CONTRACT SPECIFICATIONS

COUNTRY CLUB DRIVE
BRIDGE NO. 163 REPLACEMENT

YAKIMA COUNTY PUBLIC SERVICES PROJECT
C 3160
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INFORMATIONAL BID DOCUMENTS
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.

GARY N. EKSTEDT, P.E.
COUNTY ENGINEER

EXPIRES 8/13/77
INSTRUCTIONS TO BIDDERS

DELIVERY OF PROPOSALS

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

Office of the Board of County Commissioners of Yakima County, Room 232, Yakima County Courthouse, 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 Board of County Commissioners 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 January 5, 2006.

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

Room 419, Yakima County Courthouse, 128 North 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 1and give Bond as required.

FORM FURNISHED:

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

YAKIMA COUNTY IS AN EQUAL OPPORTUNITY EMPLOYER
PROPOSAL

This certifies that the undersigned has examined the location of the noted project:

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:

C 3160 – COUNTRY CLUB DRIVE BRIDGE NO. 163 REPLACEMENT

**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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<tr>
<td>1</td>
<td>MOBILIZATION</td>
<td>1</td>
<td>L.S.</td>
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<td>$</td>
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<td>2</td>
<td>REMOVAL OF STRUCTURES AND OBSTRUCTIONS</td>
<td>1</td>
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<td>4</td>
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<td>200</td>
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<td>$</td>
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<td>SHORING OR EXTRA EXCAVATION CL. A</td>
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<td>HMA, CL 1/2&quot;, PG 64-28</td>
<td>30</td>
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<td>LB.</td>
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<tr>
<td>11</td>
<td>SUPERSTRUCTURE – COUNTRY CLUB DRIVE BRIDGE BRIDGE NO. 163</td>
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<td>$</td>
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<tr>
<td>12</td>
<td>CONCRETE TRAFFIC BARRIER</td>
<td>212</td>
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<td>300</td>
<td>S.Y.</td>
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<td>DETOUR ROAD - COMPLETE</td>
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<td>IRRIGATION SYSTEM - COMPLETE</td>
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<td>18</td>
<td>TEMPORARY IRRIGATION SYSTEM - COMPLETE</td>
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<td>$</td>
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<td>PROJECT TEMPORARY TRAFFIC CONTROL</td>
<td>1</td>
<td>EST</td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>----------------------------------</td>
<td>----</td>
<td>-----</td>
<td>----</td>
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<tr>
<td>20</td>
<td>MINOR CHANGES</td>
<td></td>
<td>EST</td>
<td>5,000.00</td>
<td>$ 5,000.00</td>
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</tbody>
</table>

**TOTAL BID AMOUNT C 3160** $
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 Engineer 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

______________________________

(Seal and Stamp)

NOTARY PUBLIC

My appointment expires __________________________

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-3160.
LETTER OF RESPONSIBILITY

Date: ____________________________
County Road Project No.: C 3160

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 3160 – COUNTRY CLUB DRIVE BRIDGE NO. 163 REPLACEMENT

I have the following equipment available for this work.

_________________________________________________________________
_________________________________________________________________
_________________________________________________________________

_________________________________________________________________
_________________________________________________________________

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 pre-qualification 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: 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.
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.
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.

Name and Title of Authorized Representative:

Signature  Date
CONTRACT

THIS AGREEMENT, 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, materials and equipment for C 3160 — COUNTRY CLUB DRIVE BRIDGE NO. 163 REPLACEMENT and shall perform any changes in the work in accordance with the Contract Documents. “Contract Documents” are this Contract, the attached Plans and Specifications and the current edition of the Standard Specifications of the Washington State Department of Transportation and American Public Works Association which are by this reference incorporated herein and made a part hereof. In using said Standard Specifications and Amendments thereto, “Secretary of Transportation”, “Engineer” and like terms used therein will be construed to mean Yakima County Engineer and “State” or “Thurston County” shall mean Yakima County.

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 attached Specifications and the schedule of unit or itemized prices at the time and in the manner and upon the conditions provided for 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.

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.

Executed by the CONTRACTOR on ______________, 20__

BOARD OF YAKIMA COUNTY COMMISSIONERS

______________________________
Chair

______________________________
Commissioner

______________________________
Commissioner

ATTEST: Deputy Clerk of the Board

______________________________
Jennifer Adams

Approved as to form:

______________________________
Deputy Prosecuting Attorney

Signature

Print or Type Name of Person Signing

Title

Foregoing Contract approved and ratified

Surety

Attorney-in-fact
PERFORMANCE BOND
(RCW 39.08)

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 C 3160 – COUNTRY CLUB DRIVE BRIDGE NO. 163 REPLACEMENT 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 __________________, 20____

PRINCIPAL

By:__________________________

Title:_________________________

SURETY

By:__________________________

Attorney-in-Fact

APPROVED: YAKIMA COUNTY

By:__________________________

Chair of the Board of
Yakima County Commissioners

Date:________________________

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
AMENDMENTS TO THE STANDARD SPECIFICATIONS

C 3160 – COUNTRY CLUB DRIVE BRIDGE NO. 163 REPLACEMENT

Yakima County, Washington

INTRODUCTION

The English version of the 2004 Standard Specifications for Road, Bridge and Municipal Construction as prepared by the Washington State Department of Transportation and the American Public Works Association, Washington State Chapter, including Division 1-99 APWA Supplement are hereby incorporated into this contract as Standard Specifications.

The following Amendments and Special Provisions shall be used in conjunction with the 2004 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 reference which do not apply to this particular project.

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

August 1, 2005

1-07.1 Laws to be Observed

The first, second, and fourth paragraphs are revised to read:

The Contractor shall always comply with all Federal, State, tribal or local laws, ordinances, and regulations that affect work under the contract. The Contractor shall indemnify, defend, and save harmless the State (including the Governor, Commission, Secretary, and any agents, officers, and employees) against any claims that may arise because the Contractor (or any employee of the Contractor or subcontractor or material person) violated a legal requirement.
The Contractor shall be responsible for the safety of all workers and shall comply with all appropriate state safety and health standards, codes, rules, and regulations, including, but not limited to, those promulgated under the Washington Industry Safety and Health Act RCW Chapter 49.17 (WISHA) and as set forth in Title 296 WAC (Department of Labor and Industries). The Contractor shall likewise be obligated to comply with all federal safety and health standards, codes, rules, and regulations that may be applicable to the contract work.

Without usurping the authority of other agencies, the Contracting Agency will cooperate with them in their efforts to enforce legal requirements. Upon awareness of a violation of a legal requirement, the Engineer will notify the Contractor in an effort to achieve compliance. The Engineer may also notify the agency responsible for enforcement if the Engineer deems that action is necessary to achieve compliance with legal requirements. The Engineer will also assist the enforcement agency to obtain Contractor compliance to the extent such assistance is consistent with the provisions of the contract.

1-07.5 Fish and Wildlife and Ecology Regulations
The section title is revised to read:

1-07.5 Environmental Regulations

1-07.5(1) General
This section is revised to read:

Throughout the work, the Contractor shall comply with all current rules of the resource agencies having jurisdiction over the affected areas. Some, though not all, of these rules are summarized below. Any of these agencies may, without prejudice to the Contracting Agency, add rules as needed to protect game, fish, or the environment.

The following restrictions apply to all work:

No work shall occur within the jurisdictional areas unless authorized in the contract provisions and associated environmental permits.

No materials shall be placed below the ordinary high water line except as may be specified in the contract.

No equipment shall enter waters of the State, except as may be specified in the contract.

1-07.5(2) State Department of Fish and Wildlife
Item 7 is deleted.
1-07.5(3) State Department of Ecology
This section is revised to read:

In doing the work, the Contractor shall:

1. Get a waste discharge permit from the Ecology Department before:
   a. Washing aggregate; or
   b. Discharging water from pit sites or excavations into a ground or surface waterway when the water contains turbidity, silt, or foreign materials.

2. Give the Project Engineer a copy of each waste discharge permit before the work begins.

3. Control drainage and erosion in a manner that reduces waterway pollution.

4. Perform work in such a manner that all materials and substances not specifically identified in the contract documents to be placed in the water do not enter waters of the State, including wetlands.

5. Use equipment that is free of external petroleum-based products.

6. Remove accumulations of soil and debris from drive mechanisms (wheels, tracks, tires) and undercarriage of equipment prior to using equipment below the ordinary high water line.

7. Clean loose dirt and debris from all materials placed below the ordinary high water line. No materials shall be placed below the ordinary high water line without the Engineer's approval.

8. Notify the Engineer and Ecology Department immediately should oil, chemicals, or sewage spill into waters of the State.

1-07.7(2) Load Limit Restrictions
Item 1 is supplemented with the following:

If the Contractor desires to utilize work methods resulting in load that exceed any of the restrictions described above, the Contractor shall submit calculations and other supporting information (as specified in Section 6-01.6 for bridges under construction) to the Engineer for approval in accordance with Sections 6-01.6 and 6-01.9. The Engineer will review the calculations and supporting information to determine if the loading meets the criteria specified in Section 6-01.6. The Contractor shall not place or operate construction vehicles or equipment on or over the structure until receiving the Engineer's approval of the submittal.
1-07.11(10)B Required Records and Retention
The third and fourth paragraphs are revised to read:

Monthly Employment Utilization Reports
WSDOT Form #820-010 or substitute form as approved by the Contracting Agency.
This form is required for all federally assisted projects if the contract is equal to or
greater then $10,000 and for every associated subcontract equal to or greater than
$10,000. These monthly reports are to be maintained in the respective Contractor or
subcontractor’s records.

In addition, for contracts with a value of $100,000 or more, the Contractor shall
submit copies of the completed WSDOT form #820-010 or approved substitute to the
Contracting Agency by the fifth of each month throughout the term of the contract.
The Contractor shall also collect and submit these forms monthly from every
subcontractor who holds a subcontract with a value of $100,000 or more.

Failure to submit the required reports by their due dates may result in the
withholding of progress estimate payments.

1-07.13(4) Repair of Damage
This section is revised to read:

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 using the estimated bid item “Reimbursement for Third Party
Damage”.

In the event the Contracting Agency pays for damage to the Contractor’s work or for
damage to the Contractor’s equipment caused by third parties, any claim the
Contractor had or may have had against the third party shall be deemed assigned to
the Contracting Agency, to the extent of the Contracting Agency’s payment for such
damage.

Payment will be limited to repair of damaged work only. No payment will be made
for delay or disruption of work.

For the purpose of providing a common proposal for all bidders, the Contracting
Agency has entered an amount for “Reimbursement For Third Party Damage” in the
proposal to become a part of the total bid by the Contractor.

1-07.14 Responsibility for Damage
The first paragraph is revised to read:

The State, Governor, Commission, Secretary, and all officers and employees of the
State, including but not limited to those of the Department, will not be responsible in
any manner: for any loss or damage that may happen to the work or any part; for any
loss of material or damage to any of the materials or other things used or employed
in the performance of work; for injury to or death of any persons, either workers or
the public; or for damage to the public for any cause which might have been
prevented by the Contractor, or the workers, or anyone employed by the Contractor.

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

Subject to the limitations in this section, the Contractor shall indemnify, defend, and
save harmless the State, Governor, Commission, Secretary, and all officers and
employees of the State from all claims, suits, or actions brought for injuries to, or
death of, any persons or damages resulting from construction of the work or in
consequence of any negligence regarding the work, the use of any improper
materials in the work, caused in whole or in part by any act or omission by the
Contractor or the agents or employees of the Contractor during performance or at
any time before final acceptance. In addition to any remedy authorized by law, the
State may retain so much of the money due the Contractor as deemed necessary by
the Engineer to ensure indemnification until disposition has been made of such suits
or claims.

This section is supplemented with the following:

The Contracting Agency will forward to the Contractor all claims filed against the
State according to RCW 4.92.100 that are deemed to have arisen in relation to the
Contractor’s work or activities under this contract, and, in the opinion of the
Contracting Agency, are subject to the defense, indemnity, and insurance provisions
of these Standard Specifications. Claims will be deemed tendered to the Contractor
and insurer, who has named the State as a named insured or an additional insured
under the contract’s insurance provisions, once the claim has been forwarded via
certified mail to the Contractor. The Contractor shall be responsible to provide a
copy of the claim to the Contractor’s designated insurance agent who has
obtained/met the contract’s insurance provision requirements.

Within 60 calendar days following the date a claim is sent by the Contracting
Agency to the Contractor, the Contractor shall notify the Claimant and WSDOT
(Risk Management Office, PO Box 47418, Olympia, WA 98504-7418) of the
following:

a. whether the claim is allowed or is denied in whole or in part, and, if so, the
specific reasons for the denial of the individual claim, and if not denied in
full, when payment has been or will be made to the claimant(s) for the
portion of the claim that is allowed, or

b. if resolution negotiations are continuing. In this event, status updates will
be reported no longer than every 60 calendar days until the claim is
resolved or a lawsuit is filed.
If the Contractor fails to provide the above notification within 60 calendar days, then
the Contractor shall yield to the Contracting Agency sole and exclusive discretion to
allow all or part of the claim on behalf of the Contractor, and the Contractor shall
be deemed to have WAIVED any and all defenses, objections, or other
avoidances to the Contracting Agency's allowance of the claim, or the amount
allowed by the Contracting Agency, under common law, constitution, statute, or
the contract and these Standard Specifications. If all or part of a claim is allowed,
the Contracting Agency will notify the Contractor via certified mail that it has
allowed all or part of the claim and make appropriate payments to the claimant(s)
with State funds.

Payments of State funds by the Contracting Agency to claimant(s) under this section
will be made on behalf of the Contractor and at the expense of the Contractor, and
the Contractor shall be unconditionally obligated to reimburse the Contracting
Agency for the "total reimbursement amount", which is the sum of the amount paid
to the claimant(s), plus all costs incurred by the Contracting Agency in evaluating
the circumstances surrounding the claim, the allowance of the claim, the amount due
to the claimant, and all other direct costs for the Contracting Agency's administration
and payment of the claim on the Contractor's behalf. The Contracting Agency will
be authorized to withhold the total reimbursement amount from amounts due the
Contractor, or, if no further payments are to be made to the Contractor under the
contract, the Contractor shall directly reimburse the Contracting Agency for the
amounts paid within 30 days of the date notice that the claim was allowed was sent
to the Contractor. In the event reimbursement from the Contractor is not received by
the Contracting Agency within 30 days, interest shall accrue on the total
reimbursement amount owing at the rate of 12 per cent per annum calculated at a
daily rate from the date the contractor was notified that the claim was allowed. The
Contracting Agency’s costs to enforce recovery of these amounts are additive to the
amounts owing.

1-07.15(1) Spill Prevention, Control and Countermeasures Plan
This section is revised to read:

The Contractor shall prepare a project specific spill prevention, control and
countermeasures (SPCC) plan to be used for the duration of the project. The plan
shall be submitted to the Engineer prior to the commencement of any on site
construction activities. The Contractor shall maintain a copy of the plan at the work
site, including any necessary updates as the work progresses. If hazardous materials
are encountered during construction, the Contractor shall do everything possible to
control and contain the material until appropriate measures can be taken. Hazardous
material, as referred to within this specification, is defined in RCW 70.105.010 under
"Hazardous Substances". Occupational safety and health requirements that may
pertain to SPCC planning are contained in but not limited to WAC 296-824 and
WAC 296-843.
The SPCC plan shall address the following project-specific information:

1. SPCC Plan Elements

   A. Site Information
   Identify general site information useful in construction planning, recognizing potential sources of spills, and identifying personnel responsible for managing and implementing the plan.

   B. Project Site Description
   Identify staging, storage, maintenance, and refueling areas and their relationship to drainage pathways, waterways, and other sensitive areas. Specifically address:

   - the Contractor’s equipment maintenance, refueling, and cleaning activities.
   - the Contractor’s on site storage areas for hazardous materials.

   C. Spill Prevention and Containment
   For each of the locations identified in B, above, specifically address:

   1. Spill prevention and containment measures to be used at each location.
   2. The method of collecting and treating, or disposing of runoff from each location.
   3. The method of diverting project runoff from each location.

   D. Spill Response
   Outline spill response procedures including assessment of the hazard, securing spill response and personal protective equipment, containing and eliminating the spill source, and mitigation, removal and disposal of the material.

   E. Standby, On-Site, Material and Equipment
   The plan shall identify the equipment and materials the Contractor will maintain on site to carry out the preventive and responsive measures for the items listed.

   F. Reporting
   The plan shall list all federal, state and local agency telephone numbers the Contractor must notify in the event of a spill.

   G. Program Management
Identify site security measures, inspection procedures and personnel training procedures as they relate to spill prevention, containment, response, management and cleanup.

H. Preexisting Contamination
If preexisting contamination in the project area is described elsewhere in the plans or specifications, the SPCC plan shall indicate measures the Contractor will take to conduct work without allowing release or further spreading of the materials.

I. Work Below the Ordinary High Water Line
Identify equipment that will be used below the ordinary high water line. Outline daily inspection and cleanup procedures that ensure equipment is free of all external petroleum-based products. Identify refueling procedures for equipment that cannot be moved from below the ordinary high water line.

2. Attachments

A. Site plan showing the locations identified in (1. B. and 1. C.) noted previously.

B. Spill and Incident Report Forms, if any, that the Contractor will be using.

Implementation Requirements
The Contractor shall implement prevention and containment measures identified in the SPCC plan prior to performing any of the following:

- Placing materials or equipment in staging or storage areas
- Equipment refueling
- Equipment washing
- Stockpiling contaminated materials

Payment
The lump sum contract price for the “SPCC Plan” shall be full pay for:

1. All costs associated with creating the SPCC plan.

2. All costs associated with providing and maintaining on site standby materials and equipment described in the SPCC plan.

3. All costs associated with implementing the prevention and containment measures identified in the approved SPCC plan.
As to other costs associated with spills the contractor may request payment as provided for in the Contract. No payment shall be made if the spill was caused by or resulted from the Contractor's operations, negligence or omissions.

1-07.16(1) Private/Public Property
This section is revised to read:

The Contractor shall not use Contracting Agency owned or controlled property other than that directly affected by the contract work without the approval of the Engineer. If the Engineer grants such approval, the Contractor shall then vacate the area when ordered to do so by the Engineer. Approval to temporarily use the property shall not create any entitlement to further use or to compensation for any conditions or requirements imposed.

The Contractor shall protect private or public property on or in the vicinity of the work site. The Contractor shall ensure that it is not removed, damaged, destroyed, or prevented from being used unless the contract so specifies.

Property includes land, utilities, trees, landscaping, improvements legally on the right-of-way, markers, monuments, buildings, structures, pipe, conduit, sewer or water lines, signs, and other property of all description whether shown on the plans or not.

If the Engineer orders, or if otherwise necessary, the Contractor shall install protection, acceptable to the Engineer, for property such as that listed in the previous paragraph. The Contractor is responsible for locating and protecting all property that is subject to damage by the construction operation.

If the Contractor (or agents/employees of the Contractor) damage, destroy, or interfere with the use of such property, the Contractor shall restore it to original condition. The Contractor shall also halt any interference with the property's use. If the Contractor refuses or does not respond immediately, the Engineer may have such property restored by other means and subtract the cost from money that will be or is due the Contractor.

The Contractor may access the worksite from adjacent properties. The Contractor shall not use or allow others to use this access to merge with public traffic. During non-working hours, the Contractor shall provide a physical barrier that is either locked or physically unable to be moved without equipment. The access shall not go through any existing structures. The access may go through fencing. The Contractor shall control or prevent animals from entering the worksite to the same degree that they were controlled before the fence was removed. The Contractor shall prevent persons not involved in the contract work from entering the worksite through the access or through trails and pathways intersected by the access. If the contract documents require that existing trails or pathways be maintained during construction, the Contractor will insure the safe passage of trail or pathway users. The Contractor
shall effectively control airborne particulates that are generated by use of the access. The location and use of the access shall not adversely affect wetlands or sensitive areas in any manner. The Contractor shall be responsible for obtaining all haul road agreements, permits and/or easements associated with the access. The Contractor shall replace any fence, repair any damage and restore the site to its original state when the access is no longer needed. The Contractor shall bear all costs associated with this worksite access.

1-07.16(2) Vegetation Protection and Restoration
The new paragraph below is inserted to follow the third paragraph:

Any pruning activity required to complete the work as specified shall be performed by persons qualified as a Certified Arborist at the direction of the Engineer.

In the fifth paragraph, "Guide for Plant Appraisal, Eighth Edition" is revised to read "Guide for Plant Appraisal, Current Edition".

1-07.16(3) Fences, Mailboxes, Incidentals
The first sentence in the first paragraph is revised to read:

The Contractor shall maintain any temporary fencing to prevent pedestrians from entering the worksite and to preserve livestock, crops, or property when working through or adjacent to private property.

1-07.18 Public Liability and Property Damage Insurance
This section is revised to read:

The Contractor shall obtain and keep in force the following policies of insurance. The policies shall be with companies or through sources approved by the State Insurance Commissioner pursuant to Chapter 48.05, RCW. Unless otherwise indicated below, the policies shall be kept in force from the execution date of the contract until the date of acceptance by the Secretary (Section 1-05.12).

1. Owners and Contractors Protective Insurance providing bodily injury and property damage liability coverage with limits of $3,000,000 per occurrence and in the aggregate for each policy period, written on Insurance Services Office (ISO) form CG0009 together with Washington State Department of Transportation Amendatory Endorsement No. CG 29 08, specifying the State of Washington as a named insured.

The Contractor may choose to terminate this insurance after the date of Substantial Completion as determined by the Engineer or, should Substantial Completion not be achieved, after the date of Physical Completion as determined by the Engineer. In the event the Contractor elects to terminate this coverage, prior to acceptance of the contract, the Contractor shall first obtain an
endorsement to the Commercial General Liability Insurance described below that establishes the Contracting Agency on that policy as an additional insured.

2. Commercial General Liability Insurance written under ISO Form CG0001 or its equivalent with minimum limits of $3,000,000 per occurrence and in the aggregate for each policy period. This protection may be a CGL policy or any combination of primary, umbrella or excess liability coverage affording total liability limits of not less than $3,000,000. Products and completed operations coverage shall be provided for a period of one year following final acceptance of the work.

3. Commercial Automobile Liability Insurance providing bodily injury and property damage liability coverage for all owned and nonowned vehicles assigned to or used in the performance of the work with a combined single limit of not less than $1,000,000 each occurrence with the State named as an additional insured in connection with the Contractor’s Performance of the contract.

The Owners and Contractors Protective Insurance policy shall not be subject to a deductible or contain provisions for a deductible. The Commercial General Liability policy and the Commercial Automobile Liability Insurance policy may, at the discretion of the Contractor, contain such provisions. If a deductible applies to any claim under these policies, then payment of that deductible will be the responsibility of the Contractor, notwithstanding any claim of liability against the Contracting Agency. However in no event shall any provision for a deductible provide for a deductible in excess of $50,000.00.

Prior to contract execution, the Contractor shall file with the Department of Transportation, Contract Payment Section, P.O. Box 47420, Olympia, WA 98504-7420, ACORD Form Certificates of Insurance evidencing the minimum insurance coverages required under these specifications.

All insurance policies and Certificates of Insurance shall include a requirement providing for a minimum of 45 days prior written notice to the Contracting Agency of any cancellation or reduction of coverage. All insurance coverage required by this section shall be written and provided by “occurrence-based” policy forms rather than by “claims made” forms.

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 working 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.
All costs for insurance, including any payments of deductible amounts, shall be considered incidental to and included in the unit contract prices and no additional payment will be made.

1-07.20 Patented Devices, Materials, and Processes
This section is revised to read:

The Contractor shall assume all costs arising from the use of patented devices, materials, or processes used on or incorporated in the work, and agrees to indemnify, defend, and save harmless the State, Governor, Commission, Secretary, and their duly authorized agents and employees from all actions of any nature for, or on account of the use of any patented devices, materials, or processes.

1-07.23(1) Construction Under Traffic
The first paragraph is supplemented with the following:

The Contractor shall enter interstate highways only through legal movements from existing roads, streets, and through other access points specifically allowed by the contract documents.

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

Deficiencies not caused by the Contractor’s operations shall be repaired by the Contractor, when ordered by the Engineer, at the Contracting Agency’s expense.

In the sixth paragraph, 3. "C", the first sentence is revised to read:

Temporary concrete barrier or other approved barrier installed on the traffic side of the drop-off with 2 feet between the drop-off and the back of the barrier and a new edge of pavement stripe a minimum of 2 feet from the face of the barrier.

1-07.26 Personal Liability of Public Officers
This section is revised to read:

Neither the Governor, the Commission, the Secretary, the Engineer, nor any other officer or employee of the State shall be personally liable for any acts or failure to act in connection with the contract, it being understood that in such matters, they are acting solely as agents of the State.

SECTION 1-09, MEASUREMENT AND PAYMENT
August 1, 2005

1-09.1 Measurement of Quantities
The third paragraph is supplemented with the following:
Hour - measured for each hour that work is actually performed. Portions of an hour will be rounded up to a half hour.

1-09.6 Force Account
On page 1-91, under "For Labor", the fourth and fifth sentences in the second paragraph are deleted.

1-09.7 Mobilization
Under the second paragraph, item 3 is revised to read:

When the substantial completion date has been established for the project, payment of any amount bid for mobilization in excess of 10 percent of the total original contract amount will be paid.

SECTION 1-10, TEMPORARY TRAFFIC CONTROL
August 1, 2005

Section 1-10 is revised in its entirety to read:

1-10.1 General
The Contractor, utilizing contractor labor and contractor-provided equipment and materials (except when such labor, equipment or materials are to be provided by the Contracting Agency as specifically identified herein), shall plan, manage, supervise and perform all temporary traffic control activities needed to support the work of the contract.

1-10.1(1) Materials
Materials shall meet the requirements of the following sections:

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<tr>
<th>Stop/Slow Paddles</th>
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<td>Construction Signs</td>
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<td>Wood Sign Posts</td>
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<td>Sequential Arrow Signs</td>
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<td>Portable Changeable Message Signs</td>
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<td>Traffic Safety Drums</td>
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<tr>
<td>Truck-Mounted Attenuator</td>
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1-10.1(2) Description
The Contractor shall provide flaggers, spotters and all other personnel required for labor for traffic control activities and not otherwise specified as being furnished by the Contracting Agency.
The Contractor shall perform all procedures necessary to support the contract work.

The Contractor shall provide signs and other traffic control devices not otherwise specified as being furnished by the Contracting Agency. The Contractor shall erect and maintain all construction signs, warning signs, detour signs, and other traffic control devices necessary to warn and protect the public at all times from injury or damage as a result of the Contractor’s operations which may occur on or adjacent to highways, roads, or streets. No work shall be done on or adjacent to the roadway until all necessary signs and traffic control devices are in place.

The traffic control resources and activities described shall be used for the safety of the public, of the Contractor’s employees, and of the Contracting Agency’s personnel and to facilitate the movement of the traveling public. Traffic control resources and activities may be used for the separation or merging of public and construction traffic when such use is in accordance with a specific approved traffic control plan.

Upon failure of the Contractor to immediately provide flaggers; erect, maintain, and remove signs; or provide, erect, maintain, and remove other traffic control devices when ordered to do so by the Engineer, the Contracting Agency may, without further notice to the Contractor or the Surety, perform any of the above and deduct all of the costs from the Contractor’s payments.

The Contractor shall be responsible for providing adequate labor, sufficient signs, and other traffic control devices, and for performing traffic control procedures needed for the protection of the work and the public at all times regardless of whether or not the labor, devices or procedures have been ordered by the Engineer, furnished by the Contracting Agency, or paid for by the Contracting Agency.

Wherever possible when performing contract work, the Contractor’s equipment shall follow normal and legal traffic movements. The Contractor’s ingress and egress of the work area shall be accomplished with as little disruption to traffic as possible. Traffic control devices shall be removed by picking up the devices in a reverse sequence to that used for installation. This may require moving backwards through the workzone. When located behind barrier or at other locations shown on approved traffic control plans, equipment may operate in a direction opposite to adjacent traffic.

The Contractor is advised that the Contracting Agency may have entered into operating agreements with one or more law enforcement organizations for cooperative activities. Under such agreements, at the sole discretion of the Contracting Agency, law enforcement personnel may enter the workzone for enforcement purposes and may participate in the Contractor’s traffic control activities. The responsibility under the contract for all traffic control resides with the Contractor and any such participation by law enforcement personnel in Contractor traffic control activities will be referenced in the Special Provisions or will be
preceded by an agreement and, if appropriate, a cost adjustment. Nothing in this
contract is intended to create an entitlement, on the part of the Contractor, to the
services or participation of the law enforcement organization.

1-10.2 Traffic Control Management

1-10.2(1) General
It is the Contractor's responsibility to plan, conduct and safely perform the work.
The Contractor shall manage temporary traffic control with his or her own staff.
Traffic control management responsibilities shall be formally assigned to one or
more company supervisors who are actively involved in the planning and
management of field contract activities. The Contractor shall provide the Engineer
with a copy of the formal assignment. The duties of traffic control management may
not be subcontracted.

The Contractor shall designate an individual or individuals to perform the duties of
the primary Traffic Control Supervisor (TCS). The designation shall also identify an
alternate TCS who can assume the duties of the primary TCS in the event of that
person's inability to perform. The TCS shall be responsible for safe implementation
of approved Traffic Control Plans provided by the Contractor.

The designated individuals shall be certified as worksite traffic control supervisors
by one of the organizations listed in the Special Provisions. Possession of a current
flagging card by the TCS is mandatory. A traffic control management assignment
and a TCS designation are required on all projects that will utilize traffic control.

The Contractor shall maintain 24-hour telephone numbers at which the Contractor's
assigned traffic control management personnel and the TCS can be contacted and be
available upon the Engineer's request at other than normal working hours. These
persons shall have the resources, ability and authority to expeditiously correct any
deficiency in the traffic control system.

1-10.2(1)A Traffic Control Management
The responsibilities of the Contractor's traffic control management personnel shall
include:

1. Overseeing and approving the actions of the Traffic Control Supervisor
   (TCS) to ensure that proper safety and traffic control measures are
   implemented and consistent with the specific requirements created by the
   Contractor's work zones and the Contract. Some form of oversight shall be
   in place and effective even when the traffic control management personnel
   are not present at the jobsite.

2. Providing the Contractor's designated TCS with approved Traffic Control
   Plans (TCPs) which are compatible with the work operations and traffic
   control for which they will be implemented. Having the latest adopted
edition of the Manual On Uniform Traffic Control Devices for Streets and Highways (MUTCD), including the Washington State Modifications to the MUTCD and applicable standards and specifications available at all times on the project.

3. Discussing proposed traffic control measures and coordinating implementation of the Contractor-adopted traffic control plan(s) with the Engineer.

4. Coordinating all traffic control operations, including those of subcontractors and suppliers, with each other and with any adjacent construction or maintenance operations.

5. Coordinating the project’s activities (such as ramp closures, road closures, and lane closures) with appropriate police, fire control agencies, city or county engineering, medical emergency agencies, school districts, and transit companies.

6. Overseeing all requirements of the contract that contribute to the convenience, safety, and orderly movement of vehicular and pedestrian traffic.

7. Reviewing the TCS’s diaries daily and being aware of field traffic control operations.

8. Being present on-site a sufficient amount of time to adequately satisfy the above-listed responsibilities.

Failure to carry out any of the above-listed responsibilities shall be a failure to comply with the contract and may result in a suspension of work as described in Section 1-08.6.

1-10.2(1)B Traffic Control Supervisor
A Traffic Control Supervisor (TCS) shall be present on the project whenever flagging or spotting or other traffic control labor is being utilized or less frequently, as authorized by the Engineer.

The TCS shall personally perform all the duties of the TCS. During nonwork periods, the TCS shall be available to the job site within a 45-minute time period after notification by the Engineer.

The TCS’s duties shall include:

1. Having a current set of approved traffic control plans (TCPs), applicable contract provisions as provided by the Contractor, the latest adopted edition of the MUTCD, including the Washington State Modifications to the
MUTCD, the book *Quality Guidelines for Work Zone Traffic Control Devices*, and applicable standards and specifications.

2. Inspecting traffic control devices and nighttime lighting for proper location, installation, message, cleanliness, and effect on the traveling public. Traffic control devices shall be inspected at least once per hour during working hours except that Class A signs and nighttime lighting need to be checked only once a week. Traffic control devices left in place for 24 hours or more shall also be inspected once during the nonworking hours when they are initially set up (during daylight or darkness, whichever is opposite of the working hours). The TCS shall correct, or arrange to have corrected, any deficiencies noted during these inspections.

3. Preparing a daily traffic control diary on each day that traffic control is performed using DOT Forms 421-040A and 421-040B, and submitting them to the Engineer no later than the end of the next working day. The Contractor may use alternate forms if approved by the Engineer. Diary entries shall include, but not be limited to:
   
   a. Time of day when signs and traffic control devices are installed and removed,
   
   b. Location and condition of signs and traffic control devices,
   
   c. Revisions to the traffic control plan,
   
   d. Lighting utilized at night, and
   
   e. Observations of traffic conditions.

4. Making minor revisions to the traffic control plan to accommodate site conditions provided that the original intent of the traffic control plan is maintained and the revision has the concurrence of both the Contractor and the Engineer.

5. Attending traffic control coordinating meetings or coordination activities as necessary for full understanding and effective performance.

6. Ensuring that all needed traffic control devices and equipment are available and in good working condition prior to the need to install or utilize them.

The TCS may perform the work described in Section 1-10.3(1)A *Flaggers and Spotters* or in Section 1-10.3(1)B *Other Traffic Control Labor* and be compensated under those bid items, provided that the duties of the TCS are accomplished.

**1-10.2(2) Traffic Control Plans**

The traffic control plan or plans appearing in the contract documents show a method of handling traffic. All construction signs, flaggers, spotters and other traffic control devices are shown on the traffic control plan(s) except for emergency situations.
Where mainline contract traffic control plans are developed with the intent of operating without the use of flaggers or spotters, the plans shall contain a note that states, "NO FLAGGERS OR SPOTTERS". The use of flaggers or spotters to supplement these traffic control plans will not be allowed except in a case where no other means of traffic control can be used or in the event of an emergency. If the Contractor proposes the use of flaggers or spotters with one of these plans, this will constitute a modification requiring approval by the Engineer. The modified plans shall show locations for all the required advance warning signs and a safe, protected location for the flagging station. If flagging is to be performed during hours of darkness, the plan shall include appropriate illumination for the flagging station.

When the Contractor's chosen method of performing the work in the contract requires some form of temporary traffic control, the Contractor shall either: (1.) designate and adopt, in writing, the traffic control plan or plans from the contract documents that support that method; or (2.) submit a Contractor's plan that modifies, supplements or replaces a plan from the contract documents. Any Contractor-proposed modification, supplement or replacement shall show the necessary construction signs, flaggers, spotters and other traffic control devices required to support the work. Any Contractor-proposed traffic control plan shall conform to the established standards for plan development as shown in the MUTCD, Part VI. The Contractor's submittal, either designating and adopting a traffic control plan from the contract documents or proposing a Contractor-developed plan, shall be provided to the Engineer for approval at least ten calendar days in advance of the time the signs and other traffic control devices are scheduled to be installed and utilized. The Contractor shall be solely responsible for submitting any proposed traffic control plan or modification, obtaining the Engineer's approval and providing copies of the approved Traffic Control Plans to the Traffic Control Supervisor.

1-10.2(3) Conformance to Established Standards
Flagging, signs, and all other traffic control devices and procedures furnished or provided shall conform to the standards established in the latest WSDOT adopted edition of the Manual On Uniform Traffic Control Devices for Streets and Highways (MUTCD), published by the U.S. Department of Transportation and the Washington State Modifications to the MUTCD. Judgment of the quality of devices furnished will be based upon Quality Guidelines for Work Zone Traffic Control Devices, published by the American Traffic Safety Services Association. Copies of the MUTCD and Quality Guidelines for Work Zone Traffic Control Devices may be purchased from the American Traffic Safety Services Association, 15 Riverside Parkway, Suite 100, Fredericksburg, Virginia 22406-1022. The Washington State Modifications to the MUTCD may be obtained from the Department of Transportation, Olympia, Washington 98504.

In addition to the standards of the MUTCD described above, the Contracting Agency has scheduled the implementation of crushworthiness requirements for most workzone devices. The National Cooperative Highway Research Project (NCHRP) Report 350 has established requirements for crash testing. Workzone devices are
divided into four categories. Each of those categories and, where applicable, the
schedule for implementation is described below:

Category 1 includes those items that are small and lightweight, channelizing, and
delineating devices that have been in common use for many years and are known to
be crashworthy by crash testing of similar devices or years of demonstrable safe
performance. These include cones, tubular markers, flexible delineator posts, and
plastic drums. All Category 1 devices used on the project shall meet the
requirements of NCHRP 350 as certified by the manufacturer of the device.

Category 2 includes devices that are not expected to produce significant vehicular
velocity change, but may otherwise be hazardous. Examples of this class are
barricades, portable sign supports and signs, intrusion alarms and vertical panels. All
new Category 2 devices purchased after October 1, 2000 shall meet the requirements
of NCHRP 350. Existing equipment, purchased prior to October 1, 2000, may be
used on the project until December 31, 2007. For the purpose of definition, a sign
support and sign shall be considered a single unit. A new sign may be purchased for
an existing sign support and the entire unit will be defined as “existing equipment.”

Category 3 is for hardware expected to cause significant velocity changes or other
potentially harmful reactions to impacting vehicles. Barriers, fixed sign supports,
crash cushions, truck mounted attenuators (TMA’s) and other work zone devices not
meeting the definitions of Category 1 or 2 are examples from this category. Many
Category 3 devices are defined in the design of the project. Where this is the case,
NCHRP 350 requirements have been incorporated into the design and the Contractor
complies with the requirements by constructing devices according to the plans and
specifications. Where the device is a product chosen by the Contractor, the device
chosen must be compliant with the requirements of NCHRP 350.

Category 4 includes portable or trailer-mounted devices such as arrow displays,
temporary traffic signals, area lighting supports, and portable changeable message
signs. There is presently no implementation schedule for mandatory crashworthiness
compliance for these devices.

The condition of signs and traffic control devices shall be acceptable or marginal as
defined in the book Quality Guidelines for Work Zone Traffic Control Devices, and
will be accepted based on a visual inspection by the Engineer. The Engineer’s
decision on the condition of a sign or traffic control device shall be final. A sign or
traffic control device determined to be unacceptable shall be removed from the
project and replaced within 12 hours of notification.

1-10.3 Traffic Control Labor, Procedures and Devices

1-10.3(1) Traffic Control Labor
The Contractor shall furnish all personnel for flagging, spotting, for the execution of
all procedures related to temporary traffic control and for the setup, maintenance and
removal of all temporary traffic control devices and construction signs necessary to control traffic during construction operations.

Workers engaged as flaggers or spotters shall wear reflective vests and hard hats. During hours of darkness, white coveralls or white or yellow rain gear shall also be worn. The vests and other apparel shall be in conformance with Section 1-07.8.

1-10.3(1)A Flaggers and Spotters
Flaggers and Spotters shall be posted where shown on approved Traffic Control Plans or where directed by the Engineer. All flaggers and spotters shall possess a current flagging card issued by the State of Washington, Oregon, Montana, or Idaho. The flagging card shall be immediately available and shown to the Contracting Agency upon request.

Flagging stations shall be shown on Traffic Control Plans at locations where construction operations require stopping or diverting public traffic. Flagging stations shall be staffed only when flagging is required. This staffing may be continuous or intermittent, depending on the nature of the construction activity. Whenever a flagger is not required to stop or divert traffic, the flagger shall move away from the flagging station to a safer location. During hours of darkness, flagging stations shall be illuminated in a manner that insures that flaggers can easily be seen but that does not cause glare to the traveling public. Flaggers shall be equipped with portable two-way radios, with a range suitable for the project. The radios shall be capable of having direct contact with project management (foremen, superintendents, etc.).

The Contractor shall furnish the MUTCD standard Stop/Slow paddles for all flagging operations. The specification for Stop/Slow paddles in Section 9-35.1 requires 24” paddles and all new paddles purchased for the project shall conform to those provisions. Previously specified 18” paddles may be used at the request of the Contractor until December 31, 2005.

Spotting stations shall be shown on Traffic Control Plans at locations where a spotter can detect errant drivers or other hazards and provide an effective warning to other workers. Spotting stations will not be allowed at locations where the spotter will be in unnecessary danger. The Contractor shall furnish noise-makers or other effective warning devices for spotting operations. The duties of a spotter shall not include flagging.

1-10.3(1)B Other Traffic Control Labor
In addition to flagging or spotting duties, the Contractor shall provide personnel for all other traffic control procedures required by the construction operations and for the labor to install, maintain and remove any traffic control devices shown on Traffic Control Plans.

1-10.3(2) Traffic Control Procedures
1-10.3(2)A One-Way Traffic Control
The project work may require that traffic be maintained on a portion of the roadway during the progress of the work using one-way traffic control. If this is the case, the Contractor's operation shall be confined to one-half the roadway, permitting traffic on the other half. If shown on an approved traffic control plan or directed by the Engineer, one-way traffic control, in accordance with the MUTCD, shall be provided and shall also conform to the following requirements:

In any one-way traffic control configuration, side roads and approaches will be closed or controlled by a flagger or by appropriate approved signing. A side road flagger will coordinate with end flaggers where there is line of sight and with the pilot car where the end flaggers cannot be seen.

Queues of vehicles will be allowed to take turns passing through the workzone in the single open lane. When one-way traffic control is in effect, Contractor vehicles shall not use the open traffic lane except while following the same rules and routes required of the public traffic.

As conditions permit, the Contractor shall, at the end of each day, leave the work area in such condition that it can be traveled without damage to the work, without danger to traffic, and without one-way traffic control. If, in the opinion of the Engineer, one-way traffic control cannot be dispensed with after working hours, then the operation will be continued throughout the non-working hours.

1-10.3(2)B Rolling Slowdown
For work operations on multi-lane roadways that necessitate short-term roadway closures of 15 minutes or less, the Contractor may implement a rolling slowdown. Where included in an approved traffic control plan, a rolling slowdown shall be accomplished using one traffic control vehicle with flashing amber lights for each lane to be slowed down plus one control vehicle to serve as a chase vehicle for traffic ahead of the blockade. The traffic control vehicles shall enter the roadway and form a moving blockade to reduce traffic speeds and create a clear area in front of the moving blockade to accomplish the work without a total stoppage of traffic.

A portable changeable message sign shall be placed ahead of the starting point of the traffic control to warn traffic of the slowdown. The sign shall be placed far enough ahead of the work to avoid any expected backup of vehicles.

