GENERAL SPECIFICATIONS

FOR

PRIVATE CONSTRUCTION OF PUBLIC FACILITIES

STREETS AND UTILITIES

FOR THE

CITY OF YAKIMA

2011

CONTENTS

INTRODUCTION

The following Amendments and Special Provisions shall be used in conjunction with the 2010 Standard Specifications for Road, Bridge, and Municipal Construction.

AMENDMENTS TO THE STANDARD SPECIFICATIONS

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

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

SECTION 1-01, DEFINITIONS AND TERMS
August 2, 2011

1-01.2(1) Associations and Miscellaneous

The abbreviation and definition **"**AREA American Railway Engineering Association" is replaced with the following:

AREMA American Railway Engineering and Maintenance Association

SECTION 1-02, BID PROCEDURES AND CONDITIONS
January 4, 2011

1-02.7 Bid Deposit

In the first paragraph, the third sentence is revised to read:

For projects scheduled for bid opening in Olympia, the proposal bond may be in hard copy or electronic format via Surety2000.com or Insurevision.com and BidX.com.

1-02.9 Delivery of Proposal

In the first paragraph, the first sentence is revised to read:

For projects scheduled for bid opening in Olympia, each Proposal shall be sealed and submitted in the envelope provided with it, or electronically via Expedite software and BidX.com at the location and time identified in Section 1-02.12.

The following new paragraph is inserted after the first paragraph:

For projects scheduled for bid opening in the Region, each Proposal shall be sealed and submitted in the envelope provided with it, at the location and time identified in Section 1-02.12. The Bidder shall fill in all blanks on this envelope to ensure proper handling and delivery.

SECTION 1-06, CONTROL OF MATERIALS
January 3, 2011

1-06.1 Approval of Materials Prior to Use

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

1-06.1(4) Fabrication Inspection Expense

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

- Steel Bridges and Steel Bridge components
- Cantilever Sign Structures and Sign Bridges
- Prestressed Concrete Girders and Precast Bridge Components
- Cylindrical, Disc, Pin, and Spherical Bearings
- Modular Expansion Joints
- Epoxy Coated Reinforcing Steel
- Painted and Powder Coated Luminaire and Signal Poles
- Additional items as may be determined by the Engineer

The deductions for fabrication inspection costs will be as shown in the Payment Table below.

Zone	Place of Fabrication	Reduction in Payment
1	Within 300 airline miles from Seattle	None
2	Between 300 and 3,000 airline miles from Seattle	$700.00 per *inspection day
3	Over 3,000 airline miles from Seattle	$1,000 per *inspection day, but not less than $2,500 per trip

*Note - An inspection day includes any calendar day or portion of a calendar day spent inspecting at or traveling to and from a place of fabrication.

Where fabrication of an item takes place in more than one zone, the reduction in payment will be computed on the basis of the entire item being fabricated in the furthest of zones where any fabrication takes place on that item.

The rates for Zone 2 and 3 shall be applied for the full duration time of all fabrication inspection activities to include but not limited to; plant approvals, prefabrication meetings, fabrication, coatings and final inspection.

1-06.2(2)A General

Table 2 “Pay Factors” on page 1-39 is revised to read:

Table 2
Pay Factors

PAY FACTOR	Minimum Required Percent of Work Within Specification Limits for a Given Factor (PU + PL) – 100														
Category	n=3	n=4	n=5	n=6	n=7	n=8	n=9	n=10 to n=11	n=12 to n=14	n=15 to n=17	n=18 to n=22	n=23 to n=29	n=30 to n=42	n=43 to n=66	n=67 to ∞
1.05						100	100	100	100	100	100	100	100	100	100
1.04					100	99	97	95	96	96	96	97	97	97	97
1.03				100	98	96	94	92	93	93	94	95	95	96	96
1.02				99	97	94	91	89	90	91	92	93	93	94	94
1.01	100	100	100	98	95	92	89	87	88	89	90	91	92	92	93
1.00	69	75	78	80	82	83	84	85	86	87	88	89	90	91	92
0.99	66	72	76	78	80	81	82	83	84	85	86	87	89	90	91
0.98	64	70	74	76	78	79	80	81	82	84	85	86	87	88	90
0.97	63	68	72	74	76	77	78	79	81	82	83	84	86	87	88
0.96	61	67	70	72	74	75	76	78	79	81	82	83	84	86	87
0.95	59	65	68	71	72	74	75	76	78	79	80	82	83	84	86
0.94	58	63	67	69	71	72	73	75	76	78	79	80	82	83	85
0.93	57	62	65	67	69	71	72	73	75	76	78	79	80	82	84
0.92	55	60	63	66	68	69	70	72	73	75	76	78	79	81	82
0.91	54	59	62	64	66	68	69	70	72	74	75	76	78	79	81
0.90	53	57	61	63	65	66	67	69	71	72	74	75	77	78	80
0.89	51	56	59	62	63	65	66	68	69	71	72	74	75	77	79
0.88	50	55	58	60	62	64	65	66	68	70	71	73	74	76	78
0.87	49	53	57	59	61	62	63	65	67	68	70	71	73	75	77
0.86	48	52	55	58	59	61	62	64	66	67	69	70	72	74	76

(Continued)

Table 2 “Pay Factors” on page 1-40 is revised to read:

Table 2
Pay Factors (continued)

PAY FACTOR	Minimum Required Percent of Work Within Specification Limits for a Given Factor ($P_U + P_L$) – 100														
Category	n=3	n=4	n=5	n=6	n=7	n=8	n=9	n=10 to n=11	n=12 to n=14	n=15 to n=17	n=18 to n=22	n=23 to n=29	n=30 to n=42	n=43 to n=66	n=67 to ∞
0.85	46	51	54	56	58	60	61	62	64	66	67	69	71	72	75
0.84	45	49	53	55	57	58	60	61	63	65	66	68	70	71	73
0.83	44	48	51	54	56	57	58	60	62	64	65	67	69	70	72
0.82	43	47	50	53	54	56	57	59	61	62	64	66	67	69	71
0.81	41	46	49	51	53	55	56	58	59	61	63	64	66	68	70
0.80	40	44	48	50	52	54	55	56	58	60	62	63	65	67	69
0.79	39	43	46	49	51	52	54	55	57	59	61	62	64	66	68
0.78	38	42	45	48	50	51	52	54	56	58	59	61	63	65	67
0.77	36	41	44	46	48	50	51	53	55	57	58	60	62	64	66
0.76	35	39	43	45	47	49	50	52	54	56	57	59	61	63	65
0.75	33	38	42	44	46	48	49	51	53	54	56	58	60	62	64
REJECT	Values Less Than Those Shown Above														

Reject Quality Levels Less Than Those Specified for a 0.75 Pay Factor
Note: If the value of ($P_U + P_L$) - 100 does not correspond to a ($P_U + P_L$) - 100 value in this table, use the next smaller ($P_U + P_L$) - 100 value.

SECTION 1-07, LEGAL RELATIONS AND RESPONSIBILITIES TO THE PUBLIC
January 3, 2011

1-07.2 Sales Tax

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

> The Contractor shall contact the Contract Payment section of the Division of Accounting & Financial Services of the Department of Transportation, Olympia WA for questions on sales tax.

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

> The Contracting Agency will pay the retained percentage only if the Contractor has obtained from the State Department of Revenue a certificate showing that all Contract-related taxes have been paid (RCW 60.28.051).

1-07.9(1) General

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

> When the project involves highway Work, heavy Work and building Work, the Contract Provisions may list a Federal wage and fringe benefit rate for the highway Work, a separate Federal wage and fringe benefit rate for both the heavy Work and the building Work.

1-07.13(4) Repair of Damage

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

> For damage qualifying for relief under Sections 1-07.13(1), 1-07.13(2), 1-07.13(3), or 8-17.5, payment will be made in accordance with Section 1-09.4 using the estimated Bid item "Reimbursement for Third Party Damage".

1-07.14 Responsibility for Damage

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

> Subject to the limitations in this section and RCW 4.24.115 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 or breach of contract regarding the Work, or 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.
>
> Subject to the limitations in this section and RCW 4.24.115, the Contractor shall indemnify, defend, and save harmless any county, city, or region, its officers, and employees connected with the Work, within the limits of which county, city, or region the Work is being performed, all in the same manner and to the same extent as provided above for the protection of the State, its officers and employees, provided that no retention of money due

the Contractor be made by the State except as provided in RCW 60.28, pending disposition of suits or claims for damages brought against the county, city, or district.

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

This section is supplemented with the following:

THE CONTRACTOR SPECIFICALLY ASSUMES ALL POTENTIAL LIABILITY FOR ACTIONS BROUGHT BY EMPLOYEES OF THE CONTRACTOR AND, SOLELY FOR THE PURPOSE OF ENFORCING THE DEFENSE AND INDEMNIFICATION OBLIGATIONS SET FORTH IN SECTION 1-07.14, THE CONTRACTOR SPECIFICALLY WAIVES ANY IMMUNITY GRANTED UNDER THE STATE INDUSTRIAL INSURANCE LAW, RCW TITLE 51. THIS WAIVER HAD BEEN MUTUALLY NEGOTIATED BY THE PARTIES. THE CONTRACTOR SHALL SIMILARLY REQUIRE THAT EACH SUBCONTRACTOR IT RETAINS IN CONNECTION WITH THE PROJECT COMPLY WITH THE TERMS OF THIS PARAGRAPH, WAIVE ANY IMMUNITY GRANTED UNDER RCW TITLE 51 AND ASSUME ALL LIABILITY FOR ACTIONS BROUGHT BY EMPLOYEES OF THE SUBCONTRACTOR.

1-07.15 Temporary Water Pollution/Erosion Control

The fourth paragraph is deleted**.**

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

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

No on-site construction activities may commence until the Contracting Agency accepts a SPCC Plan for the project.

In item number 10, the first paragraph below the pay item "SPCC Plan," lump sum is revised to read:

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

1-07.16(2) Vegetation Protection and Restoration

The second paragraph is revised to read:

Damage which may require replacement of vegetation includes torn bark stripping, broken branches, exposed root systems, cut root systems, poisoned root systems, compaction of surface soil and roots, puncture wounds, drastic reduction of surface roots or leaf canopy, changes in grade greater than 6-inches, or any other changes to the location that may jeopardize the survival or health of the vegetation to be preserved.

The third paragraph is revised to read:

When large roots of trees designated to be saved are exposed by the Contractor's operation, they shall be wrapped with heavy, moist material such as burlap or canvas for

protection and to prevent excessive drying. The material shall be kept moist and securely fastened until the roots are covered to finish grade. All material and fastening material shall be removed from the roots before covering. All roots 1-inch or larger in diameter, which are damaged, shall be pruned with a sharp saw or pruning shear. Damaged, torn, or ripped bark shall be removed as designated by the Engineer at no additional cost to the Contracting Agency.

The fourth paragraph is revised to read:

Any pruning activity required to complete the Work as specified shall be performed by a Certified Arborist as designated by the Engineer.

1-07.18 Public Liability and Property Damage Insurance

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

1-07.18 Public Liability and Property Damage Insurance

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 (OCP) Insurance providing bodily injury and property damage liability coverage with limits of $3,000,000 per occurrence and, per project, in the aggregate for each policy period, written on Insurance Services Office (ISO) form CG0009 1204, together with Washington State Department of Transportation amendatory endorsement CG 2908 1195, specifying the Contracting Agency, the State, the Governor, the Commission, the Secretary , the Department and all officers and employees of the State as named insured.

2. Commercial General Liability (CGL) Insurance written under ISO Form CG0001 or its equivalent with minimum limits of $3,000,000 per occurrence and in the aggregate for each one year policy period. This coverage may be any combination of primary, umbrella or excess liability coverage affording total liability limits of not less than $3,000,000 per occurrence and in the aggregate. Products and completed operations coverage shall be provided for a period of three years following Substantial Completion 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. This coverage may be any combination of primary, umbrella or excess liability coverage affording total liability limits of not less than $1,000,000 per occurrence with the State named as an additional insured or designated insured in connection with the Contractor’s Performance of the Contract. If pollutants are to be transported, MCS 90 and CA 99 48 endorsements are required on the Commercial Automobile Liability insurance policy unless in-transit pollution risk is covered under a Pollution Liability insurance policy.

4. The Contractor shall be Named Insured and the Contracting Agency, the State, the Governor, the Commission, the Secretary, the Department, all officers and employees

of the State, and their respective members, directors, officers, employees, agents and consultants (collectively the "Additional Insureds") shall be included as Additional Insureds for all policies and coverages specified in this Section, with the exception of the OCP policy. Said insurance coverage shall be primary and non-contributory insurance with respect to the insureds and the Additional Insureds. Any insurance or self-insurance beyond that specified in this Contract that is maintained by any Additional Insured shall be in excess of such insurance and shall not contribute with it. All insurance coverage required by this Section shall be written and provided by "occurrence-based" policy forms rather than by "claims made" forms.

All endorsements adding Additional Insureds to required policies shall be issued on (i) form CG 20 10 11 85 or a form deemed equivalent by the Contracting Agency, providing the Additional Insureds with all policies and coverages set forth in this Section, with the exception of the OCP and Commercial Auto policies or (ii) form CA 20 48 or forms deemed equivalent by Contracting Agency, providing the Additional Insureds with all coverage's required under the Commercial Automobile Liability.

5. The coverage limits to be provided by Contractor for itself and to the Contracting Agency and Additional Insureds pursuant to this section or any Special Provision, shall be on a "per project" aggregate basis with the minimum limits of liability as set forth herein for both general liability and products/completed operations claims. The additional insured coverage required under this Section for products/completed operations claims shall remain in full force and effect for not less than three years following Substantial Completion of the project. If the Contractor maintains, at any time, coverage limits for itself in excess of limits set forth in this Section 1-07.18 or any Special Provision, then those additional coverage limits shall also apply to the Contracting Agency and the Additional Insureds. This includes, but is not limited to, any coverage limits provided under any risk financing program of any description, whether such limits are primary, excess, contingent or otherwise.

6. All insurance policies and coverage's required under Section 1-07.18 and Section 1-07.10 shall contain a waiver of subrogation against the Contracting Agency , the State, any Additional Insured and their respective departments, agencies, boards, and commissions and their respective officers, officials, agents, and employees for losses arising from Work performed by or on behalf of the Contractor. This waiver has been mutually negotiated by the parties.

7. Where applicable, the Contractor shall cause each Subcontractor to provide insurance that complies with all applicable requirements of the Contractor-provided insurance as set forth herein, in circumstances where the Subcontractor is not covered by the Contractor-provided insurance. The Contractor shall have sole responsibility for determining the limits of coverage required, if any, to be obtained by Subcontractors, which determination shall be made in accordance with reasonable and prudent business practices. In the event that a Subcontractor is required to add the Contractor as an additional insured pursuant to its contract for Work at the Project, then the Contractor shall also cause each Subcontractor to include the Contracting Agency and the Additional Insureds as additional insureds as well, for primary and non-contributory limits of liability under each Subcontractor's Commercial General Liability, Commercial Automobile Liability and, any other coverage's which may be required pursuant to a "Special Provision".

8. Unless specifically noted otherwise in the Contract Documents, the parties to this Contract do not intend by any of the provisions of this Contract to cause the public or any member thereof or any other Person to be a third party beneficiary of the Contract Documents. Nothing in this Contract authorizes anyone not a party to this Contract or a designated third party beneficiary to this Contract to maintain a suit for personal injuries or property damage pursuant to the terms or provisions of this Contract. It is the further intent of the Contracting Agency and the Contractor in executing the Form of Contract that no individual, firm, corporation or any combination thereof which supplies materials, labor, services, or equipment to the Contractor for the performance of the Work shall become thereby a third party beneficiary of this Contract.

   The Contract Documents shall not be construed to create a contractual relationship of any kind between the Contracting Agency and a Subcontractor or any other Person except the Contractor.

9. 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.

10. With the exception of the Commercial Automobile liability coverage, no policies of insurance required under this Section shall contain an arbitration or alternative dispute resolution clause applicable to disputes between the insurer and its insureds. Any and all disputes concerning (i) terms and scope of insurance coverage afforded by the policies required hereunder and/or (ii) extra contractual remedies and relief which may be afforded policy holders in connection with coverage disputes, shall be resolved in Washington Superior Court, applying Washington law.

