the Standard Specifications and are made a part of this Contract; provided, however, that if any of the provisions of FHWA 1273 are less restrictive than Washington State Law, then the Washington State Law shall prevail.

The provisions of FHWA 1273 included in this Contract require that the Contractor insert the FHWA 1273 in each Subcontract, together with the wage rates which are part of the FHWA 1273. Also, a clause shall be included in each Subcontract requiring the Subcontractors to insert the FHWA 1273 thereto in any lower tier Subcontracts, together with the wage rates. The Contractor shall also ensure that this section, REQUIRED FEDERAL AID PROVISIONS, is inserted in each Subcontract for Subcontractors and lower tier Subcontractors. For this purpose, upon request to the Project Engineer, the Contractor will be provided with extra copies of the FHWA 1273, the applicable wage rates, and this Special Provision.

1-07.13 Contractor’s Responsibility for Work

1-07.13(4) Repair of Damage

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

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

1-07.17 Utilities and Similar Facilities

Section 1-07.17 is supplemented with the following:

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

Public and private utilities, or their Contractors, will furnish all work necessary to adjust, relocate, replace, or construct their facilities unless otherwise provided for in the Plans or these Special Provisions. Such adjustment, relocation, replacement, or construction will be done during the prosecution of the work for this project. It is anticipated that utility adjustment, relocation, replacement or construction within the project limits will be completed as follows:
Utility relocation work may not be completed and adjustments will be performed by the various utilities if required during progression of work. The Contractor shall coordinate the work to ensure that the work can be completed in a continuous manner.

The Contractor shall attend a mandatory utility preconstruction meeting with the Engineer, all affected Subcontractors, and all utility owners and their Contractors prior to beginning onsite work.

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

<table>
<thead>
<tr>
<th>Call Before You Dig On Call Center</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ph. 1-800-424-5555</td>
<td></td>
</tr>
<tr>
<td>Century Link</td>
<td>Pacific Power and Light Co.</td>
</tr>
<tr>
<td>Mike Brown</td>
<td>Mike Paulson</td>
</tr>
<tr>
<td>509-839-6651</td>
<td>500 N Keys Road</td>
</tr>
<tr>
<td></td>
<td>Yakima, WA 98901</td>
</tr>
<tr>
<td>Yakima Tieton Irrigation District</td>
<td>Ph.: 509-575-3158</td>
</tr>
<tr>
<td>John Dickman</td>
<td>470 Camp Four Rd.</td>
</tr>
<tr>
<td>Yakima, WA 98908</td>
<td></td>
</tr>
<tr>
<td>Ph.: 509-678-4101</td>
<td></td>
</tr>
</tbody>
</table>

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

(January 24, 2011 APWA GSP)

1-07.18(1) General Requirements

A. The Contractor shall obtain the insurance described in this section from insurers approved by the State Insurance Commissioner pursuant to RCW Title 48. The insurance must be provided by an insurer with a rating of A-: VII or higher in the A.M. Best’s Key Rating Guide, which is licensed to do business in the state of Washington (or issued as a surplus line by a Washington Surplus lines broker). The Contracting Agency reserves the right to approve or reject the insurance provided, based on the insurer (including financial condition), terms and coverage, the Certificate of Insurance, and/or endorsements.

B. The Contractor shall keep this insurance in force during the term of the contract and for thirty (30) days after the Physical Completion date, unless otherwise indicated (see C. 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 Final Completion 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 insurance policies shall contain a “cross liability” provision.

E. The Contractor’s and all subcontractors’ insurance coverage shall be primary and non-
contributory insurance as respects the Contracting Agency’s insurance, self-insurance, or
insurance pool coverage.

F. 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.

G. Upon request, the Contractor shall forward to the Contracting Agency a full and certified
copy of the insurance policy(s).

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

I. 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.

J. 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 Professional Liability and Workers
Compensation, shall name the following listed entities as additional insured(s):
- the Contracting Agency and its officers, elected officials, employees, agents, and
  volunteers

1-07.18(3) Subcontractors
Contractor shall ensure that each subcontractor of every tier obtains and maintains at a
minimum the insurance coverages listed in 1-07.18(5)A and 1-07.18(5)B. Upon request of
the Contracting Agency, the Contractor shall provide evidence of such insurance.
1-07.18(4) Evidence of Insurance

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. The certificate and endorsements must conform to the following requirements:

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. A statement of additional insured status on an ACORD Certificate of Insurance shall not satisfy this requirement.

3. Any other amendatory endorsements to show the coverage required herein.

1-07.18(5) Coverages and Limits

The insurance shall provide the minimum coverages and limits set forth below. Providing coverage in these stated minimum limits shall not be construed to relieve the Contractor from liability in excess of such limits. All deductibles and self-insured retentions must be disclosed and are subject to approval by the Contracting Agency. The cost of any claim payments falling within the deductible shall be the responsibility of the Contractor.

1-07.18(5)A Commercial General Liability

A policy of Commercial General Liability Insurance, including:

- Per project aggregate
- Premises/Operations Liability
- Products/Completed Operations – for a period of one year following final acceptance of the work.
- Personal/Advertising Injury
- Contractual Liability
- Independent Contractors Liability
- Stop Gap / Employers' Liability
- Explosion, Collapse, or Underground Property Damage (XCU)
- Blasting (only required when the Contractor’s work under this Contract includes exposures to which this specified coverage responds)

Such policy must provide the following minimum limits:

- $1,000,000 Each Occurrence
- $2,000,000 General Aggregate
- $1,000,000 Products & Completed Operations Aggregate
- $1,000,000 Personal & Advertising Injury, each offence

Stop Gap / Employers’ Liability

- $1,000,000 Each Accident
- $1,000,000 Disease - Policy Limit
- $1,000,000 Disease - Each Employee
1-07.18(5)B Automobile Liability
Automobile Liability for owned, non-owned, hired, and leased vehicles, with an MCS 90 endorsement and a CA 9948 endorsement attached if “pollutants” are to be transported. Such policy(ies) must provide the following minimum limit:

$1,000,000 combined single limit

1-07.18(5)C Workers’ Compensation
The Contractor shall comply with Workers’ Compensation coverage as required by the Industrial Insurance laws of the state of Washington.

1-07.23 Public Convenience and Safety

1-07.23(1) Construction Under Traffic

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

(January 2, 2012)
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:
<table>
<thead>
<tr>
<th>Regulatory Posted Speed</th>
<th>Distance From Traveled Way (Feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>35 mph or less</td>
<td>10 *</td>
</tr>
<tr>
<td>40 mph</td>
<td>15</td>
</tr>
<tr>
<td>45 to 55 mph</td>
<td>20</td>
</tr>
<tr>
<td>60 mph or greater</td>
<td>30</td>
</tr>
</tbody>
</table>

* or 2-feet beyond the outside edge of sidewalk

Minimum Work Zone Clear Zone Distance

(August 7, 2006)

Lane closures are subject to the following restrictions:

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

No lane closures will be allowed on a holiday or holiday weekend, or after 12:00 PM (noon) on a day prior to a holiday or holiday weekend. Holidays that occur on Friday, Saturday, Sunday or Monday are considered a holiday weekend.

1-07.24 Rights of Way

(October 1, 2005 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.

SECTION 1-08, PROSECUTION AND PROGRESS

Add the following new section:

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

Add the following new section:

1-08.0(1) Preconstruction Conference
(October 10, 2008 APWA GSP)

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

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

The Contractor shall prepare and submit at the preconstruction conference the following:
1. A breakdown of all lump sum items;
2. A preliminary schedule of working drawing submittals; and
3. A list of material sources for approval if applicable.

1-08.1 Subcontracting

Section 1-08.1 is supplemented with the following:

(October 12, 1998)
Prior to any subcontractor or lower tier subcontractor beginning work, the Contractor shall submit to the Engineer a certification (WSDOT Form 420-004 EF) that a written agreement between the Contractor and the subcontractor or between the subcontractor and any lower tier subcontractor has been executed. This certification shall also guarantee that these subcontract agreements include all the documents required by the Special Provision Federal Agency Inspection.

A Subcontractor or lower tier Subcontractor will not be permitted to perform any work under the contract until the following documents have been completed and submitted to the Engineer:

1. Request to Sublet Work (Form 421-012 EF), and
2. Contractor and Subcontractor or Lower Tier Subcontractor Certification for Federal-aid Projects (Form 420-004 EF).

The Contractor's records pertaining to the requirements of this Special Provision shall be open to inspection or audit by representatives of the Contracting Agency during the life of the contract and for a period of not less than three years after the date of acceptance of the contract. The Contractor shall retain these records for that period. The Contractor shall also guarantee that these records of all Subcontractors and lower tier Subcontractors shall be available and open to similar inspection or audit for the same time period.

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

Section 1-08.1(1) is revised to read:

(June 27, 2011)
The following procedures shall apply to all subcontracts entered into as a part of this Contract:

Requirements
1. The Prime Contractor or Subcontractor shall make payment to the Subcontractor not later than ten (10) days after receipt of payment from the Contracting Agency for work
satisfactorily completed by the Subcontractor, to the extent of each Subcontractor’s interest therein.

2. Prompt and full payment of retainage from the Prime Contractor to the Subcontractor shall be made within 30 days after Subcontractor’s Work is satisfactorily completed.

3. For purposes of this Section, a Subcontractor’s work is satisfactorily completed when all task and requirements of the Subcontract have been accomplished and including any required documentation and material testing.

4. Failure by a Prime Contractor or Subcontractor to comply with these requirements may result in one or more of the following:
   a. Withholding of payments until the Prime Contractor or Subcontractor complies
   b. Failure to comply shall be reflected in the Prime Contractor’s Performance Evaluation
   c. Cancellation, Termination, or Suspension of the Contract, in whole or in part
   d. Other sanctions as provided by the subcontractor or by law under applicable prompt pay statutes.

Conditions
This clause does not create a contractual relationship between the Contracting Agency and any Subcontractor as stated in Section 1-08.1. Also, it is not intended to bestow upon any Subcontractor, the status of a third-party beneficiary to the Contract between the Contracting Agency and the Contractor.

Payment
The Contractor will be solely responsible for any additional costs involved in paying retainage to the Subcontractors. Those costs shall be incidental to the respective Bid Items.

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
(June 27, 2011 APWA GSP)

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

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

1-08.5 Time for Completion

Section 1-08.5 is supplemented with the following:

(August 7, 2006)
Contract time shall begin on the first working day. The first working day shall be November 4, 2013.

(March 13, 1995)
This project shall be physically completed within 120 working days.

(March 8, 2013 APWA GSP, Option A)
Revise the third and fourth paragraphs to read:

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

Each working day shall be charged to the contract as it occurs, until the contract work is physically complete. If substantial completion has been granted and all the authorized working days have been used, charging of working days will cease. Each week the Engineer will provide the Contractor a statement that shows the number of working days: (1) charged to the contract the week before; (2) specified for the physical completion of the contract; and (3) remaining for the physical completion of the contract. The statement will also show the nonworking days and any partial or whole day the Engineer declares as unworkable. Within 10 calendar days after the date of each statement, the Contractor shall file a written protest of any alleged discrepancies in it. To be considered by the Engineer, the protest shall be in sufficient detail to enable the Engineer to ascertain the basis and amount of time disputed. By not filing such detailed protest in that period, 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. Quarterly Reports of Amounts Credited as DBE Participation, as required by the Contract Provisions.
   d. Final Contract Voucher Certification
   e. Property owner releases per Section 1-07.24

1-08.9 Liquidated Damages

(March 13, 2012 APWA GSP)

Revise the fourth paragraph to read:

When the Contract Work has progressed to Substantial Completion as defined in the Contract, the Engineer may determine that the 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.

SECTION 1-09, MEASUREMENT AND PAYMENT

1-09.6 Force Account

(October 10, 2008 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 Engineer.

**1-09.9 Payments**

*(March 13, 2012 APWA GSP)*

Delete the first four paragraphs and replace them with the following:

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.

1-09.9(1) Retainage

Section 1-09.9(1) content and title is deleted and replaced with the following:

(June 27, 2011)
Vacant

1-09.13(3) Claims $250,000 or Less
(October 1, 2005 APWA GSP)

Delete this Section and replace it with the following:

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

1-09.13(3)A Administration of Arbitration
(October 1, 2005 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 are located.
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.

SECTION 1-10, TEMPORARY TRAFFIC CONTROL

1-10.1 General

Section 1-10.1 is supplemented with the following:

(April 1, 2013)
The Contracting Agency will provide the following labor, equipment and/or materials
resources to the Contractor for use on the project.

Two(2) Variable message signs, if requested by the contractor at the preconstruction
conference.
The Contractor shall notify the Engineer when each resource is to be utilized and shall provide a minimum of 10 working days advance notice to allow any necessary arrangements to be made.

1-10.2 Traffic Control Management

1-10.2(1) General

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

(December 1, 2008)
Only training with WSDOT TCS card and WSDOT training curriculum is recognized in the State of Washington. The Traffic Control Supervisor shall be certified by one of the following:

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

Evergreen Safety Council
401 Pontius Ave. N.
Seattle, WA 98109
1-800-521-0778 or
(206) 382-4090

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

1-10.4 Measurement

1-10.4(2) Items Bids with Lump Sum for Incidentals

Section 1-10.4(2) is supplemented with the following:

(August 2, 2004)
The bid proposal does not contain the item “Project Temporary Traffic Control,” lump sum. The provisions of Section 1-10.4(2) shall apply.

(*****)
Flaggers and Spotter will be by the hour for each performing the work described in Section 1-10.3(1)A. Portions of an hour will be rounded up to the one half hour.
DIVISION 2
EARTHWORK

SECTION 2-01, CLEARING, GRUBBING, AND ROADSIDE CLEANUP

2-01.1 Description

Section 2-01.1 is supplemented with the following:

(March 13, 1995)
Clearing and grubbing on this project shall be performed within the following limits:

The Contractor shall clear and grub as staked unless otherwise directed by the Engineer. The Contractor shall remove and dispose of all existing shrubs, trees, etc whether or not they are shown on the plans. Those areas identified on the Plans as having construction easements shall only be cleared as needed for improvements.

2-01.2(1) Disposal Method No. 1 –Open Burning

Section 2-01.2(1) is deleted and replaced with the following:

(******)
No open burning will be allowed on this project.

2-01.2(3) Disposal Method No. 3 –Chipping

Section 2-01.2(3) is deleted and replaced with the following:

(******)
Chipping shall be done by machines that can grind debris into wood chips. Wood chips to be sold or disposed of outside of this project may be any size. Wood chips to be used within the project site shall be no larger than 6 square inches and no thicker than 1/2–inch. The Contractor may spread the unsold chips evenly on the fill slopes only, and tractor walk them into the ground to the satisfaction of the Engineer.

2-01.5 Payment

Section 2-01.5 is revised as follows:

(******)
There shall be no payment for roadside cleanup. All work performed for roadside cleanup shall be incidental to the Bid Item "Clearing and Grubbing" per Lump Sum, and no further payment shall be made.

SECTION 2-02, REMOVAL OF STRUCTURES AND OBSTRUCTIONS
2-02.3 Construction Requirements

Section 2-02.3 is supplemented with the following:

(Feb 17, 1998)

Removal of Obstructions

The following items shall be removed, disposed of or reset as directed by the Engineer in accordance with the requirements of Section 2-02 of the Standard Specification:

1. Remove mailbox supports and relocate mailboxes along project area to new supports per mailbox support schedule and/or as directed by the United States Post Office.
2. Remove YTID abandoned irrigation pipe, Sta. 10+75 Lt. to Sta. 22+50 Rt. (Verify exact locations with YTID)
3. Remove existing standpipe, Sta. 13+70 Lt.
4. Scarify existing road bed, Sta. 20+00 Rt.
5. Scarify existing road bed, 31+50 Lt.
6. Scarify existing road bed, 37+50 Lt. to Sta. 44+00 Lt.
7. Remove existing guardrail anchors and guardrail, Sta. 43+75 Lt. to Sta. 63+60 Rt.
8. Remove existing 12” conc. culvert pipe, Sta 48+10
9. Remove existing rock wall, Sta. 52+75 Rt. To Sta. 54+15 Rt.
10. Remove existing 12” conc. culvert pipe, Sta. 62+55
11. Remove existing 15” culvert pipe, Sta. 66+20
12. Remove existing guardrail anchors and guardrail, Sta. 66+90 Lt. to Sta. 77+59.5 Lt.
13. Remove existing 12” steel culvert pipe and irrigation pipe, Sta. 68+65
14. Remove existing 18” conc. standpipe, Sta. 71+25 Lt.
15. Remove existing 8” conc. pipe, unknown start pipe and ending Sta. 73+85 Lt.
16. Remove existing culvert pipe, Sta. 73+90
17. Remove existing irrigation pipes which are relocated.
18. Remove YTID abandoned irrigation pipe, Naches-Heights Sta. 0+00 Lt. to Sta. 4+75 Lt. (Verify exact locations with YTID)
19. Remove existing weather station concrete pad and foundation.

Sawcut and remove all pavement at matchline on all existing paved roads, driveways, and connections, as shown on the plans.

Items are approximate locations, Contractor shall verify the type, size and length of each item to determine the scope of work needed to remove such items prior to bid.

All other items encountered, which are not covered by Section 2-01 of the Standard Specifications (Clearing, Grubbing, and Roadside Cleanup) shall be considered incidental to the bid item “Removal of Structures and Obstructions”.
Written permission shall be provided to the County from property owners of any waste site prior to its use.

SECTION 2-03, ROADWAY EXCAVATION AND EMBANKMENT

2-03.4 Measurement

Section 2-03.4 of the Standard Specifications is deleted and replaced with the following:

Copies of the ground cross-section notes shall be available for the bidder's inspection, before the opening of bids, at the office of the County Engineer. Upon award of the Contract, copies of the original ground cross-sections shall be furnished to the successful bidder on request to the County Engineer.

2-03.5 Payment

Section 2-03.5 of the Standard Specifications is deleted and replaced with the following:

The Contract Unit Price for "Roadway Excavation Incl. Haul," per Cubic Yard, shall be full compensation for all labor, equipment, tools, and materials necessary to excavate, load, haul, place, compact, shape, or otherwise dispose of the materials including existing hot mix asphalt pavements, and any other work required to complete this item as specified and no further payment shall be made.

No separate payment shall be made for embankment compaction and all costs to perform this work as required shall be included in the Unit Bid Price per Cubic Yard for "Roadway Excavation Incl. Haul."

SECTION 2-05, EMBANKMENT SAFETY

Section 2-05 is replaced with the following:

The Contractor shall leave existing guardrail in place until adequate clear zone is established, or other safety devices have been installed. If haul routes for equipment necessitate opening up the existing guardrail, the ends shall be protected with sand barrels or other approved safety devices.

SECTION 2-07, WATERING

Section 2-07 is deleted and replaced with the following:

The Contractor shall be solely responsible for dust control on this project and shall protect the motoring public, adjacent homes, orchards and crops from damage due to dust, by
whatever means necessary. The Contractor shall be responsible for any claims for damages and shall protect the County from any and all such claims.

When directed by the Engineer, the Contractor shall provide water for dust control within two hours of such order and have equipment and manpower available at all times including weekends and holidays to respond to orders for dust control measures.

If County forces are required to respond to a dust control problem, the Contractor shall be charged liquidated damages to offset County expenditures. For each time that the County is required to provide dust control measures, the Contractor shall be assessed damages in the amount of $500.00, which shall be deducted from any moneys due the Contractor under this contract.

Payment for water used for dust control, compaction, processing of base course and top course, and other work shall be included in the other Bid Items involved, and no further payment shall be made.

SECTION 2-09, STRUCTURE EXCAVATION

2-09.4 Measurement

Section 2-09.4 the second sentence of the second paragraph is revised to read:

(******)

Measurement will be made from the existing ground line to the bottom of the excavation and for the length of the of the Shoring or Extra Excavation Work actually performed.

DIVISION 3
PRODUCTION FROM QUARRY AND PIT SITES AND STOCKPILING

SECTION 3-01, PRODUCTION FROM QUARRY AND PIT SITES

3-01.4 Contractor Furnished Material Sources

Section 3-01.4 of the Standard Specification shall be supplemented with the following:

(******)

If the sources of materials provided by the Contractor necessitate hauling over roads other than County roads, the Contractor shall at his own expense, make all arrangements for the use of the haul routes.
DIVISION 5
SURFACE TREATMENTS AND PAVEMENTS

SECTION 5-04, HOT MIX ASPHALT

5-04.3(8)A Acceptance Sampling and Testing

Section 5-04.3(8) A shall be deleted

5-04.3(9) Spreading and Finishing

(******)
Section 5-04.3(9) shall be supplemented with the following:

5-04.3(9)A Materials Transfer Device

A materials transfer device (MTD) shall be required to deliver the hot mix asphalt from the hauling conveyance to the paving machine.

Material transfer devices may be self-propelled vehicles, pickup machines, or other devices that provide additional mixing and holding capacity of hot mix asphalt. Other than pickup machines, transfer devices shall have a minimum 18 ton holding and mixing capacity either on the paver, the device itself, or a combination of both.

Prior to use, the manufacturer and model number of the transfer equipment shall be submitted to the Engineer for review and approval. All costs to incorporate the MTD into the paving train shall be included in the unit contract prices for the associated bid items.

5-04.3(10) Compaction

5-04.3(10)B Control

(******)
The first paragraph of Section 5-04.3(10)B of the Standard Specifications is deleted and replaced with the following:

HMA used in traffic lanes, including lanes for ramps, truck climbing, weaving, and speed change, and having specified compacted course thickness greater than 0.10 foot, shall be compacted to a specified level relative density. The specified level of relative density shall be a minimum of 91.0 percent of the reference maximum density as determined by WSDOT for AASHTO T 209. The reference maximum density shall be determined as the moving average of the most recent five determinations for the lot of asphalt concrete being placed. The specified level of density attained will be determined by five nuclear gauge tests taken in accordance with WAQTC FOP TM8 and WSDOT SOP T 729 on the day the mix is placed (after completion of the finish rolling) at locations determined by
the stratified random sampling procedure conforming to WSDOT Test Method 716 within each density lot. The quantity represented by each density lot will be no greater than a single day’s production or approximately 400 tons, whichever is less. The Engineer will furnish the Contractor with a copy of the results of all acceptance testing performed in the field by 7:00 a.m. the morning of the next workday after testing, of for nighttime work within four hours after the beginning of the next paving shift.

The last paragraph of Section 5-04.3(10)B of the Standard Specifications is deleted and replaced with the following:

In addition to the randomly selected locations for tests of density, the Engineer may also isolate from a normal lot any area that is suspected of being defective in relative density. Such isolated material will not include an original sample location. A minimum of 5 randomly located density tests will be taken. The isolated area then will be evaluated for price adjustment in accordance with the price reduction formula in the Special Provisions, considering it as a separate lot.

Control lots not meeting the minimum density standard shall be removed and replaced with satisfactory material. At the option of the Engineer, noncomplying material may be accepted at reduced price as computed below.

FACTORS INVOLVED:

- **Quantity of HMA involved** (from Compaction Control Report)
- **Percent compaction** (from Compaction Control Report)
- **Pav adjustment factor** (see table below)

**Liquid asphalt used** = Percent liquid asphalt from "Amount Ordered" or "Calculated from Production" (whichever is less) from Daily Report of Asphalt Plant Operations (when producing from a commercial plant, always use the "Amount Ordered")

**Price liquid asphalt** = Invoice price f.o.b. job site (if invoice unavailable then use average monthly refinery price.)

**Unit Contract Price** (from Contract Proposal)

CALCULATION PROCEDURE:

Equations: 

\[
PA = Q \times AUCP \times PAF \\
AUCP = UCP - VLA \\
VLA = PLA \times RLAU \\
RLAU = LAU/100
\]
PA = Price adjustment
UCPA = Unit contract price adjustment
Q = Quantity HMA involved
AUCP = Adjusted unit contract price
PAF = Pay adjustment factor
UCP = Unit contract price
VLA = Value liquid asphalt
PLA = Price liquid asphalt
RLAU = Rate liquid asphalt used
LAU = Liquid asphalt used

EXAMPLE:
Q = 200 tons
Percent compaction = 90.5
LAU = 5.0%
UCP = $25.00/ton
PLA = $200.00/ton f.o.b. job site
PAF = 0.05
RLAU = LAU/100
= 5.0/100
RLAU = 0.05 ton/ton
VLA = PLA x RLAU
= $200.00/ton x 0.05 ton/ton
VLA = $10.00/ton

AUCP = UCP - VLA
= $25.00/ton - $10.00/ton
AUCP = $15.00/ton

PA = Q x AUCP x PAF
= 200 ton x $15.00/ton x 0.05
PA = $150.00

UCPA = PA/Q
= $150.00/200 ton
UCPA = $0.75/ton

PAY ADJUSTMENT FACTOR

% RICE FACTOR
91.0 AND ABOVE 0.00
90.0 - 90.9 0.05
89.0 - 89.9 0.10
88.0 - 88.9 0.20
BELOW 88.0 0.50 (IF ACCEPTED)
5-04.3(15) HMA Road Approaches

Section 5-04.3(15) is supplemented with the following:

(******)

For asphalt driveways (road approaches) shown on the plans shall be constructed with 0.40 foot (compacted depth) of crushed surfacing top course and 0.20 foot (compacted depth) of HMA (Hot Mix Asphalt). The portion of driveways not paved with asphalt shall be surfaced with 0.30 foot (compacted depth) crushed surfacing top course, for the length specified by the Engineer.

Grades from the edge of pavement to existing driveways (road approaches) shall be constructed to provide safe ingress and egress and shall be constructed of materials as shown on the plans.

Any portion of the existing driveway (road approach) beyond the construction limits that is damaged by the Contractor's operations shall be replaced in kind at his expense to the satisfaction of the Engineer.

SAW CUTTING PAVEMENT

All transitions to existing asphalt concrete and cement concrete driveways, curb, asphalt thickened edge for gutter, and walkways shall be vertically sawcut at least two (2) inches with straight, uniform edges. Existing asphalt pavement may be cut with a wheel, provided the wheel cut is full depth and no damage occurs to the pavement which is to remain. No impact tools or pavement breakers can be used for trench crossings of existing pavement. Trench crossing of existing pavement shall be vertically sawcut as directed by the Engineer.

5-04.4 Measurement

Section 5-04.4 is supplemented with the following:

(******)

Measurement for driveway (road approach) reconstruction shall be by the various Bid Items involved in the work, "HMA for Approach", per Ton, "Crushed Surfacing Top Course" per Ton, and "Roadway Excavation Incl. Haul" per Cubic Yard.

5-04.5 Payment

Section 5-04.5 is supplemented with the following:

(******)

There is no Bid Item "Saw Cutting Asphalt Pavement" for this project. All costs associated with the cutting, labor, equipment, etc., or any other costs associated with cutting the existing asphalt or concrete pavement shall be considered incidental to the other Contract Bid Items, and no further payment shall be made.

(******)
Payment for driveway (road approach) reconstruction shall be by the various Bid Items involved in the work, “HMA for Approach”, per Ton, “Crushed Surfacing Top Course” per Ton, and "Roadway Excavation Incl. Haul" per Cubic Yard, and shall include all costs associated with labor, materials, haul etc. to complete the Item as specified, and no further payment shall be made.

5-04.5(1) Quality Assurance Price Adjustments

Section 5-04.5(1) shall be deleted.

5-04.5(1) A Price Adjustment for Quality of HMA

Section 5-04.5(1)A shall be deleted.

5-04.5(1) B Price Adjustment for Quality of HMA Compaction

Section 5-04.5(1)B shall be deleted.

DIVISION 7
DRAINAGE STRUCTURES, STORM SEWERS, SANITARY SEWERS, WATER MAINS AND CONDUITS

SECTION 7-01, DRAINS

7-01.3 Construction Requirements

Section 7-01.3 of the Standard Specifications is supplemented with the following:

(*****)
The “Underdrain Pipe _ In. Diam.” shall be constructed per the detail in the plans. The Underdrain trench shall be completely encased in "Moderate Survivability" Class B underground drainage geotextile in accordance with the plans and with Section 2-12 and Section 9-33 of the Standard Specifications. The drain rock shall meet the requirements of Gravel Backfill for Drains in Section 9-03.12(4) of the Standard Specifications.

7-01.4 Measurement

The second and third paragraphs of Section 7-01.4 of the Standard Specifications are deleted.

7-01.5 Payment

Section 7-01.5 of the Standard Specifications is supplemented with the following:

(*****)
The unit contract price for “Underdrain Pipe _ In. Diam.” per linear foot, shall include furnishing and placing; pipe, geotextile fabric, and gravel backfill for drains. It shall be
full compensation for all labor, equipment, tools and materials necessary to supply, 
excavate, load, haul, install and any other work required to complete the item specified 
and no further payment will be made.

There shall be no separate measurement and payment for excavation, backfill, and 
compaction. All costs associated with excavation and backfill of new underdrain trenches, 
including cutting and removal of existing surfacing, shall be included in the various pipe 
installation bid items.

SECTION 7-02, CULVERTS

7-02.2 Materials

Section 7-02.2 is supplemented with the following:

(*.*)

Solid Wall PVC Culvert Pipe, Profile Wall PVC Culvert Pipe, and Corrugated 
Polyethylene Culvert Pipe shall not be allowed for use on driveway approaches or road 
crossings with exposed ends.

7-02.3 Construction Requirements

Section 7-02.3 is supplemented with the following:

(*.*)

All pipes, which extend into the slope shall have beveled ends to match the ground slope. 
On field cuts, the cut surface shall be painted with two coats of paint. The steel pipe to be 
painted shall be cleaned with solvent to remove contaminants. After cleaning, the pipe 
shall be painted with two coats of paint conforming to Federal Specifications TT-P-645 
(Primer, Paint, Zinc Chromate, Alkyd Vehicle).

The cost of cutting, cleaning and painting the steel pipe surfaces as specified shall be 
included in the unit contract price per linear foot for steel pipe.

SECTION 7-04, STORM SEwers

Section 7-04.3(1)E is deleted

7-04.5 Payment

Section 7-04.5 of the Standard Specifications is supplemented with the following:

(*.*)

All pipefittings including elbows, tees, gaskets, bands, etc., are considered incidental to 
individual pipe Bid Items involved, and no further payment shall be made.
SECTION 7-05, MANHOLES, INLETS, CATCH BASINS, AND DRYWELLS

7-05.3(1) Adjusting Manholes and Catch Basins to Grade

Section 7-05.3(1) is supplemented with the following:

(******)

Manholes and similar structures to be adjusted in conjunction with paving projects shall be lowered to a point approximately eight (8) inches below subgrade and covered with a temporary cover. The Contractor shall reference each structure so that it may be easily found upon completion of the paving work.

These structures shall not be adjusted until the pavement work is completed, at which time the center of each structure shall be relocated from the references previously established by the Contractor.

The pavement shall be cut in a restricted area and base material be removed to permit removal of the cover. The manhole shall then be brought to proper grade utilizing the same methods of construction as for the manhole itself. The asphalt concrete pavement shall be cut and removed to a neat circle, the diameter of which shall be equal to the outside diameter of the cast iron frame plus two (2) feet. The frame shall be placed on adjustment rings and set to the desired grade. The base materials and crushed rock shall be removed and Class 4000 Portland Cement Concrete shall be placed within the entire volume of the excavation up to 2 inches below the finished pavement surface.

On the day following placement of the concrete, the edge of the asphalt concrete pavement, and the outer edge of the casting shall be painted with hot asphalt cement. Hot mix asphalt shall then be placed and compacted with hand tampers and a patching roller.

The complete patch shall match the existing paved surface for texture, density, and uniformity of grade. The joint between the patch and the existing pavement shall then be carefully painted with hot asphalt cement or asphalt emulsion and shall be immediately covered with dry paving sand before the asphalt cement solidifies. The inside throat of the manhole shall be thoroughly mortared and plastered.

Utility structures outside paved areas shall be adjusted to match the finish grade of the area surrounding the structure.

Adjustment of Valve Box, Cleanout and Monument Castings shall be made in the same manner as for manholes, except the asphalt concrete pavement shall be cut and removed to a neat circle, the diameter of which shall be equal to the outside diameter of the frame plus one (1) foot.

7-05.4 Measurement

Section 7-04.5 is supplemented with the following:

(******)
There will be no specific unit of measurement for any structural excavation in the installation of manholes, inlets, and catch basins.

Measurement for "Adjust Valve Box" shall be per Each.

7-05.5 Payment

Section 7-05.5 of the Standard Specifications is supplemented with the following:

(******)
The Unit Contract Price for "Catch Basin Type 1," "Grate Inlet Type 2" and "Drop Inlet Type 1" per Each, shall be full compensation for all labor, equipment, tools, and materials necessary to excavate, load, haul, compact, supply and place, and any other work required to complete the item as detailed in the plans and contract documents and no further payment will be made.

"Adjust Valve Box", per Each.

The bid amount for adjustments shall include removing manhole castings, cones, rings, temporary cover installation, pavement cutting, providing ladder adjustments, cement, and Hot Mix Asphalt placement.

SECTION 7-08, GENERAL PIPE INSTALLATION REQUIREMENTS

7-08.3(2)E Rubber Gasketed Joints

Section 7-08.3(2)E is supplemented with the following:

(******)
Rubber gasketed joints are not required on driveway culvert pipe.

7-08.4 Measurement

Section 7-08.4 of the Standard Specifications is supplemented with the following:

(******)
Private Pipe Connections and Relocations shall consist of all work and materials to make the connection of existing private pipes, and relocation of existing private pipes.

7-08.5 Payment

Section 7-08.5 is supplemented with the following:

(******)
The Unit Contract Price for "Private Pipe Connections And Relocations" paid by Force Account, shall be full compensation for all labor, equipment, tools, and materials necessary to supply, excavate, load, haul, compact, furnish, and any other work required to complete the item as specified and no further payment will be made.
DIVISION 8
MISCELLANEOUS CONSTRUCTION

SECTION 8-01, EROSION CONTROL AND WATER POLLUTION CONTROL

8-01.3(1)B Erosion and Sediment Control (ESC) Lead

Section 8-01.3(B) of the Standard Specifications is supplemented with the following:

(******)

The ESC Lead shall be responsible for all submittals required for the Construction Storm Water permit through the life of the contract. The County will assume responsibility once the contract is complete.

8-01.3(2)B Seeding and Fertilizing

Section 8-01.3(2) B of the Standard Specifications is supplemented with the following:

(******)

Grass seed, of the following composition, proportion, and quality, shall be applied at the rate of 39 pounds per acre on all areas requiring seeding within the project:

<table>
<thead>
<tr>
<th>Grass Species</th>
<th>Scientific Name</th>
<th>Pounds per Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sandburg Bluegrass</td>
<td>Poa sandbergii</td>
<td>6</td>
</tr>
<tr>
<td>Bluebunch Wheatgrass</td>
<td>Agropyron spicatum</td>
<td>4</td>
</tr>
<tr>
<td>Basin Wild Rye</td>
<td>Elymus cinereus</td>
<td>4</td>
</tr>
<tr>
<td>Annual Rye</td>
<td>Lolium multiforum</td>
<td>25</td>
</tr>
</tbody>
</table>

Total Pounds per Acre: 39

(January 5, 1998)

Sufficient quantities of fertilizer shall be applied to supply the following amounts of nutrients:

- Total Nitrogen as N - 80 pounds per acre
- Available Phosphoric Acid as P₂O₅ - 40 pounds per acre
- Soluble Potash as K₂O - 40 pounds per acre
Ninety percent of nitrogen applied per acre shall be derived from isobutylidene diurea (IBDU), cyclo-di-urea (CDU), or sulfur-coated urea (SCU). The remainder may be derived from any source.

The fertilizer formulation and application rate shall be approved by the Engineer before use.

8-01.3(2)D Mulching

Section 8-01.3(2)D of the Standard Specifications is supplemented with the following:

Wood cellulose fiber mulch shall be used, applied at a rate of 2,000 pounds per acre.

8-01.3(2)E Soil Binder or Tacking Agent

Section 8-01.3(2)E of the Standard Specifications is supplemented with the following:

Tacking agent shall be Type A in accordance with Section 9-14.4(7) of the Standard Specifications. Application rate shall be per manufacturer’s written recommendations.

8-01.4 Measurement

Section 8-01.4, revise the third paragraph of the Standard Specifications to read:

Check dams will be measured per each.

8-01.5 Payment

Section 8-01.5 of the Standard Specifications is supplemented with the following:

The per-acre price for “Seeding, Fertilizing, and Mulching” shall also include providing tacking agent.

Section 8-01.5 of the Standard Specifications is revised with the following:

The Bid Item “Check Dam”, per linear foot shall be revised to read “Check Dam”, per each.

SECTION 8-13, MONUMENT CASES

8-13.1 Description

Section 8-13.1 is replaced with the following:

---
This work consists of placing monument cases and covers, in accordance with the
Standard Plans and these Specifications, in conformity with the lines and locations shown
in the Plans or as staked.

8-13.4 Measurement
Section 8-13.4 is replaced with the following:
(******)
Measurement of monument case and cover will be by the unit for each monument case
and cover set.

SECTION 8-15, RIPRAP
8-15.3(2) Loose Riprap
Section 8-15.3(2) is supplemented with the following:
(******)
It is anticipated that material suitable for use as Light Loose Riprap, can be excavated
from native material within the project limits. Approval shall be by visual inspection of
the Engineer.

8-15.3(6) Quarry Spalls
Section 8-15.3(6) is supplemented with the following:
(******)
It is anticipated that material suitable for use as Quarry Spalls, can be excavated from
native material within the project limits. Approval shall be by visual inspection of the
Engineer.

SECTION 8-18, MAILBOX SUPPORT
8-18.3 Construction Requirements
Section 8-18.3 is supplemented with the following:
(******)
Prior to construction, the Contractor shall inventory all mailboxes to be relocated along
the project and either salvage the existing mailboxes or replace in kind. The Contractor
shall notify all residents of the location of their temporary mailbox prior to the
relocation of said mailboxes.

Mailbox supports shall be replaced as shown on the attached Standard Plans and
according to the locations shown on construction plans, or at the location directed by
the Engineer and/or the United States Postal Service.
All mailboxes shall be installed such that the front face of the mailbox is flush with the new edge of road and as per the direction of the Engineer.

Newspaper boxes shall be relocated along the project and shall be relocated back after the completion of the project to the satisfaction of the Engineer.

8-18.5 Payment

Section 8-18.5 is supplemented with the following:

(******)

Payment for the Contract Bid Item "Mailbox Support Type _" per Each, shall include all costs for materials, haul, labor, equipment and all other costs necessary to complete the item as specified and no further payment shall be made.

All costs associated with transferring the existing mailboxes and newspaper tubes to the new mailbox supports, including support hardware, clamps, etc. shall be considered incidental to the Bid Items "Mailbox Support Type _" per Each, and no further payment shall be made.

SECTION 8-20, ILLUMINATION, TRAFFIC SIGNAL SYSTEMS, AND ELECTRICAL

8-20.3 Construction Requirements

8-20.3(1) General

Section 8-20.3(1) is supplemented with the following:

(******)

Restore removal site location by filling and grading to smooth neat appearance matching surrounding surface.

8-20.3(10) Service, Transformer, and Intelligent Transportation System (ITS) Cabinets

Section 8-20.3(10) is supplemented with the following:

(******)

For the temporary installation of the Variable Message Signs (VMS), the Contactor shall install County furnished Daktronics VF-2420-27X90-46-A VMS on temporary timber posts for, as shown in the plans. VMS on the temporary location would be used to advise travelers of adverse road conditions, including construction-related congestion during construction. The Contractor is responsible for furnishing and installing the timber posts, installing the VMS, power, test, local control panel assembly and all other ancillary equipment and components, to make the VMS functional. The Contractor shall supply all equipment and personnel needed to load, transport, and unload the VMS.

For the permanent installation of the VMS, the Contractor shall relocate the VMS from the temporary location to the permanent location, as shown in the plan. The contractor shall be responsible for furnishing the VMS structures, foundations, power, local control
panel assembly and all other ancillary equipment and components, to make the VMS functional. The Contractor shall supply all equipment and personnel needed to load, transport, and unload the VMS.

The variable message signs are used to inform drivers of incidents in and beyond the construction work zone. The Contractor shall provide maintenance of the furnished and installed VMS until Physical Completion of the project. Maintenance includes the response to faults that cause a failure or disruption of the control unit for the Variable Message Sign (VMS), or the VMS itself.

Any damages to the VMS, VMS controller, or any of its components during the construction shall be the responsibility of the Contractor. Responsibility might include replacing the damaged part with a new part after an evaluation to the damaged part by County Engineer.

All cables connecting equipment such as VMS signs and cabinets, including VMS Control Cable, shall conform to the equipment manufacturer's specifications.

The Contractor shall install County furnished 334 series VMS control cabinets as shown in plans. Contractor shall furnish and install Uninterrupted Power Supply (UPS) units and controller, electrical panel, a Sierra Wireless Raven X cellular modem and all associated required equipment to make the cabinet functional in place. The Contractor shall install the control cabinet, which includes but not limited to mounting the cabinet on its foundation, terminating power cables, grounding the cabinet and terminating communications cables.

The below items will be furnished by Yakima County. Contractor shall provide all other items to make the VMS complete and functional in place.
- Variable Message Sign (VMS) and controller: Daktronics VF-2420-27X90-46-A
- VMS controller Cabinet: 334 Model. All other cabinet equipment are the responsibility of the contractor to furnish

Contractor will be required to provide (see ITS VMS Installation Construction Note #7) A Sierra Wireless Raven X cellular modem (quantity 1), compatible with the commercial Sprint Wireless 3G/4G network. The described cellular modem will need to support a Static IP address, for remote network access. The authorized distributor; Feeney Wireless, LLC.