The location where the traffic control vehicles shall begin the slowdown and the speed at which the moving blockade will be allowed to travel will be calculated to accommodate the estimated time needed for closure. The chase control vehicle shall follow the slowest vehicle ahead of the blockade. When the chase vehicle passes, the Contractor may begin the work operation. In the event that the work operation is not completed when the moving blockade reaches the site, all work except that necessary to clear the roadway shall cease immediately and the roadway shall be cleared and reopened as soon as possible.
All ramps and entrances to the roadway between the moving blockade and work operation shall be temporarily closed using flaggers. Radio communications between the work operation and the moving blockade shall be established and utilized to adjust the speed of the blockade to accommodate the closure time needed.

1-10.3(2)C Lane Closure Setup/Takedown
Where allowed by the contract and where shown on approved traffic control plans or directed by the Engineer, the Contractor shall set up traffic control measures to close one or more lanes of a multi-lane facility. When this is to occur, the following sequence shall be followed:

1. Advance warning signs are set up on the shoulder of the roadway opposite the lane to be closed,

2. Advance warning signs are set up on the same shoulder as the lane to be closed,

3. A truck-mounted attenuator, with arrow board, is moved into place at the beginning of the closure taper,

4. Channelization devices are placed to mark the taper and the length of the closure as shown on the traffic control plan.

Once the lane is closed, the TMA/arrow board combination may be replaced with an arrow board without attenuator.

If additional lanes are to be closed, this shall be done in sequence with previous lane closures using the same sequence of activities. A truck-mounted attenuator with arrow board is required during the process of closing each additional lane and may be replaced with an arrow board without attenuator after the lane is closed. Each closed lane shall be marked with a separate arrow board at all times.

Traffic control for lane closures shall be removed in the reverse order of its installation.

1-10.3(2)D Mobile Operations
Where construction operations are such that movement along the length of a roadway is continuous or near-continuous to the extent that a stationary traffic control layout will not be effective, the Contractor shall implement a moving, or mobile, traffic control scheme. Such moving control shall always be conducted in the same direction as the adjacent traffic.

Where shown on an approved traffic control plan or where directed by the Engineer, mobile traffic control shall consist of portable equipment, moving with the operation. A portable changeable message sign shall be established in advance of the operation,
far enough back to provide warning of both the operation and of any queue of traffic
that has formed during the operation. The advance sign shall be continuously moved
to stay near the back of the queue at all times. A truck-mounted attenuator, with
arrow board, shall be positioned and maintained at a fixed distance upstream of the
work. A shadow vehicle, with truck-mounted attenuator shall be positioned and
maintained immediately upstream of the work.

1-10.3(2)E Patrol & Maintain Traffic Control Measures
At all times, when temporary traffic control measures are in place, the Contractor
shall provide for patrolling and maintaining these measures. The work shall consist
of resetting mislocated devices, assuring visibility of all devices, cleaning and
repairing where necessary, providing maintenance for all equipment, including
replacing batteries and light bulbs as well as keeping motorized and electronic items
functioning, and adjusting the location of devices to respond to actual conditions,
such as queue length, unanticipated traffic conflicts and other areas where planned
traffic control has proven ineffective.

This work shall be performed by the Contractor, either by or under the direction of
the Traffic Control Supervisor. Personnel, with vehicles if necessary, shall be
dispatched so that all traffic control can be reviewed at least once per hour during
working hours and at least once during each non-working day.

1-10.3(3) Traffic Control Devices

1-10.3(3)A Construction Signs
All construction signs required by approved traffic control plans, as well as any other
appropriate signs directed by the Engineer shall be furnished by the Contractor. The
Contractor shall provide the posts or supports and erect and maintain the signs in a
clean, neat, and presentable condition until the need for them has ended. Post
mounted signs shall be installed as shown in Standard Plans G-1 and G-4a. Sign
attachment to posts shall conform to the applicable detail shown in Standard Plan G-
9b. When the need for construction signs has ended, the Contractor, upon approval
of the Engineer, shall remove all signs, posts, and supports from the project and they
shall remain the property of the Contractor.

No passing zones on the existing roadway that are marked with paint striping and
which striping is to be obliterated by construction operations shall be replaced by
"Do Not Pass" and "Pass With Care" signs. The Contractor shall provide and install
the posts and signs. The signs shall be maintained by the Contractor until they are
removed or until the contract is physically completed. When the project includes
striping by the Contractor, the signs and posts shall be removed by the Contractor
when the no passing zones are reestablished by striping. The signs and posts will
become the property of the Contractor. When the Contractor is not responsible for
striping and when the striping by others is not completed when the project is
physically completed, the posts and signs shall be left in place and shall become the
property of the Contracting Agency.
All existing signs, new permanent signs installed under this contract, and construction signs installed under this contract that are inappropriate for the traffic configuration at a given time shall be removed or completely covered with metal, plywood, or an Engineer approved product specifically manufactured for sign covering during periods when they are not needed.

Construction signs will be divided into two classes. Class A construction signs are those signs that remain in service throughout the construction or during a major phase of the work. They are mounted on posts, existing fixed structures, or substantial supports of a semi-permanent nature. Class A signs will be designated as such on the approved Traffic Control Plan. “Do Not Pass” and “Pass With Care” signs are classified as Class A construction signs. Sign and support installation for Class A signs shall be in accordance with the Contract Plans or the Standard Plans. Class B construction signs are those signs that are placed and removed daily, or are used for short durations which may extend for one or more days. They are mounted on portable or temporary mountings.

Where it is necessary to add weight to signs for stability, the only allowed method will be a bag of sand that will rupture on impact. The bag of sand shall have a maximum weight of 40 pounds, and shall be suspended no more than 1 foot from the ground.

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

1-10.3(3)B Sequential Arrow Signs
Where shown on an approved traffic control plan or where ordered by the Engineer, the Contractor shall provide, operate and maintain sequential arrow signs. In some locations, the sign will be shown as a unit with an attenuator. In other locations, the plan will indicate a stand-alone unit.

1-10.3(3)C Portable Changeable Message Sign
Where shown on an approved traffic control plan or where ordered by the Engineer, the Contractor shall provide, operate and maintain portable changeable message signs. These signs shall be available, on-site, for the entire duration of their projected use.

1-10.3(3)D Barricades
Where shown on an approved traffic control plan or where ordered by the Engineer, the Contractor shall provide, install and maintain barricades. Barricades shall be kept in good repair and shall be removed immediately when, in the opinion of the Engineer, they are no longer functioning as designed.
Where it is necessary to add weight to barricades for stability, the only allowed method will be a bag of sand that will rupture on impact. The bag of sand shall have a maximum weight of 40 pounds, and shall be suspended no more than 1 foot from the ground.

1-10.3(3)E Traffic Safety Drums
Where shown on an approved Traffic Control Plan, or where ordered by the Engineer, the Contractor shall provide, install and maintain traffic safety drums.

Used drums may be utilized, provided all drums used on the project are of essentially the same configuration.

The drums shall be designed to resist overturning by means of a weighted lower unit that will separate from the drum when impacted by a vehicle.

Drums shall be regularly maintained to ensure that they are clean and that the drum and reflective material are in good condition. If the Engineer determines that a drum has been damaged beyond usefulness, or provides inadequate reflectivity, a replacement drum shall be furnished.

When the Engineer determines that the drums are no longer required, they shall be removed from the project and shall remain the property of the Contractor.

1-10.3(3)F Barrier Drums
Where shown on approved Traffic Control Plans and as ordered by the Engineer, barrier drums shall be placed on temporary concrete barrier at the following approximate spacing:

<table>
<thead>
<tr>
<th>Concrete Barrier Placement</th>
<th>Barrier Drum Spacing in Feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tangents ½ mile or less</td>
<td>2 times posted speed limit</td>
</tr>
<tr>
<td>Tangents greater than ½ mile</td>
<td>4 times posted speed limit</td>
</tr>
<tr>
<td>Tapers and Curves</td>
<td>posted speed limit</td>
</tr>
</tbody>
</table>

Note 1  A minimum of 3 barrier drums shall be used.
Note 2  A minimum of 5 barrier drums shall be used.

Temporary concrete barrier reflectors may be excluded when using barrier drums.

Both legs of the barrier drums shall be completely filled with sand. The top oval should not be filled.

Used barrier drums may be used, provided all barrier drums used on the project are of essentially the same configuration.
Barrier drums shall be regularly maintained to ensure that they are clean and that the barrier drum and reflective material are in good condition. If the Engineer determines that a barrier drum has been damaged beyond usefulness, or provides inadequate reflectivity, a replacement barrier drum shall be furnished.

When the Engineer determines that the drums are no longer required, they shall be removed from the project and shall remain the property of the Contractor.

1-10.3(3)G Traffic Cones
Where shown on an approved traffic control plan or where ordered by the Engineer, the Contractor shall provide, install and maintain traffic cones. Cones shall be kept in good repair and shall be removed immediately when directed by the Engineer. Where wind or moving traffic frequently displace cones, an effective method of stabilizing cones, such as stacking two together at each location, shall be employed.

1-10.3(3)H Tubular Markers
Where shown on an approved traffic control plan or where ordered by the Engineer, the Contractor shall provide, install and maintain tubular markers. Tubular markers shall be kept in good repair and shall be removed immediately when directed by the Engineer. Tubular markers are secondary devices and are not to be used as substitutes for cones or other delineation devices without an approved traffic control plan.

Where the Traffic Control Plan shows pavement-mounted tubular markers, the adhesive used to fasten the base to the pavement shall be suitable for the purpose, as approved by the Engineer. During the removal of pavement-mounted tubular markers, care shall be taken to avoid damage to the existing pavement. Any such damage shall be repaired by the Contractor at no cost to the Contracting Agency.

1-10.3(3)I Warning Lights and Flashers
Where shown attached to traffic control devices on an approved traffic control plan or where ordered by the Engineer, the Contractor shall provide and maintain flashing warning lights. Lights attached to advance warning signs shall be Type B, high-intensity. Lights attached to traffic safety drums, barricades or other signs shall be Type C, steady-burning low intensity or, where attention is to be directed to a specific device, Type A, flashing low-intensity units.

1-10.3(3)J Truck-Mounted Attenuator
Where shown on an approved traffic control plan or where ordered by the Engineer, the Contractor shall provide, operate and maintain truck-mounted impact attenuators (TMA). These attenuators shall be available, on-site, for the entire duration of their projected use.

The TMA shall be positioned to separate and protect construction workzone activities from normal traffic flow.
During use, the attenuator shall be in the full down-and-locked position. For stationary operations, the truck’s parking brake shall be set.

1-10.4 Measurement

1-10.4(1) Lump Sum Bid for Project (No Unit Items)
When the bid proposal contains the item “Project Temporary Traffic Control”, there will be no measurement of unit items for work defined by Section 1-10 except as described in Section 1-10.4(3). Also, except as described in Section 1-10.4(3), all of Sections 1-10.4(2) and 1-10.5(2) is deleted.

No specific unit of measurement will apply to the lump sum item of “Project Temporary Traffic Control.”

1-10.4(2) Item Bids with Lump Sum for Incidentals
When the bid proposal does not contain the item “Project Temporary Traffic Control”, Sections 1-10.4(1) and 1-10.5(1) are deleted and the bid proposal will contain some or all of the following items, measured as noted.

No specific unit of measurement will apply to the lump sum item of “Traffic Control Supervisor.”

“Flaggers and Spotters” will be measured by the hour. Hours will be measured for each flagging or spotting station, shown on an approved Traffic Control Plan, when that station is staffed in accordance with Section 1-10.3(1)A. When a flagging station is staffed on an intermittent basis, no deduction will be made in measured hours provided that the person staffing the station is in a standby mode and is not performing other duties.

“Other Traffic Control Labor” will be measured by the hour. With the exception of patrolling and maintaining, hours will be measured for each person engaged in any one of the following activities:

- Operating a pilot vehicle during one-way piloted traffic control.
- Operating a traffic control vehicle or a chase vehicle during a rolling slowdown operation.
- Operating a vehicle or placing/removing traffic control devices during the setup or takedown of a lane closure. Performing preliminary work to prepare for placing and removing these devices.
- Operating any of the moving traffic control equipment, or adjusting signing during a mobile operation as described in Section 1-10.3(2)D.
• Patrolling and maintaining traffic control measures as described in Section 1-10.3(2)E. The hours of one person will be measured for each patrol route necessary to accomplish the review frequency required by the provision, regardless of the actual number of persons per route.

• Placing and removing Class B construction signs. Performing preliminary work to prepare for placing and removing these signs.

• Relocation of Portable Changeable Message Signs within the project limits.

• Installing and removing Barricades, Traffic Safety Drums, Barrier Drums, Cones, Tubular Markers and Warning Lights and Flashers to carry out approved Traffic Control Plan(s). Performing preliminary work to prepare for installing these devices.

Time spent on activities other than those listed will not be measured under this item.

“Construction Signs, Class A” will be measured by the square foot of panel area for each sign designated on an approved Traffic Control Plan as Class A or for each construction sign installed as ordered by the Engineer and designated as Class A at the time of the order. Class A signs may be used in more than one location and will be measured for each new installation. Class B construction signs will not be measured. Sign posts or supports will not be measured.

“Sequential Arrow Sign” will be measured by the hour for the time that each sign is operating as shown on an approved Traffic Control Plan or as directed by the Engineer.

“Portable Changeable Message Sign” will be measured per each one time only for each portable changeable message sign used on the project. The final pay quantity shall be the maximum number of such signs in place at any one time as approved by the Engineer.

“Operation of Portable Changeable Message Sign” will be measured by the hour for each hour of operation. The hours of operation will be determined by the Engineer. Hours of operation in excess of those determined by the Engineer will be at the Contractor’s expense.

“Truck Mounted Impact Attenuator” will be measured per each one time only for each truck with mounted impact attenuator used on the project. The final pay quantity shall be the maximum number of truck-mounted impact attenuators in place at any one time.

“Operation of Truck-Mounted Impact Attenuator” will be measured by the hour for each truck-mounted attenuator manned and operated. Manned and operated shall be
when the truck-mounted impact attenuator has an operator and is required to move, in operating position, with the construction operation or when moving the TMA from one position to another on the project.

No specific unit of measurement will apply to the force account item of “Repair Truck-Mounted Impact Attenuator”.

No specific unit of measurement will apply to the lump sum item of “Other Temporary Traffic Control”.

1-10.4(3) Reinstating Unit Items with Lump Sum Traffic Control
The contract provisions may establish the project as lump sum, in accordance with Section 1-10.4(1) and also include one or more of the items included above in Section 1-10.4(2). When that occurs, the corresponding measurement provision in Section 1-10.4(2) is not deleted and the work under that item will be measured as specified.

1-10.4(4) Owner-Provided Resources
The contract provisions may call for specific items of labor, materials or equipment, noted in Section 1-10 as the responsibility of the Contractor, to be supplied by the Contracting Agency. When this occurs, there will be no adjustment in measurement of unit quantities.

1-10.5 Payment

1-10.5(1) Lump Sum Bid for Project (No Unit Items)
“Project Temporary Traffic Control”, lump sum.
The lump sum contract payment shall be full compensation for all costs incurred by the Contractor in performing the contract work defined in Section 1-10, except for costs compensated by bid proposal items inserted through contract provisions as described in Section 1-10.4(3).

1-10.5(2) Item Bids with Lump Sum for Incidentals
“Traffic Control Supervisor”, lump sum.
The lump sum contract payment shall be full compensation for all costs incurred by the Contractor in performing the contract work defined in Section 1-10.2(1)B.

“Flaggers and Spotters”, per hour.
The unit contract price, when applied to the number of units measured for this item in accordance with Section 1-10.4(2), shall be full compensation for all costs incurred by the Contractor in performing the contract work defined in Section 1-10.3(1)A.

“Other Traffic Control Labor”, per hour.
The unit contract price, when applied to the number of units measured for this item in accordance with Section 1-10.4(2), shall be full compensation for all labor costs
incurred by the Contractor in performing the contract work specifically mentioned for this item in Section 1-10.4(2).

"Construction Signs Class A", per square foot.
The unit contract price, when applied to the number of units measured for this item in accordance with Section 1-10.4(2), shall be full compensation for all costs of labor, materials and equipment incurred by the Contractor in performing the contract work described in Section 1-10.3(3)A. In the event that "Do Not Pass" and "Pass With Care" signs must be left in place, a change order, as described in Section 1-04.4, will be required. When the bid proposal contains the item "Sign Covering", then covering those signs indicated in the contract will be measured and paid according to Section 8-21.

"Sequential Arrow Sign", per hour.
The unit contract price, when applied to the number of units measured for this item in accordance with Section 1-10.4(2), shall be full compensation for all costs of labor, materials and equipment incurred by the Contractor in performing the contract work described in Section 1-10.3(3)B.

"Portable Changeable Message Sign", per each.
The unit contract price, when applied to the number of units measured for this item in accordance with Section 1-10.4(2), shall be full compensation for all costs of labor, materials and equipment incurred by the Contractor in procuring all portable changeable message signs required for the project and for transporting these signs to and from the project.

"Operation of Portable Changeable Message Sign", per hour.
The unit contract price, when applied to the number of units measured for this item in accordance with Section 1-10.4(2), shall be full compensation for all costs of labor, materials and equipment incurred by the Contractor in performing the contract work described in Section 1-10.3(3)C except for costs compensated separately under the items "Other Traffic Control Labor" and "Portable Changeable Message Sign".

"Truck-Mounted Impact Attenuator", per each.
The unit contract price, when applied to the number of units measured for this item in accordance with Section 1-10.4(2), shall be full compensation for all costs of labor, materials and equipment incurred by the Contractor in performing the contract work described in Section 1-10.3(3)J except for costs compensated separately under the items "Operation of Truck-Mounted Impact Attenuator" and "Repair Truck-Mounted Impact Attenuator".

"Operation of Truck-Mounted Impact Attenuator", per hour.
The unit contract price, when applied to the number of units measured for this item in accordance with Section 1-10.4(2), shall be full compensation for all costs of labor, materials and equipment incurred by the Contractor in operating truck-mounted impact attenuators on the project.
"Repair Truck-Mounted Impact Attenuator", by force account.
All costs of repairing or replacing truck-mounted impact attenuators that are
damaged by the motoring public while in use as shown on an approved Traffic
Control Plan will be paid for by force account as specified in Section 1-09.6. To
provide a common proposal for all bidders, the Contracting Agency has estimated
the amount of force account for "Repair Truck-Mounted Impact Attenuator" and has
entered the amount in the Proposal to become a part of the total bid by the
Contractor. Truck-mounted attenuators damaged due to the Contractor's operation or
damaged in any manner when not in use shall be repaired or replaced by the
Contractor at no expense to the Contracting Agency.

"Other Temporary Traffic Control", lump sum.
The lump sum contract payment shall be full compensation for all costs incurred by
the Contractor in performing the contract work defined in Section 1-10, and which
costs are not compensated by one of the above-listed items.

1-10.5(3) Reinstating Unit Items with Lump Sum Traffic Control
The contract provisions may establish the project as lump sum, in accordance with
Section 1-10.4(1) and also reinstate the measurement of one or more of the items
described in Section 1-10.4(2). When that occurs, the corresponding payment
provision in Section 1-10.5(2) is not deleted and the work under that item will be
paid as specified.

SECTION 1-99, APWA SUPPLEMENT
August 1, 2005

1-01.3 Definitions (APWA only) page 1-119
The first paragraph under "Add the following:" is revised to read:

All references in the Standard Specifications to the terms "State", "Governor",
"Department of Transportation", "Washington State Transportation Commission",
"Commission", "Secretary of Transportation", "Secretary", "Headquarters", and
"State Treasurer" shall be revised to read "Contracting Agency".

Section 1-04.2 (APWA Only) page 1-125
The second paragraph is revised 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 Division 1-99 APWA Supplement
6. Division 1-99 APWA Supplement
7. Amendments to the WSDOT/APWA Standard Specifications,
8. WSDOT/APWA Standard Specifications for Road, Bridge and Municipal
   Construction
9. Contracting Agency’s Standard Plans (if any)
10. WSDOT/APWA Standard Plans for Road, Bridge and Municipal
    Construction

Section 1-07.18.4 (APWA Only) Page 1-134 and 1-135
This section is revised to read:

When the Contractor delivers the executed contract for the work to the Contracting
Agency it shall be accompanied by a Certificate(s) of Insurance and endorsements
for each policy of insurance meeting the requirements set forth above. The certificate
must conform to the following requirements:

An ACORD certificate Form 25-S, showing the insuring company, policy effective
dates, limits of liability and the Schedule of Forms and Endorsements.

A copy of the endorsement naming Contracting Agency and any other entities
required by the Contract Provisions as Additional Insured(s), and stating that
coverage is primary and noncontributory, showing the policy number, and signed by
an authorized representative of the insurance company on Form CG2010 (ISO) or
equivalent.

The certificate(s) shall not contain the following or similar wording regarding
cancellation notification to the Contracting Agency: “Failure to mail such notice
shall impose no obligation or liability of any kind upon the company.”

Section 1-10 Temporary Traffic Control (APWA Only) page 141
This section is revised to read:

1-10.1(2) Description (APWA only)
The third paragraph is revised to read:

The Contractor shall provide flaggers, signs, and other traffic control devices
not otherwise specified as being furnished by the Contracting Agency. The
Contractor shall erect and maintain all construction signs, warning signs, detour
signs, and other traffic control devices necessary to warn and protect the public
at all times from injury or damage as a result of the Contractor’s operations
which may occur on highways, roads, streets, sidewalks, or paths. No work
shall be done on or adjacent to any traveled way until all necessary signs and
traffic control devices are in place.
SECTION 2-02, REMOVAL OF STRUCTURES AND OBSTRUCTIONS
August 1, 2005

2-02.3(3) Removal of Pavement, Sidewalks, and Curbs
The section title is revised to read:

2-02.3(3) Removal of Pavement, Sidewalks, Curbs, and Gutters
The first sentence is revised to read:

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

Item 3 is revised to read:

3. Make a vertical saw cut between any existing pavement, sidewalk, curb, or
gutter that is to remain and the portion to be removed.

2-02.4 Measurement
This section is supplemented with the following:

No specific unit of measurement shall apply to the lump sum item of removal of
structures and obstruction.

2-02.5 Payment
The second paragraph is revised to read:

If pavements, sidewalks, curbs, or gutters lie within an excavation area, their
removal will be paid for as part of the quantity removed in excavation.

SECTION 2-03, ROADWAY EXCAVATION AND EMBANKMENT
January 5, 2004
2-03.3(14)D Compaction and Moisture Control Tests
This section is revised to read:

Maximum density and optimum moisture content shall be determined by one of the
following methods:

1. materials with less than 30 percent by weight retained on the U.S. No. 4
sieve shall be determined using FOP for AASHTO T 99 Method A.

2. materials with 30 percent or more by weight retained on the U.S. No. 4
sieve and less than 30 percent retained on the 3/4 inch sieve shall be
determined by WSDOT Test Method No. 606 or FOP for AASHTO T 180
Method D. The determination of which test procedure to use will be made
solely by the Contracting Agency.
3. materials with 30 percent or more retained on the 3/4 inch sieve shall be
determined by WSDOT Test Method No. 606.

In place density will be determined using Test Methods WSDOT FOP for AASHTO
T 310 and WSDOT SOP for T 615.

SECTION 2-09, STRUCTURE EXCAVATION
August 1, 2005

2-09.3(1)E Backfilling
The first paragraph under Timing is revised to read:

Backfill shall not be placed against any concrete structure until the concrete has
attained 90 percent of its design strength and a minimum age of 14 days, except that
reinforced concrete retaining walls 15 feet in height or less may be backfilled after
the wall has attained 90 percent of its design compressive strength and curing
requirements of Section 6-02.3(11) are met. Footings and columns may be
backfilled as soon as forms have been removed, so long as the backfill is brought up
evenly on all sides.

2-09.3(3)A Preservation of Channel
This section is revised to read:

When foundations or substructures are to be built in or next to running streams, the
Contractor shall:

1. Excavate inside cofferdams, caissons, or sheet piling unless dredging or
open pit excavation is permitted.

2. Backfill foundations placed inside cofferdams and behind sheet piling prior
to removing cofferdams or sheet piling. This backfill shall be level with the
original stream bed and shall prevent scouring.

3. Remove any excavation material that may have been deposited in or near
the stream so that the watercourse is free from obstruction.

4. Maintain water depth and horizontal clearances required for traffic to pass
on navigable streams, furnishing any channel signals or lights required
during construction.

5. Place riprap around the outside of cofferdams, as specified, to repair local
scour.

2-09.4 Measurement
In the third paragraph, the width for pipes 18 inches and over is revised to (1.5 x I.D.) +
18 inches.
SECTION 4-04, BALLAST AND CRUSHED SURFACING
January 5, 2004
4-04.3(5) Shaping and Compaction
In the first paragraph, the first sentence is revised to read:

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

SECTION 5-04, HOT MIX ASPHALT
August 1, 2005
5-04.3(7)A Mix Design
The first paragraph "1. General", is revised to read:

1. General. Prior to the production of HMA, the Contractor shall determine a
design aggregate structure and asphalt binder content in accordance with
WSDOT Standard Operating Procedure 732. Once the design aggregate
structure and asphalt binder content have been determined, the Contractor shall
provide test data demonstrating that the design meets the requirements of
Sections 9-03.8(2) and 9-03.8(6) on WSDOT HMA Mix Design Submittal form
350-042. In no case shall the paving begin before the determination of anti-strip
requirements has been made.

5-04.3(8)A Acceptance Sampling and Testing - HMA Mixture
In Item 2 (Aggregates) the second sentence is revised to read:

The acceptance criteria for aggregate properties of sand equivalent, fine aggregate
angularity and fracture will be their conformance to the requirements of Section 9-
03.8(2).

In item 3, C. (Test Results), the second and third paragraphs are revised to read:

Sublot sample test results (gradation and asphalt binder content) may be challenged
by the Contractor. For HMA mixture accepted by statistical evaluation with a mix
design that did not meet the verification tolerances, the test results in the test section
including the percent air voids (Va) may be challenged. To challenge test results, the
Contractor shall submit a written challenge within five working days after receipt of
the specific test results. A split of the original acceptance sample will be sent for
testing to either the Region Materials Lab or the State Materials Lab as determined
by the Project Engineer. The split of the sample with challenged results will not be
tested with the same equipment or by the same tester that ran the original acceptance
test. The challenge sample will be tested for a complete gradation analysis and for asphalt binder content.

The results of the challenge sample will be compared to the original results of the acceptance sample test and evaluated according to the following criteria:

**Deviation**
- U.S. No. 4 sieve and larger: Percent passing ±4.0
- U.S. No. 8 sieve: Percent passing ±2.0
- U.S. No. 200 sieve: Percent passing ±0.4
- Asphalt binder %: Percent binder content ±0.3
- Va %: Percent Va ±0.7

Item 3, D. (Test Methods) is revised to read:

**D. Test Methods**
Testing of HMA for compliance of volumetric properties (VMA, VFA and Va) will be by WSDOT Standard Operating Procedure SOP 731. Testing for compliance of asphalt binder content will be by WSDOT FOP for AASHTO T 308. Testing for compliance of gradation will be by WAQTC FOP for AASHTO T 27/T 11.

In item 3, E (Test Section - HMA Mixture) the first sentence in the third paragraph is revised to read:

For a test section to be acceptable, with or without a verified mix design, the pay factor (Pf) for each of gradation, asphalt binder, VMA, VFA and Va shall be 0.95 or greater, and the remaining test requirements in Section 9-03.8(2) (dust/asphalt ratio, sand equivalent, fine aggregate angularity and fracture) shall conform to the requirements of that Section.

**5-04.3(13) Surface Smoothness**
In the first paragraph, the second sentence is revised to read:

The completed surface of the wearing course shall not vary more than 1/8 inch from the lower edge of a 10-foot straightedge placed on the surface parallel to the centerline.

**5-04.4 Measurement**
The first sentence 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, blending sand, mineral filler, or any other component of the mixture.
5-04.5 Payment
The statement for the pay item "Pavement Repair Excavation Incl. Haul" is revised to read:

The unit contract price per square yard for “Pavement Repair Excavation Incl. Haul” shall be full payment for all costs incurred to perform the work described in Section 5-04.3(5)E with the exception, however, that all costs involved in the placement of HMA shall be included in the unit contract price per ton for “HMA for Pavement Repair Cl. ____ PG __”, per ton.

SECTION 6-01, GENERAL REQUIREMENTS FOR STRUCTURES
August 1, 2005

6-01.6 Load Restrictions on Bridges Under Construction
The second paragraph is revised to read:

If necessary and safe to do so, and if the Contractor requests it in writing, the Engineer may approve traffic on a bridge prior to completion. The maximum distributed load at each construction equipment support shall not exceed the design load by more than 33 percent. The written request shall:

1. Describe the extent of the structure completion at time of the proposed equipment loading;

2. Describe the loading magnitude, arrangement, movement, and position of traffic (equipment) on the bridge, including but not limited to the following:

   a. Location of construction equipment, including outriggers, spreader beams and supports for each, relative to the bridge framing plan (bridge girder layout);

   b. Mechanism of all load transfer (load path) to the bridge;

3. Provide stress calculations under the design criteria specified in the AASHTO Standard Specifications for Highway Bridges, current edition, prepared by (or under the direction of) a professional engineer, licensed under Title 18 RCW state of Washington, and carrying the professional engineer’s signature and seal, including but not limited to the following:

   a. Supporting calculations showing that the flexural and shear stresses in the main load carrying members due to the construction load are within the allowable stresses;

   b. Supporting calculations showing that the flexural and shear stresses in the bridge deck due to the construction load are within the allowable stresses;
4. Provide supporting material properties, catalogue cuts, and other information describing the construction equipment and all associated outriggers, spreader beams, and supports; and

5. State that the Contractor assumes all risk for damage.

SECTION 6-02, CONCRETE STRUCTURES
August 1, 2005

6-02.2 Materials
This section is supplemented with the following:

Microsilica Fume 9-23.11

6-02.3(2) Proportioning Materials
This section is revised to read:

The total water soluble Chloride ion (Cl-) content of the mixed concrete shall not exceed 0.06 percent by weight of cementitious material for prestressed concrete nor 0.10 percent by weight of cementitious material for reinforced concrete. An initial evaluation may be obtained by testing individual concrete ingredients for total chloride ion content per AASHTO T 260 and totaling these to determine the total water soluble Chloride ion (Cl-) or the total water soluble Chloride ion (Cl-) in accordance with ASTM C 1218.

Unless otherwise specified, the Contractor shall use Type I or II Portland cement in all concrete as defined in Section 9-01.2(1).

The use of fly ash is required for Class 4000D and 4000P concrete. The use of fly ash and ground granulated blast furnace slag is optional for all other classes of concrete.

Fly ash, if used, shall not exceed 35 percent by weight of the total cementitious material and shall conform to Section 9-23.9. Ground granulated blast furnace slag, if used, shall not exceed 25 percent by weight of the total cementitious material and shall conform to Section 9-23.10. 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 35 percent by weight of the total cementitious material.

The water/cement ratio shall be calculated on the total weight of cementitious material. The following are considered cementitious materials: Portland cement, fly ash, ground granulated blast furnace slag and microsilica.
As an alternative to the use of fly ash, ground granulated blast furnace slag and cement as separate components, a blended hydraulic cement that meets the requirements of Section 9-01.2(4) Blended Hydraulic Cements may be used.

6-02.3(2)A Contractor Mix Design
The seventh paragraph is revised to read:

A high-range water reducer (superplasticizer) may be used in all mix designs. Microsilica fume may be used in all mix designs. The use of a high-range water reducer or microsilica fume shall be submitted as a part of the Contractor’s concrete mix design.

6-02.3(4) Ready-Mix Concrete
This section is revised to read:

All concrete, except commercial concrete and lean concrete shall be batched in a prequalified manual, semi-automatic, or automatic plant as described in Section 6-02.3(4)A. The Engineer is not responsible for any delays to the Contractor due to problems in getting the plant certified.

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

Prequalification may be obtained through an inspection conducted by the Plant Manager, defined as the person directly responsible for the daily plant operation, using the NRMCA or WSDOT checklist, through certification by NRMCA, or by an independent evaluation certified by a professional engineer using NRMCA or Contracting Agency guidelines. Information concerning NRMCA certification may be obtained from the National Ready Mix Concrete Association at 900 Spring Street, Silver Springs, MD 20910. The Contracting Agency and the NRMCA certification have similar requirements for plant and delivery equipment. Whereas Plant Manager certification shall be done prior to the start of a project and every six months throughout the life of the project, the NRMCA certification shall be good for a two year period.

If prequalification is done by the Plant Manager the following shall be performed:

1. The checklist cover page shall be signed by the Plant Manager and notarized.

2. The signed and notarized cover page shall be submitted to the Project Engineer with the concrete mix design (WSDOT Form 350-040), water meter verification, truck list, and admixture dispensing certification.

3. The checklists shall be maintained by the Plant Manager and are subject to review at any time by the Contracting Agency.
4. The water meter shall be verified every six months.

In the first sentence of the eighth paragraph, "Engineer" is revised to "Plant Manager".

6-02.3(5)A General
In the fourth paragraph, item 2 is revised to read:

2. An individual strength test averaged with the two preceding individual strength
tests meets or exceeds specified strength (for the same class and exact mix I.D.
of concrete on the same contract).

6-02.3(5)C Conformance to Mix Design
This section is revised to read:

Cement, coarse and fine aggregate weights shall be within the following tolerances
of the mix design:

Batch Volumes less than or equal to 4 cubic yards

<table>
<thead>
<tr>
<th>Material</th>
<th>Tolerance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cement</td>
<td>+5%</td>
</tr>
<tr>
<td>Aggregate</td>
<td>+10%</td>
</tr>
<tr>
<td></td>
<td>-1%</td>
</tr>
</tbody>
</table>

Batch Volumes more than 4 cubic yards

<table>
<thead>
<tr>
<th>Material</th>
<th>Tolerance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cement</td>
<td>+5%</td>
</tr>
<tr>
<td>Aggregate</td>
<td>+2%</td>
</tr>
<tr>
<td></td>
<td>-1%</td>
</tr>
</tbody>
</table>

If the total cementitious material weight is made up of different components,
these component weights shall be within the following tolerances:

1. Portland cement weight plus 5% or minus 1 percent of that specified in
the mix design.
2. Fly ash weight plus or minus 5 percent of that specified in the mix
design.
3. Microsilica weight plus or minus 10 percent of that specified in the
mix design.

Water shall not exceed the maximum water specified in the mix design.

6-02.3(6)A Weather and Temperature Limits to Protect Concrete
The section "Cold Weather Protection" is revised to read:

The Contractor is solely responsible for protecting concrete from inclement weather
during the entire curing period. The Contractor shall provide a written procedure for
cold weather concreting to the Engineer for review and approval. The procedure
shall detail how the Contractor will prevent the concrete temperature from falling
below 50°F. Extra protection shall be provided for areas especially vulnerable to
freezing (such as exposed top surfaces, corners and edges, thin sections, and concrete
placed into steel forms). Permission given by the Engineer to place concrete during cold weather will in no way ensure acceptance of the work by the Contracting Agency. Should the concrete placed under such conditions prove unsatisfactory in any way, the Engineer shall still have the right to reject the work although the plan and the work were carried out with the Engineer’s permission.

If weather forecasts predict air temperatures below 35°F during the seven days just after the concrete placement, the Contractor may place the concrete only if his approved cold weather concreting plan is implemented.

The Contractor shall provide and maintain a maturity meter in the concrete at a location specified by the Engineer for each concrete placement. During curing, data from the maturity meter shall be readily available to the Engineer. The Contractor shall record and provide time and temperature data on hourly intervals.

The Contractor shall not mix nor place concrete while the air temperature is below 35°F, unless the water or aggregates (or both) are heated to at least 70°F. The aggregate shall not exceed 150°F. If the water is heated to more than 150°F, it shall be mixed with the aggregates before the cement is added. Any equipment and methods shall heat the materials evenly. Concrete placed in shafts and piles is exempt from such preheating requirements.

The Contractor may warm stockpiled aggregates with dry heat or steam, but not by applying flame directly or under sheet metal. If the aggregates are in bins, steam or water coils or other heating methods may be used if aggregate quality is not affected. Live steam heating is not permitted on or through aggregates in bins. If using dry heat, the Contractor shall increase mixing time enough to permit the super-dry aggregates to absorb moisture.

Any concrete placed in air temperatures below 35°F shall be immediately protected. In addition to the monitoring of the concrete temperature with a maturity meter the Contractor shall provide recording thermometers or other approved devices to monitor the surface temperature of the concrete. The concrete surface temperature shall be maintained at or above 50°F and the relative humidity shall be maintained above 80 percent. These conditions shall be maintained for a minimum of seven days or for the cure period required by Section 6-02.3(11), whichever is longer. If artificial heat is used to maintain the temperature inside an enclosure, moisture shall be added to the enclosure to maintain the humidity as stated above. The Contractor shall stop adding moisture 24 hours before removing the heat.

If at any period during curing the concrete temperature falls below 50°F on the maturity meter or recording thermometer, no curing time is awarded for that day and the required curing time will be extended day for day where the temperature falls below 50°F. Should the Contractor fail to adequately protect the concrete and the temperature of the concrete falls below 35°F during curing, the Engineer may reject it.

Section 6-02.3(6) is supplemented with the following:
6-02.3(6)D Protection Against Vibration

Freshly placed concrete shall not be subjected to excessive vibration and shock waves during the curing period until it has reached a 2000 psi minimum compressive strength for concrete Class 4000 and lower strength classes of concrete. For higher strength classes of concrete, the minimum compressive strength for ending the vibration restriction shall be the concrete Class designation (specified in psi) divided by two.

After the first 5 hours from the time the concrete has been placed and consolidated, the Contractor shall keep all vibration producing operations at a safe horizontal distance from the freshly placed concrete by following either the prescriptive safe distance method or the monitoring safe distance method. These requirements for the protection of freshly placed concrete against vibration shall not apply for plant cast concrete, pile driving, shaft installation or soldier pile shaft installation operations, nor shall they apply to the vibrations caused by the traveling public. See Section 6-05.3(11)H, Shaft Special Provisions, and Section 6-16 respectively for pile driving, shaft installation, and soldier pile shaft installation operations.

Prescriptive Safe Distance Method

After the concrete has been placed and consolidated, the Contractor shall keep all vibration producing operations at a safe horizontal distance from the freshly placed concrete as follows:

<table>
<thead>
<tr>
<th>MINIMUM COMPRESSIVE STRENGTH, f’c</th>
<th>SAFE HORIZONTAL DISTANCE (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 1000 psi</td>
<td>75 feet</td>
</tr>
<tr>
<td>1000 psi to &lt; 1400 psi</td>
<td>30 feet</td>
</tr>
<tr>
<td>1400 psi to 2000 psi</td>
<td>15 feet</td>
</tr>
<tr>
<td></td>
<td>125 feet</td>
</tr>
<tr>
<td></td>
<td>50 feet</td>
</tr>
<tr>
<td></td>
<td>25 feet</td>
</tr>
</tbody>
</table>

(1) The safe horizontal distance shall be reduced to 10 feet for small rubber tire construction equipment like backhoes under 50,000 pounds, concrete placing equipment, and legal highway vehicles if such equipment travels at speeds of:

- □ ≤ 5 mph on relatively smooth roadway surfaces or
- □ ≤ 3 mph on rough roadway surfaces (i.e. with potholes)

(2) Equipment Class L (Low Vibration) shall include tracked dozers under 85,000 pounds, track vehicles, trucks (unless excluded above), hand operated jack hammers, cranes, auger drill rig, caisson drilling, vibratory roller compactors under 30,000 pounds.
(3) Equipment Class H (High Vibration) shall include machine operated impact tools, pavement breakers, and other large pieces of equipment.

After the concrete has reached a minimum compressive strength specified above, the safe horizontal distance restrictions would no longer apply.

**Monitoring Safe Distance Method**

The Contractor may monitor the vibration producing operations in order to decrease the safe horizontal distance requirements of the prescriptive safe distance method. If this method is chosen, all construction operations that produce vibration or shock waves in the vicinity of freshly placed concrete shall be monitored by the Contractor with monitoring equipment sensitive enough to detect a minimum peak particle velocity (PPV) of 0.10 inches per second. Monitoring devices shall be placed on or adjacent to the freshly placed concrete when the measurements are taken. During the time subsequent to the concrete placement, the Contractor shall cease all vibration or shock producing operations in the vicinity of the newly placed concrete when the monitoring equipment detects excessive vibration and shock waves defined as exceeding the following PPV's:

<table>
<thead>
<tr>
<th>MINIMUM</th>
<th>MAXIMUM PPV</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMPRESSIVE</td>
<td></td>
</tr>
<tr>
<td>STRENGTH, f ’c</td>
<td>0.10 in / sec</td>
</tr>
<tr>
<td>&lt; 1000 psi</td>
<td>1.0 in / sec</td>
</tr>
<tr>
<td>1000 psi to &lt; 1400 psi</td>
<td>2.0 in / sec</td>
</tr>
<tr>
<td>1400 psi to 2000 psi</td>
<td></td>
</tr>
</tbody>
</table>

After the concrete has reached a minimum compressive strength specified above, the safe horizontal distance restrictions would no longer apply.

**6-02.3(11) Curing Concrete**

In the first paragraph, item 3 is supplemented with the following:

When continuous moisture or wet curing is required, the Contractor shall keep the concrete surfaces wet with water during curing.

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

The Contractor may provide continuous moisture by watering a covering of heavy quilted blankets, by keeping concrete surfaces wet with water continuously and covering with a white reflective type sheeting, or by wetting the outside surfaces of wood forms.

The third paragraph is revised to read:

When curing Class 4000D, two coats of curing compound that complies with Section 9-23.2 shall be applied immediately (not to exceed 15 min.) after tining any portion
of the deck. The surface shall be covered with presoaked heavy quilted blankets or burlap as soon as the concrete has set enough to allow covering without damaging the finish. Soaker hoses are required and shall be placed on top of burlap or blankets and shall be charged with water frequently to keep the entire deck covering wet during the course of curing.

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

The compound shall be applied immediately after finishing.

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

The Contractor shall cover the top surfaces with white, reflective sheeting, leaving it in place for at least ten days.