11. 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. Within 30 days of being awarded a Contract, the Contractor shall provide the Department with complete copies, which may be electronic copies, of all insurance policies required under this section and any Special Provisions.

12. The Contractor shall provide written notice to the Engineer of any policy cancellations and provide the Department of Transportation, Contract Payment Section, P.O. Box 47420 Olympia, WA 98504-7420, by U.S Mail, notice of any policy cancellation within two business days of receipt of cancellation.

13. Failure on the part of the Contractor to maintain the insurance as required, or to not provide certification and copies of the insurance prior to the time specified in subsection 11 above, shall constitute a material breach of Contract upon which the Contracting Agency may, after giving 5-business days notice to the Contractor to correct the breach, immediately terminate the Contract or, at its discretion, procure or renew such insurance and pay any and all premiums in connection therewith, with any

sums so expended to be repaid to the Contracting Agency on demand, or at the sole discretion of the Contracting Agency, offset against funds due the Contractor from the Contracting Agency. 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.

SECTION 1-08, PROSECUTION AND PROGRESS
January 3, 2011

1-08.1 Subcontracting

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

This Certification shall be submitted to the Project Engineer on WSDOT form 421-023, "Quarterly Report of Amounts Paid as MBE/WBE Participants", quarterly for the State fiscal quarters: January 1 through March 31, April 1 through June 30, July 1 through September 30, October 1 through December 31, and for any remaining portion of a quarter through Physical Completion of the Contract. The report is due 20 calendar days following the fiscal quarter end or 20-calendar days after Physical Completion of the Contract.

The last sentence in the ninth paragraph is revised to read:

When required, this "Quarterly Report of Amounts Credited as DBE Participation" is in lieu of WSDOT form 421-023, "Quarterly Report of Amounts Paid as MBE/WBE Participants".

1-08.5 Time for Completion

The last two sentences in the first paragraph are revised to read:

When any of these holidays fall on a Sunday, the following Monday shall be counted a nonworking day. When the holiday falls on a Saturday, the preceding Friday shall be counted a nonworking day. The days between December 25 and January 1 will be classified as nonworking days.

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

c. Quarterly Reports of Amounts Paid as MBE/WBE Participants, or Quarterly Reports of Amounts Credited as DBE Participation, as required by the Contract Provisions.

SECTION 1-09, MEASUREMENT AND PAYMENT
January 3, 2011

1-09.2(1) General Requirement for Weighing Equipment

This section is revised to read:

Unless specified otherwise, any Highway or Bridge construction materials to be proportioned or measured and paid for by weight shall be weighed on a scale.

Scales

Scales shall:

1. be accurate to within 0.5-percent of the correct weight throughout the range of use;

2. not include spring balances;

3. include beams, dials, or other reliable readout equipment;

4. be built to prevent scale parts from binding, vibrating, or being displaced and to protect all working parts and;

5. be carefully maintained, with bunkers and platforms kept clear of accumulated materials that could cause errors.

Scale Operations

Contractor provided scale operations are defined as operations where a scale is set up by the Contractor specifically for the project and most, if not all, material weighed on the scale is utilized for Contract Work. In this situation, the Contractor shall provide a person to operate the project scale, write tickets, perform scale checks and prepare reports.

Commercial scale operations include the use of established scales used to sell materials to the public on a regular basis. In addition, for the purposes of this specification, all batch, hopper, and belt scales are considered to be commercial scales. When a commercial scale is used as the project scale, the Contractor may utilize a commercial scale operator provided it is at no additional cost to the contracting agency.

In addition, the Contractor shall ensure that:

1. the Engineer is allowed to observe the weighing operation and check the daily scale weight record;

2. scale verification checks are performed at the direction of the Contracting Agency (see Section 1-09.2(5));

3. several times each day, the scale operator records and makes certain the platform scale balances and returns to zero when the load is removed; and

4. test results and scale weight records for each day's hauling operations are provided to the Engineer daily. Unless otherwise approved, reporting shall utilize form 422-027, Scaleman's Daily Report.

Trucks and Tickets

Each truck to be weighed shall bear a unique identification number. This number shall be legible and in plain view of the scale operator. Each vehicle operator shall obtain a weigh or load ticket from the scale operator. The Contracting Agency will provide item quantity tickets for scales that are not self-printing. The Contractor shall provide tickets for self-printing scales. All tickets shall, at a minimum, contain the following information:

1. date of haul;

2. contract number;

3. contract unit Bid item;

4. unit of measure;

5. identification number of hauling vehicle; and

6. weight delivered

    a. net weight in the case of batch and hopper scales

    b. gross weight, tare and net weight in the case of platform scales (tare may be omitted if a tare beam is used)

    c. approximate load out weight in the case of belt conveyor scales

The vehicle operator shall deliver the ticket in legible condition to the material receiver at the material delivery point. The material delivery point is defined as the location where the material is incorporated into the permanent Work.

1-09.2(2) Specific Requirements for Batching Scales

In the first paragraph, the last sentence is revised to read:

Batching scales used for Portland Cement concrete or hot mix asphalt shall not be used for batching other materials.

1-09.2(3) Specific Requirements for Platform Scales

In the first paragraph, the last sentence is revised to read:

A tare weight shall be taken of each hauling vehicle at least once daily.

The third paragraph is deleted.

1-09.2(5) Measurement

This section is revised to read:

Scale Verification Checks

The Engineer will verify the accuracy of each batch, hopper or platform scale. The frequency of verification checks will be such that at least one test weekly is performed for each weighed contract item of work being performed during that week.

Verification checks may not be routinely conducted quantities of weighed material who's estimated proposal quantity, multiplied by its unit price, has a value of less than $20,000.

The verification will consist of one of the following methods and be at the Contractor's option:

1. Weigh a loaded truck on a separate certified platform scale designated by the Contractor, for the purpose of scale verification.

2. Weigh a vehicle that weighs at least 10,000 pounds on a separate certified scale and then check the project scale with it.

3. Establish a certified fixed load weighing at least 10,000 pounds as a check-weight. The certification shall consist of an affidavit affirming the correct weight of the fixed load.

Should the scale verification check reveal a weight difference of more than 0.5-percent, a second scale verification check shall be performed immediately. If the weight differences of both comparison checks exceed the 0.5-percent limit, the Contractor shall immediately stop weighing and the scale shall be recertified at the Contractor's expense.

Belt Scales

To test the accuracy of a belt-conveyor scale, the Contractor shall weigh five or more payloads from sequential hauling units and compare these weights with weights of the same payloads taken on a separate certified platform scale. If the test results fluctuate, the Engineer may require more than five check loads. Conveyor weights will be based on tonnage values taken from the sealed odometer at the beginning and end of each check period.

If scale verification checks show the scale has been under weighing, it shall be adjusted immediately.

If scale verification checks show the scale has been overweighing, its operation will cease immediately until adjusted.

Minor Construction Items

If the specifications and plans require weight measurement for minor construction items, the Contractor may request permission to convert volume to weight. If the Engineer approves, an agreed factor may be used to make this conversion and volume may be used to calculate the corresponding weight for payment.

1-09.2(6) Payment

This section is revised to read:

Unless specified otherwise the Contracting Agency will pay for no materials received by weight unless they have been weighed as required in this section or as required by another method the Engineer has approved in writing.

The Contractor shall not be compensated for any loss from under weighing that is revealed by scale verification checks.

If scale verification checks reveal that the scale is over weighing, then payment for all material weighed since the last valid scale verification check will be adjusted. The contracting agency will calculate the combined weight of all materials weighed after the last verification check showing accurate results. This combined weight will then be reduced for payment by the percentage of scale error that exceeds 0.5-percent unless the Contractor

demonstrates to the satisfaction of the Engineer that the defect in the scale was present for a lesser period of time.

Unit contract prices for the various pay items of the project cover all costs related to weighing and proportioning materials for payment. These costs include but are not limited to:

- furnishing, installing, certifying, and maintaining scales;
- providing a weigher to operate a Contractor provided scale;
- providing a weigher to operate a commercial scale, if necessary;
- providing self-printing tickets, if necessary;
- rerouting a truck for verification weighing;
- assisting the Engineer with scale verification checks;
- any other related costs associated with meeting the requirements of this section.

1-09.9 Payments

The first paragraph is revised to read:

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

The Contractor shall submit a breakdown of the cost of lump sum Items to enable the Project Engineer to determine the Work performed on a monthly basis. Lump sum item breakdowns shall be submitted prior to the first progress payment that includes payment for the Bid Item in question. A breakdown is not required for lump sum items that include a basis for incremental payments as part of the respective Specification. Absent a lump sum breakdown the Project Engineer will make a determination based on information available. The Project Engineer's determination of the cost of work shall be final.

In the third paragraph, the second sentence is deleted.

1-09.11(1)A Disputes Review Board Membership

This section is supplemented with the following new paragraph:

The Contracting Agency and Contractor shall indemnify and hold harmless the Board Members from and against all claims, damages, losses and expenses, including but not limited to attorney's fees arising out of and resulting from the actions and recommendations of the Board.

SECTION 1-10, TEMPORARY TRAFFIC CONTROL
January 3, 2011

In Division 1-10, all references to "truck mounted" are revised to read "transportable".

1-10.2(3) Conformance to Established Standards

The reference “(TMA’s)” in the paragraph that starts with “Category 3” is deleted.

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

Item number 1 in the first paragraph is revised to read:

1. If the Plans show a portable changeable message sign, it shall be established in advance of the operation; far enough back to provide warning of both the operation and any queue of traffic that has formed during the operation.

In the second paragraph, the reference to "TMA/arrow board" is revised to read "transportable attenuator/arrow board".

1-10.3(3)A Construction Signs

In the fourth paragraph “height” is replaced with “top of the ballast”.

1-10.3(3)J Truck Mounted Attenuator

The title for this section is revised to read:

1-10.3(3)J Transportable Attenuator

In the second and fourth paragraphs, the references to "TMA" are revised to read "Transportable Attenuator".

In the first paragraph, the first sentence is revised to read:

> Where shown on an approved traffic control plan or where ordered by the Engineer, the Contractor shall provide, operate, and maintain transportable impact attenuators as required in Section 9-35.12.

In the third paragraph, the reference to "truck's" is revised to read "host vehicle's".

1-10.4(2) Item Bids with Lump Sum for Incidentals

All references to "Truck Mounted Impact Attenuator(s)" are revised to read "Transportable Attenuator(s)".

In the eighth paragraph, the first sentence is revised to read:

> “Transportable Attenuator” will be measured per each one time only for each host vehicle with mounted or attached impact attenuator used on the project.

In the last sentence of the ninth paragraph, the reference to "TMA" is replaced with "transportable attenuator".

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

All references to "truck mounted impact attenuator(s)" are revised to read "transportable attenuator(s)".

SECTION 2-01, CLEARING, GRUBBING, AND ROADSIDE CLEANUP
April 5, 2011

2-01.3(2) Grubbing
In the first paragraph Item 2. e. is revised to read:

e. Upon which embankments will be placed except stumps may be close-cut or trimmed as allowed in Section 2-01.3(1) item 3.

SECTION 2-02, REMOVAL OF STRUCTURES AND OBSTRUCTIONS
January 4, 2011

2-02.3 Construction Requirements
The fourth paragraph is revised to read:

The Contractor may dispose of waste material in Contracting Agency owned sites if the Special Provisions or the Engineer permits it. Otherwise, the Contractor shall arrange to dispose of waste at no expense to the Contracting Agency and the disposal shall meet the requirements of Section 2-03.3(7)C.

SECTION 2-09, STRUCTURE EXCAVATION
January 3, 2011

2-09.3(1)E Backfilling
The sixth paragraph is revised to read:

The water/cement ratio shall be calculated on the total weight of cementitious material. Cementitious materials are those listed in Section 5-05.2.

2-09.3(2) Classification of Structure Excavation
Item number 1 is revised to read:

1. **Class A.** Structure excavation required for bridge and retaining wall footings, geosynthetic retaining wall footings, structural earth walls and sign structure footings, pile or drilled shaft caps, seals, wingwall footings, detention vaults, and noise barrier wall footings shall be classified as Structure excavation Class A. If the excavation requires a cofferdam, structural shoring, or extra excavation, the work outside the neat lines of the Structure excavation Class A shall be classified as shoring or extra excavation Class A.

2-09.3(3)D Shoring and Cofferdams
The 14th paragraph is revised to read:

If soldier piles are placed in drilled holes, and lagging is installed concurrently with the excavation, all backfill above the bottom of the lagging shall consist of controlled density fill or lean concrete. Backfill below the bottom of the lagging may consist of pea gravel. If full-height steel sheet lagging is installed prior to excavation, soldier pile holes may be backfilled with pea gravel.

2-09.4 Measurement

The second sentence in the second paragraph, "**Horizontal Limits**", is supplemented with the following:

(4) more than 1-foot outside the perimeter of the soil reinforcement area for geosynthetic and structural earth walls.

SECTION 5-04, HOT MIX ASPHALT
April 5, 2011

5-04.3(8)A1 General

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

Statistical evaluation will be used for a class of HMA with the same PG grade of asphalt binder, when the Proposal quantities exceed 4,000-tons.

The third paragraph is revised to read:

Nonstatistical evaluation will be used for the acceptance of HMA when the Proposal quantities for a class of HMA, with the same PG grade of asphalt binder, are 4,000-tons or less.

5-04.3(8)A4 Definition of Sampling Lot and Sublot

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

A lot is represented by randomly selected samples of the same mix design that will be tested for acceptance with a maximum of 15 sublots per lot; the final lot for a mix design may be increased to 25 sublots

5-04.3(10)B1 General

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

A lot is represented by randomly selected samples of the same mix design that will be tested for acceptance with a maximum of 15 sublots per lot; the final lot for a mix design may be increased to 25 sublots.

SECTION 7-04, STORM SEWERS
January 3, 2011

7-04.2 Materials

In the first paragraph, the following three items are inserted after the item "Corrugated Polyethylene Storm Sewer Pipe 9-05.20":

Steel Rib Reinforced Polyethylene Storm Sewer Pipe	9-05.22
High Density Polyethylene (HDPE) Pipe	9-05.23
Polypropylene Storm Sewer Pipe	9-05.25

The third paragraph is revised to read:

Thermoplastic storm sewer pipe includes solid wall PVC storm sewer pipe, profile wall PVC storm sewer pipe, corrugated polyethylene storm sewer pipe, and polypropylene storm sewer pipe.

In the '**Storm Sewer Pipe Schedules**' table, the fifth column heading is revised to read:

PE[2] PP[4]

The footnotes below the '**Storm Sewer Pipe Schedules**' table are supplemented with the following:

4 PP=Polypropylene pipe

7-04.5 Payment

This section is supplemented with the following:

"Steel Rib Reinforced Polyethylene Storm Sewer Pipe ____ In. Diam.", per linear foot.
"High Density Polyethylene (HDPE) Pipe ____ In. Diam.", per linear foot.
"Polypropylene Storm Sewer Pipe ____ In. Diam.", per linear foot.

SECTION 8-01, EROSION CONTROL AND WATER POLLUTION CONTROL January 3, 2011

8-01.2 Materials

In the first paragraph, the following is inserted after the first sentence:

Corrugated Polyethylene Drain Pipe 9-05.1(6)

8-01.3(1) General

In the sixth paragraph, the first sentence is revised to read:

When natural elements rut or erode the slope, the Contractor shall restore and repair the damage with the eroded material where possible, and remove and dispose of any remaining material found in ditches and culverts.

In the seventh paragraph the first two sentences are deleted.

The table in the seventh paragraph is revised to read:

Western Washington (West of the Cascade Mountain crest)	
May 1 through September 30	17 Acres
October 1 through April 30	5 Acres

Eastern Washington (East of the Cascade Mountain crest.)	
April 1 through October 31	17 Acres
November 1 through March 31	5 Acres

The eighth paragraph is revised to read:

The Engineer may increase or decrease the limits based on project conditions.