Feeney Wireless
PO Box 2549
Eugene, OR 97402
(800)-683-4818
www.feeneywireless.com

8-20.3(16) Reinstalling Salvaged Material
Section 8-20.3(16) is supplemented with the following:

(******)
Contractor will be required to provide (see ITS Weather Station Installation Construction Note #3) GLEN MARTIN fixed tower base assembly; part number FB-13 (quantity 1). Authorized distributor for GLEN MARTIN ENGINEERING; Texas Towers.

Contractor will be required to provide (see ITS Weather Station Installation Construction Note #10) GLEN MARTIN Lightning Rod Kit; part number LR 8400 (quantity 8). Authorized distributor for GLEN MARTIN ENGINEERING; Texas Towers.

GLEN MARTIN ENGINEERING:
1604 A Business Loop 70 West
Columbia, MO. 65202, USA
(800)-486-1223
(660)-882-2734
http://glenmartin.com/

Texas Towers:
1108 Summit Avenue, #4
Plano, TX. 75074
(800)-272-3467
http://www.texastowers.com/

8-20.5 Payment

Section 8-20.5 of the Standard Specifications is supplemented with the following:

(******)
The unit Contract price for “ITS Variable Message Sign - Temporary” and “ITS Variable Message Sign – Permanent”, shall be full pay for installing and testing all materials and equipment necessary to provide a complete and operable VMS system including all incidental items required to make the VMS system complete and functional at the temporary and permanent locations. This shall include but not be limited to relocating the VMS to the permanent location, timber sign posts, permanent sign structure and foundations, hardware necessary for mounting, cabinet foundation, breaker distribution panel, metering base, electrical panel, junction boxes, conduits, conduit risers, installation of controllers and other cabinet equipment, VMS control cable and connectors, connection to power conductors, grounding, adjustments to conduit, wiring and cabling, installation and connection of similar equipment associated with the sign and the cabinet, and all incidental items required to make the VMS complete and functional in place.

The unit Contract price for “ITS Existing Weather Station Removal” shall be full pay including but not limited to; removal and retention of 30’ tower assembly, equipment enclosures, and breaker distribution panel. The removal of type I junction boxes (2), 30’ wood utility pole, quazite junction box, concrete pad, encased tower base, 4” x 4” wooden support post, all RGS installed conduits, all power conductors, all ground conductors, Pacific Power meter base, and commercial power disconnect. Restoring
removal site location, Upon removal of described power and ground conductors, all 
salvageable materials shall be returned to Yakima County.

“ITS Weather Station Installation” shall be full pay including but not limited to; 
reinstallation of salvaged 30’ tower assembly, equipment enclosures, and breaker 
distribution panel retained from removal site. The installation of concrete service pad, 
concrete tower base and associated fixed tower base assembly, 30’ wood utility pole, type 
A electrical service w/ rated disconnect on wooded utility pole, tower grounding scheme 
including lightning protection, ground rods, junction boxes, conduits, power conductors, 
and ground conductors. Electrical connections shall be performed in compliance with 
N.E.C. specifications.

SECTION 8-21, PERMANENT SIGNING

8-21.2 Materials

Section 8-21.2 is supplemented with the following:

(January 3, 2011)

Perforated Steel Square Sign Post System
Where noted in the Plans, steel sign post systems shall be square, pre-punched galvanized 
steel tubing, that are NCHRP 350 Test Level 3 Certified and FHWA approved. The steel 
sign post system shall include all anchor sleeves, and other hardware required for a complete 
sign installation.

System Acceptance
Systems listed in the current QPL will be accepted per the QPL approval code. Systems not 
listed in the QPL will be accepted based on a Supplier’s Certificate of Compliance. The 
Supplier’s Certificate of Compliance will be a contract specific letter from the supplier 
stating the system is NCHRP 350 Test Level 3 compliant.

SECTION 8-22 PAVEMENT MARKINGS

8-22.1 Description

Section 8-22.1 is supplemented with the following:

(*/***)
Longitudinal Line Markings shall be applied with a highway striper truck whenever 
possible. Any other method shall be approved by the Engineer two weeks prior to the 
use of the proposed application.

8-22.3(1) Preliminary Spotting

Section 8-22.3(1) is deleted and replaced with the following:
The Engineer will provide spotting of the lines to be marked. Spotting shall be provided at a spacing of 100 feet maximum on tangents and 25 feet maximum on curves. The color of all spotting will be white.

DIVISION 9
MATERIALS

SECTION 9-03, AGGREGATES

9-03.8 Aggregates for Hot Mix Asphalt

9-03.8(2) HMA Test Requirements

(March 10, 2010 APWA GSP)
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 1 million.

9-03.8(7) HMA Tolerances and Adjustments

(March 10, 2010 APWA GSP)

Section 9-03.8(7), 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:

<table>
<thead>
<tr>
<th>Aggregate, percent passing</th>
<th>Nonstatistical Evaluation</th>
<th>Commercial Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1&quot;, ¾&quot;, ½&quot;, and 3/8&quot; sieves</td>
<td>±6%</td>
<td>±8%</td>
</tr>
<tr>
<td>U.S. No. 4 sieve</td>
<td>±6%</td>
<td>±8%</td>
</tr>
<tr>
<td>U.S. No. 8 sieve</td>
<td>±6%</td>
<td>±8%</td>
</tr>
<tr>
<td>U.S. No. 200 sieve</td>
<td>±2.0%</td>
<td>±3.0%</td>
</tr>
<tr>
<td>Asphalt Binder</td>
<td>±0.5%</td>
<td>±0.7%</td>
</tr>
</tbody>
</table>

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.
SECTION 9-28 SIGNING MATERIALS AND FABRICATION

9-28.1(2) Inspection

Section 9-28.1(2) is deleted and replaced with the following:

(*****)

The Engineer shall inspect the completed signs at the Yakima County Maintenance facility located at 1216 S. 18th Street, before the installation of the signs. An approved by Yakima County decal shall be affixed to the blank side of each sign with the exception of doubled-faced signs which do not receive decals or fabricators stickers. Signs without the approved decal shall not be installed on the project.

APPENDICES

(January 2, 2012)

The following appendices are attached and made a part of this contract:

APPENDIX A - REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

APPENDIX B - PREVAILING WAGE RATES
Federal Wage Rates and Washington State Prevailing Wage Rates - Yakima County Benefit Code Key Supplement to Wage Rates

APPENDIX C - GEOLOGICAL INFORMATION

APPENDIX D - STANDARD PLANS

(August 5, 2013)

Standard Plans
The State of Washington Standard Plans for Road, Bridge and Municipal Construction M21-01 transmitted under Publications Transmittal No. PT 13-037, effective August 5, 2013 is made a part of this contract.

The Standard Plans are revised as follows:

A-50.10
Sheet 2 of 2, Plan, with Single Slope Barrier, reference C-14a is revised to C-70.10

A-50.20
Sheet 2 of 2, Plan, with Anchored Barrier, reference C-14a is revised to C-70.10
A-50.30
Sheet 2 of 2, Plan (top), reference C-14a is revised to C-70.10

B-10.20 and B-10.40
Substitute “step” in lieu of “handhold” on plan

B-25.20
Add Note 7. See Standard Specification Section 8-04 for Curb and Gutter requirements

B-90.40
Offset & Bend details, add the subtitle, “Plan View” above titles

C-16a
Note 1, reference C-28.40 is revised to C-20.10

C-16b
Note 3, reference C-28.40 is revised to C-20.10

C-70.10-00
Elevation, and Barrier Connection Detail, callout for premolded joint filler, revise ¼” to 3/8” Note 1, revise ¼” to 3/8”.
The Welded Wire Reinforcing Substitution Option Table is deleted. The note, “*Optional Substitutions to Welded Wire Reinforcements shall conform to Standard Specification Sections 6-10 and 9-07” is revised to read: “Steel Welded Wire Reinforcement Deformed, for Concrete may be substituted for reinforcing steel in accordance with Standard Specification 6-10.3.”

C-75.10-00
Elevation, callout for premolded joint filler, revise ¼” to 3/8”, Note 1, revise ¼” to 3/8”.
The Welded Wire Reinforcing Substitution Option Table is deleted. The note, “*Optional Substitutions to Welded Wire Reinforcements shall conform to Standard Specification Sections 6-10 and 9-07” is revised to read: “Steel Welded Wire Reinforcement Deformed, for Concrete may be substituted for reinforcing steel in accordance with Standard Specification 6-10.3.”

C-75.20-00
Elevation, callout for premolded joint filler, revise ¼” to 3/8”, Note 1, revise ¼” to 3/8”.
The Welded Wire Reinforcing Substitution Option Table is deleted. The note, “*Optional Substitutions to Welded Wire Reinforcements shall conform to Standard Specification Sections 6-10 and 9-07” is revised to read: “Steel Welded Wire Reinforcement Deformed, for Concrete may be substituted for reinforcing steel in accordance with Standard Specification 6-10.3.”

C-75.30-00
Elevation, and Plan views, callout for premolded joint filler, revise ¼” to 3/8”, Note 1, revise ¼” to 3/8”.
The Welded Wire Reinforcing Substitution Option Table is deleted. The note, "**Optional Substitutions to Welded Wire Reinforcements shall conform to Standard Specification Sections 6-10 and 9-07**” is revised to read: “Steel Welded Wire Reinforcement Deformed, for Concrete may be substituted for reinforcing steel in accordance with Standard Specification 6-10.3.”

C-80.10-00
The Welded Wire Reinforcing Substitution Option Table is deleted. The note, "**Optional Substitutions to Welded Wire Reinforcements shall conform to Standard Specification Sections 6-10 and 9-07**” is revised to read: “Steel Welded Wire Reinforcement Deformed, for Concrete may be substituted for reinforcing steel in accordance with Standard Specification 6-10.3.”

C-80.20-00
The Welded Wire Reinforcing Substitution Option Table is deleted. The note, "**Optional Substitutions to Welded Wire Reinforcements shall conform to Standard Specification Sections 6-10 and 9-07**” is revised to read: “Steel Welded Wire Reinforcement Deformed, for Concrete may be substituted for reinforcing steel in accordance with Standard Specification 6-10.3.”

C-80.30-00
The Welded Wire Reinforcing Substitution Option Table is deleted. The note, "**Optional Substitutions to Welded Wire Reinforcements shall conform to Standard Specification Sections 6-10 and 9-07**” is revised to read: “Steel Welded Wire Reinforcement Deformed, for Concrete may be substituted for reinforcing steel in accordance with Standard Specification 6-10.3.”

C-80.40-00
The Welded Wire Reinforcing Substitution Option Table is deleted. The note, "**Optional Substitutions to Welded Wire Reinforcements shall conform to Standard Specification Sections 6-10 and 9-07**” is revised to read: “Steel Welded Wire Reinforcement Deformed, for Concrete may be substituted for reinforcing steel in accordance with Standard Specification 6-10.3.”

C-85.14
General Notes, Note 1, reference to Standard Plan C-13 is revised to C-70.10

C-85.15
General Notes, Note 2, reference to Standard Plan C-13 is revised to C-70.10

C-85.16
General Notes, Note 1, reference to Standard Plan C-13 is revised to C-70.10

C-85.18
General Notes, Note 1, reference to Standard Plan C-13 is revised to C-70.10
C-85.20
General Notes, Note 3, reference to Standard Plan C-13 is revised to C-70.10

D-3.10
Key Note 7, reference to 1130.04(5).06 is revised to 730.05(5)

F-10.12
Note 1. See Standard Plan F-30.10 for Curb Expansion and Contraction Joint spacing. Is
revised to read; “See Standard Plan F-30.10 for Curb Expansion and Contraction Joint
spacing and see Standard Specification section 8-04 and 9-04 for additional requirements.”

F-10.62
Plan Title, Precast Concrete Sloped Mountable Curb is revised to read; “Precast Sloped
Mountable Curb”

F-10.64
Plan Title, Plan Title, Precast Concrete Dual Faced Sloped Mountable Curb is revised to
read; “Precast Dual Faced Sloped Mountable Curb”

F-30.10
Sections, left side of sheet, (4 places), dimension, Sidewalk - 6' - 0" MIN.(See Contract) is
revised to read; “Sidewalk (See Contract)”
Section, top middle of sheet, dimension, Sidewalk - 6' - 0" MIN. (See Contract) is revised
to read; “Sidewalk (See Contract)”

F-80.10
callout, top middle of sheet, Match Sidewalk Width See Contract Plans ~ 4' - 0" MIN. is
revised to read; “Match Sidewalk Width See Contract Plans”
dimension, PLAN VIEW TYPE 2, (2 places), 4' - 0" MIN, is revised to read; “(See
Contract)”
dimension, SECTION C, See Contract Plans ~ 4' - 0" MIN. is revised to read; “See
Contract Plans”

G-60.20
Side View, callout, “Anchor Rod ~ 1-3/4” Diam. x 4’-4” Threaded 8” Min. Each End; W/ 2
Washers & 4 Heavy Hex Nuts ~ Galvanize Exposed Anchor Rod End for 1’-0” Min.” is
revised to read; “Anchor Rod ~ 1-3/4” Diam. x 4’-4” Threaded 8” Min. Each End; W/ 2
Washers & 6 Heavy Hex Nuts ~ Galvanize Exposed Anchor Rod End for 1’-0” Min.”

G-60.30
End View, callout, “Anchor Rod ~ 1-3/4” Diam. x 4’-4” Threaded 8” Min. Each End; W/ 2
Washers & 4 Heavy Hex Nuts ~ Galvanize Exposed Anchor Rod End for 1’-0” Min.” is
revised to read; “Anchor Rod ~ 1-3/4” Diam. x 4’-4” Threaded 8” Min. Each End; W/ 2
Washers & 6 Heavy Hex Nuts ~ Galvanize Exposed Anchor Rod End for 1’-0” Min.”

H-70.20
Sheet 2, Spacing Detail, Mailbox Support Type 1, reference to Standard Plan I-70.10 is revised to H-70.10

I-50.10
Deleted

J-3b
Sheet 2 of 2, Plan View of Service Cabinet, Boxed Note, “SEE STANDARD PLAN J-6C…” is revised to read: “SEE STANDARD PLAN J-10.10…”
Sheet 2 of 2, Plan View of Service Cabinet Notes, references to Std. Plan J-9a are revised to J-60.05 (3 instances).

J-10.10
Note 2. The contractor shall install the conduits in the locations shown. Conduits shall extend 2” min. above the coupling. The conduit containing unfused utility conductors shall extend into the utility chase is revised to read:

"The contractor shall install the conduits in the locations shown. Conduits shall extend 2” min. above the coupling. The grounded end bushing on GRS conduit and the end bell bushing on PVC conduit shall extend 3” max. above the coupling. The conduit containing unfused utility conductors shall extend into the utility chase.”

Note 4. The cabinets shall be attached to the foundation with 4 each: 1/2" × 12" × 2" × 4"
hot dip galv. anchor bolts, washers, and nuts. Stainless steel epoxy anchors may be used as an alternative, and shall be 1/2" diam. × 9", or 5/8" diam. × 8". Bolts shall extend 1 1/2" min. to 2” max. above the concrete pad is revised to read:

"The cabinets shall be attached to the foundation with 4 each: ½” x 12” x 2” x 4” anchor bolts, washers, and nuts conforming to Section 9-06.5(1) and galvanized after fabrication in accordance with AASHTO M 232. Stainless steel epoxy anchors may be used as an alternative, and shall be ½” diameter x 9”, or 5/8” diameter x 8”. Threaded Rod (conforming to ASTM F 593), washers (conforming to ASTM A 240), and nuts (conforming to ASTM F 594), all shall be Type 304 stainless steel. Bolts shall extend 1 ½” min. to 2” max. above the concrete pad."

J-10.15
ANCHOR BOLT detail, callout – ASTM A307 with washer and nut – Galvanized per AASHTO M 232 is revised to read; “Anchor bolts, washers, and nuts conforming to Section 9-06.5(1) and galvanized after fabrication in accordance with AASHTO M 232 “

J-15.10
Elevation View (3x), Depth dimension, reads; "Depth ~ See Std. Spec. 9-20.3(14)E and Contract", revised to read; "Depth ~ See Std. Spec. 8-20.3(13)A and Contract"

J-15.15
General Notes, Note 3, reference to Standard Plan J-7c is revised to J-27.15
J-16b
Deleted

J-16c
Deleted

J-20.10-02
Foundation Detail, callout, "½" diameter steel hex nut, with 1 ½" flat washer (2) each req’d per anchor bolt" is revised to read; ½” diameter steel heavy hex nut, with ½” flat washer (2) each req’d per anchor bolt

J-20.11-01
Sheet 1, View A, callout, “½” x 26” full thread ~ (4) required ½” hex nuts ~ (4) required per anchor bolt” is revised to read; “½” x 24” full thread ~ (4) required ½” heavy hex nuts ~ (4) required per anchor bolt”

Section B, callout, “1/2” diameter steel hex nut, with ½” flat washer, (2) required per anchor bolt” is revised to read; 1/2” diameter steel heavy hex nut, with ½” flat washer, (2) required per anchor bolt

Sheet 2, Elevation, callout, “Anchor bolt ½” x 28” full thread ~ (4) required ½” hex nuts ~ (4) required per anchor bolt” is revised to read: Anchor bolt 3/4” x 36” full thread ~ (4) required 3/4” heavy hex nuts ~ (4) required per anchor bolt”

J-20.16
Elevation, callout, “1/4” Premolded Joint Filler” is revised to read; “3/8” Premolded Joint Filler”
Add General Note 9. “Junction Box serving the Standard shall preferably be located 5’ – 0” (10’ – 0” Max.) from the Standard.”

J-21.10-03
Sheet 1, Round Concrete Foundation Detail, Elevation, callout, “¾” hex nuts, steel, (4) Req’d. per Anchor Bolt” is revised to read; Anchor bolt ¾” x 30” full thread ~ (4) required ¾” heavy hex nuts, steel, (4) Req’d. per Anchor Bolt

Sheet 1, Square Concrete Foundation Detail, Elevation, callout, “¾” hex nuts, steel, (4) Req’d. per Anchor Bolt” is revised to read; Anchor bolt ¾” x 30” full thread ~ (4) required ¾” heavy hex nuts, steel, (4) Req’d. per Anchor Bolt

Sheet 1, Detail C, callout, “Base Plate Assembly ~ ½” Diam. steel hex nut, with 1 ½” flat washer, 2 each req’d per anchor bolt ~ minimum of 2 threads above top of nut or 5/8” maximum (Typ.)” is revised to read; Base Plate Assembly ~ 3/4” heavy hex nut, with ¾” flat washer, 2 each req’d per anchor bolt ~ minimum of 2 threads above top of nut or 5/8” maximum (Typ.)”
Sheet 2, Round Concrete Foundation Detail, Elevation, callout, “Anchor Bolts ~ (4) req’d per assembly (Typ.)” is revised to read; Anchor Bolt ¾” x 30” full thread ~ (4) req’d per assembly (Typ.)
Callout, “3/4” hex nuts, steel ~ (4) req’d. per anchor bolt” is revised to read; 3/4” heavy hex nuts, steel ~ (4) req’d. per anchor bolt

Sheet 2, Round Concrete Foundation Detail, Elevation, callout, “Anchor Bolts ~ (4) req’d per assembly (Typ.)” is revised to read; Anchor Bolt ¾” x 30” full thread ~ (4) req’d per assembly (Typ.)
Callout, “3/4” hex nuts, steel ~ (4) req’d. per anchor bolt” is revised to read; 3/4” heavy hex nuts, steel ~ (4) req’d. per anchor bolt

J-22.15-01
Ramp Meter Signal Standard, elevation, dimension 4’6” is revised to read; 6’-0”

J-29.10
Galvanized Welded Wire Mesh detail, callout – “Drill and Tap for ¼” Diam. Cap Screw, 3 Places, @ 9” center, all 4 edges S.S. Screw, ASTM F593 and washer”
Is revised to read;
“Drill and Tap for ¼” Diam. Cap Screw, 3 Places, @ 9” center, all 4 edges S.S. Screw, ASTM F593 and washer. Liberally coat the threads with Anti-seize Compound.”

J-29.15
Title, “Camera Pole Standard” is revised to read; “Camera Pole Standard Details”

J-29.16
Title, “Camera Pole Standard Details” is revised to read; “Camera Pole Details”

J-60.14
All references to J-16b (6x) are revised to read; J-60.11

J-75.40
Monotube Sign Structure, elevation, callout – EQUIPMENT GROUNDING CONDUCTOR ~ SIZE PER NEC. MINIMUM SIZE # 8
Is revised to read; EQUIPMENT GROUNDING CONDUCTOR ~ SIZE PER NEC minimum size # 4 AWG

Detail C, callout- EQUIPMENT GROUNDING CONDUCTOR ~ CLAMP TO STEEL REINFORCING BAR, SIZE PER NEC MIN. SIZE # 8
Is revised to read; EQUIPMENT GROUNDING CONDUCTOR ~ CLAMP TO STEEL REINFORCING BAR, SIZE PER NEC minimum size # 4 AWG

Detail C, callout – Stainless Steel, selftapping ¼” Diam. Screw w/ S.S. Washer, space approx. 9” O.C. is revised to read; “Stainless Steel, selftapping ¼” Diam. Screw w/ S.S. Washer, space approx. 9” O.C., liberally coat the threads with Anti-seize compound”
J-75.45

elevation, callout — EQUIPMENT GROUNDING CONDUCTOR ~ SIZE PER NEC.

MINIMUM SIZE # 8

Is revised to read:

EQUIPMENT GROUNDING CONDUCTOR ~ SIZE PER NEC minimum size # 4 AWG

Detail D, callout— EQUIPMENT GROUNDING CONDUCTOR ~ CLAMP TO STEEL

REINFORCING BAR, SIZE PER NEC. MIN. SIZE # 8

Is revised to read:

EQUIPMENT GROUNDING CONDUCTOR ~ CLAMP TO STEEL REINFORCING

BAR, SIZE PER NEC minimum size # 4 AWG

Detail C, callout — Stainless Steel, selftapping ¼” Diam. Screw w/ S.S. Washer, space

approx. 9” O.C. is revised to read; “Stainless Steel, selftapping ¼” Diam. Screw w/ S.S.

Washer, space approx. 9” O.C., liberally coat the threads with Anti-seize compound”

J-90.10

Section B, callout, “Hardware Mounting Rack ~ S. S. 1-5/8” Slotted Channel” is revised to

read: “Hardware Mounting Rack (Typ.) ~ Type 304 S. S. 1-5/8” Slotted Channel”

J-90.20

Section B, callout, “Hardware Mounting Rack (Typ.) ~ S. S. 1-5/8” Slotted Channel” is

revised to read: “Hardware Mounting Rack (Typ.) ~ Type 304 S. S. 1-5/8” Slotted Channel”

K-80.30

In the NARROW BASE, END view, the reference to Std. Plan C-8e is revised to Std. Plan

K-80.35

The following are the Standard Plan numbers applicable at the time this project was

advertised. The date shown with each plan number is the publication approval date shown

in the lower right-hand corner of that plan. Standard Plans showing different dates shall not

be used in this contract.

A-10.10-00........8/7/07 A-30.35-00........10/12/07 A-50.20-01........9/22/09
A-10.20-00........10/5/07 A-40.00-00........8/11/09 A-50.30-00........11/17/08
A-10.30-00........10/5/07 A-40.10-02........6/2/11 A-50.40-00........11/17/08
A-20.10-00........8/31/07 A-40.15-00........8/11/09 A-60.10-01........10/14/09
A-30.15-00........11/8/07 A-40.50-01........6/2/11 A-60.30-00........11/8/07
A-30.30-01........6/16/11 A-50.10-00........11/17/08 A-60.40-00........8/31/07
B-5.20-01........6/16/11 B-30.50-01........4/26/12 B-75.20-01........6/10/08
B-5.40-01........6/16/11 B-30.70-03........4/26/12 B-75.50-01........6/10/08
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M-1.60-02......6/3/11    M-15.10-01......2/6/07    M-40.30-00......9/20/07
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M-2.20-02......6/3/11    M-20.10-02......6/3/11    M-40.50-00......9/20/07

C 3114 Naches Tieton Road Improvements  SP 89  SPECIAL PROVISIONS
APPENDIX A
REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS
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FEDERAL-AID CONSTRUCTION CONTRACTS

I. General
II. Nondiscrimination
III. Nonsegregated Facilities
IV. Davis-Bacon and Related Act Provisions
V. Contract Work Hours and Safety Standards Act Provisions
VI. Subletting or Assigning the Contract
VII. Safety: Accident Prevention
VIII. False Statements Concerning Highway Projects
IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
X. Compliance with Governmentwide Suspension and Debarment Requirements
XI. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in
all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding $10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.
The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

   a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

   b. The contractor will accept as its operating policy the following statement:

   "It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

   a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

   b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.
c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

   a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

   b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

   c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

   a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

   b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.
c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor’s work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor’s association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.
c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this
contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.
IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding $2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 “Contract provisions and related matters” with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

   a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conforms under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

   b. (1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer
shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

  c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

  d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the
contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b. (1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee’s social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at
http://www.dol.gov/esa/whd/forms/wh347instr.htm or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency.

(2) Each payroll submitted shall be accompanied by a “Statement of Compliance,” signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

   (i) That the payroll for the payroll period contains the information required to be provided under § 5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under § 5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

   (ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

   (iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH–347 shall satisfy the requirement for submission of the “Statement of Compliance” required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.
4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.
The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.
8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).


V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of $100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the
District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contacting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term “perform work with its own organization” refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:
(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;

(2) the prime contractor remains responsible for the quality of the work of the leased employees;

(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and

(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary
to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or
Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.
2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost $25,000 or more — as defined in 2 CFR Parts 180 and 1200.

1. Instructions for Certification – First Tier Participants:
   a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

   b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall
submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. “First Tier Covered Transactions” refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility
of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

****

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. Instructions for Certification - Lower Tier Participants:
(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost $25,000 or more - 2 CFR Parts 180 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each
participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov), which is compiled by the General Services Administration.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion—Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed $100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

   a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

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

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed $100,000 and that all such recipients shall certify and disclose accordingly.
ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

   a. To the extent that qualified persons regularly residing in the area are not available.

   b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

   c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.
5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.
APPENDIX B
PREVAILING 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.

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### Journey Level Prevailing Wage Rates for the Effective Date: 09/11/2013

<table>
<thead>
<tr>
<th>County</th>
<th>Trade</th>
<th>Job Classification</th>
<th>Wage</th>
<th>Holiday</th>
<th>Overtime</th>
<th>Note</th>
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https://fortress.wa.gov/lni/wagelookup/prvWagelookup.aspx 08/20/2013
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https://fortress.wa.gov/lni/wagelookup/prvWagelookup.aspx 08/20/2013
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https://fortress.wa.gov/lni/wagelookup/prvWagelookup.aspx 08/20/2013
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<td>Tamper &amp; Similar Electric, Air &amp; Gas Operated Tools</td>
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<td>Tamper (multiple &amp; Self-propelled)</td>
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<td>Timber Person - Sewer (lagger, Shorer &amp; Cribber)</td>
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<td>General Laborer &amp; Topman</td>
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<td>Irrigation Or Lawn Sprinkler Installers</td>
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<td>Yakima Landscape Construction</td>
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<td>$15.45</td>
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<td>Plumbers &amp; Pipefitters</td>
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<td>Brokk - Remote Demolition Equipment</td>
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<td>7A</td>
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<td>Concrete Pump - Mounted Or Trailer High Pressure Line Pump, Pump High Pressure.</td>
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<td>3C</td>
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<td>Concrete Pump: Truck Mount With Boom Attachment Up To 42m</td>
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<td>7A</td>
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<td>Yakima</td>
<td>Power Equipment Operators</td>
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<td>7A</td>
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<td>Yakima</td>
<td>Power Equipment Operators</td>
<td>Cranes: 100 Tons Through 199 Tons, Or 150' Of Boom (Including Jib With Attachments)</td>
<td>$54.04</td>
<td>7A</td>
<td>3C</td>
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<td>Power Equipment Operators</td>
<td>Cranes: 200 Tons To 300 Tons, Or 250' Of Boom (Including Jib With Attachments)</td>
<td>$54.61</td>
<td>7A</td>
<td>3C</td>
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<td>Power Equipment Operators</td>
<td>Cranes: 45 Tons Through 99 Tons, Under 150' Of Boom (including Jib With</td>
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<td>7A</td>
<td>3C</td>
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<td>Power Equipment Operators</td>
<td>Cranes: A-frame - 10 Tons And Under</td>
<td>$50.22</td>
<td>7A</td>
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<td>Yakima</td>
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<td>Cranes: Over 300 Tons Or 300' Of Boom (including Jib With Attachments)</td>
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<td>Power Equipment Operators</td>
<td>Cranes: Through 19 Tons With Attachments A-frame Over 10 Tons</td>
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<td>7A</td>
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<td>Dozers D-9 &amp; Under</td>
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<td>3C</td>
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<td>Drill Oillers: Auger Type, Truck Or Crane Mount</td>
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<td>7A</td>
<td>3C</td>
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<td>7A</td>
<td>3C</td>
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<td>Forklift: 3000 Lbs And Over With Attachments</td>
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<td>3C</td>
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<td>Hard Tail End Dump Articulating Off-road Equipment Under 45 Yards</td>
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<td>7A</td>
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<td>Power Equipment Operators</td>
<td>Horizontal/directional Drill Locator</td>
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<td>3C</td>
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<td>Power Equipment Operators</td>
<td>Hydralifts/boom Trucks Over 10 Tons</td>
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<td>3C</td>
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<td>Hydralifts/boom Trucks, 10 Tons And Under</td>
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<td>7A</td>
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<td>3C</td>
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<td>Loader, Overhead, 6 Yards. But</td>
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<td>Yakima</td>
<td>Power Equipment Operators</td>
<td>Loaders, Overhead Under 6 Yards</td>
<td>$53.00</td>
<td>$7A</td>
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<td>Loaders, Plant Feed</td>
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<td>$7A</td>
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<td>Power Equipment Operators</td>
<td>Motor Patrol Graders, Finishing</td>
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<td>Power Equipment Operators</td>
<td>Mucking Machine, Mole, Tunnel Drill, Boring, Road Header And/or Shield</td>
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<td>$7A</td>
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<td>Oil Distributors, Blower Distribution &amp; Mulch Seeding Operator</td>
<td>$50.22</td>
<td>$7A</td>
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https://fortress.wa.gov/lni/wagelookup/prvWagelookup.aspx 08/20/2013
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<td>Scrapers, Self-propelled: 45 Yards And Over</td>
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<td>Shovel, Excavator, Backhoe: Over 30 Metric Tons To 50 Metric Tons</td>
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<td>Tower Bucket Elevators</td>
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<td>Tower Crane Over 175' in Height, Base To Boom</td>
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<td>Truck Crane Oiler/driver - 100 Tons And Over</td>
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08/20/2013
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<td>Sign Makers &amp; Installers (Non-Electrical)</td>
<td>Journey Level</td>
<td>$14.65</td>
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https://fortress.wa.gov/lni/wagelookup/prvWagelookup.aspx 08/20/2013
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<thead>
<tr>
<th>Yakima</th>
<th>Job Title</th>
<th>Level</th>
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<td>6l</td>
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</table>
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 work week day or a four-ten (10) hour work week day and the first eight (8) hours worked the next day after either work week 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.
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.

**S.** 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 hours worked on holidays and 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.

**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.
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.

C. All hours worked on Sundays shall be paid at one and one-half times the hourly rate of wage. All hours worked on holidays shall be paid at two 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.

G. 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 hours worked on Sunday shall be paid at two 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.

K. All hours worked on holidays shall be paid at two times the hourly rate of wage in addition to the holiday pay.

O. All hours worked on Sundays and holidays shall be paid at one and one-half times 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.

W. 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 first eight (8) hours worked on the fifth day shall be paid at one and one-half times the hourly rate of wage. All other hours worked on the fifth, sixth, and seventh days and on holidays shall be paid at double the hourly rate of wage.

Y. All hours worked on Saturdays (except for make-up days) 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.

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.

A. 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 shift, and all work on Sundays shall be paid at time and one-half the straight time rate. Hours worked over twelve hours (12) in a single shift and all work performed after 6:00 pm Saturday to 6:00 am Monday and holidays shall be paid at double the straight time rate of pay. Any shift starting between the hours of 6:00 pm and midnight shall receive an additional one dollar ($1.00) per hour for all hours worked that shift. The employer shall have the sole discretion to assign overtime work to employees. Primary consideration for overtime work shall be given to employees regularly assigned to the work to be performed on overtime situations. 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.
3. B. 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, and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

C. 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 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 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.

D. 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 15% over the hourly rate of wage. All other hours worked after 6:00 am 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.

E. All hours worked Sundays and holidays shall be paid at double the hourly rate of wage. Each week, once 40 hours of straight time work is achieved, then any hours worked over 10 hours per day Monday through Saturday shall be paid at double the hourly wage rate.

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.

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, and all work on Saturdays shall be paid at one and one-half the straight time rate. Hours worked over twelve hours (12) in a single shift and all work performed after 8:00 am Sunday to 8:00 am Monday and Holidays shall be paid at double 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 or more.

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.

Holiday Codes


Holiday Codes Continued


Thanksgiving Day, Friday After Thanksgiving Day, Christmas Day, The Day After Christmas, And A Floating Holiday (10).


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


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.


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.


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.
Benefit Code Key – Effective 8-31-2013 thru 3-4-2014

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.

7. 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.

M. Paid Holidays: New Year's Day, The Day after or before New Year's Day, President’s Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Day, The Day after or before Christmas Day. 10. 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.


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.

R. Paid Holidays: New Year’s Day, the day after or before New Year’s Day, President’s Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Day, and the day after or before Christmas Day (10). If any of the listed holidays fall on Saturday, the preceding Friday shall be observed as the holiday. If any of the listed holidays falls on a Sunday, the day observed by the Nation shall be considered a holiday and compensated accordingly.

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.

Note Codes

8. A. In addition to the hourly wage and fringe benefits, the following depth premiums apply to depths of fifty feet or more:
Benefit Code Key – Effective 8-31-2013 thru 3-4-2014

Over 50’ To 100’ - $2.00 per Foot for Each Foot Over 50 Feet
Over 100’ To 150’ - $3.00 per Foot for Each Foot Over 100 Feet
Over 150’ To 220’ - $4.00 per Foot for Each Foot Over 150 Feet
Over 220’ - $5.00 per Foot for Each Foot Over 220 Feet

8 C. In addition to the hourly wage and fringe benefits, the following depth premiums apply to depths of fifty feet or more:
   Over 50’ To 100’ - $1.00 per Foot for Each Foot Over 50 Feet
   Over 100’ To 150’ - $1.50 per Foot for Each Foot Over 100 Feet
   Over 150’ To 200’ - $2.00 per Foot for Each Foot Over 150 Feet
   Over 200’ - Divers May Name Their Own Price

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.

P. 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.

Q. 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.

R. 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 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.

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 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 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.
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.
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.

<table>
<thead>
<tr>
<th>ITEM DESCRIPTION</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>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.</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>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.</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>4. Concrete Pipe - Plain Concrete pipe and reinforced concrete pipe Class 2 to 5 sizes smaller than 60 inch diameter.</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>5. Concrete Pipe - Plain Concrete pipe and reinforced concrete pipe Class 2 to 5 sizes larger than 60 inch diameter.</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>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.</td>
<td></td>
<td>X</td>
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<tr>
<td>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.</td>
<td></td>
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<tr>
<td>ITEM DESCRIPTION</td>
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<td>NO</td>
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<tr>
<td>8. Anchor Bolts &amp; 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.</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>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).</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>10. Major Structural Steel Fabrication - Fabrication of major steel items such as trusses, beams, girders, etc., for bridges.</td>
<td></td>
<td>X</td>
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<tr>
<td>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.</td>
<td></td>
<td>X</td>
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<tr>
<td>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).</td>
<td></td>
<td>X</td>
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<tr>
<td>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..</td>
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<tr>
<td>14. Precast Manhole Types 1, 2, and 3 with cones, adjustment sections and flat top slabs. See Std. Plans.</td>
<td></td>
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<tr>
<td>15. Precast Drywell Types 1, 2, and with cones and adjustment Sections. See Std. Plans.</td>
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<tr>
<td>17. Precast Concrete Inlet - with adjustment sections, See Std. Plans</td>
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<tr>
<td>18. Precast Drop Inlet Type 1 and 2 with metal grate supports. See Std. Plans.</td>
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<tr>
<td>19. Precast Grate Inlet Type 2 with extension and top units. See Std. Plans</td>
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<tr>
<td>20. Metal frames, vaned grates, and hoods for Combination Inlets. See Std. Plans</td>
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</tr>
<tr>
<td>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</td>
<td></td>
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<tr>
<td>22. Vault Risers - For use with Valve Vaults and Utilities Vaults.</td>
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<td>X</td>
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<tr>
<td>23. Valve Vault - For use with underground utilities. See Contract Plans for details.</td>
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<td>X</td>
</tr>
<tr>
<td>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.</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>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.</td>
<td></td>
<td>X</td>
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<tr>
<td>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</td>
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<tr>
<td>ITEM DESCRIPTION</td>
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<tr>
<td>27. Precast Railroad Crossings - Concrete Crossing Structure Slabs.</td>
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<tr>
<td>28. 12, 18 and 26 inch Standard Precast Prestressed Girder – Standard Precast</td>
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<tr>
<td>Prestressed Girder for use in structures. Fabricator plant has annual approval</td>
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<td>of methods and materials to be used. Shop Drawing to be provided for approval</td>
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<td>prior to casting girders. See Std. Spec. Section 6-02.3(25)A.</td>
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<tr>
<td>29. Prestressed Concrete Girder Series 4-14 - Prestressed Concrete Girder for</td>
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<tr>
<td>use in structures. Fabricator plant has annual approval of methods and materials</td>
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<tr>
<td>to be used. Shop Drawing to be provided for approval prior to casting girders.</td>
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<tr>
<td>See Std. Spec. Section 6-02.3(25)A.</td>
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<tr>
<td>30. Prestressed Tri-Beam Girder - Prestressed Tri-Beam Girders for use in</td>
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<td>structures. Fabricator plant has annual approval of methods and materials to be</td>
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<td>used. Shop Drawing to be provided for approval prior to casting girders.</td>
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<tr>
<td>See Std. Spec. Section 6-02.3(25)A.</td>
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<tr>
<td>31. Prestressed Precast Hollow-Core Slab – Precast Prestressed Hollow-core slab</td>
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<td>for use in structures. Fabricator plant has annual approval of methods and</td>
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<td>materials to be used. Shop Drawing to be provided for approval prior to casting</td>
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<tr>
<td>girders. See Std. Spec. Section 6-02.3(25)A.</td>
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<tr>
<td>32. Prestressed-Bulb Tee Girder - Bulb Tee Prestressed Girder for use in</td>
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<tr>
<td>structures. Fabricator plant has annual approval of methods and materials to be</td>
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<tr>
<td>used. Shop Drawing to be provided for approval prior to casting girders.</td>
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<tr>
<td>See Std. Spec. Section 6-02.3(25)A.</td>
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<tr>
<td>33. Monument Case and Cover</td>
<td></td>
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<tr>
<td>See Std. Plan.</td>
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<tr>
<td>ITEM DESCRIPTION</td>
<td>YES</td>
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<tr>
<td>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.</td>
<td></td>
<td>X</td>
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<tr>
<td>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.</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>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.</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>37. Steel Sign Post - Fabricated Steel Sign Posts as detailed in Std Plans. Shop drawings for approval are to be provided prior to fabrication</td>
<td></td>
<td>X</td>
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<tr>
<td>38. Light Standard-Prestressed - Spun, prestressed, hollow concrete poles.</td>
<td></td>
<td>X</td>
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<tr>
<td>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 Special Provisions for pre-approved drawings.</td>
<td></td>
<td>X</td>
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<tr>
<td>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</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>41. Precast Concrete Sloped Mountable Curb (Single and DualFaced) See Std. Plans.</td>
<td></td>
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<tr>
<td>ITEM DESCRIPTION</td>
<td>YES</td>
<td>NO</td>
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<tr>
<td>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. <strong>NOTE</strong>: *<strong>Fabrication inspection required. Only signs tagged &quot;Fabrication Approved&quot; by WSDOT Sign Fabrication Inspector to be installed</strong></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>43. Cutting &amp; bending reinforcing steel</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>44. Guardrail components</td>
<td>X</td>
<td>X</td>
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<tr>
<td>45. Aggregates/Concrete mixes</td>
<td></td>
<td></td>
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<td>46. Asphalt</td>
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<td>47. Fiber fabrics</td>
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<td>X</td>
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<td>48. Electrical wiring/components</td>
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<td>X</td>
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<tr>
<td>49. treated or untreated timber pile</td>
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<td>X</td>
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<tr>
<td>50. Girder pads (elastomeric bearing)</td>
<td></td>
<td>X</td>
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<tr>
<td>51. Standard Dimension lumber</td>
<td></td>
<td>X</td>
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<tr>
<td>52. Irrigation components</td>
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</table>

Supplemental to Wage Rates
08/31/2013 Edition, Published August 1st, 2013
<table>
<thead>
<tr>
<th>ITEM DESCRIPTION</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>53. Fencing materials</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>54. Guide Posts</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>55. Traffic Buttons</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>56. Epoxy</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>57. Cribbing</td>
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<td>X</td>
</tr>
<tr>
<td>58. Water distribution materials</td>
<td></td>
<td>X</td>
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<tr>
<td>59. Steel &quot;H&quot; piles</td>
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<td>X</td>
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<tr>
<td>60. Steel pipe for concrete pile casings</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>61. Steel pile tips, standard</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>62. Steel pile tips, custom</td>
<td></td>
<td>X</td>
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</tbody>
</table>

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.

Supplemental to Wage Rates
08/31/2013 Edition, Published August 1st, 2013
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.]
General Decision Number: WA130001 08/16/2013 WA1

Superseded General Decision Number: WA20120001

State: Washington

Construction Type: Highway

Counties: Washington Statewide.