6-02.3(17) F Bracing
The table following the third paragraph of the sub section Temporary Bracing For Bridge Girders is supplemented with the following:

<table>
<thead>
<tr>
<th>Girder Series</th>
<th>Distance In Inches</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prestressed concrete tub girders with webs with flanges</td>
<td>30</td>
</tr>
<tr>
<td>W32BTG, W38BTG, and W62BTG</td>
<td>70</td>
</tr>
<tr>
<td>WF74PTG, W83PTG, and W95PTG</td>
<td>72</td>
</tr>
</tbody>
</table>

6-02.3(17) K Concrete Forms on Steel Spans
The following new paragraph is inserted between the second and third paragraphs:

The compression member or bottom connection of cantilever formwork support brackets shall bear either within six inches maximum vertically of the bottom flange or within six inches maximum horizontally of a vertical web stiffener. The Contractor shall also furnish and install temporary struts and ties to prevent rotation of the steel girder. Partial depth cantilever formwork support brackets that do not conform to the above requirements shall not be used, unless the Contractor submits details showing the additional formwork struts and ties used to brace the steel girder against web distortion caused by the partial depth bracket, and receives the Engineer’s approval of the submittal.

6-02.3(17) O Early Concrete Test Cylinder Breaks
The third sentence in the first paragraph is revised to read:

The Contractor shall retain a testing laboratory to perform this work.

The first paragraph is supplemented with the following:
Testing laboratories’ equipment shall be calibrated within one year prior to testing and testers shall be either ACI certified or qualified in accordance with AASHTO R 18.

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

The Contractor shall furnish the Engineer with all test results, proof of equipment calibration, and tester’s certification.

The sixth paragraph is deleted.

6-02.3(19)A Elastomeric Bearing Pads
This section including title is revised to read:

6-02.3(19)A Vacant

6-02.3(19)B Bridge Bearing Assemblies
Item 4 is deleted.

6-02.3(20) Grout for Anchor Bolts and Bridge Bearings
The eighth paragraph is supplemented with the following:

The grout pad may be loaded when a minimum of 4000 psi compressive strength is attained.

6-02.3(21) Drainage of Box Girder Cells
This section is supplemented with the following:

All drainage holes shall be screened in accordance with the Plan details.

6-02.3(22) Drainage of Substructure
The second sentence in the first paragraph is supplemented with the following:

Weep holes shall be covered with geotextile meeting the requirements of Section 9-33.2, Table 2 Class C before backfilling. Geotextile screening shall be bonded to the concrete with an approved adhesive.

6-02.3(24)C Placing and Fastening
The fifteenth paragraph beginning with "Reinforcing steel bars shall not vary..." is supplemented with the following:

Drilled Shafts top of rebar cage elevation +6 in./-3 in.

6-02.3(24)E Welding Reinforcing Steel
The ninth paragraph is revised to read:
The minimum preheat and interpass temperature for welding Grade 60 reinforcing bars shall be in accordance with AWS D1.4 Table 5.2 and mill certification of carbon equivalence, per lot of reinforcing. Preheating shall be applied to the reinforcing bars and other splice members within 6 inches of the weld, unless limited by the available lengths of the bars or splice member.

The twelfth paragraph is revised to read:

Under supervision of the State Materials and Fabrication Inspector, the welder shall weld three test joints of the largest size reinforcing bar to be weld spliced, per type of joint shown in the Plans. Two of the test welds shall be test loaded to no less than 125 percent of the minimum specified yield strength of the bar. The remaining test weld shall be mechanically cut perpendicular to the direction of the welding and macroetched. The macroetch specimen for Flare V groove welds will be inspected for the weld size and effective throat as shown in the Plans. Indirect butt splices shall be cut mechanically at two locations to provide a transverse cross-section of each of the bars spliced in the test assembly. The sections shall show the full cross-section of the weldment, the root of the weld, and any reinforcement. The etched cross-section shall have complete penetration and complete fusion with the base metal and between successive passes in the weld. Groove welds of direct butt splices and flare-groove welds shall not have reinforcement exceeding 1/8 inch in height measured from the main body of the bar and shall have a gradual transition to the base metal surface. No cracks will be allowed in either the weld metal or heat-affected zone. All craters shall be filled to the full cross-section of the weld. Weld metal shall be free from overlay. Undercutting deeper than 1/32 inch will not be allowed except at points where welds intersect the raised pattern of deformations where undercutting less than 1/16 inch deep will be acceptable. The sum of diameters of piping porosity in groove welds shall not exceed 1/8 inch in any linear inch of weld or exceed 9/16 inch in any 6-inch length of weld. Corrections to welds with shielded metal arc, gas metal arc, or flux-cored arc welding processes shall be made in accordance with Engineer’s approval.

6-02.3(25) Prestressed Concrete Girders
The fourth paragraph is replaced with the following:

The various types of girders are:

Prestressed Concrete Girder — Refers to prestressed concrete girders of all types, including prestressed concrete I girders, prestressed concrete wide flange I girders, bulb tee girders, deck bulb tee girders, thin flange deck bulb tee girders, precast prestressed concrete members, spliced prestressed concrete girders, and prestressed concrete tub girders.

Prestressed Concrete I Girder — Refers to a prestressed concrete girder with a flanged I shaped cross section, requiring a cast-in-place concrete deck to support...
traffic loads. WSDOT standard girders in this category include Series W42G, W50G, W58G, and W74G.

**Prestressed Concrete Wide Flange I Girder** – Refers to a prestressed concrete girder with an I shaped cross section with wide top and bottom flanges, requiring a cast-in-place concrete deck to support traffic loads. WSDOT standard girders in this category include Series WF42G, WF50G, WF58G, WF74G, W83G, and W95G.

**Bulb Tee Girder** – Refers to a prestressed concrete girder, with a wide top flange requiring a cast-in-place concrete deck to support traffic loads. WSDOT standard girders in this category include Series W32BTG, W38BTG, and W62BTG.

**Deck Bulb Tee Girder** – Refers to a bulb tee girder with a top flange designed to support traffic loads, and designed to be mechanically connected at the flange edges to adjacent girders at the job site. Except where specific requirements are otherwise specified for these girders, deck bulb tee girders shall conform to all requirements specified for bulb tee girders. WSDOT standard girders in this category include Series W35DG, W41DG, W53DG, and W65DG.

**Thin Flange Deck Bulb Tee Girder** – Refers to a bulb tee girder with a top flange width equal to the girder spacing and requiring a cast-in-place concrete deck to support traffic loads. Except where specific requirements are otherwise specified for these girders, thin flange deck bulb tee girders shall conform to all requirements specified for bulb tee girders. WSDOT standard girders in this category include Series W32TFG, W38TFG, W50TFG, and W62TFG.

**Precast Prestressed Member (PCPS Member)** – Refers to a precast prestressed slab, precast prestressed ribbed section, or a deck double tee girder. PCPS members are designed to be mechanically connected at the flange or member edges to adjacent PCPS members at the job site. Except where specific requirements are otherwise specified for these girders, PCPS members shall conform to all requirements specified for deck bulb tee girders.

**Spliced Prestressed Concrete Girder** – Refers to prestressed concrete girders initially fabricated in segments to be longitudinally spliced together with cast-in-place concrete closures at the job site. Except where specific requirements are otherwise specified for these girders, spliced prestressed concrete girders shall conform to all requirements specified for prestressed concrete girders. Anchorages shall conform to Sections 6-02.3(26)B, 6-02.3(26)C, and 6-02.3(26)D. Ducts shall conform to the Section 6-02.3(26)E requirements for internal embedded installation, and shall be round, unless the Engineer approves use of elliptical shaped ducts. Duct-wedge plate transitions shall conform to Section 6-02.3(26)E. Prestressing reinforcement shall conform to Section 6-
02.3(26)F. WSDOT standard girders in this category include Series WF74PTG, W83PTG, and W95PTG.

Prestressed Concrete Tub Girder — Refers to prestressed concrete trapezoidal box or bathtub girders including those fabricated in segments to be spliced together with cast-in-place concrete closures at the job site. Except where specific requirements are otherwise specified for these girders, prestressed concrete tub girders shall conform to all requirements specified for prestressed concrete girders and spliced prestressed concrete girders. WSDOT standard girders in this category include Series U**G* or Series UF**G*, where U specifies webs without flanges, UF specifies webs with flanges, ** specifies the girder height in inches, and * specifies the bottom flange width in feet.

6-02.3(25)A Shop Plans

The second, third and fourth paragraphs are revised to read:

Shop plans shall show the size and location of all cast-in holes for installation of deck formwork hangers and/or temporary bracing. Holes for formwork hangers shall match approved deck formwork plans designed in accordance with Section 6-02.3(16). There shall be no field-drilled holes in prestressed concrete girders. Post-tensioning ducts in spliced prestressed concrete girders shall be located so their center of gravity is in accordance with the Plans.

The Contractor shall have the option to furnish Series W74G prestressed concrete girders with minor dimensional differences from those shown in the Plans. The 2 5/8-inch top flange taper may be reduced to 1 5/8 inches and the bottom flange width may be increased to 2 feet 2 inches. Other dimensions of the girder shall be adjusted as necessary to accommodate the above mentioned changes. Reinforcing steel shall be adjusted as necessary. The overall height and top flange width shall remain unchanged.

If the Contractor elects to provide a prestressed concrete girder with an increased web thickness, shop plans along with supporting design calculations shall be submitted to the Engineer for approval prior to girder fabrication. The girder shall be designed for at least the same load carrying capacity as the girder shown in the Plans. The load carrying capacity of the mild steel reinforcement shall be the same as that shown in the Plans.

The sixth paragraph is revised to read:

The Contractor shall provide five copies of the shop plans to the Engineer for approval, except as otherwise noted. Shop drawings for spliced prestressed concrete girders shall conform to Section 6-02.3(26)A, and seven copies of the shop drawings shall be submitted to the Engineer for approval. The shop drawings for spliced prestressed concrete girders shall include all details related to the post-tensioning operations in the field, including details of hardware required, tendon geometry,
blockout details, and details of additional or modified steel reinforcing bars required in cast-in-place closures. Approval of shop plans means only that the Engineer accepts the methods and materials. Approval does not imply correct dimensions.

6-02.3(25)B Casting
The first paragraph is revised to read:

Before casting girders, the Contractor shall have possession of an approved set of shop drawings. Side forms shall be steel except that cast-in-place concrete closure forms for spliced prestressed concrete girders, interior forms of prestressed concrete tub girders, and end bulkhead forms of prestressed concrete girders may be plywood. Interior voids for precast prestressed slabs with voids shall be formed by either wax soaked cardboard or expanded polystyrene forms. The interior void forms shall be secured in the position as shown in the Plans and shall remain in place.

The fourth paragraph is revised to read:

Air-entrainment is not required in the concrete placed into prestressed precast concrete girders, including cast-in-place concrete closures for spliced prestressed concrete girders.

The sixth paragraph is revised to read:

The Contractor may form circular block-outs in the girder top flanges to receive falsework hanger rods. These block-outs shall:

1. Not exceed 1 inch in diameter;
2. Be spaced no more than 72 inches apart longitudinally on the girder;

6-02.3(25)C Prestressing
The sixth paragraph is revised to read:

Post-tensioning of spliced prestressed concrete girders shall conform to Section 6-02.3(26)G, and the following requirements:

1. Before tensioning, the Contractor shall remove all side forms from the cast-in-place concrete closures. From this point until 48 hours after grouting the tendons, the Contractor shall keep all construction and other live loads off
the superstructure and shall keep the falsework supporting the
superstructure in place.

2. Once the post-tensioning steel is installed, no welds or welding grounds
shall be attached to metal forms, structural steel, or steel reinforcing bars of
the structural member.

3. The Contractor shall not tension the post-tensioning reinforcement until the
concrete in the cast-in-place closures reaches the minimum compressive
strength specified in the Plans (or 5,000 psi if the concrete strength is not
specified in the Plans). This strength shall be measured with concrete
cylinders made of the same concrete and cured under the same conditions
as the cast-in-place closures.

4. All post-tensioning shall be completed before placing the sidewalks and
barriers on the superstructure.

6-02.3(25)D Curing
The fourth paragraph is revised to read:

Curing of cast-in-place concrete closures for spliced prestressed concrete girders
shall conform to Section 6-02.3(11).

6-02.3(25)E Contractors Control Strength
The sixth through eleventh paragraphs are revised to read:

For precast prestressed members, a test shall consist of four cores measuring 3
inches in diameter by 6 inches in height (for slabs) and by the thickness of the web
(for ribbed sections). Two cores shall be taken from each side of the member and on
each side of the member’s span midpoint, at locations approved by the Engineer.
The core locations for precast prestressed slabs shall be near mid-depth of the slab,
within the middle third of the span length, and shall avoid all prestressing strands
and steel reinforcing bars. The core locations for precast prestressed ribbed sections
shall be immediately beneath the top flange, within the middle third of the span
length, and shall avoid all prestressing strands and steel reinforcing bars.

For prestressed concrete tub girders, a test shall consist of four cores measuring 3
inches in diameter by the thickness of the web, taken from each web approximately
three feet to the left and to the right of the center of the girder span. The cores shall
avoid all prestressing strands and steel reinforcing bars.

For all other prestressed concrete girders, a test shall consist of three cores
measuring 3 inches in diameter by the thickness of the web and shall be removed
from just below the top flange; one at the midpoint of the girder’s length and the
other two approximately 3 feet to the left and approximately 3 feet to the right.
The cores shall be taken in accordance with AASHTO T 24 and shall be tested in accordance with WSDOT FOP for AASHTO T 22. The Engineer may accept the girder if the average compressive strength of the four cores from the precast prestressed member, or prestressed concrete tub girder, or of the three cores from any other prestressed concrete girder, is at least 85 percent of the specified compressive strength with no one core less than 75 percent of specified compressive strength.

If the girder is cored to determine the release strength, the required patching and curing of the patch shall be done prior to shipment. If there are more than three holes or if they are not in a neutral location, the prestress steel shall not be released until the holes are patched and the patch material has attained a minimum compressive strength equal to the required release compressive strength or 4,000 psi, whichever is larger.

The Contractor shall coat cored holes with an epoxy bonding agent and patch the holes using the same type concrete as that in the girder, or a mix approved during the annual plant review and approval. The epoxy bonding agent shall meet the requirements of Section 9-26.1 for Type II, Grade 2 epoxy. The girder shall not be shipped until tests show the patch material has attained a minimum compressive strength of 4,000 psi.

6-02.3(25)F Prestress Release
The third paragraph is revised to read:

The Contractor may request permission to release the prestressing reinforcement at a minimum concrete compressive strength less than specified in the Plans. This request shall be submitted to the Engineer for approval in accordance with Section 6-01.9 and shall be accompanied with calculations showing the adequacy of the proposed release concrete compressive strength. The release strength shall not be less than 3,500 psi, except that the release strength for spliced prestressed concrete girders shall not be less than 4,000 psi. The calculated release strength shall meet the requirements outlined in the Washington State Department of Transportation Bridge Design Manual for tension and compression at release. The proposed minimum concrete compressive strength at release will be evaluated by the Contracting Agency. Fabrication of girders using the revised release strength shall not begin until the Contracting Agency has provided written approval of the revised release compressive strength. If a reduction of the minimum concrete compressive strength at release is allowed, the Contractor shall bear any added cost that results from the change.

6-02.3(25)G Protection of Exposed Reinforcement
The second paragraph is revised to read:

Grouting of post-tensioning ducts for spliced prestressed concrete girders shall conform to Section 6-02.3(26)H.
6-02.3(25)I Finishing

The fourth paragraph is revised to read:

On the deck bulb tee girder section and all precast prestressed members, the Contractor shall test the roadway deck surface portion for flatness. This test shall occur after floating but while the concrete remains plastic. Testing shall be done with a 10-foot straightedge parallel to the girder centerline and with a flange width straightedge at right angles to the girder centerline. The Contractor shall fill depressions, cut down high spots, and refinish to correct any deviation of more than 1/4 inch within the straightedge length. This section of the roadway surface shall be finished to meet the requirements for finishing roadway slabs, as defined in Section 6-02.3(10) except that, if approved by the Engineer, a coarse stiff broom may be used to provide the finish in lieu of a metal tined comb.

6-02.3(25)I Tolerances

The title, first paragraph, and items 7, 10, and 21 following the first paragraph are revised to read:

6-02.3(25)I Fabrication Tolerances

The girders shall be fabricated as shown in the Plans and shall meet the dimensional tolerances listed below. Construction tolerances of cast-in-place closures for spliced prestressed concrete girders shall conform to the tolerances specified for spliced prestressed concrete girders. Actual acceptance or rejection will depend on how the Engineer believes a defect outside these tolerances will affect the structure’s strength or appearance:

7. Flange Depth:
   - For I and Wide Flange I girders: ± 1/4 inch
   - For bulb tee and deck bulb tee girders: + 1/4 inch, - 1/8 inch
   - For PCPS members: + 1/4 inch, - 1/8 inch

10. Longitudinal Position of the Harping Point:
    - Single harping point: ± 18 inches
    - Multiple bundled strand groups: ± 6 inches
    - First bundled strand group: ± 18 inches
    - Second bundled strand group: ± 30 inches
    - Third bundled strand group: ± 30 inches

21. Differential Camber Between Girders in a Span (measured in place at the job site):
    - For I, Wide Flange I, bulb tee, and spliced prestressed concrete girders: 1/8 inch per 10 feet of beam length.
For deck bulb tee girders: Cambers shall be equalized
by
an approved method when the
differences in cambers
between
adjacent girders or stages
measured at mid-span
exceeds
1/4 inch.
For PCPS members:
± 1/4 inch per ten feet of
member
length measured at midspan,
but
not greater than ± 1/2 inch
total.
For prestressed
± 1/4 inch per ten feet of
cement tube girders:
length measured at midspan,
member
but
not greater than ± 1/2 inch
total.

6-02.3(25)J Horizontal Alignment
The fourth paragraph is revised to read:
The maximum deviation of the side of the precast prestressed slab, or the edge of the
roadway deck slab of the deck double tee girder or the precast prestressed ribbed
section, measured from a chord that extends end to end of the member, shall be ± 1/8
inch per 10 feet of member length, but not greater than 1/2 inch total.

6-02.3(25)K Girder Deflection
The second and third paragraphs are revised to read:
The “D” dimensions shown in the Plans are computed girder deflections at midspan
based on a time lapse of 40 and 120 days after release of the prestressing strands. A
positive (+) “D” dimension indicates upward deflection.
The Contractor shall control the deflection of prestressed concrete girders that are to
receive a cast-in-place slab by scheduling fabrication between 40 and 120 days of
girder erection.
The fifth paragraph is revised to read:
All costs, including roadway slab form adjustments required to maintain specified
steel reinforcing bar clearances and deck profiles, and any additional Contracting
Agency engineering expenses, in connection with accommodating excess girder
deflection shall be at the Contractor's expense.

6-02.3(25)L Handling and Storage
The first and second paragraphs are revised to read:

During handling and storage, each girder shall always be kept plumb and upright,
and each precast prestressed member and prestressed concrete tub girder shall
always be kept in the horizontal position as shown in the Plans. It shall be lifted
only by the lifting devices (strand lift loops or high-strength threaded steel bars) at
either end. For strand lift loops, a minimum 2 inch diameter straight pin of a shackle
shall be used through the loops. For high-strength threaded steel bars, the lifting
hardware that connects to the bars shall be designed, detailed, and furnished by the
Series W32BTG, W38BTG, W62BTG, and W74G girders up to 145 feet in length,
can be picked up at a minimum angle of 60 degrees from the top of the girder. All
other prestressed girders shall be picked up within 10 degrees of perpendicular to the
top of the girder.

For some girders, straight temporary top flange strands may be specified in the
Plans. Pretensioned top temporary strands for full length prestressed concrete
girders shall be unbonded over all but the end 10 feet of the girder length. As an
alternative for full length prestressed concrete girders, temporary top strands may be
post-tensioned prior to shipment. When temporary top strands are specified for
spliced prestressed concrete girders, the temporary top strands shall be post-
tensioned prior to lifting the assembled girder. When the post-tensioned alternative
is used, the Contractor shall be responsible for properly sizing the anchorage plates,
and the reinforcement adjacent to the anchorage plates, to prevent bursting or
splitting of the concrete in the top flange. Temporary strands shall be cut or released
in accordance with Section 6-02.3(25)N.

6-02.3(25)M Shipping
The third and fourth paragraphs are revised to read:

No double tee girder, deck double tee girder, precast prestressed slab or precast
prestressed ribbed section shall be shipped for at least three days after concrete
placement. No deck bulb tee girder or prestressed concrete tub girder shall be
shipped for at least seven days after concrete placement, except that deck bulb tee
girders or prestressed concrete tub girders may be shipped three days after concrete
placement when L/(bd) is less than or equal to 5.0, where L equals the shipping
length of the girder, b equals the girder top flange width (for deck bulb tee girders)
or the bottom flange width (for prestressed concrete tub girders), and d equals the
girder depth, all in feet. No other girder shall be shipped for at least ten days after
concrete placement.
Girder support during shipping shall be located as follows unless otherwise shown in the Plans:

<table>
<thead>
<tr>
<th>Type of Girder</th>
<th>Centerline Support Within This Distance From Either End</th>
</tr>
</thead>
<tbody>
<tr>
<td>Precast Prestressed Members</td>
<td>2 feet</td>
</tr>
<tr>
<td>Series W42G, WF42G, W50G and WF50G</td>
<td>3 feet</td>
</tr>
<tr>
<td>All bulb tee and deck bulb tee girders, except as noted</td>
<td>3 feet</td>
</tr>
<tr>
<td>Series W58G, WF58G, and W62BTG</td>
<td>4 feet</td>
</tr>
<tr>
<td>Series W74G and WF74G</td>
<td>5 feet</td>
</tr>
<tr>
<td>Series W83G and W95G</td>
<td>8 feet</td>
</tr>
<tr>
<td>Series WF74PTG, W83PTG, and W95PTG segments</td>
<td>8 feet</td>
</tr>
<tr>
<td>Prestressed concrete tub girder segment</td>
<td>4 feet</td>
</tr>
</tbody>
</table>

The sixth, seventh and eighth paragraphs are revised to read:

If the Contractor elects to assemble spliced prestressed concrete girders into components of two or more segments prior to shipment, the Contractor shall submit shipment support location working drawings with supporting calculations to the Engineer in accordance with Section 6-01.9. The calculations shall show that concrete stresses in the assembled girders will not exceed those listed below.

Lateral bracing for shipping is not required for prestressed concrete tub girders and precast prestressed members. Other prestressed concrete girders of lengths equal or shorter than the following will not require lateral bracing for shipping:

<table>
<thead>
<tr>
<th>Type of Girder</th>
<th>Maximum Length Not Requiring Bracing for Shipping</th>
</tr>
</thead>
<tbody>
<tr>
<td>Series W42G, WF42G, W32BTG, and W38BTG</td>
<td>80 feet</td>
</tr>
<tr>
<td>Series W50G and WF50G</td>
<td>100 feet</td>
</tr>
<tr>
<td>All deck bulb tee girders</td>
<td>120 feet</td>
</tr>
<tr>
<td>Series W74G and WF74G</td>
<td>130 feet</td>
</tr>
</tbody>
</table>

For all girders exceeding these lengths, and all Series WF74PTG, W83G, W83PTG, W95G, and W95PTG girders, the Contractor shall provide bracing to control lateral bending during shipping, unless the Contractor furnishes calculations in accordance with Section 6-01.9 demonstrating that bracing is not necessary. External bracing shall be attached securely to the top flange of the girder. The Contractor is cautioned that more conservation guidelines for lateral bracing may be required for some delivery routes. The Contractor shall submit a bracing plan, with supporting calculations, to the Engineer for approval in accordance with Section 6-01.9. The Contractor shall not begin shipping the girders until receiving the Engineer’s
approval of the bracing plan, and shall perform all bracing operations at no additional cost to the Contracting Agency.

**Criteria for Checking Girder Stresses**

**At the Time of Lifting or Transporting and Erecting**

Stresses at both support and harping points shall be satisfied based on these criteria:

1. Allowable compression stress, $f_c = 0.60 f'_c m$
   a. $f'_c m = $ compressive strength at time of lifting or transporting verified by test but shall not exceed design compressive strength ($f'_c$) at 28 days in psi + 1,000 psi

2. Allowable tension stress, ksi
   a. With no bonded reinforcement = 3 times square root ($f'_c$) ≤ 0.20 ksi
   b. With bonded reinforcement to resist total tension force in the concrete computed on the basis of an uncracked section 6.0 times square root ($f'_c m$). The allowable tensile stress in the reinforcement is 30 ksi (AASHTO M-31, Gr. 60)

3. Prestress losses
   a. 1 day to 1 month = computed losses
   b. 1 month to 1 year = 75 percent of computed final losses
   c. 1 year or more = computed final losses

4. Impact on dead load
   a. Lifting from casting beds = 0 percent
   b. Transporting and erecting = 20 percent

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**6-02.3(25)N Prestressed Concrete Girder Erection**

The fifth paragraph is revised to read:

The concrete in piers and crossbeams shall reach at least 80 percent of design strength before girders are placed on them. The Contractor shall hoist girders only by the lifting devices at the ends, always keeping the girders plumb and upright. Once erected, the girders shall be braced to prevent tipping until the intermediate diaphragms are cast and cured. **When temporary strands in the top flange are used, they shall be cut after the girders are braced and before the intermediate diaphragms are cast.** The Contractor shall place the cast-in-place deck on the girders within 30 calendar days of cutting the temporary strands, except as otherwise approved by the Engineer.

For situations where the Contractor proposes to delay placing the cast-in-place deck on the girders beyond 30 calendar days after cutting the temporary strands, the Contractor shall submit supporting girder camber calculations to the Engineer for approval in accordance with Section 6-01.9. The Contractor shall not cut the
temporary strands until receiving the Engineer's approval of the girder camber calculations.

The seventh paragraph is deleted

The eighth paragraph is revised to read:

The Contractor shall check the horizontal alignment of both the top and bottom flanges of each girder after girder erection but before placing concrete in the bridge diaphragms as described in Section 6-02.3(25)J.

6-02.3(25)N  Prestressed Concrete Girder Erection

The tenth paragraph is revised to read:

For precast prestressed concrete slabs, the Contractor shall place the 1\(\frac{1}{4}\) inch diameter vertical dowel bars at the top of the pier walls as shown in the Plans. The Contractor shall either form the hole or core drill the hole following the alternatives shown in the Plans. The portion of the dowel bar in the top of the pier walls shall be set with either grout that complies with Section 9-26.3 or type II epoxy bonding agent conforming to Section 9-26.1 following placement of each precast prestressed slab.

6-02.3(25)O  Deck Bulb Tee Girder Flange Connection

This section is revised to read:

The Contractor shall submit a method of equalizing deck bulb tee girder (and precast prestressed member) deflections to the Engineer for approval in accordance with Section 6-01.9, except that the submittal shall be made a minimum of 60 days prior to field erection of the deck bulb tee girder. Deflection equalizing methods approved for previous Contracting Agency contracts will be acceptable providing the bridge configuration is similar and the previous method was satisfactory. A listing of the previous Contracting Agency contract numbers for which the method was used shall be included with the submittal. The weld-ties may be used as a component of the equalizing system provided the Contractor's procedure outlines how the weld-ties are to be used, and that the Contractor's submittal includes a list and description of previous bridge projects where the Contractor has successfully used weld-ties as a component of the equalizing system.

The concrete diaphragms for deck bulb tee girders shall attain a minimum compressive strength of 2,500 psi before any camber equalizing equipment is removed.

On deck bulb tee girders, girder deflection shall be equalized utilizing the approved method before girders are weld-tied and before keyways are filled. Keyways between tee girders shall be filled flush with the surrounding surfaces with nonshrink grout, except that keyways for deck bulb tee girders receiving a cast-in-place
concrete deck slab need not be filled with grout. This nonshrink grout shall have a compressive strength of 5,000 psi before the equalizing equipment is removed. Compressive strength shall be determined by fabricating and testing cubes in accordance with WSDOT Test Method 813 and testing in accordance with WSDOT FOP for AASHTO T-106.

Welding ground shall be attached directly to the steel plates being welded when welding the weld-ties on bulb tee girders.

No construction equipment shall be placed on the structure, other than equalizing equipment, until the girders have been weld-tied and the keyway grout has attained a compressive strength of 5,000 psi.

6-02.3(26) Cast-in-Place Prestressed Concrete
6-02.3(26)C Bearing Type Anchorages
Item 6 in the first paragraph is revised to read:

6. For transverse post-tensioning of roadway slabs, the bearing stress shall not exceed 0.9$f_c$ at $P_{jack}$ of all strands (before seating) or 4,000 psi at service load after all losses.

6-02.3(26)E Ducts
The first paragraph under Ducts for Internal Embedded Installation is revised to read:

For longitudinal tendons, the Contractor shall encase each tendon in a semi-rigid, galvanized, ferrous metal duct. Semi-rigid ducts shall be corrugated, and their minimum wall thickness shall be either 26 gage for ducts less than or equal to 2-5/8 inches in diameter, or 24 gage for ducts greater than 2-5/8 inches in diameter. For prestressing steel bars preassembled with their ducts, the minimum duct thickness shall be 31 gage. For transverse tendons, the Contractor shall encase each tendon in a rigid plastic duct. This duct shall maintain the required profile within a placement tolerance of plus or minus 1/4 inch for longitudinal tendons and plus or minus 1/8 inch for transverse slab tendons during all phases of the work. The ducts shall be completely sealed to keep out all mortar.

6-02.3(26)H Grouting
The first sentence in the sixth paragraph is revised to read:

The Contractor shall proportion the mix to produce a grout with a flow of 11 to 20 seconds as determined by WSDOT Test Method for ASTM C 939, Flow of Grout for Preplaced Aggregate Concrete (Flow Cone Method).

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

Cubes shall be made in accordance with WSDOT Test Method T 813 and stored in accordance with WSDOT FOP for AASHTO T 23.
6-02.3(27) Concrete for Precast Units

This section is supplemented with the following:

Self compacting concrete (SCC) may be used for precast concrete barrier covered under Section 6-10 and drainage items covered under Section 9-12. If self compacting concrete has been approved for use the requirements of Section 6-02.3(4)C consistency shall not apply. Self compacting concrete is concrete that is able to flow under its own weight and completely fill the formwork, even in the presence of dense reinforcement, without the need of any vibration, while maintaining homogeneity. When using SCC modified testing procedures for air content and compressive strength will be used. The modification shall be that molds will be filled completely in one continuous lift without any rodding, vibration, tamping or other consolidation methods other than lightly tapping around the exterior of the mold with a rubber mallet to allow entrapped air bubbles to escape. In addition the fabricators QC testing shall include Slump Flow Test results, which do not indicate segregation. As part of the plants approval for use of SCC the plant fabricator shall cast one barrier, or drainage item and have that barrier or drainage item sawed in half for examination by the Contracting Agency to determine that segregation has not occurred.

SECTION 6-06, BRIDGE RAILINGS
January 5, 2004

6-06.2 Materials

This section is revised to read:

Materials shall meet the requirements of the following sections:

Timber Railing 9-09
Metal Railing 9-06.18
SECTION 7-12, VALVES FOR WATER MAINS
April 5, 2004

7-12.3 Construction Requirements
In the third paragraph the reference to Section 7-10 is revised to Section 7-09.

In the fourth paragraph the reference to section 7-11 is revised to Section 7-09.

SECTION 8-01, EROSION CONTROL AND WATER POLLUTION CONTROL
August 1, 2005

8-01.3(1)B Erosion and Sediment Control (ESC) Lead
This section is revised to read:

The Contractor shall identify the ESC Lead at the preconstruction discussions. The ESC Lead shall have, for the life of the contract, a current Certificate of Training in Construction Site Erosion and Sediment Control from a course approved by WSDOT's Statewide Erosion Control Coordinator.

The ESC Lead shall implement the Temporary Erosion and Sediment Control (TESC) plan. Implementation shall include, but is not limited to:

1. Installing and maintaining all temporary erosion and sediment control Best Management Practices (BMPs) included in the TESC plan to assure continued performance of their intended function. Damaged or inadequate TESC BMPs shall be corrected immediately.

2. Inspecting all on-site erosion and sediment control BMPs at least once every five working days and each working day there is a runoff event. Inspections shall occur within 24 hours of the runoff event. A TESC Inspection Report shall be prepared for each inspection and shall be included in the TESC file. A copy of each TESC Inspection Report shall be submitted to the Engineer no later than the end of the next working day following the inspection. The report shall include, but not be limited to:

   a. When, where and how BMPs were installed, maintained, modified, and removed;
   b. Observations of BMP effectiveness and proper placement;
   c. Recommendations for improving future BMP performance with upgraded or replacement BMPs when inspections reveal TESC plan inadequacies.

3. Updating and maintaining a TESC file on site that includes, but is not limited to:
a. TESC Inspection Reports.
b. Temporary Erosion and Sediment Control (TESC) plan narrative.
c. National Pollutant Discharge Elimination System construction permit (Notice of Intent).
d. Other applicable permits.

Upon request, the file shall be provided to the Engineer for review.

8-01.3(1)C Ground Water
This section including title is revised to read:

8-01.3(1)C Water Management

1. Ground Water

When ground water is encountered in an excavation, it shall be treated and discharged as follows:

A. When the ground water conforms to Water Quality Standards for Surface Waters of the State of Washington (Chapter 173-201A WAC), it may bypass detention and treatment facilities and be routed directly to its normal discharge point at a rate and method that will not cause erosion.

B. When the turbidity of the ground water is similar to the turbidity of the site runoff, the ground water may be treated using the same detention and treatment facilities being used to treat the site runoff and then discharged at a rate that will not cause erosion.

C. When the turbidity is greater than the turbidity of the site runoff, the ground water shall be treated separately until the turbidity is similar to or better than the site runoff, and then may be combined and treated as in B, above.

2. Process Water

All water generated on site from construction or washing activities that is more turbid than site runoff shall be treated separately until the turbidity is the same or less than the site runoff, and then may be combined and treated as in 1B, above. Water may be infiltrated upon the approval of the Engineer.

3. Offsite Water

The Contractor shall, prior to disruption of the normal watercourse, intercept the offsite stormwater and pipe it either through or around the project site. This water shall not be combined with onsite stormwater and shall be discharged at its pre-construction outfall point in such a manner that there is no increase in erosion below the site.
The method for performing this work shall be provided by the Contractor for the Engineer's approval.

SECTION 8-04, CURBS, GUTTERS, AND SPILLWAYS
December 6, 2004

8-04.3(1)A Extruded Cement Concrete Curb
The second and third paragraphs are revised to read:

The pavement shall be dry and cleaned of loose and deleterious material prior to curb placement. Cement concrete curbs shall be anchored to the existing pavement by placing steel tie bars 1 foot on each side of every joint.

Tie bars shall meet the dimensions shown in the Standard Plans.

SECTION 8-11, GUARDRAIL
(August 2, 2004)

8-11.3 Construction Requirements
Section 8-11.3 is supplemented with the following:

8-11.3(1) Beam Guardrail

8-11.3(1)C Erection of Rail
Section 8-11.3(1)C is supplemented with the following:

Snow load rail and post washers shall be used in construction of Type 1 and 2 W-beam guardrail.

SECTION 8-15, RIPRAP
April 5, 2004

8-15.3(6) Quarry Spalls
The second sentence is revised to read:

After placement, the quarry spalls shall be compacted to be uniformly dense and unyielding.

8-15.5 Payment
In the second paragraph, the first sentence is revised to read:

The unit contract price per ton or per cubic yard for the class or kind of riprap specified above shall be full pay for furnishing all labor, tools, equipment, and materials required to construct the riprap protection, except for excavation.
SECTION 9-01, PORTLAND CEMENT
December 6, 2004

9-01.2(1) Portland Cement
This section is revised to read:

Portland cement shall conform to the requirements for Types I, II, or III cement of the Standard Specifications for Portland Cement, AASHTO M 85 or ASTM C 150, except that the content of alkalis shall not exceed 0.75 percent by weight calculated as Na₂O plus 0.658 K₂O and except that the content of Tricalcium aluminate (C₃A) shall not exceed 8 percent by weight calculated as 2.650Al₂O₃ minus 1.692Fe₂O₃. The total amount of processing additions used shall not exceed 1% of the weight of portland cement clinker. The type and amount of processing additions used shall be shown on mill test reports.

The time of setting shall be determined by the Vicat Test method, AASHTO T 131 or ASTM C 191.

9-01.2(4) Blended Hydraulic Cement
This section is revised to read:

Blended hydraulic cement shall be either Type IP (MS), Type I (SM) (MS) or Type I (PM) (MS) cement conforming to AASHTO M 240 and meet the following additional requirements:

1. Type IP(MS) Portland - Pozzolan Cement with moderate sulfate resistance.

   This product shall be limited to Portland Cement and Pozzolan. Pozzolan shall be limited to fly ash or ground granulated blast furnace slag. Fly ash is limited between 15 percent and 35 percent by weight of the cementitious material. Ground granulated blast furnace slag is limited between 15 percent and 25 percent by weight of the cementitious material.

2. Type I(SM) (MS) Slag Modified Portland Cement with moderate sulfate resistance.

   This product shall be limited to Portland Cement and ground granulated blast furnace slag. The addition of ground granulated blast furnace slag shall be limited to a maximum of 25 percent by weight of the cementitious material.

3. Type I(PM)(MS) Pozzolan – Modified Portland Cement with moderate sulfate resistance.

   The product shall be limited to Portland Cement and pozzolan. The pozzolan shall be limited to fly ash or ground granulated blast furnace slag at a maximum of 15 percent by weight of the cementitious material.
The source and weight of the fly ash or ground granulated blast furnace slag shall be certified on the cement mill test certificate and shall be reported as a percent by weight of the total cementitious material. The fly ash or ground granulated blast furnace slag constituent content in the finished cement will not vary more than plus or minus 5 percent by weight of the finished cement from the certified value.

Fly ash shall meet the requirements of Section 9-23.9 of these Standard Specifications.

Ground granulated blast furnace slag shall meet the requirements of Section 9-23.10 of these Standard Specifications.

SECTION 9-02, BITUMINOUS MATERIALS

August 1, 2005

9-02.1(3) Rapid-Curing (RC) Liquid Asphalt

The column headings MC-70, MC-250, MC-800, and MC-3000 are revised to RC-70, RC-250, RC-800, and RC-3000 respectively.

The RC-250 requirement for "Residue of 680°F distillation % volume by difference" is revised from 67 to 65.

9-02.1(4)A Performance Grade (PG) Asphalt Cement

This section including title is revised to read:

9-02.1(4)A Performance Graded Asphalt Binder

<table>
<thead>
<tr>
<th>Performance Grade</th>
<th>PG58</th>
<th>PG64</th>
<th>PG70</th>
<th>PG76</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash point temp, AASHTO T48 Minimum °C</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Viscosity, AASHTO T316 Maximum 3 Pa·s, test temp, °C</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dynamic shear, AASHTO T315 G*/sinθ, minimum 1.00 kPa</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Original Binder

| | PG58 | PG64 | PG70 | PG76 |
| | -22 | -28 | -34 | -22 | -28 | -34 | -22 | -28 |

<p>| | 230 | 135 | 58 | 64 | 70 | 76 |</p>
<table>
<thead>
<tr>
<th>Test temp. @ 10 rad/s, °C</th>
<th></th>
</tr>
</thead>
</table>

### Rolling Thin Film Oven Residue (AASHTO T240)

<table>
<thead>
<tr>
<th>Mass Change, Maximum, percent</th>
<th>1.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dynamic shear, AASHTO T315 G*/sin ∅, minimum 2.20 kPa Test temp. @ 10 rad/s, °C</td>
<td>58</td>
</tr>
</tbody>
</table>

### Pressure Aging Vessel Residue (AASHTO R28)

<table>
<thead>
<tr>
<th>PAV aging temperature, °C</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dynamic shear, AASHTO T315 G*/sin ∅ maximum 5000 kPa Test temp. @ 10 rad/s, °C</td>
<td>22</td>
</tr>
<tr>
<td>Creep stiffness, AASHTO T313 S, maximum 300 MPa, m - value, minimum 0.300 Test temp. @ 60 s, °C</td>
<td>-12</td>
</tr>
</tbody>
</table>

1. All Performance Grade asphalt binders not included in this chart shall be determined by Table 1-Performance Graded Asphalt Binder Specification in AASHTO M320.

### 9-02.1(9) Coal Tar Pitch Emulsion

The first two sentences are replaced with the following:

The coal tar pitch emulsions shall conform to the requirements found in ASTM D 5727.

### SECTION 9-03, AGGREGATES

**August 22, 2005**

### 9-03.1(1) General Requirements

This section is revised to read:
Portland cement concrete aggregates shall be manufactured from ledge rock, talus, or sand and gravel in accordance with the provisions of Section 3-01.

Aggregates tested in accordance with AASHTO T 303 or ASTM C 1260 with expansion greater than 0.20 percent are Alkali Silica Reactive (ASR) and will require mitigating measures. Aggregates tested in accordance with ASTM C 1293 with expansion greater than 0.04 percent are Alkali Silica Reactive (ASR) and will require mitigating measures.

Aggregates for use in Commercial Concrete as defined in 6-02.3(2)B shall not require mitigation.

Mitigating measures for aggregates with expansions from 0.21 to 0.45 percent, when tested in accordance with AASHTO T 303 or ASTM C 1260, may be accomplished by using low alkali cement as per 9-01.2(3) or by using 25% Class F fly ash by total weight of the cementitious materials. The Contractor may submit an alternative mitigating measure through the Project Engineer to the State Materials Laboratory for approval along with evidence in the form of test results from AASHTO T 303 or ASTM C 1260 that demonstrate the mitigation when used with the proposed aggregate controls expansion to 0.20 percent or less. The agency may test the proposed ASR mitigation measure to verify its effectiveness. In the event of a dispute, the agency’s results will prevail.

Mitigating measures for aggregates with expansions greater than 0.45 percent when tested in accordance with AASHTO T-303 or ASTM C-1260 shall include the use of low alkali cement per 9-01.2(3) and may include the use of fly ash, lithium compound admixtures, ground granulated blast furnace slag or other material as approved by the Engineer. The Contractor shall submit evidence in the form of test results from ASTM C 1260 or AASHTO T 303 through the Project Engineer to the State Materials Laboratory that demonstrate the proposed mitigation when used with the aggregates proposed will control the potential expansion to 0.20 percent or less before the aggregate source may be used in concrete. The agency may test the proposed ASR mitigation measure to verify its effectiveness. In the event of a dispute, the agency’s results will prevail.

Passing petrographic analysis (ASTM C 295) accepted by WSDOT prior to August 1, 2005, is acceptable as proof of mitigation until the aggregate source is reevaluated.

ASTM C 1293 sampling and testing must be coordinated through the WSDOT State Materials Laboratory, Documentation Section utilizing the ASA (Aggregate Source Approval) process. Cost of sampling, testing, and processing will be borne by the source owner.
9-03.1(4)C Grading
The third paragraph is revised to read:

In individual tests, a variation of four under the minimum percentages or over the
maximum percentages will be permitted, provided the average of three consecutive
tests is within the specification limits. Coarse aggregate shall contain no piece of
greater size than two times the maximum sieve size for the specified grading
measured along the line of greatest dimension.