The ninth paragraph is revised to read:

Erodible earth is defined as any surface where soils, grindings, or other materials may be capable of being displaced and transported by rain, wind, or surface water runoff.

The 10th paragraph is revised to read:

Erodible earth not being worked, whether at final grade or not, shall be covered within the specified time period, (see the tables below) using an approved soil covering practice.

Western Washington (West of the Cascade Mountain crest)

October 1 through April 30	2-days maximum
May 1 to September 30	7-days maximum

Eastern Washington (East of the Cascade Mountain crest.)

October 1 through June 30	5-days maximum
July 1 through September 30	10-days maximum

8-01.3(1)A Submittals

This section is revised to read:

When a Temporary Erosion and Sediment Control (TESC) Plan is included in the Plans, the Contractor shall either adopt or modify the existing TESC Plan. If modified, the Contractor's TESC Plan shall meet all requirements of Chapter 6-2 of the current edition of the WSDOT Highway Runoff Manual. The Contractor shall provide a schedule for TESC Plan implementation and incorporate it into the Contractor's progress schedule. The Contractor shall obtain the Engineer's approval of the TESC Plan and schedule prior to the beginning of Work. The TESC Plan shall cover all areas that maybe affected inside and outside the limits of the project (including all Contracting Agency-provided sources, disposal sites, and haul roads, and all nearby land, streams, and other bodies of water).

The Contractor shall allow at least 5-working days for the Engineer to review any original or revised TESC Plan. Failure to approve all or part of any such Plan shall not make the Contracting Agency liable to the Contractor for any Work delays.

8-01.3(1)B Erosion and Sediment Control (ESC) Lead

In the last paragraph, "Form Number 220-030 EF" is revised to read "WSDOT Form Number 220-030 EF".

8-01.3(1)C Water Management

In number 2., the reference to "Standard Specification" is revised to read "Section".

Number 3., is revised to read:

3. Offsite Water

Prior to disruption of the normal watercourse, the Contractor shall intercept the offsite stormwater and pipe it either through or around the project site. This water shall not be combined with onsite stormwater. It 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 submitted by the Contractor for the Engineer's approval.

8-01.3(1)D Dispersion/Infiltration

This section is revised to read:

Water shall be conveyed only to dispersion or infiltration areas designated in the TESC Plan or to sites approved by the Engineer. Water shall be conveyed to designated dispersion areas at a rate such that, when runoff leaves the area, and enters waters of the State, turbidity standards are achieved. Water shall be conveyed to designated infiltration areas at a rate that does not produce surface runoff.

8-01.3(2)B Seeding and Fertilizing

The fourth paragraph is revised to read:

The seed applied using a hydroseeder shall have a tracer added to visibly aid uniform application. This tracer shall not be harmful to plant, aquatic or animal life. If HECP Type 3 Mulch is used as a tracer, the application rate shall not exceed 250-pounds per acre.

In the fifth paragraph, "hydro seeder" is revised to read "hydroseeder".

8-01.3(2)D Mulching

In the second paragraph, the second sentence is revised to read:

Wood strand mulch shall be applied by hand or by straw blower on seeded areas.

In the third paragraph, "1" is revised to read "a single" and "hydro seeder" is revised to read "hydroseeder".

The fourth paragraph is revised to read:

Temporary seed applied outside the application windows established in 8-01.3(2)F shall be covered with a mulch containing either HECP Type 2 Mulch or HECP Type 1 Mulch, as designated by the Engineer.

8-01.3(2)E Tacking Agent and Soil Binders

The following new paragraph is inserted at the beginning of this Section:

Tacking agent or soil binders applied using a hydroseeder shall have a mulch tracer added to visibly aid uniform application. This tracer shall not be harmful to plant, aquatic or animal life. If HECP Type 3 Mulch is used as a tracer, the application rate shall not exceed 250-pounds per acre.

The third sentence in the first paragraph below "**Soil Binding Using Polyacrylamide (PAM)"** is revised to read:

A minimum of 200-pounds per acre of HECP Type 3 Mulch shall be applied with the dissolved PAM.

In the second paragraph below "**Soil Binding Using Polyacrylamide (PAM)**", "within" is revised to read "after".

The paragraph "**Soil Binding Using Bonded Fiber Matrix (BFM)"** including title is revised to read:

Soil Binding Using HECP Type 2 Mulch

The HECP Type 2 Mulch shall be hydraulically applied in accordance with the manufacturer's installation instructions. The HECP Type 2 Mulch may require a 24 to 48 hour curing period to achieve maximum performance and shall not be applied when precipitation is predicted within 24 to 48 hours, or on saturated soils, as determined by the Engineer.

The last paragraph including titled is revised to read:

Soil Binding Using HECP Type 1 Mulch

The HECP Type 1 Mulch shall be hydraulically applied in accordance with the manufacturer's installation instructions and recommendations.

8-01.3(2)F Dates for Application of Final Seed, Fertilizer, and Mulch

The first paragraph is revised to read:

Unless otherwise approved by the Engineer, the final application of seeding, fertilizing, and mulching of slopes shall be performed during the following periods:

Western Washington[1]	Eastern Washington
(West of the Cascade Mountain crest)	(East of the Cascade Mountain crest)
March 1 through May 15	October 1 through November 15 only
September 1 through October 1	

[1] Where Contract timing is appropriate, seeding, fertilizing, and mulching shall be accomplished during the fall period listed above. Written permission to seed after October 1 will only be given when Physical Completion of the project is imminent and the environmental conditions are conducive to satisfactory growth.

8-01.3(2)G Protection and Care of Seeded Areas

The first paragraph is revised to read:

The Contractor shall be responsible to ensure a healthy stand of grass. The Contractor shall restore eroded areas, clean up and properly dispose of eroded materials, and reapply the seed, fertilizer, and mulch, at no additional cost to the Contracting Agency.

In the second paragraph, number 1. is revised to read:

1. At the Contractor's expense, seed, fertilizer and mulch shall be reapplied in areas that have been damaged through any cause prior to final inspection, and reapplied to areas that have failed to receive a uniform application at the specified rate.

8-01.3(2)H Inspection

The first sentence is revised to read:

> Inspection of seeded areas will be made upon completion of seeding, temporary seeding, fertilizing, and mulching.

The third sentence is revised to read:

> Areas that have not received a uniform application of seed, fertilizer, or mulch at the specified rate, as determined by the Engineer, shall be reseeded, refertilized, or remulched at the Contractor's expense prior to payment.

8-01.3(2)I Mowing

In the first paragraph, the last sentence is revised to read:

> Trimming around traffic facilities, Structures, planting areas, or other features extending above ground shall be accomplished preceding or simultaneously with each mowing.

8-01.3(3) Placing Erosion Control Blanket

In the first sentence, "Standard" is deleted.

The second sentence is revised to read:

> Temporary erosion control blankets, having an open area of 60-percent or greater, may be installed prior to seeding.

8-01.3(4) Placing Compost Blanket

In the first paragraph, "before" is revised to read "prior to".

The last sentence is revised to read:

> Compost shall be Coarse Compost.

8-01.3(5) Placing Plastic Covering

The first sentence is revised to read:

> Plastic shall be placed with at least a 12-inch overlap of all seams.

8-01.3(6)A Geotextile-Encased Check Dam

The first paragraph is deleted.

8-01.3(6)B Rock Check Dam

This section including title is revised to read:

> ### 8-01.3(6)B Quarry Spall Check Dam
> The rock used to construct rock check dams shall meet the requirements for quarry spalls.

8-01.3(6)D Wattle Check Dam
This section is revised to read:

Wattle check dams shall be installed in accordance with the Plans.

8-01.3(6)E Coir Log
This section is revised to read:

Coir logs shall be installed in accordance with the Plans.

8-01.3(9)A Silt Fence
In the second paragraph, the second sentence is revised to read:

The strength of the wire or plastic mesh shall be equivalent to or greater than what is required in Section 9-33.2(1), Table 6 for unsupported geotextile (i.e., 180 lbs. grab tensile strength in the machine direction).

8-01.3(9)B Gravel Filter, Wood Chip or Compost Berm
In the second paragraph, the last sentence is deleted.

The third paragraph is revised to read:

The Compost Berm shall be constructed in accordance with the detail in the Plans. Compost shall be Coarse Compost.

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

Straw Bale Barriers shall be installed in accordance with the Plans.

8-01.3(9)D Inlet Protection
The first three paragraphs are revised to read:

Inlet protection shall be installed below or above, or as a prefabricated cover at each inlet grate, as shown in the Plans. Inlet protection devices shall be installed prior to beginning clearing, grubbing, or earthwork activities.

Geotextile fabric in all prefabricated inlet protection devices shall meet or exceed the requirements of Section 9-33.2, Table 1 for Moderate Survivability, and the minimum filtration properties of Table 2.

When the depth of accumulated sediment and debris reaches approximately ½ the height of an internal device or ⅓ the height of the external device (or less when so specified by the manufacturers) or as designated by the Engineer, the deposits shall be removed and stabilized on site in accordance with Section 8-01.3(16).

8-01.3(10) Wattles

In the first paragraph, the third sentence is revised to read:

> Excavated material shall be spread evenly along the uphill slope and be compacted using hand tamping or other method approved by the Engineer.

This section is supplemented with the following new paragraph:

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

8-01.3(12) Compost Sock

In the first paragraph, "sock" is revised to read "socks" and "streambed" is revised to read "waterbodies".

In the second paragraph "bank" is revised to read "slope".

In the third paragraph "and" is revised to read "or".

This section is supplemented with the following new paragraph:

> Compost for Compost Socks shall be Coarse Compost.

8-01.3(14) Temporary Pipe Slope Drain

The first paragraph is revised to read:

> Temporary pipe slope drain shall be Corrugated Polyethylene Drain Pipe and shall be constructed in accordance with the Plans

The last paragraph is revised to read:

> Placement of outflow of the pipe shall not pond water on road surface.

8-01.3(15) Maintenance

In the fourth paragraph, the last sentence is revised to read:

> Clean sediments may be stabilized on site using approved BMPs as approved by the Engineer.

8-01.3(16) Removal

In the second paragraph, the last sentence is revised to read:

> This may include, but is not limited to, ripping the soil, incorporating soil amendments, and seeding with the specified seed.

8-01.4 Measurement

The eighth paragraph is revised to read:

Silt fence, gravel filter, compost berms, and wood chip berms will be measured by the linear foot along the ground line of completed barrier.

8-01.5 Payment

The following bid items are relocated after the bid item "Check Dam":

"Inlet Protection", per each.

"Gravel Filter Berm", per linear foot.

The following new paragraph is inserted before the bid item "Stabilized Construction Entrance":

The unit Contract price per linear foot for "Check Dam" and "Gravel Filter Berm" and per each for "Inlet Protection" shall be full pay for all equipment, labor and materials to perform the Work as specified, including installation, removal and disposal at an approved disposal site.

The paragraph after the bid item "Temporary Curb" is revised to read:

The unit Contract price per linear foot for temporary curb shall include all costs to install, maintain, remove, and dispose of the temporary curb.

The following bid item is inserted after the bid item "Mulching with Pam":

"Mulching with HECP Type 3 Mulch", per acre.

The bid item "Mulching with BFM" is revised to read:

"Mulching with HECP Type 2 Mulch"

The bid item "Mulching with MBFM/FRM" is revised to read:

"Mulching with HECP Type 1 Mulch"

SECTION 8-02, ROADSIDE RESTORATION
January 3, 2011

8-02.2 Materials

In the first paragraph, the following item is inserted after the item "Fertilizer 9-14.3":

Mulch and Amendments 9-14.4

8-02.3(2) Roadside Work Plan

In the first paragraph, the second sentence is revised to read:

The roadside work plan shall define the Work necessary to provide all Contract requirements, including: wetland excavation, soil preparation, habitat, Structure placement,

planting area preparation, seeding area preparation, bark mulch and compost placement, seeding, planting, plant replacement, irrigation, and weed control in narrative form.

The first sentence under "**Progress Schedule**" is revised to read:

A progress schedule shall be submitted in accordance with Section 1-08.3. The Progress Schedule shall include the planned time periods for Work necessary to provide all Contract requirements in accordance with Sections 8-01, 8-02, and 8-03.

The first sentence under "**Weed and Pest Control Plan**" is revised to read:

The Weed and Pest Control Plan shall be submitted and approved prior to starting any Work defined in Sections 8-01, and 8-02.

In the third paragraph under "**Weed and Pest Control Plan**" the first and second sentences are revised to read:

The plan shall be prepared and signed by a licensed Commercial Pest Control Operator or Consultant when chemical pesticides are proposed. The plan shall include methods of weed control; dates of weed control operations; and the name, application rate, and Material Safety Data Sheets of all proposed herbicides.

The last paragraph under "**Plant Establishment Plan**" is deleted.

8-02.3(2)A Chemical Pesticides

This section is deleted.

8-02.3(2)B Weed Control

This section is deleted.

8-02.3(3) Planting Area Weed Control

This section including title is revised to read:

8-02.3(3) Weed and Pest Control

The Contractor shall control weed and pest species within the project area using integrated pest management principles consisting of mechanical, biological and chemical controls that are outlined in the Weed and Pest Control Plan or as designated by the Engineer.

Those weeds specified as noxious by the Washington State Department of Agriculture, the local Weed District, or the County Noxious Weed Control Board and other species identified by the Contracting Agency shall be controlled on the project in accordance with the weed and pest control plan.

The Contractor shall control weeds not otherwise covered in accordance with Section 8-02.3(3)A, **Planting Area Weed Control** in all areas within the project limits, including erosion control seeding area and vegetation preservation areas, as designated by the Engineer.

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

8-02.3(3)A Planting Area Weed Control

All planting areas shall be prepared so that they are weed and debris free at the time of planting and until completion of the project. The planting areas shall include the entire ground surface, regardless of cover, all planting beds, areas around plants, and those areas shown in the Plans.

All applications of post-emergent herbicides shall be made while green and growing tissue is present. Should unwanted vegetation reach the seed stage, in violation of these Specifications, the Contractor shall physically remove and bag the seed heads. All physically removed vegetation and seed heads shall be disposed of off site at no cost to the Contracting Agency.

Weed barrier mats shall be installed as shown in the Plans. Mats shall be 3-feet square and shall be secured by a minimum of 5-staples per mat. Mats and staples shall be installed according to the manufacturer's recommendations.

8-02.3(3)B Chemical Pesticides

Application of chemical pesticides shall be in accordance with the label recommendations, the Washington State Department of Ecology, local sensitive area ordinances, and Washington State Department of Agriculture laws and regulations. Only those herbicides listed in the table *Herbicides Approved for Use on WSDOT Rights of Way* at http://www.wsdot.wa.gov/Maintenance/Roadside/herbicide_use.htm may be used.

The applicator shall be licensed by the State of Washington as a Commercial Applicator or Commercial Operator with additional endorsements as required by the Special Provisions or the proposed weed control plan. The Contractor shall furnish the Engineer evidence that all operators are licensed with appropriate endorsements, and that the pesticide used is registered for use by the Washington State Department of Agriculture. All chemicals shall be delivered to the job site in the original containers. The licensed applicator or operator shall complete a Commercial Pesticide Application Record (DOT Form 540-509) each day the pesticide is applied, and furnish a copy to the Engineer by the following business day.

The Contractor shall ensure confinement of the chemicals within the areas designated. The use of spray chemical pesticides shall require the use of anti-drift and activating agents, and a spray pattern indicator unless otherwise allowed by the Engineer.

The Contractor shall assume all responsibility for rendering any area unsatisfactory for planting by reason of chemical application. Damage to adjacent areas, either on or off the Highway Right of Way, shall be repaired to the satisfaction of the Engineer or the property owner, and the cost of such repair shall be borne by the Contractor.

8-02.3(5) Planting Area Preparation

In the first paragraph, the second sentence is revised to read:

Material displaced by the Contractor's operations that interferes with drainage shall be removed from the channel and disposed of as approved by the Engineer.

8-02.3(7) Layout of Planting

The second paragraph is deleted.