HIGHWAY (Excludes D.O.E. Hanford Site in Benton and Franklin Counties)

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<td>15</td>
<td>06/21/2013</td>
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CARP00001-008 09/01/2009

Rates Fringes

Carpenters:

COLUMBIA RIVER AREA - ADAMS, BENTON, COLUMBIA, DOUGLAS (EAST OF THE 120TH MERIDIAN), FERRY, FRANKLIN, GRANT, OKANOGAN (EAST OF THE 120TH MERIDIAN) AND WALLA WALLA COUNTIES

GROUP 1: ....................... $ 27.73 10.56
GROUP 2: ....................... $ 29.73 10.56
GROUP 3: ....................... $ 28.00 10.56
GROUP 4: ....................... $ 27.73 10.56
GROUP 5: ....................... $ 63.50 10.56
GROUP 6: ....................... $ 30.75 10.56
GROUP 7: ....................... $ 31.75 10.56
GROUP 8: ....................... $ 28.00 10.56
GROUP 9: ....................... $ 33.75 10.56

WA130001 Modification 21
Federal Wage Determinations for Highway Construction
SPOKANE AREA: ASOTIN,
GARFIELD, LINCOLN, PENDEL
OREILLE, SPOKANE, STEVENS
AND WHITMAN COUNTIES

GROUP 1: ....................... $ 26.06 10.56
GROUP 2: ....................... $ 28.06 10.56
GROUP 3: ....................... $ 26.32 10.56
GROUP 4: ....................... $ 26.06 10.56
GROUP 5: ....................... $ 60.14 10.56
GROUP 6: ....................... $ 29.07 10.56
GROUP 7: ....................... $ 30.07 10.56
GROUP 8: ....................... $ 27.32 10.56
GROUP 9: ....................... $ 33.07 10.56

CARPENTER & DIVER CLASSIFICATIONS:

GROUP 1: Carpenter
GROUP 2: Millwright, machine erector
GROUP 3: Piledriver - includes driving, pulling, cutting,
placing collars, setting, welding, or creosote treated
material, on all piling
GROUP 4: Bridge carpenters
GROUP 5: Diver Wet
GROUP 6: Diver Tender, Manifold Operator, ROV Operator
GROUP 7: Diver Standby, Bell/Vehicle or Submersible operator
Not Under Pressure
GROUP 8: Assistant Tender, ROV Tender/Technician
GROUP 9: Manifold Operator-Mixed Gas

ZONE PAY:
ZONE 1 0-40 MILES FREE
ZONE 2 41-65 MILES $2.25/PER HOUR
ZONE 3 66-100 MILES $3.25/PER HOUR
ZONE 4 OVER 100 MILES $4.75/PER HOUR

DISPATCH POINTS:
CARPENTERS/MILLWRIGHTS: PASCO (515 N Neel Street) or Main
Post Office of established residence of employee (Whichever
is closest to the worksite).

CARPENTERS/PILEDRIVER: SPOKANE (127 E. AUGUSTA AVE.) or Main
Post Office of established residence of employee (Whichever
is closest to the worksite).

CARPENTERS: WENATCHEE (27 N. CHELAN) or Main Post Office of
established residence of employee (Whichever is closest to
the worksite).

CARPENTERS: COEUR D' ALENE (1839 N. GOVERNMENT WAX) or Main
Post Office of established residence of employee (Whichever
is closest to the worksite).

CARPENTERS: MOSCOW (302 N. JACKSON) or Main Post Office of
established residence of employee (Whichever is closest to
the worksite).
DEPTH PAY FOR DIVERS BELOW WATER SURFACE:
50-100 feet $2.00 per foot
101-150 feet $3.00 per foot
151-220 feet $4.00 per foot
221 feet and deeper $5.00 per foot

PREMIUM PAY FOR DIVING IN ENCLOSURES WITH NO VERTICAL ASCENT:
0-25 feet Free
26-300 feet $1.00 per Foot

SATURATION DIVING:
The standby rate applies until saturation starts. The saturation diving rate applies when divers are under pressure continuously until work task and decompression are complete. The diver rate shall be paid for all saturation hours.

WORK IN COMBINATION OF CLASSIFICATIONS:
Employees working in any combination of classifications within the diving crew (except dive supervisor) in a shift are paid in the classification with the highest rate for that shift.

HAZMAT PROJECTS:

Anyone working on a HAZMAT job (task), where HAZMAT certification is required, shall be compensated at a premium, in addition to the classification working in as follows:

LEVEL D + $.25 per hour - This is the lowest level of protection. No respirator is used and skin protection is minimal.

LEVEL C + $.50 per hour - This level uses an air purifying respirator or additional protective clothing.

LEVEL B + $.75 per hour - Uses same respirator protection as Level A. Supplied air line is provided in conjunction with a chemical "splash suit".

LEVEL A +$1.00 per hour - This level utilizes a fully encapsulated suit with a self-contained breathing apparatus or a supplied air line.
SOUTHWEST WASHINGTON: CLARK, COWLITZ, KLICKITAT, LEWIS (Filedriver only), PACIFIC (South of a straight line made by extending the north boundary line of Wahkiakum County west to Willapa Bay to the Pacific Ocean), SKAMANIA AND WAHKIAKUM COUNTIES and INCLUDES THE ENTIRE PENINSULA WEST OF WILLAPA BAY

SEE ZONE DESCRIPTION FOR CITIES BASE POINTS

ZONE 1:

<table>
<thead>
<tr>
<th>Rates</th>
<th>Fringes</th>
</tr>
</thead>
<tbody>
<tr>
<td>CARPENTERS .................. $32.04</td>
<td>14.18</td>
</tr>
<tr>
<td>DIVERS TENDERS .................. $36.34</td>
<td>14.18</td>
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<tr>
<td>DIVERS .................. $77.08</td>
<td>14.18</td>
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<tr>
<td>DRYWALL .................. $27.56</td>
<td>14.18</td>
</tr>
<tr>
<td>MILLWRIGHTS .................. $32.19</td>
<td>14.18</td>
</tr>
<tr>
<td>FILEDRIVERS .................. $33.04</td>
<td>14.18</td>
</tr>
</tbody>
</table>

DEPTH PAY:

- 50 TO 100 FEET $1.00 PER FOOT OVER 50 FEET
- 101 TO 150 FEET $1.50 PER FOOT OVER 101 FEET
- 151 TO 200 FEET $2.00 PER FOOT OVER 151 FEET

Zone Differential (Add up Zone 1 rates):

- Zone 2 - $0.85
- Zone 3 - 1.25
- Zone 4 - 1.70
- Zone 5 - 2.00
- Zone 6 - 3.00

BASE POINTS: ASTORIA, LONGVIEW, PORTLAND, THE DALLES, AND VANCOUVER, (NOTE: All dispatches for Washington State Counties: Cowlitz, Wahkiakum and Pacific shall be from Longview Local #1707 and mileage shall be computed from that point.)

ZONE 1: Projects located within 30 miles of the respective city hall of the above mentioned cities
ZONE 2: Projects located more than 30 miles and less than 40 miles of the respective city of the above mentioned cities
ZONE 3: Projects located more than 40 miles and less than 50 miles of the respective city of the above mentioned cities
ZONE 4: Projects located more than 50 miles and less than 60 miles of the respective city of the above mentioned cities.
ZONE 5: Projects located more than 60 miles and less than 70 miles of the respective city of the above mentioned cities
ZONE 6: Projects located more than 70 miles of the respected city of the above mentioned cities
Carpenters:

CENTRAL WASHINGTON:
CHelan, douglas (west of the 120th meridian), Kittitas, okanogan (west of the 120th meridian) and yakima counties

Carpenters on creosote
material $25.93 12.60
Carpenters $25.83 12.60
Divers tender $39.15 12.60
Divers $87.20 12.60
MILLwright and machine
Erectors $37.07 12.60
PileDriver, driving,
pulling, cutting, placing
Collars, setting, welding
Or creosote treated
Material, all piling $36.22 12.60

(HOURLy ZONE Pay: Western and central washington - all classifications except millwrights and pileDrivers)

Hourly Zone Pay shall be paid on jobs located outside of the free zone computed from the city center of the following listed cities:

Seattle  Olympia  Bellingham
Auburn  Bremerton  Anacortes
Renton  Shelton  Yakima
Aberdeen-Hoquiam  Tacoma  Wenatchee
Ellensburg  Everett  Port Angeles
Centralia  Mount Vernon  Sunnyside
Chelan  Ft. Townsend

zone Pay:
0 - 25 radius miles Free
26 - 35 radius miles $1.00/hour
36 - 45 radius miles $1.15/hour
46 - 55 radius miles $1.35/hour
Over 55 radius miles $1.55/hour

(HOURLy ZONE Pay: Western and Central Washington - Millwright and PileDriver only)

Hourly Zone Pay shall be computed from Seattle Union Hall, Tacoma City center, and Everett City center

zone Pay:
0 - 25 radius miles Free
26 - 45 radius miles $ .70/hour
Over 45 radius miles $1.50/hour

WA130001 Modification 21
Federal Wage Determinations for highway Construction
CARP0770-006 07/07/2012

Carpenters:

WESTERN WASHINGTON:
CLALLAM, GRAYS HARBOR, ISLAND, JEFFERSON, KING, KITSAP, LEWIS (excludes piledrivers only), MASON, PACIFIC (North of a straight line made by extending the north boundary line of Wahkiakum County west to the Pacific Ocean), PIERCE, SAN JUAN, SKAGIT, SNOHOMISH, THURSTON AND WHATCOM COUNTIES

BRIDGE CARPENTERS .......... $ 35.39  13.60
CARPENTERS ON CREOSOTE
MATERIAL .................. $ 35.49  13.60
CARPENTERS ................ $ 35.39  13.60
DIVERS TENDER ............. $ 39.15  13.60
DIVERS .................... $ 87.20  13.60
MILLWRIGHT AND MACHINE
ERECTORS ................... $ 36.39  13.60
PILEDRIVER, DRIVING,
PULLING, CUTTING, PLACING
COLLARS, SETTING, WELDING
OR CREOSOTE TREATED
MATERIAL, ALL PILING ...... $ 35.59  13.60

(HOURLY ZONE PAY: WESTERN AND CENTRAL WASHINGTON - ALL CLASSIFICATIONS EXCEPT MILLRIGHTS AND PILEDRIVERS)

Hourly Zone Pay shall be paid on jobs located outside of the free zone computed from the city center of the following listed cities:

Seattle    Olympia    Bellingham
Auburn     Bremerton  Anacortes
Renton     Shelton    Yakima
Aberdeen-Hoquiam Tacoma   Mount Vernon
Ellensburg Everett   Port Angeles
Centralia  Mount Vernon Sunnyside
Chelan     Pt. Townsend

Zone Pay:
0 -25 radius miles    Free
26-35 radius miles    $1.00/hour
36-45 radius miles    $1.15/hour
46-55 radius miles    $1.35/hour
Over 55 radius miles  $1.55/hour

(HOURLY ZONE PAY: WESTERN AND CENTRAL WASHINGTON - MILLWRIGHT AND PILEDRIVER ONLY)

Hourly Zone Pay shall be computed from Seattle Union Hall, Tacoma City center, and Everett City center

Zone Pay:
0 -25 radius miles    Free
26-45 radius miles    $.70/hour
Over 45 radius miles  $1.50/hour

WA130001 Modification 21
Federal Wage Determinations for Highway Construction
CALLAM, JEFFERSON, KING AND KITSAP COUNTIES

<table>
<thead>
<tr>
<th>Rates</th>
<th>Fringes</th>
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<tr>
<td>CABLE SPLICER</td>
<td>$46.87</td>
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<tr>
<td>ELECTRICIAN</td>
<td>$42.61</td>
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CLARK, Klickitat and Skamania Counties

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<tr>
<th>Rates</th>
<th>Fringes</th>
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</thead>
<tbody>
<tr>
<td>CABLE SPLICER</td>
<td>$41.85</td>
</tr>
<tr>
<td>ELECTRICIAN</td>
<td>$38.05</td>
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</tbody>
</table>

HOURLY ZONE PAY:

Hourly Zone Pay shall be paid on jobs located outside of the free zone computed from the city center of the following listed cities:

Portland, The Dalles, Hood River, Tillamook, Seaside and Astoria

Zone Pay:
- Zone 1: 31-50 miles $1.50/hour
- Zone 2: 51-70 miles $3.50/hour
- Zone 3: 71-90 miles $5.00/hour
- Zone 4: Beyond 90 miles $9.00/hour

*These are not miles driven. Zones are based on Delorme Street Atlas USA 2006 plus.

COWLITZ AND WAIKIAKUM COUNTY

<table>
<thead>
<tr>
<th>Rates</th>
<th>Fringes</th>
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<tbody>
<tr>
<td>CABLE SPLICER</td>
<td>$41.85</td>
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<tr>
<td>ELECTRICIAN</td>
<td>$38.05</td>
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ADAMS, FERRY, LINCOLN, FEND OREILLE, SPOKANE, STEVENS, WHITMAN COUNTIES

<table>
<thead>
<tr>
<th>Rates</th>
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WA130001 Modification 21
Federal Wage Determinations for Highway Construction
<table>
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<th>Counties</th>
<th>Rates</th>
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<tr>
<td><strong>GRAYS HARBOR, LEWIS, MASON, PACIFIC, PIERCE, AND THURSTON COUNTIES</strong></td>
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<td><strong>ASOTIN, BENTON, COLUMBIA, FRANKLIN, GARFIELD, KITTITAS, WALLA WALLA, YAKIMA COUNTIES</strong></td>
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<td>Cable Splicer</td>
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<td>Electrician</td>
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<td><strong>ISLAND, SAN JUAN, SNOHOMISH, SKAGIT AND WHATCOM COUNTIES</strong></td>
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<td><strong>CHELAN, DOUGLAS, GRANT AND OKANOGAN COUNTIES</strong></td>
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<td>Cable Splicer</td>
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<td>Electrician</td>
<td>$35.91</td>
<td>17.3</td>
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ENGI0302-003 06/01/2012

CHelan (West of the 120th Meridian), Clallam, Douglas (West of the 120th Meridian), Grays Harbor, Island, Jefferson, King, Kitsap, Kittitas, Mason, Okanogan (West of the 120th Meridian), San Juan, Skagit, Snohomish, Whatcom and Yakima (West of the 120th Meridian) Counties

Projects: Category A Projects (Excludes Category B Projects, as shown below)

Zone 1 (0-25 radius miles):

<table>
<thead>
<tr>
<th>Power equipment operators</th>
<th>Rates</th>
<th>Fringes</th>
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<tbody>
<tr>
<td>Group 1A ...................</td>
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<td>Group 1AA ..................</td>
<td>$37.11</td>
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</tr>
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<td>Group 1AAA ..................</td>
<td>$37.67</td>
<td>15.90</td>
</tr>
<tr>
<td>Group 1 .....................</td>
<td>$35.99</td>
<td>15.90</td>
</tr>
<tr>
<td>Group 2 .....................</td>
<td>$35.50</td>
<td>15.90</td>
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<tr>
<td>Group 3 .....................</td>
<td>$35.08</td>
<td>15.90</td>
</tr>
<tr>
<td>Group 4 .....................</td>
<td>$32.72</td>
<td>15.90</td>
</tr>
</tbody>
</table>

Zone Differential (Add to Zone 1 rates):
Zone 2 (26-45 radius miles) - $1.00
Zone 3 (Over 45 radius miles) - $1.30

Basepoints: Aberdeen, Bellingham, Bremerton, Everett, Kent, Mount Vernon, Port Angeles, Port Townsend, Seattle, Shelton, Wenatchee, Yakima

Power Equipment Operators Classifications

GROUP 1AAA - Cranes-over 300 tons, or 300 ft of boom (including jib with attachments)

GROUP 1AA - Cranes 200 to 300 tons, or 250 ft of boom (including jib with attachments); Tower crane over 175 ft in height, base to boom

GROUP 1A - Cranes, 100 tons thru 199 tons, or 150 ft of boom (including jib with attachments); Crane-overhead, bridge type, 100 tons and over; Tower crane up to 175 ft in height base to boom; Loaders-overhead, 8 yards and over; Shovels, excavator, backhoes-6 yards and over with attachments

GROUP 1 - Cableway; Cranes 45 tons thru 99 tons, under 150 ft of boom (including jib with attachments); Crane-overhead, bridge type, 45 tons thru 99 tons; Derricks on building work; Excavator, shovel, backhoes over 3 yards and under 6 yards; Hard tail end dump articulating off-road equipment 45 yards and over; Loader-overhead 6 yards to, but not including 8 yards; Mucking machine, mole, tunnel, drill and/or shield; Quad 9, HD 41, D-10; Remote control operator on rubber tired earth moving equipment; Rollagon; Scrapers-self propelled 45 yards and over; Slipform pavers; Transporters, all truck or track type

WA130001 Modification 21
Federal Wage Determinations for Highway Construction
GROUP 2 - Barrier machine (zipper); Batch Plant Operator-Concrete; Bump Cutter; Cranes, 20 tons thru 44 tons with attachments; Crane-overhead, bridge type-20 tons through 44 tons; Chipper; Concrete Pump-truck mount with boom attachment; Crusher; Deck Engineer/Deck Winches (power); Drilling machine; Excavator, shovel, backhoe-3yards and under; Finishing Machine, Bidwell, Gamaco and similar equipment; Guardrail punch; Horizontal/directional drill operator; Loaders-overhead under 6 yards; Loaders-plant feed; Locomotives-all; Mechanics-all; Mixers-asphalt plant; Motor patrol graders-finishing; Piledriver (other than crane mount); Roto-mill, roto-grinder; Screedman, spreader, topside operator-Blaw Knox, Cedar Rapids, Jaeger, Caterpillar, Barbara Green; Scraper-self propelled, hard tail end dump, articulating off-road equipment-under 45 yards; Subgrade trimmer; Tractors, backhoes-over 75 hp; Transfer material service machine-shuttle buggy, blaw knox-roadtec; Truck crane oiler/driver-100 tons and over; Truck Mount portable conveyor; Yo Yo Pay dozer

GROUP 3 - Conveyors; Cranes-thru 19 tons with attachments; A-frame crane over 10 tons; Drill oilers-auger type, truck or crane mount; Dozers-D-9 and under; Forklift-3000 lbs. and over with attachments; Horizontal/directional drill locator; Outside hoists-(elevators and manlifits), air tuggers, strato tower bucket elevators; Hydralifts/boom trucks over 10 tons; Loader-elevating type, belt; Motor patrol grader-nonfinishing; Plant oiler- asphalt, crusher; Pumps-concrete; Roller, plant mix or multi-lift materials; Saws-concrete; Scrpers-concrete and carry-all; Service engineer-equipment; Trenching machines; Truck Crane Oilier/Driver under 100 tons; Tractors, backhoe 75 hp and under

GROUP 4 - Assistant Engineer; Bobcat; Brooms; Compressor; Concrete finish machine-laser screed; Cranes-A frame-10 tons and under; Elevator and Manlift-permanent or shaft type; Gradechecker, Stakehop; Forklifts under 3000 lbs. with attachments; Hydralifts/boom trucks, 10 tons and under; Oil distributors, blower distribution and mulch seeding operator; Pavement breaker; Posthole digger, mechanical; Power plant; Pumps, water; Rigger and Bellman; Roller-other than plant mix; Wheel Tractors, farmall type; Shotcrete/gunite equipment operator
Category B Projects: 95% of the basic hourly rate for each group plus full fringe benefits applicable to category A projects shall apply to the following projects. A Reduced rates may be paid on the following:

1. Projects involving work on structures such as buildings and bridges whose total value is less than $1.5 million excluding mechanical, electrical, and utility portions of the contract.

2. Projects of less than $1 million where no building is involved. Surfacing and paving included, but utilities excluded.

3. Marine projects (docks, wharfs, etc.) less than $150,000.

Handling of Hazardous Waste Materials:

Personnel in all craft classifications subject to working inside a federally designated hazardous perimeter shall be eligible for compensation in accordance with the following group schedule relative to the level of hazardous waste as outlined in the specific hazardous waste project site safety plan.

H-1 Base wage rate when on a hazardous waste site when not outfitted with protective clothing
H-2 Class "C" Suit - Base wage rate plus $.25 per hour.
H-3 Class "B" Suit - Base wage rate plus $.50 per hour.
H-4 Class "A" Suit - Base wage rate plus $.75 per hour.

Zone Differential (Add to Zone 1 rates):
Zone 2 (26-45 radius miles) - $.70
Zone 3 (Over 45 radius miles) - $1.00

Basepoints: Aberdeen, Bellingham, Bremerton, Everett, Kent, Mount Vernon, Port Angeles, Port Townsend, Seattle, Shelton, Wenatchee, Yakima
POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1AAA - Cranes-over 300 tons, or 300 ft of boom
  (including jib with attachments)

GROUP 1AA - Cranes 200 to 300 tons, or 250 ft of boom
  (including jib with attachments); Tower crane over 175 ft in
  height, base to boom

GROUP 1A - Cranes, 100 tons thru 199 tons, or 150 ft of boom
  (including jib with attachments); Crane-overhead, bridge
  type, 100 tons and over; Tower crane up to 175 ft in height
  base to boom; Loaders-overhead, 8 yards and over; Shovels,
  excavator, backhoes-6 yards and over with attachments

GROUP 1 - Cableway; Cranes 45 tons thru 99 tons, under 150 ft
  of boom (including jib with attachments); Crane-overhead,
  bridge type, 45 tons thru 99 tons; Derricks on building work;
  Excavator, shovel, backhoes over 3 yards and under 6 yards;
  Hard tail end dump articulating off-road equipment 45 yards
  and over; Loader- overhead 6 yards to, but not including 8
  yards; Mucking machine, mole, tunnel, drill and/or shield;
  Quad 9, HD 41, D-10; Remote control operator on rubber tired
  earth moving equipment; Rollagon; Scrapers-self propelled 45
  yards and over; Slipform pavers; Transporters, all truck or
  track type

GROUP 2 - Barrier machine (zipper); Batch Plant Operatoor-
Concrete; Bump Cutter; Cranes, 20 tons thru 44 tons with
attachments; Crane-overhead, bridge type-20 tons through 44
tons; Chipper; Concrete Pump-truck mount with boom
attachment; Crusher; Deck Engineer/Deck Winches (power);
Drilling machine; Excavator, shovel, backhoe-3 yards and
under; Finishing Machine, Bidwell, Gamaco and similar
equipment; Guardrail punch; Horizontal/directional drill
operator; Loaders-overhead under 6 yards; Loaders-plant feed;
Locomotives-all; Mechanics-all; Mixers-asphalt plant; Motor
patrol graders-finishing; Piledriver (other than crane
mount); Roto-mill,roto-grinder; Screedman, spreader, topside
operator-Blaw Knox, Cedar Rapids, Jaeger, Caterpillar, Barbara
Green; Scraper-self propelled, hard tail end dump,
articulating off-road equipment-under 45 yards; Subgrade
trimmer; Tractors, backhoes-over 75 hp; Transfer material
service machine-shuttle buggy, blaw knox-roadtec; Truck crane
oiler/driver-100 tons and over; Truck Mount portable
conveyor; Yo Yo Pay dozer
GROUP 3 - Conveyors; Cranes-thru 19 tons with attachments; A-frame crane over 10 tons; Drill oilers-auger type, truck or crane mount; Dozers-D-9 and under; Forklift-3000 lbs. and over with attachments; Horizontal/directional drill locator; Outside hoists-(elevators and manlifts), air tuggers, strato tower bucket elevators; Hydralifts/boom trucks over 10 tons; Loader-elevating type, belt; Motor patrol grader-nonfinishing; Plant oiler- asphalt, crusher; Pumps-concrete; Roller, plant mix or multi-lift materials; Saws-concrete; Scapers-concrete and carry-all; Service engineer-equipment; Trenching machines; Truck Crane Oiler/Driver under 100 tons; Tractors, backhoe 75 hp and under

GROUP 4 - Assistant Engineer; Bobcat; Brooms; Compressor; Concrete finish mahine-laser screed; Cranes-A frame-10 tons and under; Elevator and Manlift-permanent or shaft type; Gradechecker, Stakehop; Forklifts under 3000 lbs. with attachments; Hydralifts/boom trucks, 10 tons and under; Oil distributors, blower distribution and mulch seeding operator; Pavement breaker; Posthole digger, mechanical; Power plant; Pumps, water; Rigger and Bellman; Roller-other than plant mix; Wheel Tractors, farmall type; Shotcrete/gunite equipment operator

CATEGORY B PROJECTS: 95% OF THE BASIC HOURLY RATE FOR EACH GROUP PLUS FULL FRINGE BENEFITS APPLICABLE TO CATEGORY A PROJECTS SHALL APPLY TO THE FOLLOWING PROJECTS. REDUCED RATES MAY BE PAID ON THE FOLLOWING:

1. Projects involving work on structures such as buildings and bridges whose total value is less than $1.5 million excluding mechanical, electrical, and utility portions of the contract.
2. Projects of less than $1 million where no building is involved. Surfacing and paving including, but utilities excluded.
3. Marine projects (docks, wharfs, etc.) less than $150,000.

HANDLING OF HAZARDOUS WASTE MATERIALS: Personnel in all craft classifications subject to working inside a federally designed hazardous perimeter shall be eligible for compensation in accordance with the following group schedule relative to the level of hazardous waste as outlined in the specific hazardous waste project site safety plan.

H-1 Base wage rate when on a hazardous waste site when not outfitted with protective clothing.
H-2 Class "C" Suit - Base wage rate plus $.25 per hour.
H-3 Class "B" Suit - Base wage rate plus $.50 per hour.
H-4 Class "A" Suit - Base wage rate plus $.75 per hour.
ADAMS, ASOTIN, BENTON, CHELAN (EAST OF THE 120TH MERIDIAN),
COLUMBIA, DOUGLAS (EAST OF THE 120TH MERIDIAN), FERRY,
FRANKLIN, GARFIELD, GRANT, LINCOLN, OKANOGAN (EAST OF THE 120TH
MERIDIAN), PEND OREILLE, SPOKANE, STEVENS, WALLA WALLA, WHITMAN
AND YAKIMA (EAST OF THE 120TH MERIDIAN) COUNTIES

ZONE 1:

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ZONE DIFFERENTIAL (Add to Zone 1 rate): Zone 2 - $2.00

Zone 1: Within 45 mile radius of Spokane, Pasco, Washington; Lewiston, Idaho

Zone 2: Outside 45 mile radius of Spokane, Pasco, Washington; Lewiston, Idaho

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1A: Boat Operator; Crush Feeder; Oiler; Steam Cleaner

GROUP 1: Bit Grinders; Bolt Threading Machine; Compressors (under 2000 CFM, gas, diesel, or electric power); Deck Hand; Fireman & Heater Tender; Hydro-seeder, Mulcher, Nozzleman; Oiler Driver, & Cable Tender, Mucking Machine; Pumpman; Rollers, all types on subgrade, including seal and chip coatings (farm type, Case, John Deere & similar, or Compacting Vibrator), except when pulled by Dozer with operable blade; Welding Machine; Crane Oiler-Driver (CLD required) & Cable Tender, Mucking Machine
GROUP 2: A-frame Truck (single drum); Assistant Refrigeration Plant (under 1000 ton); Assistant Plant Operator, Fireman or Pugmixer (asphalt); Bagley or Stationary Scraper; Belt Finishing Machine; Blower Operator (cement); Cement Hog; Compressor (2000 CFM or over, 2 or more, gas diesel or electric power); Concrete Saw (multiple cut); Distributor Leverman; Ditch Witch or similar; Elevator Hoisting Materials; Dope Pots (power agitated); Fork Lift or Lumber Stacker, hydra-lift & similar; Gin Trucks (pipeline); Hoist, single drum; Loaders (bucket elevators and conveyors); Longitudinal Float; Mixer (portable-concrete); Pavement Breaker, Hydra-Hammer & similar; Power Broom; Railroad Ballast Regulation Operator (self-propelled); Railroad Power Tamper Operator (self-propelled); Railroad Tamper Jack Operator (self-propelled); Spray Curing Machine (concrete); Spreader Box (self-propelled); Straddle Buggy (Ross & similar on construction job only); Tractor (Farm type R/T with attachment, except Backhoe); Tugger Operator

GROUP 3: A-frame Truck (2 or more drums); Assistant Refrigeration Plant & Chiller Operator (over 1000 ton); Backfillers (Cleveland & similar); Batch Plant & Wet Mix Operator, single unit (concrete); Belt-Crete Conveyors with power pack or similar; Belt Loader (Kocal or similar); Bending Machine; Bob Cat (Skid Steer); Boring Machine (earth); Boring Machine (rock under 8 inch bit) (Quarry Master, Joy or similar); Bump Cutter (Wayne, Saginaw or similar); Canal Lining Machine (concrete); Chipper (without crane); Cleaning & Doping Machine (pipeline); Deck Engineer; Elevating Belt-type Loader (Euclid, Barber Green & similar); Elevating Grader-type Loader (Dumor, Adams or similar); Generator Plant Engineers (diesel or electric); Gunite Combination Mixer & Compressor; Locomotive Engineer; Mixermobile; Mucking Machine; Posthole Auger or Punch; Pump (grout or jet); Soil Stabilizer (P & H or similar); Spreader Machine; Dozer/Tractor (up to D-6 or equivalent) and Traxcavator; Traverse Finish Machine; Turnhead Operator

GROUP 4: Concrete Pumps (squeeze-crete, flow-crete, pump-crete, Whitman & similar); Curb Extruder (asphalt or concrete); Drills (churn, core, calyx or diamond); Equipment Serviceman; Greaser & Oiler; Hoist (2 or more drums or Tower Hoist); Loaders (overhead & front-end, under 4 yds. R/T); Refrigeration Plant Engineer (under 1000 ton); Rubber-tired Skidders (R/T with or without attachments); Surface Heater & Plant Machine; Trenching Machines (under 7 ft. depth capacity); Turnhead (with re-screening); Vacuum Drill (reverse circulation drill under 8 inch bit)
GROUP 5: Backhoe (under 45,000 gw); Backhoe & Hoe Ram (under 3/4 yd.); Carrydeck & Boom Truck (under 25 tons); Cranes (25 tons & under), all attachments including clamshell, dragline; Derricks & Stifflegs (under 65 tons); Drilling Equipment (8 inch bit & over) (Robbins, reverse circulation & similar); Hoe Ram; Piledriving Engineers; Paving (dual drum); Railroad Track Liner Operatoir (self-propelled); Refrigeration Plant Engineer (1000 tons & over); Signalman (Whirleys, Highline Hammerheads or similar); Grade Checker

GROUP 6: Asphalt Plant Operator; Automatic Subgrader (Ditches & Trimmers) (Autograde, ABC, R.A. Hansen & similar on grade wire); Backhoe (45,000 gw and over to 110,000 gw); Backhoes & Hoe Ram (3/4 yd. to 3 yd.); Batch Plant (over 4 units); Batch & Wet Mix Operator (multiple units, 2 & incl. 4); Blade Operator (motor patrol & attachments); Cable Controller (dispatcher); Compactor (self-propelled with blade); Concrete Pump Boom Truck; Concrete Slip Form Paver; Cranes (over 25 tons, to and including 45 tons), all attachments including clamshell, dragline; Crusher, Grizille & Screening Plant Operator; Dozer, 834 R/T & similar; Drill Doctor; Loader Operator (front-end & overhead, 4 yds. incl. 8 yds.); Multiple Dozer Units with single blade; Paving Machine (asphalt and concrete); Quad-Track or similar equipment; Rollerman (finishing asphalt pavement); Roto Mill (pavement grinder); Scrapers, all, rubber-tired; Screed Operator; Shovel(under 3 yds.); Trenching Machines (7 ft. depth & over); Tug Boat Operator Vactor guzzler, super sucker; Lime Batch Tank Operator (REcycle Train); Lime Brain Operator (Recycle Train); Mobile Crusher Operator (Recycle Train)

GROUP 7: Backhoe (over 110,000 gw); Backhoes & Hoe Ram (3 yds & over); Blade (finish & bluetop) Automatic, CMI, ABC, Finish Athey & Huber & similar when used as automatic; Cableway Operators; Concrete Cleaning/Decontamination machine operator; Cranes (over 45 tons to but not including 85 tons), all attachments including clamshell and dragine; Derricks & Stiffleys (65 tons & over); Elevating Belt (Holland type); Heavy equipment robotics operator; Loader (360 degrees revolving Koehring Scooper or similar); Loaders (overhead & front-end, over 8 yds. to 10 yds.); Rubber-tired Scrapers (multiple engine with three or more scrapers); Shovels (3 yds. & over); Whirleys & Hammerheads, ALL; H.D. Mechanic; H.D. Welder; Hydraulic Platform Trailers (Goldhofer, Shaurerly and Similar); Ultra High Pressure Waterjet Cutting Tool System Operator (30,000 psi); Vacuum Blasting Machine Operator
GROUP 8: Cranes (85 tons and over, and all climbing, overhead, rail and tower), all attachments including clamshell, dragline; Loaders (overhead and front-end, 10 yards and over); Helicopter Pilot

BOOM PAY: (All Cranes, Including Tower)
180 ft to 250 ft $ .50 over scale
Over 250 ft $ .80 over scale

NOTE:
In computing the length of the boom on Tower Cranes, they shall be measured from the base of the Tower to the point of the boom.

HAZMAT:
Anyone working on HAZMAT jobs, working with supplied air shall receive $1.00 an hour above classification.

--- ENGI0612-006 07/01/2012 ---

LEWIS, PIERCE, PACIFIC (portion lying north of a parallel line extending west from the northern boundary of Wahkaikum County to the sea) AND THURSTON COUNTIES

ON PROJECTS DESCRIBED IN FOOTNOTE A BELOW, THE RATE FOR EACH GROUP SHALL BE 90% OF THE BASE RATE PLUS FULL FRINGE BENEFITS. ON ALL OTHER WORK, THE FOLLOWING RATES APPLY.

Zone 1 (0-25 radius miles):

<table>
<thead>
<tr>
<th>Rates</th>
<th>Fringes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power equipment operators:</td>
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<tr>
<td>GROUP 1A ........................ $ 36.54</td>
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<td>GROUP 1AA .................................... $ 37.11</td>
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<tr>
<td>GROUP 4 ..................................... $ 32.72</td>
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</tbody>
</table>

Zone Differential (Add to Zone 1 rates):
Zone 2 (26-45 radius miles) = $ .70
Zone 3 (Over 45 radius miles) - $1.00

BASEPOINTS: CENTRALIA, OLYMPIA, TACOMA

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1 AAA - Cranes—over 300 tons or 300 ft of boom (including jib with attachments)

GROUP 1AA - Cranes—200 tons to 300 tons, or 250 ft of boom (including jib with attachments; Tower crane over 175 ft in height, bas to boom

WA130001 Modification 21
Federal Wage Determinations for Highway Construction
GROUP 1A - Cranes, 100 tons thru 199 tons, or 150 ft of boom (including jib with attachments); Crane-overhead, bridge type, 100 tons and over; Tower crane up to 175 ft in height base to boom; Loaders-overhead, 8 yards and over; Shovels, excavator, backhoes-6 yards and over with attachments

GROUP 1 - Cableway; Cranes 45 tons thru 99 tons under 150 ft of boom (including jib with attachments); Crane-overhead, bridge type, 45 tons thru 99 tons; Derricks on building work; Excavator, shovel, backhoes over 3 yards and under 6 yards; Hard tail end dump articulating off-road equipment 45 yards and over; Loader-overhead, 6 yards to, but not including, 8 yards; Mucking machine, mole, tunnel, drill and/or shield; Quad 9 HD 41, D-10; Remote control operator on rubber tired earth moving equipment; Rollagon; Scrapers-self-propelled 45 yards and over; Slipform pavers; Transporters, all track or truck type

GROUP 2 - Barrier machine (zipper); Batch Plant Operator-concrete; Bump Cutter; Cranes, 20 tons thru 44 tons with attachments; Crane-Overhead, bridge type, 20 tons through 44 tons; Chipper; Concrete pump-truck mount with boom attachment; Crusher; Deck engineer/deck winches (power); Drilling machine; Excavator, shovel, backhoe-3 yards and under; Finishing machine, Bidwell, Gamaco and similar equipment; Guardrail punch; Loaders, overhead under 6 yards; Loaders-plant feed; Locomotives-all; Mechanics-all; Mixers, asphalt plant; Motor patrol graders, finishing; Piledriver (other than crane mount); Roto-mill, roto-grinder; Screedman, spreader, topside operator-Blaw Knox, Cedar Rapids, Jaeger, Caterpillar, Barbar Green; Scraper-self-propelled, hard tail end dump, articulating off-road equipment-under 45 yards; Subgrader trimmer; Tractors, backhoe over 75 hp; Transfer material service machine-shuttle buggy, Blaw Knox- Roadtec; Truck Crane oiler/driver-100 tons and over; Truck Mount Portable Conveyor; Yo Yo pay

GROUP 3 - Conveyors; Cranes through 19 tons with attachments; Crane-A-frame over 10 tons; Drill oilers-auger type, truck or crane mount; Dozer-D-9 and under; Forklift-3000 lbs. and over with attachments; Horizontal/directional drill locator; Outside Hoists-(elevators and manlifts), air tuggers, strato tower bucket elevators; Hydralifts/boom trucks over 10 tons; Loaders-elevating type, belt; Motor patrol grader-nonfinishing; Plant oiler-asphalt, crusher; Pump-Concrete; Roller, plant mix or multi-lfit materials; Saws-concrete; Scrapers, concrete and carry all; Service engineers-equipment; Trenching machines; Truck crane oiler/driver under 100 tons; Tractors, backhoe under 75 hp
GROUP 4 - Assistant Engineer; Bobcat; Brooms; Compressor; Concrete Finish Machine-laser screed; Cranes A-frame 10 tons and under; Elevator and manlift (permanent and shaft type); Forklifts-under 3000 lbs. with attachments; Gradechecker, stakehop; Hydrailifts boom trucks, 10 tons and under; Oil distributors, blower distribution and mulch seeding operator; Pavement breaker; Posthole digger-mechanical; Power plant; Pumps-water; Rigger and Bellman; Roller-other than plant mix; Wheel Tractors, farmall type; Shotcrete/gunite equipment operator

FOOTNOTE A - Reduced rates may be paid on the following:
1. Projects involving work on structures such as buildings and bridges whose total value is less than $1.5 million excluding mechanical, electrical, and utility portions of the contract.
2. Projects of less than $1 million where no building is involved. Surfacing and paving included, but utilities excluded.
3. Marine projects (docks, wharfs, etc.) less than $150,000.

HANDLING OF HAZARDOUS WASTE MATERIALS: Personnel in all craft classifications subject to working inside a federally designated hazardous perimeter shall be eligible for compensation in accordance with the following group schedule relative to the level of hazardous waste as outlined in the specific hazardous waste project site safety plan.

H-1 Base wage rate when on a hazardous waste site when not outfitted with protective clothing
H-2 Class "C" Suit - Base wage rate plus $.25 per hour.
H-3 Class "B" Suit - Base wage rate plus $.50 per hour.
H-4 Class "A" Suit - Base wage rate plus $.75 per hour.

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ENGI0701-002 01/01/2013

CLARK, COWLITZ, KLICKITAT, PACIFIC (SOUTH), SKAMANIA, AND WAHIKUM COUNTIES

POWER EQUIPMENT OPERATORS: ZONE 1

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<tr>
<th>Power equipment operators:</th>
<th>Rates</th>
<th>Fringes</th>
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<td>GROUP 6....................</td>
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Zone Differential (add to Zone 1 rates):
Zone 2 - $3.00
Zone 3 - $6.00

WA130001 Modification 21
Federal Wage Determinations for Highway Construction
For the following metropolitan counties: MULTNOMAH; CLACKAMAS; MARION; WASHINGTON; YAMHILL; AND COLUMBIA; CLARK; AND COWLITZ COUNTY, WASHINGTON WITH MODIFICATIONS AS INDICATED:

All jobs or projects located in Multnomah, Clackamas and Marion Counties, West of the western boundary of Mt. Hood National Forest and West of Mile Post 30 on Interstate 84 and West of Mile Post 30 on State Highway 26 and West of Mile Post 30 on Highway 22 and all jobs or projects located in Yamhill County, Washington County and Columbia County and all jobs or projects located in Clark & Cowlitz County, Washington except that portion of Cowlitz County in the Mt. St. Helens "Blast Zone" shall receive Zone I pay for all classifications.

All jobs or projects located in the area outside the identified boundary above, but less than 50 miles from the Portland City Hall shall receive Zone II pay for all classifications.

All jobs or projects located more than 50 miles from the Portland City Hall, but outside the identified border above, shall receive Zone III pay for all classifications.

For the following cities: ALBANY; BEND; COOS BAY; EUGENE; GRANTS PASS; KLAMATH FALLS; MEDFORD; ROSEBURG

All jobs or projects located within 30 miles of the respective city hall of the above mentioned cities shall receive Zone I pay for all classifications.

All jobs or projects located more than 30 miles and less than 50 miles from the respective city hall of the above mentioned cities shall receive Zone II pay for all classifications.