9-03.1(5) Combined Aggregate Gradation for Portland Cement Concrete
This section is revised to read:

As an option to using Coarse and Fine graded aggregates for Portland Cement
Concrete, aggregate gradation may consist of a combined gradation. Aggregates
shall consist of sand, gravel, crushed stone, or other inert material or combinations
thereof, having hard, strong durable particles free from adherent coatings.
Aggregates shall be washed to remove clay, loam, alkali, organic matter, silt, bark,
sticks, or other deleterious matter.

9-03.1(5)B Grading
This section is revised to read:

If a nominal maximum aggregate size is not specified, the Contractor shall determine
the nominal maximum aggregate size, using ACI 211.1 as a guide. In no case will the
maximum aggregate size exceed one-fifth of the narrowest dimension between sides
of the forms, one-third the depth of slabs, nor three-fourths of the minimum clear
spacing between individual reinforcing bars, bundles of bars, or pretensioning
strands.

The combined aggregate shall conform to the following requirements based upon the
nominal maximum aggregate size.

<table>
<thead>
<tr>
<th>Nominal Maximum Aggregate Size</th>
<th>1-1/2</th>
<th>1</th>
<th>3/4</th>
<th>1/2</th>
<th>3/8</th>
<th>No. 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-1/2</td>
<td>87-100*</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>82-100*</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3/4</td>
<td>62-88</td>
<td>87-100*</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/2</td>
<td>57-83</td>
<td>81-100*</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3/8</td>
<td>43-64</td>
<td>60-88</td>
<td>86-100*</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>29-47</td>
<td>34-54</td>
<td>41-64</td>
<td>48-73</td>
<td>68-100*</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>19-34</td>
<td>22-39</td>
<td>27-47</td>
<td>31-54</td>
<td>39-73</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>12-25</td>
<td>14-29</td>
<td>17-34</td>
<td>20-39</td>
<td>24-54</td>
<td>28-73</td>
</tr>
<tr>
<td>30</td>
<td>7-18</td>
<td>8-21</td>
<td>9-25</td>
<td>11-29</td>
<td>13-39</td>
<td>16-54</td>
</tr>
<tr>
<td>50</td>
<td>3-14</td>
<td>3-15</td>
<td>4-18</td>
<td>5-21</td>
<td>6-29</td>
<td>7-39</td>
</tr>
<tr>
<td>1</td>
<td>100</td>
<td>0-10</td>
<td>0-11</td>
<td>0-14</td>
<td>0-15</td>
<td>0-21</td>
</tr>
<tr>
<td>----</td>
<td>-----</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>2</td>
<td>200</td>
<td>0-2.0</td>
<td>0-2.0</td>
<td>0-2.0</td>
<td>0-2.0</td>
<td>0-2.0</td>
</tr>
</tbody>
</table>

* = Nominal Maximum Size

All percentages are by weight.

Nominal maximum size for concrete aggregate is defined as the smallest standard sieve opening through which the entire amount of the aggregate is permitted to pass. Standard sieve sizes shall be those listed in ASTM C 33.

The Contracting Agency may sample each component aggregate prior to introduction to the weigh batcher or as otherwise determined by the Engineer. Each separate component will be sieve analyzed alone per AASHTO Test Method T-11/27. All material components will be mathematically re-combined by proportions (Weighted Average), supplied by the Contractor.

9-03.8(2) HMA Test Requirements

Number 1 is revised to read:

Vacant.

Item 3 is revised to read:

3. The uncompacted void content for the combined fine aggregate is tested in accordance with WSDOT Test Method for AASHTO T 304, Method A. The minimum percent voids shall be as required in the following table:

<table>
<thead>
<tr>
<th>Traffic ESAL's (millions)</th>
<th>HMA Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Statistical &amp; Nonstatistical</td>
</tr>
<tr>
<td>&lt; 3</td>
<td>40</td>
</tr>
<tr>
<td>≥ 3</td>
<td>44</td>
</tr>
</tbody>
</table>

The last paragraph of this section is revised to read:

When material is being produced and stockpiled for use on a specific contract or for a future contract, the fine aggregate angularity, fracture, and sand equivalent requirements shall apply at the time of stockpiling. When material is used from a stockpile that has not been tested as provided above, the specifications for fine aggregate angularity, fracture, and sand equivalents shall apply at the time of its introduction to the cold feed of the mixing plant.

9-03.8(7) HMA Tolerances and Adjustments

The requirement for "VMA" is revised to read:

VMA 1.5% below minimum value in 9-03.8(2)
9-03.12(4) Gravel Backfill for Drains
The percent Passing for Sieve size 3/8" square is revised from "10 - 40" to "0 - 40".

9-03.12(5) Gravel Backfill for Drywells
The percent passing for sieve size 1" square is revised to "50-100".

9-03.14(1) Gravel Borrow
This section is supplemented with the following:

Ballast may be substituted for gravel borrow for embankment construction.

Section 9-03.14 is supplemented with the following:

9-03.14(4) Gravel Borrow for Geosynthetic Retaining Wall
All backfill material used in the reinforced soil zone of the geosynthetic retaining wall shall conform to requirements of Section 9-03.14(1) 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:

<table>
<thead>
<tr>
<th>Property</th>
<th>Test Method</th>
<th>Allowable Test Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Los Angeles Wear, 500 rev.</td>
<td>AASHTO T 96</td>
<td>35 percent max.</td>
</tr>
<tr>
<td>Degradation</td>
<td>WSDOT Test Method 113</td>
<td>15 min.</td>
</tr>
<tr>
<td>pH</td>
<td>AASHTO T 289-91</td>
<td>**</td>
</tr>
</tbody>
</table>

**  4.5 to 9 for permanent walls and 3 to 10 for temporary walls

Wall backfill material satisfying these gradation, durability and chemical requirements shall be classified as nonaggressive.

9-03.21(2) Recycled Hot Mix Asphalt
The Maximum Bitumen Content (Percent) for Gravel Borrow is revised from "0" to "1.2".

SECTION 9-05, DRAINAGE STRUCTURES, CULVERTS, AND CONDUITS
August 1, 2005

9-05.1(2) Zinc Coated (Galvanized) or Aluminum Coated (Aluminized) - Corrugated Iron or Steel Drain Pipe
This section is revised to read:
Zinc coated (galvanized) or aluminum coated (aluminized Type 2) corrugated iron or steel drain pipe shall meet the requirements of AASHTO M 36. The steel sheet thickness shall be 0.064 inch for 6-inch diameter and larger drain pipe. Zinc coated steel shall meet the material requirements of AASHTO M 218 (ASTM A929). Aluminum coated steel shall meet the material requirements of AASHTO M 274 (ASTM A929).

9-05.2(4) Zinc Coated (Galvanized) or Aluminum Coated (Aluminized) - Corrugated Iron or Steel Underdrain Pipe
This section is revised to read:

Zinc coated (galvanized) or aluminum coated (aluminized type 2) corrugated iron or steel underdrain pipe shall meet the fabrication requirements of AASHTO M 36, except that perforations required in Class I, II, and III pipe may be located anywhere on the tangent of the corrugations provided the other perforation spacing requirements remain as specified. Zinc coated steel shall meet the material requirements of AASHTO M 218 (ASTM A929). Aluminum coated steel shall meet the material requirements of AASHTO M 274 (ASTM A929).

The pipe may conform to any one of the Type III pipes specified in AASHTO M 36, and perforations in Class I, II, and III pipe may be drilled or punched. The sheet thickness shall be 0.064 inch for 6-inch and larger diameter underdrain pipe.

9-05.4 Steel Culvert Pipe and Pipe Arch
This section is revised to read:

Steel culvert pipe and pipe arch shall meet the fabrication requirements of AASHTO M 36, Type I and Type II. Zinc coated steel shall meet the material requirements of AASHTO M 218 (ASTM A929). Aluminum coated steel shall meet the material requirements of AASHTO M 274 (ASTM A929).

9-05.4(3) Protective Treatment
This section is revised to read:

Steel pipe and pipe arch culverts shall be coated by one of the following protective treatments, when such treatment is specified:

| Treatment 1 | Coated uniformly inside and out with asphalt as per 9-05.4(4) (AASHTO M190 Type A) or with polymer as per 9-05.4(6). |
| Treatment 2 | Coated uniformly inside and out with asphalt and with an asphalt paved invert (AASHTO M 190 Type C) or with polymer as per 9-05.4(6). |
| Treatment 3 | This treatment is no longer available. |
| Treatment 4 | This treatment is no longer available. |
Treatment 5  Coated inside and out with asphalt and a 100 percent periphery inside spun asphalt lining (AASHTO M 190 Type D).

Treatment 6  This treatment is no longer available.

9-05.4(4) Asphalt Coatings and Paved Inverts
Aluminum thickness in inches is deleted from the chart under item 1.

The second paragraph under item 2 is revised to read:

The paved invert for Treatment 2 shall consist of bituminous material applied in such a manner that one or more smooth pavements will be formed in the invert filling the corrugations for at least 40 percent of the circumference. The pavement shall have a minimum thickness of 1/8 inch above the crest of the corrugations except where the upper edges intercept the corrugation. The pavements shall be applied following the coating with asphalt. Treatment 5 may be substituted for Treatment 2, at the option of the Contractor.

Section 9-05 is supplemented with the following new section:

9-05.4(5) Polymer Protective Coating
Polymer coated steel pipe and pipe-arch shall meet the fabrication requirements of AASHTO M 36 (ASTM A760). Polymer protective coatings shall meet the material requirements of AASHTO M 246 (ASTM A742). Polymer coating shall be mill applied to galvanized steel coils before fabrication and shall measure 10 mils thick on each side.

9-05.5(3) Protective Treatment
This section including title is revised to read:

9-05.5(3) Vacant

9-05.5(4) Asphalt Coatings
This section including title is revised to read:

9-05.5(4) Vacant

9-05.9 Steel Spiral Rib Storm Sewer Pipe
This section is revised to read:

Steel spiral rib storm sewer pipe shall meet the fabrication requirements of AASHTO M 36 and these Specifications. Zinc coated steel shall meet the material requirements of AASHTO M 218 (ASTM A929). Aluminum coated steel shall meet the material requirements of AASHTO M-274 (ASTM A929). The size, coating, metal, and protective treatment, if any, shall be as shown in the Plans or in the specifications.
The manufacturer of spiral rib storm sewer pipe shall furnish the Engineer a Manufacturer's Certificate of Compliance stating that the materials furnished comply in all respects with these Specifications. The Engineer may require additional information or tests to be performed by the Contractor at no expense to the Contracting Agency.

Unless otherwise specified, spiral rib storm sewer pipe shall be furnished with pipe ends cut perpendicular to the longitudinal axis of the pipe. Pipe ends shall be cut evenly. Spiral rib pipe shall be fabricated by using a continuous helical lock seam.

Spiral rib storm sewer pipe shall have helical ribs that project outwardly, be formed from a single thickness of material, and conform to one of the following configurations:

1. 3/4 inch wide by 3/4 inch deep ribs at 7-1/2 inches on center.
2. 3/4 inch wide by 1 inch deep ribs at 11-1/2 inches on center.
3. 3/4 inch wide by 5/8 inch deep ribs at 12 inches on center.

Pipe shall be fabricated with ends that can be effectively jointed with coupling bands. When it is required, spiral rib pipe shall be furnished with bituminous or polymer protective treatment 1 or 2 treated or paved. The bituminous treatment for spiral rib pipe shall conform to the requirements of Sections 9-05.4(3) and 9-05.4(4). Polymer coating shall conform to Section 9-05.4(5).

9-05.9(2) Continuous Welded Seam Pipe
This section including title is revised to read:

9-05.9(2) Vacant

9-05.10 Steel Storm Sewer Pipe
This section is revised to read:

Steel storm sewer pipe shall conform to the requirements of Section 9-05.4 for steel culvert pipe, except that protective coating shall be Treatment 1 or 5, and be constructed of helically corrugated lock seam pipe. When gasketed helically corrugated lock seam steel pipe is called for, and the pipe is properly sized to meet hydraulic requirements, Treatment 5 is not required.

9-05.11 Aluminum Storm Sewer Pipe
This section is revised to read:

Aluminum storm sewer pipe shall conform to the requirements of Section 9-05.5 for aluminum culvert pipe, and the pipe shall be constructed of helically corrugated lock seam aluminum pipe.
9-05.16 Grate Inlets and Drop Inlets
The first and second paragraphs are revised to read:

Steel in grates, angles, and anchors for grate inlets shall conform to ASTM A 36, except structural tube shall conform to ASTM A 500, Grade B, and structural shapes may conform to ASTM A 992. After fabrication, the steel shall be galvanized in accordance with AASHTO M 111, or galvanized with a hot-sprayed (plasma flame applied) 6 mil minimum thickness plasma coating.

Steel grating shall be fabricated by weld connections. Welds, welding procedures, and welding materials shall conform with the AWS D1.1/D1.1M, latest edition, Structural Welding Code.

9-05.17 Aluminum Spiral Rib Storm Sewer Pipe
This section is revised to read:

Aluminum spiral storm sewer pipe shall meet the fabrication requirements of AASHTO M 196 and these Specifications. Aluminum alloy shall meet the material requirements of AASHTO M 97 (ASTM B744). The size and corrugation shall be as shown in the Plans or in the Specifications. The size, metal, and protective treatment shall be as shown in the Plans or in the Specifications.

The manufacturer of spiral rib storm sewer pipe shall furnish to the Engineer a Manufacturer's Certificate of Compliance stating that the materials furnished comply in all respects with these Specifications. The Engineer may require additional information or tests to be performed by the Contractor at no expense to the Contracting Agency.

Unless otherwise specified, spiral rib storm sewer pipe shall be furnished with pipe ends cut perpendicular to the longitudinal axis of the pipe. Pipe ends shall be cut evenly. Spiral rib pipe shall be fabricated by using a continuous helical lock seam.

Spiral rib storm sewer pipe shall have helical ribs that project outwardly, be formed from a single thickness of material, and conform to one of the following configurations:

1. 3/4 inch wide by ¾ inch deep ribs at 7-1/2 inches on center.
2. 3/4 inch wide by 1 inch deep ribs at 11-1/2 inches on center.
3. 3/4 inch wide by 5/8 inch deep ris at 12 inches on center.

Pipe shall be fabricated with ends that can be effectively jointed with coupling bands.

9-05.19 Corrugated Polyethylene Culvert Pipe
The first paragraph is revised to read:
Corrugated polyethylene culvert pipe shall meet the requirements of AASHTO M 294 Type S or D for pipe 12-inch to 60-inch diameter.

SECTION 9-07, REINFORCING STEEL
April 4, 2005

9-07.3 Epoxy Coated Steel Reinforcing Bars
This section is revised to read:

Epoxy coated rebar shall be coated according to AASHTO M 284 with the additional following modifications:

1. The list of steel reinforcing bars acceptable for coating shall include ASTM A 706.

2. The Contractor shall furnish a written certification that properly identifies the material, the number of each batch of coating material used, quantity represented, date of manufacture, name and address of manufacturer, and a statement that the supplied coating material meets the requirements of AASHTO M 284.

3. Prior to coating the bars, the Contractor shall submit to the Engineer for review, the coating material manufacturer’s recommendation on the proper use and application requirements of the coating material. For Pre Approved Epoxy Coating Facilities this information will be available to the Fabrication Inspector upon request.

4. A certification stating that all bars have been coated in accordance with the coating material manufacturer’s recommendations and these Specifications shall be furnished with each shipment. This certification shall include for each bar size the preheat temperatures, cure times, thickness checks, holidays detected, and test results. Two copies of these certifications shall be furnished to the Engineer.

5. The Contractor shall give advance notice to the Engineer of the coating schedule in the coating plant so that Contracting Agency inspection may be provided. The Engineer may inspect the coated bars at the coating plant for approval.

6. The patching material, compatible with the coating material and inert in concrete, shall be supplied with each shipment.

7. For projects where epoxy coated steel reinforcing bars are used in the top mat of bridge decks only, the maximum amount of damage to the coating shall not exceed 0.25 percent of the surface area of each bar.
8. The thickness of epoxy coating shall be 10 mils plus or minus 2 mils.

9. Samples, when required, shall be shipped to the Washington State Department of Transportation, Materials Laboratory, 1655 South 2nd Ave, Tumwater, Washington 98504.

9-07.10 Prestressing Reinforcement Strand
The fourth paragraph is revised to read:

For every 5 reels furnished, one sample, not less than 5 feet long, shall be sent to the Engineer for testing. Samples of the furnished reels with Manufacturer's Certificate of Compliance, a mill certificate, and test report may be shipped directly by the manufacturer to the Engineer. An independent inspector, approved by the Contracting Agency, shall be present during sampling and shall provide a written certification to the Engineer.

9-07.11 Prestressing Reinforcement Bar
The sixth paragraph is revised to read:

For each heat of steel for high-strength steel bar, the Contractor shall submit two samples, each not less than 5 feet long, to the Engineer for testing.

SECTION 9-08, PAINTS
April 5, 2004

9-08.2 Paint Formulas – General
The following paint formulas and associate specifications are deleted:

- Formula A-6-86 Zinc Dust Zinc Oxide Primer
- Formula H-2-83-White Masonry Paint for Precast Curbs
- Formula H-3-83 Yellow Masonry Paint for Precast Curbs

SECTION 9-09, TIMBER AND LUMBER
January 5, 2004

9-09.2 Grade Requirements
Under "Structures", the last sentence is revised to read:

Timber lagging for soldier pile walls shall be Douglas Fir-Larch, grade No. 2 or better or Hem-Fir No. 1.
SECTION 9-13, RIPRAP, QUARRY SPALLS, SLOPE PROTECTION, AND ROCK WALLS
August 1, 2005

9-13.5(1) Semi Open Concrete Masonry Units Slope Protection
This section is revised to read:

Precast cement concrete blocks shall conform to the requirements of ASTM C 90.

SECTION 9-14, EROSION CONTROL AND ROADSIDE PLANTING
August 1, 2005

9-14.4(1) Straw
The first sentence is revised to read:

All straw material shall be in an air dried condition free of noxious weeds and other materials detrimental to plant life.

9-14.4(8) Compost
This section is revised to read:

Compost products shall be the result of the biological degradation and transformation of plant-derived materials under controlled conditions designed to promote aerobic decomposition. Compost shall be stable with regard to oxygen consumption and carbon dioxide generation. Compost shall be mature with regard to its suitability for serving as a soil amendment or an erosion control BMP as defined below. The compost shall have a moisture content that has no visible free water or dust produced when handling the material.

Compost production and quality shall comply with Chapter 173-350 WAC.

Compost products shall meet the following physical criteria:

1. Compost material shall be tested in accordance with Testing Methods for the Examination of Compost and Composting (TMECC) Test Method 02.02-B, “Sample Sieving for Aggregate Size Classification”.

Fine Compost shall meet the following:

<table>
<thead>
<tr>
<th></th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent passing 2&quot;</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Percent passing 1&quot;</td>
<td>90%</td>
<td>100%</td>
</tr>
<tr>
<td>Percent passing 3/4&quot;</td>
<td>70%</td>
<td>100%</td>
</tr>
<tr>
<td>Percent passing 1/4&quot;</td>
<td>40%</td>
<td>75%</td>
</tr>
<tr>
<td>Maximum particle length of 6 inches</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Coarse Compost shall meet the following:

<table>
<thead>
<tr>
<th>Percent passing</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>3&quot;</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>1&quot;</td>
<td>90%</td>
<td>100%</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>70%</td>
<td>100%</td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>40%</td>
<td>60%</td>
</tr>
<tr>
<td>Maximum particle length of 6 inches</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. The pH shall be between 6.0 and 8.5 when tested in accordance with TMECC 04.11-A, “1:5 Slurry pH”.

3. Manufactured inert material (plastic, concrete, ceramics, metal, etc.) shall be less than 0.5 percent on a dry weight or volume basis, whichever provides for the least amount of foreign material.


5. Soluble salt contents shall be less than 6.0 mmhos/cm tested in accordance with TMECC 04.10-A, “1:5 Slurry Method, Mass Basis”.

6. Maturity greater than 80% in accordance with TMECC 05.05A, “Germination and Root Elongation”.

7. Stability 8 or below in accordance with TMECC 05.08-B, Carbon Dioxide Evolution Rate”.

8. The compost product must originate a minimum of 65 percent by volume from recycled plant waste as defined in WAC 173-350 as “Type I Feedstocks.” A maximum of 35 percent by volume of other approved organic waste and/or biosolids may be substituted for recycled plant waste. The supplier shall provide written verification of feedstock sources.

The compost supplier will test all compost products within 30 calendar days prior to initial application with samples taken from the material stockpiled by the supplier for project use. Samples will be taken using the Seal of Testing Assurance (STA) sample collection protocol. (The sample collection protocol can be obtained from the U.S. Composting Council, 4250 Veterans Memorial Highway, Suite 275, Holbrook, NY 11741 Phone: 631-737-4931). The sample shall be sent to an independent STA Program approved lab. The compost supplier will pay for the test. A copy of the approved independent STA Program laboratory test report shall be submitted to the Contracting Agency prior to initial application of the compost.
Compost not conforming to the above requirements or taken from a source other than those tested and accepted shall be immediately removed from the project and replaced at no cost to the Contracting Agency.

The contractor shall either select a compost supplier from the Qualified Products List, or submit the following information to the Engineer for approval:

1. A Request for Approval of Material Source.

2. A copy of the Solid Waste Handling Permit issued to the supplier by the Jurisdictional Health Department as per WAC 173-350 (Minimum Functional Standards for Solid Waste Handling).

3. The supplier shall verify in writing, and provide lab analyses that the material complies with the processes, testing, and standards specified in WAC 173-350 and these specifications. The analysis shall be performed by an independent STA Program certified laboratory.

4. A list of the feedstock by percentage present in the final compost product.

5. A copy of the producers Seal of Testing Assurance certification as issued by the U.S. Composting Council.

Acceptance will be based upon a satisfactory Test Report from an independent STA program certified laboratory.

Section 9-14.4 is supplemented with the following new sections:

9-14.4(9) Bonded Fiber Matrix (BFM)
The BFM shall be a hydraulically-applied blanket/mulch/covering composed of long strand, thermally processed wood fibers and crosslinked, hydro-colloid tackifier. The BFM may require a 24-48 hour curing period to achieve maximum performance. Once cured, the BFM forms an intimate bond with the soil surface to create a continuous, absorbent, flexible erosion resistant blanket that allows for rapid germination and accelerated plant growth.

9-14.4(10) Mechanically-Bonded Fiber Matrix (MBFM)
The MBFM shall be a hydraulically-applied, flexible erosion control blanket/mulch/covering composed of long strand, thermally processed wood fibers, crimped, interlocking fibers and performance enhancing additives. The MBFM shall require no curing period and upon application forms an intimate bond with the soil surface to create a continuous, porous, absorbent and erosion resistant blanket that allows for rapid germination and accelerated plant growth.
SECTION 9-16, FENCE AND GUARDRAIL

April 4, 2005

9-16.1 Chain Link Fence and Gates
All sub-sections under Section 9-16.1 are deleted and replaced with the following:

9-16.1(1) General
All material used in the construction of chain link fence and gates shall be new. Iron or steel material shall be galvanized unless specified otherwise. Material upon which serious abrasions of galvanizing occur shall not be acceptable.

9-16.1(1)A Post Material for Chain Link Fence
Except as noted otherwise, post material shall conform to the requirements of AASHTO M 181, Type I (zinc-coated steel), Grade 1 or 2, and shall be understood to include all round and roll-formed material (brace rails, top rails, line posts, brace posts, end posts, corner posts and pull posts).

Grade 1 post material shall conform to the weight per linear foot, minimum wall thickness and detail requirements of Standard Plan L-2. Grade 1 post material that exceeds the maximum wall thickness requirement of Standard Plan L-2 may be accepted, provided it does not interfere with the proper construction of the fence.

Grade 2 post material shall meet the organic exterior coatings requirements of AASHTO M 181 (Section 33) and the additional requirement that the interior coated surface shall be capable of resisting 300 hours of exposure to salt fog with a maximum of 5% red rust when tested in accordance with ASTM B 117.

- Round Post Material
  Round post material shall be Grade 1 or 2.

- Roll Form Material
  Roll-formed post material shall be Grade 1. Roll-formed end, corner, and pull posts shall have integral fastening loops to connect to the fabric for the full length of each post. Top rails and brace rails shall be open rectangular sections with internal flanges as shown in Standard Plan L-2.

9-16.1(1)B Chain Link Fence Fabric
Chain link fabric shall consist of 11 gage wire for Types 3, 4, and 6 fence, and 9 gage wire for Type 1 fence. The fabric shall be zinc-coated steel wire conforming to AASHTO M 181, Class C.

The wire shall be woven into approximately 2-inch diamond mesh. The width and top and bottom finish of the fabric shall be as specified in AASHTO M 181.
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

Except where indicated, fittings shall be malleable cast iron or pressed steel and shall conform to the requirements of ASTM F626 or AASHTO M232, whichever is applicable. Fittings for any particular fence shall be those furnished by the manufacturer of the fence.

Tension truss rods shall be 3/8 inch round galvanized rods with drop forged turnbuckles or other approved type of adjustment. Couplings for tubular sections shall be outside sleeve type and shall be at least 6 inches long.

Eye bolts for attaching tension wire shall be 3/8 inch diameter and of sufficient length to fasten to the type of post being used.

Tension bars shall be 3/16 inch by 3/4 inch nominal and cross sectional area shall be 0.141 in$^2$ +/- 5%.

Hog rings shall be 12 gage galvanized steel wire. Tie wire shall be 9 gage galvanized steel wire or 9 gage aluminum wire meeting the requirements of ASTM F626.

9-16.1(E) Chain Link Gates

Gate frames shall be constructed of not less that 11/2 inch (I.D.) hot-dipped galvanized pipe conforming to AASHTO M 181 Type I, Grade 1 or 2 as specified in Section 9-16.1(1)A. The corners of the gate frame shall be fastened together and reinforced with a malleable iron or pressed steel fitting designed for the purpose, or they may be welded. Welding shall conform to the requirements of Section 6-03.3(25). All welds shall be ground smooth and painted with an A-9-73 or A-11-99 primer meeting the requirements of Section 9-08.2. The paint shall be applied in one or more coats to provide a minimum dry film thickness of 3.5 mils.

Chain link fence fabric for filling the gate frame shall meet the requirements of Section 9-16.1(1)B for the fence type being furnished.

Cross trussing shall be 5/16 inch steel adjustable rods galvanized in accordance with Section 9-16.1(1)D.

Each gate shall be furnished complete with necessary hinges, latch, and drop bar locking device designed for the type of gate posts and gate used on the project. Gates shall have positive type latching devices with provisions for padlocking. Hinges, latches, and locking devices shall be galvanized in accordance with Section 9-16.1(1)D.
Gate frames constructed of steel sections, other than pipe, that are fabricated in such a manner as to form a gate of equal or better rigidity may be used provided they are approved by the Engineer.

9-16.1(1)F Concrete
All concrete for chain link fence shall be as specified in Section 6-02.3(2)B.

9-16.1(2) Approval
Approval of materials for chain link fence shall be by evaluation of independent test results from a certified testing laboratory or by QPL. Independent test results for evaluation shall be submitted to the State Materials Engineer in Tumwater WA.

9-16.2 Wire Fence and Gates
All sub-sections under Section 9-16.2 are deleted and replaced with the following:

9-16.2(1) General
All materials used in the construction of the wire fence shall be new. All iron or steel material shall be galvanized. Material upon which serious abrasions of galvanizing occur will not be acceptable.

9-16.2(1)A Steel Post Material
- Round Post Material
  Round post material shall conform to AASHTO M 181, Type I, Grade 1.

- Angle Post Material (Channel, T, U, Y, or Other Approved Style)
  All angle post material shall be hot-dipped galvanized in accordance with the requirements of AASHTO M 111 grade 75. Galvanizing shall be 1.7 oz/ft² of surface area. Angle post used for end, corner, gate and pull post and brace shall have a minimum weight of 3.1 lb/ft.

Posts shall be not less than 7 feet in length. A tolerance of -5% on the weight of individual posts, braces or anchor plates will be permitted. One type of line post shall be used throughout the project. Line posts shall be studded, slotted, or properly adapted for attaching either wire or mesh in a manner that will not damage the galvanizing of posts, wire or mesh during the fastening. Line posts shall have a minimum weight of 1.33 lbs/ft and shall be provided with a tapered galvanized steel anchor plate. The anchor plate shall be securely attached and have a surface area of 20 +/-2 in², a minimum weight of 0.67 pounds and 1.7 oz/ft² galvanizing.

9-16.2(1)B Wood Fence Posts and Braces
Douglas fir, Western red cedar, hemlock, or larch shall be used in the construction of wood fence posts and braces. The material shall be of good quality and approved by the Engineer before use. Peeler cores shall not be used for round posts. Wood fencing materials shall have sufficient sapwood in the outer periphery to obtain the specified penetration of preservative. Western red cedar will not require preservative
treatment. Fencing materials shall be cut to the correct length before pressure treatment.

Line posts shall be 3 inch minimum diameter round posts or nominal 3 inch by 3 inch square sawed posts. If the posts are to be pointed for driving, they shall be pointed before treatment. Line posts shall be at least 7 feet in length.

Pull posts and brace posts shall be 6 inch diameter round posts or nominal 6 inch by 6 inch material not less than 7 feet in length.

End, gate, and corner posts, and posts at an intersecting fence shall be 6 inch diameter round posts or nominal 6 inch by 6 inch material not less than 7 feet 10 inches in length.

All sawed posts and timbers shall meet the requirements in the table under Section 9-09.2.

The preservatives used to pressure treat wood fencing materials shall meet the requirements of Section 9-09.3.

The retention and penetration of the preservative shall be as follows:

<table>
<thead>
<tr>
<th>Minimum Retention in Pounds Per Cubic Foot</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preservative</td>
</tr>
<tr>
<td>----------------</td>
</tr>
<tr>
<td>Creosote</td>
</tr>
<tr>
<td>Pentachlorophenol</td>
</tr>
<tr>
<td>ACA</td>
</tr>
<tr>
<td>ACZA</td>
</tr>
<tr>
<td>CCA</td>
</tr>
</tbody>
</table>

Minimum Penetration

for material 5” or less - 0.40 inches penetration and 90% of sapwood
for material 5” or greater - 0.50 inches penetration and 90% of sapwood

9-16.2(1)C Brace Wire
Brace wire shall be 9 gage wire galvanized to meet the requirements of AASHTO M 279, Type Z, Class 1.

9-16.2(1)D Staples and Wire Clamps
The staples used to attach the wire fencing to wood posts shall be 9 gage wire, 1 1/2 inches long, galvanized to meet the requirements of AASHTO M 279, Type Z, Class 1.
The wire clamps used to attach the wire fencing to steel posts shall be 11 gage wire, galvanized to meet the requirements of AASHTO M 279, Type Z, Class 1.

9-16.2(1)E Barbed Wire
Barbed wire shall conform to the requirements of AASHTO M 280, Type Z and shall consist of two strands of 12 1/2 gage wire, twisted with four point 14 gage barbs with barbs spaced 5 inches apart (Design 12-4-5-14R). Galvanizing shall be Class 3.

9-16.2(1)F Wire Mesh
Wire mesh shall conform to the requirements of AASHTO M 279, Type Z and shall consist of eight horizontal wires with vertical stays spaced 6 inches apart. The top and bottom wires shall be 10 gage, and the intermediate wires and vertical stays shall be 12 1/2 gage. The mesh shall have a total width of 32 inches (Design 832-6-12 1/2). Galvanizing shall be Class 3.

The zinc coated wire as represented by the test specimens shall be capable of being wrapped in a close helix at a rate not exceeding 15 turns/minute around a cylindrical steel mandrel having a diameter the same as the specimen being tested, without cracking or flaking the zinc coating to such an extent that any zinc can be removed by rubbing with the bare fingers.

9-16.2(1)G Vertical Cinch Stays
Vertical cinch stays shall be 10 gage galvanized wire meeting the requirements of AASHTO M 279, Type Z, Class 1.

9-16.2(1)H Miscellaneous Hardware
Bolts, nuts, hinges, latches and other miscellaneous hardware shall be galvanized in accordance with AASHTO M 232.

9-16.2(1)I Wire Gates
Gate frames shall be constructed of galvanized pipe with a nominal diameter of not less than 1 inch. The pipe shall conform to the requirements of AASHTO M 181 Type I, Grade 1. Wire gates shall be not less than 48 inches in height and shall be designed to fit openings of the width called for in the Plans or as indicated by the bid items. Each gate shall be provided with two upright braces of the same material as the frame, spaced at 1/3 points in the gate. All gates shall be provided with adjustable 5/16 inch diameter galvanized diagonal truss rods from corner to corner. Galvanizing shall be in accordance with Section 9-16.2(1)H.

The gate frame shall be provided with wire mesh conforming to the requirements specified in Section 9-16.2(1)F, except that it shall consist of 10 horizontal wires and have a total width of 47 inches.

Each gate shall be furnished complete with necessary galvanized hinges and latch designed for use with the type of gate posts used on the project. The hinges shall be
so designed as to be securely attached to the gate post and to enable the gate to be
swing back against the fence. Double gates shall be hinged in the same manner as
single gates and shall be provided with an approved galvanized drop bar locking
device. Galvanizing for hinges, latches, and locking devices shall be in accordance
with Section 9-16.2(1)H.

9-16.2(1)J Concrete
All concrete for wire fence shall be as specified in Section 6-02.3(2)B.

9-16.2(2) Approval
Approval of materials for wire fence shall be by evaluation of independent test
results from a certified testing laboratory or by QPL. Independent test results for
evaluation shall be submitted to the State Materials Engineer in Tumwater WA.

9-16.3(1) Rail Element
The third paragraph is revised to read:

The 6-inch channel rails and splice plates shall conform to ASTM A 36, except that
the channel rails may conform to ASTM A 992. All fabrication shall be complete
before galvanizing.

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

Posts and blocks may be of creosote treated timber, pentachlorophenol treated
timber, waterborne chromated copper arsenate (CCA), ammoniacal copper arsenate
(ACA), or ammoniacal copper zinc arsenate (ACZA), treated timber or galvanized
steel; except only treated timber posts and blocks may be used for weathering steel
beam guardrail.

In the second paragraph, the treatment for Pentachlorophenol is revised from 060 lbs. pcf
to 0.60 lbs. pcf.

The fourth paragraph is revised to read:

Steel posts, blocks, and base plates, where used, shall conform to either ASTM A 36
or ASTM A 992, and shall be galvanized in accordance with AASHTO M 111.
Welding shall conform to Section 6-03.3(25). All fabrication shall be completed
prior to galvanizing.

9-16.3(4) Hardware
This section is revised to read:

Bolts, unless otherwise specified, shall comply with ASTM A 307 Grade A
specifications. High strength bolts shall conform to the requirements of AASHTO M
164. Nuts, unless otherwise specified, shall comply with ASTM A 563 Grade A
specifications. Washers, unless otherwise specified, shall meet ASTM F 844 specifications. The Contractor shall submit a manufacturer’s certificate of compliance for high strength bolts, nuts, and washers prior to installing any of the hardware. A307 Bolts will be accepted by field verification and documentation that bolt heads are stamped 307A.

9-16.3(5) Anchors
The sixth paragraph is revised to read:

The anchor plate, W200 x 27 and metal plates shall be fabricated of steel conforming to the specifications of ASTM A 36, except that the W200 x 27 may conform to ASTM A 992.

SECTION 9-23, CONCRETE CURING MATERIALS AND ADMIXTURES
April 4, 2005

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

9-23.10 Ground Granulated Blast Furnace Slag
Ground granulated blast furnace slag shall meet the requirements of AASHTO M 302, Grade 100 or Grade 120. The grade of the ground granulated blast furnace slag, the source, and type of manufacturing facility shall be certified on the cement mill test certificate.

9-23.11 Microsilica Fume
Microsilica Fume shall conform to the requirements of AASHTO M 307. The optional physical requirement for Reactivity with Cement Alkalies set forth in Table 3 will be required when Microsilica Fume is being used as an ASR mitigation measure.

SECTION 9-28, SIGNING MATERIALS AND FABRICATION
December 6, 2004

9-28.1 General
The third sentence in the first paragraph is deleted.

9-28.6 Destination Sign Messages
The second paragraph is deleted.

9-28.8 Sheet Aluminum Signs
The sheet thickness chart is revised to read:

<table>
<thead>
<tr>
<th>Maximum Horizontal Dimension</th>
<th>Sheet Aluminum Thickness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overlay panels</td>
<td>0.050 inch</td>
</tr>
<tr>
<td>Up to 20 inches</td>
<td>0.063 inch</td>
</tr>
</tbody>
</table>
20 inches to 36 inches, inclusive 0.080 inch
Over 36 inches (Permanent Signs) 0.125 inch

The fourth paragraph is revised to read:

Before placing aluminum in contact with untreated steel, the steel surfaces shall be protected by proper cleaning and painting with one coat of Zinc Primer A-9-73 or A-11-99 and two coats of aluminum paint D-1-57.

9-28.10 Plywood Signs
This section is deleted.

9-28.11 Hardware
The entry for hardware item "Angle and “Z” Bar" in the table in this section is revised to read:

Angle and “Z” Bar
ASTM B 221 6061-T6 Aluminum
ASTM A 36 or ASTM A 992 Steel

9-28.14(2) Steel Structures and Posts
This section is revised to read:

Truss chords, struts, and diagonals, end posts, and end post struts and diagonals for sign bridge structures and cantilever sign structures shall conform to either ASTM A 36 or ASTM A 53 Grade B Type E or S. The nominal pipe diameter and the pipe wall thickness shall be as shown in the Plans or Standard Plans. All other structural steel for sign bridge structures and cantilever sign structures shall conform to either ASTM A 36 or ASTM A 992. Truss member connection hardware shall conform to Section 9-06.5(3).

Pipe members for bridge mounted sign brackets shall conform to ASTM A 53 Grade B Type E or S, and shall be Schedule 40 unless otherwise specified. All other structural steel for bridge mounted sign brackets shall conform to either ASTM A 36 or ASTM A 992. U bolts, and associated nuts and washers, shall be stainless steel conforming to Section 9-28.11, and shall be fabricated hot.

Anchor rods for sign bridge and cantilever sign structure foundations shall conform to ASTM F 1554 Grade 105, including Supplemental Requirements S2, S3, and S5. Nuts and washers for sign bridge and cantilever sign structure foundations shall conform to AASHTO M 291 Grade DH and AASHTO M 293, respectively.

Steel sign structures and posts shall be galvanized after fabrication in accordance with AASHTO M 111, unless noted otherwise in the Plans. All bolts, nuts, and washers shall be galvanized after fabrication in accordance with AASHTO M 232. Unless otherwise specified in the Plans or Special Provisions, metal surfaces shall not be painted.
Except as otherwise noted, steel used for sign structures and posts shall have a controlled silicon content of either 0.00 to 0.04 percent or 0.15 to 0.25 percent. If the Plans or Special Provisions specify painting of the galvanized steel surfaces, then the controlled silicon content requirement does not apply for those steel members. Mill test certificates verifying the silicon content of the steel shall be submitted to both the galvanizer and the Engineer prior to beginning galvanizing operations.

Minor fabricating and modifications necessary for galvanizing will be allowed if not detrimental to the end product as determined by the Engineer. If such modifications are contemplated, the Contractor shall submit to the Engineer, for approval, six copies of the proposed modifications, prior to fabrication.

SECTION 9-33, CONSTRUCTION GEOSYNTHETIC
April 5, 2004
9-33.1 Geosynthetic Material Requirements
The term geosynthetic shall be considered to be inclusive of geotextiles, geogrids, and prefabricated drainage mats.

Geotextiles, including geotextiles attached to prefabricated drainage core to form a prefabricated drainage mat, shall consist only of long chain polymeric fibers or yarns formed into a stable network such that the fibers or yarns retain their position relative to each other during handling, placement, and design service life. At least 95 percent by weight of the material shall be polyolefins or polyesters. The material shall be free from defects or tears. The geotextile shall also be free of any treatment or coating which might adversely alter its hydraulic or physical properties after installation.

Geogrids shall consist of a regular network of integrally connected polymer tensile elements with an aperture geometry sufficient to permit mechanical interlock with the surrounding backfill. The long chain polymers in the geogrid tensile elements, not including coatings, shall consist of at least 95 percent by mass of the material of polyolefins or polyesters. The material shall be free of defects, cuts, and tears.

Prefabricated drainage core shall consist of a three dimensional polymeric material with a structure that permits flow along the core laterally, and which provides support to the geotextiles attached to it.

The geosynthetic shall conform to the properties as indicated in Tables 1 through 8 in Section 9-33.2, and additional tables as required in the Special Provisions for each use specified in the Plans. Specifically, the geosynthetic uses included in this section and their associated tables of properties are as follows:

Geotextile Application

Applicable Property Tables
Underground Drainage, Low Survivability, Classes A, B, and C  
Tables 1 and 2

Underground Drainage, Moderate Survivability, Classes A, B, and C  
Tables 1 and 2

Separation  
Table 3

Soil Stabilization  
Table 3

Permanent Erosion Control, Moderate Survivability, Classes A, B, and C  
Tables 4 and 5

Permanent Erosion Control, High Survivability Classes A, B, and C  
Tables 4 and 5

Ditch Lining  
Table 4

Temporary Silt Fence  
Table 6

Permanent Geosynthetic Retaining Wall  
Tables 7 and 9

Temporary Geosynthetic Retaining Wall  
Tables 7 and 10

Prefabrciated Drainage Mat  
Table 8

Tables 9 and 10 will be included in the Special Provisions.

Geogrid and geotextile reinforcement in geosynthetic retaining walls shall conform to the properties specified in Table 9 for permanent walls, and Table 10 for temporary walls.

For geosynthetic retaining walls that use geogrid reinforcement, the geotextile material placed at the wall face to retain the backfill material as shown in the Plans shall conform to the properties for Construction Geotextile for Underground Drainage, Moderate Survivability, Class A.

Thread used for sewing geotextiles shall consist of high strength polypropylene, polyester, or polyamide. Nylon threads will not be allowed. The thread used to sew permanent erosion control geotextiles, and to sew geotextile seams in exposed faces of temporary or permanent geosynthetic retaining walls, shall also be resistant to ultraviolet radiation. The thread shall be of contrasting color to that of the geotextile itself.
9-33.2 Geosynthetic Properties

9-33.2(1) Geotextile Properties

Table 1: Geotextile for underground drainage strength properties for survivability.