8-02.3(8) Planting

In the second paragraph, the first and second sentences are revised to read:

> Under no circumstances will planting be permitted during unsuitable soil or weather conditions as determined by the Engineer. Unsuitable conditions may include frozen soil, freezing weather, saturated soil, standing water, high winds, heavy rains, and high water levels.

The fourth paragraph is revised to read:

> Plants shall not be placed below the finished grade.

The fifth paragraph is revised to read:

> Planting hole sizes for plant material shall be in accordance with the details shown in the Plans. Any glazed surface of the planting hole shall be roughened prior to planting.

The following new paragraph is inserted after the fifth paragraph:

> All cuttings shall be planted immediately if buds begin to swell.

8-02.3(9) Pruning, Staking, Guying, and Wrapping

In the first paragraph, the last sentence is revised to read:

> All other pruning shall be performed only after the plants have been in the ground at least one year and when plants are dormant.

8-02.3(13) Plant Establishment

In the third paragraph, the first sentence is revised to read:

> During the first-year plant establishment period, the Contractor shall perform all Work necessary to ensure the resumption and continued growth of the transplanted material.

In the fourth paragraph, "propose" is revised to read "submit".

8-02.3(15) Live Fascines

In the first paragraph, the fourth sentence is revised to read:

> Dead branches may be placed within the live fascine and on the side exposed to the air.

In the second paragraph, the third sentence is deleted.

In the second paragraph, the seventh sentence is revised to read:

> The live stakes shall be driven through the live fascine vertically into the slope.

8-02.3(16)A Lawn Installation

In the third paragraph, the last two items "West of the summit of the Cascade Range - March 1 to October 1." and "East of the summit of the Cascade Range - April 15 to October 1." are revised to read:

Western Washington	Eastern Washington
(West of the Cascade Mountain crest)	(East of the Cascade Mountain crest)
March through May 15	October 1 through November 15
September 1 through October 1	

The fifth paragraph is revised to read:

Topsoil for seeded or sodded lawns shall be placed at the depth and locations as shown in the Plans. The topsoil shall be cultivated to the specified depth, raked to a smooth even grade without low areas that trap water and compacted, all as approved by the Engineer.

In the sixth paragraph, the last sentence is revised to read:

Following placement, the sod shall be rolled with a smooth roller to establish contact with the soil.

8-02.4 Measurement

The seventh paragraph is revised to read:

Fine compost, medium compost and coarse compost will be measured by the cubic yard in the haul conveyance at the point of delivery.

8-02.5 Payment

The following new paragraph is inserted above the paragraph beginning with “Payment shall be increased to 90-percent……”:

Plant establishment milestones are achieved when plants meet conditions described in Section 8-02.3(13).

The following is inserted after the bid item "Fine Compost":

“Medium Compost”, per cubic yard.

The paragraph for the bid item "Weed Control" is revised to read:

“Weed and Pest Control”, will be paid in accordance with Section 1-09.6.

The following new paragraph is inserted after the bid item "Soil Amendment":

The unit Contract price per cubic yard for “Soil Amendment” shall be full pay for furnishing and incorporating the soil amendment into the existing soil.

The following new paragraph is inserted after the bid item "Bark or Wood Chip Mulch":

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

SECTION 8-14, CEMENT CONCRETE SIDEWALKS
January 3, 2011

8-14.3(3) Placing and Finishing Concrete.
The last sentence in the last paragraph is deleted.

8-14.3(5) Curb Ramp Detectable Warning Surface Retrofit
This section including heading is revised to read:

8-14.3(5) Detectable Warning Surface
Detectable warning surfaces shall consist of truncated domes as shown in the Plans. Where a detectable warning surface is to be applied, the Contractor shall attach the detectable warning surface to the pavement surface according to the manufacturer’s recommendations. The detectable warning surface shall be located as shown in the Plans.

The Contractor shall use one of the detectable warning surface products listed in the Qualified Products List or submit another product for approval by the Project Engineer. If the Plans require, the detectable warning surface shall be capable of being bonded to a cement concrete surface or to an asphalt concrete surface. Vertical edges of the detectable warning surface shall be flush with the adjoining surface to the extent possible (otherwise not be more than 1/4-inch above the surface of the pavement) after installation.

8-14.4 Measurement
The second sentence in the first paragraph is revised to read:

Cement concrete curb ramp type _____ will be measured per each for the complete curb ramp type installed and includes the installation of the detectable warning surface.

The second paragraph is revised to read:

Detectable warning surface will be measured by the square foot of detectable warning surface material installed as shown in the Plans.

8-14.5 Payment
The pay item “Cement Conc. Curb Ramp Type_____” is supplemented with the following new paragraph:

The unit Contract price per each for “Cement Concrete Curb Ramp Type____”, shall be full pay for installing the curb ramp as specified including the “Detectable Warning Surface”.

The pay item “Curb Ramp Detectable Warning Surface Retrofit” is revised to read “Detectable Warning Surface”.

SECTION 8-20, ILLUMINATION, TRAFFIC SIGNAL SYSTEMS, AND ELECTRICAL January 3, 2011

8-20.1 Description

In the first paragraph, item number 3 is revised to read:

3. Intelligent Transportation Systems (ITS)

8-20.3(4) Foundations

In the 12th paragraph, item number 2 is revised to read:

2. The top heavy-hex nuts for type ASTM F1554 grade 105 anchor bolts shall be tightened by the Turn-Of-Nut Tightening Method to minimum rotation of ¼-turn (90 degrees) and a maximum rotation of ⅓-turn (120 degrees) past snug tight. Permanent marks shall be set on the base plate and nuts to indicate nut rotation past snug tight.

In the 12th paragraph, the following is inserted after item number 2:

3. The top hex nuts for type ASTM F1554 grade 55 anchor bolts shall be tightened by the Turn-of-Nut Tightening Method to minimum rotation of 1/8-turn (45 degrees) and a maximum rotation of 1/6-turn (60 degrees) past snug tight. Permanent marks shall be set on the base plate and nuts to indicate nut rotation past snug tight.

8-20.3(5) Conduit

In the fifth sentence of the fourth paragraph, “conforms” is revised to read “conforming”.

8-20.3(6) Junction Boxes, Cable Vaults, and Pull boxes

In the first paragraph, the first sentence is revised to read:

Standard Duty and Heavy Duty junction boxes, pull boxes and cable vaults shall be installed at the locations show in the Plans.

In the second paragraph, the first sentence is revised to read:

Cable vaults and pull boxes shall be installed in accordance with the following:

In item number 2 of the second paragraph, “top course” is deleted and “per” is revised to read “in accordance with”.

In the last paragraph, “1/2 inch” is revised to read “1/8 inch”.

This section is supplemented with the following:

Standard Duty pull boxes, cable vaults and concrete junction boxes installed in sidewalks, walkways and shared use paths shall have slip resistant surfaces, be flush with surface and match grade of the sidewalk, walkway and shared use path. The boxes, vaults and junction boxes shall not be placed in curb ramps, curb ramp landings, or the gutter areas associated with the curb ramps. Standard Duty non-concrete junction boxes shall not be installed in sidewalks, walkways or shared use paths.

8-20.3(8) Wiring

The following new two paragraphs are inserted after the first table:

Splices and taps on underground circuits shall be made with solderless crimp connectors meeting the requirements of Section 9-29.12.

Only one conductor or one multi conductor cable per wire entrance will be allowed in any rigid mold splice.

In the eleventh paragraph item number 5 is revised to read:

5. Video detection camera lead-in cable - the numbers of the phases the camera served.

In the eleventh paragraph the following is added after item number 5:

6. For ITS cameras – the number of the camera indicated in the Contract and the number of the associated cabinet as indicated on the Plans.

7. Communication cable -- labeled as Comm.

This section is supplemented with the following new paragraph:

Installation of coaxial or coaxial/Siamese cable or data cables with a 600 VAC rating will be allowed in the same raceway with 480 VAC illumination cable.

8-20.4 Measurement

The first sentence is revised to read:

No specific unit of measurement will apply to the lump sum items for illumination system, intelligent transportation system (ITS), or traffic signal systems, but measurement will be for the sum total of all items for a complete system to be furnished and installed.

The second paragraph is revised to read:

Conduit of the kind and diameter specified will be measured, through the junction boxes, by the linear foot of conduit placed, unless the conduit is included in an illumination system, signal system, Intelligent Transportation (ITS) or other type of electrical system lump sum Bid item.

8-20.5 Payment

All references to “Intelligent Transportation System” are revised to read “ITS”.

The paragraph after the bid item, **“**Conduit Pipe___In. Diam.” per linear foot**,** is revised to read:

The unit Contract price per linear foot for “Conduit Pipe____ In. Diam.” shall be full pay for furnishing all pipe, pipe connections, elbows, bends, caps, reducers, conduits, unions, junction boxes and fittings; for placing the pipe in accordance with the above provisions, including all excavation, jacking or drilling required, backfilling of any voids around casing, conduits, pits or the trenches, restoration of native vegetation disturbed by the operation,

chipping of pavement, and bedding of the pipe; and all other Work necessary for the construction of the conduit, except that when conduit is included on any project as an integral part of an illumination, traffic signal, or ITS systems and the conduit is not shown as a pay item, it shall be included in the lump sum price for the system shown.

SECTION 8-22, PAVEMENT MARKING
August 2, 2011

8-22.1 Description
In the second paragraph, the last sentence is revised to read:

Traffic letters used in word messages shall be sized as shown in the Plans.

8-22.4 Measurement
In the sixth paragraph “Painted Line” is revised to read “Paint Line”.

SECTION 9-01, PORTLAND CEMENT
April 5, 2011

9-01.2(1) Portland Cement
In the first paragraph, all the text after “shall not exceed 8-percent by weight” is deleted and the paragraph ends.

In the second paragraph, “per” is revised to read “in accordance with”.

SECTION 9-04, JOINT AND CRACK SEALING MATERIALS
August 2, 2011

9-04.2(1) Hot Poured Joint Sealants
This section is revised to read:

Hot poured joint sealants shall meet the requirements of AASHTO M 324 Type IV except for the following:

1. The Cone Penetration at 25°C shall be 130 maximum.

2. The extension for the bond, non immersed, shall be 100%.

3. The hot poured joint sealant shall have a minimum Cleveland Open Cup Flash Point of 205°C in accordance with AASHTO T 48

Hot poured joint sealants shall be sampled in accordance with ASTM D 5167 and tested in accordance with ASTM D 5329.

9-04.11 Butyl Rubber

This section including title is revised to read:

9-04.11 Butyl Rubber and Nitrile Rubber

Butyl rubber shall conform to ASTM D 2000, M1 BA 610. If the Engineer determines that the area will be exposed to petroleum products Nitrile rubber shall be utilized and conform to ASTM D 2000, M1 BG 610.

SECTION 9-05, DRAINAGE STRUCTURES, CULVERTS, AND CONDUITS January 3, 2011

9-05.2(8) Perforated Corrugated Polyethlene Underdraine Pipe (12-inch through 60-inch)

This section including title is revised to read:

9-05.2(8) Perforated Corrugated Polyethylene Underdrain Pipe, Couplings and Fittings (12-inch through 60-inch)

Perforated corrugated polyethylene underdrain pipe, couplings and fittings, 12-inch through 60-inch diameter maximum, shall meet the requirements of AASHTO M 294 Type CP or Type SP. Type CP shall be Type C pipe with Class 2 perforations and Type SP shall be Type S pipe with either Class 1 or Class 2 perforations. Additionally, Class 2 perforations shall be uniformly spaced along the length and circumference of the pipe.

9-05.12(2) Profile Wall PVC Culvert Pipe, Profile Wall PVC Storm Sewer Pipe, and Profile Wall PVC Sanitary Sewer Pipe

In the fourth paragraph, the word "producer's" is revised to read "Manufacturer's".

9-05.13 Ductile Iron Sewer Pipe

The second and third paragraphs are revised to read:

Ductile iron pipe shall conform to ANSI A 21.51 or AWWA C151 and shall be cement mortar lined and have a 1- mil seal coat per AWWA C104, or a Ceramic Filled Amine cured Novalac Epoxy lining, as indicated on the Plans or in the Special Provisions. The ductile iron pipe shall be Special Thickness Class 50, Minimum Pressure Class 350, or the Class indicated on the Plans or in the Special Provisions.

Nonrestrained joints shall be either rubber gasket type, push on type, or mechanical type meeting the requirements of AWWA C111.

9-05.19 Corrugated Polyethylene Culvert Pipe

This sections title is revised to read:

9-05.19 Corrugated Polyethylene Culvert Pipe, Couplings, and Fittings

The first paragraph is revised to read:

Corrugated polyethylene culvert pipe, couplings, and fittings, shall meet the requirements of AASHTO M 294 Type S or D for pipe 12-inch to 60-inch diameter with silt-tight joints.

9-05.20 Corrugated Polyethylene Storm Sewer Pipe

This sections title is revised to read:

9-05.20 Corrugated Polyethylene Storm Sewer Pipe, Couplings, and Fittings

In the first paragraph, the first sentence is revised to read:

Corrugated polyethylene storm sewer pipe, couplings, and fittings shall meet the requirements of AASHTO M 294 Type S or D.

Section 9-05 is supplemented with the following new sub-sections:

9-05.21 Steel Rib Reinforced Polyethylene Culvert Pipe

Steel rib reinforced polyethylene culvert pipe shall meet the requirements of ASTM F2562 Class 1 for steel reinforced thermoplastic ribbed pipe and fittings for pipe 24-inch to 60-inch diameter with silt-tight joints.

Silt-tight joints for steel reinforced polyethylene culvert pipe shall be made with a bell/bell or bell and spigot coupling and incorporate the use of a gasket conforming to the requirements of ASTM F 477. All gaskets shall be installed on the pipe by the manufacturer.

Qualification for each manufacturer of steel reinforced polyethylene culvert pipe requires an approved joint system and a formal quality control plan for each plant proposed for consideration.

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

9-05.22 Steel Rib Reinforced Polyethylene Storm Sewer Pipe

Steel rib reinforced polyethylene storm sewer pipe shall meet the requirements of ASTM F2562 Class 1 for steel reinforced thermoplastic ribbed pipe and fittings. The maximum diameter for steel reinforced polyethylene storm sewer pipe shall be the diameter for which a manufacturer has submitted a qualified joint. Qualified manufacturers and approved joints are listed in the Qualified Products Lists. Fittings shall be rotationally molded, injection molded, or factory welded.

All joints for steel reinforced polyethylene storm sewer pipe shall be made with a bell and spigot coupling and conform to ASTM D 3212 using elastomeric gaskets conforming to ASTM F 477. All gaskets shall be installed on the pipe by the manufacturer.

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

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

9-05.23 High Density Polyethylene (HDPE) Pipe

HDPE pipe shall be manufactured from resins meeting the requirements of ASTM D3350 with a cell classification of 345464C and a Plastic Pipe Institute (PPI) designation of PE 3408.

The pipes shall have a minimum standard dimension ratio (SDR) of 32.5.

HDPE pipe shall be joined into a continuous length by an approved joining method.

The joints shall not create an increase in the outside diameter of the pipe. The joints shall be fused, snap together or threaded. The joints shall be water tight, rubber gasketed if applicable, and pressure testable to the requirements of ASTM D 3212.

Joints to be welded by butt fusion, shall meet the requirements of ASTM F 2620 and the manufacturer's recommendations. Fusion equipment used in the joining procedure shall be capable of meeting all conditions recommended by the pipe manufacturer, including but not limited to fusion temperature, alignment, and fusion pressure. All field welds shall be made with fusion equipment equipped with a Data Logger. Temperature, fusion pressure and a graphic representation of the fusion cycle shall be part of the Quality Control records. Electro fusion may be used for field closures as necessary. Joint strength shall be equal or greater than the tensile strength of the pipe.

Fittings shall be manufactured from the same resins and Cell Classification as the pipe unless specified otherwise in the Plans or Specifications. Butt fusion fittings and Flanged or Mechanical joint adapters shall have a manufacturing standard of ASTM D3261. Electro fusion fittings shall have a manufacturing standard of ASTM F1055.

HDPE pipe to be used as liner pipe shall meet the requirements of AASHTO M 326 and this specification.