All jobs or projects located more than 50 miles from the respective city hall of the above mentioned cities shall receive Zone III pay for all classifications.
POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: CONCRETE: Batch Plant and/or Wet Mix Operator, three units or more; CRANE: Helicopter Operator, when used in erecting work; Whirley Operator, 90 ton and over; LATTICE BOOM CRANE: Operator 200 tons through 299 tons, and/or over 200 feet boom; HYDRAULIC CRANE: Hydraulic Crane Operator 90 tons through 199 tons with luffing or tower attachments; FLOATING EQUIPMENT: Floating Crane, 150 ton but less than 250 ton

GROUP 1A: HYDRAULIC CRANE: Hydraulic Operator, 200 tons and over (with luffing or tower attachment); LATTICE BOOM CRANE: Operator, 200 tons through 299 tons, with over 200 feet boom; FLOATING EQUIPMENT: Floating Crane 250 ton and over

GROUP 1B: LATTICE BOOM CRANE: Operator, 300 tons through 399 tons with over 200 feet boom; Operator 400 tons and over; FLOATING EQUIPMENT: Floating Crane 350 ton and over

GROUP 2: ASPHALT: Asphalt Plant Operator (any type); Roto Mill, pavement profiler, operator, 6 foot lateral cut and over; BLADE: Auto Grader or "Trimmer" (Grade Checker required); Blade Operator, Robotic; BULLDOZZERS: Bulldozer operator over 120,000 lbs and above; Bulldozer operator, twin engine; Bulldozer Operator, tandem, quadnine, D10, D11, and similar type; Bulldozers Robotic Equipment (any type; CONCRETE: Batch Plant and/or Wet Mix Operator, one and two drum; Automatic Concrete Slip Form Paver Operator; Concrete Canal Line Operator; Concrete Profiler, Diamond Head; CRANE: Cableway Operator, 25 tons and over; HYDRAULIC CRANE: Hydraulic crane operator 90 tons through 199 tons (without luffing or tower attachment); TOWER/WHIRLEY CRANE: Operator, 90 tons; LATTICE BOOM CRANE: 90 through 199 tons and/or 150 to 200 feet boom; CRUSHER: Crusher Plant Operator; FLOATING EQUIPMENT: Floating Clamshell, etc. operator, 3 cu. yds. and over; Floating Crane (derrick barge) Operator, 30 tons but less than 150 tons; LOADERS: Loader operator, 120,000 lbs. and above; REMOTE CONTROL: Remote controlled earth-moving equipment; RUBBER-TIRED SCRAPERS: Rubber-tired scraper operator, with tandem scrapers, multi-engine; SHOVEL, DRAGLINE, CLAMSHELL, SKOOPER OPERATOR: Shovel, Dragline, Clamshell, operator 5 cu. yds and over; TRENCHING MACHINE: Wheel Excavator, under 750 cu. yds. per hour (Grade Oiler required); Canal Trimmer (Grade Oiler required); Wheel Excavator, over 750 cu. yds. per hour; Band Wagon (in conjunction with wheel excavator); UNDERWATER EQUIPMENT: Underwater Equipment Operator, remote or otherwise; HYDRAULIC HOES-EXCAVATOR: Excavator over 130,000 lbs.; HYDRAULIC CRANE: Hydraulic crane operator, 50 tons through 89 tons (with luffing or tower attachment);
GROUP 3: BULLDOZERS: Bulldozer operator, over 70,000 lbs. up to and including 120,000 lbs.; HYDRAULIC CRANE: Hydraulic crane operator, 50 tons through 89 tons (without luffing or tower attachment); LATTICE BOOM CRANES: Lattice Boom Crane 50 through 89 tons (and less than 150 feet boom); FORKLIFT: Rock Hound Operator; HYDRAULIC HOE-EXCAVATOR: excavator over 80,000 lbs. through 130,000 lbs.; LOADERS: Loader operator 60,000 and less than 120,000; RUBBER-TIRED SCRAPERS: Scraper Operator, with tandem scrapers; Self-loading, paddle wheel, auger type, finish and/or 2 or more units; SHOVEL, DRAGLINE, CLAMSHELL, SKOOPER OPERATOR: Shovel, Dragline, Clamshell operators 3 cu. yds. but less than 5 cu yds.

GROUP 4: ASPHALT: Screed Operator; Asphalt Paver operator (screenman required); BLADE: Blade operator; Blade operator, finish; Blade operator, externally controlled by electronic, mechanical hydraulic means; Blade operator, multi-engine; BULLDOZERS: Bulldozer Operator over 20,000 lbs and more than 100 horse up to 70,000 lbs; Drill Cat Operator; Side-boom Operator; Cable-Flow Operator (any type); CLEARING: Log Skidders; Chippers; Incinerator; Stump Splitter (loader mounted or similar type); Stump Grinder (loader mounted or similar type); Tub Grinder; Land Clearing Machine (Track mounted forestry mowing & grinding machine); Hydro Axe (loader mounted or similar type); COMPACTORS SELF-PROPELLED: Compactor Operator, with blade; Compactor Operator, multi-engine; Compactor Operator, robotic; CONCRETE: Mixer Mobile Operator; Screed Operator; Concrete Cooling Machine Operator; Concrete Paving Road Mixer; Concrete Breaker; Reinforced Tank Banding Machine (K-17 or similar types); Laser Screed; CRANE: Chicago boom and similar types; Lift Slab Machine Operator; Boom type lifting device, 5 ton capacity or less; Hoist Operator, two (2) drum; Hoist Operator, three (3) or more drums; Derrick Operator, under 100 ton; Hoist Operator, stiff leg, guy derrick or similar type, 50 ton and over; Cableway Operator up to twenty (25) ton; Bridge Crane Operator, Locomotive, Gantry, Overhead; Cherry Picker or similar type crane; Carry Deck Operator; Hydraulic Crane Operator, under 50 tons; LATTICE BOOM CRANE OPERATOR: Lattice Boom Crane Operator, under 50 tons; CRUSHER: Generator Operator; Diesel-Electric Engineer; Grizzley Operator; Drill Doctor; Boring Machine Operator; Driller-Percussion, Diamond, Core, Cable, Rotary and similar type; Cat Drill (John Henry); Directional Drill Operator over 20,000 lbs pullback; FLOATING EQUIPMENT: Diesel-electric Engineer; Jack Operator, elevating barges, Barge Operator, self-unloading; Piledriver Operator (not crane type) (Deckhand required); Floating Clamshells, etc. Operator, under 3 cu. yds. (Fireman or Diesel-Electric Engineer required); Floating Crane (derrick barge) Operator, less than 30 tons; GENERATORS: Generator Operator; Diesel-electric Engineer; GUARDRAIL EQUIPMENT: Guardrail Punch Operator (all types); Guardrail Auger Operator (all types); Combination Guardrail machines, i.e., punch auger, etc.; HEATING PLANT: Surface
Heater and Planer Operator; HYDRAULIC HOES EXCAVATOR:
Robotic Hydraulic backhoe operator, track and wheel type up to and including 20,000 lbs. with any or all attachments; Excavator Operator over 20,000 lbs through 80,000 lbs.; LOADERS: Belt Loaders, Kolman and Ko Cal types; Loaders Operator, front end and overhead, 25,000 lbs and less than 60,000 lbs; Elevating Grader Operator by Tractor operator, Sierra, Euclid or similar types; PILEDRIVERS: Hammer Operator; Piledriver Operator (not crane type); PIPELINE, SEWER WATER: Pipe Cleaning Machine Operator; Pipe Doping Machine Operator; Pipe Bending Machine Operator; Pipe Wrapping Machine Operator; Boring Machine Operator; Back Filling Machine Operator; REMOTE CONTROL: Concrete Cleaning Decontamination Machine Operator; Ultra High Pressure Water Jet Cutting Tool System Operator/Mechanic; Vacuum Blasting Machine Operator/mechanic; REPAIRMEN, HEAVY DUTY: Diesel Electric Engineer (Plant or Floating; Bolt Threading Machine operator; Drill Doctor (Bit Grinder); H.D. Mechanic; Machine Tool Operator; RUBBER-TIRED SCRAPERS: Rubber-tired Scraper Operator, single engine, single scraper; Self-loading, paddle wheel, auger type under 15 cu. yds.; Rubber-tired Scraper Operator, twin engine; Rubber-tired Scraper Operator, with push-ull attachments; Self Loading, paddle wheel, auger type 15 cu. yds. and over, single engine; Water pulls, water wagons; SHOVEL, DRAGLINE, CLAMSHELL, SKOOPER OPERATOR: Diesel Electric Engineer; Stationary Drag Scraper Operator; Shovel, Dragline, Clamshell, Operator under 3 cy yds.; Grade-all Operator; SURFACE (BASE) MATERIAL: Blade mounted spreaders, Ulrich and similar types; TRACTOR-RUBBERED TIRED: Tractor operator, rubber-tired, over 50 hp flywheel; Tractor operator, with boom attachment; Rubber-tired dozers and pushers (Michigan, Cat, Hough type); Skip Loader, Drag Box; TRENCHING MACHINE: Trenching Machine operator, digging capacity over 3 ft depth; Back filling machine operator; TUNNEL: Mucking machine operator
GROUP 5: ASPHALT: Extrusion Machine Operator; Roller Operator (any asphalt mix); Asphalt Burner and Reconditioner Operator (any type); Roto-Mill, pavement profiler, ground man; BULLDOZERS: Bulldozer operator, 20,000 lbs. or less or 100 horse or less; COMPRESSORS: Compressor Operator (any power), over 1,250 cu. ft. total capacity; COMPACTORS: Compactor Operator, including vibratory; Wagner Pactor Operator or similar type (without blade); CONCRETE: Combination mixer and Compressor Operator, gunite work; Concrete Batch Plant Quality Control Operator; Beltacrete Operator; Pumpcrete Operator (any type); Pavement Grinder and/or Grooving Machine Operator (riding type); Cement Pump Operator, Fuller-Kenyon and similar; Concrete Pump Operator; Grouting Machine Operator; Concrete mixer operator, single drum, under (5) bag capacity; Cast in place pipe laying machine; maginness Internal Full slab vibrator operator; Concrete finishing machine operator, Clary, Johnson, Bidwell, Burgess Bridge deck or similar type; Curb Machine Operator, mechanical Berm, Curb and/or Curb and Gutter; Concrete Joint Machine Operator; Concrete Planer Operator; Tower Mobile Operator; Power Jumbo Operator setting slip forms in tunnels; Slip Form Pumps, power driven hydraulic lifting device for concrete forms; Concrete Paving Machine Operator; Concrete Finishing Machine Operator; Concrete Spreader Operator; CRANE: Helicopter Hoist Operator; Hoist Operator, single drum; Elevator Operator; A-frame Truck Operator, Double drum; Boom Truck Operator; HYDRAULIC CRANE OPERATOR: Hydraulic Boom Truck, Pittman; DRILLING: Churn Drill and Earth Boring Machine Operator; Vacuum Truck; Directional Drill Operator over 20,000 lbs pullback; FLOATING EQUIPMENT: Fireman; FORKLIFT: Fork Lift, over 10 ton and/or robotic; HYDRAULIC HOES EXCAVATORS: Hydraulic Backhoe Operator, wheel type (Ford, John Deere, Case type); Hydraulic Backhoe Operator track type up to and including 20,000 lbs.; LOADERS: Loaders, rubber- tired type, less than 25,000 lbs; Elevating Grader Operator, Tractor Towed requiring Operator or Grader; Elevating loader operator, Athey and similar types; OILERS: Service oiler (Greaser); PIPELINE-SEWER WATER: Hydra hammer or similar types; Pavement Breaker Operator; PUMPS: Pump Operator, more than 5 (any size); Pot Rammer Operator; RAILROAD EQUIPMENT: Locomotive Operator, under 40 tons; Ballast Regulator Operator; Ballast Tamper Multi-Purpose Operator; Track Liner Operator; Tie Spacer Operator; Shuttle Car Operator; Locomotive Operator, 40 tons and over; MATERIAL HAULERS: Cat wagon DJEs Volvo similar types; Conveyored material hauler; SURFACING (BASE) MATERIAL: Rock Spreaders, self-propelled; Pulva-mixer or similar types; Chip Spreading machine operator; Lime spreading operator, construction job siter; SWEEPERS: Sweeper operator (Wayne type) self-propelled construction job site; TRACTOR-RUBBER TIRED: Tractor operator, rubber-tired, 50 hp flywheel and under; Trenching machine operator, maximum digging capacity 3 ft depth; TUNNEL: Dinkey
GROUP 6: ASPHALT: Plant Oiler; Plant Fireman; Pugmill Operator (any type); Truck mounted asphalt spreader, with screed; COMPRESSORS: Compressor Operator (any power), under 1,250 cu. ft. total capacity; CONCRETE: Plant Oiler, Assistant Conveyor Operator; Conveyor Operator; Mixer Box Operator (C.T.B., dry batch, etc.); Cement Hog Operator; Concrete Saw Operator; Concrete Curing Machine Operator (riding type); Wire Mat or Brooming Machine Operator; CRANE: Oiler; Fireman, all equipment; Truck Crane Oiler Driver; A-frame Truck Operator, single drum; Tugger or Coffin Type Hoist Operator; CRUSHER: Crusher Oiler; Crusher Feederman; CRUSHER: Crusher oiler; Crusher feederman; DRILLING: Drill Tender; Auger Oiler; FLOATING EQUIPMENT: Deckhand; Boatman; FORKLIFT: Self-propelled Scaffolding Operator, construction job site (excluding working platform); Fork Lift or Lumber Stacker Operator, construction job site; Ross Carrier Operator, construction job site; Lull Hi-Lift Operator or Similar Type; GUARDRAIL EQUIPMENT: Oiler; Auger Oiler; Oiler, combination guardrail machines; Guardrail Punch Oiler; HEATING PLANT: Temporary Heating Plant Operator; LOADERS: Bobcat, skid steer (less than 1 cu yd.); Bucket Elevator Loader Operator, BarberGreene and similar types; OILERS: Oiler; Guardrail Punch Oiler; Truck Crane Oiler-Driver; Auger Oiler; Grade Oiler, required to check grade; Grade Checker; Rigger; PIPELINE-SEWER WATER: Tar Pot Fireman; Tar Pot Fireman (power agitated); PUMPS: Pump Operator (any power); Hydrostatic Pump Operator; RAILROAD EQUIPMENT: Brakeman; Oiler; Switchman; Motorman; Ballast Jack Tamper Operator; SHOVEL, DRAGLINE, CLAMSHELL, SKOOPER, ETC. OPERATOR: Oiler; Grade Oiler (required to check grade); Grade Checker; Fireman; SWEEPER: Broom operator, self propelled, construction job site; SURFACING (BASE) MATERIAL: Roller Operator, grading of base rock (not asphalt); Tamping Machine operator, mechanical, self-propelled; Hydrographic Seeder Machine Operator; TRENCHING MACHINE: Oiler; Grade Oiler; TUNNEL: Conveyor operator; Air filtration equipment operator

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WA130001 Modification 21
Federal Wage Determinations for Highway Construction
<table>
<thead>
<tr>
<th>Rates</th>
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ZONE 1:

**Rates**

**Fringes**

**Laborers:**

CALLAM, GRAYS HARBOR, ISLAND, JEFFERSON, KING, KITSAP, LEWIS, MASON, PACIFIC (NORTH OF STRAIGHT LINE MADE BY EXTENDING THE NORTH BOUNDARY WAHKIAKUM COUNTY WEST TO THE PACIFIC OCEAN), PIERCE, SAN JUAN, SKagit, SNOHOMISH, THURSTON AND WHATCOM COUNTIES

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CHELAN, DOUGLAS (WEST OF THE 120TH MERIDIAN), KITTITAS AND YAKIMA COUNTIES

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<tr>
<td>5</td>
<td>$24.49</td>
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BASE POINTS: BELLINGHAM, MT. VERNON, EVERETT, SEATTLE, KENT, TACOMA, OLYMPIA, CENTRALIA, ABERDEEN, SHELTON, PT. TOWNSEND, PT. ANGELES, AND BREMERTON

ZONE 1 - Projects within 25 radius miles of the respective city hall
ZONE 2 - More than 25 but less than 45 radius miles from the respective city hall
ZONE 3 - More than 45 radius miles from the respective city hall

ZONE DIFFERENTIAL (ADD TO ZONE 1 RATES):

ZONE 2 - $1.00
ZONE 3 - $1.30

BASE POINTS: CHELAN, SUNNYSIDE, WENATCHEE, AND YAKIMA

ZONE 1 - Projects within 25 radius miles of the respective city hall
ZONE 2 - More than 25 radius miles from the respective city hall

ZONE DIFFERENTIAL (ADD TO ZONE 1 RATES):

ZONE 2 - $2.25

WA130001 Modification 21
Federal Wage Determinations for Highway Construction
LABORERS CLASSIFICATIONS

GROUP 1: Landscaping and Planting; Watchman; Window Washer/Cleaner (detail clean-up, such as but not limited to cleaning floors, ceilings, walls, windows, etc., prior to final acceptance by the owner)

GROUP 2: Batch Weighman; Crusher Feeder; Fence Laborer; Flagman; Pilot Car

GROUP 3: General Laborer; Air, Gas, or Electric Vibrating Screed; Asbestos Abatement Laborer; Ballast Regulator Machine; Brush Cutter; Brush Hog Feeder; Burner; Carpenter Tender; Cement Finisher Tender; Change House or Dry Shack; Chipping Gun (under 30 lbs.); Choker Setter; Chuck Tender; Clean-up Laborer; Concrete Form Stripper; Curing Laborer; Demolition (wrecking and moving including charred material); Ditch Digger; Dump Person; Fine Graders; Firewatch; Form Setter; Gabian Basket Builders; Grout Machine Tender; Grinders; Guardrail Erector; Hazardous Waste Worker (Level C: uses a chemical "splash suit" and air purifying respirator); Maintenance Person; Material Yard Person; Pot Tender; Rip Rap Person; Riggers; Scale Person; Sloper Sprayer; Signal Person; Stock Piler; Stake Hopper; Toolroom Man (at job site); Topper-Tailer; Track Laborer; Truck Spotter; Vinyl Seamer

GROUP 4: Cement Dumper-Paving; Chipping Gun (over 30 lbs.); Clary Power Spreader; Concrete Dumper/Chute Operator; Concrete Saw Operator; Drill Operator (hydraulic, diamond, aiartrac); Faller and Bucker Chain Saw; Grade Checker and Transit Person; Groutmen (pressure) including post tension beams; Hazardous Waste Worker (Level B: uses same respirator protection as Level A. A supplied air line is provided in conjunction with a chemical "splash suit"); High Scaler; Jackhammer; Laserbeam Operator; Manhole Builder-Mudman; Nozzelman (concrete pump, green cutter when using combination of high pressure air and water on concrete and rock, sandblast, gunite, shotcrete, water blaster, vacuum blaster); Pavement Breaker; Pipe Layer and Cauker; Pipe Pot Tender; Pipe Reliner (not insert type); Pipe Wrapper; Power Jacks; Railroad Spike Puller-Power; Raker-Asphalt; Rivet Buster; Rodder; Sloper (over 20 ft); Spreader (concrete); Tamper and Similar electric, air and glas operated tool; Timber Person-sewer (lagger shorer and criber); Track Liner Power; Tugger Operator; Vibrator; Well Point Laborer
GROUP 5: Caisson Worker; Miner; Mortarman and Hodcarrier; Powderman; Re-Timberman; Hazardous Waste Worker (Level A: utilizes a fully encapsulated suit with a self-contained breathing apparatus or a supplied air line).

LAB00238-004 06/01/2013

PASCO AREA: ADAMS, BENTON, COLUMBIA, DOUGLAS (East of 120th Meridian), FERRY, FRANKLIN, GRANT, OKANOGAN, WALLA WALLA

SPOKANE AREA: ASOTIN, GARFIELD, LINCOLN, PEND OREILLE, SPOKANE, STEVENS & WHITMAN COUNTIES

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<th>Rates</th>
<th>Fringes</th>
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<td>$24.92</td>
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LABORER (PASCO)

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<td>$24.34</td>
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<td>$24.62</td>
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LABORER (SPOKANE)

Zone Differential (Add to Zone 1 rate): $2.00

BASE POINTS: Spokane, Pasco, Lewiston

Zone 1: 0-45 radius miles from the main post office.
Zone 2: 45 radius miles and over from the main post office.
LABORERS CLASSIFICATIONS

GROUP 1: Flagman; Landscape Laborer; Scaleman; Traffic Control Maintenance Laborer (to include erection and maintenance of barricades, signs and relief of flagperson); Window Washer/Cleaner (detail cleanup, such as, but not limited to cleaning floors, ceilings, walls, windows, etc. prior to final acceptance by the owner)

GROUP 2: Asbestos Abatement Worker; Brush Hog Feeder; Carpenter Tender; Cement Handler; Clean-up Laborer; Concrete Crewman (to include stripping of forms, hand operating jacks on slip form construction, application of concrete curing compounds, pumpcrete machine, signaling, handling the nozzle of squeezecrete or similar machine, 6 inches and smaller); Confined Space Attendant; Concrete Signalman; Crusher Feeder; Demolition (to include clean-up, burning, loading, wrecking and salvage of all material); Dumpman; Fence Erector; Firewatch; Form Cleaning Machine Feeder, Stacker; General Laborer; Grout Machine Header Tender; Guard Rail (to include guard rails, guide and reference posts, sign posts, and right-of-way markers); Hazardous Waste Worker, Level D (no respirator is used and skin protection is minimal); Miner, Class "A" (to include all bull gang, concrete crewman, dumpman and pumpcrete crewman, including distributing pipe, assembly & dismantle, and nipper); Nipper; Riprap Man; Sandblast Tailhosemann; Scaffold Erector (wood or steel); Stake Jumper; Structural Mover (to include separating foundation, preparation, cribbing, shoring, jacking and unloading of structures); Tailhosemann (water nozzle); Timber Bucker and Faller (by hand); Track Laborer (RR); Truck Loader; Well-Point Man; All Other Work Classifications Not Specially Listed Shall Be Classified As General Laborer

GROUP 3: Asphalt Raker; Asphalt Roller, walking; Cement Finisher Tender; Concrete Saw, walking; Demolition Torch; Dope Pot Fireman, non-mechanical; Driller Tender (when required to move and position machine); Form Setter, Paving; Grade Checker using level; Hazardous Waste Worker, Level C (uses a chemical "splash suit" and air purifying respirator); Jackhammer Operator; Miner, Class "B" (to include brakeman, finisher, vibrator, form setter); Nozzleman (to include squeeze and flo-crete nozzle); Nozzelman, water, air or steam; Pavement Breaker (under 90 lbs.); Pipelayer, corrugated metal culvert; Pipelayer, multi-plate; Pot Tender; Power Buggy Operator; Power Tool Operator, gas, electric, pneumatic; Railroad Equipment, power driven, except dual mobile power spiker or puller; Railroad Power Spiker or Fuller, dual mobile; Rodder and Spreader; Tamper (to include operation of Barco, Essex and similar tampers); Trencher, Shawnee; Tugger Operator; Wagon Drills; Water Pipe Liner; Wheelbarrow (power driven)
GROUP 4: Air and Hydraulic Track Drill; Brush Machine (to include horizontal construction joint cleanup brush machine, power propelled); Caisson Worker, free air; Chain Saw Operator and Fallar; Concrete Stack (to include laborers when laborers working on free standing concrete stacks for smoke or fume control above 40 feet high); Gunite (to include operation of machine and nozzle); Hazardous Waste Worker, Level B (uses same respirator protection as Level A. A supplied air line is provided in conjunction with a chemical "splash suit"); High Scaler; Laser Beam Operator (to include grade checker and elevation control); Miner, Class C (to include miner, nozzleman for concrete, laser beam operator and rigger on tunnels); Monitor Operator (air track or similar mounting); Mortar Mixer; Nozzleman (to include jet blasting nozzleman, over 1,200 lbs., jet blast machine power propelled, sandblast nozzle); Pavement Breaker (90 lbs. and over); Pipelayer (to include working topman, caulker, collarman, jointer, mortarman, rigger, jacker, shorer, valve or meter installer); Pipewrapper; Plasterer Tender; Vibrators (all)

GROUP 5 - Drills with Dual Masts; Hazardous Waste Worker, Level A (utilizes a fully encapsulated suit with a self-contained breathing apparatus or a supplied air line); Miner Class "D", (to include raise and shaft miner, laser beam operator on raises and shafts)

GROUP 6 - Powderman

LAB00238-006 06/01/2013

COUNTIES EAST OF THE 120TH MERIDIAN: ADAMS, ASOTIN, BENTON, CHELAN, COLUMBIA, DOUGLAS, FERRY, FRANKLIN, GARFIELD, GRANT, LINCOLN, OKANOGAN, PEND OREILLE, STEVENS, SPOKANE, WALLA WALLA, WHITMAN

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<tr>
<th>Hod Carrier</th>
<th>$ 24.10</th>
<th>10.65</th>
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LAB00335-001 06/01/2013

CLARK, COWLITZ, Klickitat, Pacific (south of a straight line made by extending the north boundary line of Wahkiakum County west to the Pacific Ocean), Skamania and Wahkiakum Counties

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<th>Fringes</th>
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WA130001 Modification 21
Federal Wage Determinations for Highway Construction
Zone Differential (Add to Zone 1 rates):
Zone 2 $ 0.65
Zone 3 - 1.15
Zone 4 - 1.70
Zone 5 - 2.75

BASE POINTS: GOLDendale, LONGview, AND VANCOUVER

ZONE 1: Projects within 30 miles of the respective city all.
ZONE 2: More than 30 miles but less than 40 miles from the respective city hall.
ZONE 3: More than 40 miles but less than 50 miles from the respective city hall.
ZONE 4: More than 50 miles but less than 80 miles from the respective city hall.
ZONE 5: More than 80 miles from the respective city hall.

LABORERS CLASSIFICATIONS

GROUP 1: Asphalt Plant Laborers; Asphalt Spreaders; Batch Weighman; Broomers; Brush Burners and Cutters; Car and Truck Loaders; Carpenter Tender; Change-House Man or Dry Shack Man; Choker Setter; Clean-up Laborers; Curing, Concrete; Demolition, Wrecking and Moving Laborers; Dumpers, road oiling crew; Dumpmen (for grading crew); Elevator Feeders; Median Rail Reference Post, Guide Post, Right of Way Marker; Fine Graders; Fire Watch; Form Strippers (not swinging stages); General Laborers; Hazardous Waste Worker; Leverman or Aggregate Spreader (Flaherty and similar types); Loading Spotters; Material Yard Man (including electrical); Pittsburgh Chipper Operator or Similar Types; Railroad Track Laborers; Ribbon Setters (including steel forms); Rip Rap Man (hand placed); Road Pump Tender; Sewer Labor; Signalman; Skipman; Slopers; Spraymen; Stake Chaser; Stockpiler; Tie Back Shoring; Timber Faller and Bucker (hand labor); Toolroom Man (at job site); Tunnel Bullgang (above ground); Weight-Man- Crusher (aggregate when used)

GROUP 2: Applicator (including pot power tender for same), applying protective material by hand or nozzle on utility lines or storage tanks on project; Brush Cutters (power saw); Burners; Choker Splicer; Clary Power Spreader and similar types; Clean- up Nozzleman-Green Cutter (concrete, rock, etc.); Concrete Power Buggyman; Concrete Laborer; Crusher Feeder; Demolition and Wrecking Charred Materials; Gunite Nozzleman Tender; Gunite or Sand Blasting Pot Tender; Handlers or Mixers of all Materials of an irritating nature (including cement and lime); Tool Operators (includes but not limited to: Dry Pack Machine; Jackhammer; Chipping Guns; Paving Breakers); Pipe Doping and Wrapping; Post Hole Digger, air, gas or electric; Vibrating Screed; Tampers; Sand Blasting (Wet); Stake-Setter; Tunnel-Muckers, Brakemen, Concrete Crew, Bullgang (underground)
GROUP 3: Asbestos Removal; Bit Grinder; Drill Doctor; Drill Operators, air tracks, cat drills, wagon drills, rubber-mounted drills, and other similar types including at crusher plants; Gunite Nozzleman; High Scalers, Strippers and Drillers (covers work in swinging stages, chairs or belts, under extreme conditions unusual to normal drilling, blasting, barring-down, or sloping and stripping); Manhole Builder; Powdermen; Concrete Saw Operator; Powdermen; Power Saw Operators (Bucking and Falling); Pumpcrete Nozzlemen; Sand Blasting (Dry); Sewer Timbermen; Track Liners, Anchor Machines, Ballast Regulators, Multiple Tamperers, Power Jacks, Tugger Operator; Tunnel-Chuck Tenders, Nippers and Timbermen; Vibrator; Water Blaster

GROUP 4: Asphalt Raker; Concrete Saw Operator (walls); Concrete Nozzleman; Grade Checker; Pipelayer; Laser Beam (pipelaying)-applicable when employee assigned to move, set up, align; Laser Beam; Tunnel Miners; Motorman-Dinky Locomotive-Tunnel; Powderman-Tunnel; Shield Operator-Tunnel

GROUP 5: Traffic Flaggers

GROUP 6: Fence Builders

GROUP 7: Landscaping or Planting Laborers

LAB00335-019 06/01/2012

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PAIN0005-002 07/01/2013

STATEWIDE EXCEPT CLARK, COWLITZ, KLICKITAT, PACIFIC (SOUTH), SKAMANIA, AND WAHKIAKUM COUNTIES

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PAIN0005-004 03/01/2009

CLALLAM, GRAYS HARBOR, ISLAND, JEFFERSON, KING, KITSAP, LEWIS, MASON, PIERCE, SAN JUAN, SKAGIT, SNOHOMISH, THURSTON AND WHATCOM COUNTIES

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WA130001 Modification 21
Federal Wage Determinations for Highway Construction
ADAMS, ASOTIN; BENTON AND FRANKLIN (EXCEPT HANFORD SITE); CHELAN, COLUMBIA, DOUGLAS, FERRY, GARFIELD, GRANT, KITTITAS, LINCOLN, OKANOGAN, PEND OREILLE, SPOKANE, STEVENS, WALLA WALLA, WHITMAN AND YAKIMA COUNTIES

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<td>Application of Cold Tar Products, Epoxies, Polyure thanes, Acids, Radiation Resistant Material, Water and Sandblasting.............$ 26.44</td>
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<td>Over 30'/Swing Stage Work..$ 22.20</td>
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<td>Brush, Roller, Striping, Steam-cleaning and Spray....$ 21.23</td>
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<tr>
<td>Lead Abatement, Asbestos Abatement...............$ 21.50</td>
<td>7.98</td>
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*$.70 shall be paid over and above the basic wage rates listed for work on swing stages and high work of over 30 feet.

CLARK, COWLITZ, KLICKITAT, PACIFIC, SKAMANIA, AND WAHKIAKUM COUNTIES

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<td>Brush &amp; Roller..............$ 21.01</td>
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<td>High work - All work 60 ft. or higher..............$ 21.61</td>
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<td>Spray and Sandblasting........$ 21.76</td>
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* PAIN0055-007 07/01/2013

CLARK, COWLITZ, KLICKITAT, SKAMANIA and WAHKIAKUM COUNTIES

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WA130001 Modification 21
Federal Wage Determinations for Highway Construction
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<td>CEMENT MASON/CONCRETE FINISHER</td>
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<tr>
<td>ZONE 1</td>
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Zone Differential (Add to Zone 1 rate): Zone 2 - $2.00

BASE POINTS: Spokane, Pasco, Lewiston; Wenatchee
Zone 1: 0 - 45 radius miles from the main post office
Zone 2: Over 45 radius miles from the main post office

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Cement Masons:
CEMENT MASON............... $ 36.63 \[14.55\]
COMPOSITION, TROWEL
MACHINE, GRINDER, POWER
TOOLS, GUNNITE NOZZLE...... $ 37.13 \[14.55\]
TROWLING MACHINE OPERATOR
ON COMPOSITION.............. $ 37.13 \[14.55\]

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<table>
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<th>Fringes</th>
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CLARK, Klickitat and Skamania Counties

ZONE 1:

Cement Masons:
CEMENT MASON DOING BOTH
COMPOSITION/POWER
MACHINERY AND
SUSPENDED/HANGING SCAFFOLD.. $ 30.58 \[17.76\]
CEMENT MASONs ON
SUSPENDED, SWINGING AND/OR
HANGING SCAFFOLD............ $ 30.58 \[17.76\]
CEMENT MASONs................. $ 29.98 \[17.76\]
COMPOSITION WORKERS AND
POWER MACHINERY OPERATORS... $ 31.18 \[17.76\]

WA130001 Modification 21
Federal Wage Determinations for Highway Construction
Zone Differential (Add To Zone 1 Rates):
Zone 2 - $0.65
Zone 3 - 1.15
Zone 4 - 1.70
Zone 5 - 3.00

BASE POINTS: BEND, CORVALLIS, EUGENE, MEDFORD, PORTLAND,
SALEM, THE DALLES, VANCOUVER

ZONE 1: Projects within 30 miles of the respective city hall
ZONE 2: More than 30 miles but less than 40 miles from the
respective city hall.
ZONE 3: More than 40 miles but less than 50 miles from the
respective city hall.
ZONE 4: More than 50 miles but less than 80 miles from the
respective city hall.
ZONE 5: More than 80 miles from the respective city hall

* TEAM0037-002 06/01/2013

CLARK, COWLITZ, Klickitat, Pacific (South of a straight line
made by extending the north boundary line of Wahkiakum County
west to the Pacific Ocean), Skamania, and Wahkiakum Counties

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Zone Differential (Add to Zone 1 Rates):
Zone 2 - $0.65
Zone 3 - 1.15
Zone 4 - 1.70
Zone 5 - 2.75

BASE POINTS: ASTORIA, THE DALLES, LONGVIEW AND VANCOUVER

ZONE 1: Projects within 30 miles of the respective city hall.
ZONE 2: More than 30 miles but less than 40 miles from the
respective city hall.
ZONE 3: More than 40 miles but less than 50 miles from the
respective city hall.
ZONE 4: More than 50 miles but less than 80 miles from the
respective city hall.
ZONE 5: More than 80 miles from the respective city hall.

WA130001 Modification 21
Federal Wage Determinations for Highway Construction
TRUCK DRIVERS CLASSIFICATIONS

GROUP 1: A Frame or Hydra lift truck w/load bearing surface; Articulated Dump Truck; Battery Rebuilders; Bus or Manhaul Driver; Concrete Buggies (power operated); Concrete Pump Truck; Dump Trucks, side, end and bottom dumps, including Semi Trucks and Trains or combinations thereof: up to and including 10 cu. yds.; Lift Jitneys, Fork Lifts (all sizes in loading, unloading and transporting material on job site); Loader and/or Leverman on Concrete Dry Batch Plant (manually operated); Pilot Car; Pickup Truck; Solo Flat Bed and misc. Body Trucks, 0-10 tons; Truck Tender; Truck Mechanic Tender; Water Wagens (rated capacity) up to 3,000 gallons; Transit Mix and Wet or Dry Mix - 5 cu. yds. and under; Lubrication Man, Fuel Truck Driver, Tireman, Wash Rack, Steam Cleaner or combinations; Team Driver; Slurry Truck Driver or Leverman; Tireman

GROUP 2: Boom Truck/Hydra-lift or Retracting Crane; Challenger; Dumpsters or similar equipment all sizes; Dump Trucks/Articulated Dumps 6 cu to 10 cu.; Flaherty Spreader Driver or Leverman; Lowbed Equipment, Flat Bed Semi-trailer or doubles transporting equipment or wet or dry materials; Lumber Carrier, Driver-Straddle Carrier (used in loading, unloading and transporting of materials on job site); Oil Distributor Driver or Leverman; Transit mix and wet or dry mix trucks: over 5 cu. yds. and including 7 cu. yds.; Vacuum Trucks; Water truck/Wagens (rated capacity) over 3,000 to 5,000 gallons

GROUP 3: Ammonia Nitrate Distributor Driver; Dump trucks, side, end and bottom dumps, including Semi Trucks and Trains or combinations thereof: over 10 cu. yds. and including 30 cu. yds. includes Articulated Dump Trucks; Self-Propelled Street Sweeper; Transit mix and wet or dry mix truck: over 7 cu yds. and including 11 cu yds.; Truck Mechanic-Welder-Body Repairman; Utility and Clean-up Truck; Water Wagens (rated capacity) over 5,000 to 10,000 gallons

GROUP 4: Asphalt Burner; Dump Trucks, side, end and bottom curnps, including Semi-Trucks and Trains or combinations thereof: over 30 cu. yds. and including 50 cu. yds. includes Articulated Dump Trucks; Fire Guard; Transit Mix and Wet or Dry Mix Trucks, over 11 cu. yds. and including 15 cu. yds.; Water Wagon (rated capacity) over 10,000 gallons to 15,000 gallons

GROUP 5: Composite Crewman; Dump Trucks, side, end and bottom dumps, including Semi Trucks and Trains or combinations thereof: over 50 cu. yds. and including 60 cu. yds. includes Articulated Dump Trucks

GROUP 6: Bulk Cement Spreader w/o Auger; Dry Pre-Batch concrete Mix Trucks; Dump trucks, side, end and bottom dumps, including Semi Trucks and Trains of combinations thereof: over 60 cu. yds. and including 80 cu. yds., and includes Articulated Dump Trucks; Skid Truck

WA130001 Modification 21
Federal Wage Determinations for Highway Construction
GROUP 7: Dump Trucks, side, end and bottom dumps, including Semi Trucks and Trains or combinations thereof: over 80 cu. yds. and including 100 cu. yds., includes Articulated Dump Trucks; Industrial Lift Truck (mechanical tailgate)

TEAM0174-001 06/29/2012

CLALLAM, GRAYS HARBOR, ISLAND, JEFFERSON, KING, KITSAP, LEWIS, MASON, PACIFIC (North of a straight line made by extending the north boundary line of Wahkiakum County west to the Pacific Ocean), PIERCE, SAN JUAN, SKAGIT, SNOHOMISH, THURSTON AND WHATCOM COUNTIES

Rates Fringes

<table>
<thead>
<tr>
<th>Truck drivers:</th>
<th></th>
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<tbody>
<tr>
<td>ZONE A:</td>
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</tr>
<tr>
<td>GROUP 1:</td>
<td>$ 31.68</td>
<td>16.23</td>
</tr>
<tr>
<td>GROUP 2:</td>
<td>$ 30.84</td>
<td>16.23</td>
</tr>
<tr>
<td>GROUP 3:</td>
<td>$ 28.03</td>
<td>16.23</td>
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<tr>
<td>GROUP 4:</td>
<td>$ 23.06</td>
<td>16.23</td>
</tr>
<tr>
<td>GROUP 5:</td>
<td>$ 31.23</td>
<td>16.23</td>
</tr>
</tbody>
</table>

ZONE B (25-45 miles from center of listed cities*): Add $.70 per hour to Zone A rates.
ZONE C (over 45 miles from center of listed cities*): Add $1.00 per hour to Zone A rates.

*Zone pay will be calculated from the city center of the following listed cities:

BELLINGHAM | CENTRALIA | RAYMOND | OLYMPIA
EVE RTT | SHELTON | ANACORTES | BELLEVUE
SEATTLE | PORT ANGELES | MT. VERNON | KENT
TACOMA | PORT TOWNSEND | ABERDEEN | BREMERTON

TRUCK DRIVERS CLASSIFICATIONS

GROUP 1 - "A-frame or Hydralift" trucks and Boom trucks or similar equipment when "A" frame or "Hydralift" and Boom truck or similar equipment is used; Buggymobile; Bulk Cement Tanker; Dumpsters and similar equipment, Tournorockers, Tournowagon, Tournotrailer, Cat DW series, Terra Cobra, Le Tourneau, Westinghouse, Athye Wagon, Buclid Two and Four-Wheeled power tractor with trailer and similar top-loaded equipment transporting material; Dump Trucks, side, end and bottom dump, including semi-trucks and trains or combinations thereof with 16 yards to 30 yards capacity: Over 30 yards $.15 per hour additional for each 10 yard increment; Explosive Truck (field mix) and similar equipment; Hyster Operators (handling bulk loose aggregates); Lowbed and Heavy Duty Trailer; Road Oil Distributor Driver; Spreader, Flaherty Transit mix used exclusively in heavy construction; Water Wagon and Tank Truck-3,000 gallons and over capacity
GROUP 2 - Bulllifts, or similar equipment used in loading or unloading trucks, transporting materials on job site; Dumpsters, and similar equipment, Tournorockers, Tournowagon, Turnotrailers, Cat. D.W. Series, Terra Cobra, Le Tourneau, Westinghouse, Athye wagon, Euclid two and four-wheeled power tractor with trailer and similar top-loaded equipment transporting material: Dump trucks, side, end and bottom dump, including semi-trucks and trains or combinations thereof with less than 16 yards capacity; Flatbed (Dual Rear Axle); Grease Truck, Fuel Truck, Greaser, Battery Service Man and/or Tire Service Man; Leverman and loader at bunkers and batch plants; Oil tank transport; Scissor truck; Slurry Truck; Sno-Go and similar equipment; Swampers; Straddler Carrier (Ross, Hyster) and similar equipment; Team Driver; Tractor (small, rubber-tired) (when used within Teamster jurisdiction); Vacuum truck; Water Wagon and Tank trucks-less than 3,000 gallons capacity; Winch Truck; Wrecker, Tow truck and similar equipment

GROUP 3 - Flatbed (single rear axle); Pickup Sweeper; Pickup Truck. (Adjust Group 3 upward by $2.00 per hour for onsite work only)

GROUP 4 - Escort or Pilot Car

GROUP 5 - Mechanic

HAZMAT PROJECTS

Anyone working on a HAZMAT job, where HAZMAT certification is required, shall be compensated as a premium, in addition to the classification working in as follows:
LEVEL C: +$.25 per hour - This level uses an air purifying respirator or additional protective clothing.
LEVEL B: +$.50 per hour - Uses same respirator protection as Level A. Supplied air line is provided in conjunction with a chemical "splash suit."
LEVEL A: +$.75 per hour - This level utilizes a fully-encapsulated suit with a self-contained breathing apparatus or a supplied air line.
Truck drivers: (ANYONE WORKING ON HAZMAT JOBS SEE FOOTNOTE A BELOW)

<table>
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<tr>
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<td>GROUP 2</td>
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<td>GROUP 7</td>
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<tr>
<td>GROUP 8</td>
<td>$24.44</td>
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Zone Differential (Add to Zone 1 rate: Zone 2 - $2.00)

BASE POINTS: Spokane, Moses Lake, Pasco, Lewiston
Zone 1: 0-45 radius miles from the main post office.
Zone 2: Outside 45 radius miles from the main post office

TRUCK DRIVERS CLASSIFICATIONS

GROUP 1: Escort Driver or Pilot Car; Employee Haul; Power Boat Hauling Employees or Material

GROUP 2: Fish Truck; Flat Bed Truck; Fork Lift (3000 lbs. and under); Leverperson (loading trucks at bunkers); Trailer Mounted Hydro Seeder and Mulcher; Seeder & Mulcher; Stationary Fuel Operator; Tractor (small, rubber-tired, pulling trailer or similar equipment)

GROUP 3: Auto Crane (2000 lbs. capacity); Buggy Mobile & Similar; Bulk Cement Tanks & Spreader; Dumport (6 yrs. & under); Flat Bed Truck with Hydraulic System; Fork Lift (3001-16,000 lbs.); Fuel Truck Driver, Steamcleaner & Washer; Power Operated Sweeper; Rubber-tired Tunnel Jumbo; Scissors Truck; Slurry Truck Driver; Straddle Carrier (Ross, Hyster, & similar); Tireperson; Transit Mixers & Truck Hauling Concrete (3 yd. to & including 6 yds.); Trucks, side, end, bottom & articulated end dump (3 yards to and including 6 yds.); Warehouseperson (to include shipping & receiving); Wrecker & Tow Truck

GROUP 4: A-Frame; Burner, Cutter, & Welder; Service Greaser; Trucks, side, end, bottom & articulated end dump (over 6 yards to and including 12 yrs.); Truck Mounted Hydro Seeder; Warehouseperson; Water Tank truck (0-8,000 gallons)

WA130001 Modification 21
Federal Wage Determinations for Highway Construction
GROUP 5: Dumptor (over 6 yds.); Lowboy (50 tons & under); Self-loading Roll Off; Semi-Truck & Trailer; Tractor with Steer Trailer; Transit Mixers and Trucks Hauling Concrete (over 6 yds. to and including 10 yds.); Trucks, side, end, bottom and end dump (over 12 yds. to & including 20 yds.); Truck-Mounted Crane (with load bearing surface either mounted or pulled, up to 14 ton); Vacuum Truck (super sucker, guzzler, etc.)