<table>
<thead>
<tr>
<th>Geotextile Property</th>
<th>Test Method</th>
<th>Low Survivability Woven/Nonwoven</th>
<th>Moderate Survivability Woven/Nonwoven</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grab Tensile Strength, min. in machine and x-machine direction</td>
<td>ASTM D4632</td>
<td>180 lbs./115 lbs. min.</td>
<td>250 lbs./160 lbs. min.</td>
</tr>
<tr>
<td>Grab Failure Strain, in machine and x-machine direction</td>
<td>ASTM D4632</td>
<td>&lt;50%/≥50%</td>
<td>&lt;50%/≥50%</td>
</tr>
<tr>
<td>Seam Breaking Strength</td>
<td>ASTM D4632</td>
<td>160 lbs./100 lbs. min.</td>
<td>220 lbs./140 lbs. min.</td>
</tr>
<tr>
<td>Puncture Resistance</td>
<td>ASTM D4833</td>
<td>67 lbs./40 lbs. min.</td>
<td>80 lbs./50 lbs. min.</td>
</tr>
<tr>
<td>Tear Strength, min. in machine and x-machine direction</td>
<td>ASTM D4533</td>
<td>67 lbs/40 lbs. min.</td>
<td>80 lbs./50 lbs. min.</td>
</tr>
<tr>
<td>Ultraviolet (UV) Rediation stability</td>
<td>ASTM D4355</td>
<td>50% strength retained min., after 500 hrs. in weatherometer</td>
<td>50% strength retained min., after 500 hrs. in weatherometer</td>
</tr>
</tbody>
</table>

Table 2: Geotextile for underground drainage filtration properties.

<table>
<thead>
<tr>
<th>Geotextile Property</th>
<th>Test Method</th>
<th>Geotextile Property Requirements&lt;sup&gt;1&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>AOS</td>
<td>ASTM D4751</td>
<td>Class A: .43 mm max. (#40 sieve)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Class B: .25 mm max. (#60 sieve)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Class C: .18 mm max. (#80 sieve)</td>
</tr>
<tr>
<td>Water Permittivity</td>
<td>ASTM D4491</td>
<td>.5 sec&lt;sup&gt;-1&lt;/sup&gt; min.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>.4 sec&lt;sup&gt;-1&lt;/sup&gt; min.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>.3 sec&lt;sup&gt;-1&lt;/sup&gt; min.</td>
</tr>
</tbody>
</table>

Table 3: Geotextile for separation or soil stabilization.

<table>
<thead>
<tr>
<th>Geotextile Property</th>
<th>Test Method</th>
<th>Geotextile Property Requirements&lt;sup&gt;1&lt;/sup&gt;</th>
<th>Soil Stabilization Separation Woven/Nonwoven</th>
</tr>
</thead>
<tbody>
<tr>
<td>AOS</td>
<td>ASTM D4751</td>
<td>.60 mm max. (#30 sieve)</td>
<td>.43 mm max. (#40 sieve)</td>
</tr>
<tr>
<td>Water Permittivity</td>
<td>ASTM D4491</td>
<td>.02 sec&lt;sup&gt;-1&lt;/sup&gt; min.</td>
<td>.10 sec&lt;sup&gt;-1&lt;/sup&gt; min.</td>
</tr>
<tr>
<td>Grab Tensile Strength, min. in machine and x-machine direction</td>
<td>ASTM D4632</td>
<td>250 lbs./160 lbs. min.</td>
<td>315 lbs./200 lbs. min.</td>
</tr>
<tr>
<td>Grab Failure Strain, in machine and x-machine direction</td>
<td>ASTM D4632</td>
<td>&lt;50%/≥50%</td>
<td>&lt;50%/≥50%</td>
</tr>
</tbody>
</table>
direction

Seam Breaking Strength ASTM D4632\(^2\) 220 lbs./140 lbs. min. 270 lbs./180 lbs. min.

Puncture Resistance ASTM D4833 80 lbs./50 lbs. min. 112 lbs./79 lbs. min.

Tear Strength, min. in machine and x-machine direction ASTM D4533 80 lbs/50 lbs. min. 112 lbs./79 lbs. min.

Ultraviolet (UV) Radiation stability ASTM D4355 50% strength retained min., after 500 hrs. in weatherometer 50% strength retained min., after 500 hrs. in weatherometer

Table 4: Geotextile for permanent erosion control and ditch lining.

<table>
<thead>
<tr>
<th>Geotextile Property</th>
<th>Property Specification</th>
<th>Geotextile Property Requirements(^1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AOS (sieve)</td>
<td>Test Method ASTM D4751</td>
<td>Permanent Erosion Control</td>
</tr>
<tr>
<td></td>
<td>Woven/Nonwoven</td>
<td>High Servicability</td>
</tr>
<tr>
<td></td>
<td>See Table 5</td>
<td>Woven/Nonwoven</td>
</tr>
<tr>
<td></td>
<td></td>
<td>See Table 5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>.60 mm max (#30)</td>
</tr>
<tr>
<td>Water Permittivity</td>
<td>ASTM D4491</td>
<td>See Table 5</td>
</tr>
<tr>
<td>Grab Tensile Strength, min. in machine and x-machine direction</td>
<td>ASTM D4632 250 lbs./160 lbs. min. 315 lbs./200 lbs. min.</td>
<td>.02 sec(^{-1}) min.</td>
</tr>
<tr>
<td>Grab Failure Strain, in machine and x-machine direction</td>
<td>ASTM D4632 15%-50%/≥50%</td>
<td>15%-50%/≥50%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&lt;50%/≥50%</td>
</tr>
<tr>
<td>Seem Breaking Strength</td>
<td>ASTM D4632(^2) 220 lbs./140 lbs. min. 270 lbs./180 lbs. min.</td>
<td>220 lbs./140 lbs. min.</td>
</tr>
<tr>
<td>Burst Strength</td>
<td>ASTM D3785 400 psi/190 psi min.</td>
<td>500 psi/320 psi min.</td>
</tr>
<tr>
<td>Puncture Resistance</td>
<td>ASTM D4833 80 lbs./50 lbs. min.</td>
<td>112 lbs./79 lbs. min. 80 lbs./50 lbs. min.</td>
</tr>
<tr>
<td>Tear Strength, min. in machine and x-machine direction</td>
<td>ASTM D4533 80 lbs/50 lbs. min.</td>
<td>112 lbs./79 lbs. min. 80 lbs./50 lbs. min.</td>
</tr>
<tr>
<td>Ultraviolet (UV) Radiation stability</td>
<td>ASTM D4355</td>
<td>70% strength retained min., after 500 hrs. in weatherometer</td>
</tr>
<tr>
<td></td>
<td></td>
<td>70% strength retained min., after 500 hrs. in weatherometer</td>
</tr>
<tr>
<td></td>
<td></td>
<td>70% strength retained min., after 500 hrs. in weatherometer</td>
</tr>
</tbody>
</table>

Table 5: Filtration properties for geotextile for permanent erosion control.
<table>
<thead>
<tr>
<th>Geotextile Property</th>
<th>Test Method</th>
<th>Class A</th>
<th>Class B</th>
<th>Class C</th>
</tr>
</thead>
<tbody>
<tr>
<td>AOS</td>
<td>ASTM D4751</td>
<td>.43 mm max. (#40 sieve)</td>
<td>.25 mm max. (#60 sieve)</td>
<td>.22 mm max. (#70 sieve)</td>
</tr>
<tr>
<td>Water Permittivity</td>
<td>ASTM D4491</td>
<td>.7 sec(^{-1}) min.</td>
<td>.4 sec(^{-1}) min.</td>
<td>.2 sec(^{-1}) min.</td>
</tr>
</tbody>
</table>

Table 6: Geotextile for temporary silt fence.

<table>
<thead>
<tr>
<th>Geotextile Property</th>
<th>Test Method</th>
<th>Unsupported Between Posts</th>
<th>Posts with Wire or Polymeric Mesh</th>
</tr>
</thead>
<tbody>
<tr>
<td>AOS</td>
<td>ASTM D4751</td>
<td>.60 mm max. for slit film wovens (#30 sieve)</td>
<td>.60 mm max. for slit film wovens (#30 sieve)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>.30 mm max. for all other geotextile types (#50 sieve)</td>
<td>.30 mm max. for all other geotextile types (#50 sieve)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>.15 mm min. (#100 sieve)</td>
<td>.15 mm min. (#100 sieve)</td>
</tr>
<tr>
<td>Water Permittivity</td>
<td>ASTM D4491</td>
<td>.02 sec(^{-1}) min.</td>
<td>.02 sec(^{-1}) min.</td>
</tr>
<tr>
<td>Grab Tensile Strength, min. in machine and x-machine direction</td>
<td>ASTM D4632</td>
<td>180 lbs. min. in machine direction</td>
<td>100 lbs. min.</td>
</tr>
<tr>
<td>Grab Failure Strain, in machine and x-machine direction</td>
<td>ASTM D4632</td>
<td>30% max. at 180 lbs. or more</td>
<td>30% strength retained min., after 500 hrs. in weatherometer</td>
</tr>
<tr>
<td>Ultraviolet (UV) Radiation stability</td>
<td>ASTM D4355</td>
<td>70% strength retained min., after 500 hrs. in weatherometer</td>
<td></td>
</tr>
</tbody>
</table>

\(^1\)All geotextile properties in Tables 1 through 6 are minimum average roll values (i.e., the test result for any sampled roll in a lot shall meet or exceed the values shown in the table).

\(^2\)The test procedures used are essentially in conformance with the most recently approved ASTM geotextile test procedures, except for geotextile sampling and specimen conditioning, which are in accordance with WSDOT Test Methods 914 and 915, respectively. Copies of these test methods are available at the State Materials Laboratory in Tumwater.

\(^3\)With seam located in the center of 8-inch long specimen oriented parallel to grip faces.
9-33.2(2) Geosynthetic Properties For Retaining Walls and Reinforced Slopes

All geotextile properties provided in Table 7 are minimum average roll values. The average test results for any sampled roll in a lot shall meet or exceed the values shown in the table. The test procedures specified in the Table are in conformance with the most recently approved ASTM geotextile test procedures, except for geotextile sampling and specimen conditioning, which are in accordance with WSDOT Test Methods 914 and 915, respectively.

**Table 7:** Minimum properties required for geotextile reinforcement used in geosynthetic reinforced slopes and retaining walls.

<table>
<thead>
<tr>
<th>Geotextile Property</th>
<th>Test Method</th>
<th>Woven/Nonwoven</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Permittivity</td>
<td>ASTM D4491</td>
<td>.02 sec.(^{-1}) min.</td>
</tr>
<tr>
<td>AOS</td>
<td>ASTM D4751</td>
<td>.84 mm max.</td>
</tr>
<tr>
<td>(No. 20 Sieve)</td>
<td></td>
<td>200 lbs/120 lbs min.</td>
</tr>
<tr>
<td>Grab Tensile Strength, min. in machine and x-machine direction</td>
<td>ASTM D4632</td>
<td></td>
</tr>
<tr>
<td>Grab Failure Strain, in machine and x-machine direction</td>
<td>ASTM D4632</td>
<td>&lt; 50% / ≥ 50%</td>
</tr>
<tr>
<td>Seam Breaking Strength(^1)</td>
<td>ASTM D4632</td>
<td>160 lbs/100 lbs min.</td>
</tr>
<tr>
<td>Puncture Resistance</td>
<td>ASTM D4833</td>
<td>63 lbs/50 lbs min.</td>
</tr>
<tr>
<td>Tear Strength, min. in machine and x-machine direction</td>
<td>ASTM D4533</td>
<td>63 lbs/50 lbs min.</td>
</tr>
<tr>
<td>Ultraviolet (UV) Radiation Stability</td>
<td>ASTM D4355</td>
<td>70% (for polypropylene and polyethylene) and 50% (for polyester) Strength Retained min., after 500 Hr. in weatherometer</td>
</tr>
</tbody>
</table>

\(^1\) Applies only to seams perpendicular to the wall face.
The ultraviolet (UV) radiation stability, ASTM D4355, shall be a minimum of 70% strength retained after 500 hours in the weatherometer for polypropylene and polyethylene geogrids and geotextiles, and 50% strength retained after 500 hours in the weatherometer for polyester geogrids and geotextiles.

9-33.2(3) Prefabricated Drainage Mat
Prefabricated drainage mat shall have a single or double dimpled polymeric core with a geotextile attached and shall meet the following requirements:

Table 8: Minimum properties required for prefabricated drainage mats.

<table>
<thead>
<tr>
<th>Property</th>
<th>Test Method</th>
<th>Prefabricated Drainage Material/Geotextile Property Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Width</td>
<td></td>
<td>12 inches min.</td>
</tr>
<tr>
<td>Thickness</td>
<td>ASTM D 5199</td>
<td>0.4 inches min.</td>
</tr>
<tr>
<td>Compressive Strength at Yield</td>
<td>ASTM D 1621</td>
<td>100 psi min.</td>
</tr>
<tr>
<td>In Plan Flow Rate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gradient = 0.1,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pressure = 5.5 psi</td>
<td>ASTM D 4716</td>
<td>5.0 gal./min./ft.</td>
</tr>
<tr>
<td>Gradient = 1.0,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pressure = 14.5 psi</td>
<td></td>
<td>15.0 gal./min./ft.</td>
</tr>
<tr>
<td>Geotextile - AOS</td>
<td>ASTM D 4751</td>
<td>#60 US Sieve max.</td>
</tr>
<tr>
<td>Geotextile - Permittivity</td>
<td>ASTM D 4491</td>
<td>&gt; 0.4 SEC⁻¹</td>
</tr>
<tr>
<td>Geotextile - Grab Strength</td>
<td>ASTM D 4632</td>
<td>Nonwoven - 1101</td>
</tr>
</tbody>
</table>

Prefabricated drainage mats will be accepted based on the manufacturer's certificate of compliance that the material furnished conforms to these specifications. The Contractor shall submit the manufacturer’s certificate of compliance to the Engineer in accordance with Section 1-06.3.

9-33.3 Aggregate Cushion of Permanent Erosion Control Geotextile
Aggregate cushion for permanent erosion control geotextile, Class A shall meet the requirements of Section 9-03.9(2). Aggregate cushion for permanent erosion control geotextile, Class B or C shall meet the requirements of Section 9-03.9(3) and 9-03.9(2).
9-33.4 Geosynthetic Approval and Acceptance

9-33.4(1) Source Approval
The Contractor shall submit to the Engineer the following information regarding each geosynthetic proposed for use:

Manufacturer's name and current address,
Full product name,
Geotextile structure, including fiber/yarn type,
Geosynthetic polymer type(s) (for temporary and permanent geosynthetic retaining walls), and
Proposed geotextile use(s).

If the geosynthetic source has not been previously evaluated, or is not listed in the current WSDOT Qualified Products List (QPL), a sample of each proposed geosynthetic shall be submitted to the State Materials Laboratory in Tumwater for evaluation. After the sample and required information for each geosynthetic type have arrived at the State Materials Laboratory in Tumwater, a maximum of 14 calendar days will be required for this testing. Source approval will be based on conformance to the applicable values from Tables 1 through 8 in Section 9-33.2 and additional tables as specified in the Special Provisions. Source approval shall not be the basis of acceptance of specific lots of material unless the lot sampled can be clearly identified and the number of samples tested and approved meet the requirements of WSDOT Test Method 914.

Geogrid and geotextile products that are qualified for use in permanent geosynthetic retaining walls and reinforced slopes (Classes 1, 2, or both) are listed in the current WSDOT QPL.

For geogrid and geotextile products proposed for use in permanent geosynthetic retaining walls or reinforced slopes that are not listed in the current QPL, the Contractor shall submit test information and the calculations used in the determination of $T_a$ performed in accordance with WSDOT Standard Practice T925 to the State Materials Laboratory in Tumwater for evaluation. The Contracting Agency will require up to 30 calendar days after receipt of the information to complete the evaluation.

9-33.4(3) Acceptance Samples
Samples will be randomly taken by the Engineer at the job site to confirm that the geosynthetic meets the property values specified.

Approval will be based on testing of samples from each lot. All “lot” shall be defined for the purposes of this specification as all geosynthetic rolls within the consignment (i.e., all rolls sent the project site) that were produced by the same manufacturer during a continuous period of production at the same manufacturing plant and have the same product name. After the samples have arrived at the State Materials
Laboratory in Tumwater, a maximum of 14 calendar days will be required for this testing.

If the results of the testing show that a geosynthetic lot, as defined, does not meet the properties required for the specified use as indicated in Tables 1 through 8 in Section 9-33.2, and additional tables as specified in the Special Provisions, the roll or rolls which were sampled will be rejected. Geogrids and geotextiles for temporary geosynthetic retaining walls shall meet the requirements of Table 7, and Table 10 in the Special Provisions. Geogrids and geotextiles for permanent geosynthetic retaining wall shall meet the requirements of Table 7, and Table 9 in the Special Provisions, and both geotextile and geogrid acceptance testing shall meet the required ultimate tensile strength $T_{ult}$ as provided in the current QPL for the selected product(s). If the selected product(s) are not listed in the current QPL, the result of the testing for $T_{ult}$ shall be greater than or equal to $T_{ult}$ as determined from the product data submitted and approved by the State Materials Laboratory during source approval.

Two additional rolls for each roll tested which failed from the lot previously tested will then be selected at random by the Engineer for sampling and retesting. If the retesting shows that any of the additional rolls tested do not meet the required properties, the entire lot will be rejected. If the test results from all the rolls retested meet the required properties, the entire lot minus the roll(s) that failed will be accepted. All geosynthetic that has defects, deterioration, or damage, as determined by the Engineer, will also be rejected. All rejected geosynthetic shall be replaced at no additional expense to the Contracting Agency.

9-33.4(4) Acceptance by Certificate of Compliance

When the quantities of geosynthetic proposed for use in each geosynthetic application are less than or equal to the following amounts, acceptance shall be by Manufacturer’s Certificate of Compliance:

<table>
<thead>
<tr>
<th>Application</th>
<th>Geotextile Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underground Drainage</td>
<td>600 sq. yards</td>
</tr>
<tr>
<td>Soil Stabilization and Separation</td>
<td>1,800 sq. yards</td>
</tr>
<tr>
<td>Permanent Erosion Control</td>
<td>1,200 sq. yards</td>
</tr>
<tr>
<td>Temporary Silt Fence</td>
<td>All quantities</td>
</tr>
<tr>
<td>Temp. or Perm. Geosynthetic Retaining Wall</td>
<td>Not required</td>
</tr>
<tr>
<td>Prefabricated Drainage Mat</td>
<td>All quantities</td>
</tr>
</tbody>
</table>

The Manufacturer’s Certificate of Compliance shall include the following information about each geosynthetic roll to be used:

- Manufacturer’s name and current address,
- Full product name,
- Geosynthetic structure, including fiber/yarn type,
Polymer type (for all temporary and permanent geosynthetic retaining walls only),
Geosynthetic roll number,
Proposed geosynthetic use(s), and
Certified test results.

9-33.4(5) Approval of Seams
If the geotextile seams are to be sewn in the field, the Contractor shall provide a section
of sewn seam which can be sampled by the Engineer before the geotextile is installed.

The seam sewn for sampling shall be sewn using the same equipment and procedures as
will be used to sew the production seams. If production seams will be sewn in both the
machine and cross-machine directions, the Contractor must provide sewn seams for
sampling which are oriented in both the machine and cross-machine directions. The
seams sewn for sampling must be at least 2 yards in length in each geotextile direction. If
the seams are sewn in the factory, the Engineer will obtain samples of the factory seam at
random from any of the rolls to be used. The seam assembly description shall be
submitted by the Contractor to the Engineer and will be included with the seam sample
obtained for testing. This description shall include the seam type, stitch type, sewing
thread type(s), and stitch density.

SECTION 9-35, TEMPORARY TRAFFIC CONTROL MATERIALS
August 1, 2005

Temporary traffic control materials in this section consist of various traffic
communication, channelization and protection items described in Section 1-10 and listed
below:

Stop/Slow Paddles
Construction Signs
Wood Sign Posts
Sequential Arrow Signs
Portable Changeable Message Signs
Barricades
Traffic Safety Drums
Barrier Drums
Traffic Cones
Tubular Markers
Warning Lights and Flashers
Truck-Mounted Attenuator

The basis for acceptance of temporary traffic control devices and materials shall be visual
inspection by the Engineer’s representative. No sampling or testing will be done except
that deemed necessary to support the visual inspection. Requests for Approval of
Material and Qualified Products List submittals are not required. Certification for
crashworthiness according to NCHRP 350 will be required as described in Section 1-10.2(3).

“MUTCD,” as used in this section, shall refer to the latest WSDOT adopted edition of the Manual on Uniform Traffic Control Devices for Streets and Highways. In the event of conflicts between the MUTCD and the contract provisions, then the provisions shall govern.

9-35.1 Stop/Slow Paddles
Paddles shall conform to the requirements of the MUTCD, except that the minimum width shall be 24 inches.

9-35.2 Construction Signs
Construction signs shall conform to the requirements of the MUTCD and shall meet the requirements of NCHRP Report 350 for Category 2 devices. Except as noted below, any sign/sign stand combination that satisfies these requirements will be acceptable.

Where aluminum sheeting is used to fabricate signs, it shall have a minimum thickness of 0.080 inches and a maximum thickness of 0.125 inches.

All orange background signs shall be fabricated with Type X reflective sheeting. All post-mounted signs with Type X sheeting shall use a nylon washer between the twist fasteners (screw heads, bolts or nuts) and the reflective sheeting.

Any fabric sign which otherwise meets the requirements of this section and was purchased prior to July 1, 2004, may be utilized until December 31, 2007. If a fabric sign is used, it shall have been fabricated with Type VI reflective sheeting.

9-35.3 Wood Sign Posts
Use the charts below to determine post size for construction signs.

**One Post Installation**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>4x4</td>
<td>-</td>
<td>16.0</td>
</tr>
<tr>
<td>4x6</td>
<td>17.0</td>
<td>20.0</td>
</tr>
<tr>
<td>6x6</td>
<td>21.0</td>
<td>25.0</td>
</tr>
<tr>
<td>6x8</td>
<td>26.0</td>
<td>31.0</td>
</tr>
</tbody>
</table>

**Two Post Installation**

(For signs 5 feet or greater in width)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>4x4</td>
<td>-</td>
<td>16.0</td>
</tr>
<tr>
<td>4x6</td>
<td>17.0</td>
<td>36.0</td>
</tr>
</tbody>
</table>
6x6 \hspace{1cm} 37.0 \hspace{1cm} 46.0
6x8 \hspace{1cm} 47.0 \hspace{1cm} 75.0* \\

* The Engineer shall determine post size for signs greater than 75 square feet.

Sign posts shall conform to the grades and usage listed below. Grades shall be determined by the current standards of the West Coast Lumber Inspection Bureau (WCLIB) or the Western Wood Products Association (WWPA).

4 x 4 Construction grade (Light Framing, Section 122-b WCLIB) or (Section 40.11 WWPA)
4 x 6 No. 1 and better, grade (Structural Joists and Planks, Section 123-b WCLIB) or (Section 62.11 WWPA)
6 x 6, 6 x 8, 8 x 10 No. 1 and better, grade (Posts and Timbers, Section 131-b WCLIB) or (Section 80.11 WWPA)
6 x 10, 6 x 12 No. 1 and better, grade (Beams and Stringers, Section 130-b WCLIB) or (Section 70.11 WWPA)

9-35.4 Sequential Arrow Signs
Sequential Arrow Signs shall meet the requirements of the MUTCD supplemented with the following:

Sequential arrow signs furnished for stationary lane closures on this project shall be Type C.
The color of the light emitted shall be yellow.
The dimming feature shall be automatic, reacting to changes in light without a requirement for manual adjustment.

9-35.5 Portable Changeable Message Signs
Portable Changeable Message Signs (PCMS) shall meet the requirements of the MUTCD and the following:

The PCMS shall employ one of the following technologies:

1. Fiber optic/shutter
2. Light emitting diode
3. Light emitting diode/shutter
4. Flip disk

Regardless of the technology, the PCMS shall meet the following general requirements:
• Be light emitting and must not rely solely on reflected light. The emitted light shall be generated using fiber optic or LED technology.

• Have a display consisting of individually controlled pixels no larger than 2 1/2 inch by 2 1/2 inch. If the display is composed of individual character modules, the space between modules must be minimized so alphanumeric characters of any size specified below can be displayed at any location within the matrix.

• When activated, the pixels shall display a yellow or orange image. When not activated, the pixels shall display a flat black image that matches the background of the sign face.

• Be capable of displaying alphanumeric characters that are a minimum of 18 inches in height. The width of alphanumeric characters shall be appropriate for the font. The PCMS shall be capable of displaying three lines of eight characters per line with a minimum of one pixel separation between each line.

• The PCMS message, using 18-inch characters, shall be legible by a person with 20/20 corrected vision from a distance of not less than 800 feet centered on an axis perpendicular to the sign face.

• The sign display shall be covered by a stable, impact resistant polycarbonate face. The sign face shall be non-glare from all angles and shall not degrade due to exposure to ultraviolet light.

• Be capable of simultaneously activating all pixels for the purpose of pixel diagnostics. Any sign that employs flip disk or shutter technology shall be programmable to activate the disks/shutters once a day to clean the electrical components. This feature shall not occur when the sign is displaying an active message.

• The light source shall be energized only when the sign is displaying an active message.

The PCMS panels and related equipment shall be permanently mounted on a trailer with all controls and power generating equipment.

The PCMS shall be operated by a controller that provides the following functions:

1. Select any preprogrammed message by entering a code.
2. Sequence the display of at least five messages.
3. Blank the sign.
4. Program a new message, which may include animated arrows and chevrons.
5. Mirror the message currently being displayed or programmed.
9-35.6 Barricades
Barricades shall conform to the requirements of the MUTCD supplemented by the further
requirements of Standard Plan H-2.

9-35.7 Traffic Safety Drums
Traffic safety drums shall conform to the requirements of the MUTCD and the following:
The drums shall have the following additional physical characteristics:

<table>
<thead>
<tr>
<th>Material</th>
<th>Fabricated from low-density polyethylene that meets the requirements of ASTM D 4976 and is UV stabilized.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Width</td>
<td>18-inch minimum in the direction(s) of traffic flow.</td>
</tr>
<tr>
<td>Shape</td>
<td>Rectangular, hexagonal, circular, or flat-sided semi-circular.</td>
</tr>
<tr>
<td>Color</td>
<td>The base color of the drum shall be fade resistant safety orange.</td>
</tr>
</tbody>
</table>

The traffic safety drums shall be designed to accommodate at least one portable light unit.
The method of attachment shall ensure that the light does not separate from the drum
upon impact.

Drums and light units shall meet the crashworthiness requirements of NCHRP 350 as
described in Section 1-10.2(3).

When recommended by the manufacturer, drums shall be treated to ensure proper
adhesion of the reflective sheeting.

9-35.8 Barrier Drums
Barrier drums shall be small traffic safety drums, manufactured specifically for traffic
control purposes to straddle a concrete barrier and shall be fabricated from low-density
polyethylene that meets the requirements of ASTM D 4976 and is UV stabilized.
The barrier drums shall meet the following general specifications:

<table>
<thead>
<tr>
<th>Total height</th>
<th>22 in., ± 1 in.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross-section</td>
<td>hollow oval</td>
</tr>
<tr>
<td>10 in. X 14 in., ± 1 in.</td>
<td></td>
</tr>
<tr>
<td>Formed support legs length</td>
<td>13 in., ± 1 in.</td>
</tr>
<tr>
<td>Space between legs</td>
<td>6 1/4 in. min.</td>
</tr>
<tr>
<td>(taper to fit conc. barrier)</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>33 lb. ± 4 lb. with legs filled with sand.</td>
</tr>
<tr>
<td>Color</td>
<td>Fade resistant safety orange.</td>
</tr>
</tbody>
</table>
Barrier drums shall have three 4-inch reflective white stripes, (one complete and two partial). Stripes shall be fabricated from Type III or Type IV reflective sheeting.

When recommended by the manufacturer, barrier drums shall be treated to ensure proper adhesion of the reflective sheeting.

9-35.9 Traffic Cones
Cones shall conform to the requirements of the MUTCD, except that the minimum height shall be 28 inches.

9-35.10 Tubular Markers
Tubular markers shall conform to the requirements of the MUTCD, except that the minimum height shall be 28 inches.

Pavement-mounted tubular markers shall consist of a surface-mounted assembly which uses a separate base with a detachable tubular marker held in place by means of a locking device.

9-35.11 Warning Lights and Flashers
Warning lights and flashers shall conform to the requirements of the MUTCD.

9-35.12 Truck-Mounted Attenuator
The Truck-Mounted Attenuator (TMA) shall be selected from the approved units listed on the Qualified Products List. The TMA shall be mounted on a vehicle with a minimum weight of 15,000 pounds and a maximum weight in accordance with the manufacturer’s recommendations. Ballast used to obtain the minimum weight requirement, or any other object that is placed on the vehicle shall be securely anchored such that it will be retained on the vehicle during an impact. The Contractor shall provide certification that the unit complies with NCHRP 230 or 350 requirements. Units fabricated after 1998 must comply with NCHRP 350 requirements.

The TMA shall have an adjustable height so that it can be placed at the correct elevation during usage and to a safe height for transporting. If needed, the Contractor shall install additional lights to provide fully visible brake lights at all times.

The TMA unit shall have a chevron pattern on the rear of the unit. The standard chevron pattern shall consist of 4-inch yellow stripes, alternating non-reflective black and reflective yellow sheeting, slanted at 45 degrees in an inverted “V” with the “V” at the center of the unit.
SPECIAL PROVISIONS
SPECIAL PROVISIONS

C 3160 – COUNTRY CLUB DRIVE BRIDGE
NO. 163 REPLACEMENT

Yakima County, Washington

The following Special Provisions, including Division 1-99 APWA Supplement are made a part of this contract and supersede any conflicting provisions of the 2004 Standard Specifications for Road, Bridge and Municipal Construction, and the foregoing Amendments to the Standard Specifications.

Several types of Special Provisions are included in this contract; General, Region, Bridges and Structures, and Project Specific. Special Provisions types are differentiated as follows:

(date) General Special Provision
(******) Notes a revision to a General Special Provision and also notes a Project Specific Special Provision.
(Regions¹ date) Region Special Provision
(BSP date) Bridges and Structures Special Provision

General Special Provisions are similar to Standard Specifications in that they typically apply to many projects, usually in more than one Region. Usually, the only difference from one project to another is the inclusion of variable project data, inserted as a “fill-in”.

Region Special Provisions are commonly applicable within the designated Region. Region designations are as follows:

Regions¹
ER Eastern Region
NCR North Central Region
NWR Northwest Region
OR Olympic Region
SCR South Central Region
SWR Southwest Region
WSF Washington State Ferries Division

Bridges and Structures Special Provisions are similar to Standard Specifications in that they typically apply to many projects, usually in more than one Region. Usually, the only difference from one project to another is the inclusion of variable project data, inserted as a “fill-in”.

¹ Regions are specific to the project location and may vary.
Project Specific Special Provisions normally appear only in the contract for which they were developed.

DIVISION 1
GENERAL REQUIREMENTS

DESCRIPTION OF WORK
(March 13, 1995)

This contract provides for the replacement of Country Club Drive Bridge No. 163, located south of Terrace Heights Drive, approximately 4 miles east of downtown Yakima, Washington.

This project consists of:
1. Removing any and all structures, components and portions of the existing bridge, including the concrete deck with paving, attached wood guardrail, irrigation pipelines being replaced under this contract, steel girders and columns, concrete abutments and footings, and all attachments, including hangers, brackets and signs, etc.,
2. Protecting the existing Roza Irrigation Canal banks and concrete canal lining during construction,
3. Placement of reinforced concrete footings and abutment walls,
4. Installation of six WSDOT W53DG prestressed precast girders, with cast in place intermediate and end diaphragms,
5. Installation of new bridge and approach concrete traffic barrier with Type BP railing,
6. Installation of new 6 In. Dia. irrigation pipeline, with associated fittings, and attachments,
7. Reconstruction of approximately 146’ of Country Club Drive in the vicinity of the new bridge, including grading, placement of crushed surfacing base course and hot mix asphalt,
8. Constructing and maintaining a gravel detour road with barrier on one side,
9. Working around existing utility lines, including telecommunication, electrical, underground irrigation and gas line piping,
10. Other miscellaneous work.

all in accordance with the attached Contract Plans, these Contract Provisions, and the Standard Specifications.

FUNDS

(******)
Yakima County Road, and Public Works Trust Funds (PWTF) are involved in the construction of these improvements.
1-02 BID PROCEDURES AND CONDITIONS

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

Section 1-02.4 is supplemented with the following:

(******)
The soils information used for study and design of this project is available for review by prospective bidders at the following location:

Yakima County Public Services Office, 128 N. 2nd Street, 4th Floor County Courthouse, Yakima, WA 98901.

1-02.6 Preparation Of Proposal

Section 1-02.6 is supplemented with the following:

(August 2, 2004)
The fifth and sixth paragraphs of Section 1-02.6 are deleted.

1-05 CONTROL OF WORK

(March 13, 1995)
Cooperation With Other Contractors
Section 1-05.14 is supplemented with the following:

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:

Relocation of existing utilities, which are in conflict with the proposed improvements.

1-06 CONTROL OF MATERIAL

Foreign Made Materials
Section 1-06 is supplemented with the following:

(March 13, 1995)
The major quantities of steel and iron construction material that is permanently incorporated into the project shall consist of American-made materials only.

The Contractor may utilize minor amounts of foreign steel and iron 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 occur in the United States. 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. 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 350-109 provided by the Engineer, or such other form the Contractor chooses, provided it contains the same information as DOT Form 350-109.

The following items of work containing steel or iron construction materials are considered to be temporary and are excluded from the requirements for American-made materials described in the above paragraphs:

***Construction of Bridge Falsework***

1-06.2 (2) Statistical Evaluation of Materials for Acceptance

(******)
Section 1-06.2(2) of the Standard Specifications is deleted.

1-07 LEGAL RELATIONS AND RESPONSIBILITIES TO THE PUBLIC
(******)
(January 5, 2004)

Lead Health Protection Program
Structural and non-structural materials located at the project site *** Country Club Drive Bridge No. 163 *** contain lead-based products. The Contractor shall be fully responsible for the safety and health of all on-site workers and compliant with Washington Administrative Code (WAC 296-155-176). The Contractor's Lead Health Protection Program shall be sent to the Contracting Agency at least 2 weeks prior to the Contractor beginning work involving exposure to lead contamination. The Contractor shall communicate with the Project Engineer to ensure a coordinated effort for providing and maintaining a safe worksite for both the Contracting Agency's and Contractor's workers.

Construction Requirements
The Contractor shall be responsible for the containment measures required to provide and maintain a safe and healthful jobsite for the duration of the project in accordance with all applicable laws and this Special Provision.

Payment
All costs to comply with this Special Provision for the Lead Health Protection laws and regulations are the responsibility of the Contractor and shall be included in related items of work.

1-07.2 State Taxes
Section 1-07.2 is supplemented with the following:

(March 13, 1995)
The work on this contract is to be performed upon lands whose ownership obligates the Contractor to pay Sales tax. The provisions of Section 1-07.2(1) apply.

1-07.5 Fish and Wildlife and Ecology Regulations
Section 1-07.6 is supplemented with the following:

(March 13, 1995)
No hydraulic permits are required for this project unless the Contractor's operations use, divert, obstruct, or change the natural flow or bed of any river or stream, or utilize any of the waters of the State or materials from gravel or sand bars, or from stream beds.

1-07.6 Permits And Licenses
Section 1-07.6 is supplemented with the following:

(******)
In addition to the expenses that may be incurred by the Contractor for procuring permits and licenses, as specified herein, the Contractor shall be required to submit payment to the Department of Labor and Industries for processing of "Statement of
Intent to Pay Prevailing Wages" and "Affidavit of Wages Paid". All costs incurred
by the Contractor shall be included in his various Unit Bid Prices, and no further
Payment shall be made.

Any material hauled from the project will be subject to the requirements of the
Yakima County Excavation and Grading Ordinance. All costs incurred by the
Contractor to obtain a Grading Permit shall be included in the various Unit Bid
Prices, and no further Payment shall be made.

The Yakima County Excavation and Grading Ordinance may be reviewed on the
Fourth Floor of the Yakima County Courthouse.

1-07.7 Load Limits
Section 1-07.7 is supplemented with the following:

(***)
If the sources of materials provided by the Contractor of the County require hauling
over roads other than County Highways, the Contractor shall, at his own cost and
expense, make all arrangements for the use of the haul routes.

1-07.9 Wages

1-07.9(5) Required Documents
Section 1-07.9(5) is supplemented with the following:

(***)
The Engineer shall conduct a minimum of one wage rate interview of the prime
Contractor and each Subcontractor during the project.

(***)
The Contractor and his Subcontractors shall supply Yakima County with Weekly
Certified Payrolls for this Project.

(February 5, 2001)
Utilities And Similar Facilities
Section 1-07.17 is supplemented with the following:

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

Call Before You Dig One Call Center (800) 424-5555
Roza Irrigation District (Wayne Sonnichsen) (509) 837-5141
Cascade Natural Gas (Darrell Wheeler) (509) 840-0246
Private Irrigation Line on Bridge (Mark Cleaver) (509) 574-2314
Pacific Power & Light Co. (Mike Paulson) (509) 575-3158
QWEST (Marilyn Perry) (509) 575-7183

1-07.18 Public Liability and Property Damage Insurance

Section 1-07.18 is revised as follows:

(*****)
Delete from paragraph two the reference to “Department of Transportation, Contract Payment section, P.O. Box 47420, Olympia, WA 98504-7420,” and replace with “Yakima County Public Services Department, 4th Floor County Courthouse, 128 N. 2nd Street, Yakima, WA. 98901”.

1-07.23 Public Convenience And Safety

1-07.23(2) Construction and Maintenance of Detours

(January 7, 2002)
Requirements for Closing Bridge to Traffic Prior to Beginning Removal
The Contractor shall not close the existing bridge to traffic, and shall not begin bridge removal operations, until the following conditions are met:

1. The Contractor has received the engineer’s approval of the bridge demolition plan.

2. The Contractor has sufficient material on hand to complete bridge removal and bridge construction operations in the least possible time.

3. The Contractor shall furnish a report on the status of material delivery to the engineer. The report shall specify the materials already available at the site, the materials yet to arrive at the site, and the scheduled delivery dates of the materials yet to arrive at the site.

4. The Contractor has received the Engineer’s approval to proceed.

5. The canal bank detour road has been constructed and is ready for operation, as detailed in Section 1-07.23(2) of these Special Provisions.
Section 1-07.23(2) shall be supplemented with the following:

(******)
As shown on the Plans, and as directed by the Engineer, the Contractor shall construct, improve, and maintain a gravel detour road along the Roza Irrigation District canal access road, from Country Club Drive to Santa Roza Drive.

Construction, maintenance, and removal of the canal bank detour road shall consist of the following principal items of work:

1. Remove and salvage approximately 50 linear feet of existing 6’ high chain link fence, located to the east of Country Club Drive on the canal bank detour road. This segment of chain link fence shall be stored in a safe place by the Contractor until Country Club Drive is reopened and the detour road removed, and then it shall be reinstalled. Damaged or lost sections of fencing or posts shall be replaced by the Contractor at no cost.

2. Remove and salvage approximately 100 linear feet of cable guardrail and posts located to the east of Country Club Drive on the canal bank detour road, and the east side of Country Club Drive, just south of the detour road. The cable guardrail and posts shall be stored in a safe place by the Contractor until Country Club Drive is reopened and the detour road removed, and then be reinstalled. Damaged or lost sections of cable guardrail or posts shall be replaced by the Contractor at no cost.

3. Remove approximately 250 S.Y. of lawn grass and soil as necessary to provide a firm driveable detour roadway base. The lawn shall be re-established by hydroseeding with an approved grass mix with fertilizer over 6” of Topsoil- Class C once the detour road is decommissioned.

4. Grade and process to a smooth surface for vehicular travel, approximately 850 linear feet of canal bank roadway for the detour road. A berm shall be re-established along the south canal bank once the detour road is removed.

5. Place approximately 0.25’ of crushed surfacing top course over the width and length of the processed detour road, from County Club Drive to Santa Roza Drive. The total volume of crushed surfacing top course is estimated to be approximately 150 cubic yards (Contractor shall independently verify volume.)

6. The Contractor shall install, maintain, and remove (once the detour road is decommissioned), approximately 850 linear feet of barrier along the north side of the detour road, from Country Club Drive to Santa Roza Drive. The barrier can be either Precast Concrete Barrier Type 2, or Beam Guardrail Type 1, with Beam Guardrail Anchor Type 1 at each end of the guardrail length. The Contractor shall select one of the following three options to accomplish this work:

1. Option No. 1; Precast Concrete Barrier Type 2
If Precast Concrete Barrier Type 2 is used, the Contractor shall supply and place all barrier components, including all necessary equipment, labor and miscellaneous items required to accomplish the work.

All concrete barrier components shall remain the property of the Contractor, and once Country Club Drive is re-opened and the detour road is no longer needed, the Contractor shall remove all barrier components from the project site. The Contractor shall grade the canal bank road to establish a berm along the south side of the Roza Canal, similar to what existed prior to construction.

2. Option No. 2; Beam Guardrail Type 1 – Contractor Supplied

If Beam Guardrail Type 1 – Contractor Supplied is selected, the Contractor shall supply all guardrail components, equipment, and labor to accomplish the work, including beam guardrail, posts, blocks, bolts, and other miscellaneous items as required. The components do not have to be new, but shall be clean, straight, and serviceable to meet new guardrail dimension and strength requirements. All guardrail components shall remain the property of the Contractor, and once Country Club Drive is re-opened and the detour road is no longer needed, the Contractor shall remove all guardrail components from the project site. The Contractor shall also fill all guardrail post holes with soil, and grade the canal bank to establish a berm along the south side of the Roza Canal, similar to what existed prior to construction.

3. Option No. 3; Beam Guardrail Type 1 – County Supplied

Yakima County shall make available to the Contractor at no cost, Beam Guardrail Type 1, wood posts and blocks, adequate to meet the guardrail length requirements. The components are available for pickup from Yakima County Public Services Maintenance Division in Yakima, Washington. Contact Yakima County Maintenance Supervisor Augie Martinez at (509) 574-2330 for pickup arrangements.