The supplier shall furnish a Manufacturer's Certification of Compliance stating the materials meet the requirements of ASTM D 3350 with the correct cell classification with the physical properties listed above. The supplier shall certify the dimensions meet the requirements of ASTM F 714 or as indicated in this Specification or the Plans.

At the time of manufacture, each lot of pipe, liner, and fittings shall be inspected for defects and tested for Elevated Temperature Sustain Pressure in accordance with ASTM F 714. The Contractor shall not install any pipe that is more than 2 years old from the date of manufacture.

At the time of delivery, the pipe shall be homogeneous throughout, uniform in color, free of cracks, holes, foreign materials, blisters, or deleterious faults.

Pipe shall be marked at 5 foot intervals or less with a coded number which identifies the manufacturer, SDR, size, material, machine, and date on which the pipe was manufactured.

9-05.24 Polypropylene Culvert Pipe, Polypropylene Storm Sewer Pipe, and Polypropylene Sanitary Sewer Pipe

Polypropylene Culvert Pipe, Polypropylene Storm Sewer Pipe and Polypropylene Sanitary Sewer pipe shall conform to the following requirements:

1. For pipe sizes up to 30 inches: ASTM F2736.
2. For pipe sizes from 30 to 60 inches: ASTM F2764.
3. Fittings shall be factory welded, injection molded or PVC.

All joints for corrugated polypropylene pipe shall be made with a bell/bell or bell and spigot coupling and shall conform to ASTM D3212 using elastomeric gaskets conforming to ASTM F477. All gaskets shall be factory installed on the pipe in accordance with the producer's recommendations.

Qualification for each producer of corrugated polypropylene storm sewer pipe requires joint system conformance to ASTM D3212 using elastomeric gaskets conforming to ASTM F477 and a formal quality control plan for each plant proposed for consideration.

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

SECTION 9-14, EROSION CONTROL AND ROADSIDE PLANTING
August 2, 2011

Section 9-14 is deleted in its entirety and replaced with the following:

9-14.1 Soil

9-14.1(1) Topsoil Type A

Topsoil Type A shall be as specified in the Special Provisions.

9-14.1(2) Topsoil Type B

Topsoil Type B shall be native topsoil taken from within the project limits either from the area where roadway excavation is to be performed or from strippings from borrow, pit, or quarry sites, or from other designated sources. The general limits of the material to be utilized for topsoil will be indicated in the Plans or in the Special Provisions. The Engineer will make the final determination of the areas where the most suitable material exists within these general limits. The Contractor shall reserve this material for the specified use. Material for Topsoil Type B shall not be taken from a depth greater than 1 foot from the existing ground unless otherwise designated by the Engineer.

In the production of Topsoil Type B, all vegetative matter less than 4 feet in height, shall become a part of the topsoil. Prior to topsoil removal, the Contractor shall reduce the native vegetation to a height not exceeding 1 foot. Noxious weeds, as designated by authorized State and County officials, shall not be incorporated in the topsoil, and shall be removed and disposed of as designated elsewhere or as approved by the Engineer.

9-14.1(3) Topsoil Type C

Topsoil Type C shall be native topsoil meeting the requirements of Topsoil Type B but obtained from a source provided by the Contractor outside of the Contracting Agency owned right of way.

9-14.2 Seed

Grasses, legumes, or cover crop seed of the type specified shall conform to the standards for "Certified" grade seed or better as outlined by the State of Washington Department of Agriculture "Rules for Seed Certification," latest edition. Seed shall be furnished in standard containers on which shall be shown the following information:

1. Common and botanical names of seed
2. Lot number
3. Net weight
4 Pure live seed

All seed vendors must have a business license issued by the Washington State Department of Licensing with a "seed dealer" endorsement. Upon request, the Contractor shall furnish the Engineer with copies of the applicable licenses and endorsements.

Upon request, the Contractor shall furnish to the Engineer duplicate copies of a statement signed by the vendor certifying that each lot of seed has been tested by a recognized seed testing laboratory within six months before the date of delivery on the project. Seed which has become wet, moldy, or otherwise damaged in transit or storage will not be accepted.

9-14.3 Fertilizer

Fertilizer shall be a standard commercial grade of organic or inorganic fertilizer of the kind and quality specified. It may be separate or in a mixture containing the percentage of total nitrogen, available phosphoric acid, water-soluble potash, or sulfur in the amounts specified. All fertilizers shall be furnished in standard unopened containers with weight, name of plant nutrients, and manufacturer's guaranteed statement of analysis clearly marked, all in accordance with State and Federal laws.

Fertilizer shall be supplied in one of the following forms:

1 A dry free-flowing granular fertilizer, suitable for application by agricultural fertilizer spreader.

2 A soluble form that will permit complete suspension of insoluble particles in water, suitable for application by power sprayer.

3 A homogeneous pellet, suitable for application through a ferti-blast gun.

4 A tablet or other form of controlled release with a minimum of a six month release period.

5 A liquid suitable for application by a power sprayer or hydroseeder.

9-14.4 Mulch and Amendments

All amendments shall be delivered to the site in the original, unopened containers bearing the manufacturer's guaranteed chemical analysis and name. In lieu of containers, amendments may be furnished in bulk. A manufacturer's certificate of compliance shall accompany each delivery. Compost and other organic amendments shall be accompanied with all applicable health certificates and permits.

9-14.4(1) Straw

Straw shall be in an air dried condition free of noxious weeds, seeds, and other materials detrimental to plant life. Hay is not acceptable.

All straw material shall be Certified Weed Free Straw using North American Weed Management Association (NAWMA) standards or the Washington Wilderness Hay and Mulch (WWHAM) program run by the Washington State Noxious Weed Control Board. Information can be found at http://www.nwcb.wa.gov/http://www.nwcb.wa.gov/

In lieu of Certified Weed Free Straw, the Contractor shall provide documentation that the material is steam or heat treated to kill seeds, or shall provide U.S., Washington, or other State's Department of Agriculture laboratory test reports, dated within 90 days prior to the date of application, showing there are no viable seeds in the straw.

Straw mulch shall be suitable for spreading with mulch blower equipment.

9-14.4(2) Hydraulically Applied Erosion Control Products (HECPs)

All HECPs shall be biodegradable and in a dry condition free of noxious weeds, seeds, chemical printing ink, germination inhibitors, herbicide residue, chlorine bleach, rock, metal, plastic, and other materials detrimental to plant life. Up to 5 percent by weight may be photodegradable material.

The HECP shall be suitable for spreading with a hydroseeder.

All HECPs shall be furnished premixed by the manufacturer with Type A or Type B Tackifier as specified in 9-14.4(7). Under no circumstances will field mixing of additives or components be acceptable.

The Contractor shall provide test results, dated within three years prior to the date of application, from an independent, accredited laboratory, as approved by the Engineer, showing the product meets the following requirements:

Properties	Test Method	Requirements		
Acute Toxicity	EPA-821-R-02-012 Methods for Measuring Acute Toxicity of Effluents. Test leachate from recommended application rate receiving 2 inches of rainfall per hour using static test for No-Observed-Adverse-Effect-Concentration (NOEC)	Four replicates are required with No statistically significant reduction in survival in 100% leachate for a Daphnid at 48 hours and *Oncorhynchus mykiss* (rainbow trout) at 96 hours.		
Solvents	EPA 8260B	Benzene - < 0.03 mg/kg Methylene chloride – < 0.02 mg/kg Naphthalene – < 5 mg/kg Tetrachloroethylene – < 0.05 mg/kg Toluene – < 7 mg/kg Trichloroethylene – < 0.03 mg/kg Xylenes – < 9 mg/kg		
Heavy Metals	EPA 6020A Total Metals	Antimony – < 4 mg/kg Arsenic – < 6 mg/kg Barium – < 80 mg/kg Boron – < 100 mg/kg Cadmium – < 2 mg/kg Chromium – < 2 mg/kg Copper – < 5 mg/kg Lead – < 5 mg/kg Mercury – < 2 mg/kg Nickel – < 2 mg/kg Selenium – < 10 mg/kg Strontium – < 30 mg/kg Zinc – < 5 mg/kg		
Water Holding Capacity	ASTM D 7367	900 percent minimum		
Organic Matter Content	ASTM D 586	90 percent minimum		
Moisture Content	ASTM D 644	15 percent maximum		
Seed Germination Enhancement	ASTM D 7322	HECP Type 1	HECP Type 2	HECP Type 3
		420 percent minimum	400 percent minimum	200 percent minimum

If the HECP contains cotton or straw, the Contractor shall provide documentation that the material has been steam or heat treated to kill seeds, or shall provide U.S., Washington, or other State's Department of Agriculture laboratory test reports, dated within 90 days prior to the date of application, showing there are no viable seeds in the mulch.

The HECP shall be manufactured in such a manner that when agitated in slurry tanks with water, the fibers will become uniformly suspended, without clumping, to form a homogeneous slurry. When hydraulically applied, the material shall form a strong moisture-holding mat that allows the continuous absorption and infiltration of water.

The HECP shall contain a dye to facilitate placement and inspection of the material. Dye shall be non-toxic to plants, animals, and aquatic life and shall not stain concrete or painted surfaces.

The HECP shall be furnished with a Material Safety Data Sheet (MSDS) that demonstrates that the product is not harmful to plants, animals, and aquatic life.

9-14.4(2)A HECP Type 1 Mulch

HECP Type 1 Mulch shall demonstrate the ability to adhere to the soil and create a blanket-like mass within two hours of application and shall bond with the soil surface to create a continuous, porous, absorbent, and flexible erosion resistant blanket that allows for seed germination and plant growth and conforms to the requirements in Table [1] HECP Type 1 Mulch Test Requirements.

The Contractor shall provide test results documenting the mulch meets the requirements in Table [1] HECP Type 1 Mulch Test Requirements.

Prior to January 1, 2012, the Contractor shall supply independent ASTM D 6459 test results from one of the following testing facilities:

National Transportation Product Evaluation Program (NTPEP)
Utah State University's Utah Water Research Laboratory
Texas Transportation Institute
San Diego State University's Soil Erosion Research Laboratory
TRI Environmental, Inc

Effective January 1, 2012, the Contractor shall supply independent test results from the National Transportation Product Evaluation Program (NTPEP).

Table [1] HECP Type 1 Mulch Test Requirements

Properties	Test Method	Requirements
Performance in Protecting Slopes from Rainfall-Induced Erosion	ASTM D 6459 - Test in one soil type. Soil tested shall be sandy loam as defined by the NRCS Soil Texture Triangle	C Factor = 0.01 maximum using Revised Universal Soil Loss Equation (RUSLE)

9-14.4(2)B HECP Type 2 Mulch

Within 48 hours of application, the HECP Type 2 Mulch shall bond with the soil surface to create a continuous, absorbent, flexible erosion resistant blanket that allows for seed germination and plant growth and conform to the requirements in Table [2] HECP Type 2 Mulch Test Requirements.

The Contractor shall provide test results documenting the mulch meets the requirements in Table [2] HECP Type 2 Mulch Test Requirements.

Prior to January 1, 2012, the Contractor shall supply independent ASTM D 6459 test results from one of the following testing facilities:

National Transportation Product Evaluation Program (NTPEP)
Utah State University's Utah Water Research Laboratory
Texas Transportation Institute
San Diego State University's Soil Erosion Research Laboratory
TRI Environmental, Inc

Effective January 1, 2012, the Contractor shall supply independent test results from the National Transportation Product Evaluation Program (NTPEP).

Table [2] HECP Type 2 Mulch Test Requirements

Properties	Test Method	Requirements
Performance in Protecting Slopes from Rainfall-Induced Erosion	ASTM D 6459 - Test in one soil type. Soil tested shall be sandy loam as defined by the NRCS Soil Texture Triangle	C Factor = 0.05 maximum using Revised Universal Soil Loss Equation (RUSLE)

9-14.4(2)C HECP Type 3 Mulch

The Contractor shall provide test results documenting the mulch meets the requirements in Table [3] HECP Type 3 Mulch Test Requirements.

Prior to January 1, 2012, the Contractor shall supply independent ASTM D 6459 test results from one of the following testing facilities:

National Transportation Product Evaluation Program (NTPEP)
Utah State University's Utah Water Research Laboratory
Texas Transportation Institute
San Diego State University's Soil Erosion Research Laboratory
TRI Environmental, Inc

Effective January 1, 2012, the Contractor shall supply independent test results from the National Transportation Product Evaluation Program (NTPEP).

Table [3] HECP Type 3 Mulch Test Requirements

Properties	Test Method	Requirements
Performance in Protecting Slopes from Rainfall-Induced Erosion	ASTM D 6459 - Test in one soil type. Soil tested shall be sandy loam as defined by the National Resources Conservation Service (NRCS) Soil Texture Triangle	C Factor = 0.15 maximum using Revised Universal Soil Loss Equation (RUSLE)

9-14.4(3) Bark or Wood Chips

Bark or wood chip mulch shall be derived from Douglas fir, pine, or hemlock species. It shall not contain resin, tannin, or other compounds in quantities that would be detrimental to plant life. Sawdust shall not be used as mulch.

Bark or wood chips, when tested, shall be according to WSDOT Test Method T 123 prior to placement and shall meet the following loose volume gradation:

Sieve Size	Percent Passing	
	Minimum	Maximum
2”	95	100
No. 4	0	30

9-14.4(4) Wood Strand Mulch

Wood strand mulch shall be a blend of angular, loose, long, thin wood pieces that are frayed, with a high length-to-width ratio and shall be derived from native conifer or deciduous trees. A minimum of 95 percent of the wood strand shall have lengths between 2 and 10 inches. At least 50 percent of the length of each strand shall have a width and thickness between 1/16 and ½ inch. No single strand shall have a width or thickness greater than ½ inch.

The mulch shall not contain salt, preservatives, glue, resin, tannin, or other compounds in quantities that would be detrimental to plant life. Sawdust or wood chips or shavings will not be acceptable. Products shall be tested according to WSDOT Test Method 125 prior to acceptance.

9-14.4(5) Lime

Agriculture lime shall be of standard manufacture, flour grade or in pelletized form, meeting the requirements of ASTM C 602.

9-14.4(6) Gypsum

Gypsum shall consist of Calcium Sulfate (CaSO42H2O) in a pelletized or granular form. 100 percent shall pass through a No. 8 sieve.

9-14.4(7) Tackifier

Tackifiers are used as a tie-down for soil, compost, seed, and/or mulch. Tackifier shall contain no growth or germination inhibiting materials, and shall not reduce infiltration rates. Tackifier shall hydrate in water and readily blend with other slurry materials and conform to the requirements in Table [4] Tackifier Test Requirements.

The Contractor shall provide test results documenting the tackifier meets the requirements in Table [4] Tackifier Test Requirements.

Before January 1, 2012, the Contractor shall supply independent ASTM D 6459 test results from one of the following testing facilities:

National Transportation Product Evaluation Program (NTPEP)
Utah State University’s Utah Water Research Laboratory
Texas Transportation Institute
San Diego State University’s Soil Erosion Research Laboratory
TRI Environmental, Inc

Effective January 1, 2012, the Contractor shall supply independent test results from the National Transportation Product Evaluation Program (NTPEP).

Table [4] Tackifier Test Requirements

Properties	Test Method	Requirements
Heavy Metals Solvents Acute Toxicity	Test at manufacturer's recommended application rate	See Table in Section 9-14.4(2)
Performance in Protecting Slopes from Rainfall-Induced Erosion	Modified ASTM D 6459 on 3(H):1(V) slope with 2 inches of rainfall evenly distributed over a period of 100 minutes. Test in one soil type. Soil tested shall be sandy loam as defined by the National Resources Conservation Service (NRCS) Soil Texture Triangle	C Factor = 0.15 maximum using Revised Universal Soil Loss Equation (RUSLE)

9-14.4(7)A Organic Tackifier

Organic tackifier shall be derived from natural plant sources and shall have an MSDS that demonstrates to the satisfaction of the Engineer that the product is not harmful to plants, animals, and aquatic life.

9-14.4(7)B Synthetic Tackifier

Synthetic tackifier shall have an MSDS that demonstrates to the satisfaction of the Engineer that the product is not harmful to plants, animals, and aquatic life.