GROUP 6: Flaherty Spreader Box Driver; Flowboys; Fork Lift (over 16,000 lbs.); Dumps (Semi-end); Mechanic (Field); Semi-end Dumps; Transfer Truck & Trailer; Transit Mixers & Trucks Hauling Concrete (over 10 yds. to & including 20 yds.); Trucks, side, end, bottom and articulated end dump (over 20 yds. to & including 40 yds.); Truck and Pup; Tournarocker, DWs & similar with 2 or more 4 wheel-power tractor with trailer, gallonage or yardage scale, whichever is greater Water Tank Truck (8,001-14,000 gallons); Lowboy(over 50 tons)

GROUP 7: Oil Distributor Driver; Stringer Truck (cable operated trailer); Transit Mixers & Trucks Hauling Concrete (over 20 yds.); Truck, side, end, bottom end dump (over 40 yds. to & including 100 yds.); Truck Mounted Crane (with load bearing surface either mounted or pulled (16 through 25 tons);

GROUP 8: Prime Movers and Stringer Truck; Trucks, side, end, bottom and articulated end dump (over 100 yds.); Helicopter Pilot Hauling Employees or Materials

Footnote A - Anyone working on a HAZMAT job, where HAZMAT certification is required, shall be compensated as a premium, in addition to the classification working in as follows:

LEVEL C-D: -.50 PER HOUR (This is the lowest level of protection. This level may use an air purifying respirator or additional protective clothing.

LEVEL A-B: - $1.00 PER HOUR (Uses supplied air is conjunction with a chemical splash suit or fully encapsulated suit with a self-contained breathing apparatus.

Employees shall be paid Hazmat pay in increments of four(4) and eight(8) hours.
NOTE:
Trucks Pulling Equipment Trailers: shall receive $.15/hour over applicable truck rate

-----------------------------------------------

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

-----------------------------------------------

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

-----------------------------------------------

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is union or non-union.

Union Identifiers

An identifier enclosed in dotted lines beginning with characters other than "SU" denotes that the union classification and rate have found to be prevailing for that classification. Example: PLJM0198-005 07/01/2011. The first four letters, PLJM, indicate the international union and the four-digit number, 0198, that follows indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2011, following these characters is the effective date of the most current negotiated rate/collective bargaining agreement which would be July 1, 2011 in the above example.

Union prevailing wage rates will be updated to reflect any changes in the collective bargaining agreements governing the rates.

0000/9999: weighted union wage rates will be published annually each January.
Non-Union Identifiers

Classifications listed under an "SU" identifier were derived from survey data by computing average rates and are not union rates; however, the data used in computing these rates may include both union and non-union data. Example: SULA2004-007 5/13/2010. SU indicates the rates are not union majority rates, LA indicates the State of Louisiana; 2004 is the year of the survey; and 007 is an internal number used in producing the wage determination. A 1993 or later date, 5/13/2010, indicates the classifications and rates under that identifier were issued as a General Wage Determination on that date.

Survey wage rates will remain in effect and will not change until a new survey is conducted.

-----------------------------------------

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

WA130001 Modification 21
Federal Wage Determinations for Highway Construction
The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

    Administrative Review Board  
    U.S. Department of Labor  
    200 Constitution Avenue, N.W.  
    Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

END OF GENERAL DECISION
APPENDIX C
GEOLOGIC INFORMATION
October 6, 2006

Yakima County Public Services
128 North Second Street
Fourth Floor Courthouse
Yakima, Washington 98901

Attn: Mr. Mark Brzoska

RE: PRELIMINARY GEOTECHNICAL ENGINEERING REPORT; NACHES-TIETON ROAD REALIGNMENT; BENTON COUNTY, WASHINGTON

YAKIMA

Shannon & Wilson, Inc. is pleased to present our preliminary geotechnical engineering study performed for Naches-Tieton Road Realignment in Yakima County, Washington. This report presents the results of our field observations, Geophysical Seismic Refraction Study, Geological survey, a brief description of the subsurface conditions, and provides preliminary recommendations for grading, excavations and fill slopes, and estimated shrink/swell factors.

We appreciate the opportunity to work with you on this project. Should you have questions or comments regarding this report, please contact our office.

Sincerely,

SHANNON & WILSON, INC.

[Signature]

Dee J. Burrie, P.E.
Branch Manager

LLA: LJR: DJB/lla

10-06-2006/22-1-02339-001 Naches-Tieton Rd Grd doc/cvm
# TABLE OF CONTENTS

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# LIST OF FIGURES

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# APPENDICES

**APPENDIX A**

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<tr>
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<td>APOLLO GEOPHYSICS REPORT</td>
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**APPENDIX B**

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<td>GEOLOGICAL RECONNAISSANCE MEMORANDUM</td>
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**APPENDIX C**

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<td>IMPORTANT INFORMATION ABOUT YOUR GEOTECHNICAL ENGINEERING REPORT</td>
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</table>
PRELIMINARY GEOTECHNICAL ENGINEERING REPORT
NACHES-TIETON ROAD REALIGNMENT
BENTON COUNTY, WASHINGTON

1.0 INTRODUCTION

Shannon & Wilson, Inc. is pleased to present this preliminary geotechnical engineering study for the Naches-Tieton Road Realignment in Yakima County, Washington. This report presents the results of our field observations, Geophysical Seismic Refraction Study, Geological survey, a brief description of the subsurface conditions, and provides recommendations for grading, excavations and fill slopes, and estimated shrink/swell factors.

We appreciate the opportunity to work with you on this project. Should you have comments or questions regarding this report, or if we can be of additional service to you on another phase of this work, please contact us.

2.0 PROJECT DESCRIPTION

The project includes realigning and rebuilding approximately 1.25 miles of the existing Rural Arterial road in the Naches area of Yakima County (Figure 1). Naches-Tieton Road serves as a major connector between the Upper Naches Valley and the Naches Heights Area. Average grade on the existing 22-foot-wide road is approximately 6.3 percent. The alignment includes four, 90-degree turns and one approximately 45-degree turn. Sight distances are limited on the existing alignment resulting in few passing opportunities. Heavy, two-way truck traffic, particularly during harvest season, results in congestion and risk-taking by impatient drivers.

The proposed alignment modifications and reconstruction will provide a minimum 48-foot wide section with 12-foot wide lanes, 4- to 8-foot shoulders, and a truck climbing lane. Three 90-degree turns will be eliminated and overall grade improved.

3.0 FIELD EXPLORATIONS

The field exploration program included geophysical seismic refraction surveys from March 13 through March 16, 2006; a geological survey on March 21, 2006; and drilled borings on May 2, 2006. Descriptions of these field exploration methods are presented in the following sections.
3.1 Geophysical

Apollo Geophysics conducted the geophysical seismic refraction survey under subcontract with Shannon & Wilson, Inc.

The refraction survey used P-waves to help delineate major soil and/or rock units along the alignment. We planned the survey to cover major excavation or embankment features, as well as parts of the alignment where the geologic morphology is unclear. Although not strictly indicative of engineering properties, P-wave studies can be used to generally delineate material types, and are commonly used to delineate rippable from non-rippable materials.

Appendix A shows the approximately geophysical seismic lines locations presented in Apollo Geophysics’ report. We located seven Seismic lines along the road alignment. The following table presents the geophysical lines and station.

<table>
<thead>
<tr>
<th>Geophysical Test Line</th>
<th>Approximate Station Location</th>
</tr>
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<tbody>
<tr>
<td>Line 1</td>
<td>14+00 to 16+00</td>
</tr>
<tr>
<td>Line 2</td>
<td>62+00 to 64+00</td>
</tr>
<tr>
<td>Line 3</td>
<td>64+00 to 66+00</td>
</tr>
<tr>
<td>Line 4</td>
<td>32+00</td>
</tr>
<tr>
<td>Line 5</td>
<td>48+00 to 50+00</td>
</tr>
<tr>
<td>Line 6</td>
<td>46+00 to 48+00</td>
</tr>
<tr>
<td>Line 7</td>
<td>51+00 to 53+00</td>
</tr>
</tbody>
</table>

3.2 Geological Survey

Shannon and Wilson, Inc. performed a field geological reconnaissance of the site. The purpose of the reconnaissance was to identify and describe the general geology of the project area, and interpret apparent subsurface conditions. We used reconnaissance information to determine boring locations.

The general geology of the area is mapped as a single lava flow known as the Tieton Andesite. The Tieton Andesite is a dark gray, plagioclase phyric andesite with thickness greater than 525-feet at the center of the flow. Outburst flood deposits, associated with the Pleistocene ice age, are also present along the lower flanks of the Tieton Andesite. Some shallow windblown silt deposits mantle the approximate upper 6-feet of the soil profile along the alignment. Surrounding slopes also indicate past landslides in the area. A copy of the geological reconnaissance memorandum is presented in Appendix B.
3.3 Borings

(The field investigation included two borings drilled on May 2, 2006. Environmental West Explorations (EWE) drilled the borings under subcontract to Shannon & Wilson, Inc. using a Mobile B-80 drill rig equipped with air rotary methods. EWE advanced the borings 60½-feet below the existing road grade. A Shannon & Wilson engineer observed the drilling, collected representative soil samples, and prepared field boring logs. The Site and Exploration Plan shows the approximate boring locations (Figure 2). Appendix A presents the boring logs.

The Standard Penetration Test (SPT) consists of driving a 2-inch outside diameter split-spoon sampler 18 inches into the soil beneath the bottom of the drill casing with a 140 pound hammer free-falling 30 inches. The number of blows required to advance the split-spoon through each 6-inch increment is recorded. The SPT resistance, or N-value, is defined as the number of blows required to drive the sampler from 6 inches to 18 inches below the casing. The SPT N-value is reported as the number of blows per 1 foot of penetration. When 50 blows were required for 6 inches or less of penetration, the test was stopped, and the number of blows and the corresponding penetration were recorded. The SPT N-value provides an indication of the relative density or consistency of the soil and is plotted on the boring logs. The following terminology was used to describe the relative density or compactness of the subsurface soils:

<table>
<thead>
<tr>
<th>Cohesionless (granular) Soils</th>
<th>Cohesive (clayey) Soils</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relative Density</td>
<td>Penetration Resistance</td>
</tr>
<tr>
<td></td>
<td>(blows per foot)</td>
</tr>
<tr>
<td>Very Loose</td>
<td>Under 4</td>
</tr>
<tr>
<td>Loose</td>
<td>4 – 10</td>
</tr>
<tr>
<td>Medium Dense</td>
<td>10 – 30</td>
</tr>
<tr>
<td>Dense</td>
<td>30 – 50</td>
</tr>
<tr>
<td>Very Dense</td>
<td>Over 50</td>
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</table>

The strata boundaries were estimated in the field based on the drill rig action and the SPT sampling. The subsurface conditions are known only at the exploratory locations on the date explored and should be considered approximate. Actual subsurface conditions between exploratory locations may vary. The exploratory boring logs are presented in Appendix C.
4.0 SUBSURFACE CONDITIONS

4.1 Geologic Maps

The Geologic Map of the Yakima West 1:100,000 Quadrangle (DGER OF 94-8) maps two main soil types along the road alignment. The alignment is mapped as Tieton Andesite (Qvti) and Terraced Deposits (Qt).

The Tieton Andesite is described as an andesite flow erupted from vents southwest of the Yakima Quadrangle. The Terraced Deposits are described as silt sand and gravel of diverse composition, largely confined to the Yakima River drainage system.

4.2 Geophysical Observations

The geophysical seismic refraction survey commonly identified three layers along the alignment. The upper 20-foot loose to medium dense soil layer is clearly defined with P-wave velocities +/- 1,000 to 1,600 feet per second. The middle 20- to 60-foot medium dense to dense soil layer is clearly defined with P-wave velocities +/- 3,500 to 4,300 feet per second. The underlining basalt is also well defined with average P-wave velocities approximately +/- 10,000 feet per second.

4.3 Explorations

We located the borings on the down-slope side of the existing road, near stations 32+00 and 48+00. The borings encountered medium dense to dense fine to medium grained sand. Boring B-1, located near station 32+00, indicates that approximately 10-feet of sand with trace gravel mantles clean sand to 60-feet. Boring B-2, located near station 48+00, indicates that approximately 20-feet of sand with trace gravel and boulders mantles clean sand to 61½-feet.

The explorations did not encounter groundwater. Based on water well logs in the area, we anticipate that groundwater is approximately 25- to 30-feet below the valley floor.

5.0 GEOTECHNICAL CONCLUSIONS AND RECOMMENDATIONS

5.1 General

Based on site explorations and geophysical data, the andesite contact on the slope face is relatively steep. Soils on the down-slope side of the road are relatively loose and deep. In our opinion the soils conditions on the down-slope side of the road alignment will require significant foundation work or modifications to support structural fill or retaining wall foundations. We, therefore,
recommend moving the road further into the slopes to minimize the need for structural fill and/or retaining walls on the downslope side of the existing road.

We recommend performing a 2nd phase of explorations once the road alignment is further developed. The additional explorations can focus on specific design requirements.

5.2 Earthwork

We anticipate that the main earthwork issue will be the ability to rip the andesite along the slope of the road alignment, and locating adequate-strength down-slope soils to support structural fill and retaining wall footings. Earthwork should be conducted in accordance with the Washington State Department of Transportation Standard Specifications. Compaction should be in accordance with WSDOT Section 2-03.3(14) C, Method C.

Based on our experience with similar soil types, we anticipate that the sand soils will experience approximately 10 to 20 percent shrinkage from cut to fill. The overlaying gravel typically experiences approximately 5 to 10 percent swell. Excavated andesite rock may experience 50 to 100 percent swell.

5.3 Excavation / Slopes

Shannon & Wilson, Inc. will develop slope models for excavations in the various conditions once a more complete plan for the road alignment is established. We anticipate that significant foundation or ground modification will be required for any fill embankments or retaining walls placed on the downslope side of the existing road.

We recommend using preliminary slope inclinations of 2 horizontal to 1 vertical (2H:1V) inclinations or flatter for the area where talus and outburst terrace deposits occur. Excavations in competent andesite bedrock can be excavated at near vertical inclinations. Steep rock cuts are common in the competent andesite. Flatter rock slopes may be required depending on the actual rock quality, weathering, and joints encountered in the excavations.

Permanent cut and fill soil slopes must be protected from both wind and water erosion. Erosion protection may consist of a vegetative cover or a minimum 3-inch layer of coarse concrete aggregate conforming to the requirements of WSDOT Specification 9-03.1(4) c, "Concrete Aggregate AASHTO Grading No. 57."

5 22-1-02339-001
5.4 Transition from Cut to Fill Sections

Settlement frequently occurs where the subgrade transitions from cut section to embankment. To reduce the settlement potential, we recommend tying the fill into the existing slope using steps and benches and "grade pointing."

Embankments should be keyed into the existing slope in accordance with WSDOT Specification 2-03.3(14). The bench area should be compacted to the same density as the embankment.

"Grading pointing" involves building a zone of compacted material across the slope-embankment interface. Starting at the top of subgrade elevation, the cut zone should be over-excavated 2 feet deep for 20 feet. This over-excavation should extend across the entire width of the subgrade section. The over-excavated zone should be backfilled with compacted subgrade material.

6.0 LIMITATIONS

The analyses, conclusion, and recommendations contained in this report are based upon site conditions as the presently exist. We further assume that the soil conditions exposed in the explorations are representative of the subsurface conditions under all portions of the proposed alignment, i.e., subsurface conditions are not significantly different from those disclosed by the field explorations and observations.

If subsurface conditions different from those encountered in the field explorations are observed or appear to be present beneath the excavations during construction, we should be advised at once so that we can review these conditions and reconsider our recommendations, where necessary. If there is a substantial lapse of time between the submission of this report and the start of construction at the site, if conditions have changed because of natural forces or construction at the site, or if design or loading configurations change, we recommend that we review this report to determine the applicability of the conclusion and recommendations concerning the changed conditions contained in this report.

Our report was prepared for the exclusive use of Yakima County Public Services and their design team, in the design and construction of the Naches-Tieton Road Realignment in Yakima County, Washington. This report should be made available to prospective contractors for information on factual data only and not as a warranty of subsurface conditions, such as those interpreted from the exploratory logs and discussions of subsurface conditions included in this report.

The scope of services did not include any environmental assessment or evaluation regarding the presence or absence of wetlands or hazardous or toxic materials in the soil, surface water,
groundwater, or air, on or below the site, or the evaluation or disposal of contaminated soils or groundwater, should any be encountered.

As an integral part of this report, we have prepared the attachment "Important Information About Your Geotechnical Engineering Report," (Appendix D) to help you more clearly understand its use and limitations.

SHANNON & WILSON, INC.

Ladd L. Anderson, E.I.T.
Engineer I

Lloyd J. Reitz, P.E.
Senior Principal Engineer

LLA:LJR:DJB/Ila
APPENDIX A

APOLLO GEOPHYSICAL REPORT
Shannon and Wilson, Inc.  
Richland Branch Office  
Attention: Mr. Dee Burrie  
P.O. Box 967  
Richland, WA 99352  

RE: GEOPHYSICAL EXPLORATION  
NACHES-TIETON ROAD IMPROVEMENT  
NACHES, WASHINGTON  

Dear Mr. Burrie:  

Enclosed is a copy of our geophysical report titled, "Geophysical Exploration - Naches-Tieton Road Improvement." 

The exploration was authorized on March 13, 2006 and was conducted in accordance with the scope of work outlined in P.O Number: 22-1-02339-001.  

The attached report presents our interpretations and recommendations developed during our exploration, including cross sections illustrating Seismic Refraction Survey data collected during the geophysical exploration.  

We appreciate the opportunity to conduct this investigation. Please do not hesitate to contact us if you have any questions or comments. Please keep us informed on the developments pertaining to the proposed facility upgrade. If you would like us to provide additional exploration services for this project or to assist you on a future project, we would definitely welcome the opportunity. 

Sincerely, 

APOLLO GEOPHYSICS  

[Signature]  
Lynn M. Ringstad, L.E.G.  
President
INTRODUCTION
This geophysical report presents the results of a Seismic Refraction Survey at the above referenced site. The site is located at the Naches Tieton Road in Yakima, WA. APOLLO GEOPHYSICS completed the geophysical exploration with the standard Seismic Refraction Method. APOLLO GEOPHYSICS completed the geophysical exploration with state-of-the-art seismic instrumentation. A two-person field crew from APOLLO GEOPHYSICS completed the geophysical field program from March 13, 2006 through March 16, 2006.

GEOPHYSICAL FINDINGS
General Overview
The seismic refraction method is the most commonly used geophysical method for engineering site investigation. It is based on the measurement of seismic energy travel time through the subsurface and the development of an interpretive model of velocity and thickness for various layers of earth materials through which the seismic wave has passed in its travel from source to detector.

Interpreted results from a seismic refraction survey yield seismic velocity profiles that show the distribution, shape, and thickness of subsurface layers having different seismic velocities. There is usually a closed relationship between seismic velocity and soil and rock types. With adequate correlation from other, more direct methods of exploration, it is usually possible to relate the seismic results to geologic conditions.

The seismic refraction method is most frequently employed to determine depth to rock for classification of excavation and for foundation design studies. There are other uses of this method that are less frequently considered, such as using seismic velocity to identify rock formations, to determine the relative quality of rock, and to locate areas or zones of poor rock.

Substantially lower velocities may occur in rock that is highly weathered, heavily sheared or jointed, or has experienced stress relief as compared to fresh, undisturbed rock. This method is also useful in classifying overburden types and for determining water table levels in unconsolidated granular material. Under certain
conditions, it may be an excellent method for determining the best location for water wells.

The refraction method is valid only where seismic velocities increase with depth. The most favorable conditions for a seismic refraction survey occur when the characteristic seismic velocity of each seismic layer is uniform and when the velocity contrast between adjacent seismic layers is large.

**Data & Interpretation**

Seven approximately 200 foot long seismic refraction traverses were completed at specific project stationing locations along the proposed road improvement project; Line 1 (14+00 to 16+00), Line 2 (62+00 to 64+00), Line 3 (64+00 to 66+00), Line 4 32+00, Line 5 (48+00 to 50+00), Line 6 (46+00 to 48+00), and Line 7 (51+00 to 53+00). The approximate locations of the seismic refraction traverses are presented on the Site Plan in Figure 1. The shot points were uniformly distributed along the lines. The seismic data was calculated at points corresponding to each geophone location on approximately 8.5-foot centers. The cross-sections illustrating the Seismic Refraction Survey data for Lines 1 through 7 are presented in Figures 2 through 6.

**APOLLO GEOPHYSICS** personnel utilized a state-of-the-art seismic instrument. The Seismic Instrument included 24 channels, 24-bit A/D Conversion, and 135 dB theoretical dynamic range. The seismograph is an integrated high-grade instrument with ultra-wide bandwidth for high-resolution surveys controlled by a field laptop computer. The seismic instrument provided a more rapid data acquisition and we were able to achieve the depths requested. We utilized standard 14-Hertz geophones to capture a bandwidth from 10 Hz to 100 Hz.

**APOLLO GEOPHYSICS** personnel created the subsurface sound waves by striking a metal plate with a vertical blow of a 12-pound sledge hammer. The subsurface sound waves generated extended below the ground surface to more than 100 feet. This approach had a minimal impact to the surrounding environment.

**APOLLO GEOPHYSICS** personnel expect that the data should relate well to actual geologic overburden soils and local bedrock and should not be significantly diverse from actual drill hole depths. Below is a brief summary of the three velocity units we identified in the seismic data, which may represent the following interpreted units:

- **Layer 1 – 0 to 20 feet Below Ground Surface (BGS)**
  - Average Seismic Velocity, +/- 1,000 to 1,600 feet per second (fps)
  - Suggested Classification of Materials, Loose to Medium Dense Soil Horizons

- **Layer 2 – 20 to 60 feet Below Ground Surface (BGS)**
  - Average Seismic Velocity, +/- 3,500 to 4,300 feet per second (fps)
  - Suggested Classification of Materials, Medium Dense to Dense Soil Horizons

- **Layer 3 – 40 to 100 feet Below Ground Surface (BGS)**
  - Average Seismic Velocity, +/- 10,000 feet per second (fps)
  - Suggested Classification of Materials, BEDROCK

The velocity of each unit was taken as an average over the length of the seismic traverse.
WARRANTY OF SERVICES

All geophysical information presented is based upon geophysical measurements made by generally accepted methods and field procedures and APOLLO GEOPHYSICS' interpretation of these data. The geophysical results are, therefore, interpretative in nature and are considered to be a reasonably accurate presentation of existing conditions within the limitations of the methods employed. Services performed by APOLLO GEOPHYSICS under this agreement are conducted in a manner consistent with, but no less than, that level of care skill ordinarily exercised by members of the profession currently practicing under similar conditions. We cannot guarantee the accuracy or correctness of any interpretation, and we shall not be liable or responsible for any loss, cost, damages or expenses incurred or sustained by the Client resulting from any interpretation made by any of our officers, agents or employees. No other warranty, expressed or implied, is made. APOLLO GEOPHYSICS recognizes that subsurface conditions may vary from those encountered at the location where geophysical or other explorations are made. The data interpretations and recommendations made by APOLLO GEOPHYSICS are based solely on the information available to them at the time of performance; and APOLLO GEOPHYSICS shall not be responsible for the interpretation, by others, of the information developed.

The seismic data obtained, overall, looks excellent and all data gathered is presented in this document. It should be noted that the average Layer 3 velocities in Lines 6 and 7 appear lower (+/- 6,000 fps & +/- 5,600 fps respectively), which may be due to geologic conditions.

We trust this will complete your requirements for this portion of the project and look forward to working with you on the next portion of this project. If you have any further questions or need further assistance, please don't hesitate to call.

Sincerely,

APOLLO GEOPHYSICS

[Signature]
Lynn M. Ringstad, L.E.G.
President

[Signature]
Matthew C. Ringstad
Vice President
APPENDIX B

GEOLOGICAL RECONNAISSANCE MEMORANDUM
MEMORANDUM

TO: Dee Burrie

c: Lloyd Reitz,

FROM: Kim Elliott, L.E.G.

DATE: April 4, 2006

RE: Naches-Tieton Road Geologic Reconnaissance

INTRODUCTION

General

Kim Elliott, L.E.G., accompanied by Ladd Anderson, performed a field reconnaissance of approximately a 6,700-foot portion of the Naches-Tieton Road on March 21, 2006. The study area includes that portion of the Naches-Tieton Road that descends the north slope of Naches Heights. The study section begins, approximately 2.75 miles south of the town of Naches at an elevation of about 1,950 feet above sea level (asl) and ends about 1.5 miles south of Naches at an elevation of about 1,520 feet asl.

The purpose of the reconnaissance was to identify and describe the general geology of the project area, interpret subsurface conditions as much as possible from surface exposures and our knowledge of this area, to make appropriate recommendations on the proposed subsurface exploration plan, and to provide such other comments and observations that might aid in the investigation, design and construction of this roadway improvement project.

Project Understanding

It is our understanding that this proposed project includes realigning and rebuilding of approximately 1.25 miles of an existing rural arterial road in the Naches area of Yakima County. Naches-Tieton Road serves as the major connector between the upper Naches Valley and the Naches Heights area. Average grade on the existing 22-foot-wide road is approximately 6.3 percent. The alignment includes four, 90-degree turns and one approximately 45-degree turn.

22-1-02339-001
Memorandum to Dee Burrie  
April 4, 2006  
Page 2 of 15

Sight distances are limited on the existing alignment resulting in few passing opportunities. Heavy, two-way truck traffic, particularly during the harvest season, results in congestion and risk-taking by impatient drivers.

The proposed alignment modifications and reconstruction will provide a minimum 48-foot wide section with 12-foot lanes, 4- to 8-foot shoulders, and a truck-climbing lane. Three 90-degree turns will be eliminated and the overall grade improved. A panoramic view of the project area is shown in Photo #1.

**GENERAL GEOLOGY**

Campbell (1998) has described the general geology of the Yakima area. Campbell (1979) mapped the surficial geology of the Yakima Quadrangle (1:250,000), and Walsh (1986) has compiled the geology of the Yakima Quadrangle (1:100,000).

About one million years ago a single lava flow, known as the Tieton Andesite, moved down the Tieton River Canyon from a volcano that once existed in the Goat Rocks south of White Pass. Apparently most of the lava flowed out of the Naches Canyon, and pooled in what was then the Naches-Tieton Valley between Tieton and Yakima. The Naches River was displaced, but eventually cut a new channel along the north margin of the lava flow. The Naches River's original channel approximately followed the present Cowiche Creek course.

Campbell (1998) describes the Tieton Andesite as a dark gray, plagioclase phryic andesite whose thickness exceeds 525 feet at the center of the flow.

As the Naches River cut its way down to the present valley floor alluvial and coarse gravel outwash deposits from the Pleistocene ice age were left terraced in places along the lower flanks of the Tieton Andesite. Also associated with glaciation, are wind-blown deposits of silt, or loess. Originating in glacial outwash deposits, strong northerly winds picked up the silt and distributed it across the Columbia Basin. In the Yakima area the thickest loess deposits are found on the north and northeastern sides of ridges. In the project area, the loess deposits are generally less than about 6 feet thick. Loess deposits are probably present to some depth across Naches.
Memorandum to Dee Burrie  
April 4, 2006  
Page 3 of 15

Heights and are the parent materials of the modern soils that make fruit growing possible on this otherwise rocky upland.

Down cutting and erosion by the Naches River has left hard rock exposed along the north slope of Naches Heights. Exposure to the atmosphere hastens both the mechanical and chemical weathering processes that eat away at the rock surface, and slowly reduce the rock mass to soil. As fragments of rock have become separated from the intact mass, gravity moved them down slope where they accumulated as talus. Talus slopes are generally composed of soil and coarse, angular rock fragments at the angle of repose (usually 33° to 37°, and rarely less than 30° or more than 39°). Talus deposits transition from the steep rock exposures on the upper slopes of Naches Heights to the nearly flat valley floor. Talus deposits overlie, but may also be interbedded with, the terraced alluvial deposits.

Campbell (1979) and Walsh (1986) mapped a number of landslides along the north slopes of Naches Heights. The Naches Slide is perhaps the largest. It is located approximately 2.5 miles west of the town of Naches and initially moved in 1956. Additional movements may have occurred since, but the slide has not been monitored. This earth slump apparently involves talus/colluvium, and possibly terrace deposits sliding over Tieton Andesite. It is approximately 1,200 feet wide, extends upslope about 300 feet, and may be 50 to 100 feet deep (Arim, 1975). The Naches Slide is about 3 miles northwest of the project area. A similar, but smaller slide is present about 1,500 feet due east of Station 4+00, again on the north-facing slope of Naches Heights. We observed construction activity (clearing and grading) on this slide during our reconnaissance. This slide does not appear to have been active recently, and is well north of the project alignment, thus not likely to impact the proposed roadway improvements project. These slides do, however, illustrate the potential for failures on the steep talus-mantled slopes in this area.

DISCUSSION

General

The following discussion includes observations and interpretations of site geologic conditions, and other comments relative to the proposed exploration program, project design and

22-1-02339-001
Memorandum to Dee Burrie
April 4, 2006
Page 4 of 15

construction. The discussion will proceed by station, but has been separated into sections with similar characteristics (station references are approximate).

Station 0+00 to 13+00

The new alignment closely follows the existing one, except that the horizontal curves are a little broader. The new grade is a little lower than existing, maximum cuts are in the range of 5 to 7 feet. From about Sta 10+00 through 13+00, grading will require cuts left of centerline (CL) and fills up to about 7 feet high right of CL. Orchards are present along both sides of the highway. We anticipate that existing soils are loessal silts. The loess consists of brown, micaceous, and fine-grained sandy silt with no to low plasticity. Campbell (1979) indicated that the loess in this area is probably less than about 6 feet thick.

Because of the very low slopes, rainwater and snowmelt is more likely to infiltrate than run off quickly, giving the rock more opportunity to weather. Therefore, it is likely that some residual soil, developed from the andesite rock is present between the loess and a hard rock surface. Residual soils are expected to range from silt to clay depending on the degree of weathering, and to grade down to rocky silt. We expect that the upper surface of the Tieton Andesite is very irregular. Excavations in this range are expected to encounter only soil, but some hard rock knobs or rock blocks isolated in soil may be encountered locally.

Station 13+00 to 18+00

The new alignment is still very close to the existing one, the existing curve will be eased. Cuts up to about 18 feet in height will be required left of CL, thin cuts will be on CL and right. An existing rock outcrop is present left of CL between about Sta 14+00 and 17+00. The exposed rock iron-stained on exposed surfaces, but fresh on interior surfaces with little to no weathering rind. The rock is hard and appears to have a moderate unconfined compressive strength. It has a very dark gray, fine-grained matrix with an open (or “diktytaxis”) texture. The plagioclase phenocrysts are 3 to 4 mm in length. The rock does not appear to be particularly durable. The open-texture is weak, and, although fresh and brittle, the rock tends to crush under the blow of a hammer. The rock mass is broken by a three-dimensional pattern of fractures, or joints, that define broad stubby columns and irregular blocks that range from 2 to 9 feet in diameter (see 22-1-02339-001
Memorandum to Dee Burrie  
April 4, 2006  
Page 5 of 15

Photo #2). Many individual joints are open and/or filled with silt and sand. The jointing pattern is close and open enough that it can probably be excavated or ripped by mechanical equipment. It is possible that the exposed rock, being in the upper-most portion of the lava flow and mechanically excavated in this road cut, is more “inflated” along the joint surfaces than is typical of covered, undisturbed rock. As the excavation proceeds into the slope, the joints may become much tighter and the rock more difficult to separate along the joints.

The blocky jointing pattern will produce an irregular surface when mechanically excavated, and may result in significant over-break. If in-place rock is encountered beneath the roadway and right of CL, the thin cuts required may be difficult to achieve without significant over-break. Large blocks may be difficult to pull from the subgrade without having an open face to work from. Additional backfill material may be required to achieve grade.

Station 18+00 to 21+00

The new alignment is still very close to the existing alignment. Thin cuts and fills are required. Based on the silt slope left and the orchard right of CL, we anticipate a soil subgrade in this area.

Station 21+00 to 25+50

The new alignment cuts off a tight existing curve. Fills are thicker on the right, with a maximum of about 13 feet near Sta 25+00. No excavation is required in the section. Subgrade soils are anticipated to be silt in the section. A test pit excavation is anticipated at about Sta 22+50. The presence and thickness of the silt should be determined to evaluate potential settlements beneath the embankment fill.

Station 25+50 to 27+00

The new alignment cuts off a second curve in this section. Thin cuts may be required left of CL and thin fills to right of CL. Subgrade soils in this section appear to be rocky talus and colluvium. A boulder pile is centered at about Sta 26+50, 50’ R. It is unclear whether these large blocks were dumped or are very inflated in place rock. A test pit is proposed at Sta 27+00, CL. Existing ground is very close to proposed new grade. This area is accessible to a backhoe 22-1-02339-001
and a shallow excavation will be able to determine whether the talus/colluvium is thick or whether the boulder pile is rooted in shallow in-place rock.

27+00 to 29+50

This section is a new alignment, and still on the curve cut-off that began at about Sta 25+00. The new and old alignments come together again at about Sta 30+00. This section is requires thick fills across the right-of-way to raise the grade. Fills reach a maximum of about 18 feet in height at about Sta 28+00. Rock outcrops are present left of CL from about 27+50 to 29+50. The exposed rock is fresh, hard, and brittle with an open texture similar to that described above. Jointing patterns form large irregularly shaped blocks. The largest we observed measures roughly 7 ft X 9 ft X 12 ft. Rock excavation is not anticipated in this section. The high fills, however will probably need to be retained on the right, since 2H to 1V fill slopes do not appear to have a catch point on the steeper talus slopes below the existing road grade. Measurements taken on the existing talus slopes range between about 30° and 32°, or about 1.7H to 1V, the apparent angle of repose for this coarse rock material.

29+50 to 39+00

Thick fills from 12 to 18 feet in height dominate this section. The problem with a lack of catch point right of CL remains. Retaining walls will probably be required. Location of the walls is uncertain, but the only access for exploration work appears to be on the existing roadway. Talus slopes below the existing grade may be too steep and unstable to cut in access roads. A boring is proposed for about Sta 32+00, 20’ R. Rock should be anticipated relatively shallow, 10 to 15 feet (?) below the pavement surface. A backhoe is proposed at station 36+00, 20’ R. Again, rock is probably about 10 to 15 feet below pavement. Although access is good, space to excavate a backhoe test pit may not be adequate (refer to Photo #3 and #4). For either borings or test pits, one lane would have to be closed. Excavating a test pit would probably require that the guardrail and posts be removed, and then there still may not be space to swing the bucket and pile the spoils without encroaching on traffic passing in the other lane. There’s also the risk that the pavement would be damaged and require the area to be repaved.
Memorandum to Dee Burrie
April 4, 2006
Page 7 of 15

Thin cuts in talus may be required left of CL in the vicinity of Sta 30+00 and between 32+00 and 34+50. Slopes in this area are talus material weakly cemented in caliche (precipitated calcium carbonate). Existing cut slopes are much steeper than the angle of repose, but do not appear stable in the long term. If cuts are necessary they should match the angle of repose, if sufficient right-of-way is available. Steeper slopes, such as those that now exist, will stand temporarily, but sloughing and raveling will require periodic maintenance, especially in wet and freezing weather.

Rock excavations will be required left of CL between approximately 34+50 and 39+50. In this area the blocky jointing characteristic of the upper “entablature” portion of the lava flow passes to the lower or “colonade” portion. The colonade is characterized by a jointing pattern that forms 5-sided, parallel columns. The columns are often vertical (See Photo #4), but in some exposures here, they are tilted back into the slope. The rock character in the colonade is also different. The rock appears similar in color and weathering, but the texture lacks the open diktytaxitic texture. The rock mass is harder and denser (moderate to high unconfined compressive strength). Jointing patterns are close, individual columns vary from about 6 to 10 inches in diameter, but the joints are tighter with little or no infilling.

Mechanical excavation is still possible. The slopes should be cut much steeper than those in talus, on the order of 0.5 to 0.75H to 1V. Steeper cuts allow loose rock to fall into the ditch rather than rolling and bouncing down a flatter slope and perhaps being launched out into travel lanes. Where the columnar jointing is near vertical or tilting out of the slope, toppling of the columns becomes a hazard. Where steep columns exist, slopes should either be laid back, or set back behind a wider ditch to avoid columns toppling over into traffic lanes.

Station 39+00 to 54+50

This section is still dominated by fills that range from about 8 to 12 feet up to about Sta 44+00, then the fills thin gradually until the new grade nearly matches the existing grade beyond about Sta 51+00. Cuts are required left of CL, and the problem with lack of catch points for the right side embankment is still present. Although, an existing bench cut into the slope to catch rock fall could possibly be used to catch the toe of the embankment fill. From about Sta 41+00 to about Station 50+00, the bench is approximately 50 feet right of the new alignment CL.

22-1-02339-001
Memorandum to Dee Burrie  
April 4, 2006  
Page 8 of 15

The cuts required left of centerline would be in talus. Existing talus slopes were measured at approximately 32 degrees or 1.6H to 1V. The talus was observed to be crudely stratified, probably the result of periodic debris slides. Several of the deeper slide layers were weakly cemented with caliche, suggesting that these surfaces were exposed to the atmosphere for long periods of time before the next slide came down (see Photo #5). Cuts into these materials should ideally match the existing 1.6H to 1V slope for best stability. But, existing cut slopes adjacent to the roadway are steeper at about 1:1. So, clearly steeper cuts (probably made more stable by the caliche) will stand temporarily, but raveling and sloughing will be a constant and continuing occurrence making periodic maintenance necessary (see Photo #6).

Below the existing roadway, talus slopes away from just outside the guardrail posts. There are a couple of points were erosion, apparently from water running to the outside, off of the roadway rather than into the inside ditch, that have eroded the slope under the guardrail. The worst erosion occurred at about Sta 43+35. We observed that one guardrail post had pulled away from the guardrail. County maintenance personnel had apparently removed the bolts from the guardrail so that the post wouldn’t deform the guardrail (see Photo #7).

A small drainage channel and/or debris flow chute is present at about Sta 50+50, and a larger chute is present at Sta 54+00. These channels run perpendicularly down the slope. Culverts cross under the roadway and the chutes continue to the valley floor below. Flows of rock debris are a hazard anywhere that is covered by, or lies below, talus covered slopes. Flooding and debris flows should be anticipated in design. Adequate catchment areas and properly sized culverts should anticipate infrequent, but intense thunderstorms, and the flooding and debris flows that often result.

Explorations are proposed at Sta 45+00, 40’ R. (test pit) and at 48+00, 20’ R. (boring). Judging from the extensive talus slopes above the existing road grade, in place rock is probably quite deep, if present at all beneath the existing outside road shoulder. Rock is almost certainly beyond reach of the test pit, and the boring may pass through talus, then terrace deposits, and then encounter valley fill deposits below the base of the lava flow.

Campbell (1998) stated that the Tieton Andesite was greater than 525 feet thick at the center of the flow. The project alignment runs along the northern most margin of the flow where the lava
is probably thinner. The change in elevation from the beginning to end of the project is on the order of 430 feet. The exposed rock outcrops along the upper rim of the heights form near vertical slopes. If these slopes continue beneath the talus slopes, then the rock may not extend laterally far enough to be encountered in borings along the outside road shoulder.