The Contractor shall pick up the guardrail components from the County storage yard, haul the components to the site, and install them. The Contractor shall supply all necessary bolts and attachment hardware, and Beam Guardrail Anchor Type 1 at the two end locations.
All guardrail components shall remain the property of Yakima County, and once Country Club Drive is re-opened and the detour road is no longer needed, the Contractor shall remove all guardrail components from the project site, and deliver them back to the Yakima County storage yard. The bolts and attachment hardware shall remain the property of the Contractor. The Contractor shall also fill all guardrail post holes with soil, and grade the canal bank to establish a berm along the south side of the Roza Canal, similar to what existed prior to construction.

The Contractor shall use reasonable care in the handling, installation, and removal of County guardrail components, and will not be assessed a charge for normal wear. Damaged components that are the result of Contractor negligence shall be replaced in kind at no cost to the Contracting Agency.

7. Remove and dispose of approximately 20 linear feet of cement concrete curb and gutter located at the east end of the canal bank detour road at Santa Roza Drive.

8. The Contractor shall maintain the detour road in a clean, serviceable condition, as determined by the Engineer, during the closure of Country Club Drive. This will include grading the detour roadway when required; and adding additional crushed surfacing top course if the roadway becomes rutty, muddy or difficult for vehicles to traverse.

9. There may also be the need to remove snow from the detour road periodically. The Contractor shall have equipment and manpower available at all times, including weekends and holidays, to provide maintenance and snow removal measures.

The Contractor shall be responsible for monitoring weather conditions, and if snow removal appears warranted, he shall contact the Yakima County Public Services Division (at a telephone contact number that will be provided at the preconstruction conference), and inform the County that snow removal appears warranted, so that a County inspector can be available to monitor equipment and manpower use, if desired.

Plowing the snowfall to the side of the detour route will not be allowed. To ensure that snowfall is removed in a timely manner, the Contractor shall provide a contact individual with telephone number, that can be reached 24 hours a day by County personnel.
It is the responsibility of the Contractor to monitor snow removal. However, if Yakima County observes that the snow removal requirement has not been met, and notifies the Contractor that snow removal is necessary, the Contractor shall respond immediately. If the Contractor does not respond within two hours of being notified, Yakima County shall have the option of clearing the snowfall. If County forces, or County hired contractors are required to respond, the Contractor shall be charged damages to offset County personnel and inconvenience. For each time that the County is required to provide snow removal measures, the Contractor shall be assessed damages in the amount of $250.00, which shall be deducted from any moneys due the Contractor under this contract.

*Payment for snow removal by the Contractor will be paid for per force account, per Section 1-09.6 of the Standard Specifications.*

1-07.23(2)A Measurement (New Section)

Section 1-07.23(2)A shall be supplemented with the following:

(*)

No specific measurement shall apply to the lump sum price for “Detour Road - Complete”.

1-07.23(2)B Payment (New Section)

Section 1-07.23(2)A shall be supplemented with the following:

(*)

The contract bid price for “Detour Road - Complete” per lump sum, shall be full pay for constructing, maintaining, and decommissioning the detour road with principal items of work as outlined above, and as detailed in the Plans, except for snow removal by force account, and no further payment shall be made.

1-08 PROSECUTION AND PROGRESS

1-08.3 Progress Schedule

Section 1-08.3 of the Standard Specifications is deleted and replaced with the following:

(*)

Following Contract award and satisfactory provision of execution of all required Contract Documents, the Engineer shall schedule a preconstruction conference at a time mutually agreeable to all concerned.

At this conference several points concerning the Contract Specifications shall be discussed including order and coordination of work, equipment lead time required,
means and methods of construction, inspection and reporting procedures, etc. The Contractor shall satisfy himself that all Contract Provisions and intentions are fully understood.

The Contractor shall prepare and submit to the Engineer at the beginning of the Preconstruction Conference a Construction Progress and Completion Schedule developed by a critical path, bar graph, or similar type method. Items in the Schedule shall be arranged in the order and sequence in which they shall be performed. The Schedule shall conform to the working time and time of completion established under the terms of the Contract and shall be subject to modification by the Engineer. The schedule shall be drawn to a time scale, shown along the base of the diagram, using appropriate measurement per day with weekends and holidays indicated. The contractor shall submit five copies of the progress schedule (total working days) to the engineer at the preconstruction conference.

Because of the possible conflicts with utilities at several locations, the Contractor shall provide adequate advance notice to the Engineer or the Inspector of the date and time and particular project location where he shall be working next. Notice shall be given even if the Contractor perceives that utilities conflicts will not be a problem. The Contractor should be aware that in some cases, a representative of the utility company may want to be on site, so advanced notice is important. The County shall not be responsible for delays caused because of utilities, and time extensions shall not be granted.

The Contractor shall submit, along with the progress schedule, a shift schedule detailing his normal daily working hours, which shall also be made available to the Engineer at the beginning of the preconstruction conference. The Contractor shall restrict his operations to weekday (exclusive of holidays), daylight hours, except for emergencies or as approved by the Engineer. The Engineer shall be notified at least five (5) days prior to any schedule changes.

The Contractor shall submit supplemental progress schedules when requested by the Project Engineer or as required by any provision of the contract. These supplemental schedules shall reflect any changes in the proposed order of the work, any construction delays, or other conditions that may affect the progress of the work. The Contractor shall provided the Project Engineer with the supplemental progress schedules within ten calendar days of receiving notice of the request.

1-08.5 Time For Completion

Section 1-08.5 is supplemented with the following:

This project shall be physically completed within ***45*** working days.

The length of road closure shall be kept to a minimum and all work shall be performed under the closure. Therefore, the Contractor shall not install the road closure signing and close the road until approved by the Engineer. The closure date
will be dependent upon the date that the bridge girders can be delivered to the site, and HMA pavement is available.

If Country Club Drive remains closed more than 45 working days, the Contractor shall be assessed $250.00 per day, starting on contract working day 46 and continuing until the road is re-opened. This assessed amount is to cover the additional costs incurred by the County for inspection, etc. and shall be deducted from any monies due the Contractor. This amount is in addition to any liquidated damaged assessed per Section 1-08.9.

1-10 TEMPORARY TRAFFIC CONTROL

1-10.2 Traffic Control Management

1-10.2(1) General

(August 2, 2004)
Section 1-10.2(1) is supplemented with the following:

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

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

Evergreen Safety Council
401 Pontius Ave. N.
Seattle, WA 98109
1-800-521-0778 or (206) 382-4090

1-10.4 Measurement

Section 1-10.4 is supplemented with the following:

(*****)
No unit of measurement will apply to the position of traffic control supervisor and it will be considered incidental to the Bid Item “Project Temporary Traffic Control” per Lump Sum.

(August 2, 2004)
Section 1-10.4(1) is supplemented with the following:

(*****)
The proposal contains the item “Project Temporary Traffic Control,” lump sum. The provisions of Section 1-10.4(1) shall apply.
1-10.5 Payment

(*****)
Section 1-10.5 of the Standard Specifications is deleted and replaced by the following:

No specific unit of measurement shall apply to the lump sum contract item “Project Temporary Traffic Control”. The Contractor shall include all costs for providing traffic control labor and signing for the road closure and detour road and other work to complete the project per the Bid Item “Project Temporary Traffic Control.”

Payment for Traffic Control shall be included in the Bid Item “Project Temporary Traffic Control”, per lump sum, and shall be full compensation for furnishing, hauling, installing, maintaining, and removing all detour road signing and all traffic control labor as required, and as directed by the Engineer, and no further payment shall be made.

Progress payment for the Bid Item “Project Temporary Traffic Control” per lump sum, shall be made as follows:

1. When Country Club Drive is closed and the detour is opened, 40 percent of the Bid Item amount shall be paid.
2. Payment for the remaining 60 percent of the Bid Item amount will be paid on a prorated basis in accordance with the total job progress as determined by progress payments.

The Contractor is alerted to Section 1-08.5 of these Special Provisions regarding potential assessments if Country Club Drive is not opened in a timely manner.

1-99 APWA SUPPLEMENT

(*****)
Division 1-99 APWA Supplement will apply for this contract.

1-08.0(2) HOURS OF WORK (APWA ONLY)

Section 1-08.0(2) “HOURS OF WORK (APWA ONLY) is supplemented with the following:

(*****)
The last paragraph of this section is deleted for this project.

1-08.0(3) REIMBURSEMENT FOR OVERTIME WORK OF CONTRACTING EMPLOYEES (NON-FEDERAL AID PROJECTS ONLY) (APWA ONLY)
Section 1-08.0(3) of Division 1-99 APWA Supplement (APWA ONLY) is deleted for this contract.

DIVISION 2
EARTHWORK

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. 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:

(******)
No chipping will be allowed on this project.

2-01.5 Payment
Section 2-01.5 is revised as follows:

(******)
There shall be no payment for roadside cleanup. Any 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.

2-02 REMOVAL OF STRUCTURES AND OBSTRUCTIONS
2-02.1 Description
Section 2-02.1 is supplemented with the following:

(******)
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
Specifications:

1. Remove and dispose of existing 3 inch and 4 inch diameter
irrigation lines on and adjacent to the existing bridge scheduled to
be replaced by the new 6” DI irrigation line.

2. All other items encountered, which are not covered by Section 2-
01 of the Standard Specification (Clearing and Grubbing) shall be
considered incidental to the bid item “Removal of Structures and
Obstructions”.

2-02.3(2) Removal of Bridges, Box Culverts, and other Drainage Structures

(******)
(June 26, 2000)
The Contractor shall remove existing Bridge *** Country Club Drive Bridge No.
163 *** after routing traffic onto *** Canal Bank Road *** detour route.

(******)
(June 26, 2000)
Bridge Demolition Plan
The contractor shall submit a bridge demolition plan with working drawings and
calculations to the Engineer for approval in accordance with Section 6-01.9,
showing the method of removing the existing bridges(s), or portions of bridges, as
specified.

The bridge demolition plan shall show support bents, bracing, guys, lifting
devices, lifting attachments, the sequence of demolition and removal, the type of
equipment to be used in all demolition and removal operations, the location of
cranes and barges, the location of support or lifting points, and the weights of
structure parts being removed. The plan shall include a crane stability analysis
and crane load calculations based on the controlling crane picks of the
Contractor’s plan. The plan shall detail the containment, collection, and disposal
of all debris. The plan shall show all stages of demolition.

The Contractor shall not begin removal operations until receiving the Engineer’s
approval of the bridge demolition plan.

(******)
(June 26, 2000)
Explosives shall not be used in the demolition.
2-02.3 Construction Requirements
Section 2-02.3 is supplemented with the following:

(******)
Section 2-02.3 paragraph four is deleted and replaced by the following:

No waste site has been provided for the disposal of removed material. All material to
be removed from the project shall become the property of the Contractor and shall be
removed from the site or otherwise disposed of as approved by the Engineer. The
Contractor shall provide his own waste site for excess excavation, debris, etc., and
all costs involved shall be considered incidental to the other bid items, and no further
payment will be made. Written permission (If Contractor uses private waste sites)
shall be provided to the County from property owners of any waste site prior to its
use.

2-02.5 Payment
Section 2-02.5 is supplemented with the following:

(******)
The contract bid price for “Removal of Structure and Obstruction” per lump sum,
shall include all work described above in Section 2-02. If curbs, gutters, or
pavements lie within an excavation area, their removal will be paid for as part of
the bid item “Roadway Excavation Including Haul” per lump sum.

(******)
“Removal of Existing Bridge No. 163” per lump sum.

(January 7, 2002)
Requirements for Closing Bridge to Traffic Prior to Beginning Removal
The Contractor shall not close the existing bridge to traffic, and shall not begin bridge
removal operations, until the following conditions are met:

1. The Contractor has received the engineer’s approval of the bridge demolition
plan.
2. The Contractor has sufficient material on hand to complete bridge removal
and bridge construction operations in the least possible time.
3. The Contractor shall furnish a report on the status of material delivery to the
engineer. The report shall specify the materials already available at the site,
the materials yet to arrive at the site, and the scheduled delivery dates of the
materials yet to arrive at the site.
4. The Contractor has received the Engineer’s approval to proceed.
5. The canal bank detour road has been constructed and is ready for operation, as
detailed in Section 1-07.23(2) of these Special Provisions.
2-03 ROADWAY EXCAVATION AND EMBANKMENT

2-03.1 Description

Section 2-03.1 is supplemented with the following:

(*****)

Any material hauled from the project will be subject to the requirements of the Yakima County Excavation and Grading Ordinance. All costs incurred by the Contractor to obtain a Grading Permit shall be included in the various Unit Bid Prices, and no further Payment shall be made.

The Yakima County Excavation and Grading Ordinance may be reviewed in the County Engineer's Office, 4th Floor, Yakima County Courthouse.

2-03.3 Construction Requirements

2-03.3(7) Disposal Of Surplus Material

2-03.3(7)A General

Section 2-03.3(7)A of the Standard Specifications is supplemented with the following:

(*****)

Yakima County is not providing a waste disposal site for this project. Therefore, the Contractor shall make arrangements, at his own expense, for the disposal of excess waste materials and shall protect the Contracting Agency from all damages that may arise from the waste disposal operations.

2-03.3(14) Embankment Construction

2-03.3(14)C Compacting Earth Embankments

Section 2-03.3(14)C is supplemented with the following:

(*****)

Compaction of embankments and excavations shall be by Method “C” as specified under Section 2-03.3(14)C.

2-03.4 Measurement

Section 2-03.4 is supplemented with the following:

(March 13, 1995)

Only one determination of the original ground elevation will be made on this project. Measurement for roadway excavation and embankment will be based on the original ground elevations recorded previous to the award of this contract. Control stakes
will be set during construction to provide the Contractor with all essential information for the construction of excavation and embankments.

If discrepancies are discovered in the ground elevations which will materially affect the quantities of earthwork, the original computations of earthwork quantities will be adjusted accordingly.

Earthwork quantities will be computed, either manually or by means of electronic data processing equipment, by use of the average end area method or by the finite element analysis method utilizing digital terrain modeling techniques.

Copies of the ground cross-section notes will be available for the bidder's inspection, before the opening of bids, at the Project Engineer's office and at the Region office. Upon award of the contract, copies of the original ground cross-sections will be furnished to the successful bidder on request to the Project Engineer.

2-03.5 Payment
Section 2-03.5 is supplemented with the following:

Section 2-03.5 of the Standard Specifications is deleted and replaced with the following:

(******)
The Contract Unit Price for "Roadway Excavation Including 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.

(******)
The item for “Embankment Compaction”, per cubic yard from Section 2-03.5 shall be deleted and replaced with the following:

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 Including Haul”.

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.

2-09 STRUCTURE EXCAVATION

2-09.4 Measurement

Section 2-09.4 of the Standard Specification shall be supplemented with the following:

(******)
Structure Excavation Class B shall not be measured for payment.

2-09.5 Payment

Section 2-09.5 of the Standard Specification shall be supplemented with the following:

(******)
There shall be no separate payment for Structure Excavation Class B. All costs associated with excavation, backfill and compaction of new culvert or pipe trenches shall be included in the lineal foot price of the pipe.

DIVISION 4
BASES

4-04 BALLAST AND CRUSHED SURFACING

4-04.2 Materials

Section 4-04.2 is supplemented with the following:

(******) For bidding purposes, the Contractor shall assume that recycled materials will not be accepted for crushed surfacing. Once a contract has been awarded, the Contractor may propose recycled materials as an alternative, subject to review
and testing by the Engineer. Further, the use of recycled materials, if accepted as
an alternative, will be subject to a mutually agreeable cost adjustment.

DIVISION 5
SURFACE TREATMENTS AND PAVEMENTS

SECTION 5-04, HOT MIX ASPHALT

5-04.1 Description

Section 5-04.1 is supplemented with the following:

(**)&

The approach road segments, including placement of surfacing and HMA shall be
completed while the road closure is in place.

Construction Requirements

5-04.3(8) Mixing

5-04.3(8)A Acceptance Sampling and Testing

Section 5-04.3(8)A of the Standard Specifications shall be deleted.

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.

5-04.3(15) HMA Road Approaches

Section 5-04.3(15) is supplemented with the following:

*****

Where asphalt driveways are shown on the plans, asphalt driveways (road
approaches) shall be constructed with 0.40 foot (compacted depth) of crushed
surfacing and 0.20 foot (compacted depth) of Hot Mix Asphalt (HMA) for
Approach. The portion of the driveways not paved with asphalt shall be surfaced
with 0.30 foot (compacted depth) crushed surfacing top course.

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 in kind 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

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, “Crushed Surfacing Base Course” per Ton, and
"Roadway Excavation Including 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, "Crushed Surfacing Base Course" per Ton, and "Roadway Excavation Including 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 6
STRUCTURES

6-01 GENERAL REQUIREMENTS FOR STRUCTURES

6-01.2 Foundation Data

Section 6-01.2 is supplemented with the following:

(June 26, 2000)
The attached log of test boring pages are reproductions of the original Log of Test Boring for the test holes shown in the Plans.

The Contractor should review the geotechnical recommendations report prepared for this project. Copies of the geotechnical report are available for review by prospective bidders at the location specified in Section 1-02.4 as supplemented in these Special Provisions.

6-01.10 Utilities Supported by or Attached to Bridges

(******)
The following subsection is added to Section 6-01.10:
6-01.10(A) Blockouts, Inserts, and Hanger Assemblies for Utilities

Description

Provisions for a new 6” DI irrigation water line and existing gas line shall be installed and supported on the Country Club Drive Bridge No. 163 as shown in the Plans. Structural supports in the form of inserts in the bridge deck slab (precast concrete deck bulb tee girders), hanger rods and nuts as shown on the Plans shall be furnished and installed on the bridge.

Materials

Inserts shall be of the type and model specified in the Plans. Inserts shall be galvanized in accordance with AASHTO M 111.

Hanger rods, and associated nuts and washers, shall conform to Section 9-06.5(1), and shall be galvanized in accordance with AASHTO M 111.

Steel shapes and plates shall conform to ASTM A 36 and shall be galvanized in accordance with AASHTO M 111.

Construction Requirements
The Contractor shall furnish and install inserts for the bridge utility supports, and the utility pipe or conduit pipe, as shown in the Plans. The Contractor shall verify that the hanger rods freely hang plumb in their inserts, and shall make adjustments to the inserts as necessary and as approved by Engineer.

Measurement and Payment
All costs associated with providing and installing utility supports on and through the new bridge structure shall be included in the Bid Item “Superstructure – Country Club Drive Bridge Bridge No. 163”, per lump sum.

6-02 CONCREATE STRUCTURES

6-02.2 Materials

(December 2, 2002)
Epoxy Bonding Agent For Surfaces And For Steel Reinforcing Bar Dowels
Epoxy bonding agent for surfaces shall be Type II, as specified in Section 9-26.1. Epoxy bonding agent for steel reinforcing bar dowels shall be either Type I or Type IV, as specified in Section 9-26.1. The grade and class of epoxy bonding agent shall be as recommended by the resin manufacturer and approved by the Engineer.

Section 6-02.2 is supplemented with the following:
Bridge Supported Utilities

(June 26, 2000)
Inserts shall be of the type and model specified in the Plans. Inserts shall be galvanized in accordance with AASHTO M 111.

(June 26, 2000)
Pipe rolls or pipe saddles shall be of the type and model specified in the Plans.

6-02.2 Construction Requirements

6-02.3(2)A Contractor Mix Design

Section 6-02.3(2)A of the Standard Specifications shall be amended as follows:
The first sentence of the first paragraph of Section 6-02.3(2)A is revised to read as follows:

(******)
The Contractor shall provide a mix design in writing for all classes of concrete.

6-02.3(2)B Commercial Concrete

Section 6-02.3(2)B of the Standard Specifications shall be amended as follows:

(******)
The third sentence of the first paragraph is deleted and replaced with the following:

Commercial concrete requires plant approval, mix design, source approvals for cement, aggregate, and other admixtures.

(******)
In the first sentence of the second paragraph, the terms “luminaire bases, sidewalks, curbs, and gutters,” shall be deleted.

6-02.3(4) Ready-Mix Concrete

Section 6-02.3(4) of the Standard Specifications shall be amended as follows:

(******)
The first sentence of Section 6-02.3(4) is revised to read as follows:

All concrete, including commercial concrete and lean concrete, shall be batched in a prequalified manual, semi-automatic, or automatic plant as described in Section 6-02.3(4)A.
6-02.3(4)B Jobsite Mixing

Section 6-02.3(4)B of the Standard Specifications shall be amended as follows:

(******)
The first sentence of Section 6-02.3(4) is revised to read as follows:

For small quantities of concrete, less than ½ cubic yard, the Contractor may mix concrete on the job site, provided the Contractor has requested in writing and received written permission from the Engineer.

6-02.3(5) Acceptance of Concrete

6-02.3(5)A General

The first sentence of Section 6-02.3(5)A is hereby deleted and replaced with the following:

(******)
Lean concrete will be accepted based on a Certificate of Compliance to be provided by the Supplier as described in Section 6-02.3(5)B.

6-02.3(6)A Weather and Temperature Limits to Protect Concrete.

Section 6-02.3(6)A of the Standard Specifications is supplemented with the following:

COLD WEATHER PROTECTION

The first sentence is deleted and replaced with the following:

(******)
The construction schedule necessitates placement of concrete during months when cold weather will be expected. The Contractor shall provide a written procedure for cold weather concreting at the pre-construction conference, for review and approval by the Engineer.

The first sentence of the second paragraph is deleted and replaced with the following:

The Contractor shall provide and maintain a recording thermometer at the project site.

6-02.4 Measurement

(******)

(June 26, 2000)
*** Superstructure – Country Club Drive Bridge No. 163 *** contains the following approximate quantities of materials and work:

- WSDOT W53DG Prestressed Concrete Deck Bulb Tee Girders.......... 551 L.F.
- St. Reinf. Bar........................................................................ 3,603 LB.
- Cement Concrete Class 4000.................................................. 30 C.Y.
- Galvanized Angle Iron Nosing................................................. 70 L.F.
- Elastomeric Bearing Pads (Girder)............................................. 12 Each
- Elastomeric Bearing Pads (Girder Stop)................................. 24 Each
- Compression Seal.................................................................. 20 L.F.

The quantities are listed only for the convenience of the Contractor in determining the volume of work involved and are not guaranteed to be accurate. Prospective bidders shall verify these quantities before submitting a bid. No adjustments other than for approved changes will be made in the lump sum contract price for *** Superstructure – Country Club Drive Bridge No. 163 ***, even though the actual quantities required may deviate from those listed.

(******)
Section 6-02.4 is supplemented with the following:

Bridge Railing Type BP, and Traffic Barrier on the bridge shall be paid for by separate bid items, and shall not be included in the quantities for *** Superstructure – Country Club Drive Bridge No. 163 ***.

**6-02.5 Payment**
Section 6-02.5 is supplemented with the following:

(******)
For purpose of payment, such bridge items as expanded polystyrene, concrete inserts, premolded joint filler, polyurethane joint sealer, elastomeric expansion joint seal, utility hangers and inserts, blockout sleeves, silicone sealants, grout, welding, etc., for which there is no pay item included in the proposal, are considered as bridge minor items. All costs in connection with providing these bridge minor items as shown in the Plans and as specified shall be included in the lump sum contract price for “Superstructure – Country Club Drive Bridge No. 163”.

All costs for admixtures and additions to strengthen concrete, and for furnishing and producing the formed surfaces as specified shall be included in the unit contract price per cubic yard for the various classes of concrete involved. If the concrete is to be paid for other than by class of concrete, all costs for furnishing and applying these items as specified shall be included in the unit contract price for the applicable item(s) of work.
No additional compensation will be made by reason of any delay or other expense to the Contractor caused by coordination with the utility companies or by installing utility company furnished items. However, any unavoidable delays to the Contractor caused by coordination with the utility company or resulting from installing utility company furnished items will be adjusted in accordance with Section 1-08.8.

DIVISION 8
MISCELLANEOUS CONSTRUCTION

8-01 EROSION CONTROL AND WATER POLLUTION CONTROL

8-01.1 Description

(* * * * *)

Section 8-01.1 is supplemented with the following:

This work shall include, but not be limited to, inlet protection, silt fence, straw bale, and other measures needed to protect the disturbed areas and control pollution, erosion, run-off, and related damage, as shown on plans or as directed by the Engineer.

8-03 IRRIGATION SYSTEMS

8-03.1 Description

Section 8-03.1 is supplemented with the following:

(* * * * *)

As part of this project, the Contractor shall replace the existing irrigation lines with a new 6 In. Diam. Ductile Iron Class 52 irrigation line to the limits shown in the plans. The installation shall include all necessary appurtenances for a complete job, including approved valve box(es) with drain valve(s), valves, bends, sleeves, spools, thrust blocks, hanging the new irrigation line on the new bridge, and connecting it to the existing irrigation lines as detailed on Sheet 3 of the Plans. The irrigation line components shall meet the requirements for Section 7-09 of the Standard Specifications.

The proposed new 6 In. Diam. DI Class 52 irrigation line must be installed, tested, and fully operational by March 15, 2006. In the event the permanent new 6 In. Diam. DI irrigation pipeline cannot be installed and operational by March 15, 2006, due to timing of girder placement and/or diaphragm construction, then the Contractor shall install and maintain an approved temporary irrigation pipeline system until the permanent irrigation pipeline system has been installed and is operational. The temporary irrigation line can be of material selected by the
Contractor, but must provide a minimum diameter of 4 inches, and be rated for 100 p.s.i. operating pressure. This temporary irrigation pipeline shall be referred to by the Bid Item “Temporary Irrigation Pipeline – Complete.”

The temporary irrigation pipeline shall cross the Roza Canal on an approved temporary support structure between the new bridge abutments or on a separate independent structure crossing the canal at an elevation above the concrete canal liner. The Contractor shall propose a method of support, and it shall be reviewed by the Engineer prior to installation. In the event the proposed temporary support structure is not attached to or supported by the new bridge abutments, then a permit may be required from Roza Irrigation District. If a permit is required, the Contractor shall work through the Engineer, who will assist in obtaining the required permits.

The temporary irrigation pipeline shall be connected to the existing irrigation lines at or near the termini shown on Plan Sheet 3 for the permanent irrigation pipeline. The temporary pipeline may rest on top of the ground, if freezing temperatures are not a consideration.

8-03.4 Measurement
Section 8-03.4 is supplemented with the following:

(*****)
No specific measurement shall apply to the lump sum price for “Irrigation System – Complete” and “Temporary Irrigation System – Complete”.

8-03.5 Payment
Section 8-03.5 is supplemented with the following:

(*****)
The contract bid price for “Irrigation System - Complete” per lump sum, shall be full pay for all piping, valves, fittings, labor, tools, irrigation system equipment and components, attachment to the existing irrigation system, and all other miscellaneous items required for a complete installation as detailed in the Plans, including but not limited to, trench excavation, pipe bedding, backfilling, testing, and flushing.

In the event that a temporary irrigation line is required, it shall be paid for by the bid item “Temporary Irrigation System – Complete”, per lump sum, and shall include all costs to install and maintain a temporary irrigation line from March 15, 2006 until the permanent irrigation system has been installed and is operational. The lump sum price shall include supplying and installing the temporary irrigation line, including all necessary valves, bends, temporary connections, canal support structure(s), permits, and all other miscellaneous items required for a complete temporary installation, and no further payment shall be made.
Timing and coordination of the transition and cutover from the temporary irrigation system to the permanent irrigation system shall be coordinated with the Engineer, so that users can be notified, and no further payment shall be made.

DIVISION 9
MATERIALS

9-28 SIGNING MATERIALS AND FABRICATION

9-28.8 Sheet Aluminum Signs

The second paragraph of Section 9-28.8 is supplemented with the following:

******
All sheet thickness over 36 inches shall be 0.125 inch.

9-33 CONSTRUCTION GEOTEXTILE

9-33.2 Geotextile Properties

Section 9-33.2 shall be supplemented with the following:

******
Construction Geotextile for Separation shall meet the requirements for Geotextile for Separation as listed in Table 3.

APPENDICES

July 12, 1999

The following appendices are attached and made a part of this contract:

******
APPENDIX A: Geotechnical Information, including Log of Test Borings.
APPENDIX B: Existing Bridge Data.

STANDARD PLANS

April 4, 2005

The State of Washington Standard Plans for Road, Bridge and Municipal Construction M21-01 transmitted under Publications Transmittal No. PT 05-012, effective April 4, 2005 is made a part of this contract.
The Standard Plans are revised as follows:

**All Standard Plans**

All references in the Standard Plans to "Asphalt Concrete Pavement" shall be revised to read "Hot Mix Asphalt".

All references in the Standard Plans to the abbreviation "ACP" shall be revised to read "HMA".

**C-1 Sheet 2**

The SNOW LOAD RAIL WASHER dimensions are revised to 1 3/4" from 2", and to 7/8" from 1".

**C-11b Sheets 1 and 2**

In the PRECAST FOOTING, ELEVATION view (Sheet 1) and in the CAST-IN-PLACE FOOTING, ELEVATION view (Sheet 2), COMMERCIAL CONCRETE is revised to CONCRETE CLASS 4000.

In the BREAKAWAY ANCHOR ANGLE, ELEVATION view (Sheet 2), the welding symbols are revised to indicate that the 1/4" Inside Gussets have 1/4" fillet weld joints, and the 1/2" End Gussets have 1/2" fillet weld joints.

**C-14f**

In SECTION "A", the reference to SEE STD. PLAN C-14b is revised to SEE STD. PLAN C-14c.

**C-14g**

In SECTION "A" and SECTION "B", the reference to SEE STD. PLAN C-14b is revised to SEE STD. PLAN C-14e.

**D-2k Sheet 2**

In the "BAR B" detail, all references to "button head" are revised to read "cone head".

**D-2n Sheet 2**

In DETAIL A, the specification for 1/4" Anchor bolt is revised to 1 1/4" Anchor bolt.

In the BASE PLATE DETAIL the reference to AASHTO M 183 is revised to ASTM A 36.

In the "BAR B" detail, all references to "button head" are revised to read "cone head".

**K-1 through K-27**

These plans shall not be used on projects administered by WSDOT.

The following are the Standard Plan numbers applicable at the time this project was advertised. The date shown with each plan is the publication approval date shown in the lower right-hand corner of that plan. Standard Plans not having this date shall not be used in this contract.

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COUNTRY CLUB DRIVE BRIDGE NO. 163 REPLACEMENT
C 3160

Special Provisions
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<td>F-2c</td>
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<tr>
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<td>12/17/02</td>
<td>F-2d</td>
</tr>
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</tr>
<tr>
<td>45</td>
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COUNTRY CLUB DRIVE BRIDGE NO. 163 REPLACEMENT
C 3160

Special Provisions
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<td>M-17.10-00........3/04/05</td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX A
(GEOTECHNICAL INFORMATION)
Approx. Scale: 1" = 1/2 mile
Legend:

- BH-1  Approximate Location of Borings

Note: Base map provided by Otak.

Country Club Drive Bridge Replacement Project
Yakima County, Washington

SITE AND EXPLORATION PLAN

PanGEO INCORPORATED

PROJECT NO. 05-010
FIGURE NO. 2
### RELATIVE DENSITY / CONSISTENCY

<table>
<thead>
<tr>
<th>Density</th>
<th>SPT N-Values</th>
<th>Approx. Relative Density (%)</th>
<th>Consistency</th>
<th>SPT N-Values</th>
<th>Approx. Undrained Shear Strength (psf)</th>
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<tr>
<td>Very Loose</td>
<td>&lt;4</td>
<td>&lt;15</td>
<td>Very Soft</td>
<td>&lt;2</td>
<td>&lt;250</td>
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<tr>
<td>Loose</td>
<td>4 to 10</td>
<td>15 - 35</td>
<td>Soft</td>
<td>2 to 4</td>
<td>250 - 500</td>
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<tr>
<td>Med. Dense</td>
<td>10 to 30</td>
<td>35 - 65</td>
<td>Med. Stiff</td>
<td>4 to 8</td>
<td>500 - 1000</td>
</tr>
<tr>
<td>Dense</td>
<td>33 to 50</td>
<td>65 - 85</td>
<td>Stiff</td>
<td>8 to 15</td>
<td>1000 - 2000</td>
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<tr>
<td>Very Dense</td>
<td>&gt;50</td>
<td>85 - 100</td>
<td>Very Stiff</td>
<td>15 to 30</td>
<td>2000 - 4000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Hard</td>
<td>&gt;30</td>
<td>&gt;4000</td>
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</table>

### UNIFIED SOIL CLASSIFICATION SYSTEM

**MAJOR DIVISIONS**
- Gravel: 50% or more of the coarse fraction retained on the 0.060 mm sieve. Use dual symbols (e.g. GP-GM) for 5% to 12% fines.
- Sand: 50% or more of the coarse fraction passing the 0.060 mm sieve. Use dual symbols (e.g. SP-SM) for 5% to 12% fines.
- Silt and Clay: 50% or more passing the No. 200 sieve.

**GROUP DESCRIPTIONS**

- **GW:** Well-graded GRAVEL
- **GM:** Silty GRAVEL
- **GC:** Clayey GRAVEL
- **SW:** Well-graded SAND
- **SP:** Poorly-graded SAND
- **SM:** Silty SAND
- **SC:** Clayey SAND
- **CL:** Lean Silt
- **OL:** Organic Silt or CLAY
- **MH:** Elastic Silt
- **OH:** Organic Silt or CLAY
- **PT:** Peat

**HIGHLY ORGANIC SOILS**

**NOTES:**
1. Soil exploration logs contain material descriptions based on visual observation and field tests using a system modified from the Unified Soil Classification System (USCS). Where necessary laboratory tests have been conducted (as noted in the "Other Tests" column), unit descriptions may include a classification. Please refer to the discussions in the report text for a more complete description of the subsurface conditions.
2. The graphic symbols given above are not inclusive of all symbols that may appear on the borehole logs. Other symbols may be used where field observations indicated mixed soil conditions or dual constituent materials.

### DESCRIPTIONS OF SOIL STRUCTURES

- **Layered:** Units of material distinguished by color and/or composition from material units above and below.
- **Laminated:** Layers of soil typically 0.05 to 1 mm thick, max. 1 cm thick.
- **Lens:** Layer of soil that pinches out laterally.
- **Interlayered:** Alternating layers of differing soil material.
- **Pocket:** Erratic, discontinuous deposits of limited extent.
- **Homogeneous:** Soil with uniform color and composition throughout.

- **Fissured:** Breaks along defined planes.
- **Slickenfied:** Fracture planes that are polished or glossy.
- **Blocky:** Angular soil lumps that resist breakdown.
- **Disrupted:** Soil that is broken and mixed.
- **Scattered:** Less than one per foot.
- **Numerous:** More than one per foot.
- **BCN:** Angle between bedding plane and a plane normal to core axis.

### COMPONENT DEFINITIONS

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<th>COMPONENT</th>
<th>SIZE / SIEVE RANGE</th>
<th>COMPONENT</th>
<th>SIZE / SIEVE RANGE</th>
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</thead>
<tbody>
<tr>
<td>Boulder</td>
<td>&gt; 12 inches</td>
<td>Sand</td>
<td>#4 to #10 sieve (4.5 to 2.0 mm)</td>
</tr>
<tr>
<td>Cobble</td>
<td>3 to 12 inches</td>
<td>Coarse Sand</td>
<td>#10 to #40 sieve (2.0 to 0.42 mm)</td>
</tr>
<tr>
<td>Gravel</td>
<td>3 to 3/4 inches</td>
<td>Medium Sand</td>
<td>#40 to #200 sieve (0.42 to 0.074 mm)</td>
</tr>
<tr>
<td>Coarse Gravel</td>
<td>3/4 inches to #4 sieve</td>
<td>Fine Sand</td>
<td>0.074 to 0.002 mm</td>
</tr>
</tbody>
</table>
| Fine Gravel | 3/4 inches to #4 sieve | Silt | <0.002 mm

### TEST SYMBOLS

- **CBR:** California Bearing Ratio
- **Comp:** Compaction Tests
- **Con:** Consolidation
- **DD:** Dry Density
- **DS:** Direct Shear
- **%F:** Fines Content
- **GS:** Grain Size
- **Perm:** Permeability
- **PP:** Pocket Penetrometer
- **R:** R-value
- **SG:** Specific Gravity
- **TV:** Torvane
- **TXC:** Triaxial Compression
- **UCC:** Unconfined Compression

### SYMBOLS

- **2-inch OD Split Spoon, SPT** (140-lb. hammer, 30" drop)
- **3.25-inch OD Split Spoon** (300-lb. hammer, 30" drop)
- **Non-standard penetration test (see boring log for details)**
- **Thin wall (Shelby) tube**
- **Grab**
- **Rock core**
- **Vane Shear**

### MONITORING WELL

- **Groundwater Level:** time ofduration (RTD)
- **Static Groundwater Level**
- **Cement / Concrete Seal**
- ** Bentonite grout / seal**
- **Silica sand backfill**
- **Slotted tip**
- **Slough**
- **Bottom of Boring**

### MOISTURE CONTENT

- **Dry:** Dusty, dry to the touch
- **Mott:** Damp but no visible water
- **Wet:** Visible free water

---

**PanGEO INCORPORATED**

Terms and Symbols for Boring and Test Pit Logs

Figure A-1
LOG OF TEST BORING BH-1

Completion Depth: 5.5 ft
Date Borehole Started: 2/2/05
Date Borehole Completed: 2/2/05
Logged By: TEA
Drilling Company: Bore-Tec

Remarks: Standard Penetration Test (SPT) sampler driven with a 140 lb. safety hammer. Hammer operated with a rope and cathead mechanism.

The stratification lines represent approximate boundaries. The transition may be gradual.
<table>
<thead>
<tr>
<th>Depth (ft)</th>
<th>Sample No.</th>
<th>Sample Type</th>
<th>Blows / 6 in.</th>
<th>Other Tests</th>
<th>Symbol</th>
<th>Material Description</th>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>S1</td>
<td></td>
<td>7</td>
<td></td>
<td></td>
<td>Medium dense tan SILT with gravel, dry to moist, weathered with horizontal bedding.</td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td>13</td>
<td></td>
<td></td>
<td>Bottom of boring at 6.5 feet. Drilling action indicated coarse gravel and cobbles. Refusal.</td>
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<tr>
<td>15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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Completion Depth: 6.5 ft  
Date Borehole Started: 2/2/05  
Date Borehole Completed: 2/2/05  
Logged By: TEA  
Drilling Company: Bore-Tec

Remarks: Standard Penetration Test (SPT) sampler driven with a 140 lb. safety hammer. Hammer operated with a rope and cathead mechanism. Groundwater encountered at about 10 feet during drilling.

LOG OF TEST BORING BH-2

Figure A-3

PanGEO INCORPORATED  
Phone: 206.262.0370

The stratification lines represent approximate boundaries. The transition may be gradual.
GEOTECHNICAL CONSIDERATIONS

The following excerpts are from the “Draft Geotechnical Report” for County Club Drive Bridge No. 163 Replacement Project, prepared by PanGEO, Inc., and are presented to provide information about soil conditions at the site. The complete document is available for review by prospective bidders at Yakima County Public Services, 128 N. 2nd Street, 4th Floor County Courthouse, Yakima, Washington 98901. Please contact Mr. Mark Cleaver at (509) 574-2300.

FIELD EXPLORATIONS

The subsurface exploration program consisted of drilling two test borings at each bridge site, one near each abutment location (Figure 2). Field exploration took place on February 2, 2005. The borings were drilled by Bore-Tec, Inc. of Valleyford, Washington, under subcontract to PanGEO. The borings were drilled using hollow stem auger drilling technology. The soils encountered were sampled using conventional Standard Penetration Test (SPT) split spoon samplers. The borings were designated BH-1 and BH-2, and were advanced to depths of 5.5 and 6.5 feet at the south and north abutments, respectively. Both borings met refusal at unexpectedly shallow depths, so a second boring attempt was made at each site. The second attempt confirmed the general nature of the soils. A geotechnical engineer of PanGEO was on site to direct drilling activities and log the test borings.

Appendix A contains summary logs of boreholes and describes the field exploration methodology in greater detail. Logs of the second borings at each site are not presented.

SUBSURFACE CONDITIONS

SOILS

The site soils, as encountered in the test borings, consisted of medium dense tan silt with gravel. This material is most likely of eolian origin (loess), with the gravel becoming mixed in through natural or earthwork grading. Clear outcrops of loess material occur downstream of the subject bridge site, but become less well defined closer to the bridge site. Both borings met refusal abruptly at the contact between the silt with underlying gravel-cobble-boulder material. This material consisted of mainly gravel and cobbles in a silt/sand matrix. The deposit is interpreted as mainstream facies Thorpe Gravel, which has been mapped surrounding the project site (Bentley, et al, 1993). Outcrops of this material in the canal banks show a mixture of lithologies, though basalt is most prevalent. The Thorpe Gravel is reported to be moderately to highly weathered, and generally poorly indurated. Iron oxide and/or caliche may locally cement the materials.

GROUND WATER

Ground water was not encountered in the borings. However, numerous seeps were observed in the canal banks near the project site. Seeps were observed along the contact between the loess bed and the underlying gravels, and from several levels within the gravels. Seepage was especially noted along the top of the concrete lining of the canal.
CONSTRUCTION CONSIDERATIONS

The following items should be considered during the foundation design and development of the contract specifications.

1. Very dense cobble material was encountered in the test borings and observed on the native surfaces surrounding the project area. Some boulders should also be anticipated in the Thorpe Gravel soil. The contract special provisions should alert the contractor to the potential for difficult excavation of the gravel and cobble material, due to iron oxide or caliche cementation. Even shallow excavation may require breaking before removal. Breaking could include using an impact hoe ram.