9-14.4(8) Compost

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 U.S. Composting Council Testing Methods for the Examination of Compost and Composting (TMECC) 02.02-B, "Sample Sieving for Aggregate Size Classification".

   Fine compost shall meet the following gradation:

	Percent Passing	
Sieve Size	Minimum	Maximum
2"	100	
1"	95	100

5/8”	90	100
1/4”	75	100

Maximum particle length of 6 inches.

Medium compost shall meet the following gradation:

	Percent Passing	
Sieve Size	Minimum	Maximum
2”	100	
1”	95	100
5/8”	90	100
1/4”	75	85

Maximum particle length of 6 inches.

Medium compost shall have a carbon to nitrogen ratio (C:N) between 18:1 and 30:1. The carbon to nitrogen ratio shall be calculated using the dry weight of “Organic Carbon” using TMECC 04.01A divided by the dry weight of “Total N” using TMECC 04.02D.

Coarse compost shall meet the following gradation:

	Percent Passing	
Sieve Size	Minimum	Maximum
3”	100	
1”	90	100
3/4”	70	100
1/4”	40	60

Maximum particle length of 6 inches.

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

3. Manufactured inert material (plastic, concrete, ceramics, metal, etc.) shall be less than 1.0 percent by weight as determined by U.S. Composting Council TMECC 03.08-A “Classification of Inerts by Sieve Size”.

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

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

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

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

8. The compost product shall originate a minimum of 65 percent by volume from recycled plant waste as defined in WAC 173-350 as “Type 1 Feedstocks.” A maximum of 35

percent by volume of “Type 2 Feedstocks,” source-separated food waste, and/or biosolids may be substituted for recycled plant waste. The Contractor shall provide a list of feedstock sources by percentage in the final compost product.

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

9-14.4(8)A Compost Submittal Requirements

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

1. The Qualified Products List printed page or a Request for Approval of Material(DOT Form 350-071EF).

2. A copy of the Solid Waste Handling Permit issued to the manufacturer by the Jurisdictional Health Department in accordance with WAC 173-350 (Minimum Functional Standards for Solid Waste Handling).

3. The Contractor 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. An independent Seal of Testing Assurance (STA) Program certified laboratory shall perform the analysis.

4. A copy of the manufacturer’s Seal of Testing Assurance (STA) certification as issued by the U.S. Composting Council.

9-14.4(8)B Compost Acceptance

Fourteen days prior to application, the Contractor shall submit a sample of the compost approved for use, and a STA test report dated within 90 calendar days of the application, and the list of feed stocks by volume for each compost type to the Engineer for review.

The Contractor shall use only compost that has been tested within 90 calendar days of application and meets the requirements in Section 9-14.4(8). Compost not conforming to the above requirements or taken from a source other than those tested and accepted shall not be used.

9-14.4(9) Vacant

9-14.4(10) Vacant

9-14.5 Erosion Control Devices

9-14.5(1) Polyacrylamide (PAM)

Polyacrylamide (PAM) products shall meet ANSI/NSF Standard 60 for drinking water treatment with an AMD content not to exceed 0.05 percent. PAM shall be anionic, linear, and not cross-linked. The minimum average molecular weight shall be greater than 5 mg/mole and minimum 30 percent charge density. The product shall contain at least 80 percent active ingredients and have a moisture content not exceeding 10 percent by weight. PAM shall be delivered in a dry granular or powder form.

9-14.5(2) Erosion Control Blanket

Temporary erosion control blanket shall be made of natural plant fibers. The Contractor shall supply independent test results from the National Transportation Product Evaluation Program (NTPEP) meeting the requirements in the following table:

Properties	ASTM Test Method	Requirements
Protecting Slopes from Rainfall-Induced Erosion	D 6459 - Test in one soil type. Soil tested shall be sandy loam as defined by the NRCS Soil Texture Triangle	Maximum C factor of 0.15 using Revised Universal Soil Loss Equation (RUSLE)
Dry Weight per Unit Area	D 6475	0.36 lb/sq. yd. minimum
Performance in Protecting Earthen Channels from Stormwater-Induced Erosion	D 6460 Test in one soil type. Soil tested shall be loam as defined by the NRCS Soil Texture Triangle	1.0 lb/sq. ft. minimum
Seed Germination Enhancement	D 7322	200 percent minimum

Netting, if present, shall be biodegradable with a life span not to exceed one year.

Permanent erosion control blanket shall meet the following requirements:

Properties	ASTM Test Method	Requirements
UV Stability	D 4355	Minimum 80 percent strength retained after 500 hours in a xenon arc device
Protecting Slopes from Rainfall-Induced Erosion	D 6459 with 0.12 inch average raindrop size.* Test in one soil type. Soil tested shall be loam as defined by the NRCS Soil Texture Triangle **	Maximum C factor of 0.15 using Revised Universal Soil Loss Equation (RUSLE)
Dry Weight per Unit Area	D 6475	0.50 lb/sq. yd. minimum
Performance in Protecting Earthen Channels from Stormwater-Induced Erosion	D 6460 Test in one soil type. Soil tested shall be loam as defined by the NRCS Soil Texture Triangle**	2.0 lb/sq. ft. minimum
Seed Germination Enhancement	D 7322	200 percent minimum

9-14.5(2)A Erosion Control Blanket Approval

The Contractor shall select erosion control blanket products that bear the Quality and Data Oversight and Review (QDOR) seal from the Erosion Control and Technology Council (ECTC). All materials selected shall be currently listed on the QDOR products list available at www.ectc.org/qdor

9-14.5(3) Clear Plastic Covering

Clear plastic covering shall meet the requirements of ASTM D 4397 for polyethylene sheeting having a minimum thickness of 6 mils.

9-14.5(4) Geotextile-Encased Check Dam

The geotextile-encased check dam shall be a urethane foam core encased in geotextile material. The minimum length of the unit shall be 7 feet.

The foam core shall be a minimum of 8 inches in height, and have a minimum base width of 16 inches. The geotextile material shall overhang the foam by at least 6 inches at each end, and shall have apron type flaps that extend a minimum of 24 inches on each side of the check dam. The geotextile material shall meet the requirements in Section 9-33.

9-14.5(5) Wattles

Wattles shall consist of cylinders of biodegradable plant material such as weed-free straw, coir, compost, wood chips, excelsior, or wood fiber or shavings encased within biodegradable netting. Wattles shall be a minimum of 5 inches in diameter. Netting material shall be clean, evenly woven, and free of encrusted concrete or other contaminating materials such as preservatives. Netting material shall be free from cuts, tears, or weak places and shall have a minimum lifespan of 6 months.

Compost filler shall be coarse compost and shall meet the material requirements as specified in Section 9-14.4(8). If wood chips are used they shall meet the material requirements as specified in Section 9-14.4(3). If wood shavings are used, 80 percent of the fibers shall have a minimum length of 6 inches between 0.030 and 0.50 inches wide, and between 0.017 and 0.13 inches thick.

Wood stakes for wattles shall be made from untreated Douglas fir, hemlock, or pine species. Wood stakes shall be 2 inch by 2 inch nominal dimension and 36 inches in length.

9-14.5(6) Compost Socks

Compost socks shall consist of extra heavy weight biodegradable fabric, with a minimum strand thickness of 5 mils. The fabric shall be filled with Coarse Compost. Compost socks shall be at least 8 inches in diameter. The fabric shall be clean, evenly woven, and free of encrusted concrete or other contaminating materials and shall be free from cuts, tears, broken or missing yarns, and be free of thin, open, or weak areas and shall be free of any type of preservative.

Coarse compost filler shall meet the material requirements as specified in Section 9-14.4(8).

Wood stakes for compost socks shall be made from untreated Douglas fir, hemlock, or pine species. Wood stakes shall be 2 inch by 2 inch nominal dimension and 36 inches in length,

9-14.5(7) Coir Log

Coir logs shall be made of 100 percent durable coconut (coir) fiber uniformly compacted within woven netting made of bristle coir twine with minimum strength of 80 lbs tensile strength. The netting shall have nominal 2 inch by 2 inch openings. Log segments shall have a maximum length of 20 feet, with a minimum diameter as shown in the Plans. Logs shall have a minimum density of 7 lbs/cf.

Stakes shall be untreated Douglas fir, hemlock, or pine species. Wood stakes shall have a notch to secure the rope ties. Rope ties shall be of 1/4 inch diameter commercially available hemp rope.

9-14.5(8) High Visibility Fencing

High visibility fence shall be UV stabilized, orange, high-density polyethylene or polypropylene mesh, and shall be at least 4-feet in height.

Support posts shall be wood or steel in accordance with Standard Plan I-10.10-00. The posts shall have sufficient strength and durability to support the fence through the life of the project.

9-14.6 Plant Materials

9-14.6(1) Description

Bareroot plants are grown in the ground and harvested without soil or growing medium around their roots.

Container plants are grown in pots or flats that prevent root growth beyond the sides and bottom of the container.

Balled and burlapped plants are grown in the ground and harvested with soil around a core of undisturbed roots. This rootball is wrapped in burlap and tied or placed in a wire basket or other supportive structure.

Cuttings are live plant material without a previously developed root system. Source plants for cuttings shall be dormant when cuttings are taken and all cuts shall be made with a sharp instrument. Cuttings may be collected. If cuttings are collected, the requirement to be nursery grown or held in nursery conditions does not apply. Written permission shall be obtained from property owners and provided to the Engineer before cuttings are collected. The Contractor shall collect cuttings in accordance with applicable sensitive area ordinances. Cuttings shall meet the following requirements:

A. Live branch cuttings shall have flexible top growth with terminal buds and may have side branches. The rooting end shall be cut at an approximate 45 degree angle.

B. Live stake cuttings shall have a straight top cut immediately above a bud. The lower, rooting end shall be cut at an approximate 45 degree angle. Live stakes are cut from one to two year old wood. Live stake cuttings shall be cut and installed with the bark intact with no branches or stems attached, and be ½ to 1½ inch in diameter.

C. Live pole cuttings shall have a minimum 2 inch diameter and no more than three branches which shall be pruned back to the first bud from the main stem.

Rhizomes shall be a prostrate or subterranean stem, usually rooting at the nodes and becoming erect at the apex. Rhizomes shall have a minimum of two growth points. Tubers shall be a thickened and short subterranean branch having numerous buds or eyes.

9-14.6(2) Quality

At the time of delivery all plant material furnished shall meet the grades established by the latest edition of the American Standard for Nursery Stock, (ASNS) ANSI Z60.1 and shall conform to the size and acceptable conditions as listed in the Contract, and shall be free of all foreign plant material.

All plant material shall comply with State and Federal laws with respect to inspection for plant diseases and insect infestation.

All plant material shall be purchased from a nursery licensed to sell plants in Washington State.

Live woody or herbaceous plant material, except cuttings, rhizomes, and tubers, shall be vigorous, well formed, with well developed fibrous root systems, free from dead branches, and from damage caused by an absence or an excess of heat or moisture, insects, disease, mechanical or other causes detrimental to good plant development. Evergreen plants shall be well foliated and of good color. Deciduous trees that have solitary leaders shall have only the lateral branches thinned by pruning. All conifer trees shall have only one leader (growing apex) and one terminal bud, and shall not be sheared or shaped. Trees having a damaged or missing leader, multiple leaders, or Y-crotches shall be rejected.

Root balls of plant materials shall be solidly held together by a fibrous root system and shall be composed only of the soil in which the plant has been actually growing. Balled and burlapped rootballs shall be securely wrapped with jute burlap or other packing material not injurious to the plant life. Root balls shall be free of weed or foreign plant growth.

Plant materials shall be nursery grown stock. Plant material, with the exception of cuttings, gathered from native stands shall be held under nursery conditions for a minimum of one full growing season, shall be free of all foreign plant material, and meet all of the requirements of these Specifications, the Plans, and the Special Provisions.

Container grown plants shall be plants transplanted into a container and grown in that container sufficiently long for new fibrous roots to have developed so that the root mass will retain its shape and hold together when removed from the container, without having roots that circle the pot. Plant material which is root bound, as determined by the Engineer, shall be rejected. Container plants shall be free of weed or foreign plant growth.

Container sizes for plant material of a larger grade than provided for in the container grown Specifications of the ASNS shall be determined by the volume of the root ball specified in the ASNS for the same size plant material.

All bare root plant materials shall have a heavy fibrous root system and be dormant at the time of planting.

Average height to spread proportions and branching shall be in accordance with the applicable sections, illustrations, and accompanying notes of the ASNS.

Plants specified or identified as “Street Tree Grade” shall be trees with straight trunks, full and symmetrical branching, central leader, and be developed, grown, and propagated with a full branching crown. A “Street Tree Grade” designation requires the highest grade of nursery shade or ornamental tree production which shall be supplied.

Street trees with improperly pruned, broken, or damaged branches, trunk, or root structure shall be rejected. In all cases, whether supplied balled and burlapped or in a container, the root crown (top of root structure) of the tree shall be at the top of the finish soil level. Trees supplied and delivered in a nursery fabric bag will not be accepted.

Plants which have been determined by the Engineer to have suffered damage for the following reasons will be rejected:

1. Girdling of the roots, stem, or a major branch.

2. Deformities of the stem or major branches.

3. Lack of symmetry.

4. Dead or defoliated tops or branches.

5. Defects, injury, and condition which renders the plant unsuitable for its intended use.

Plants that are grafted shall have roots of the same genus as the specified plant.

9-14.6(3) Handling and Shipping

Handling and shipping shall be done in a manner that is not detrimental to the plants.
The nursery shall furnish a notice of shipment in triplicate at the time of shipment of each truck load or other lot of plant material. The original copy shall be delivered to the Project Engineer, the duplicate to the consignee and the triplicate shall accompany the shipment to be furnished to the Inspector at the job site. The notice shall contain the following information:

1. Name of shipper.

2. Date of shipment.

3. Name of commodity. (Including all names as specified in the Contract.)

4. Consignee and delivery point.

5. State Contract number.

6. Point from which shipped.

7. Quantity contained.

8. Size. (Height, runner length, caliper, etc. as required.)

9. Signature of shipper by authorized representative.

To acclimate plant materials to Northwest conditions, all plant materials used on a project shall be grown continuously outdoors north of the 42nd Latitude (Oregon-California border) from not later than August 1 of the year prior to the time of planting.

All container grown plants shall be handled by the container.

All balled and burlapped plants shall be handled by the ball.

Plant material shall be packed for shipment in accordance with prevailing practice for the type of plant being shipped, and shall be protected at all times against drying, sun, wind, heat, freezing, and similar detrimental conditions both during shipment and during related handling. Where necessary, plant material shall be temporarily heeled in. When transported in closed vehicles, plants shall receive adequate ventilation to prevent sweating. When transported in open vehicles, plants shall be protected by tarpaulins or other suitable cover material.

9-14.6(4) Tagging

Plants delivered as a single unit of 25 or less of the same size, species, and variety, shall be clearly marked and tagged. Plants delivered in large quantities of more than 25 shall be segregated as to variety, grade, and size; and one plant in each 25, or fraction thereof, of each variety, grade, and size shall be tagged.

9-14.6(5) Inspection

The Contracting Agency will make an inspection of plant material at the source when requested by the Engineer. However, such preliminary approval shall not be considered as final acceptance for payment. Final inspection and approval (or rejection) will only occur when the plant material has been delivered to the Project site. The Contractor shall notify the Engineer, not less than 48 hours in advance, of plant material delivery to the project.

9-14.6(6) Substitution of Plants

No substitution of plant material, species or variety, will be permitted unless evidence is submitted in writing to the Engineer that a specified plant cannot be obtained and has been unobtainable since the Award of the Contract. If substitution is permitted, it can be made only with written approval by the Engineer. The nearest variety, size, and grade, as approved by the Engineer, shall then be furnished.

Container or balled and burlapped plant material may be substituted for bare root plant material. Container grown plant material may be substituted for balled and burlapped plant materials. When substitution is allowed, use current ASNS standards to determine the correct rootball volume (container or balled and burlapped) of the substituted material that corresponds to that of the specified material. These substitutions shall be approved by the Engineer and be at no cost to the Contracting Agency.