**Station 54+50 to 66+00**

In this section cuts left of CL continue, thin fills are necessary right and centerline is about two to three feet lower than the existing grade. From about Sta 54+50, however the hillside left of centerline begins a transition from talus deposits to terraced alluvium. The alluvium consists of gravel, cobbles and boulders in a sandy silt matrix (see Photo #8). The gravel/cobble clasts are rounded and lie in thin trough-shaped beds. The thin beds and coarse sediment suggest a braided stream environment, probably choked with glacial outwash material. Natural slopes in these materials are about 28 degrees (1.9H to 1V). Numerous small slumps and slides are evident in the area from about Sta 56+50 to Sta 61+00, including two more drainage swale/debris flow chutes that begin higher on the slope in predominantly talus deposits. Again existing road cuts are steeper than natural slopes and raveling and sloughing of the coarser gravels and cobbles is evident. One particularly large block (Tieton Andesite?) incorporated in the channel deposit appears to be a significant rock fall hazard (see Photo #9).

An excavated bench has been constructed across the slope from about Sta 56+00 to beyond Sta 66+96 (end of project) to catch falling rocks. The bench has been cut and scarred by several of the soil slumps and debris flows (noted above) between Sta 56+00 and Sta 61+00, apparently because the upslope drainage is funneled to this area. Beyond Sta 61+00 the bench remains intact.

A test pit excavation is proposed at Sta 54+50, 40’ R. This is located just at the transition between talus and alluvium. On additional test pit located somewhere beyond Sta 58+00, where the fills are highest, might be useful in evaluating alluvial conditions below this lowest section of the roadway.
REFERENCES


Photo #1. View is to the south and toward Naches Heights. The project area begins behind the house on the ridge top near the left photo margin. Naches-Tieton Road descends the bluff from left to right, ending just beyond the right photo margin. The arrows indicate the existing road grade.
APPENDIX C

EXPLORATORY BORING LOGS
### SOIL DESCRIPTION

<table>
<thead>
<tr>
<th>Depth, Ft.</th>
<th>Symbol</th>
<th>Samples</th>
<th>Ground Water</th>
<th>Depth, Ft.</th>
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<tbody>
<tr>
<td>8.0</td>
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- Loose, brown, silty, fine-grained SAND with trace gravel, damp, (SM).

- Medium dense to dense, brown, fine to medium grained SAND, damp, (SP).

**Bottom of Boring at 60 ft.**

No groundwater encountered.

### LEGEND

- * Sample Not Recovered
- I Standard Penetration Test

### NOTES

1. The boring was performed using drilling methods.
2. The stratification lines represent the approximate boundaries between soil types, and the transition may be gradual.
3. The discussion in the text of this report is necessary for a proper understanding of the nature of the subsurface materials.
4. Groundwater level, if indicated above, is for the date specified and may vary.
5. Refer to KEY for explanation of symbols, codes and definitions.
6. USCS designation is based on visual-manual classification and selected lab testing.

### Naches-Tieton Road Improvements

Approx. Sta. 32+00

Yakima County, Washington

### LOG OF BORING B-1

May 2006  
22-1-02339-001

SHANNON & WILSON, INC.  
Geotechnical and Environmental Consultants  
FIG. C-1
### SOIL DESCRIPTION

<table>
<thead>
<tr>
<th>Depth, Ft</th>
<th>Symbol</th>
<th>Samples</th>
<th>Ground Water Depth, Ft</th>
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<td></td>
</tr>
<tr>
<td>70</td>
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</table>

- **Dense, brown, silty, sandy, gravelly BOULDERS, damp, approx. 2 ft. to 48 in. diameter, subangular (Talus), (GP).**

- **Medium dense to dense, brown SAND with trace gravel, damp, (SP).**

- **Bottom of Boring 61.5 ft.**
  - No groundwater encountered.

### LEGEND
- Sample Not Recovered
- Standard Penetration Test
- % Water Content
- Plastic Limit
- Liquid Limit
- Natural Water Content

### NOTES
1. The boring was performed using drilling methods.
2. The stratification lines represent the approximate boundaries between soil types, and the transition may be gradual.
3. The discussion in the text of this report is necessary for a proper understanding of the nature of the subsurface materials.
4. Groundwater level, if indicated above, is for the date specified and may vary.
5. Refer to KEY for explanation of symbols, codes and definitions.
6. USCS designation is based on visual-manual classification and selected lab testing.

---

**LOG OF BORING B-2**

**Naches-Tieton Road Improvements**

**Approx. Sta. 48+00**

**Yakima County, Washington**

May 2006 22-1-02339-001

SHANNON & WILSON, INC. Geotechnical and Environmental Consultants FIG. C-2
Shannon & Wilson, Inc. (S&W), uses a soil classification system modified from the Unified Soil Classification System (USCS). Elements of the USCS and other definitions are provided on this and the following page. Soil descriptions are based on visual-manual procedures (ASTM D 2488-93) unless otherwise noted.

**S&W CLASSIFICATION OF SOIL CONSTITUENTS**

- Major constituents compose more than 50 percent, by weight, of the soil. Major constituents are capitalized (SAND).
- Minor constituents compose 12 to 50 percent of the soil and precede the major constituents (silty SAND). Minor constituents preceded by "slightly" compose 5 to 12 percent of the soil (slightly silty SAND).
- Trace constituents compose 0 to 5 percent of the soil (slightly silty SAND, trace of gravel).

**MOISTURE CONTENT DEFINITIONS**

- Dry: Absence of moisture, dusty, dry to the touch.
- Moist: Damp but no visible water.
- Wet: Visible free water, from below water table.

**ABBREVIATIONS**

- ATD: At Time of Drilling
- Elev.: Elevation
- ft: feet
- HSA: Hollow Stem Auger
- ID: Inside Diameter
- in: inches
- lbs: pounds
- Mon.: Monument cover
- N: Blows for last two 6-inch increments
- NA: Not Applicable or Not Available
- OD: Outside Diameter
- OVA: Organic Vapor Analyzer
- PID: Photoionization Detector
- ppm: parts per million
- PVC: Polyvinyl Chloride
- SS: Split Spoon sampler
- SPT: Standard Penetration Test
- USC: Unified Soil Classification
- WLI: Water Level Indicator

**GRAIN SIZE DEFINITIONS**

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>SIEVE SIZE</th>
</tr>
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<tbody>
<tr>
<td>FINES</td>
<td>&lt; #200 (0.8 mm)</td>
</tr>
<tr>
<td>SAND*</td>
<td>#200 - #40 (0.4 mm)</td>
</tr>
<tr>
<td></td>
<td>#40 - #16 (2 mm)</td>
</tr>
<tr>
<td></td>
<td>#10 - #4 (5 mm)</td>
</tr>
<tr>
<td>GRAVEL*</td>
<td>#4 - 3 1/2 inch</td>
</tr>
<tr>
<td></td>
<td>&gt; 3 inches</td>
</tr>
<tr>
<td>COBBLES</td>
<td>3 - 12 inches</td>
</tr>
<tr>
<td>BOULDERS</td>
<td>&gt; 12 inches</td>
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</table>

* Unless otherwise noted, sand and gravel, when present, range from fine to coarse in grain size.

**RELATIVE DENSITY / CONSISTENCY**

<table>
<thead>
<tr>
<th>COARSE-GRAINED SOILS</th>
<th>FINE-GRAINED/COHESIVE SOILS</th>
</tr>
</thead>
<tbody>
<tr>
<td>N, SPT, BLOWS/FT.</td>
<td>RELATIVE DENSITY</td>
</tr>
<tr>
<td>0 - 4</td>
<td>Very loose</td>
</tr>
<tr>
<td>4 - 10</td>
<td>Loose</td>
</tr>
<tr>
<td>10 - 30</td>
<td>Medium dense</td>
</tr>
<tr>
<td>30 - 50</td>
<td>Dense</td>
</tr>
<tr>
<td>Over 50</td>
<td>Very dense</td>
</tr>
<tr>
<td>Over 30</td>
<td></td>
</tr>
</tbody>
</table>

**WELL AND OTHER SYMBOLS**

- Cement/Concrete
- Bentonite Grout
- Bentonite Seal
- Slough
- Silica Sand
- 2" I.D. PVC Screen (0.020-inch Slot)
- Asphalt or PVC Cap
- Cobble
- Fill
- Ash
- Bedrock
- Gravel

---

Naches Tieton Road Alignment
Yakima County, Washington

**SOIL CLASSIFICATION AND LOG KEY**

October 2006

SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

FIG. C-3

Sheet 1 of 2
### UNIFIED SOIL CLASSIFICATION SYSTEM
(From ASTM D 2488-93 & 2487-93)

<table>
<thead>
<tr>
<th>MAJOR DIVISIONS</th>
<th>GROUP/GRAPHIC SYMBOL</th>
<th>TYPICAL DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gravels (more than 50% of coarse fraction retained on No. 4 sieve)</td>
<td>GW</td>
<td>Well-Graded Gravels, Gravel-Sand Mixtures, Little or No Fines</td>
</tr>
<tr>
<td>Gravels with Fines (more than 12% fines)</td>
<td>GP</td>
<td>Poorly Graded Gravels, Gravel-Sand Mixtures, Little or No Fines</td>
</tr>
<tr>
<td>Coarse-Grained Soils (more than 50% retained on No. 200 sieve)</td>
<td>GM</td>
<td>Silty Gravels, Gravel-Sand-Silt Mixtures</td>
</tr>
<tr>
<td>Clean sands (less than 5% fines)</td>
<td>GC</td>
<td>Clayey Gravels, Gravel-Sand-Clay Mixtures</td>
</tr>
<tr>
<td>Sand (50% or more of coarse fraction passes the No. 4 sieve)</td>
<td>SW</td>
<td>Well-Graded Sands, Gravelly Sands, Little or No Fines</td>
</tr>
<tr>
<td>Clean sands (less than 5% fines)</td>
<td>SP</td>
<td>Poorly Graded Sand, Gravelly Sands, Little or No Fines</td>
</tr>
<tr>
<td>Sand with Fines (more than 12% fines)</td>
<td>SM</td>
<td>Silty Sands, Sand-Silt Mixtures</td>
</tr>
<tr>
<td>Inorganic Silts and Clays of Low to Medium Plasticity, Rock Flour, or Clayey Silts With Slight Plasticity</td>
<td>ML</td>
<td>Clayey Sands, Sand-Silt Mixtures</td>
</tr>
<tr>
<td>Inorganic Clays of Low to Medium Plasticity, Gravelly Clays, Sandy Clays, Silty Clays, Lean Clays</td>
<td>CL</td>
<td>Inorganic Silts and Organic Silty Clays of Low Plasticity</td>
</tr>
<tr>
<td>Fine-Grained Soils (50% or more passes the No. 200 sieve)</td>
<td>OL</td>
<td>Inorganic Clays of Medium to High Plasticity, Sandy Fat Clay, Gravelly Fat Clay</td>
</tr>
<tr>
<td>Silts and Clays (liquid limit 50 or more)</td>
<td>CH</td>
<td>Inorganic Silts, Micaeous or Diatomaceous Fine Sands or Silty Soils, Elastic Silt</td>
</tr>
<tr>
<td>Organic Silts and Organic Silty Clays of Medium to High Plasticity, Organic Silts</td>
<td>MH</td>
<td>Organic Clays of Medium to High Plasticity, Organic Silts</td>
</tr>
<tr>
<td>Organic Silts</td>
<td>OH</td>
<td>Peat, Humus, Swamp Soils with High Organic Content (See D 4427-92)</td>
</tr>
</tbody>
</table>

**NOTES**

1. Dual Symbols (symbols separated by a hyphen, i.e., SP-SM, slightly silty fine SAND) are used for soils with between 5% and 12% fines or when the liquid limit and plasticity index values plot in the CL-ML area of the plasticity chart.

2. Borderline symbols (symbols separated by a slash, i.e., CL/ML, silty CLAY/clayey SILT; GW/SW, sandy GRAVEL/gravelly SAND) indicate that the soil may fall into one of two possible basic groups.
November 11, 2009

Yakima County – Public Services
128 North Second Street
Fourth Floor Courthouse
Yakima, Washington 98901

Attn:  Mr. Mark Brzoska, P.E

RE:  GEOTECHNICAL ENGINEERING STUDY; NACHES-TIETON ROAD GRADE IMPROVEMENTS; YAKIMA COUNTY, WASHINGTON

Shannon & Wilson, Inc. is pleased to present this geotechnical engineering report for the proposed Naches-Tieton Road grade improvements in Yakima County, Washington. We conducted the study in general accordance with our proposal dated September 30, 2009.

This report provides recommendations for earthwork, foundations, retaining walls, gravel pavement sections, and IBC seismic design.

We appreciate the opportunity to work with you on this project. Should you have comments or questions regarding this report, or if we can be of additional service to you on another phase of this work, please contact us.

Sincerely,

SHANNON & WILSON, INC.

[Signature]

Dee J. Burrle, P.E.
Branch Manager

LJR:DJB/ljr

22-1-02339-003
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0 INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>2.0 BACKGROUND</td>
<td>1</td>
</tr>
<tr>
<td>3.0 FIELD EXPLORATIONS</td>
<td>2</td>
</tr>
<tr>
<td>4.0 SUBSURFACE CONDITIONS</td>
<td>2</td>
</tr>
<tr>
<td>5.0 CONCLUSIONS AND RECOMMENDATIONS</td>
<td>2</td>
</tr>
<tr>
<td>5.1 General</td>
<td>2</td>
</tr>
<tr>
<td>5.2 Slope Stability Evaluation</td>
<td>3</td>
</tr>
<tr>
<td>5.3 Earthwork</td>
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</tr>
<tr>
<td>5.4 Excavation/Slopes</td>
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<td>5.5 Drainage</td>
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<tr>
<td>5.6 Construction Considerations</td>
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<td>6.0 LIMITATIONS</td>
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## FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
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<tr>
<td>1</td>
<td>Vicinity Map</td>
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<tr>
<td>2</td>
<td>Site and Exploration Plan</td>
</tr>
<tr>
<td>3</td>
<td>Key and Bench Detail</td>
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## APPENDICES

<table>
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<tr>
<th>Appendix</th>
<th>Description</th>
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<tbody>
<tr>
<td>A</td>
<td>Exploratory Test Pit Logs</td>
</tr>
<tr>
<td>B</td>
<td>Slope Stability Evaluation</td>
</tr>
<tr>
<td>C</td>
<td>Important Information About Your Geotechnical Engineering Report</td>
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</table>
1.0 INTRODUCTION

Shannon and Wilson, Inc. is pleased to present the results of our geotechnical engineering study for the proposed Naches-Tieton Road grade improvements in Yakima County, Washington. Our scope of work included:

- Reviewing existing boring data and County provided embankment slopes;
- Excavating five trackhoe test pits;
- Performing slope stability analyses; and
- Preparing this report.

This report provides recommendations for earthwork, keyway and benching, and slope stability.

2.0 BACKGROUND

The project includes realigning and rebuilding approximately 1.25 miles of the existing Rural Arterial road in the Naches area of Yakima County. The Naches Tieton Road serves as a major connector between the Upper Naches Valley and the Naches Heights Area. Average grade on the existing 22-foot-wide road is approximately 6.3 percent. The alignment includes four, 90-degree turns and one approximately 45-degree turn. Sight distances are limited on the existing alignment resulting in few passing opportunities. Heavy, two-way truck traffic, particularly during harvest season, results in congestion and risk-taking by impatient drivers.

The proposed alignment modifications and reconstruction will provide a minimum 48-foot wide section with 12-foot wide lanes, 4- to 8-foot shoulders, and a truck climbing lane. Three 90-degree turns will be eliminated and overall grade improved.

Shannon & Wilson, Inc. conducted a preliminary geotechnical investigation for the project in 2006. The investigation included a geologic reconnaissance, a geophysical survey on the upslope side of the road, and two deep boring on the downslope road edge. The investigation encountered deep, loose conditions on the downslope slope side of the road. The loose conditions create stability issues for constructing fills or retaining walls on the downslope. Therefore, our report recommended moving the road alignment upslope, into the hillside.

We understand that because of cost considerations, the County desires to widen the road by placing fill on the downslope side of the roadway. The proposed fill will extend down to near the existing slope toe. Preliminary plans indicate that the proposed embankment fill will have an approximately 1.75 horizontal to 1 vertical (1.75H:1V) inclination.
Initial fill material will be imported from a road cut project on Highway 12 west of Naches. A site visit by a Shannon & Wilson, Inc. engineer indicates that the excavated material will consist of a mixture of silt, sand, gravel, and cobbles.

3.0 FIELD EXPLORATIONS

The field exploration program included five test pits excavated on October 16, 2009. Ken Leingang Excavating, Inc., under subcontract with Shannon & Wilson, Inc., excavated the test pits using a John Deere 160C excavator with a 30-inch wide bucket. The test pits extended 8½ to 16 feet below the ground surface.

Our engineer observed the excavations, obtained representative soil samples, and prepared test pit logs. We evaluated the relative soil density, where feasible, using a dynamic mini-cone penetrometer. The mini-cone uses a slide hammer to drive a conical tip into the soil. The number of hammer blows required to drive the cone 1¾-inch increments is roughly equivalent to a Standard Penetration Test (SPT) blow count. The blows-per-increment provides an indication of the relative soil density. We recorded the blow counts on the test pit logs. The test pit logs are presented in Appendix A.

The Site and Exploration Plan (Figure 2) shows the approximate test pit locations. We located the approximate test pit sites using a hand-held GPS.

The subsurface conditions are known only at the test pit locations on the date explored and should be considered approximate. Actual subsurface conditions may vary between test pit locations.

4.0 SUBSURFACE CONDITIONS

The test pits typically encountered loose to medium-dense, tan, sandy silt soils with trace gravel and boulders. Some areas contained more gravel and boulders. In test pit TP-1, the excavator experienced practical refusal at 8½ feet on cemented silty sand with gravel. Test pits TP-4 and TP-5 experienced refusal at 14 to 16 feet on either very large boulders (greater than 8 feet in diameter) or bedrock.

The test pits did not encounter groundwater. However, based on vegetation observed on the slope, we anticipate that springs may be encountered in the hillside.

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 General

The test pits along the slope toe typically encountered loose to medium-dense sandy silt soils with gravel, cobbles and boulders. The soils encountered in the test pits are similar to the soil conditions encountered in the borings in our 2006 geotechnical report. The borings were located along the
outside roadway edge, near the crest of the proposed fill area. In order to evaluate the proposed embankment slope stability, we assumed that the entire slope consisted of these soil types. In our opinion, these sandy silt soils are the weaker soils encountered in the slope and will be the most critical for the slope stability.

The following sections discuss our slope stability evaluation, earthwork, and drainage recommendations.

5.2 Slope Stability Evaluation

In order to evaluate the stability of the proposed fill embankment and develop keyway/benching recommendations, we developed two typical cross-section profiles. We selected STA 43+00 and STA 59+00 as typical profiles. STA 43+00 has a flatter existing slope, while STA 59+00 is steeper.

We used Yakima County’s cross-section data at these sections to develop the profile.

The existing slope below the Naches-Tieton Road is inclined at approximately 2 horizontal to 1 vertical (2H:1V) or flatter. Cuts along the slope exposed silt and sand soils with gravel and boulders. The test pits and borings encountered similar conditions. Two test pits at the slope toe encountered bedrock. For our analyses, we assumed that the entire hillside consisted of the silt and sand soils. We estimated the soil strengths based on correlations with blow count data from the borings and test pits, and reviewing existing slope cuts.

We understand that the proposed embankment fill will be initially constructed using material excavated from a road cut along Highway 12, west of Naches. A Shannon and Wilson engineer visited the road cut area. The excavated material appears to consist of a mixture of silt, sand, gravel, cobbles, and boulders. For our analyses, we assumed that the embankment fill material would be classified as “Gravel Borrow”. We assumed soil strength parameters in the middle of the range presented in the WSDOT Geotechnical Design Manual for “Gravel Borrow.”

Using the developed profiles, we evaluated the slope stability using the computer program Slope/W.

We assumed that the embankment toe would be keyed into the existing slope using an approximately 5-foot deep by 10-foot wide keyway. In addition, we assumed that the fill will be benching into the existing slope using approximately 10-foot wide benches. A sketch of the assumed keyway and benching detail is attached as Figure 3.

Our slope stability analysis indicates that the critical failure surface occurs along the interface of the existing slope and proposed embankment fill. Our analysis indicates an approximately 1.25 safety factor for static conditions at the STA 59+00 cross-section, based on the assumed soil conditions. The WSDOT Geotechnical Design Manual indicates that a 1.25 safety factor is the minimum recommended safety factor for a roadway embankment. The safety factor will increase as the native slope angle decreases, or decrease as the slope angle increases. The existing slopes at STA 43+00 are flatter, therefore they had a higher safety factor.
We also evaluated the slope stability during a seismic event. Figure 6-8 in the WSDOT Geotechnical Design Manual indicates that the peak horizontal acceleration for a 7 percent probability of exceedance in 75 years at the site is approximately 0.165g ($a_{\text{max}}$). We performed a pseudo-static slope stability analysis assuming a pseudo-static coefficient equal to $1/3 a_{\text{max}}$. The slope stability results indicate that the proposed fill embankment has an approximately 1.1 safety factor during the assumed design event.

The safety factors can also be improved by widening and deepening the embankment keyway, and flattening the embankment fill slope at the toe. Increasing the keyway size and flattening the toe slope creates more of a buttress at the toe. We recommend doing this where there is sufficient space within the right-of-way.

Results from the slope stability analyses are attached in Appendix B.

5.3 Earthwork

Surface vegetation, topsoil, debris, and existing fill material must be stripped from areas to receive structural fill. Based on the test pits, we estimate that approximately 6 inches of material must be stripped to remove the vegetation and topsoil. Topsoil may be stockpiled and used in future landscape areas, if desired, but should not be used for structural fill.

The embankment fill should be constructed in accordance Section 2-03.3(14) Embankment Construction in the WSDOT Standard Specifications M 41-10. A keyway should be constructed at the embankment toe, and the embankment fill benched into the slope. Our analysis assumes a minimum 10-foot wide by 5-foot deep keyway. In addition, we assumed approximately 10-foot wide benches. We recommend moisture conditioning and compacted the native soil subgrades prior to placing fill.

We anticipate that the keyway and benching excavation will encounter a significant amount of boulders. The boulder material should be removed from the embankment fill or crushed down to an appropriate size for use in the embankment fill material.

5.4 Excavations/Slopes

In our opinion, OSHA Soil Type C best describes the soil conditions at the site. Type C soils may have maximum temporary slopes of 1.5 Horizontal to 1 Vertical (1.5H:1V).

Permanent cut and fill slopes should be constructed with inclinations no steeper than 1.75H: 1V, and must be protected from both wind and water erosion. Erosion protection may consist of a vegetative cover or a minimum 3-inch aggregate.
5.5 Drainage

The roadway should be graded so that surface water is directed away from the embankment slope. Surface water should not be allowed to flow uncontrolled onto the slope. We recommend tightlining any drainage culvert to the slope base.

Based on the slope vegetation, we anticipate that some springs may be encountered during excavation. We recommend installing french drains through the spring areas to prevent the buildup of hydrostatic pressure. The french drains should be connected to a tightline that directs the water to the slope base.

5.6 Construction Considerations

Variations in soil conditions are possible at the site and may be encountered during construction. The geotechnical engineer should be retained to provide construction observation services during the earthwork, excavation, and foundation phases of the project. Construction observation allows the geotechnical engineer to observe the actual soil conditions exposed in the excavations and determine if the proposed design is compatible with the design recommendations, and if the conditions encountered at the site are consistent with those observed during the geotechnical study. Construction observation is conducted to reduce the potential for problems arising during and after construction. However, in all cases, the contractor is responsible for the quality and completeness of their work and for adhering to the plans, specifications, and recommendations on which their work is based.

We recommend retaining Shannon & Wilson, Inc to review the construction plans for the proposed structures, and to provide construction observations services during site grading and foundation installation. We anticipate that our services would include verifying subgrade soils, and fill compaction. We can provide construction observation services on a time and expense basis.

6.0 LIMITATIONS

The analyses, conclusions, and recommendations contained in this report are based upon site conditions as they presently exist. We further assume that the site explorations are representative of the subsurface conditions throughout the site; i.e., site conditions are not significantly different from those disclosed by the field explorations and observations.

If subsurface conditions different from those encountered in the field explorations are observed or appear to be present beneath the excavations during construction, we should be advised at once so that we can review these conditions and reconsider our recommendations, where necessary.

If there is a substantial lapse of time between the submission of this report and the start of construction at the site, if conditions have changed because of natural forces or construction at the
site, or if the design or loading configurations change, we recommend that we review this report to determine the applicability of the conclusions and recommendations concerning the time lapse or changed conditions contained in this report.

The scope of services did not include any environmental assessments or evaluations regarding the presence or absence of wetlands or hazardous or toxic materials in the soil, surface water, groundwater, or air, on or below the site, or for the evaluation or disposal of contaminated soils or groundwater, should any be encountered.

This report was prepared for the use of Yakima County, and their design team, in the design and construction of the proposed Naches-Tieton Road grade improvements in Yakima County, Washington. This report was made for a specific set of proposed structures and locations on the site. Variations from the structure types or locations discussed in this report should be analyzed by Shannon & Wilson to assess the potential geotechnical impacts of those variations on the recommendations included in this report.

As an integral part of this report, we have prepared the attached “Important Information About Your Geotechnical Engineering Report,” (Appendix C) to help you more clearly understand its use and limitations.

SHANNON & WILSON, INC.

Lloyd J. Reitz, P.E.
Senior Principal Engineer

LJR:DJB/ljr
LEGEND

▶ TP-1    Approximate Test Pit Locations

☒ B-1     Approximate Boring Locations (2006)

Drawing provided by Yakima County Public Services.

Naches-Tieton Road Improvements
Yakima County, Washington

VICINITY MAP

November 2009    22-1-02339-003
SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants
FIG. 2
Nches-Tleton Road Improvements
Yakima County, Washington

KEY AND BENCH DETAIL

November 2009

SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

FIG. 3
APPENDIX A

EXPLORATORY TEST PIT LOGS
SOIL PROFILE DESCRIPTION

1: Loose, tan, sandy SILT (ML) with roots; moist in upper 4 in.

2: Loose, tan, sandy SILT (ML) with some roots and gravel; dry; non-plastic.

3: Loose to medium dense, tan, sandy SILT with gravel and trace cobbles and boulders (ML); dry.

4: Very dense, tan, cemented, silty SAND with gravel (SM); dry.

Refusal at 8.5 ft. No groundwater encountered.

NOTES

1. The description in the text of this report is necessary for a proper understanding of the nature of the subsurface materials.

2. Refer to Soil Classification and Log Key for explanation of "Symbols" and Definitions.

3. USCS designation is based on visual-manual classification.

4. Where possible, a 1/2-inch-diameter, steel T-bar probe was used to estimate the density of soil.

LEGEND

- Roots
- Seepage
- Cobble or Boulder
- Log

Naches-Tieton Road Improvements
Yakima County, Washington

LOG OF TEST PIT TP-1

November 2009
22-1-02339-003

SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

FIG. A-1
SOIL PROFILE DESCRIPTION

Average Depth (ft)   Symbol   Samples   Water Content (%)   Ground Water   NOTES   Depth (ft)
1: Loose, tan, sandy Silt with organic (ML); moist in upper 4 in.
2: Loose to medium dense, tan, sandy Silt (ML) with some roots; dry; non-plastic.
Grades moist.
Boulder at 11 ft.
Boulder at 14 ft.
Bottom of Test Pit 14 ft.
No groundwater encountered.

SKETCH OF WEST TEST PIT SIDE WALL
Horizontal Distance in Feet

LEGEND

1. The description in the text of this report is necessary for a proper understanding of the nature of the subsurface materials.
2. Refer to Soil Classification and Log Key for explanation of "Symbols" and Definitions.
3. USCS designations are based on visual-manual classification.
4. Where possible, a 1/2-inch-diameter, steel T-bar probe was used to estimate the density of soil.
SOIL PROFILE DESCRIPTION

1: Loose, tan, sandy SILT with organics (ML); dry.

Depth: 1.0
Symbol: S-1

2: Loose, boulders in a tan, sandy SILT matrix (GM); dry. Boulders are subangular, 1 to 5 ft. diameter.

Depth: 12.0
Symbol: Not Encountered

Bottom of Test Pit 12 ft. No groundwater encountered.

NOTES

1. The description in the text of this report is necessary for a proper understanding of the nature of the subsurface materials.
2. Refer to Soil Classification and Log Key for explanation of "Symbols" and Definitions.
3. USCS designation is based on visual-manual classification.
4. Where possible, a 1/2-inch-diameter, steel T-bar probe was used to estimate the density of soil.

LEGEND

- Roots
- Seepage
- Cobble or Boulder
- Log

SKETCH OF WEST TEST PIT SIDE WALL

Horizontal Distance in Feet

LOG OF TEST PIT TP-3

Naches-Tieton Road Improvements
Yakima County, Washington

November 2009

SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants
1. The description in the text of this report is necessary for a proper understanding of the nature of the subsurface materials.

2. Refer to Soil Classification and Log Key for explanation of "Symbols" and Definitions.

3. USCS designation is based on visual-manual classification.

4. Where possible, a 1/2-inch-diameter, steel T-bar probe was used to estimate the density of soil.
SOIL PROFILE DESCRIPTION

1: Loose, dry, sandy SILT with organics (ML); dry.
   Average Depth (ft): 1.0
   Symbol: 
   Samples: 
   Water-content (%): 
   Ground Water: Not Encountered

2: Loose, tan, sandy SILT (ML), trace roots; dry; non-plastic.
   Average Depth (ft): 6.0
   Symbol: 
   Samples: 
   Water-content (%): 
   Ground Water: Not Encountered

3: Medium dense to dense, cobbles and boulders (GP); dry; subangular, approx. 24 in. max. diameter.
   Average Depth (ft): 9.0
   Symbol: 
   Samples: 
   Water-content (%): 
   Ground Water: Not Encountered

4: Bedrock or a boulder greater than 5 ft. in diameter.
   Average Depth (ft): 14.0
   Symbol: 
   Samples: 
   Water-content (%): 
   Ground Water: Not Encountered

Refusal at 14 ft. on boulder. No groundwater encountered.

SKETCH OF SOUTH TEST PIT SIDE WALL
Horizontal Distance in Feet

NOTES

1. The description in the text of this report is necessary for a proper understanding of the nature of the subsurface materials.
2. Refer to Soil Classification and Log Key for explanation of "Symbols" and Definitions.
3. USCS designation is based on visual-manual classification.
4. Where possible, a 1/2-inch-diameter, steel T-bar probe was used to estimate the density of soil.

LEGEND

- Roots
- Seepage
- Cobble or Boulder
- Log

Naches-Tieton Road Improvements
Yakima County, Washington

LOG OF TEST PIT TP-5

November 2009

SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

FIG. A-5
# Soil Classification Chart

<table>
<thead>
<tr>
<th>Major Divisions</th>
<th>Symbols Graph</th>
<th>Typical Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gravel and Gravelly Soils</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>More than 50% of coarse fraction retained on No. 4 sieve</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Sand and Sandy Soils</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>More than 50% of coarse fraction passing on No. 4 sieve</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Silts and Clays</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>More than 50% of material is smaller than No. 200 sieve size</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Fine Grained Soils**

<table>
<thead>
<tr>
<th>Silts and Clays</th>
<th>Liquid Limit Less Than 50</th>
<th></th>
<th>Inorganic Silts and Very Fine Sands, Rock Flour, Silty or Clayey Fine Sands or Clayey Silts with Slight Plasticity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>CL</td>
<td>Inorganic Clays of Low to Medium Plasticity, Gravelly Clays, Sandy Clays, Silty Clays, Lean Clays</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OL</td>
<td>Organic Silts and Organic Clayes of Low Plasticity</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MH</td>
<td>Inorganic Silts, Micaceous or Diatomaceous Fine Sand or Silty Soils</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CH</td>
<td>Inorganic Clays of High Plasticity</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OH</td>
<td>Organic Clays of Medium to High Plasticity, Organic Silts</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PT</td>
<td>Peat, Humus, Swamp Soils with High Organic Contents</td>
</tr>
</tbody>
</table>

**Coarse Grained Soils**

<table>
<thead>
<tr>
<th>Clean Gravels</th>
<th>Gravel with Fines</th>
<th>Silty Gravels, Gravel - Sand Mixtures</th>
<th>Clayey Gravels, Gravel - Sand Mixtures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clean Sands</td>
<td></td>
<td>Well-Graded Sands, Gravelly Sands</td>
<td>Clayey Sands, Sand - Clay Mixtures</td>
</tr>
<tr>
<td>Sand with Fines</td>
<td></td>
<td>Poorly-Graded Sands, Gravelly Sand</td>
<td>Poorly-Graded Sands, Gravelly Sand</td>
</tr>
</tbody>
</table>

**Highly Organic Soils**

| Peat, Humus, Swamp Soils with High Organic Contents |

**Notes:** Dual symbols are used to indicate borderline soil classifications.
Note: Site Plan is based on measurements made in the field by AG personnel, utilizing a hand-held GPS instrument. Locations of all features are approximate.
Seismic Refraction Survey Cross-Sections

Line 1 - 20+17.5 to 22+15

- /- 2,000 fps
- /- 4,500 fps

Line 2 - 22+00 to 24+00

- /- 4,000 fps
- /- 10,000 fps

SUGGESTED CLASSIFICATION OF MATERIALS:

<table>
<thead>
<tr>
<th>VELOCITY (fps)</th>
<th>MATERIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>+/- 1,000 to 2,000</td>
<td>Loose to Medium Dense Soil Horizons</td>
</tr>
<tr>
<td>+/- 3,000 to 4,500</td>
<td>Medium Dense to Dense Soil Horizons</td>
</tr>
<tr>
<td>+/- 6,000</td>
<td>BEDROCK</td>
</tr>
</tbody>
</table>

Approximate Scale 1" = 30'

Note: Locations of all features are approximate.
Seismic Refraction Survey Cross-Sections

Suggested Classification of Materials:

Average Seismic Velocity, fps Material:

- /- 1,000 to 2,000
  Loose to Medium Dense Soil Horizons

- /- 3,000 to 4,500
  Medium Dense to Dense Soil Horizons

- /- 8,000
  Bedrock

Note: Locations of all features are approximate.
Seismic Refraction Survey Cross-Sections

Line 5 - 28+00 to 29+50

Line 6 - 29+00 to ~31+00

SUGGESTED CLASSIFICATION OF MATERIALS:

Average Seismic Velocity, fps: Material

- /- 1,000 to 2,000: Loose to Medium Dense Soil Horizons
- /- 3,000 to 4,500: Medium Dense to Dense Soil Horizons
- /- 8,000: Bedrock

Note: Locations of all features are approximate.

Approximate Scale 1" = 30'

Naches-Tieton Road Improvement
Naches, Washington

FILE NO. 07.2047
DATE August 2007
Seismic Refraction Survey Cross-Sections

Line 7 - 28+00

SUGGESTED CLASSIFICATION OF MATERIALS:

<table>
<thead>
<tr>
<th>AVERAGE SEISMIC VELOCITY, fps</th>
<th>MATERIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>+/- 1,000 to 2,000</td>
<td>Loose to Medium Dense Soil Horizons</td>
</tr>
<tr>
<td>+/- 3,000 to 4,500</td>
<td>Medium Dense to Dense Soil Horizons</td>
</tr>
<tr>
<td>+/- 8,000</td>
<td>BEDROCK</td>
</tr>
</tbody>
</table>

Approximate Scale 1" = 30'

Note: Locations of all features are approximate.
SUGGESTED CLASSIFICATION OF MATERIALS:

<table>
<thead>
<tr>
<th>Average Seismic Velocity, fps</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>+/- 1,000 to 2,000</td>
<td>Loose to Medium Dense Soil Horizons</td>
</tr>
<tr>
<td>+/- 3,000 to 4,500</td>
<td>Medium Dense to Dense Soil Horizons</td>
</tr>
<tr>
<td>+/- 8,000</td>
<td>REDROCK</td>
</tr>
</tbody>
</table>

Approximate Scale 1" = 30'  
Note: Locations of features are approximate.
Seismic Refraction Survey Cross-Sections

Line 9 - 24+00

Depth (Feet)

Distance (Feet)

SUGGESTED CLASSIFICATION OF MATERIALS:

AVERAGE SEISMIC VELOCITY, fps MATERIAL

+/-. 1,000 to 2,000 Loose to Medium Dense Soil Horizons

+/-. 3,000 to 4,500 Medium Dense to Dense Soil Horizons

+/-. 8,000 BEDROCK

Approximate Scale 1" = 30'

Note: Locations of all features are approximate.
PIPE ALLOWANCES

<table>
<thead>
<tr>
<th>PIPE MATERIAL</th>
<th>MAXIMUM INSIDE DIAMETER</th>
</tr>
</thead>
<tbody>
<tr>
<td>REINFORCED OR PLAIN CONCRETE</td>
<td>12&quot;</td>
</tr>
<tr>
<td>ALL METAL PIPE</td>
<td>15&quot;</td>
</tr>
<tr>
<td>CPSP (STD. SPEC. 9-95.20)</td>
<td>12&quot;</td>
</tr>
<tr>
<td>SOLID WALL PVC (STD. SPEC. 6-95.1219)</td>
<td>15&quot;</td>
</tr>
<tr>
<td>PROFILE WALL PVC (STD. SPEC. 9-95.1423)</td>
<td>15&quot;</td>
</tr>
</tbody>
</table>

* CORRUGATED POLYETHYLENE STORM SEWER PIPE

NOTES

1. As acceptable alternatives to the rebar shown in the PRECAST BASE SECTION, fibers (placed according to the Standard Specifications), or wire mesh having a minimum area of 0.12 square inches per foot shall be used with the minimum required rebar shown in the ALTERNATIVE PRECAST BASE SECTION. Wire mesh shall not be placed in the knockouts.

2. The knock diameter shall not be greater than 20". Knockouts shall have a wall thickness of 2" minimum to 3.5" maximum. Provide a 1.5" minimum gap between the knockout wall and the outside of the pipe. After the pipe is installed, fill the gap with joint mortar in accordance with Standard Specification 9-04.3.

3. The maximum depth from the finished grade to the lowest pipe invert shall be 5'.

4. The frame and grate may be installed with the flange down, or integrally cast into the adjustment section with flange up.

5. The Precast Base Section may have a rounded floor, and the walls may be sloped at a rate of 1:24 or steeper.

6. The opening shall be measured at the top of the Precast Base Section.

7. All pickup holes shall be grouted full after the basin has been placed.
NOTES
1. This frame is designed to accommodate 2C × 24" grates or covers as shown on Standard Plans B-30.20, B-30.30, B-30.40, and B-30.50.
2. 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 5/8"-11 NC × 2" Allen head cap screw by being tapped, or other approved mechanism. Location of bolt-down holes varies by manufacturer.
3. Refer to Standard Specification 0-05.18(2) for additional requirements.
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 5/8" x 11 NC x 2" Allen head cap screw by being tapped, or other approved mechanisms. Location of bolt-down holes varies by manufacturer.

2. Alternative reinforcing designs are acceptable in lieu of the rib design.

3. Refer to Standard Specification 9-05.15(2) for additional requirements.

4. For frame details, see Standard Plan B-30.10.
1. The Steel Angles shall be set so that each bearing bar of prefabricated grate shall have full bearing on both ends. The finished top of concrete shall be even with the grate surface.

2. Top of inlet grate shall be placed at ground level to present an unobstructed ditch or median section.

3. All exposed concrete edges shall be finished with a 1/2" radius.

4. Pipes may enter through the knockouts on any side at any reasonable angle, provided the outside of the pipe can be contained between two opposite walls.

5. The flow line of the outlet pipe shall be 18" minimum above the inside bottom of the inlet structure.

6. The grade line of the top inside of any inlet pipe shall enter no lower than the grade line of the top inside of the outlet pipe.

7. Unit "H" and optional extension units "J" and "K" shall be grouted in place to the satisfaction of the Engineer.

8. All pickup holes shall be grouted full after the basin has been placed.

NOTES
1. The Contract may specify a rotated inlet installation. Orient the Grates in the frame so they intercept flow.
2. When bolt-down grates are specified in the Contract, provide two slots in the grate that are centered with the holes in the frame. Location of bolt-down slots varies among different manufacturers.
3. Refer to Standard Specification 9-05.15(2) for additional requirements.
4. Frame and Grates shall be Ductile Iron.

FRAME AND DUAL VANED GRATES FOR GRATE INLET
STANDARD PLAN B-40.40-01

Sheet 1 of 1 Sheet

Pasco Bakotich III 06-16-10
State Design Engineer

Washington State Department of Transportation
NOTES

1. The top of the inlet shall be placed at ground level to present an unobstructed ditch or median section.
2. Bevel or round exposed concrete edges 1/2".
3. Pipes may enter through the knockouts at any reasonable angle provided the outside of the pipe can be contained within the knockout provided.
4. The grade line of the lowest inlet pipe shall enter the structure at an elevation equal to or higher than the grade line of the outlet pipe.
5. All pickup holes shall be grouted full after the inlet has been placed.
6. The steel angles shall be so spaced that each bearing bar of the grates shall have full seating on both ends. The finished top of concrete shall be even with the grate surface. For grates, see Standard Plan B-50-20.
7. The amount, type, and grade of reinforcing steel is the responsibility of the manufacturer.
8. The inside wall taper for form removal shall not result in any wall section thinner than 6" except in pipe knockout areas.
9. Precast inlets shall be marked with the manufacturer's identification on the inside of the structure in some readily accessible location.

DROP INLET TYPE 1

STANDARD PLAN B-45.20-00

Sheet 1 of 1 sheet

APPROVED FOR PUBLICATION

Harold J. Petersen 06-01-06
Civil Engineer

Washington State Department of Transportation
1. See Standard Specifications Section 7-08.3(3) for Pipe Zone Backfill.
2. See Standard Specifications Section 9-03.12(3) for Gravel Backfill for Pipe Zone Bedding.
4. For sanitary sewer installation, concrete pipe shall be beveled to spring line.