2. Temporary shoring and/or slopes will be required during construction of the abutment foundations. The design and construction of temporary shoring/slopes should be the responsibility of the contractor. Groundwater inflow may be encountered in footing excavations that extend below the loess-Thorpe Gravel interface. The amount of inflow is not expected to be excessive, and can probably be controlled with sump pumps or similar facilities.
APPENDIX B
(EXISTING BRIDGE DATA)
21’-6”

19’-6”

14.5”

W16x36

W24x76 2.5” ACP

Spans 1 & 3 – Span 2

19’-6”

41’

23’

W27x84 Crossbeam

2 Steel Columns @ 18’-9”

EXELTECH

EXISTING COUNTRY CLUB DRIVE BRIDGE NO. 163
C 3160
# BRIDGE INSPECTION REPORT

**Agency:** Yakima County

**Bridge No.:** 163
**Bridge Name:** COUNTRY CLUB RD. #163
**Structure ID:** 08293100

**Route:** 43350
**MilePost:** 0.06
**Intersecting:** ROZA CANAL
**Location:** 00.06 S TERRACE HTS

## Inspector's Signature

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1. **ORIENTATION:** South to North over Roza Canal. Pier 1 closest to the golf course.
2. **Type 1 (1.29)** Type 2 (1.19) Type 3 (1.33)
3. **Concrete Deck:**
   - DECK: 2” of ACP on concrete deck (ELEMENT 800).
   - SOFFIT: Hairline transverse and longitudinal cracks in bottom of deck. Spalls and delaminations in the overhangs. 3 short sections of rebar exposed in the West overhang due to lack of cover. A couple spalls with exposed rebar in the East overhang.
4. **Concrete Abutment:** Hairline vertical cracks in South abutment, Pier 1, at stringer locations.
5. **Moveable Bearing:** Rollers at the North abutment, Pier 4, are tilted about 10 degrees in the expansion direction - 50 degrees from.
6. **Timber Bridge Railing:** Timber posts and rails are weathered and checked. (w-25-c5) (*Road face has been painted*)
7. **Drains:** Drains are partially plugged with dirt and debris. Supper type drains in the curbs.
8. **Utilities:** West side, 4” and 3” water lines. East side 4” Natural Gas line.
9. **Channel Protection:** Spall in canal lining at column 2A (photo #3) and 3B (photo #4). The canal lining is undermined 5’ between columns 3A and 3B (photo #5). 10-SEP-03 Called Roza Irr. At (509) 837-5141 They will repair void.
10. **Photos:** Roadway Deck and Elevation digital photos taken 3/17/03.
11. **Asphaltic Concrete Overlay:** 2” of ACP on concrete deck, 2” cracked over both abutments. Patch over the North abutment had been placed prior to 3/17/03 to repair reported raveling.
13. **UBIT:** DFM used for 2003 inspection.
14. **LOCAL AGENCY Flagging:** Flaggers provided by Yakima County Public Works. Call Nick Michael (509) - 574 - 2392.

**Priority**

**Repair Description**

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Bridge #163 Country Club

Deck View Looking South

Elevation Looking SouthWest
C 3160; COUNTRY CLUB DRIVE BRIDGE NO. 163
Existing north abutment.
PREVAILING WAGE RATES
Washington State Prevailing Wage Rates For Public Works Contracts

The PREVAILING WAGES listed here include both the hourly wage rate and the hourly rate of fringe benefits. On public works projects, workers' wage and benefit rates must add to not less than this total. A brief description of overtime calculation requirements is provided on the Benefit Code Key.

**YAKIMA COUNTY**
Effective 08-31-05

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<td>LABORERS - UNDERGROUND SEWER &amp; WATER</td>
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<td>BACKHOE, EXCAVATOR, SHOVEL (OVER 3 YD &amp; UNDER 6 YD)</td>
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<td>BACKHOE, EXCAVATOR, SHOVEL (6 YD AND OVER WITH)</td>
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<td>BACKHOES, (75 HP &amp; UNDER)</td>
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<td>BATCH PLANT OPERATOR, CONCRETE</td>
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<td>BOBCAT (SKID STEER)</td>
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<td>BROOMS</td>
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<td>CONCRETE FINISH MACHINE - LASER SCREED</td>
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<tr>
<td>CONCRETE PUMP-TRUCK MOUNT WITH BOOM ATTACHMENT</td>
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<td>CRANES, 19 TONS, WITH ATTACHMENTS</td>
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<td>CRANES, 20 - 44 TONS, WITH ATTACHMENTS</td>
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<td>CRANES, 45 TONS - 99 TONS, UNDER 150 FT OF BOOM (INCLUDING JIB WITH ATTACHMENTS)</td>
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<td>8L</td>
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<tr>
<td>Classification</td>
<td>Prevailing Wage</td>
<td>Time Code</td>
<td>Holiday Code</td>
<td>Note</td>
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<tr>
<td>--------------------------------------------------------------------------------</td>
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<tr>
<td>CRANES, 100 TONS - 199 TONS, OR 150 FT OF BOOM (INCLUDING JIB WITH ATTACHMENTS)</td>
<td>$42.13</td>
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<td>CRANES, 200 TONS TO 300 TONS, OR 250 FT OF BOOM (INCLUDING JIB WITH ATTACHMENTS)</td>
<td>$42.68</td>
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<tr>
<td>CRANES, A-FRAME, 10 TON AND UNDER</td>
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<td>CRANES, A-FRAME, OVER 10 TON</td>
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<td>CRANES, OVER 300 TONS, OR 300' OF BOOM INCLUDING JIB WITH ATTACHMENTS</td>
<td>$43.22</td>
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<td>CRANES, OVERHEAD, BRIDGE TYPE (20 - 44 TONS)</td>
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<td>CRANES, OVERHEAD, BRIDGE TYPE (45 - 99 TONS)</td>
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<td>CRANES, OVERHEAD, BRIDGE TYPE (100 TONS &amp; OVER)</td>
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<td>CRANES, TOWER CRANE UP TO 175' IN HEIGHT, BASE TO BOOM</td>
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<td>CRANES, TOWER CRANE OVER 175' IN HEIGHT, BASE TO BOOM</td>
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<td>1T</td>
<td>5D</td>
<td>8L</td>
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<td>CRUSHERS</td>
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<td>DECK ENGINEER/DECK WINCHES (POWER)</td>
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<td>DERRICK, BUILDING</td>
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<td>DOZERS, D-9 &amp; UNDER</td>
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<td>DRILL OILERS - AUGER TYPE, TRUCK OR CRANE MOUNT</td>
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<td>ELEVATOR AND MANLIFT, PERMANENT AND SHAFT-TYPE</td>
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<td>EQUIPMENT SERVICE ENGINEER (OILER)</td>
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<td>FINISHING MACHINE/BIDWELL GAMACO AND SIMILAR EQUIP</td>
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<td>FORK LIFTS, (3000 LBS AND OVER)</td>
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<td>GRADE ENGINEER</td>
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<td>GRADECHECKER AND STAKEMAN</td>
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<td>HOSTS, OUTSIDE (ELEVATORS AND MANLIFTS), AIR TUGGERS</td>
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<td>HYDRAULIFTS/BOOM TRUCKS (10 TON &amp; UNDER)</td>
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<td>HYDRAULIFTS/BOOM TRUCKS (OVER 10 TON)</td>
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<td>LOADERS, OVERHEAD (6 YD UP TO 8 YD)</td>
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<td>MIXERS, ASPHALT PLANT</td>
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<td>MOTOR PATROL GRADER (FINISHING)</td>
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<td>MUCKING MACHINE, MOLE, TUNNEL DRILL AND/OR SHIELD</td>
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<td>OIL DISTRIBUTORS, BLOWER DISTRIBUTION AND MULCH SEEDING</td>
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<td>OPERATOR</td>
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<td>PAVEMENT BREAKER</td>
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<td>PILEDRIVER (OTHER THAN CRANE MOUNT)</td>
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<td>POWER PLANT</td>
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<td>PUMPS, WATER</td>
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<td>REMOTE CONTROL OPERATOR ON RUBBER TIRED EARTH MOVING EQUIP</td>
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<td>RIGGER AND BELLMAN</td>
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<td>Classification</td>
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<td>Time Code</td>
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<td>ROLLAGON</td>
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<td>SAWS, CONCRETE</td>
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<td>1T</td>
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<td>8L</td>
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<tr>
<td>SCRAPERS - SELF PROPELLED, HARD TAIL END DUMP, ARTICULATING</td>
<td>$41.12</td>
<td>1T</td>
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<tr>
<td>OFF-ROAD EQUIPMENT (UNDER 45 YD)</td>
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<td>SCRAPERS, SELF PROPELLED, HARD TAIL END DUMP, ARTICULATING</td>
<td>$41.59</td>
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<tr>
<td>OFF-ROAD EQUIPMENT (45 YD AND OVER)</td>
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<td>SCRAPOWERS, CONCRETE AND CARRY ALL</td>
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<td>8L</td>
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<td>SCREED MAN</td>
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<td>SHOTCRETE GUNITE</td>
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<td>$41.12</td>
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<td>SUBGRADE TRIMMER</td>
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<td>TOWER BUCKET ELEVATORS</td>
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<td>1T</td>
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<td>TRACTORS, (75 HP &amp; UNDER)</td>
<td>$40.71</td>
<td>1T</td>
<td>5D</td>
<td>8L</td>
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<tr>
<td>TRACTORS, (OVER 75 HP)</td>
<td>$41.12</td>
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<tr>
<td>TRANSFER MATERIAL SERVICE MACHINE</td>
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<td>8L</td>
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<tr>
<td>TRANSPORTERS, ALL TRACK OR TRUCK TYPE</td>
<td>$41.59</td>
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<td>TRENCHING MACHINES</td>
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<td>TRUCK CRANE OILER/DRIVER (UNDER 100 TON)</td>
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<tr>
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<tr>
<td>TRUCK MOUNT PORTABLE CONVEYER</td>
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<td>WHEEL TRACTORS, FARMALL TYPE</td>
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<td>YO YO PAY DOZER</td>
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<td>POWER EQUIPMENT OPERATORS - UNDERGROUND SEWER &amp;</td>
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<tr>
<td>(SEE POWER EQUIPMENT OPERATORS)</td>
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<td>POWER LINE CLEARANCE TREE TRIMMERS</td>
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<td>JOURNEY LEVEL IN CHARGE</td>
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<td>SPRAY PERSON</td>
<td>$32.16</td>
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<td>TREE TRIMMER</td>
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<td>REFRIGERATION &amp; AIR CONDITIONING MECHANICS</td>
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<td>RESIDENTIAL DRYWALL TAPERS JOURNEY LEVEL</td>
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<td>Note Code</td>
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<td>SIGN MAKERS &amp; INSTALLERS (NON-ELECTRICAL) JOURNEY LEVEL</td>
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<td>SOFT FLOOR LAYERS JOURNEY LEVEL</td>
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<td>SURVEYORS CHAIN PERSON</td>
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<td>INSTRUMENT PERSON</td>
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<td>PARTY CHIEF</td>
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<td>HOLE DIGGER/GROUND PERSON</td>
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<td>JOURNEY LEVEL TELEPHONE LINEPERSON</td>
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<tr>
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<td>TELEVISION SYSTEM TECHNICIAN</td>
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<td>TELEVISION TECHNICIAN</td>
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<td>TREE TRIMMER</td>
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<tr>
<td>TERRAZZO WORKERS &amp; TILE SETTERS JOURNEY LEVEL</td>
<td>$26.51</td>
<td>M</td>
<td>5A</td>
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<td>TILE, MARBLE &amp; TERRAZZO FINISHERS FINISHER</td>
<td>$22.71</td>
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<td>TRAFFIC CONTROL STRIPERS JOURNEY LEVEL</td>
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<td>Classification</td>
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<tr>
<td>TRUCK DRIVERS</td>
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<td>ASPHALT MIX</td>
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<td>61</td>
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<tr>
<td>DUMP TRUCK &amp; TRAILER</td>
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<td>61</td>
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<tr>
<td>OTHER TRUCKS</td>
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<td>3</td>
<td>61</td>
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<td>TRANSIT MIXER</td>
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<td>WELL DRILLERS &amp; IRRIGATION PUMP INSTALLERS</td>
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<td>IRRIGATION PUMP INSTALLER</td>
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<td>OILER</td>
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<td>WELL DRILLER</td>
<td>$17.68</td>
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OVERTIME CODES

OVERTIME CALCULATIONS ARE BASED ON THE HOURLY RATE ACTUALLY PAID TO THE WORKER. ON PUBLIC WORKS PROJECTS, THE HOURLY RATE MUST BE NOT LESS THAN THE PREVAILING RATE OF WAGE MINUS THE HOURLY RATE OF THE COST OF FRINGE BENEFITS ACTUALLY PROVIDED FOR THE WORKER.

1. ALL HOURS WORKED IN EXCESS OF EIGHT (8) HOURS PER DAY OR FORTY (40) HOURS PER WEEK SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE.

A. ALL HOURS WORKED ON SATURDAYS, SUNDAYS AND HOLIDAYS SHALL ALSO 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 WORKED 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. THE FIRST TWO (2) HOURS AFTER EIGHT (8) REGULAR HOURS MONDAY THROUGH FRIDAY AND ALL HOURS ON SATURDAY SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE. ALL OTHER OVERTIME HOURS OVER TEN (10) HOURS ON 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 SHALL BE PAID AT DOUBLE THE HOURLY RATE OF WAGE. MONDAY THROUGH FRIDAY, SUNDAYS AND HOLIDAYS SHALL BE PAID AT DOUBLE THE HOURLY RATE OF WAGE.

J. 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.

K. 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.

L. 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.

M. 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.

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. 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) 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.
1. 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 ALLOHOURS 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 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.

T. ALL HOURS WORKED ON SATURDAYS, EXCEPT MAKE-UP DAYS, SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE. ALL HOURS WORKED AFTER 6:00PM SATURDAY TO 6:00AM MONDAY AND ON HOLIDAYS 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 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.

2. ALL HOURS WORKED IN EXCESS OF EIGHT (8) HOURS PER DAY OR FORTY (40) HOURS PER WEEK SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE.

A. THE FIRST SIX (6) HOURS ON SATURDAY SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE. ALL HOURS WORKED IN EXCESS OF SIX (6) HOURS ON SATURDAY AND ALL HOURS WORKED ON SUNDAYS AND HOLIDAYS SHALL BE PAID AT TWO 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.

D. ALL HOURS WORKED ON SATURDAYS AND SUNDAYS SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE. THE FIRST EIGHT (8) HOURS WORKED ON HOLIDAYS SHALL BE PAID AT STRAIGHT TIME IN ADDITION TO THE HOLIDAY PAY. ALL HOURS WORKED IN EXCESS OF EIGHT (8) HOURS ON HOLIDAYS SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE.

E. ALL HOURS WORKED ON SATURDAYS OR HOLIDAYS (EXCEPT LABOR DAY) SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE. ALL HOURS WORKED ON SUNDAYS OR ON LABOR DAY 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 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.

I. ALL HOURS WORKED ON SATURDAYS AND HOLIDAYS (EXCEPT LABOR DAY) SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE. ALL HOURS WORKED ON SUNDAYS AND ON LABOR DAY SHALL BE PAID AT TWO TIMES THE HOURLY RATE OF WAGE.

J. ALL HOURS WORKED ON SUNDAYS 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 THE HOLIDAY PAY. ALL HOURS WORKED ON UNPAID HOLIDAYS SHALL BE PAID AT TWO 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.

M. ALL HOURS WORKED ON SATURDAYS, SUNDAYS AND HOLIDAYS SHALL BE PAID AT DOUBLE THE HOURLY RATE OF WAGE.

O. ALL HOURS WORKED ON SUNDAYS AND HOLIDAYS SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE.
2. P. THE FIRST EIGHT (8) HOURS ON SATURDAY SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE. ALL HOURS WORKED IN EXCESS OF EIGHT (8) HOURS ON SATURDAY AND ALL HOURS WORKED ON SUNDAYS AND HOLIDAYS SHALL BE PAID AT TWO TIMES THE HOURLY RATE OF WAGE.

4. 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

5. A. HOLIDAYS: NEW YEAR'S DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, THANKSGIVING DAY, FRIDAY AFTER THANKSGIVING DAY, AND CHRISTMAS DAY (7).

B. HOLIDAYS: NEW YEAR'S DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, THANKSGIVING DAY, FRIDAY AFTER THANKSGIVING DAY, THE DAY BEFORE CHRISTMAS, AND CHRISTMAS DAY (8).

C. HOLIDAYS: NEW YEAR'S DAY, PRESIDENTS' DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, THANKSGIVING DAY, THE FRIDAY AFTER THANKSGIVING DAY, AND CHRISTMAS DAY (8).

D. HOLIDAYS: NEW YEAR'S DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, THANKSGIVING DAY, THE FRIDAY AND SATURDAY AFTER THANKSGIVING DAY, AND CHRISTMAS DAY (8).

E. HOLIDAYS: NEW YEAR'S DAY, PRESIDENTS' DAY, MEMORIAL DAY, INDEPENDENCE DAY, PRESIDENTIAL ELECTION DAY, THANKSGIVING DAY, THE FRIDAY AFTER THANKSGIVING DAY, AND CHRISTMAS DAY (8).


G. HOLIDAYS: NEW YEAR'S DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, THANKSGIVING DAY, THE LAST WORK DAY BEFORE CHRISTMAS, AND CHRISTMAS DAY (7).


I. HOLIDAYS: NEW YEAR'S DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, THANKSGIVING DAY, AND CHRISTMAS DAY (6).

J. HOLIDAYS: NEW YEAR'S DAY, MEMORIAL DAY, INDEPENDENCE DAY, THANKSGIVING DAY, FRIDAY AFTER THANKSGIVING DAY, CHRISTMAS EVE DAY, AND CHRISTMAS DAY (7).

N. HOLIDAYS: NEW YEAR'S DAY, PRESIDENTS' DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, VETERANS' DAY, THANKSGIVING DAY, THE FRIDAY AFTER THANKSGIVING DAY, AND CHRISTMAS DAY (9).

P. HOLIDAYS: NEW YEAR'S DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, THANKSGIVING DAY, FRIDAY AND SATURDAY AFTER THANKSGIVING DAY, THE DAY BEFORE CHRISTMAS, AND CHRISTMAS DAY (9).

Q. PAID HOLIDAYS: NEW YEAR'S DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, THANKSGIVING DAY, AND CHRISTMAS DAY (6).

R. PAID HOLIDAYS: NEW YEAR'S DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, THANKSGIVING DAY, DAY AFTER THANKSGIVING DAY, ONE-HALF DAY BEFORE CHRISTMAS DAY, AND CHRISTMAS DAY. (7 1/2).

S. PAID HOLIDAYS: NEW YEAR'S DAY, PRESIDENTS' DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, THANKSGIVING DAY, AND CHRISTMAS DAY (7).


V. PAID HOLIDAYS: SIX (6) PAID HOLIDAYS.

W. PAID HOLIDAYS: NINE (9) PAID HOLIDAYS.

X. HOLIDAYS: AFTER 520 HOURS - NEW YEAR'S DAY, THANKSGIVING DAY AND CHRISTMAS DAY. AFTER 2080 HOURS - NEW YEAR'S DAY, WASHINGTON'S BIRTHDAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, THANKSGIVING DAY, CHRISTMAS DAY AND A FLOATING HOLIDAY (8).
5. Y. HOLIDAYS: NEW YEAR'S DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, PRESIDENTIAL ELECTION DAY, THANKSGIVING DAY, THE FRIDAY FOLLOWING THANKSGIVING DAY, AND CHRISTMAS DAY (8).

Z. HOLIDAYS: NEW YEAR'S DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, VETERANS DAY, THANKSGIVING DAY, THE FRIDAY AFTER THANKSGIVING DAY, AND CHRISTMAS DAY (8).


B. PAID HOLIDAYS: NEW YEAR'S EVE DAY, NEW YEAR'S DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, THANKSGIVING DAY, THE FRIDAY AFTER THANKSGIVING DAY, CHRISTMAS EVE'S DAY, AND CHRISTMAS DAY (9).


I. PAID HOLIDAYS: NEW YEAR'S DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, THANKSGIVING DAY, FRIDAY AFTER THANKSGIVING DAY, AND CHRISTMAS DAY (7).

L. 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)

Q. PAID HOLIDAYS: NEW YEAR'S DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, VETERANS DAY, THANKSGIVING DAY, THE DAY AFTER THANKSGIVING DAY AND CHRISTMAS DAY (8). UNPAID HOLIDAY: PRESIDENTS' DAY.


V. PAID HOLIDAYS: NEW YEAR'S DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, THANKSGIVING DAY, DAY AFTER THANKSGIVING DAY, CHRISTMAS EVE DAY, CHRISTMAS DAY, AND ONE DAY OF THE EMPLOYEE'S CHOICE (9).

W. PAID HOLIDAYS: NEW YEAR'S DAY, DAY BEFORE NEW YEAR'S DAY, PRESIDENTS DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, THANKSGIVING DAY, DAY AFTER THANKSGIVING DAY, CHRISTMAS DAY, DAY BEFORE OR AFTER CHRISTMAS DAY (10).

X. PAID HOLIDAYS: NEW YEAR'S DAY, DAY BEFORE OR AFTER NEW YEAR'S DAY, PRESIDENTS DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, THANKSGIVING DAY, DAY AFTER THANKSGIVING DAY, CHRISTMAS DAY, DAY BEFORE OR AFTER CHRISTMAS DAY, EMPLOYEE'S BIRTHDAY (11).

NOTE CODES

8. A. THE STANDBY RATE OF PAY FOR DIVERS SHALL BE ONE-HALF TIMES THE DIVERS RATE OF PAY. 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 175' - $2.25 PER FOOT FOR EACH FOOT OVER 100 FEET
OVER 175' TO 250' - $5.50 PER FOOT FOR EACH FOOT OVER 175 FEET
OVER 250' - DIVERS MAY NAME THEIR OWN PRICE, PROVIDED IT IS NO LESS THAN THE SCALE LISTED FOR 250 FEET

C. THE STANDBY RATE OF PAY FOR DIVERS SHALL BE ONE-HALF TIMES THE DIVERS RATE OF PAY. 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.
Washington State Department of Labor and Industries
Policy Statement
(Regarding the Production of "Standard" or "Non-standard" Items)

Below is the department's (State L&I's) list of criteria to be used in determining whether a prefabricated item is "standard" or "non-standard". For items not appearing on WSDOT's predetermined list, these criteria shall be used by the Contractor (and the Contractor's subcontractors, agents to subcontractors, suppliers, manufacturers, and fabricators) to determine coverage under RCW 39.12. The production, in the State of Washington, of non-standard items is covered by RCW 39.12, and the production of standard items is not. The production of any item outside the State of Washington is not covered by RCW 39.12.

1. Is the item fabricated for a public works project? If not, it is not subject to RCW 39.12. If it is, go to question 2.

2. Is the item fabricated on the public works jobsite? If it is, the work is covered under RCW 39.12. If not, go to question 3.

3. Is the item fabricated in an assembly/fabrication plant set up for, and dedicated primarily to, the public works project? If it is, the work is covered by RCW 39.12. If not, go to question 4.

4. Does the item require any assembly, cutting, modification or other fabrication by the supplier? If not, the work is not covered by RCW 39.12. If yes, go to question 5.

5. Is the prefabricated item intended for the public works project typically an inventory item which could reasonably be sold on the general market? If not, the work is covered by RCW 39.12. If yes, go to question 6.

6. Does the specific prefabricated item, generally defined as standard, have any unusual characteristics such as shape, type of material, strength requirements, finish, etc? If yes, the work is covered under RCW 39.12.

Any firm with questions regarding the policy, WSDOT's Predetermined List, or for determinations of covered and non-covered workers shall be directed to State L&I at (360) 902-5330.
WSDOT's
Predetermined List for
Suppliers - Manufacturers - Fabricators

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.

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<tr>
<th>ITEM DESCRIPTION</th>
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<th>NO</th>
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<tr>
<td>1. Manhole Ring &amp; Cover - manhole type 1, 2, 3, and 4. For use with Catch Basin type 2. The casting to meet AASHTO-M-105, class 30 gray iron casting. See Std. Plan B-23a, B-23b, B-23c, B-23d and B-25.</td>
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<tr>
<td>2. Frame &amp; Grate - frame and Grate for Catch Basin type 1, 1L, 1P, 2, and Concrete Inlets. Cast frame may be grade 70-36 steel, class 30 gray cast iron or grade 80-55-06 ductile iron. The cast grate may be grade 70-36 steel or grade 80-55-06 ductile iron. See Std. Plan B-1, B-1L, B-1P, B-2, B-2a, B-2b, B-2c, B-2d, B-2e, B-3, and B-3a.</td>
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<td>3. Grate Inlet &amp; Drop Inlet Frame &amp; Grate - Frame and Grate for Grate Inlets Type 1 or 2 or Drop Inlets Type 1 or 2. Angle iron frame to be cast into top of inlet. See Std. Plan B-4b, B-4c, B-4d, B-4f, or B-4h. Frames &amp; Grates to be galvanized.</td>
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<td>4. Concrete Pipe - Plain Concrete pipe and reinforced concrete pipe Class 2 to 5 sizes smaller than 60 inch diameter.</td>
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<tr>
<td>5. Concrete Pipe - Plain Concrete pipe and reinforced concrete pipe Class 2 to 5 sizes larger than 60 inch diameter.</td>
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</table>
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.

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.

8.  Anchor Bolts & Nuts - Anchor Bolts and Nuts, for mounting sign structures, luminaries and other items, shall be made from commercial bolt stock. See Contract Plans and Std. Plans for size and material type.

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).

10. Major Structural Steel Fabrication - Fabrication of major steel items such as trusses, beams, girders, etc., for bridges.

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.

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).
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. Shop drawings for approval shall be provided per Section 6-05.3(3) of the Std. Spec. See Std. Plans E-4 and E-4a

14. Manhole Type 1, 2, 3 and 4 - Precast Manholes with risers and flat top slab and/or cones. See Std. Plans B-23a, B-23b, B-23c, and B-23d.

15. Drywell - Drywell as specified in Section 9-12.7 of the Std. Sec. See Std. Plan B-27.

16. Catch Basin - Catch Basin type 1, 1L, 1P, and 2, including risers, frames maybe cast into riser. See Std. Plans B-1, B-1a, B-1b, B-1e.

17. Precast Concrete Inlet - Concrete Inlet with risers, frames may be cast into risers. See Std. Plan B-26.

18. Drop Inlet Type 1 - Drop Inlet Type 1 with support angles and grate. See Std. Plans B-4f and B-4h.

19. Drop Inlet Type 2 - Drop Inlet type 2 with support angles and grate. See Std. Plans B-4g and B-4h.

20. Grate Inlet Type 2 - Grate Inlet Type 2 with risers and top unit with bearing angles.

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.
22. Vault Risers - For use with Valve Vaults and Utilities Vaults. X

23. Valve Vault - For use with underground utilities. See Contract Plans for details. X

24. Precast Concrete Barrier - Precast Concrete Barrier for use as new barrier or may also be used as Temporary Concrete Barrier. Only new state approved barrier may be used as permanent barrier. X

25. Reinforced Earth Wall Panels - Reinforced Earth Wall Panels in size and shape as shown in the Plans. Fabrication plant has annual approval for methods and materials to be used. See Shop Drawing. Fabrication at other locations may be approved, after facilities inspection, contact HQ. Lab. X

26. Precast Concrete Walls - Precast Concrete Walls - tilt-up wall panel in size and shape as shown in Plans. Fabrication plant has annual approval for methods and materials to be used. X

27. Precast Railroad Crossings - Concrete Crossing Structure Slabs. X

28. 12, 18 and 26 inch Standard Precast Prestressed Girder - Standard Precast Prestressed Girder for use in structures. Fabricator plant has annual approval of methods and materials to be used. Shop Drawing to be provided for approval prior to casting girders. See Std. Spec. Section 6-02.3(25)c. X
29. Prestressed Concrete Girder Series 4-14 - Prestressed Concrete Girders for use in structures. Fabricator plant has annual approval of methods and materials to be used. Shop Drawing to be provided for approval prior to casting girders. See Std. Spec. Section 6-02.3(25)c.

30. Prestressed Tri-Beam Girder - Prestressed Tri-Beam Girders for use in structures. Fabricator plant has annual approval of methods and materials to be used. Shop Drawing to be provided for approval prior to casting girders. See Std. Spec. Section 6-02.3(25)c.

31. Prestressed Precast Hollow-Core Slab - Precast Prestressed Hollow-core slab for use in structures. Fabricator plant has annual approval of methods and materials to be used. Shop Drawing to be provided for approval prior to casting girders. See Std. Spec. Section 6-02.3(25)c.

32. Prestressed-Bulb Tee Girder - Bulb Tee Prestressed Girder for use in structures. Fabricator plant has annual approval of methods and materials to be used. Shop Drawing to be provided for approval prior to casting girders. See Std. Spec. Section 6-02.3(26)A.

33. Monument Case and Cover - To meet AASHTO-M-105 class 30 gray iron casting. See Std. Plan H-7.

34. Cantilever Sign Structure - Cantilever Sign Structure fabricated from steel tubing meeting AASHTO-M-183. See Std. Plans G-3, G-3a, G-3b, and Contract Plans for details. The steel structure shall be galvanized after fabrication in accordance with AASHTO-M-111.

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.
36. Steel Sign Bridges - Steel Sign Bridges fabricated from steel tubing meeting AASHTO-M-138 for Aluminum Alloys. See Std. Plans G-2, G2a, and Contract Plans for details. The steel structure shall be galvanized after fabrication in accordance with AASHTO-M-111.

37. Steel Sign Post - Fabricated steel sign posts as detailed in Std. Plan G-8a, G-8b, G-8c, G-8d, G-8e, G-8f, and G-8h. Shop drawings for approval are to be provided prior to fabrication.

38. Light Standard-Prestressed - Spun, prestressed, hollow, concrete poles.

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. Plan J-1a. See Special Provisions for pre-approved drawings.

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 J-7a and J-7c. See Special Provisions for pre-approved drawings.

41. Traffic Curb, Type A or C Precast - Type A or C Precast traffic curb, for use in construction of raised channelization, and other traffic delineation uses such as parking lots, rest areas, etc. NOTE: Acceptance based on inspection of Fabrication Plant and an advance sample of curb section to be submitted for approval by Engineer.
42. Traffic Signs - Prior to approval of a Fabricator of Traffic Signs, the sources of the following materials must be submitted and approved for reflective sheeting, legend material, and aluminum sheeting. **NOTE:** Fabrication inspection required. Only signs tagged "Fabrication Approved" by WSDOT Sign Fabrication inspector to be installed.

43. Cutting & bending reinforcing steel

44. Guardrail components

45. Aggregates/Concrete mixes

46. Asphalt

47. Fiber fabrics

48. Electrical wiring/components

49. treated or untreated timber piles

50. Girder pads (elastomeric bearing)
51. Standard Dimension lumber  X

52. Irrigation components  X

53. Fencing materials  X

54. Guide Posts  X

55. Raised Pavement Markers  X

56. Epoxy  X

57. Cribbing  X

58. Water distribution materials  X

59. Steel "H" piles  X

60. Steel pipe for concrete pile casings  X

61. Steel pile tips, standard  X

62. Steel pile tips, custom  X
WASHINGTON STATE PREVAILING WAGE RATES - EFFECTIVE 08/31/05
METAL FABRICATION (IN SHOP)

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Counties Covered:
Adams, Asotin, Columbia, Douglas, Ferry, Franklin, Garfield
Kittitas, Lincoln, Okanogan, Pend Oreille, Stevens, Walla Walla and Whitman

Counties Covered:
Benton
Welder
16.70
Machine Operator
10.53
Painter
9.76

Counties Covered:
Chelan
Fitter
15.04
Welder
12.24
Machine Operator
9.71
Painter
9.93
Laborer
8.77

Counties Covered:
Clallam, Grays Harbor, Island, Jefferson,
Lewis, Mason, Pacific, San Juan and Skagit
Fitter
15.16
Welder
15.16
Machine Operator
10.66
Painter
11.41
Laborer
11.13
## METAL FABRICATION (IN SHOP) 08/31/05

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### METAL FABRICATION (IN SHOP) 08/31/05

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WASHINGTON STATE PREVAILING WAGE RATES - EFFECTIVE 08/31/05
FABRICATED PRECAST CONCRETE PRODUCTS

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Supplemental To Wage Rates
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Washington State Department of Labor and Industries
Policy Statements
(Regarding Production and Delivery of Gravel, Concrete, Asphalt, etc.)

The following two letters from the State Department of Labor and Industries (State L&I) dated August 18, 1992 and June 18, 1999, clarify the intent and establish policy for administering the provisions of WAC 296-127-018 COVERAGE AND EXEMPTIONS OF WORKERS INVOLVED IN THE PRODUCTION AND DELIVERY OF GRAVEL, CONCRETE, ASPHALT, OR SIMILAR MATERIALS.

Any firm with questions regarding the policy, these letters, or for determinations of covered and non-covered workers shall be directed to State L&I at (350) 902-5330.

Effective September 1, 1993, minimum prevailing wages for all work covered by WAC 296-127-018 for the production and/or delivery of materials to a public works contract will be found under the regular classification of work for Teamsters, Power Equipment Operators, etc.
August 18, 1992

TO: All Interested Parties

FROM: Jim P. Christensen
Acting Industrial Statistician

SUBJECT: Materials Suppliers - WAC 296-127-018

This memo is intended to provide greater clarity regarding the application of WAC 296-127-018 to awarding agencies, contractors, subcontractors, material suppliers and other interested parties. The information contained herein should not be construed to cover all possible scenarios which might require the payment of prevailing wage. The absence of a particular activity under the heading "PREVAILING WAGES ARE REQUIRED FOR" does not mean that the activity is not covered.

Separate Material Supplier Equipment Operator rates have been eliminated. For those cases where a production facility is set up for the specific purpose of supplying materials to a public works construction site, prevailing wage rates for operators of equipment such as crushers and batch plants can be found under Power Equipment Operators.

**PREVAILING WAGES ARE REQUIRED FOR:**

1. Hauling materials away from a public works project site, including excavated materials, demolished materials, etc.

2. Delivery of materials to a public works project site using a method that involves incorporation of the delivered materials into the project site, such as spreading, leveling, rolling, etc.

3. The production of materials at a facility that is established for the specific, but not necessarily exclusive, purpose of supplying materials for a public works project.

4. Delivery of the materials mentioned in #3 above, regardless of the method of delivery.

**PREVAILING WAGES ARE NOT REQUIRED FOR:**

1. The production of materials by employees of an established materials supplier, in a permanent facility, as well as the delivery of these materials, as long as delivery does not include incorporation of the materials into the job site.

2. Delivery of materials by a common or contract carrier, as long as delivery does not include incorporation of the materials into the job site.

3. Production of materials for unspecified future use.
TO:        Kerry S. Radcliff, Editor
            Washington State Register

FROM:      Gary Moore, Director
            Department of Labor and Industries

SUBJECT:   Notice re WAC 296-127-018, Coverage and exemptions of workers
            involved in the production and delivery of gravel, concrete, asphalt,
            or similar materials

The department wishes to publish the following Notice in the next edition of the
Washington State Register:

NOTICE

Under the current material supplier regulations, WAC 296-127-018, the
department takes the position that prevailing wages do not apply to the
delivery of wet concrete to public works sites, unless the drivers do
something more than just deliver the concrete. Drivers delivering
concrete into a crane and bucket, hopper of a pump truck, or forms or
footings, are not entitled to prevailing wages unless they operate
machinery or use tools that screed, float, or put a finish on the concrete.

This position applies only to the delivery of wet concrete. It does not
extend to the delivery of asphalt, sand, gravel, crushed rock, or other
similar materials covered under WAC 296-127-018. The department's
position applies only to this regulation.

If you need additional information regarding this matter, please contact
Greg Mowat, Program Manager, Employment Standards, at
P.O. Box 44510, Olympia, WA 98504-4510, or call (360) 902-5310.

Please publish the above Notice in WSR 99-13. If you have questions or need
additional information, please call Selwyn Walters at 902-4206. Thank you.

Cc:        Selwyn Walters, Rules Coordinator
            Patrick Woods, Assistant Director
            Greg Mowat, Program Manager
STANDARD PLANS
NOTES
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 bedded to spring line.

### Trench Width

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**NOTES**

1. When required by the contract, a Snow Load Post Washer shall be used on the backside of the post (in lieu of the 3 3/4" post bolt washer) and a Snow Load Rail Washer shall be placed on the face side of Type 1 and Type 2 Beam Guardrail. Snow load rail washers are not to be installed on terminals.

2. Rail washers, also called “snow load rail washers”, are not required on new installations, except as called for in Note 1. Rail washers need not be removed on existing installations, except posts 2 through 8 of a BCT installation.

3. Guardrail post spacing for Types 1 through 4 shall be 6'-3" on centers.

4. Timber block shall be toe-nailed to post with a 16d galvanized nail to restrict block rotation.

5. For post and block details, see Standard Plan C-1b.

6. When Beam Guardrail Type 1, 2 Foot Long Post, is specified in Contract, the post length shall be stamped with numbers 1 3/4" MIN height and 1/4" deep at the location where the letter 'I' is shown on the detail. After installation of long post, it shall be the Contractor’s responsibility to ensure that the stamped numbers are still legible and 1/4" deep.
1. Wood posts for all guardrail placement plans shall be 6x8 except where noted otherwise.

2. Lower hole is for rub rail of Type 2 and Type 3 Beam Guardrail.

3. 6x8 steel posts and timber blocks are alternates for 6x8 timber posts and blocks. 6x8x15 steel posts and timber blocks are alternates for 10x10 timber posts and blocks.

4. Holes shall be located on approaching traffic side of web.

5. When contract requires "Beam Guardrail Type 1, ..., Foot Long Post," the steel post length shall be marked with numbers to ensure permanent identification at the location where the letter "H" is shown on the detail. The marking shall be 1/2" WIM height.

6. Soil plate may be welded to foundation tube. If so, holes in soil plate and foundation tube may be omitted.
NOTE:

1. Anchor plate may be constructed from 1/4" plates welded to equal strength and dimensions as shown.

2. For end section details, see Standard Plan "Beam Guardrail End Sections".

3. For post details, see Standard Plan "Beam Guardrail Posts and Blocks".

4. Eight 5/8" x 1 1/4" machine bolts with hex nut and washer. Place washer on face side of rail.

5. Outside nut shall be torqued against inside nut a minimum of 100 ft-lbs.

6. Thread bearing plate with 100 ft-lbs at corners to prevent turning.

7. Anchor pay limit does not apply when anchor is included in a Beam Guardrail Terminal.

TYPE 1 ANCHOR

BEAM GUARDRAIL ANCHOR

STANDARD PLAN C-6

APPROVED FOR PUBLICATION

WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
OLYMPIA, WASHINGTON

Sheet 1 of 2 Sheets
NOTES

1. End Section Design G shall be used except where noted on the plans or contract.

2. Attach guardrail to bridge rail or concrete barrier with 7/8" diameter high strength bolts (Standard Specification 9-06.5(4)) with thin slab ferrule inserts or resin bonded anchors. See the Contract Plans.

3. A single piece having similar dimensional shape to Design G and mating with the W-beam guardrail is an alternate.

4. In cases where Design "F" end section is lapped on the outside of the guardrail, a galvanized 1" ID, 2" OD, 0.134" thick, narrow Type A Plain Washer or an anchor rail washer shall be placed under the splice bolt heads.
NOTES
1. An additional width for shy distance is required when the existing roadway is to be widened.
2. The additional width for shy distance may be less than 2.0' when it, combined with the existing shoulder width, totals 8.0' or more.

TRAFFIC BARRIER SHOULDER WIDENING ~ FOR SHOULDERS LESS THAN 8.0' WIDE
STANDARD PLAN C-16b

APPROVED FOR PUBLICATION

Washington State Department of Transportation
NOTES
1. Refer to the Sign Specification Sheet of the contract for the 'V' and 'W' distances.

SIGN INSTALLATION IN FILL SECTION

SIGN INSTALLATION ON STEEP FILL SLOPES

MULTIPLE SIGN POST INSTALLATION IN FILL SECTION

SIGN INSTALLATION BEHIND TRAFFIC BARRIER

SIGN INSTALLATION IN CURB SECTION

GUIDE OR DIRECTIONAL SIGN WITH SECONDARY SIGN INSTALLATION ON EXPRESSWAYS AND FREEWAYS

MULTIPLE SIGN POST INSTALLATION IN DITCH SECTION

SIGN INSTALLATION IN DITCH SECTION

SIGN WITH SUPPLEMENTAL PLAQUE INSTALLATION IN FILL SECTION
NOTES

1. Notch is only required with multiple post installations.

2. 6" x 10", 8" x 10", and 8" x 12" Timber Sign Posts can not be made breakaway and do not have holes or notches. These posts shall not be installed within the Design Clear Zone. They can be installed behind traffic barrier.

3. Signs with a width less than 12 feet and supported on three 6" x 6" or 6" x 8" posts shall not be installed in the clear zone.

4. Signs with a width less than 17 feet and supported on four 6" x 6" or 6" x 8" posts shall not be installed in the clear zone.


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TIMBER SIGN SUPPORTS

STANDARD PLAN G-4a

SHEET 3 OF 3 SHEETS

APPROVED FOR PUBLICATION

Harold J. Petersen 05-20-04

WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
NOTES

1. All fasteners may be zinc plated, galvanized or stainless steel. All steel angle and tubular steel shall be hot-rolled, high carbon steel, painted or galvanized.

2. Install one lightweight Type A Low-Intensity flashing warning light on the traffic side of the barricade. Install two Type A Low-Intensity flashing warning lights per barricade when the barricades are used to close a roadway. Attach the light to the barricade according to the light manufacturer's recommendations or use the details shown on this plan.

3. Stripes on barricade rails shall be alternating orange and white reflective strips (stopping downward at an angle of 45 degrees in the direction traffic is to pass).

4. The Type 3 barricade design shown on this plan meets the crash test requirements of NCHRP 350. Alternate designs may be approved if they conform to the NCHRP 350 crash test criteria.

5. When a sign is mounted on the barricade, it shall be securely bolted to at least two plywood panels. The top of the sign shall not be higher than the top panel of the barricade.

6. When sandbags used in freezing weather, urea fertilizer shall be mixed with the sand in a quantity to prevent the sand from freezing.

TYPE 3 BARRICADE

STANDARD PLAN H-2

SHEET 1 OF 2 SHEETS

APPROVED FOR PUBLICATION

WASHINGTON STATE DEPARTMENT OF TRANSPORTATION

WASHINGTON STATE DEPARTMENT OF TRANSPORTATION

EXPRESS M 2006

WASHINGTON STATE DEPARTMENT OF TRANSPORTATION

WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
STRIPES ON THE BARRICADES SHALL SLOPE DOWNWARD IN THE DIRECTION TRAFFIC IS TO PASS

ROAD CLOSURE AT INTERSECTION

ROAD CLOSURE AT OTHER LOCATIONS

TYPE 3 BARRICADE

STANDARD PLAN H-2

EXPRESS MAY 5, 2005

WASHINGTON STATE DEPARTMENT OF TRANSPORTATION

WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
NOTES

1. An additional width for shy distance is required when the existing roadway is to be widened.

2. The additional width for shy distance may be less than 2.0' when it, combined with the existing shoulder width, totals 8.0' or more.
**SIGN SPACING = X (FEET)**

<table>
<thead>
<tr>
<th>MPH</th>
<th>TAPER</th>
<th>TANGENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>50/65</td>
<td>40</td>
<td>80</td>
</tr>
<tr>
<td>35/45</td>
<td>30</td>
<td>60</td>
</tr>
<tr>
<td>25/30</td>
<td>20</td>
<td>40</td>
</tr>
</tbody>
</table>

**NOTES**

1. Flagger stations shall be illuminated during hours of darkness.
2. Extend devices taper across shoulder.
3. Sign sequence is the same for both directions of travel on the highway.
4. Radio communication recommended between flaggers. Required if flaggers do not have clear vision of each other.