9-14.6(7) Temporary Storage

Plants stored under temporary conditions prior to installation shall be the responsibility of the Contractor.

Plants stored on the project shall be protected at all times from extreme weather conditions by insulating the roots, root balls, or containers with sawdust, soil, compost, bark or wood chips, or other approved material and shall be kept moist at all times prior to planting.

Cuttings shall continually be shaded and protected from wind. Cuttings shall be protected from drying at all times and shall be heeled into moist soil or other insulating material or placed in water if not installed within eight hours of cutting. Cuttings to be stored for later installation shall be bundled, laid horizontally, and completely buried under 6 inches of water, moist soil or placed in cold storage at a temperature of 34°F and 90 percent humidity. Cuttings that are not planted within 24 hours of cutting shall be soaked in water for 24 hours prior to planting. Cuttings taken when the temperature is higher than 50°F shall not be stored for later use. Cuttings that already have developed roots shall not be used.

9-14.6(8) Sod

The available grass mixtures on the current market shall be submitted to the Engineer for selection and approval.

The sod shall be field grown one calendar year or older, have a well developed root structure, and be free of all weeds, disease, and insect damage.

Prior to cutting, the sod shall be green, in an active and vigorous state of growth, and mowed to a height not exceeding 1 inch.

The sod shall be cut with a minimum of 1inch of soil adhering.

9-14.7 Stakes, Guys, and Wrapping

Stakes shall be installed as shown in the Plans.

Commercial plant ties may be used in lieu of hose and wire guying upon approval of the Engineer. The minimum size of wire used for guying shall be 12 gauge, soft drawn.

Hose for guying shall be nylon, rubber, or reinforced plastic and shall have an inside diameter of at least 1 inch.

Tree wrap shall be a crinkled waterproof paper weighing not less than 4.0 pounds per 100 square feet and shall be made up of two sheets cemented together with asphalt.

SECTION 9-22, MONUMENT CASES
January 4, 2011

9-22.1 Monument Cases, Covers, and Risers

In the first sentence, "Class 30B" is revised to read "Class 35B".

SECTION 9-23, CONCRETE CURING MATERIALS AND ADMIXTURES
January 3, 2011

9-23.1 Sheet Materials for Curing Concrete

In the first paragraph, “AASHTO M 171” is revised to read “ASTM C 171”.

9-23.2 Liquid Membrane Forming Concrete Curing Compounds

The first paragraph is revised to read:

> Liquid membrane-forming compounds for curing concrete shall conform to the requirements of ASTM C 309 Type 1 or 2, Class A or B, except that the water retention when tested in accordance with WSDOT Test Method 814 shall be 2.50 grams for all applications.

Section 9-23 is supplemented with the following new sub-sections:

9-23.12 Metakaolin

Metakaolin shall conform to the requirements of AASHTO M 295 Class N including optional chemical requirements as set forth in Table 2 and with a further limitation that the loss on ignition shall be a maximum of 1.5 percent.

9-23.13 Blended Supplementary Cementitious Material

Blended Supplementary Cementitious Material (SCM) shall meet the requirements of ASTM C1697. Blended SCMs shall be limited to binary or ternary blends of fly ash, ground granulated blast furnace slag, microsilica fume, and metakaolin. Fly ash shall meet the requirements of Section 9-23.9. Ground granulated blast furnace slag shall meet the requirements of Section 9-23.10. Microsilica fume shall meet the requirements of Section 9-23.11. Metakaolin shall meet the requirements of Section 9-23.12. The individual SCMs composing the blended SCM shall be individually listed on the WSDOT QPL.

SECTION 9-29, ILLUMINATION, SIGNAL, ELECTRICAL
January 3, 2011

In this division, all references to "hot-dipped" are revised to read "hot-dip".

In this division, Section "**9-29.1(4)B**" is revised to read "**9-29.1(4)C**".

9-29.1(4) Non-Metallic Conduit

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

9-29.1(4)B Expansion Fittings

Expansion fittings for use with PVC shall allow for 4-inches of movement minimum (2-inches in each direction). Expansion fittings for PVC conduit shall be PVC and have threaded terminal adaptor or coupling end and shall meet the requirements listed in Section 9-29.1(4)A.

9-29.2(1)A Standard Duty Junction Boxes

The first paragraph below the title "**Concrete Junction Boxes**" is supplemented with the following:

> All Standard Duty Concrete Junction Boxes placed in sidewalks, walkways and shared use paths shall have slip resistant surfaces. Non-slip lids and frames shall be hot-dip galvanized.

The second sentence in the second paragraph below the title "**Concrete Junction Boxes**" is revised to read:

The frame shall be anchored to the box by welding headed studs ⅜ inch × 3 inches long, as specified in Section 9-06.15, to the frame.

The first sentence in the second paragraph below the title "**Non-Concrete Junction Boxes**" is revised to read:

Type 1, 2, and 8 non-concrete junction boxes shall have a Design Load of 22,500 lbs. and shall be tested in accordance with 9-29.2(1)C.

In the second paragraph below the title "**Non-Concrete Junction Boxes**", "hex-head" is revised to read "penta-head".

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

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

The frame shall be anchored to the vault/box by welding headed studs 3/8 inch X 3 inches long, as specified in Section 9-06.15, to the frame.

This section is supplemented with the following new paragraph:

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

9-29.3(2)B Multi-Conductor Cable

This section is revised to read:

Two-conductor through 10-conductor unshielded signal control cable shall have stranded copper conductor and shall conform to International Municipal Signal Association (IMSA) signal cable Specification 20-1.

9-29.3(2)E Two-Conductor Shielded

This section is revised to read:

Two conductor shielded (2CS) cable shall have stranded 14 AWG (minimum) conductors and shall conform to IMSA Specification No. 50-2.

9-29.3(2)F Detector Loop Wire

This section is revised to read:

Detector loop wire shall be 12 or 14 AWG stranded copper wire, IMSA 51-3.

9-29.3(2)G Four-Conductor Shielded Cable

The first sentence is revised to read:

Four-conductor shielded cable (4CS) shall consist of a cable with four stranded 18 AWG conductors with polypropylene insulation, an aluminized polyester shield, water-blocking material in the cable interstices, and a 26-mil minimum outer jacket of polyethylene.

9-29.4 Messenger Cable, Fittings

This section is supplemented with the following:

Messenger cable shall be ⅜-inch, 7-wire strand messenger cables conforming to ASTM A 475, extra-high-strength grade, 15,400 pounds minimum breaking strength, Class A galvanized.

Strain insulators shall be wet process, porcelain, conforming to EEI-NEMA Class 54-2 standards for 12,000 pound ultimate strength.

Down guy assembly shall consist of an eight-way steel expanding anchor, having a minimum area of 300 square inches, made of pressed steel, coated with asphalt or similar preservative, and fitted with a ¾-inch minimum guy eye anchor rod 8-feet long. As an alternate to expanding anchors, screw type anchors with two 8-inch helix, 3½-inch-pitch, 1-inch by 7 foot guy anchor rod, and rated for 7,000 pound maximum torque may be installed.

All pole hardware, bolts, plate rods, hangers, clips, wire guards, and pole bands shall be hot-dipped galvanized in conformance with the requirements of AASHTO M 232.

9-29.6(5) Foundation Hardware

The first paragraph is revised to read:

Anchor bolts for Type PPB, PS, I, FB, and RM signal standards shall conform to the requirements of ASTM F1554, grade 55. Nuts shall meet the requirements of AASHTO M 291, grade A. Washers shall meet the requirements of ASTM F 844 or ASTM F 436.

9-29.7 Luminaire Fusing and Electrical Connections at Light Standard Bases, Cantilever Bases and Sign Bridge Bases

The content of this section is revised and moved to the following new sub-sections:

9-29.7(1) Unfused Quick-Disconnect

Unfused quick-disconnect connector kits shall conform to the following requirements:

1. The copper pin and copper receptacle shall be a crimped type of connection or a stainless steel set screw and lug connection to the cable. The receptacle shall establish contact pressure with the pin through the use of a tinned copper or copper beryllium sleeve spring and shall be equipped with a disposable mounting pin. The receptacle shall be fully annealed. Both the copper pin and receptacle shall have a centrally located recessed locking area adapted to be complementarily filled and retained by the rubber housing.

2. The plug and receptacle housing shall be made of water resistant synthetic rubber which is capable of burial in the ground or installation in sunlight. Each housing shall provide a section to form a water-seal around the cable, have an interior arrangement to suitably and complementarily receive and retain the copper pin or receptacle, and a section to provide a water-seal between the two housings at the point of disconnection.

3. The kit shall provide waterproof in-line connector protection with three cutoff sections on both the line and load side to accommodate various wire sizes. All

connections shall be as described in item “1” above. Upon disconnect, the connector shall remain in the load side of the kit.

9-29.7(2) Fused Quick-Disconnect

Fused quick-disconnect kits shall provide waterproof in-line fuse protection. The kit shall provide three cutoff sections on both lines and load side to accommodate various wire sizes. All connections shall be as described in item “1” above. Upon disconnect, the fuse shall remain in the load side of the kit.

Fuses furnished for all lighting circuits shall be capable of handling the operating voltage of the circuit involved and shall have the following characteristics:

1. Fuses shall be capable of indefinitely supporting 110 percent of the rated load.

2. Fuses shall be capable of supporting 135 percent of the rated load for approximately 1 hour.

3. A load of 200 percent of rated load shall effectively cause instantaneous blowing of the fuse.

4. Fuses shall be rated as listed below and shall be sized to fit the fuse containers furnished on this project, according to the manufacturer’s recommendations therefore.

5. Fuses shall be listed by a nationally recognized testing laboratory.

Luminaire	**Service Voltage**		
Size	**480V**	**240V**	**120V**
1,000W	10A	15A	30A
750W	5A	10A	20A
700W	5A	10A	20A
400W	5A	10A	15A
310W	5A	5A	10A
250W	5A	5A	10A
200W	4A	5A	10A
175W	4A	5A	10A
150W	3A	4A	5A
100W	2A	3A	4A
70W	2A	2A	2A
50W	2A	2A	2A

9-29.9 Ballast, Transformers

This sections content is deleted and replaced with:

Heat-generating components shall be mounted to use the portion of the luminaire upon which they are mounted as a heat sink. Capacitors shall be located as far as practicable from heat-generating components or shall be thermally shielded to limit the fixture temperature to 160°F.

Transformers and inductors shall be resin-impregnated for protection against moisture. Capacitors, except those in starting aids, shall be metal cased and hermetically sealed.

No capacitor, transformer, or other device shall employ the class of compounds identified as polychlorinated biphenyls (PCB) as dielectric, coolants, or for any other purpose.

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

9-29.9(1) Ballast

Each ballast shall have a name plate attached permanently to the case listing all electrical data.

A Manufacturer's Certificate of Compliance in accordance with Section 1-06.3 meeting the manufacturers and these Specification requirements, shall be submitted by the Contractor with each type of luminaire ballast.

Ballasts shall be designed for continuous operation at ambient air temperatures from 20°F without reduction in ballast life. Ballasts shall have a design life of not less than 100,000 hours. Ballasts shall be designed to operate for at least 180 cycles of 12 hours on and 12 hours off, with the lamp circuit in an open or short-circuited condition and without measurable reduction in the operating requirements. All ballasts shall be high power factor (90%).

Ballasts shall be tested in accordance with the requirements of current ANSI C 82.6, Methods of Measurement of High-Intensity-Discharge Lamp Ballasts. Starting aids for ballasts of a given lamp wattage shall be interchangeable between ballasts of the same wattage and manufacturer without adjustment.

Ballast assemblies shall consist of separate components, each of which shall be capable of being easily replaced. A starting aid will be considered as a single component. Each component shall be provided with screw terminals, NEMA tab connectors or a single multi-circuit connector. All conductor terminals shall be identified as to the component terminal to which they connect.

Ballasts for high-pressure sodium lamps shall have a ballast characteristic curve which will intersect both of the lamp-voltage limit lines between the wattage limit lines and remain between the wattage limit lines throughout the full range of lamp voltage. This requirement shall be met not only at the rated input voltage of the ballast, but also the lowest and highest input voltage for which the ballast is rated. Throughout the lifetime of the lamp, the ballast curve shall fall within the specified limits of lamp voltage and wattage.

All luminaires ballasts shall be located within the luminaire housing. The only exception shall be ballasts to be mounted on lowering assemblies and shall be external to, and attached to the fixture assembly.

Ballast Characteristics for High Pressure Sodium (HPS) and Metal Halide (MH) Sources shall be:

Source	Line Volt.	Lamp Wattage	Ballast Type	Input Voltage Variation	Lamp Wattage Variation
HPS	any	70 400	Mag. Reg. Lag	10%	18%
HPS	any	750 1000	Auto Reg. Lead CWA	10%	30%
MH	any	175 400	Mag. Reg. Lag	10%	18%
MH	any	1000	Auto Reg. Lead CWA	10%	30%

9-29.9(2) Transformers

The transformers to be furnished shall be indoor/outdoor dry type transformers rated as shown in the Plans. The transformer coils, buss bar, and all connections shall be copper. Transformers, 7.5 KVA and larger shall be supplied with two full capacity taps, one at 5% and one at 10% below the normal full capacity.

9-29.10 Luminaires

This section is revised to read:

All luminaires shall have their components secured to the luminaire frame with ANSI, 300 series chrome-nickel grade stainless steel, zinc dichromate coated steel or ceramic coated steel hardware. The luminaire slip-fitter bolts shall be either stainless steel, hot-dip galvanized steel, zinc dichromate coated steel, or ceramic coated steel. All internal luminaire assemblies shall be assembled on or fabricated from either stainless steel or galvanized steel. The housing, complete with integral ballast, shall be weathertight.

The temperature rating of all wiring internal to the luminaire housing, excluding the pole and bracket cable, shall equal or exceed 200°F .

All luminaires shall be provided with markers for positive identification of light source type and wattage. Markers shall be 3-inches square with Gothic bold, black 2-inch legend on colored background. Background color shall be gold for high pressure sodium, and red for metal halide light sources. Legends shall be sealed with transparent film resistant to dust, weather, and ultraviolet exposure.

Legends shall correspond to the following code:

Lamp	Wattage Legend
70	7
100	10
150	15
175	17
200	20
250	25

310	31
400	40
700	70
750	75
1,000	XI

9-29.10(1) Cobra Head Luminaires

This sections content including title is revised to read:

9-29.10(1) Conventional Roadway Luminaires

A. Conventional highway luminaires shall be IES Type III medium distribution cut off cobra head configuration with horizontal lamp, rated at 24,000 hours minimum.

B. The ballast shall be mounted on a separate exterior door, which shall be hinged to the luminaire and secured in the closed position to the luminaire housing by means of an automatic type of latch (a combination hex/slot stainless steel screw fastener may supplement the automatic type latch).

C. The reflector of all luminaires shall be of a snap-in design or be secured with screws. The reflector shall be manufactured of polished aluminum or molded from prismatically formed borosilicate glass. The refractor or lens shall be mounted in a doorframe assembly which shall be hinged to the luminaire and secured in the closed position to the luminaire by means of automatic latch. The refractor or lens and doorframe assembly, when closed, shall exert pressure against a gasket seat. The refractor lens shall not allow any light output above 90 degrees nadir. Gaskets shall be composed of material capable of withstanding temperatures involved and shall be securely held in place.

D. Each housing shall be provided with a four bolt slipfitter capable of mounting on a 2-inch pipe tenon and capable of being adjusted within 5 degrees from the axis of the tenon. The clamping bracket(s) and the cap screws of the slipfitter shall not bottom out on the housing bosses when adjusted within the $\pm$5 degree range.

No part of the slipfitter mounting brackets on the luminaires shall develop a permanent set in excess of 0.2-inch when the cap screws used for mounting are tightened to a torque of 32 pounds feet.

E. Refractors shall be formed from heat resistant, high impact, molded borosilicate glass. Flat lens shall be formed from heat resistant, high impact borosilicate or tempered glass.

F. High pressure sodium conventional roadway luminaires shall be capable of accepting a 150, 200, 250, 310, or 400 watt lamp complete with ballast.