### CLEARANCE BETWEEN PIPES FOR MULTIPLE INSTALLATIONS

<table>
<thead>
<tr>
<th>PIPE</th>
<th>SIZE</th>
<th>MINIMUM DISTANCE BETWEEN BARRELS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIRCULAR PIPE (DIAMETER)</td>
<td>30&quot; to 66&quot;</td>
<td>24&quot;</td>
</tr>
<tr>
<td></td>
<td>102&quot; to 180&quot;</td>
<td>48&quot;</td>
</tr>
<tr>
<td>PIPE ARCH (SPAN) METAL ONLY</td>
<td>43&quot; to 142&quot;</td>
<td>12&quot;</td>
</tr>
<tr>
<td></td>
<td>148&quot; to 200&quot;</td>
<td>48&quot;</td>
</tr>
</tbody>
</table>

NOTES

**CONCRETE AND DUCTILE IRON PIPE**

**THERMOPLASTIC PIPE**

**METAL PIPE**

**PIECE ARCHES**

**PIPE ZONE BEDDING AND BACKFILL**

*Standard Plan 8-55.20-00*

Sheet 1 of 1 Sheet

APPROVED FOR PUBLICATION

Harold J. Peterese  06-01-06

WASHINGTON, D.C. DEPARTMENT OF TRANSPORTATION
END SECTION LENGTH SHALL BE AT LEAST SIX TIMES THE DIAMETER OF THE PIPE (SEE STD. SPEC. 7-02.3(9))

NOTES
1. The culvert ends shall be beveled to match the embankment or ditch slope and shall not be beveled flatter than 4H:1V. When slopes are between 4H:1V and 6H:1V, shape the slope in the vicinity of the culvert end to ensure that no part of the culvert protrudes more than 4" above the ground line.

2. Field cutting of culvert ends is permitted when approved by the Engineer. All field-cut culvert pipe shall be treated with protection as shown in the Standard Specifications or General Special Provisions.

FOR CULVERTS 30" DIAMETER OR LESS

BEVELED END SECTIONS

STANDARD PLAN B-70.20-00

APPROVED FOR PUBLICATION

Harold J. Paterfeso 05-01-06
Washington State Department of Transportation
NOTES

1. Wood posts for all guardrail placement plans shall be 5 × 8 except where noted otherwise.

2. Lower hole is for Rub Rail of Type 2 and Type 3 Beam Guardrail.

3. W6=9 steel posts and timber blocks are alternates for 6 × 8 timber posts and blocks. W6=15 steel posts and timber blocks are alternates for 10 × 10 timber posts and blocks.

4. Holes shall be located on approaching traffic side of web.

5. When "Beam Guardrail Type - Ft. Long Post" is specified in the contract, the post length shall be stamped with numbers, 1 1/2" min. high and 3/4" wide at the location where the letter "H" is shown in the ASSEMBLY DETAIL. For wood post applications, the letter shall be stamped to a minimum depth of 1/4". For steel post applications, the letter shall be legible after the post is galvanized. After post installation, it shall be the Contractor's responsibility to ensure that the stamped numbers remain visible.

6. Soil plate may be welded to foundation tube. If so, holes in soil plate and foundation tube may be omitted.

BEAM GUARDRAIL
POSTS AND BLOCKS
STANDARD PLAN C-1b

ANALOR POST ASSEMBLY

WOOD BREAKAWAY POST

5/8" + 1/2" BOLT,
NUT AND WASHER

5/8" + 1/2" BOLTS,
NUTS AND WASHERS
(2 REQUIRED PER POST)

WELDED OPTION FOR
STEEL TUBE AND
SOIL PLATE CONNECTION
(SEE NOTE 5)

SOIL PLATE

FOUNDATION TUBE

0.001" MAX

5/8" DIAM HOLE

5/8" DIAM HOLE

5/8" DIAM HOLE

5/8" HOLE

S3 x 5.7

1/2" TYP

1/4" PLATE

BOTTOM CORNERS
MAY BE CLIPPED
2" x 2" TO AD DRIVING

G-2 POST

TIMBER POST

STEEL POST

PARTIAL ASSEMBLY DETAIL

ANCHOR POST

G-2 POST

ISOMETRIC

PASCO BAKOSCH III 06-16-11
WASHINGTON STATE DEPARTMENT OF TRANSPORTATION

APPROVED FOR PUBLICATION
NOTES
1. For post details see Standard Plan, "Beam Guardrail Posts and Blocks".

DETAIL A
3/8" DIA x 1 1/2" hex head bolt with hex nut and 1 1/4" square x .135" washer

DETAIL B
1/4" DIA x 1 1/2" hex head bolt with hex nut. Guardrail rests on top of bolt.

BEAM GUARDRAIL

STANDARD PLAN C-1c
APPROVED FOR PUBLICATION

Donald K. Nelson
STATE DESIGN ENGINEER
WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
OLYMPIA, WASHINGTON

DATE: 5/30/97
NOTES

1. Attach guardrail to bridge rail or concrete barrier with 7/8" diameter bolts in accordance with Standard Spec. 9-06.84(4), with thin slab ferrule inserts or resin bonded anchors. See Contract Plans.

2. If the last guardrail post is 3' or less from the end of the bridge barrier, this attachment and blockout is not necessary.

3. This case is also applicable for F-shape and vertical faces with no curbs.

4. When B connection is used with Type 1A Transition, the maximum spacing between bolts is 6' - 3".

5. See Bridge Plans for additional connection details.

6. Wood blocks shown. Blocks of alternate material may be used. See Standard Specification 9-16.3 (2).

CURB WIDTH - 9" OR LESS, OR CONCRETE BARRIER

PLAN
B CONNECTION

CURB WIDTH, GREATER THAN 9" - 18" MAX.

PLAN
C CONNECTION

GUARDRAIL CONNECTION TO BRIDGE RAIL OR CONCRETE BARRIER
STANDARD PLAN C-24.10-00

APPROVED FOR PUBLICATION
Pasco Bakotich III 07/2/12
Washington State Department of Transportation
NOTES

1. An ET-PLUS (TL3) as manufactured by Trinity Industries, Inc. or an SKT-350 as manufactured by Road Systems Inc. shall be installed according to manufacturer's recommendations. When a TL2 terminal is specified in the contract an ET-PLUS (TL2) as manufactured by Trinity Industries, Inc., or an SKT-TL2 as manufactured by Road Systems, Inc. shall be installed according to manufacturer's recommendations.

2. A reflectorized object marker shall be installed according to manufacturer's recommendations.

3. When snow load post washers and snow load rail washers are required by the contract, the snow load rail washers must not be installed within the terminal limits.

4. Terminal shall be installed at a taper, ensuring that end piece is entirely off shoulder.

5. Length for ET-PLUS (TL3) and SKT-350 is 60'. Length for ET-PLUS (TL2) and SKT-TL2 is 25'.

BEAM GUARDRAIL
PAY LIMIT
NON-FLARED TERMINAL PAY LIMIT (SEE NOTE 1)
(SEE NOTES 4 & 5)
10' MIN
EDGE OF WIDENED EMBANKMENT
6:1 TAPER
RELATIVE TO GRADE
10:1 SLOPE OR FLATTER
EDGE OF SHOULDER

SEE NOTE 2
GROUND LINE

BEAM GUARDRAIL
NON-FLARED TERMINAL
STANDARD PLAN C-4e
HEET 1 OF 1 SHEET
APPROVED FOR PUBLICATION
Harold J. Peterson 02-20-03

RICHARD BARKSTON
PROFESSIONAL ENGINEER

COPYR JLY 24, 4

2/2003 REVISED NOTES 4 & 5 ADDS SLOPES, INC
DATE REVISION
NOTES

1. Wire rope loops shall be 3'-0" long, except for the top loop of the Barrier Terminal, which shall be 2'-0" long.

2. Except for the locations of the wire rope loops, the dimensions shown in END VIEW "A" are typical for both ends of a Barrier Section or opposing ends of Barrier Terminals.

3. Connecting and Cntt Pin head designs vary among different manufacturers. Pin designs that are shaped differently than those shown in the detail are acceptable, if the bearing surface is within the minimum and maximum widths specified.

4. The vertical spacing of the Wire Rope Loops in a Barrier Terminal is determined by the end of the Barrier Segment to which it is connected. See BARRIER CONNECTION DETAIL (Sheet 2).
NOTES

1. PERMANENT INSTALLATION requirements: Embed barrier 3" minimum, install 1/2" Premolded Joint Filler between segments, fill the Connection Blockout with grout, center the Rebar Grid in the blockout before adding grout.

2. TEMPORARY INSTALLATION requirement: Place a Rebar Grid in the Connection Blockout between barrier segments.

3. See Standard Plan C-70.10 for REBAR GRID DETAIL and BARRIER CONNECTION DETAIL.

4. Vertical Back barrier is used only in the configurations shown in Standard Plans C-85.10 and C-85.20, and when placed against a retaining wall.

5. When High-Performance Concrete Barrier is specified in the Contract, use the dimensions given in the H/P row in the DIMENSION TABLE, with a minimum height above roadway of 3'-0", and a minimum embedment of 3'.
1. The Vertical Back barrier is used only in the configurations shown in Standard Plans C-85-10 and C-85-11, and when placed against a retaining wall.

2. See Standard Plan C-80.10, Sheet 1, for EXPANSION JOINT and DUMMY JOINT details. Modify rebar as shown in EXPANSION JOINT MODIFICATION.

3. Reinforcing steel dimensions and clearances are shown for stationary form construction. When slip-form construction is used, increase reinforcing steel clearances to the outside surfaces of the barrier to 2 1/2" and adjust steel dimensions as required.

4. When High-Performance Concrete Barrier is specified in the Contract, use the dimensions given in the HP row in the DIMENSION TABLE, with a minimum height above roadway of 3'-6" and a minimum embedment of 3'.

**WELDED WIRE REINFORCING SUBSTITUTION OPTION TABLE**

<table>
<thead>
<tr>
<th>MARK</th>
<th>REINFORCING SIZE</th>
<th>WELDED WIRE REINFORCEMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>#4</td>
<td>D-20</td>
</tr>
<tr>
<td>2</td>
<td>#4</td>
<td>D-20</td>
</tr>
<tr>
<td>3</td>
<td>#5</td>
<td>D-31</td>
</tr>
</tbody>
</table>

**WELDED WIRE REINFORCEMENTS SHALL CONFORM TO STANDARD SPECIFICATION SECTIONS 8-55 and 8-67**

**REINFORCING STEEL BENDING DIAGRAM**

SEE STD. SPEC. #471/12 FOR BENDING DIAMETERS

**DIMENSION TABLE**

<table>
<thead>
<tr>
<th>BARRIER HEIGHT</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>HORIZONTAL BAR (QTY)</th>
</tr>
</thead>
<tbody>
<tr>
<td>STD.</td>
<td>3'-6&quot;</td>
<td>9&quot;</td>
<td>1'-4&quot;</td>
<td>3</td>
<td>2'-6&quot;</td>
<td>1'-0 1/4&quot;</td>
<td>5</td>
</tr>
<tr>
<td>HP</td>
<td>4'-0&quot;</td>
<td>9 1/2&quot;</td>
<td>1'-5 1/4&quot;</td>
<td>4</td>
<td>3'-6&quot;</td>
<td>1'-0 1/2&quot;</td>
<td>10</td>
</tr>
</tbody>
</table>

**NOTES**

1. The Vertical Back barrier is used only in the configurations shown in Standard Plans C-85-10 and C-85-11, and when placed against a retaining wall.

2. See Standard Plan C-80.10, Sheet 1, for EXPANSION JOINT and DUMMY JOINT details. Modify rebar as shown in EXPANSION JOINT MODIFICATION.

3. Reinforcing steel dimensions and clearances are shown for stationary form construction. When slip-form construction is used, increase reinforcing steel clearances to the outside surfaces of the barrier to 2 1/2" and adjust steel dimensions as required.

4. When High-Performance Concrete Barrier is specified in the Contract, use the dimensions given in the HP row in the DIMENSION TABLE, with a minimum height above roadway of 3'-6" and a minimum embedment of 3'.
NOTES

1. The Terminal is used only on the trailing end of a barrier, unless otherwise shown in the Contract.

2. See Standard Plan C-80-10, Sheet 1, for EXPANSION JOINT and DUMMY JOINT details.

3. When High-Performance Concrete Barrier is specified in the Contract, use the dimensions given in the HP row in the DIMENSION TABLE, with a minimum height above roadway of 3'-6", and a minimum embedment of 3'.
NOTES

1. Notch is only required with multiple post installations.

2. 6x10, 8x10, and 6x12 Timber Sign Posts cannot be made breakaway and do not have holes or notches. These posts shall not be installed within the Design Clear Zone. They may be installed behind traffic barrier.

3. Signs with a width less than 12 feet and supported on three 6x6 or 6x8 posts shall not be installed within the Design Clear Zone. They may be installed behind traffic barrier.

4. Signs with a width less than 17 feet and supported on four 6x6 or 6x8 posts shall not be installed within the Design Clear Zone. They may be installed behind traffic barrier.

5. For "X", "Y", "H1", "H2", "H3", and "H4" refer to the Sign Specification Sheet in the Contract.

6. For 6x6 posts and larger, 7 feet minimum spacing is required between posts.

---

**POST INSTALLATION TABLE**

<table>
<thead>
<tr>
<th>POST SIZE (NOM.)</th>
<th>DEPTH</th>
<th>HOLE DIAMETER</th>
<th>NOTCH DEPTH (SEE NOTE 1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4x4</td>
<td>3&quot;</td>
<td>3/4&quot;</td>
<td>0.75&quot;</td>
</tr>
<tr>
<td>4x8</td>
<td>4&quot;</td>
<td>1.125&quot;</td>
<td>2.625&quot;</td>
</tr>
<tr>
<td>6x6</td>
<td>4&quot;</td>
<td>2&quot;</td>
<td>3.125&quot;</td>
</tr>
<tr>
<td>6x8</td>
<td>5&quot;</td>
<td>3&quot;</td>
<td>3.625&quot;</td>
</tr>
<tr>
<td>6x10</td>
<td>6&quot;</td>
<td>See Note 2</td>
<td>See Note 2</td>
</tr>
<tr>
<td>6x12</td>
<td>7&quot;</td>
<td>See Note 2</td>
<td>See Note 2</td>
</tr>
</tbody>
</table>

---

**TIMBER SIGN SUPPORT**

STANDARD PLAN G-22.10-01

SHEET 1 OF 3 SHEETS

APPROVED FOR PUBLICATION
Pasco Bekitch III 07-03-08

STATE ENGINEER

Washington State Department of Transportation
1. A socket and wedge anchoring system that meets the NCHRP 350 crash test criteria may be substituted in lieu of the anti-twist plate designs shown. Anti-twist plates are not required for wood post installations.

2. The platform design shown on this plan features slots that accommodate several types of mailbox supports; only those slots necessary for assembling the type being installed are required. An adjustable platform may be used in lieu of this design, but it must fit the bracket design shown on this plan. Brackets are required for all single-post installations. Field drilling may be necessary.

3. Center the mailbox on the platform to ensure space for the mailbox door to open and to allow space for installing the fasteners (see ALIGNMENT DETAIL, Sheet 2). Spacing of mailbox mounting holes varies among manufacturers. Attachment of the mailbox to the platform may require drilling additional holes through the mailbox to fit the platform.

4. Attach a newspaper box to a steel post with two 1 7/8" Muffler Clamps spaced 4" apart. Field drill 7/16" holes in the newspaper box to fit. Use 2 1/2" x 1/4" lag bolts to attach newspaper boxes to wood posts. Newspaper boxes must not extend beyond the front of the mailbox when the mailbox door is closed.

5. A Type 2 Support (Standard Plan H-70.20) is required when 2 or more mailboxes are to be installed on one support.
NOTES

1. Maximize detention of stormwater by placing fence as far away from toe of slope as possible without encroaching on sensitive areas or outside of the clearing boundaries.

2. Install silt fencing along contours.

3. Install the ends of the silt fence to point slightly up-slope to prevent sediment from flowing around the ends of the fence.

4. Perform maintenance in accordance with Standard Specifications 8.01.3(9)A and 8.01.3(10).

NOTE
DURING EXCAVATION, MINIMIZE DISTURBING THE GROUND AROUND TRENCH AS MUCH AS IS FEASIBLE, AND SMOOTH SURFACE FOLLOWING EXCAVATION TO AVOID CONCENTRATING FLOWS.

SILT FENCE
STANDARD PLAN I-30.15-01

SPICED FENCE SECTIONS SHALL BE CLOSE ENOUGH TOGETHER TO PREVENT SILT LADEN WATER FROM ESCAPING THROUGH THE FENCE AT THE OVERLAP. JOINING SECTIONS SHALL NOT BE PLACED IN LOW SPOTS OR IN HUMP LOCATIONS.

SPICE DETAIL
NOTE

Perform maintenance in accordance with Standard Specification 8-01.3(9)A and 8-01.3(15).

EROSION CONTROL
AT CULVERT ENDS

STANDARD PLAN I-30.20-00

APPROVED FOR PUBLICATION 09-20-07

Washington State Department of Transportation
NOTES
1. Size the Below Inlet Grate Device (BIGD) for the storm water structure it will service.
2. The BIGD shall have a built-in high-flow relief system (overflow bypass).
3. The retrieval system must allow removal of the BIGD without spilling the collected material.
4. Perform maintenance in accordance with Standard Specification 8-01.3(15).

STORM DRAIN INLET PROTECTION
STANDARD PLAN I-40.20-00
APPROVED FOR PUBLICATION
Pasco Bakofich III 09-20-07
STATE HIGHWAY ENGINEER
Washington State Department of Transportation
ROCK CHECK DAM

NOTE
ROCK CHECK DAMS SHALL BE PLACED OUTSIDE OF THE CLEAR ZONE, OR BEING TRAFFIC BARRIER.

WATTLE OR COMPOST SOCK CHECK DAM

SANDBAG CHECK DAM

PLACE SACKS FIRMLY AGAINST GROUND LINE AND ADJACENT SACKS.

ELEVATION

SECTION A

SIDE PROTECTION
SPILLWAY

EFFECTIVE DAM HEIGHT

QUARRY SPALLS
(STD. SPEC. B-128)

FLOWLINE

FLOW

SPILLWAY

SPACE CHECK DAMS THE DISTANCE APART WHERE POINTS A' AND B' ARE THE SAME ELEVATION

EXTENDED SECTION A

EXTENDED SECTION B

EXTENDED SECTION C

STATE OF WASHINGTON
LICENSED LANDSCAPE ARCHITECT

MARK W. MAURER
CERTIFICATE NO. 000556

CHECK DAMS
STANDARD PLAN I-50.20-00
SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION
Pasco Bakotich III 08-31-07
STATE OF WASHINGTON / Date
NOTE
PLACE GEOTEXTILE UNDER THE SPILLWAY AND SIDE SLOPES, PROVIDE A
CONTINUOUS LAYER BETWEEN THE GRAVEL/ROCK AND THE NATIVE EARTHEN MATERIAL

SECTION A

OUTFLOW CHANNEL IS
CONSTRUCTED BY EXCAVATION

SEDIMENT TRAP BOTTOM
1'-0" DEPTH OF 3/4"-1 1/2"
WASHED GRAVEL BACKFILL

1'-0" DEPTH OF 3/4"-1 1/2"
SEDIMENT TRAP BOTTOM

COMPACTED NATIVE MATERIAL
CONSTRUCTED BY EXCAVATION
OR EMBANKMENT

2'-0" SETTLING DEPTH

GROUND LINE

QUARRY SPALLS

TEMPORARY SILT FENCE
OR COMPOST SOCK

X = 1'-6" FOR SLOPES 4H:1V OR FLATTER
X = 1'-6" FOR SLOPES STEEPER THAN 4H:1V

TYPICAL SECTION
COMPOST BERM DETAIL

EXISTING ROAD

25'-0" R MIN. (TYP.)

4'-0" QUARRY SPALLS

AS REQUIRED - 10' MIN.
EXCEPT MAY BE REDUCED
to 5' MIN. FOR SITES WITH
LESS THAN ONE ACRE OF
EXPOSED SOIL.

PLACE CONSTRUCTION GEOTEXTILE FOR
SOIL STABILIZATION AND A MINIMUM OF 3'-0"
CRUSHED ROCK UNDER THE SPALLS, FROM THE
EDGE OF THE EXISTING ROADWAY TO THE RADIOUS
RETURNS, OR AS DIRECTED BY THE ENGINEER.

ISOMETRIC VIEW
STABILIZED CONSTRUCTION ENTRANCE

PLACE CONSTRUCTION GEOTEXTILE FOR
SOIL STABILIZATION AND A MINIMUM OF 3'-0"
CRUSHED ROCK UNDER THE SPALLS, FROM THE
EDGE OF THE EXISTING ROADWAY TO THE RADIOUS
RETURNS, OR AS DIRECTED BY THE ENGINEER.
NOTES
1. A Protective Vehicle is recommended regardless if a Truck Mounted Attenuator (TMA) is available; a work vehicle may be used. When no TMA is used, the Protective Vehicle shall be strategically located to shield workers, with no specific Roll-Ahead distance.

2. Night work requires additional roadway lighting at flagging stations. See WSDOT Standard Specifications for additional details.

3. Extend Channelizing Device taper across shoulder — recommended.

4. Sign sequence is the same for both directions of travel on the roadway.

5. Channelizing Device spacing for the downstream taper option shall be 20’ O.C.

6. For sign size refer to Manual on Uniform Traffic Control Devices (MUTCD) and WSDOT Sign Fabrication Manual M55-05.

SIGN SPACING = X (1)

<table>
<thead>
<tr>
<th>Highway Type</th>
<th>Speed Range (MPH)</th>
<th>Sign Spacing</th>
</tr>
</thead>
<tbody>
<tr>
<td>RURAL HIGHWAYS</td>
<td>50 / 60 MPH</td>
<td>500’ ≈</td>
</tr>
<tr>
<td>RURAL ROADS</td>
<td>45 / 55 MPH</td>
<td>500’ ≈</td>
</tr>
<tr>
<td>RURAL ROADS &amp; URBAN ARTERIALS</td>
<td>35 / 40 MPH</td>
<td>500’ ≈</td>
</tr>
<tr>
<td>RURAL ROADS, URBAN ARTERIALS, RESIDENTIAL &amp; BUSINESS DISTRICTS</td>
<td>30 / 35 MPH</td>
<td>200’ (2)</td>
</tr>
<tr>
<td>URBAN STREETS</td>
<td>25 MPH OR LESS</td>
<td>200’ (2)</td>
</tr>
</tbody>
</table>

(1) ALL SIGN SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMPS, AT-GRADE INTERSECTIONS, AND DRIVeways.

(2) THIS SIGN SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.

FOR LOCAL AGENCY USE ONLY
NOT FOR USE ON STATE ROUTES

LANE CLOSURE WITH FLAGGER CONTROL
STANDARD PLAN K-20.40-00
SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION
Ken L. Smith 02-15-07
ENGINEER DISTRICT ENGINEER

Washington State Department of Transportation
NOTES:
1) MACHINE BEARING FACES OF CASE AND COVER TO INSURE POSITIVE FIT.
2) CASTING SHALL BE GRAY IRON AASHTO M-105, CLASS 30.
IMPROVEMENT PLANS

For The Construction Of:
NACHES TIETON ROAD IMPROVEMENT PROJECT
(COWICHE RD., N. TO NACHES RD., S.)
C 3114
Volume 2 of 2
FA# STPR-W391(001)
Yakima County Public Services Project
<table>
<thead>
<tr>
<th>Item No.</th>
<th>Description</th>
<th>Approx. Quantity</th>
<th>Unit</th>
<th>Notes</th>
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<tr>
<td>1</td>
<td>MOBILIZATION</td>
<td>1</td>
<td>EA</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>CLEAVING AND CREEPING</td>
<td>1</td>
<td>EA</td>
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<tr>
<td>3</td>
<td>REMOVAL OF STRUCTURE AND OBSTRUCTION</td>
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<tr>
<td>4</td>
<td>REMOVING GUARDRAIL</td>
<td>2,063</td>
<td>EA</td>
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<tr>
<td>5</td>
<td>REMOVING GUARDRAIL, ANCHOR</td>
<td>3</td>
<td>EACH</td>
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<td>6</td>
<td>REMOVING PAINT LINE</td>
<td>500</td>
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<td>7</td>
<td>ROADWAY EXCAVATION INCL. RAIL</td>
<td>275,284</td>
<td>CY</td>
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<td>GRADE POINT TYPE 7</td>
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<td>EACH</td>
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<tr>
<td>9</td>
<td>LIGHT LOOSE SEED</td>
<td>12 EA</td>
<td>CY</td>
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<td>10</td>
<td>QUARRY SPALLS</td>
<td>190</td>
<td>CY</td>
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<td>PLACED END SECTION 36&quot; DIAM.</td>
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<td>12</td>
<td>UNDERGRADE PIPE 12&quot; DIAM.</td>
<td>3,806</td>
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<td>UNDERGRADE PIPE 12&quot; DIAM.</td>
<td>155</td>
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<td>14</td>
<td>DROP INLET TYPE 1</td>
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<td>SCHEDULE A APPROACH PIPE 12&quot; DIAM.</td>
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<td>18</td>
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**TRAFFIC**

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**MONUMENT CASE & COVER SCHEDULE**

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**ROCKCHECK DAM SCHEDULE**

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**PREPARED UNDER THE DIRECTION OF:**

COUNTY ENGINEER: DATE: 8/14/71

SUMMARY OF QUANTITIES AND SCHEDULES

SHEET 2 OF 79

GENERAL NOTES:

1. ALL EXISTING PRIVATE PIPE CONNECTIONS AND RELOCATIONS WILL BE PAID WITH SBA ITEM PRIVATE PIPE CONNECTIONS AND RELOCATION (FORCE ACCOUNT).CONTRACTOR IS RESPONSIBLE FOR VERIFYING WITH YAKIMA TITON IRRIGATION DISTRICT (TIT) ALL LOCATIONS OF NEW AND PROPOSED LINES, AS WELL AS ANY ABANDONED TID LINES.

2. YAKIMA COUNTY ANTICIPATES USING NATIVE ROCKY MATERIAL EXCAVATED FROM THE PROJECT AREA, AS LIGHT LOOSE ZIPRAPE AND QUARRY SPALLS.

3. ENHANCEMENT PROTECTION AT PIPE OUTFALLS SHALL BE LIGHT LOOSE ZIPRAPE (6' WIDE) X 2.5' (DEPTH) X LENGTH TO TIC OF ENHANCEMENT, AS SHOWN ON PLANS.

4. GRAVEL DRIVEWAYS TO BE SURFACED WITH HM 15' FROM EDGE OF ROAD, THEN REMAINDER CRUSHED SURFACING TOP COURSE AS SHOWN ON PLANS AND SPECIALS.

5. FIELD ENTRANCES TO BE SURFACED WITH CRUSHED SURFACING TOP COURSE AS SHOWN ON PLANS AND SPECIALS.
NACHES-TIETON ROAD

State of WA/ DNR Leased to Wyles Brothers
Lot 2

CONSTRUCTION NOTES

REMOVE YTD ABANDONED IRRIGATION PIPE BEYOND PROPOSED DELOCATED PIPE CROSSING (VERIFY WITH YTD)

SE CORNER OF NACHES-TIETON ROAD & NORTH COWICH ROAD

EDGE OF PAVEMENT

BEURN 3542.61
1/4 3543.00
1/2 3542.74
3/4 3542.56
END 3542.87

N. COWICH RD. STA. 648.63, 12 LT.

S.P.# 85-306

Wyles Brothers

PREPARED UNDER THE DIRECTION OF:

COUNTY ENGINEER DATE: 8/16/13

PROJECT ENGINEER:

DRAWN BY:

CHECKED BY:

PLAN:
STA. 6+00 TO STA. 12+00

SHEET 5 OF 79
NACHES-TIETON ROAD

CONSTRUCTION NOTES

1. INSTALL LOOSE RIPRAP
2. INSTALL BEAM GUARDRAIL NON-FLEARED TERMINAL (DOT)
   (HSDOT STANDARD PLAN C-4a)
3. INSTALL BEAM GUARDRAIL TYPE 1 - 9 FT. POSTS
   (HSDOT STANDARD PLAN C-1)
4. INSTALL RIDGE CHECK DAM
5. INSTALL MONUMENT CASE X COVER

Arthur & Easter Allen
Rev. Living Trust
(7/4/18-100)

COUNTY ENGINEER
DATE: 8/14/13

PROJECT ENGINEER:

DEMAND:

CHECKED BY:

REVISION:

PLAN:

STA. 36+00 TO
STA. 42+00

SECT. 16, T.14 N., R.17 E., W.M.

SHEET 10 OF 79
CONSTRUCTION NOTES

3. INSTALL BEAM GUARDRAIL, TYPE 1 - 9 FT, POSTS (WSDOT STANDARD PLAN C-1)
4. REMOVE EXISTING GUARDRAIL ANCHOR
5. INSTALL GUARDRAIL
6. INSTALL SINGLE-SLOPE CONCRETE BARRIER TERMINAL - 84/75 (VERTICAL BACK).
   (WSDOT STANDARD PLAN C-75.30-00 OR C-80.20-00)
7. INSTALL SINGLE-SLOPE CONCRETE BARRIER - 84/75 (VERTICAL BACK).
   (WSDOT STANDARD PLAN C-75.30-00 OR C-80.40-00)
8. TO MINIMIZE EROSION, THE TOP 5' OF THE OUTER EDGE OF EMBANKMENT SHALL BE CONSTRUCTED USING NATIVE ROCKY MATERIAL FROM PROJECT SITE.
9. INSTALL MONUMENT CASE & COVER
10. EMBANKMENT TO BE KEYED INTO THE EXISTING SLOPE USING 5-FOOT DEEP BY 10-FOOT WIDE KEYWAY. THE FILL WILL BE BENCHED INTO EXISTING SLOPE USING 10-FOOT WIDE BENCHES. (SEE GEO-TECHNICAL ENGINEERING REPORT TOT Tap#Naches/Tieton Road Stage Improvements)
CONSTRUCTION NOTES

1. INSTALL LIGHT LOOSE RIPRUP PER DETAIL A
2. INSTALL BEAM GUARDRAIL, NON-FLARED TERMINAL (50')
   (WSOD STANDARD PLAN C-46)
3. INSTALL BEAM GUARDRAIL, TYPE 1 - 0 FT. POSTS
   (WSOD STANDARD PLAN C-1)
4. REMOVE EXISTING GUARDRAIL ANCHOR
5. REMOVE EXISTING GUARDRAIL
6. INSTALL SINGLE-SLOPE CONCRETE BARRIER - S/P (VERTICAL BACK)
   (WSOD STANDARD PLAN C-75.20-00 OR C-80.40-00)
7. CONNECT UNDERGROUND PIPE TO STRUCTURE

8. CONSTRUCT BERM 2' WIDE TOP, WITH 2:1 SLOPE TOP ELEV. 2' ABOVE
   DROP INLET BLM LENGTH - FROM DRIB. GROUND TOP ELEV. TO BACK
   OF CONCRETE BARRIER.
9. REMOVE EXISTING CULVERT
10. INSTALL BEAM GUARDRAIL, TYPE 1 - 0 FT. POSTS
    (WSOD STANDARD PLAN C-1)
11. TO MINIMIZE EROSION, THE TOP 5' OF THE OUTER EDGE OF EMBANKMENT
    (WSOD STANDARD PLAN C-3A AND C-24.10-00)
12. INSTALL BEAM GUARDRAIL, TRANSITION SECTION TYPE 2, CONNECTION D
    SHALL BE CONSTRUCTED USING NATIVE ROCKY MATERIAL FROM
    PROJECT SITE.

INSTALL MONUMENT CASE & COVER
BENEFIT Foam Shall Be Keyed Into the Existing Slope Using
5-FOOT DEEP BY 10-FOOT WIDE KEYWAY. THE FILL WILL Be KEyed INTO
EXISTING SLOPE USING 10-FOOT WIDE BENCHES. (See Geotechnical
Engineering Study: Naches-Tieton Road - Bridge Improvement)

COUNTY ENGINEER
DATE: 8/4/13

PREPARED UNDER THE DIRECTION OF:
COUNTY ENGINEER
DATE: 8/4/13

PROJECT ENGINEER: KIM PFaffen
DRAWING BY: J. MATTHEWS
CHECKED BY: K. PFaffen
REVISION

PLAN:
STA. 60+00
TO
STA. 66+00

SHEET 14 OF 79
**CONSTRUCTION NOTES**

1. Install light loose riprap per detail A
2. Install beam guardrail type 1 - 8 ft. posts (King standard plan C-1)
3. Install single-slope concrete barrier terminal - H/P (vertical back) (King standard plan C-75.20-00 or C-60.40-00)
4. Install single-slope concrete barrier - H/P (vertical back) (King standard plan C-75.20-00 or C-60.40-00)
5. Remove existing culvert
6. Remove existing guardrail anchor
7. Remove existing guardrail
8. Install beam guardrail type 1 - 8 ft. posts (King standard plan C-1)
9. Auger, or relocate existing private irrigation as directed by the engineer, field verify location and size. (End item - private pipe connections and relocations.)
10. To minimize erosion, the top 5' of the outer edge of embankment shall be constructed using native soil/stabilization material from project site.
11. Install monuments case L cover
12. Embankment toe shall be keyed into the existing slope using 5-foot deep by 10-foot wide veneer. The fill will be bencheted into existing slope using 10-foot wide benches. (See geotechnical engineering study Naches-Tieton Road grading improvements)
13. Remove existing irrigation pipes which are located per note 14.
CONSTRUCTION NOTES

1. REMOVE EXISTING GUARDRAIL
2. INSTALL SINGLE-SLOPE CONCRETE BARRIER - 9'/90 (VERTICAL BACK), (INSDOT STANDARD PLAN C-72,20-00) OR C-60,40-00)
3. CONNECT UNDERDRAIN PIPE TO STRUCTURE
4. REMOVE EXISTING CULVERT
5. INSTALL DRAIN GUARDRAIL, TYPE 1 - 6 FT. POSTS (INSDOT STANDARD PLAN C-13)
6. ADJUST, OR RELOCATE EXISTING PRIVATE IRRIGATION AS DIRECTED BY THE ENGINEER. FIELD VERIFY LOCATION AND SIZE. END ITEM - PRIVATE PIPE CONNECTIONS AND RELOCATIONS.
7. INSTALL MONUMENT CASE 1 COVER
8. REMOVE EXISTING IRRIGATION PIPES WHICH ARE RELOCATED PER NOTE 14.

Donald E. & Merlin E. Gosnell
(71409-4143)

NOTE:
1) GUARDRAIL ENGINEERING STATION IS APPROXIMATE BASED ON CONNECTING TO EXISTING GUARDRAIL. CORRECTION TO BE PERFORMED BY CONTRACTOR TO MATCH PHYSICAL LOCATION OF EXISTING GUARDRAIL POSTS (FIELD VERIFIED)
NACHES-TIETON ROAD

ROADWAY EXCAVATION INCLUDING HAIL = 165,930 C.Y.
ENDAMENT = 0 C.Y.

EXISTING & PROFILE

CENTERLINE PROFILE

VPI STA = 26+00.00
VPI EL = 1922.00
CURVE LEN = 880.00

NACHES-TIETON ROAD
IMPROVEMENT PROJECT
COMICHE RD., N. TO
NACHES RD., S.
FA# STPR-W391(001)
C 3114

PREPARED UNDER
THE DIRECTION OF:

COUNTY ENGINEER
DATE:

PROJECT ENGINEER:

DRAWN:

CHECKED BY:
KIM PFAFF
J. MATHERS
E. PFAFF

PROFILE:
STA. 24+00
TO
STA. 30+00

SHEET 26 OF 79
NACHES-TIETON ROAD

EXISTING & PROFILE

PROFILE:
STA. 76+00
TO
STA. 79+50

SHEET 35 OF 79
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NACHES-TIETON ROAD IMPROVEMENT PROJECT COWICH RD., N. TO NACHES RD., S.
FA# SP-RE-W391(001) C 3114

COUNTY ENGINEER DATE: 8/1/14

PROJECT ENGINEER: KML PFAFF
DRAWN: J. MATHEWS CHECKED BY: K. PFAFF

REVISION:

STRUCTURE NOTES

SHEET 44 OF 79
NACHES-TIETON ROAD

LEGEND

CL of Ave Road
New Ave Road
Skirt Fence
Pipe (arc/arc sizes)

NACHES—TIETON ROAD IMPROVEMENT PROJECT
CONICHE RD., N. TO
NACHES RD., S.
FA# STPR-W391(001)
C 3114

PREPARED UNDER THE DIRECTION OF:
STATE OF WASHINGTON
CITY OF WASHINGTON

COUNTY ENGINEER
DATE: 8/19/93

PROJECT ENGINEER:
KIM PFAPP

DRAWN:
J. MATTHEWS

CHECKED BY:
K. PFAPP

EROSION CONTROL PLAN

SHEET 45 OF 79
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<td>7.3</td>
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<td>CONSTRUCT GRAVEL FIELD ENTRANCE PER DESIGN, MATCH POINT AT 45° LT.</td>
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<td>STA. 5+80 LT. (NACHES-TIETON)</td>
<td>4.6</td>
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<td>CONSTRUCT GRAVEL FIELD ENTRANCE PER DESIGN, MATCH POINT AT 50° LT.</td>
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<td>STA. 12+55 LT. (NACHES-TIETON)</td>
<td>68.4</td>
<td>21.1</td>
<td>5.4 CONSTRUCT HMA/GRAVEL APPROACH PER DESIGN, HMA TO 45° LT, REMINDER TO BE GRAVEL TO MATCH POINT AT 75° LT.</td>
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<td>STA. 25+14 BT. (NACHES-TIETON)</td>
<td>90.2</td>
<td>28.3</td>
<td>2.0 CONSTRUCT HMA/GRavel APPROACH PER DESIGN, HMA TO 45° LT, REMINDER TO BE GRAVEL TO MATCH POINT AT 65° BT.</td>
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<tr>
<td>STA. 25+00 BT. (NACHES-TIETON)</td>
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<td>11.4</td>
<td>0 CONSTRUCT GRAVEL FIELD ENTRANCE PER DESIGN, MATCH POINT AT 45° LT.</td>
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<tr>
<td>STA. 25+44 LT. (NACHES-TIETON)</td>
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<td>STA. 66+30 LT. (NACHES-TIETON)</td>
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<tr>
<td>STA. 1+25 LT. (N.T. PRIVATE)</td>
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<td>22.4 0 CONSTRUCT GRAVEL FIELD ENTRANCE PER DESIGN.</td>
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<td>91.0</td>
<td>59.2 0 CONSTRUCT GRAVEL FIELD ENTRANCE PER DESIGN, MATCH POINT AT 120° BT.</td>
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Totals for this sheet: 673.4 320.3 252.3 13.4
# GENERAL TRAFFIC CONTROL SIGN SPECIFICATIONS

<table>
<thead>
<tr>
<th>SIGN NO.</th>
<th>MUTCD SIGN #</th>
<th>LOCATION</th>
<th>SIGN SIZE</th>
<th>MATERIAL TYPE (IN.)</th>
<th>POST MATERIAL</th>
<th>POST SIZE</th>
<th>POST LENGTH (IN.)</th>
<th>CLEARANCE</th>
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<td>002-1</td>
<td></td>
<td>NAGAS HEIGHTS RD, 500 FT SOUTH OF BUEED RD.</td>
<td>48&quot; x 48&quot;</td>
<td>X</td>
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<tr>
<td>002-5</td>
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<td>002-12</td>
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**NOTE:** POST LENGTHS SHOWN ARE APPROXIMATE (14'-16'). FINAL VALUES SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR.

A: WOOD OR TELESPAR

**NOTES:**
1. MUTCD (MATERIALS ON UNIFORM TRAFFIC CONTROL DEVICES)
2. FOR STRUCTURE AND MOUNTING DETAILS, SEE STANDARD CONSTRUCTION OF SIGN AND CROSS-SECTION DETAILS. SERIES 6.
3. FOR CODE REFERENCE AND SIGN MATERIAL DETAILS, SEE STANDARD HIGHWAY SIGNS MANUAL.
4. DISTANCE FROM THE EXISTING SHOULDER, OR FACE OF CURB, TO THE SIGN POST.
5. ALL SIGNS, POSTS AND ANY OTHER TRAFFIC CONTROL DEVICES SHALL BE SUPPLIED, ERECTED AND MAINTAINED BY THE CONTRACTOR.
6. THE POSTS SHALL NOT PROTRUDE ABOVE THE SIGNS.

**NOTE:** THE CONTRACTOR IS RESPONSIBLE FOR SUBMITTING SITE SPECIFIC TRAFFIC CONTROL PLANS TO THE PROJECT ENGINEER FOR REVIEW AND APPROVAL. ROAD CLOSURES WILL NOT BE ALLOWED UNLESS OTHERWISE APPROVED BY THE ENGINEER. SEE SPECIAL PROVISIONS.