**BUFFER DATA**

<table>
<thead>
<tr>
<th>BUFFER SPACE = B</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPEED (MPH)</td>
</tr>
<tr>
<td>LENGTH (feet)</td>
</tr>
</tbody>
</table>

**PROTECTIVE VEHICLE ROLL AHEAD DISTANCE = R**

<table>
<thead>
<tr>
<th>VEHICLE TYPE</th>
<th>TYPICAL VEHICLE LOADED WEIGHT (LBS)</th>
<th>POSTED SPEED (mph)</th>
<th>STATIONARY OPERATIONS (feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 YARD DUMP TRUCK</td>
<td>24,000</td>
<td>50-55</td>
<td>15</td>
</tr>
<tr>
<td>2 TON CARGO TRUCK</td>
<td>15,000</td>
<td>45-50</td>
<td>100</td>
</tr>
<tr>
<td>1 TON CARGO TRUCK</td>
<td>10,000</td>
<td>45-50</td>
<td>100</td>
</tr>
</tbody>
</table>

Roll ahead stopping distance assumes dry pavement.

---

**LEGEND**

- **SIGN LOCATION - TRIPOD MOUNT**
- **□ □ □** TEMPORARY TRAFFIC CONTROL DEVICES
- **↑** FLAGGING STATION
- **□ □ □** PROTECTIVE VEHICLE (WHEN SPECIFIED IN CONTRACT)
- **---** EXISTING STOP BAR

FOR PILOT CAR OPERATIONS THE FOLLOWING SIGNS SHALL BE REQUIRED TO SUPPLEMENT THE SIGNS SHOWN ON THIS PLAN.

- **G20-4** 20'' x 16''
- **SP-1** 36'' x 18''
- **PILOT CAR FOLLOW ME**
- **STOP WAIT FOR PILOT CAR**

---

**EXPIRES NOVEMBER 23, 2003**

**ALTERNATING ONE-WAY TRAFFIC FLAGGER CONTROLLED OR PILOT CAR CONTROLLED STANDARD PLAN K-3**

**APPROVED FOR PUBLICATION**

Harold J. Peterseso 12-20-02

STATE ENGINEER

Washington State Department of Transportation
SIGHT DISTANCE DATA
MIN. STOPPING SIGHT DIST. = S

<table>
<thead>
<tr>
<th>SPEED LIMIT</th>
<th>25</th>
<th>30</th>
<th>35</th>
<th>40</th>
<th>45</th>
<th>50</th>
<th>55</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPH</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DISTANCE</td>
<td>75'</td>
<td>100'</td>
<td>150'</td>
<td>225'</td>
<td>300'</td>
<td>375'</td>
<td>450'</td>
</tr>
<tr>
<td>FEET</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

DISTANCES SHOWN ARE MINIMUMS, USE ADDITIONAL DISTANCE WHEN POSSIBLE.

NOTES
1. DAYLIGHT HOURS ONLY.
2. RADIO CONTACT BETWEEN WORK CREW AND SHADOW VEHICLE RECOMMENDED.

LEGEND

[Diagram of traffic control measures with legends and symbols]

WORK VEHICLE WITH FLASHING AMBER WARNING BEACON

SHADOW VEHICLE WITH FLASHING AMBER WARNING BEACON
(with truck mounted attenuator when specified in contract)

PORTABLE CHANGEABLE MESSAGE SIGN DISPLAYS

EXPRESS NOVEMBER 12, 2003
MOBILE SHOULDER OPERATION WITH LANE ENCROACHMENT STANDARD PLAN K-5
SHEET 1 OF 1 SHEET
APPROVED FOR PUBLICATION
Harold J. Peterfeso 12-20-02
WASHINGTO N STATE DEPARTMENT OF TRANSPORTATION
NOTES
1. OTHER WARNING SIGNS, SUCH AS LOOSE GRAVEL, TRUCK CROSSING, BUMP, ABRUPT LANE EDGE, ETC., SHALL BE USED AS NECESSARY ALONG WITH ADVISORY SPEED SIGNS.
2. ADVISORY SPEED SIGNS ARE DETERMINED BY THE ENGINEER.
3. FLOODLIGHTS SHALL BE PROVIDED TO MARK FLAGGER STATIONS AT NIGHT.

SIGN SPACING = X (FEET)

<table>
<thead>
<tr>
<th>Type</th>
<th>Speed Range</th>
<th>Space (Feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural Roads</td>
<td>45/65 MPH</td>
<td>500' ++</td>
</tr>
<tr>
<td>Urban Arterials &amp; Rural</td>
<td>35/40 MPH</td>
<td>350' ++</td>
</tr>
<tr>
<td>Roads</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural Streets</td>
<td>25/30 MPH</td>
<td>200' ++</td>
</tr>
<tr>
<td>Residential Areas &amp;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business Districts</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

All signs are black on orange unless otherwise designated.

LEGEND

SIGN LOCATION-POST MOUNTED
BUFFER DATA

<table>
<thead>
<tr>
<th>BUFFER SPACE x</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPEED (mph)</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>30</td>
</tr>
<tr>
<td>35</td>
<td>40</td>
</tr>
<tr>
<td>40</td>
<td>45</td>
</tr>
<tr>
<td>LENGTH (feet)</td>
<td></td>
</tr>
<tr>
<td>55</td>
<td>85</td>
</tr>
<tr>
<td>90</td>
<td>20</td>
</tr>
<tr>
<td>120</td>
<td></td>
</tr>
<tr>
<td>180</td>
<td></td>
</tr>
</tbody>
</table>

SIGN SPACING = X (FEET)

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Urban Arterials 35</td>
<td>350''</td>
</tr>
<tr>
<td></td>
<td>Urban Streets</td>
<td>25/30 MPH 200''</td>
</tr>
<tr>
<td></td>
<td>Residential Areas &amp;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Business Districts</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>All signs are black</td>
</tr>
<tr>
<td></td>
<td></td>
<td>on orange unless</td>
</tr>
<tr>
<td></td>
<td></td>
<td>otherwise designed.</td>
</tr>
</tbody>
</table>

MINIMUM TAPER LENGTH (L) IN FEET

<table>
<thead>
<tr>
<th>Lane Width (feet)</th>
<th>Posted Speed (mph)</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>105 150 205 40</td>
</tr>
<tr>
<td>30</td>
<td>115 165 225 40</td>
</tr>
<tr>
<td>35</td>
<td>125 180 245 40</td>
</tr>
</tbody>
</table>

CHANNELIZING DEVICE SPACING (FEET)

<table>
<thead>
<tr>
<th>MPH</th>
<th>TAPER</th>
<th>TANGENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>35</td>
<td>30</td>
<td>60</td>
</tr>
<tr>
<td>25/30</td>
<td>20</td>
<td>40</td>
</tr>
</tbody>
</table>

LEGEND

- SIGN LOCATION—TRIPOD MOUNTED
- TEMPORARY TRAFFIC CONTROL DEVICES
- PROTECTIVE VEHICLE (WHEN SPECIFIED IN CONTRACT)

(35 MPH OR LESS)
WORK BEYOND THE SHOULDER

NOTES
1. THE SIGN SHOWN IS NOT REQUIRED IF THE WORK SPACE IS BEHIND A BARRIER, MORE THAN 2' BEHIND THE CURB, OR 15' OR MORE FROM THE EDGE OF ANY ROADWAY.

<table>
<thead>
<tr>
<th>SIGN SPACING = X (feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural Roads 45/55 MPH</td>
</tr>
<tr>
<td>Urban Arterials 35/40 MPH</td>
</tr>
<tr>
<td>Urban Streets 25/30 MPH</td>
</tr>
<tr>
<td>Residential Areas &amp; Business Districts</td>
</tr>
<tr>
<td>All signs are black on orange unless otherwise designated.</td>
</tr>
</tbody>
</table>

SHOULDER WORK AREAS

1. SHOULDER EXCAVATION SHALL BE LIMITED TO ONE SIDE AT A TIME.

ABRUPT LANE EDGE

WARNING SIGNS - LOCATE AS NEEDED FOR SITE CONDITIONS TO SUPPLEMENT WARNING SIGNS.

NO SHOULDER

TEMPORARY TRAFFIC CONTROL DEVICE

SHOULDER WORK AREA PROTECTION NON-WORKING HOURS

4:1 WEDGE OF COMPACTED STABLE MATERIAL
NOTES
1. WORK VEHICLE AND SHADOW/PROTECTIVE VEHICLE SHALL USE WARNING BEACONS.
2. SHADOW/PROTECTIVE VEHICLE RECOMMENDED- SHALL MAINTAIN 500'-1000' OF SIGHT DISTANCE TO APPROACHING TRAFFIC.
3. THIS PLAN MAY BE IMPLEMENTED ON MULTI-LANE HIGHWAYS WITH LESS THAN 10,000 ADT.
4. IN THOSE SITUATIONS WHERE MULTIPLE WORK LOCATIONS WITHIN A LIMITED DISTANCE MAKE IT PRACTICAL TO PLACE STATIONARY SIGNS, THE DISTANCE BETWEEN THE ADVANCE WARNING SIGN AND THE WORK SHOULD NOT EXCEED 2 MILES.
5. IN THOSE SITUATIONS WHERE THE DISTANCE BETWEEN THE ADVANCE WARNING SIGNS AND THE WORK IS 1 TO 2 MILES, A SUPPLEMENTAL DISTANCE PLAQUE SHALL BE USED WITH THE ROAD WORK AHEAD SIGN.

LEGEND
● SEQUENTIAL ARROW PANEL - TYPE "B" (CAUTION MODE)
● TMA TRUCK MOUNTED ATTENUATOR
● WARNING BEACON

PROTECTIVE VEHICLE ROLL AHEAD DISTANCE = R

<table>
<thead>
<tr>
<th>VEHICLE TYPE</th>
<th>VEHICLE WEIGHT (LBS)</th>
<th>STATIONARY</th>
<th>MOBILE</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 YARD DUMP TRUCK</td>
<td>24,000</td>
<td>100'</td>
<td>175'</td>
</tr>
</tbody>
</table>

ROLL AHEAD STOPPING DISTANCE ASSUMES DRY PAVEMENT

SHORT TERM DURATION OR MOBILE OPERATION SHOULDER CLOSURE STANDARD PLAN K-12

APPROVED FOR PUBLICATION
Harold J. Peterfeso 12-20-02
STATE DESIGN ENGINEER
Washington State Department of Transportation

EXPRESO NOVEMBER 23, 2001
### NOTES

1. WORK VEHICLE AND SHADOW/PROTECTIVE VEHICLE SHALL USE WARNING BEACONS.

2. SHADOW/PROTECTIVE VEHICLE RECOMMENDED SHALL MAINTAIN 500'-1000' OF SIGHT DISTANCE TO APPROACHING TRAFFIC.

3. THIS PLAN MAY BE IMPLEMENTED ON MULTI-LANE HIGHWAYS WITH LESS THAN 10,000 ADT.

4. IN THOSE SITUATIONS WHERE MULTIPLE WORK LOCATIONS WITHIN A LIMITED DISTANCE MAKE IT PRACTICAL TO PLACE STATIONARY SIGNS, THE DISTANCE BETWEEN THE ADVANCE WARNING SIGN AND THE WORK SHOULD NOT EXCEED 2 MILES.

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### LEGEND

- **SEQ** SEQUENTIAL ARROW PANEL - TYPE "B" (CAUTION MODE)
- **TMA** TRUCK MOUNTED ATTENUATOR
- **W** WARNING BEACON

### Table: Protective Vehicle Roll Ahead Distance

<table>
<thead>
<tr>
<th>VEHICLE TYPE</th>
<th>Vehicle Weight (LBS)</th>
<th>Stationary</th>
<th>Mobile</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 Yard Dump Truck</td>
<td>24,000</td>
<td>100'</td>
<td>175'</td>
</tr>
</tbody>
</table>

ROLL AHEAD STOPPING DISTANCE ASSUMES DRY PAVEMENT
SIGN SPACING = X (FEET)

<table>
<thead>
<tr>
<th>Type of Road</th>
<th>Speed</th>
<th>Spacing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural Roads</td>
<td>45 MPH</td>
<td>500'</td>
</tr>
<tr>
<td>Urban Arterials</td>
<td>35/40 MPH</td>
<td>300'</td>
</tr>
<tr>
<td>Urban Streets</td>
<td>25/30 MPH</td>
<td>200'</td>
</tr>
<tr>
<td>Residential &amp; Business Districts</td>
<td>200'</td>
<td></td>
</tr>
</tbody>
</table>

Alert signs are black on orange unless otherwise designated.

CHANNELIZING DEVICE SPACING (FEET)

<table>
<thead>
<tr>
<th>Speed</th>
<th>Taper</th>
<th>Tangent</th>
</tr>
</thead>
<tbody>
<tr>
<td>35/45</td>
<td>30</td>
<td>60</td>
</tr>
<tr>
<td>25/30</td>
<td>20</td>
<td>40</td>
</tr>
</tbody>
</table>

NOTES
1. FOR USE WITH SPEEDS OF 45 MPH AND UNDER.
2. 3 ADVANCED WARNING SIGNS ARE REQUIRED FOR FLAGGING OPERATIONS. (L & I REQUIREMENTS)

LEGEND
- SIGN LOCATION - TRIPOD MOUNT
- Temporary Traffic Control Devices
- Flagging Station
- Surveyor

SURVEYING ALONG CENTERLINE OF LOW-VOLUME ROAD STANDARD PLAN K-24

APPROVED FOR PUBLICATION
Harold J. Peterseso 12-20-02

Washington State Department of Transportation
TRAFFIC CONTROL PLANS
## ROAD CLOSURE SIGN SPECIFICATIONS

<table>
<thead>
<tr>
<th>SIGN NO.</th>
<th>MUTCD SIGN #</th>
<th>LOCATION</th>
<th>SIGN SIZE (X: Y: Z)</th>
<th>SHEETING TYPE</th>
<th>POST MATERIAL</th>
<th>POST SIZE (H: V: W)</th>
<th>POST NUMBER</th>
<th>CLEARANCE</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>29</td>
<td>W20-1</td>
<td>TERRAINES DRIVES, 750' WEST OF COUNTRY CLUB DRIVE</td>
<td>40' : 45' : 45'</td>
<td>I</td>
<td>WOOD</td>
<td>4' x 4'</td>
<td>10'</td>
<td>7' : 6'</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>W20-2</td>
<td>TERRAINES DRIVES, 650' WEST OF COUNTRY CLUB DRIVE</td>
<td>36' : 45'</td>
<td>I</td>
<td>WOOD</td>
<td>4' x 4'</td>
<td>10'</td>
<td>7' : 6'</td>
<td></td>
</tr>
<tr>
<td>41</td>
<td>W20-1</td>
<td>EAST HILLCREST DRIVE, 250' NORTH OF TERRAINES DRIVES</td>
<td>40' : 45'</td>
<td>I</td>
<td>WOOD</td>
<td>4' x 4'</td>
<td>10'</td>
<td>7' : 6'</td>
<td></td>
</tr>
<tr>
<td>42</td>
<td>W20-2</td>
<td>EAST HILLCREST DRIVE, 400' WEST OF TERRAINES DRIVES</td>
<td>36' : 45'</td>
<td>I</td>
<td>WOOD</td>
<td>4' x 4'</td>
<td>10'</td>
<td>7' : 6'</td>
<td>SEE DETAIL</td>
</tr>
<tr>
<td>43</td>
<td>SPECIAL SIGN NO. 3</td>
<td>TERRAINES DRIVES, 400' WEST OF COUNTRY CLUB DRIVE</td>
<td>40' : 45'</td>
<td>I</td>
<td>WOOD</td>
<td>4' x 4'</td>
<td>10'</td>
<td>7' : 6'</td>
<td></td>
</tr>
<tr>
<td>44</td>
<td>W2-2R</td>
<td>TERRAINES DRIVES, 392' WEST OF COUNTRY CLUB DRIVE</td>
<td>--- : ---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>COVER IMMEDIATELY AFTER ROAD CLOSURE</td>
</tr>
<tr>
<td>45</td>
<td>W1-1</td>
<td>SAME</td>
<td>--- : ---</td>
<td>I</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>46</td>
<td>W16-00400-3</td>
<td>SAME</td>
<td>--- : ---</td>
<td>I</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>47</td>
<td>W4-9U</td>
<td>TERRAINES DRIVES, 250' WEST OF COUNTRY CLUB DRIVE</td>
<td>30' : 24'</td>
<td>I</td>
<td>WOOD</td>
<td>4' x 4'</td>
<td>4'</td>
<td>7' : 6'</td>
<td>COVER IMMEDIATELY AFTER ROAD CLOSURE</td>
</tr>
<tr>
<td>48</td>
<td>D1-201/00200-3</td>
<td>SAME</td>
<td>42' : 7'</td>
<td>I</td>
<td>SAME</td>
<td>SAME</td>
<td>SAME : SAME</td>
<td>SAME</td>
<td>&quot;COUNTRY CLUB&quot; MOUNTED ABOVE SIGN NO. 47</td>
</tr>
<tr>
<td>49</td>
<td>SPECIAL SIGN NO. 3</td>
<td>TERRAINES DRIVES, 400' EAST OF COUNTRY CLUB DRIVE</td>
<td>40' : 43'</td>
<td>I</td>
<td>WOOD</td>
<td>4' x 4'</td>
<td>14'</td>
<td>7' : 10'</td>
<td>SEE DETAIL</td>
</tr>
<tr>
<td>50</td>
<td>W2-2L</td>
<td>TERRAINES DRIVES, 550' EAST OF COUNTRY CLUB DRIVE</td>
<td>--- : ---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>51</td>
<td>W1-1</td>
<td>SAME</td>
<td>--- : ---</td>
<td>I</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>52</td>
<td>W16-00400-3</td>
<td>SAME</td>
<td>--- : ---</td>
<td>I</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>53</td>
<td>W20-1</td>
<td>TERRAINES DRIVES, 800' EAST OF COUNTRY CLUB DRIVE</td>
<td>40' : 45'</td>
<td>I</td>
<td>WOOD</td>
<td>4' x 4'</td>
<td>10'</td>
<td>7' : 6'</td>
<td></td>
</tr>
<tr>
<td>54</td>
<td>W20-1</td>
<td>NORTH CANYON ROAD, 400' NORTH OF TERRAINES DRIVE</td>
<td>40' : 45'</td>
<td>I</td>
<td>WOOD</td>
<td>4' x 4'</td>
<td>10'</td>
<td>7' : 6'</td>
<td></td>
</tr>
<tr>
<td>55</td>
<td>W20-2</td>
<td>NORTH CANYON ROAD, 500' NORTH OF TERRAINES DRIVE</td>
<td>36' : 45'</td>
<td>I</td>
<td>WOOD</td>
<td>4' x 4'</td>
<td>10'</td>
<td>7' : 6'</td>
<td></td>
</tr>
<tr>
<td>56</td>
<td>W20-1</td>
<td>TERRAINES DRIVES, 700' EAST OF OR SANTA ROZA DRIVE</td>
<td>40' : 45'</td>
<td>I</td>
<td>WOOD</td>
<td>4' x 4'</td>
<td>10'</td>
<td>7' : 6'</td>
<td></td>
</tr>
<tr>
<td>57</td>
<td>W20-2</td>
<td>TERRAINES DRIVES, 500' EAST OF OR SANTA ROZA DRIVE</td>
<td>36' : 45'</td>
<td>I</td>
<td>WOOD</td>
<td>4' x 4'</td>
<td>10'</td>
<td>7' : 6'</td>
<td></td>
</tr>
<tr>
<td>58</td>
<td>SPECIAL SIGN NO. 3</td>
<td>TERRAINES DRIVES, 370' EAST OF OR SANTA ROZA DRIVE</td>
<td>40' : 43'</td>
<td>I</td>
<td>WOOD</td>
<td>4' x 4'</td>
<td>14'</td>
<td>7' : 6'</td>
<td>SEE DETAIL</td>
</tr>
<tr>
<td>59</td>
<td>M-4L</td>
<td>TERRAINES DRIVES, 205' WEST OF OR SANTA ROZA DRIVE</td>
<td>30' : 24'</td>
<td>I</td>
<td>WOOD</td>
<td>4' x 4'</td>
<td>12'</td>
<td>7' : 6'</td>
<td></td>
</tr>
<tr>
<td>60</td>
<td>D1-201/00200-3</td>
<td>SAME</td>
<td>42' : 7'</td>
<td>I</td>
<td>SAME</td>
<td>SAME</td>
<td>SAME : SAME</td>
<td>SAME</td>
<td>&quot;COUNTRY CLUB&quot; MOUNTED ABOVE SIGN NO. 39</td>
</tr>
<tr>
<td>61</td>
<td>M-4R</td>
<td>TERRAINES DRIVES, 250' WEST OF SANTA ROZA DRIVE</td>
<td>30' : 24'</td>
<td>I</td>
<td>WOOD</td>
<td>4' x 4'</td>
<td>12'</td>
<td>7' : 6'</td>
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</tr>
<tr>
<td>62</td>
<td>D1-201/00200-3</td>
<td>SAME</td>
<td>42' : 7'</td>
<td>I</td>
<td>SAME</td>
<td>SAME</td>
<td>SAME : SAME</td>
<td>SAME</td>
<td>&quot;COUNTRY CLUB&quot; MOUNTED ABOVE SIGN NO. 61</td>
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<tr>
<td>63</td>
<td>M-4L</td>
<td>SANTA ROZA DRIVE, 100' SOUTH OF TERRAINES DRIVES</td>
<td>30' : 24'</td>
<td>I</td>
<td>WOOD</td>
<td>4' x 4'</td>
<td>4'</td>
<td>7' : 6'</td>
<td>MOUNTED ON FENCE POST</td>
</tr>
<tr>
<td>64</td>
<td>D1-201/00200-3</td>
<td>SAME</td>
<td>42' : 7'</td>
<td>I</td>
<td>SAME</td>
<td>SAME</td>
<td>SAME : SAME</td>
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<tr>
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<td>30' : 24'</td>
<td>I</td>
<td>WOOD</td>
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<td>4'</td>
<td>7' : 6'</td>
<td>MOUNTED ON FENCE POST</td>
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<tr>
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<td>D1-201/00200-3</td>
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<td>42' : 7'</td>
<td>I</td>
<td>SAME</td>
<td>SAME</td>
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<td>68</td>
<td>D1-201/00200-3</td>
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<td>42' : 7'</td>
<td>I</td>
<td>SAME</td>
<td>SAME</td>
<td>SAME : SAME</td>
<td>SAME</td>
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<td>69</td>
<td>SPECIAL SIGN NO. 3</td>
<td>SANTA ROZA DRIVE, 360' SOUTH OF CANAL BANC ROAD</td>
<td>40' : 43'</td>
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<td>WOOD</td>
<td>4' x 4'</td>
<td>14'</td>
<td>7' : 6'</td>
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<tr>
<td>70</td>
<td>620-2a</td>
<td>SANTA ROZA DRIVE, 550' SOUTH OF CANAL BANC ROAD</td>
<td>36' : 45'</td>
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<td>4' x 4'</td>
<td>12'</td>
<td>7' : 6'</td>
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<tr>
<td>71</td>
<td>M20-1</td>
<td>SANTA ROZA DRIVE, 625' SOUTH OF CANAL BANC ROAD</td>
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<td>WOOD</td>
<td>4' x 4'</td>
<td>10'</td>
<td>7' : 6'</td>
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*COVER SIGNS IMMEDIATELY AFTER ROAD CLOSURE. UNCOVER IMMEDIATELY AFTER THE ROAD IS REOPENED.*

NOTES:
1. MUTCD (MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES).
2. FOR STRUCTURE AND MOUNTING DETAILS, SEE STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION, SERIES G.
3. FOR CODE REFERENCES AND STANDARD SIGN LAYOUT DETAILS, SEE STANDARD HIGHWAY SIGN BOOK.
4. POST LENGTHS SHOWN ARE APPROXIMATE. FINAL VALUES SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR.
5. W-DISTANCE FROM THE EXISTING SHOULDER, OR FACE OF CURB, TO THE SIGN POST.
6. ALL SIGNS, POSTS AND ANY OTHER TRAFFIC CONTROL DEVICES SHALL BE SUPPLIED, ERECTED AND MAINTAINED BY THE CONTRACTOR.
7. THE POSTS SHALL NOT PROTRUDE ABOVE THE SIGNS.
# ROAD CLOSURE SIGN SPECIFICATIONS

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<tr>
<th>SIGN NO.</th>
<th>MUTCD SIGN #</th>
<th>LOCATION</th>
<th>SIGN SIZE</th>
<th>SHEETING TYPE</th>
<th>POST MATERIAL</th>
<th>POST SIZE</th>
<th>POST LENGTH</th>
<th>CLEARANCE</th>
<th>NOTES</th>
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<tr>
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<td>CANAL BANK ROAD, 23RD EAST OF COUNTRY CLUB DRIVE</td>
<td>36&quot; x 36&quot;</td>
<td>III</td>
<td>WOOD</td>
<td>4&quot; x 4&quot;</td>
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<tr>
<td>11</td>
<td>D3-20(1000)D3</td>
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<td>SAME</td>
<td>SAME</td>
<td>SAME 10&quot;</td>
<td>SAME 10.5&quot;</td>
<td>&quot;COUNTRY CLUB CD&quot; MOUNTED ABOVE SIGN NO. 73</td>
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<td>SAME</td>
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<td>I</td>
<td>SAME</td>
<td>SAME</td>
<td>SAME 10.5&quot;</td>
<td>SAME 10&quot;</td>
<td>&quot;COUNTRY CLUB CD&quot; MOUNTED ABOVE SIGN NO. 74</td>
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<td>I</td>
<td>WOOD</td>
<td>4&quot; x 4&quot;</td>
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<td>7'</td>
<td>&quot;COUNTRY CLUB CD&quot; MOUNTED ABOVE SIGN NO. 75</td>
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<td>CANAL BANK ROAD, 700TH WEST OF SANTA ROZA DRIVE</td>
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<td>I</td>
<td>WOOD</td>
<td>4&quot; x 4&quot;</td>
<td>14&quot;</td>
<td>7'</td>
<td>&quot;COUNTRY CLUB CD&quot; MOUNTED ABOVE SIGN NO. 76</td>
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<td>WOOD</td>
<td>4&quot; x 4&quot;</td>
<td>14&quot;</td>
<td>7'</td>
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<td>I</td>
<td>WOOD</td>
<td>4&quot; x 4&quot;</td>
<td>14&quot;</td>
<td>7'</td>
<td>&quot;COUNTRY CLUB CD&quot; MOUNTED ABOVE SIGN NO. 78</td>
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<tr>
<td>17</td>
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<td>CANAL BANK ROAD, 250TH WEST OF SANTA ROZA DRIVE</td>
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<td>I</td>
<td>WOOD</td>
<td>4&quot; x 4&quot;</td>
<td>14&quot;</td>
<td>7'</td>
<td>&quot;COUNTRY CLUB CD&quot; MOUNTED ABOVE SIGN NO. 79</td>
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<td>18</td>
<td>CM-2R</td>
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<td>WOOD</td>
<td>4&quot; x 4&quot;</td>
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<td>7'</td>
<td>&quot;COUNTRY CLUB CD&quot; MOUNTED ABOVE SIGN NO. 80</td>
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<td>19</td>
<td>M5-1</td>
<td>CANAL BANK ROAD, 25TH WEST OF SANTA ROZA DRIVE</td>
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<td>I</td>
<td>WOOD</td>
<td>4&quot; x 4&quot;</td>
<td>14&quot;</td>
<td>7'</td>
<td>&quot;COUNTRY CLUB CD&quot; MOUNTED ABOVE SIGN NO. 81</td>
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<tr>
<td>20</td>
<td>M4-9L</td>
<td>CANAL BANK ROAD, 800TH WEST OF SANTA ROZA DRIVE</td>
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<td>I</td>
<td>WOOD</td>
<td>4&quot; x 4&quot;</td>
<td>14&quot;</td>
<td>7'</td>
<td>&quot;COUNTRY CLUB CD&quot; MOUNTED ABOVE SIGN NO. 82</td>
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<tr>
<td>21</td>
<td>D3-20(1000)D3</td>
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<td>43&quot; x 66&quot;</td>
<td>I</td>
<td>SAME</td>
<td>SAME</td>
<td>SAME 10&quot;</td>
<td>SAME 10.5&quot;</td>
<td>&quot;COUNTRY CLUB CD&quot; MOUNTED ABOVE SIGN NO. 83</td>
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<tr>
<td>22</td>
<td>R1-1</td>
<td>CANAL BANK ROAD, 35TH WEST OF SANTA ROZA DRIVE</td>
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<td>I</td>
<td>WOOD</td>
<td>4&quot; x 4&quot;</td>
<td>14&quot;</td>
<td>7'</td>
<td>&quot;COUNTRY CLUB CD&quot; MOUNTED ABOVE SIGN NO. 84</td>
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<tr>
<td>23</td>
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<td>SAME</td>
<td>43&quot; x 66&quot;</td>
<td>I</td>
<td>SAME</td>
<td>SAME</td>
<td>SAME 10&quot;</td>
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<td>&quot;COUNTRY CLUB CD&quot; MOUNTED ABOVE SIGN NO. 85</td>
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<tr>
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<td>CANAL BANK ROAD, 25TH WEST OF SANTA ROZA DRIVE</td>
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<td>WOOD</td>
<td>4&quot; x 4&quot;</td>
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<td>7'</td>
<td>&quot;COUNTRY CLUB CD&quot; MOUNTED ABOVE SIGN NO. 86</td>
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<td>CANAL BANK ROAD, 25TH WEST OF SANTA ROZA DRIVE</td>
<td>36&quot; x 36&quot;</td>
<td>I</td>
<td>WOOD</td>
<td>4&quot; x 4&quot;</td>
<td>14&quot;</td>
<td>7'</td>
<td>&quot;COUNTRY CLUB CD&quot; MOUNTED ABOVE SIGN NO. 87</td>
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<tr>
<td>26</td>
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<td>CANAL BANK ROAD, 125TH WEST OF SANTA ROZA DRIVE</td>
<td>36&quot; x 36&quot;</td>
<td>I</td>
<td>WOOD</td>
<td>4&quot; x 4&quot;</td>
<td>14&quot;</td>
<td>7'</td>
<td>&quot;COUNTRY CLUB CD&quot; MOUNTED ABOVE SIGN NO. 88</td>
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<tr>
<td>27</td>
<td>R1-2a</td>
<td>CANAL BANK ROAD, 35TH WEST OF SANTA ROZA DRIVE</td>
<td>36&quot; x 36&quot;</td>
<td>I</td>
<td>WOOD</td>
<td>4&quot; x 4&quot;</td>
<td>14&quot;</td>
<td>7'</td>
<td>&quot;COUNTRY CLUB CD&quot; MOUNTED ABOVE SIGN NO. 89</td>
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<tr>
<td>28</td>
<td>TYPE III BARRICADE (D)</td>
<td>CANAL BANK ROAD, 175TH WEST OF SANTA ROZA DRIVE</td>
<td>6' x 5'</td>
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<td>---</td>
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<td>&quot;SEE BARRICADE DETAIL A&quot;</td>
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<tr>
<td>29</td>
<td>TYPE III BARRICADE (L)</td>
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<td>6' x 5'</td>
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<td>---</td>
<td>&quot;SEE BARRICADE DETAIL A&quot;</td>
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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 G.
3. For Code References and Standard Sign Layout Details, see Standard Highway Sign Book.
4. Post lengths shown are approximate. Final values shall be determined in the field by the contractor.
5. Width distance from the existing shoulder or face of curb to the sign post.
6. All signs, posts and any other traffic control devices shall be supplied, erected and maintained by the contractor.
7. The posts shall not protrude above the signs.
TYPICAL SIGN INSTALLATION

TYPICAL SIGN INSTALLATION
NOTE: SIGNS TO BE INSTALLED IMMEDIATELY BEFORE THE ROAD IS REOPENED.

NOTE: FOR REFERENCE ONLY. NOT PART OF THIS PROJECT. WORK TO BE PERFORMED BY OTHERS.

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 REFERENCED AND STANDARD SIGN LAYOUT DETAILS, SEE STANDARD HIGHWAY SIGN BOOK.
4. POST LENGTHS SHOWN ARE APPROXIMATE. FINAL VALUES SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR.
5. W = DISTANCE FROM THE EXISTING SHOULDER, OR FACE OF CURB, TO THE SIGN POST.
6. ALL SIGNS, POSTS AND ANY OTHER TRAFFIC CONTROL DEVICES SHALL BE SUPPLIED, ERECTED AND MAINTAINED BY THE CONTRACTOR.
7. THE POSTS SHALL NOT PROTRUDE ABOVE THE SIGNS.

PERMANENT SIGNING SPECIFICATIONS

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<tr>
<th>SIGN NO.</th>
<th>MUTCD SIGN NO.</th>
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<th>SHEET MATERIAL</th>
<th>POST MATERIAL</th>
<th>POST SIZE (IN)</th>
<th>POST CLEARANCE (FT.)</th>
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<tr>
<td>1</td>
<td>W3-1a</td>
<td>COUNTRY CLUB DR, 427 SOUTH OF TERRACE HEIGHTS DR</td>
<td>36&quot; x 36&quot;</td>
<td>METAL</td>
<td>2&quot;x2&quot;</td>
<td>12&quot;</td>
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<td>D3-101(003)</td>
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<td>SAME</td>
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<td>METAL</td>
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IMPROVEMENT PLANS
### LEGEND

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<td>Edge of Cl</td>
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<td>Existing Eye</td>
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<td>Grape Line</td>
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### ABBREVIATIONS

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<th>ABBREVIATION</th>
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<td>ASHPL. ASHPLIED</td>
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<td>BB</td>
<td>BBL. BEARING</td>
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<tr>
<td>CB</td>
<td>CB. CATCH BERN</td>
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<td>CD</td>
<td>CD. CLEAN UP</td>
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<td>CON</td>
<td>CON. CONCRETE</td>
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<td>CNT</td>
<td>CNT. CONTINUOUS</td>
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<tr>
<td>CEBRC</td>
<td>CEBRC. CEBRC. CRUSHED SURFACE BASE COURSE</td>
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<tr>
<td>CEBT</td>
<td>CEBT. CEBT. CRUSHED SURFACE TOP COURSE</td>
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<tr>
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<td>CHM. CHAMBER</td>
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<td>C</td>
<td>C. C.H.</td>
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<tr>
<td>EE</td>
<td>EE. ELEVATION</td>
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<tr>
<td>FF</td>
<td>FF. FAR FACE</td>
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<tr>
<td>FL</td>
<td>FL. FLOW LINE</td>
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<td>FOA</td>
<td>FOA. FACE OF CURB</td>
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<td>HOTWAX</td>
<td>HOTWAX. HOT WAX ASPHALT</td>
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<td>LF</td>
<td>LF. LE. LINEAR FEET</td>
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| M           | M. M.

### GENERAL PROJECT NOTES

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT PLANS, SPECIFICATIONS, AND SPECIAL PROVISIONS (CONTACT DOCUMENT) AND ALL WORK SHALL COMPLY WITH ALL ORDINANCES.

2. LEGEND, ABBREVIATIONS, SURVEY CONTROL POINTS AND TYPICAL SECTION

3. TEMPORARY DESIGN AND SEISMIC CONTROL, ETC., MEASURES SHALL BE IN PLACE PRIOR TO CONSTRUCTION.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK OUTSIDE THE CHAIN-OF-WAY DESIGN OUTSIDE THE CONSTRUCTION LIMITS.

5. AN APPROVED SET OF CONSTRUCTION PLANS FOR ALL WORK SHALL BE KEPT AT THE CONSTRUCTION SITE AT ALL TIMES.

6. A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD WITH THE COUNTY PRIOR TO STARTING ANY CONSTRUCTION ON THE PROJECT.

7. THE SOURCE OF SUPPLY OF EACH OF THE MATERIALS PREPARED TO THE CONTRACTOR SHALL BE SUBMITTED TO THE COUNTY FOR APPROVAL PRIOR TO DELIVERY; ONLY MATERIALS CONFORMING TO THE REQUIREMENTS OF THE COUNTY'S SPECIFICATIONS AND APPROVED BY THE COUNTY SHALL BE USED IN THE WORK. TESTING OF MATERIALS WILL OCCUR AT THE CONTRACTOR'S EXPENSE, APPROVAL, OR REJECTION OF MATERIALS.

### TYPICAL ROADWAY SECTION

NOT TO SCALE

**SURVEY CONTROL POINTS**

**CONTROL POINT TABLE**

NOTE: PRE-SERVE POINTS 200 & 203 AND USE AS REFERENCE DURING CONSTRUCTION.
CONSTRUCTION NOTES

1. CONSTRUCTION CONTINUING.
2. EXISTING UTILITY TO REMAIN PROTECT DURING CONSTRUCTION.
3. EXISTING GAS LINE TO BE RELOCATED BY UTILITY COMPANY.
4. CONTRACTOR SHALL COORDINATE WORK WITH THE UTILITY COMPANY.
5. REMOVE EXISTING IRRIGATION SYSTEM, LIMIT AS SHOWN.
6. INSTALL 8" PVC PIPE TO PROTECT PIPE UNDER THE BRIDGE.
7. SEE STRUCTURAL PLANS FOR ADDITIONAL DETAILS.
8. SAWCUT AND REMOVE EXISTING PAVEMENT, RECONSTRUCT.

SHEET 3 OF 16
1. All materials and workmanship shall be in accordance with the requirements of the Washington State Department of Transportation "Standards Specifications for Roads, Bridges and Municipal Construction," English Units, dated 2004.

2. This structure has been designed in accordance with the "Asphalt Lift Bridge Design Specifications" 3rd Edition 2006. All prestressed concrete elements are designed for service load and checked for load and resistance factor design. The footings are designed per the service load design method. All other elements are designed per load and resistance factor design method. Seismic design has been done using an acceleration coefficient of 0.111 and a soil profile type I and site coefficient 1.0.

3. Footing elevation and substructure details are subject to change depending upon foundation material encountered. Reinforcing steel for abutment walls, and footings shall not be cut until final elevations have been determined and substructure details have been modified as required.

4. The maximum nominal bearing resistance for the service design of the footings is 2,000 psf. The lateral equivalent design earth pressure is 15 psf. All design values and site-specific design parameters shall be verified with the geotechnical report for this project by Pinned Inc.

MATERIALS

5. All cast-in-place concrete shall be class A-400.

6. All reinforcing bars shall conform to AASHTO M-31, Grade 60.

7. The contractor shall be responsible for the stability of the structure during construction. Temporary supports and falsework shall be gradually released to prevent impact or undue stresses in the structure.

8. Unless otherwise noted in the plans, all dimensions are horizontal and vertical and based on a design temperature of 44 degrees F. (mean temperature during construction).

9. Unless otherwise shown on the plans, the concrete cover measured from the face of the concrete to the face of any reinforcement bar shall be 3-1/2 inches at the top of the roadway slab, 2 inches at the bottom of the roadway slab, 3-1/2 inches at the bottom of footings, 3-1/2 inches at tops of footings and face of pier walls, and 1/2 inch at all other locations.

10. Unless noted otherwise, minimum lap splice lengths shall be as follows:

- Bar 12 in.
- Bar 16 in.
- Bar 20 in.
- Bar 24 in.
- Bar 30 in.

11. All cast-in-place concrete edges shall have 1/4" chamfers.

ELEVATION

Grades elev. shown are finish grade. Ely at C of C-Line are equal to profile grade.

P.C. girders (W530C)

Loading: HL-93

Two 24" axes, @ 4' ctrs.
FRAMING PLAN
(BEARING OF ALL PIERS ARE PERPENDICULAR TO C-LINE)

NOTE:
1. GIRDER STOPS SHALL BE CONSTRUCTED AFTER PLACEMENT OF PRESTRESSED GIRDER.
2. ELASTOMERIC PADS BETWEEN GIRDER AND GIRDER STOPS SHALL BE COATED WITH RUBBER CEMENT PRIOR TO INSTALLATION.

35'-0" (OUT TO OUT)
32'-0" ROADWAY

BEARING PAD
LAMINATED ELASTOMERIC BRIDGE
PAD 1.72" THICK (3/14 GAUGE SHIMS)
DURAMETER HARDNESS = 60
(TOTAL 12 REQD)
NOTES

1. Shop drawings of railings shall be submitted for approval, showing complete dimensions and details of fabrication and including an erection drawing. Material being used shall be specified in the shop drawings.

2. All aluminum parts shall be open a clear anodic coating at least 0.006" thick and shall be sealed to meet the requirements of ASTM B 156 and shall have a uniform finish.

3. Pipe railing, pipe railing splices, cover plates and bottom extended channels may be heated to not more than 90°F for a period not to exceed 30 minutes to facilitate forming or bending horizontal curvature.

4. Cutting shall be done by sawing on melon and all cuts shall be true and smooth. Flame cutting will not be permitted.

5. Pipe railing, pipe balusters, pipe railing splices, cover plates and bottom extended channels shall be adequately wrapped to ensure surface protection during handling and transportation to the job site.


GENERAL DETAIL
HANGER UTILITY SUPPORT
NATURAL GAS CONDUIT (TO BE INSTALLED BY OTHERS)

ANVIL INSERT FG. 282

UNISTRUT M 26 SPOUT CONCRETE INSERT
DAYTON-STANDARD 130 OR APPROVED EQUAL (typ.)
INSERT TO BE INSTALLED LEVEL, LONGITUDINALLY
AND TRANSVERSELY. PLACE INSERT TO PROVIDE
FOR TRANSVERSE ADJUSTMENT OF HANGER RODS.

NOTES:
1. ALL MATERIALS SHALL BE GALVANIZED
AFTER FABRICATION PER ASTM M 111 OR
AASHO M 232 EXCEPT GRAYWELLS PIPE ROLL.
2. PAINT ROLLERS WITH THREE COATS OF
GALVANIZING REPAIR PAINT. SEE STD.
SPEC. 9-06.2.

SECTION E

DETAIL A

SECTION B

SECTION C

DETAIL D

HANGER UTILITY SUPPORT
WATER LINE
### Reinforcement Bending Diagrams

#### Dimensions (Out to Out)

<table>
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<th>MARK NO.</th>
<th>LOCATION</th>
<th>SIZE</th>
<th>BEND TYPE</th>
<th>BAR WIDTH</th>
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- **U**
- **V**

#### Weight

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<th>Weight</th>
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<tbody>
<tr>
<td>Ft.</td>
<td>Lbs.</td>
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**NOTE**: The information in this table is for reference only, and reinforced detail shall be determined by the contractor from the plans.