---

**TYPICAL SIGN INSTALLATION**

- **V**
- **W**
- **EDGE OF TRAVELLEDWAY**
- **EDGE OF SHOULDER**

---

**YAKIMA COUNTY**

**NACHES-TIETON ROAD IMPROVEMENT PROJECT COMMENC RD., N. TO NACHES RD., S.**

**PREPARED UNDER THE DIRECTION OF:**

**COUNTY ENGINEER DATE:** 8/14/15

**PROJECT ENGINEER:**

**DRAWN:** J. MATTHEWS

**CHECKED BY:** M. REHAN

**GENERAL TRAFFIC CONTROL SPECIFICATIONS**

**SHEET 52 OF 79**
<table>
<thead>
<tr>
<th>SIGN NO.</th>
<th>MUTCD SIGN #</th>
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</table>
# SIGN REMOVAL SPECIFICATIONS

<table>
<thead>
<tr>
<th>SIGN NO.</th>
<th>MUTCD SIGN #</th>
<th>LOCATION</th>
<th>SIGN SIZE</th>
<th>POST MATERIAL</th>
<th>POST SIZE</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>W1-4L</td>
<td></td>
<td>NACHES-TETON RD., 4,422 FT EAST/NORTH OF N. CONCONE RD.</td>
<td>24&quot; 48&quot;</td>
<td>WOOD</td>
<td>4&quot;x4&quot;</td>
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<tr>
<td>W1-6L</td>
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<td>NACHES-TETON RD., 4,850 FT EAST/NORTH OF N. CONCONE RD.</td>
<td>24&quot; 48&quot;</td>
<td>WOOD</td>
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<tr>
<td>W1-6R</td>
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<td>NACHES-TETON RD., 4,955 FT EAST/NORTH OF N. CONCONE RD.</td>
<td>24&quot; 48&quot;</td>
<td>WOOD</td>
<td>4&quot;x4&quot;</td>
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</tr>
<tr>
<td>W1-8L</td>
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<td>NACHES-TETON RD., 5,057 FT EAST/NORTH OF N. CONCONE RD.</td>
<td>36&quot; 56&quot;</td>
<td>WOOD</td>
<td>4&quot;x4&quot;</td>
<td></td>
</tr>
<tr>
<td>W1-3-1</td>
<td>SAME AS ABOVE</td>
<td>18&quot; 24&quot;</td>
<td>---</td>
<td>---</td>
<td>MOUNTED BELOW SIGN NO. 50</td>
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<tr>
<td>W1-5R</td>
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<td>NACHES-TETON RD., 5,254 FT EAST/NORTH OF N. CONCONE RD.</td>
<td>36&quot; 56&quot;</td>
<td>WOOD</td>
<td>4&quot;x4&quot;</td>
<td></td>
</tr>
<tr>
<td>W1-3-1</td>
<td>SAME AS ABOVE</td>
<td>18&quot; 24&quot;</td>
<td>---</td>
<td>---</td>
<td>MOUNTED BELOW SIGN NO. 52</td>
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<td>W1-5L</td>
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<td>NACHES-TETON RD., 5,757 FT EAST/NORTH OF N. CONCONE RD.</td>
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<tr>
<td>W1-3-1</td>
<td>SAME AS ABOVE</td>
<td>18&quot; 24&quot;</td>
<td>---</td>
<td>---</td>
<td>MOUNTED BELOW SIGN NO. 54</td>
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<tr>
<td>W1-4L</td>
<td></td>
<td>NACHES-TETON RD., 6,025 FT EAST/NORTH OF N. CONCONE RD.</td>
<td>36&quot; 56&quot;</td>
<td>WOOD</td>
<td>4&quot;x4&quot;</td>
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<tr>
<td>W1-3-1</td>
<td>SAME AS ABOVE</td>
<td>18&quot; 24&quot;</td>
<td>---</td>
<td>---</td>
<td>MOUNTED BELOW SIGN NO. 56</td>
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<td>W1-6R</td>
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<td>NACHES-TETON RD., 7,110 FT EAST/NORTH OF N. CONCONE RD.</td>
<td>24&quot; 48&quot;</td>
<td>WOOD</td>
<td>4&quot;x4&quot;</td>
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<tr>
<td>W1-5L</td>
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<td>NACHES-TETON RD., 7,560 FT EAST/NORTH OF N. CONCONE RD.</td>
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<td>WOOD</td>
<td>4&quot;x4&quot;</td>
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</tr>
<tr>
<td>W1-3-1</td>
<td>SAME AS ABOVE</td>
<td>18&quot; 24&quot;</td>
<td>---</td>
<td>---</td>
<td>MOUNTED BELOW SIGN NO. 60</td>
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<tr>
<td>W2-2R</td>
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<td>NACHES-TETON RD., 7,927 FT EAST/NORTH OF N. CONCONE RD.</td>
<td>36&quot; 56&quot;</td>
<td>WOOD</td>
<td>4&quot;x4&quot;</td>
<td></td>
</tr>
<tr>
<td>W16-3-2</td>
<td>SAME AS ABOVE</td>
<td>24&quot; 48&quot;</td>
<td>---</td>
<td>---</td>
<td>MOUNTED BELOW SIGN NO. 62</td>
<td></td>
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</tbody>
</table>

**NOTES:**
1. MUTCD (MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES).
2. FOR CODE REFERENCES AND STANDARD SIGN LAYOUT DETAILS, SEE THE CURRENT STANDARD HIGHWAY SIGN BOOK.
3. THE SIGNS AND POSTS SHALL BE DISASSEMBLED AND DELIVERED TO THE YAKIMA COUNTY PUBLIC WORKS DEPARTMENT MAINTENANCE SHOP AT 1216 S. 18TH ST., YAKIMA, WA, 98901. CONTACT CRAIG BLANKSHEP AT (509) 574-2596.
## Road Closure Sign Specifications

<table>
<thead>
<tr>
<th>SIGN NO.</th>
<th>MTC/SD #</th>
<th>LOCATION</th>
<th>SIGN SIZE</th>
<th>SHEETING (T X W)</th>
<th>POST</th>
<th>POST LENGTH</th>
<th>CLEARANCE</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>MA-4E</td>
<td>S. NACHES RD., 200 FT SOUTH OF YOUNG GRADE RD.</td>
<td>10&quot; x 24&quot;</td>
<td>A</td>
<td>4&quot;x4&quot;</td>
<td>• T</td>
<td>1½</td>
<td>MOUNTED ABOVE SIGN NO. 1, &quot;Naches-Tieton Rd&quot;</td>
</tr>
<tr>
<td>02</td>
<td>D3-201(420)</td>
<td>S. NACHES RD., 5.2 MILES NORTH OF YOUNG GRADE RD.</td>
<td>10&quot; x 24&quot;</td>
<td>A</td>
<td>4&quot;x4&quot;</td>
<td>• T</td>
<td>1½</td>
<td>MOUNTED ABOVE SIGN NO. 3, &quot;Naches-Tieton Rd&quot;</td>
</tr>
<tr>
<td>03</td>
<td>MA-4U</td>
<td>S. NACHES RD., 5.2 MILES NORTH OF YOUNG GRADE RD.</td>
<td>10&quot; x 24&quot;</td>
<td>A</td>
<td>4&quot;x4&quot;</td>
<td>• T</td>
<td>1½</td>
<td>MOUNTED ABOVE SIGN NO. 5, &quot;Naches-Tieton Rd&quot;</td>
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<tr>
<td>04</td>
<td>MA-4U</td>
<td>S. NACHES RD., 2 MILES NORTH OF YOUNG GRADE RD.</td>
<td>10&quot; x 24&quot;</td>
<td>A</td>
<td>4&quot;x4&quot;</td>
<td>• T</td>
<td>1½</td>
<td>MOUNTED ABOVE SIGN NO. 5, &quot;Naches-Tieton Rd&quot;</td>
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<tr>
<td>05</td>
<td>MA-10E</td>
<td>YOUNG GRADE RD., 100 FT WEST OF S. NACHES RD.</td>
<td>10&quot; x 24&quot;</td>
<td>A</td>
<td>4&quot;x4&quot;</td>
<td>• T</td>
<td>1½</td>
<td>MOUNTED ABOVE SIGN NO. 7, &quot;Naches-Tieton Rd&quot;</td>
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<tr>
<td>06</td>
<td>MA-4U</td>
<td>NACHES HEIGHTS RD., 50 FT EAST OF CAMP 4 RD.</td>
<td>10&quot; x 24&quot;</td>
<td>A</td>
<td>4&quot;x4&quot;</td>
<td>• T</td>
<td>1½</td>
<td>MOUNTED ABOVE SIGN NO. 10, &quot;Naches-Tieton Rd&quot;</td>
</tr>
<tr>
<td>07</td>
<td>MA-4U</td>
<td>NACHES HEIGHTS RD., 50 FT EAST OF WHITEKNIGHT RD.</td>
<td>10&quot; x 24&quot;</td>
<td>A</td>
<td>4&quot;x4&quot;</td>
<td>• T</td>
<td>1½</td>
<td>MOUNTED ABOVE SIGN NO. 10, &quot;Naches-Tieton Rd&quot;</td>
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<tr>
<td>08</td>
<td>R1-10M600</td>
<td>NACHES HEIGHTS RD., 100 FT SOUTH OF BLOOM RD.</td>
<td>10&quot; x 24&quot;</td>
<td>A</td>
<td>4&quot;x4&quot;</td>
<td>• T</td>
<td>1½</td>
<td>MOUNTED BELOW SIGN NO. 12, &quot;Naches-Tieton Rd&quot;</td>
</tr>
<tr>
<td>09</td>
<td>MA-10L</td>
<td>SAME AS ABOVE</td>
<td>10&quot; x 24&quot;</td>
<td>A</td>
<td>4&quot;x4&quot;</td>
<td>• T</td>
<td>1½</td>
<td>MOUNTED BELOW SIGN NO. 12, &quot;Naches-Tieton Rd&quot;</td>
</tr>
<tr>
<td>10</td>
<td>MA-4R</td>
<td>BLOOM RD., 50 FT WEST OF NACHES-TIETON RD.</td>
<td>10&quot; x 24&quot;</td>
<td>A</td>
<td>4&quot;x4&quot;</td>
<td>• T</td>
<td>1½</td>
<td>MOUNTED BELOW SIGN NO. 12, &quot;Naches-Tieton Rd&quot;</td>
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<tr>
<td>11</td>
<td>TYPE II BARRICADE (L)</td>
<td>NACHES-TIETON RD., 100 FT NORTH OF NACHES HEIGHTS RD.</td>
<td>6' x 5'</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>SEE BARC RiCade DETAILa</td>
</tr>
<tr>
<td>12</td>
<td>TYPE II BARRICADE (L)</td>
<td>NACHES-TIETON RD., 100 FT NORTH OF NACHES HEIGHTS RD.</td>
<td>6' x 5'</td>
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<td></td>
<td>SEE BARC RiCade DETAILa</td>
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<tr>
<td>13</td>
<td>R1-2</td>
<td>NACHES-TIETON RD., 100 FT NORTH OF NACHES HEIGHTS RD.</td>
<td>10&quot; x 24&quot;</td>
<td>A</td>
<td>4&quot;x4&quot;</td>
<td>• T</td>
<td>1½</td>
<td>MOUNTED ABOVE BARC RiCade NO. 16, &quot;Naches-Tieton Rd&quot;</td>
</tr>
<tr>
<td>14</td>
<td>TYPE III BARRICADE B &amp; R</td>
<td>NACHES-TIETON RD., 100 FT NORTH OF NACHES HEIGHTS RD.</td>
<td>6' x 5'</td>
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<td></td>
<td></td>
<td></td>
<td>SEE BARC RiCade DETAILa</td>
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<tr>
<td>15</td>
<td>MA-10R</td>
<td>NACHES-TIETON RD., 50 FT EAST OF N. CONWAY RD.</td>
<td>10&quot; x 24&quot;</td>
<td>A</td>
<td>4&quot;x4&quot;</td>
<td>• T</td>
<td>1½</td>
<td>MOUNTED BELOW SIGN NO. 20, &quot;Naches-Tieton Rd&quot;</td>
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<tr>
<td>16</td>
<td>R1-10M600</td>
<td>NACHES-TIETON RD., 100 FT WEST OF FLETCHER RD.</td>
<td>10&quot; x 24&quot;</td>
<td>A</td>
<td>4&quot;x4&quot;</td>
<td>• T</td>
<td>1½</td>
<td>MOUNTED BELOW SIGN NO. 20, &quot;Naches-Tieton Rd&quot;</td>
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<tr>
<td>17</td>
<td>MA-10E</td>
<td>SAME AS ABOVE</td>
<td>10&quot; x 24&quot;</td>
<td>A</td>
<td>4&quot;x4&quot;</td>
<td>• T</td>
<td>1½</td>
<td>MOUNTED BELOW SIGN NO. 20, &quot;Naches-Tieton Rd&quot;</td>
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<tr>
<td>18</td>
<td>MA-4U</td>
<td>POTTER RD., 50 FT NORTH OF NACHES-TIETON RD.</td>
<td>10&quot; x 24&quot;</td>
<td>A</td>
<td>4&quot;x4&quot;</td>
<td>• T</td>
<td>1½</td>
<td>MOUNTED BELOW SIGN NO. 20, &quot;Naches-Tieton Rd&quot;</td>
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<tr>
<td>19</td>
<td>R1-10M600</td>
<td>NACHES-TIETON RD., 100 FT WEST OF POTTER RD.</td>
<td>10&quot; x 24&quot;</td>
<td>A</td>
<td>4&quot;x4&quot;</td>
<td>• T</td>
<td>1½</td>
<td>MOUNTED BELOW SIGN NO. 20, &quot;Naches-Tieton Rd&quot;</td>
</tr>
<tr>
<td>20</td>
<td>MA-10E</td>
<td>SAME AS ABOVE</td>
<td>10&quot; x 24&quot;</td>
<td>A</td>
<td>4&quot;x4&quot;</td>
<td>• T</td>
<td>1½</td>
<td>MOUNTED BELOW SIGN NO. 20, &quot;Naches-Tieton Rd&quot;</td>
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<tr>
<td>21</td>
<td>MA-10L</td>
<td>ROSDENBAHN RD., 50 FT EAST OF POTTER RD.</td>
<td>10&quot; x 24&quot;</td>
<td>A</td>
<td>4&quot;x4&quot;</td>
<td>• T</td>
<td>1½</td>
<td>MOUNTED BELOW SIGN NO. 25, &quot;Naches-Tieton Rd&quot;</td>
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<td>22</td>
<td>TYPE III BARRICADE B &amp; R</td>
<td>NACHES-TIETON RD., 100 FT NORTH OF NACHES HEIGHTS RD.</td>
<td>6' x 5'</td>
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<td></td>
<td>SEE BARC RiCade DETAILa</td>
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<td>23</td>
<td>TYPE III BARRICADE B &amp; R</td>
<td>NACHES-TIETON RD., 100 FT NORTH OF NACHES HEIGHTS RD.</td>
<td>6' x 5'</td>
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<td>SEE BARC RiCade DETAILa</td>
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<tr>
<td>24</td>
<td>R1-2</td>
<td>NACHES-TIETON RD., 100 FT NORTH OF NACHES HEIGHTS RD.</td>
<td>10&quot; x 24&quot;</td>
<td>A</td>
<td>4&quot;x4&quot;</td>
<td>• T</td>
<td>1½</td>
<td>MOUNTED ABOVE BARC RiCade NO. 27, &quot;Naches-Tieton Rd&quot;</td>
</tr>
<tr>
<td>25</td>
<td>TYPE III BARRICADE B &amp; R</td>
<td>NACHES-TIETON RD., 100 FT NORTH OF NACHES HEIGHTS RD.</td>
<td>6' x 5'</td>
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<td></td>
<td></td>
<td></td>
<td>SEE BARC RiCade DETAILa</td>
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<tr>
<td>26</td>
<td>R1-10M600</td>
<td>RANGER RD., 50 FT WEST OF S. NACHES RD.</td>
<td>10&quot; x 24&quot;</td>
<td>A</td>
<td>4&quot;x4&quot;</td>
<td>• T</td>
<td>1½</td>
<td>MOUNTED ABOVE SIGN NO. 33, &quot;1½ MILE&quot;</td>
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<tr>
<td>27</td>
<td>MA-4U</td>
<td>NACHES RD., 200 FT SOUTH OF RANGER RD.</td>
<td>10&quot; x 24&quot;</td>
<td>A</td>
<td>4&quot;x4&quot;</td>
<td>• T</td>
<td>1½</td>
<td>MOUNTED ABOVE SIGN NO. 33, &quot;1½ MILE&quot;</td>
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<tr>
<td>28</td>
<td>MA-4U</td>
<td>NACHES RD., 200 FT SOUTH OF RANGER RD.</td>
<td>10&quot; x 24&quot;</td>
<td>A</td>
<td>4&quot;x4&quot;</td>
<td>• T</td>
<td>1½</td>
<td>MOUNTED ABOVE SIGN NO. 33, &quot;1½ MILE&quot;</td>
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<tr>
<td>29</td>
<td>D3-201(420)</td>
<td>RANGER RD., 50 FT WEST OF S. NACHES RD.</td>
<td>10&quot; x 24&quot;</td>
<td>A</td>
<td>4&quot;x4&quot;</td>
<td>• T</td>
<td>1½</td>
<td>MOUNTED ABOVE SIGN NO. 33, &quot;1½ MILE&quot;</td>
</tr>
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</table>

** Note: To be determined in the field by the contractor. ** Note: Post lengths shown are approximate (14'-15'). Final values shall be determined in the field by the contractor.

** WOOD OR TELESPAR

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** Notes:**
1. MUTCD Manual on Uniform Traffic Control Devices.
2. For structure and mounting details, see Standard Plans for Road and Bridge Construction, Series 6.
4. All signs are to be furnished by the existing shoulder, edge of curb, to the sign post.
5. All signs, posts, and any other traffic control devices shall be supplied, erected, and maintained by the contractor.
6. The posts shall not protrude above the signs.

** Note:** The contractor is responsible for submitting site specific traffic control plans to the Project Engineer for review and approval. Road closures will not be allowed unless otherwise approved by the Engineer. See special provisions.
## ROAD CLOSURE SIGN SPECIFICATIONS

<table>
<thead>
<tr>
<th>SIGN NO.</th>
<th>MUTCD SIGN #</th>
<th>LOCATION</th>
<th>SHAPED SIZE</th>
<th>MATERIAL</th>
<th>POST SIZE</th>
<th>POST LENGTH</th>
<th>CLEARANCE</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>M4-10L</td>
<td>NACHES HEIGHTS RD., 100 FT SOUTH OF NACHES-TIETON RD.</td>
<td>30&quot; x 24&quot;</td>
<td>X</td>
<td>4 x 4&quot;</td>
<td>7</td>
<td>10&quot;</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>M4-10L</td>
<td>N. COMANCHE RD., 100 FT NORTH OF FLETCHER RD.</td>
<td>X</td>
<td>X</td>
<td>4 x 4&quot;</td>
<td>7</td>
<td>10&quot;</td>
<td></td>
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<tr>
<td>3</td>
<td>M4-10L</td>
<td>ROSENKRANZ RD., 100 FT WEST OF NACHES-TIETON RD.</td>
<td>X</td>
<td>X</td>
<td>4 x 4&quot;</td>
<td>7</td>
<td>10&quot;</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>M4-10L</td>
<td>ROSENKRANZ RD., 100 FT NORTH OF NACHES-TIETON RD.</td>
<td>X</td>
<td>X</td>
<td>4 x 4&quot;</td>
<td>7</td>
<td>10&quot;</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>M4-10R</td>
<td>NACHES-TIETON RD., 100 FT EAST OF ROSENKRANZ RD.</td>
<td>X</td>
<td>X</td>
<td>4 x 4&quot;</td>
<td>7</td>
<td>10&quot;</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>M4-10R</td>
<td>NACHES-TIETON RD., 100 FT EAST OF POTTER RD.</td>
<td>X</td>
<td>X</td>
<td>4 x 4&quot;</td>
<td>7</td>
<td>10&quot;</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>M4-10R</td>
<td>NACHES-TIETON RD., 100 FT WEST OF NACHES-HEIGHTS RD.</td>
<td>X</td>
<td>X</td>
<td>4 x 4&quot;</td>
<td>7</td>
<td>10&quot;</td>
<td></td>
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<tr>
<td>8</td>
<td>M4-10R</td>
<td>POTTER RD., 100 FT SOUTH OF ROSENKRANZ RD.</td>
<td>X</td>
<td>X</td>
<td>4 x 4&quot;</td>
<td>7</td>
<td>10&quot;</td>
<td></td>
</tr>
</tbody>
</table>

*NOTE: POST LENGTHS SHOWN ARE APPROXIMATE (1.4'-1.6'). FINAL VALUES SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR.*

### NOTES:

1. MUTCD (Manual on Uniform Traffic Control Devices).
2. FOR STRUCTURE AND MOUNTING DETAILS, SEE STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION, SERIES 6.
3. FOR CODE REFERENCES AND STANDARD SIGN LAYOUT DETAILS, SEE STANDARD HIGHWAY SIGNS MANUAL.
4. DISTANCE FROM THE EXISTING SHOULDER, OR FACE OF CURB, TO THE SIGN POST.
5. ALL SIGNS, POSTS AND ANY OTHER TRAFFIC CONTROL DEVICES SHALL BE SUPPLIED, ERECTED AND MAINTAINED BY THE CONTRACTOR.
6. THE POSTS SHALL NOT PROTRUDE ABOVE THE SIGNS.

### ENLARGEMENT PLAN

- DETOUR
- NACHES-TIETON RD.
- WEATHER STATION
- CLOSURE AREA

### NOTES:

- THE CONTRACTOR IS RESPONSIBLE FOR SUBMITTING SITE-SPECIFIC TRAFFIC CONTROL PLANS TO THE PROJECT ENGINEER FOR REVIEW AND APPROVAL. ROAD CLOSURES WILL NOT BE ALLOWED UNLESS OTHERWISE APPROVED BY THE ENGINEER. SEE SPECIAL PROVISIONS.
YAKIMA COUNTY PUBLIC SERVICES
ADVANCE ROAD NAME SIGN
SPECIFICATIONS

SIGN FABRICATION SHALL MEET THE CURRENT EDITION OF THE
FEDERAL HIGHWAY ADMINISTRATION (FHA) STANDARD
SIDEWALK SIGN MANUAL.

SIGN FACE
D4-2H (MODIFIED)
1 1/2" RADIUS

w Wapato Rd

VARIABLE
COLORS
LEGEND - BLACK (3101)
BACKGROUND - ORANGE (3101)

ALL LEGEND SHALL BE SERIES 6 (MODIFIED)
LEGEND
ALL SPACING
4" 6"

DIRECTION (W)
3" L.C.
ABBR. (H)
3" L.C. / 3/16" L.C.

THE REFLECTIVE SHEETING SHALL
MEET THE FEDERAL HIGHWAY
ADMINISTRATION (FHA)
RETROREFLECTIVITY REQUIREMENTS.

REFLECTIVE SIGN SHEETING SHALL
BE TYPE I.

TYPICAL SIGN INSTALLATION

NTS
**TYPE TP-A FOUNDATION**

**TYPE TP-A & TP-B FOUNDATION TABLE**

<table>
<thead>
<tr>
<th>POST SIZE</th>
<th>MAX. XYZ</th>
<th>VERTICAL REBAR</th>
<th>PIXEL DEPTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASTM A 36</td>
<td>ASTM A 61</td>
<td>3 POST</td>
<td>3 POST</td>
</tr>
<tr>
<td>WE 2 x 12</td>
<td>WS 9 x 12</td>
<td>1570</td>
<td>2205</td>
</tr>
<tr>
<td>WE 2 x 10</td>
<td>WS 9 x 10</td>
<td>1260</td>
<td>1350</td>
</tr>
<tr>
<td>WE 2 x 10</td>
<td>WS 9 x 10</td>
<td>1260</td>
<td>1350</td>
</tr>
<tr>
<td>WE 2 x 12</td>
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<td>1570</td>
<td>2205</td>
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<tr>
<td>WE 2 x 10</td>
<td>WS 9 x 10</td>
<td>1260</td>
<td>1350</td>
</tr>
<tr>
<td>WE 2 x 12</td>
<td>WS 9 x 12</td>
<td>1570</td>
<td>2205</td>
</tr>
</tbody>
</table>

*CONCRETE DESIGN 3000 PSI REQUIRED 4000 PSI*

**NOTES**
1. For TRANSPO 3" to 8" square steel posts are acceptable and require type TP-B foundations.

**KEY NOTES**
- Foundation depths based on allowable lateral bearing pressure in excess of 2000 PSF.
- Two-post installation.
- Single-post installations require square steel posts. For single-post installations, divide the post MAX. XYZ in half.

**PREPARED UNDER THE DIRECTION OF:**

**COUNTY ENGINEER:**

**DATE:** 8/6/15

**ITS VM5 INSTALLATION DETAILS**

**SHEET 64 OF 78**
RWIS (REMOTE WEATHER INFORMATION SYSTEM) STATION REMOVAL DETAILS

CONSTRUCTION NOTES:
1. All materials not identified to be reinstalled and are salvageable shall be delivered to Terraza Heights landfill.
2. Remove associated weather station tower assembly and equipment enclosures from existing location Naches-Tieton 6000 site. (Salvage tower structure and enclosures for re-installation at new RWIS site).
4. Remove type 1 J-box (quantity 2).
5. Remove 30’ wooden utility pole. (Salvage Pacific Power meter base, disconnect, and Telco demarcation protector currently installed on pole).
6. Remove all RG6 conduit connecting J-box locations, Pacific Power meter base, Pacific Power disconnect, Telco demarcation and weather station.
7. Remove all power conductors from previously described RG6 conduit.
8. Remove (and salvage) breaker (quantity 2) distribution panel.
10. Remove 4” x 4” wood post, approx. 4’ height, (tower rest / support).

NOTE #1 - EXISTING NACHES-TIETON RWIS REMOTE WEATHER INFORMATION SYSTEM LOCATION. REFER SHEET 68 OF 79 FOR WEATHER STATION REMOVAL DETAIL.

NOTE #2 - NEW NACHES-TIETON RWIS REMOTE WEATHER INFORMATION SYSTEM LOCATION. REFER SHEET 67 OF 79 FOR WEATHER STATION INSTALLATION DETAIL.
CONSTRUCTION NOTES:
1. INSTALL CONCRETE SERVICE PAD (2' x 6' x 4' TYPICAL)
2. INSTALL CONCRETE TOWER BASE (33" x 33" x 48")
3. INSTALL TOWER FIXED BASE ASSEMBLY (SELMER MODEL WFD-13)
4. INSTALL QUATRE SERVICE BOX (12" x 12" x 12" TOP OF BOX FLUSH WITH TOP OF SERVICE PAD)
5. INSTALL 2' RD5 CONDUIT
6. INSTALL 1' RD5 CONDUIT
7. INSTALL 1/2' RD5 CONDUIT
8. INSTALL SALVAGED BREAKER DISTRIBUTION PANEL (20A x 2)
9. INSTALL SALVAGED RIM / UPS ENCLOSURES
10. INSTALL 6' COPPER GROUND ROD
11. INSTALL 30' WOODEN UTILITY POLE: 8' DEPTH
12. INSTALL ONE ELECTRICAL SERVICE (N/RATED DISCONNECT) ON WOODEN UTILITY POLE
13. INSTALL JUNCTION BOX TYPE I
14. INSTALL SALVAGED 30' TOWER ASSEMBLY

WIRING SCHEDULE

<table>
<thead>
<tr>
<th>RAGWAY SIZE</th>
<th>NB AND POWER</th>
<th>GB AND GROUND</th>
<th>SEE WIRE #</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>2</td>
<td>N/A</td>
<td>NOTE 1</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>NOTE 2</td>
</tr>
<tr>
<td>3</td>
<td>1/2</td>
<td>1</td>
<td>6</td>
<td>GROUND</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td>N/A</td>
</tr>
</tbody>
</table>

* NICE NOTE 1: ALL SERVICE WIRING SHALL BE (SEE WIRE #)

* NICE NOTE 2: TRANSFORMER GROUND WIRING SHALL BE (SEE WIRE #)

SEE ENLARGED DETAIL NEW LOCATION NACHES-TIETON RD
REMOTE WEATHER INFORMATION SYSTEM

ENLARGEMENT DETAIL
SITE DETAIL (SEE CONSTRUCTION NOTES)

STA 38+60, 701 FT, ELEV. = 1820.5

ELECTRICAL LEGEND
TO BE CONSTRUCTED
QUATRE J-BOX
JUNCTION BOX TYPE I
BREAKER DISTRIBUTION PANEL
TOWER BASE & TOWER STRUCTURE
TYPE A ELECTRICAL SERVICE
WITH RATED DISCONNECT
6' SOLID COPPER GROUND ROD
RD5 GRIZED SALVAGED CONDUIT
32 STRAND 17 AWG, TINNED COPPER GROUND CABLE
RIM5 COMPONENT & UPS ENCLOSURE

CONSTRUCTION & WIRE NOTE FLAGS
CONSTRUCTION NOTE FLAG
WIRE NOTE FLAG
CONSTRUCTION NOTES:
1. INSTALL CONCRETE SERVICE PAD (6' X 6' X 4' TYPICAL)
2. INSTALL CONCRETE TOWER BASE (33" X 33" X 36") SEE NOTES 1, 2, 4, 5
3. INSTALL TOWER FIXED BASE ASSEMBLY (KELLMAN MODEL NF-13)
4. INSTALL QUAILTITE SERVICE BOX (27" X 16" X 12") TOP OF BOX FLUSH W/ TOP OF SERVICE PAD
5. INSTALL 2" DD CONDUIT
6. INSTALL 1" DD CONDUIT
7. INSTALL 1/2" DD CONDUIT
8. INSTALL SALVAGED BREAKER DISTRIBUTION PANEL (20A X 2)
9. INSTALL SALVAGED RRMS / UPS ENCLOSURES
10. INSTALL 8" COPPER GROUND ROD
11. INSTALL GROUND CABLE CLAMP (GROUND TERMINAL)
12. INSTALL SALVAGED TOWER ASSEMBLY
13. STUB OUT CONDUIT 6' BEYOND CONCRETE PAD.
14. DO NOT INSTALL GROUND CABLES IN CONCRETE PAD, RUN CABLES ON TOP, ANCHOR GROUND CABLES FLAT AGAINST CONCRETE PAD WITH APPROVED CLAMPS / ANCHORS.
15. CONCRETE: MINIMUM 4,000 P.S.I. w/ 28 DAY COMpressive STRENGTH.
16. CONCRETE BASE SHALL BE DESIGNED FOR 2,000 P.S.I. SOIL BEARING CAPACITY.
17. A GEOTECHNICAL ENGINEER MAY BE NEEDED TO VERIFY SOL CAPACITY OR RECOMMEND MODIFIED ALTERATIONS IF SOIL CONDITIONS ARE QUESTIONABLE.
18. MINIMUM DISTANCE FROM TOWER LEG: 3', (THREE FEET)
19. MINIMUM DISTANCE FROM TOWER LEG: 10' (TEN FEET)

WIRE NOTE:
22 STRAND, 17 GAUGE, TINNED COPPER CABLE

GENERAL NOTE:
CONTRACTOR SHOULD ANTICIPATE ROCK IN THE AREA.
CONSTRUCTION NOTES:
1. INSTALL 1" RISER CONDUIT
2. INSTALL SALVAGED BREAKER DISTRIBUTION PANEL (20A X 2)
3. INSTALL SALVAGED RMS / UPS ENCLOSURES
4. INSTALL 8" COPPER GROUND ROD
5. GROUND CABLE CLAMP (GROUND TERMINAL)
6. 30' SALVAGED TOWER ASSEMBLY
7. **DO NOT INSTALL GROUND CABLES IN CONCRETE PAD. RUN CABLES ON TOP, ANCHOR GROUND CABLES FLAT AGAINST CONCRETE PAD WITH APPROVED CLAMPS / ANCHORS.**
8. MINIMUM DISTANCE FROM TOWER LEGS: 3' (THREE FEET)
9. MINIMUM DISTANCE FROM TOWER LEGS: 10' (TEN FEET)

WIRE NOTE:

**32 STRAND, 17 GAUGE, TINNED COPPER CABLE**

GENERAL NOTE:
CONTRACTOR SHOULD ANTICIPATE ROCK IN THE AREA.

(TOP VIEW)
GROUND ROD OVERVIEW
NT5

(TOWER GROUND TERMINAL DETAIL)

GROUND TERMINAL
NT5

(TOWER GROUNDING OVERVIEW (SIDE VIEW))

GROUND TERMINAL
NT5
CONSTRUCTION NOTES:
6. Install 1" RIGS conduit
7. Install 30' wooden utility pole; 8' depth
8. Electrical weather head rated for 1" conduit
9. Meter base (type A electrical service with rated dis-connect)
10. Disconnect panel (100A)
11. Weather head, conduit & utility pole for overhead connectivity: Pacific Power
12. 10' minimum depth for buried conduit

ELECTRICAL LEGEND

TO BE CONSTRUCTED

TYPE A ELECTRICAL SERVICE WITH RATED DIS-CO N N E C T

RIGS (RIGID GALVANIZED CONDUIT) - 6' - 6' -

ORIGINAL GROUND

TO BREAKER DISTRIBUTION PANEL; SEE CONSTRUCTION NOTE 27

SOUTH ELEVATION VIEW
WEST ELEVATION VIEW

POWER POLE & TYPE A ELECTRICAL SERVICE DETAIL

NTS
CHANNELIZATION NOTES

1. PAINTED CENTER LINE
2. PAINTED CENTER LINE WITH NO PASS LINE
3. PAINTED DOUBLE CENTER LINE
4. PAINTED EDGE LINE

CONSTRUCTION LINE

NOTE:
1) THE PAVEMENT MARKINGS SHALL BE SPOTTED BY THE ENGINEER PRIOR TO PAINTING. THE ENGINEER SHALL BE NOTIFIED AT LEAST 5 WORKING DAYS PRIOR TO PAINTING TO SPOT THE PAVEMENT MARKINGS.
NACHES-TIETON ROAD

CHANNELIZATION NOTES

1. PAINTED CENTER LINE
2. PAINTED CENTER LINE WITH NO PASS LINE
3. PAINTED DOUBLE CENTER LINE
4. PAINTED EDGE LINE

CONSTRUCTION LINE

TYPICAL CENTER LINE
WITH NO PASS LINE

NOTES:
1) THE PAVEMENT MARKINGS SHALL BE
SPOTTED BY THE ENGINEER PRIOR TO
PAINTING. THE ENGINEER SHALL BE NOTIFIED
AT LEAST 5 WORKING DAYS PRIOR TO
PAINTING TO SPOT THE PAVEMENT MARKINGS.

TYPICAL SKID CENTER LINE

TYPICAL DOUBLE CENTER LINE

PROJECT ENGINEER:

CHECKED BY:

PAVEMENT MARKINGS
STA. 36+00
TO
EOP STA. 77+54.48

SHEET 73 OF 79
## PERMANENT SIGNING SPECIFICATIONS

<table>
<thead>
<tr>
<th>SIGN NO.</th>
<th>MUTCD SIGN NO.</th>
<th>LOCATION</th>
<th>SIGN SIZE UN</th>
<th>MOUNTING TYPE</th>
<th>POST MATERIAL</th>
<th>POST SIZE (IN)</th>
<th>CLEARANCE BT</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>22-2R</td>
<td>NACHES-TIETON RD, 500 FT WEST OF N. CONOWE RD</td>
<td>36&quot; X 36&quot;</td>
<td>IV</td>
<td>METAL</td>
<td>2&quot; x 2&quot;</td>
<td>—</td>
<td>MOUNTED BELOW SIGN NO. 1, &quot;N. Conowee Rd&quot;</td>
</tr>
<tr>
<td>2</td>
<td>26-6P</td>
<td>SAME AS ABOVE</td>
<td>24&quot; X 48&quot;</td>
<td>III-P</td>
<td>—</td>
<td>—</td>
<td>6&quot;</td>
<td>10&quot;</td>
</tr>
<tr>
<td>3</td>
<td>SPECIAL NO. 1</td>
<td>NACHES-TIETON RD, 300 FT WEST OF N. CONOWE RD</td>
<td>48&quot; X 60&quot;</td>
<td>IV</td>
<td>METAL</td>
<td>2&quot; x 2&quot;</td>
<td>—</td>
<td>DOUBLE POST MOUNTED, &quot;Conowee 2 M, Naches 2.5 M&quot;</td>
</tr>
<tr>
<td>4</td>
<td>SPECIAL NO. 2</td>
<td>N. CONOWE RD, 500 FT SOUTH OF NACHES-TIETON RD</td>
<td>48&quot; X 60&quot;</td>
<td>IV</td>
<td>METAL</td>
<td>2&quot; x 2&quot;</td>
<td>—</td>
<td>DOUBLE POST MOUNTED, &quot;Conowee, Tieton&quot;</td>
</tr>
<tr>
<td>5</td>
<td>SPECIAL NO. 3</td>
<td>NACHES-TIETON RD, 50 FT NORTH OF N. CONOWE RD</td>
<td>48&quot; X 24&quot;</td>
<td>IV</td>
<td>METAL</td>
<td>2&quot; x 2&quot;</td>
<td>—</td>
<td>DOUBLE POST MOUNTED, &quot;Conowee Rd&quot;</td>
</tr>
<tr>
<td>6</td>
<td>SPECIAL NO. 4</td>
<td>NACHES-TIETON RD, 50 FT SOUTH OF NACHES-TIETON RD</td>
<td>48&quot; X 24&quot;</td>
<td>IV</td>
<td>METAL</td>
<td>2&quot; x 2&quot;</td>
<td>—</td>
<td>DOUBLE POST MOUNTED, &quot;Conowee Rd&quot;</td>
</tr>
</tbody>
</table>

| NO. | SAME AS ABOVE | 24" X 48" | — | 6" | 10" |
| 7        | SPECIAL NO. 5  | NACHES-TIETON RD, 1,220 FT EAST/NORTH OF N. CONOWE RD | 36" X 36" | IV | METAL | 2" x 2" | — | MOUNTED BELOW SIGN NO. 13, "N. Conowee Rd" |
| 8        | SPECIAL NO. 6  | NACHES-TIETON RD, 1,420 FT EAST/NORTH OF N. CONOWE RD | 36" X 36" | IV | METAL | 2" x 2" | — | MOUNTED BELOW SIGN NO. 14, "Rosenburg Rd" |
| 9        | SPECIAL NO. 7  | NACHES-TIETON RD, 2,200 FT EAST/NORTH OF N. CONOWE RD | 36" X 36" | IV | METAL | 2" x 2" | — | MOUNTED BELOW SIGN NO. 22, "Rosenburg Rd" |
| 10       | SPECIAL NO. 8  | NACHES-TIETON RD, 2,260 FT EAST/NORTH OF N. CONOWE RD | 36" X 36" | IV | METAL | 2" x 2" | — | MOUNTED BELOW SIGN NO. 24, "Rosner Rd" |
| 11       | SPECIAL NO. 9  | NACHES-TIETON RD, 2,875 FT EAST/NORTH OF N. CONOWE RD | 36" X 36" | IV | METAL | 2" x 2" | — | MOUNTED BELOW SIGN NO. 26, "Naches Heights Rd" |
| 12       | SPECIAL NO. 10 | NACHES-TIETON RD, 2,890 FT EAST/NORTH OF N. CONOWE RD | 36" X 36" | IV | METAL | 2" x 2" | — | MOUNTED ABOVE SIGN NO. 29, "Rosenburg Rd" |

| NO. | SAME AS ABOVE | 24" X 48" | — | 6" | 10" |
| 13       | SPECIAL NO. 11 | NACHES-TIETON RD, 3,650 FT EAST/NORTH OF N. CONOWE RD | 36" X 36" | IV | METAL | 2" x 2" | — | MOUNTED ABOVE SIGN NO. 30, "Rosenburg Rd" |

### NOTES:
1. MUTCD (Manual on Uniform Traffic Control Devices).
2. FOR STRUCTURE AND MOUNTING DETAILS, SEE STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION, SERIES 6.
3. FOR CODE REFERENCES AND STANDARD SIGN LAYOUT DETAILS, SEE CURRENT STANDARD HIGHWAY SIGNS MANUAL.
4. ALL SIGNS, POSTS AND ANY OTHER TRAFFIC CONTROL DEVICES SHALL BE SUPPLIED, ERECTED AND MAINTAINED BY THE CONTRACTOR.
5. THE POSTS SHALL NOT PROTRUDE ABOVE THE SIGN.

### PREPARED UNDER THE DIRECTION OF:

- COUNTY ENGINEER
  - DATE: 8/14/83

### PROJECT ENGINEER:
- K.W. MYAFF

### DRAWN:
- J. MATTHEWS

### CHECKED BY:
- M. REMNAN

### SHEET 77 OF 79
DOUBLE POST MOUNTED DETAIL

TYPICAL SIGN INSTALLATION

FOR SPECIAL NO. 1, 2, 3, & 4

FOR WAPATO RD

EDGE OF TRAVELED WAY

SIGN POST
2 1/4" SQUARE STEEL TUBE

LOWER SIGN POST SUPPORT
2 1/4" SQUARE STEEL TUBE

NOTE: SEE STANDARD PLAN 6-24.50.00 FOR TYPE 51-2 SIGN SUPPORT

YAKIMA COUNTY PUBLIC SERVICES
ADVANCE ROAD NAME SIGN
SPECIFICATIONS

SIGN FACE
DO-1 (OXIDERED)

COLORS:
LEGEND- BLACK (SIL)
BACKGROUND- GREEN (SIL)

ALL LEGENDS SHALL BE BURNISH EDGES
LEGEND 3/4" O.C. (1/4" L.C.)
ALL LETTERS 3/4" O.C. (1/4" L.C.)
ABBREVIATION (SIL) 1/2" O.C. (1/2" L.C.)

THE REFLECTIVE SHEETING SHALL
MEET THE FEDERAL HIGHWAY ADMINISTRATION (FHA) REFLECTIVITY REQUIREMENTS.

RECOMMENDED USE OF SHEETING:
1 TYPE "A" REEL

YAKIMA COUNTY

NACHES-TIETON
ROAD IMPROVEMENT PROJECT
COWCHE RD., N. TO
NACHES RD., S.
FA# 58-391(001)
C 3114

PREPARED UNDER THE DIRECTION OF:

COUNTY ENGINEER
DATE: 8/14/13

REV.

PROJECT ENGINEER:

PERMANENT SIGNING
DETAILS

SHEET 79 OF 79