G. Housings shall be fabricated from aluminum. Painted housings shall be painted flat gray, Federal Standard 595 color chip No. 26280. Housings that are painted shall withstand a 1,000-hour salt spray test as specified in ASTM B 117.

H. All luminaires to be mounted on horizontal mast arms shall be capable of withstanding cyclic loading in:

1. A vertical plane at a minimum peak acceleration level of 3.0 g's peak-to-peak sinusoidal loading (same as 1.5 g's peak) with the internal ballast removed, for a minimum of 2 million cycles without failure of any luminaire parts, and;

2. A horizontal plane perpendicular to the direction of the mast arm at a minimum peak acceleration level of 1.5 g's peak to peak sinusoidal loading (same as 0.75 g's peak) with the internal ballast installed, for a minimum of 2 million cycles without failure of any luminaire parts.

I. All luminaires shall have leveling reference points for both transverse and longitudinal adjustment. Luminaires shall have slip-fitters capable of adjusting through a 5-degree axis for the required leveling procedure.

9-29.10(2) Decorative Luminaires

In the first paragraph, "150 - 400" is revised to read "50 - 400".

In the second paragraph, "box shaped" is deleted.

In the third paragraph, the first sentence is deleted. The second sentence is revised to read:

The ballast housing shall be adequately constructed to contain ballasts for 50 - 400 watt alternate high intensity discharge sources.

The fourth paragraph is revised to read:

Each housing shall consist of an integral reflector, containing a mogul based high intensity discharge lamp, and a one piece heat and shock resistant, clear tempered lens mounted in a gasketed, hinged frame. The reflector shall be a snap-in design or secured with screws. The reflector assembly shall have a lamp vibration damper. The reflector shall be manufactured of polished aluminum or molded from prismatically formed borosilicate glass. The housing shall have a heat resistant finish. The lens frame shall be secured to the housing with ANSI, 300 series chrome-nickel grade stainless steel, zinc dichromate coated steel or ceramic coated steel hardware.

The last sentence in the fifth paragraph is deleted.

The sixth paragraph is deleted.

The seventh paragraph is revised to read:

The finish shall meet the requirements of ASTM B 117 with the exception that the finish shall be salt spray resistant after 300 hours exposure.

The first sentence in the eighth paragraph is deleted.

9-29.10(3) High Mast Luminaires and Post Top Luminaires
This sections content including title is deleted and replaced with:

9-29.10(3) Vacant

9-29.10(5) Sign Lighting Luminaires
This section is revised to read:

Sign lighting luminaires shall be the Induction Bulb type.

9-29.10(5)A Sign Lighting Luminaires - Mercury Vapor
This section including title is revised to read:

9-29.10(5)A Sign Lighting Luminaires – Isolation Switch
The isolation switch shall be installed in a terminal cabinet in accordance with Section 9-29.25 with the exception that the cabinet shall be NEMA 3R and stainless steel. The terminal cabinet shall be installed in accordance to the Standard Plans. The switch shall be either single pole, single throw, or double pole single throw as necessary to open all conductors to the luminaires other than neutral and ground conductors. The switch shall contain 600 volt alternating current (VAC) terminal strips on the load side with solderless lugs as required for each load carrying conductor plus four spare lugs per strip.

9-29.10(5)B Sign Lighting Fixtures - Induction
The first sentence is revised to read:

Sign lighting luminaires shall have a cast aluminum housing and door assembly with a polyester paint finish.

In the second sentence of the sixth paragraph, "87" is revised to read "85".

In the last sentence of the sixth paragraph, "Class a" is revised to read "Class A".

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

A Manufacturer's Certificate of Compliance, conforming to Section 1-06.3 “Manufacturer's Certificates of Compliance” and a copy of the high frequency generator test methods and results shall be submitted by the manufacturer with each lot of sign lighting fixtures.

9-29.12 Electrical Splice Materials
This section is revised to read:

Circuit splicing materials shall meet the following specifications.

9-29.12(1) Illumination Circuit Splices
This section is revised to read:

Illumination circuit splices shall be split bolt vice type connectors or solderless crimped connections to securely join the wires both mechanically and electrically as defined in Section 8-20.3(8).

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

9-29.12(1)A Heat Shrink Splice Enclosure

Heat shrink insulating materials shall be the moisture blocking mastic type meeting Mil Spec I 230053

9-29.12(1)B Molded Splice Enclosure

Epoxy resin cast type insulation shall employ a clear rigid plastic mold or a clear mylar sheet bonded to butyrate webbing forming a flexible mold. The material used shall be compatible with the insulation material of the insulated conductor or cable. The component materials of the resin insulation shall be packaged ready for convenient mixing without removing from the package.

9-29.12(2) Traffic Signal Splice Material

This section is revised to read:

Induction loop splices and magnetometer splices shall include an uninsulated barrel type crimped connector capable of being soldered. The insulating material shall be a heat shrink type meeting requirements of Section 9-29.12(1)A, an epoxy resin cast type with clear rigid plastic mold meeting the requirements of Section 9-29.12(1)B, or a re-enterable type with silicone type filling compound that remains flexible and enclosed in a re-enterable rigid mold that snaps together.

9-29.15 Flashing Beacon Control

In the first paragraph, the first word “Flashers” is revised to read “Line voltage flashers”.

9-29.16 Vehicular Signal Heads

This sections title is revised to read:

9-29.16 Vehicular Signal Heads, Displays and Housing

The first sentence is revised to read:

Each signal head shall be of the adjustable, vertical type with the number and type of displays detailed in the Contract; shall provide an indication in one direction only; shall be adjustable through 360 degrees about a vertical axis; and shall be mounted at the location and in the manner shown in the Plans.

This following new paragraph is inserted after the first paragraph:

Back plates shall be constructed of 5-inch wide .050-inch thick corrosion resistant flat black finish, louvered aluminum or polycarbonate attached with stainless steel hardware. A 1-inch wide strip of yellow retro reflective, type IV prismatic sheeting, in accordance with Section 9-28.12, shall be applied around the perimeter of each backplate.

9-29.16(1) Optically Programmed, Adjustable Face, 12-inch Traffic Signal

This section including title is revised to read:

9-29.16(1) Optically Programmed Adjustable Face, and Programmable, Array 12-inch Traffic Signal

The signal shall permit the visibility zone of the indication to be determined optically and require no hoods or louvers. The projected indication may be selectively visible or veiled anywhere within the optical axis. No indication shall result from external illumination, nor shall one light unit illuminate a second. The display shall operate from 85 VAC to 130 VAC.

9-29.16(1)A Optical Systems

The following new title is inserted above the first paragraph:

9-29.16(1)A1 Conventional Optical System

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

9-29.16(1)A2 LED Programmable Array

1. LED array with programmable visibility from a portable hand held device from ground level,

2. Lens shall be clear, unless color lenses specified.

The LED array shall be 22 watt maximum and shall operate directly from 120 volt AC.

The LED array shall provide an accessible imaging surface at focus on the optical axis for objects 900 to 1,200-feet distant, and permit an effective veiling mask to be variously applied as determined by the desired visibility zone.

The optical system shall accommodate projection of diverse, selected indicia to separate portions of the roadway such that only one indication will be simultaneously apparent to any viewer after optically limiting procedures have been accomplished. The projected indication shall conform to ITE transmittance and chromaticity standards.

9-29.16(1)B Construction

The title for this section is revised to read:

9-29.16(1)B Housing Construction

The fourth paragraph is deleted.

9-29.16(1)D Electrical

The title for this section is revised to read:

9-29.16(1)D Housing Electrical

The following new title is inserted above the first paragraph:

9-29.16(1)D1 Electrical Conventional

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

9-29.16(1)D2 Electrical LED

The LED array shall be accessible from the front of the housing. Each multi section assembly shall include a terminal block for clip or screw attachment of lead wires.

9-29.16(1)E Photo Controls

The following new title is inserted above the first paragraph:

9-29.16(1)E1 Conventional Photo Controls

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

9-29.16(1)E2 LED Photo Controls

Each signal section shall include integral means for automatically regulating the display intensity for day and night operation.

9-29.16(2)A Optical Units

This section is revised to read as follows:

Light Emitting Diode (LED) light sources are required for all displays. The Contractor shall provide test results from a Nationally Recognized Testing Laboratory documenting that the LED display conforms to the current ITE Specification for; Vehicle Traffic Control Signal Heads, Light Emitting Diode Circular Signal Supplement VTCSH ST-052 or Vehicle Traffic Signal Heads, Light Emitting Diode Vehicle Arrow Traffic Signal Supplement ITE VTSCH ST-054, and the following requirements:

1. The LED traffic signal module shall be operationally compatible with controllers and conflict monitors on this project and the LED lamp unit shall contain a disconnect that will show an open switch to the conflict monitor when less than 60% of the LEDs in the unit are operational.

2. LED shall have a 50 degree min. viewing angle.

3. Wattage (Maximum): 12-inch red, yellow and green ball displays - 25 W 12-inch red, yellow and green arrow displays - 15W 8-inch red, yellow and green ball displays - 15W

4. Voltage: The operation voltages shall be between 85 VAC and 130VAC.

5. The LED display shall be a module type and shall replace the lens, socket, bail, reflector and be directly connected to the terminal strip in the signal head.

6. Label: Each optical unit shall be listed by and bear the label of a nationally recognized testing laboratory. In addition, the manufacturer's name, trademark, serial number and other necessary identification shall be permanently marked on the backside of the LED signal module and the installation date shall be indicated on a separate label with an indelible ink marker.

9-29.16(2)B Signal Housing

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

> The signal head housing, or case, shall consist of an assembly of separate sections, expandable type for vertical mounting, substantially secured together in a weather tight manner.

In the third paragraph **"**may" is revised to read "shall".

9-29.16(2)D Back Plates

This section's content including title is deleted and replaced with:

> **9-29.16(2)D Vacant**

9-29.16(2)E Painting Signal Heads

In the first sentence "Federal Standard 595B" is revised to read "Federal Standard 595-14056".

9-29.16(3) Polycarbonate Traffic Signal Heads

This section is supplemented with the following paragraph:

> Polycarbonate employed in traffic signal fabrication shall tolerate an elongation prior to break in excess of 90 percent. The green color shall be molded throughout the head assembly. The optical system shall be Light Emitting Diodes as defined in 9-29.16(2)A. The entire optical system shall be sealed by a single neoprene gasket. The signal head shall be formed to be used with standard signal head mounting accessories as shown in 9-29.17. All hinge pins, latch assemblies and reflector assemblies shall conform to 9-29.16(2)B.

9-29.16(3)A 8-inch Polycarbonate Traffic Signal Heads

This section and title are deleted.

9-29.16(3)B 12-inch Polycarbonate Traffic Signal Heads

This section and title are deleted.

Section 9-29.16 is supplemented with the following new sub-section:

> **9-29.16(4) Traffic Signal Cover**
>
> The covers shall be manufactured from a durable fabric material, black in color with a mesh front and designed to fit the signal head configuration properly. The covers shall have an attachment method that will hold the cover securely to the signal in heavy wind. The covers shall be provided with a drain to expel any accumulated water.

9-29.18 Vehicle Detector

The first paragraph is revised to read:

> Induction loop detectors and magnetometer detectors shall comply with current NEMA Specifications when installed with NEMA control assemblies and shall comply with the current California Department of Transportation document entitled "Transportation Electrical Equipment Specifications," specified in Section 9-29.13(7) when installed with Type 170, Type 2070 or NEMA control assemblies.

9-29.19 Pedestrian Push Buttons

This section is revised to read:

Where noted in the Contract, pedestrian push buttons of tamper-resistant construction shall be furnished and installed. They shall consist of a 2-inch nominal diameter plunger. The switch shall be a three bladed beryllium copper spring rated at 10 amperes, 125 volts.

The pedestrian push-button assembly shall be constructed and mounted as detailed in the Contract.

9-29.25 Amplifier, Transformer, and Terminal Cabinets

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

Amplifier and terminal cabinets shall conform to NEMA 4 requirements. Transformer cabinets shall be NEMA 3R.

Item number 3 in the first paragraph is revised to read:

3. Cabinet doors shall have a stainless steel piano hinge or shall meet the requirements for the alternate hinge detailed for type B modified service cabinets. Doors less than 3 feet in height shall have two hinges. Doors from 3 feet to 4 feet 8 inches in height shall have 3 hinges. Spacing of hinges for doors greater than 4 feet 8 inches in height shall not exceed 14 inches center to center. The door shall also be provided with a three point latch and a spring loaded construction core lock capable of accepting a Best six pin CX series core. The locking mechanism shall provide a tapered bolt. The Contractor shall supply construction cores with two master keys. The keys shall be delivered to the Engineer. Three point latches are not required for terminal cabinets.

SECTION 9-34, PAVEMENT MARKING MATERIAL
January 3, 2011

9-34.1 General

The item 'High VOC Solvent Based Paint' is deleted.

9-34.2 Paint

In the first paragraph, the first sentence is revised to read:

White and yellow paint shall comply with the Specifications for low VOC solvent based paint or low VOC waterborne paint.

9-34.2(1) High VOC Solvent Based Paint

This section is including title is revised to read:

9-34.2(1) Vacant

SECTION 9-35, TEMPORARY TRAFFIC CONTROL MATERIALS
January 4, 2011

9-35.0 General Requirements
In the first paragraph, the item "Truck Mounted Attenuator" is revised to read "Transportable Attenuator".

In the second paragraph, the third sentence is revised to read:

> Unless otherwise noted, Requests for Approval of Material (RAM) and Qualified Products List (QPL) submittals are not required.

9-35.12 Truck-Mounted Attenuator
This section including title is revised to read:

> ### 9-35.12 Transportable Attenuator
> Transportable attenuators are Truck-Mounted Attenuators (TMA) or Trailer-Mounted Attenuators (TMA-trailer). The transportable attenuator shall be mounted on, or attached to a host 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 transportable attenuator complies with NCHRP 350 Test level 3 requirements. Lighter host vehicles proposed by the Contractor are subject to the approval of the Engineer. The Contractor shall provide the Engineer with roll-ahead distance calculations and crash test reports illustrating that the proposed host vehicle is appropriate for the attenuator and the site conditions.
>
> The transportable attenuator 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 retro-reflective yellow sheeting, slanted at 45 degrees in an inverted "V" with the "V" at the center of the unit.

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

> ### 9-35.12(1) Truck-Mounted Attenuator
> The TMA may be selected from the approved units listed on the QPL or submitted using a RAM.
>
> 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.
>
> ### 9-35.12(2) Trailer-Mounted Attenuator
> The TMA-trailer may be selected from the approved units listed on the QPL or submitted using a RAM.
>
> If needed, the Contractor shall install additional lights to provide fully visible brake lights at all times.

9-35.12(3) Submittal Requirements

For transportable attenuators listed on the QPL, the Contractor shall submit the QPL printed page or a QPL Acceptance Code entered on the RAM (WSDOT Form 350-071EF) for the product proposed for use to the Engineer for approval. The Contractor shall submit a RAM for transportable attenuators not listed on the QPL.

SPECIAL PROVISIONS

The following Special Provisions are made a part of this contract and supersede any conflicting provisions of the 2010 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.
(Regions[1] 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:

Regions[1]	
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".

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 improvement of *** the 16th Avenue and Washington Avenue Intersection by widening the paved roadway, planning bituminous pavement, paving with ATB and HMA, installing curb, gutter and sidewalk, upgrading the traffic signal and lighting system *** and other work, all in accordance with the attached Contract Plans, these Contract Provisions, and the Standard Specifications.

1-01 DEFINITIONS AND TERMS

1-01.3 Definitions

(September 12, 2008 APWA GSP)
This Section is supplemented with the following:

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

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

The venue of all causes of action arising from the advertisement, award, execution, and performance of the contract shall be in the Superior Court of the County where the Contracting Agency’s headquarters are located.

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

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

Contract Documents
See definition for “Contract”.

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

Dates

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

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

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

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

Substantial Completion Date
The day the Engineer determines the Contracting Agency has full and unrestricted use and benefit of the facilities, both from the operational and safety standpoint, and only minor incidental work, replacement of temporary substitute facilities, or correction or repair remains for the physical completion of the total contract.

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

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

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

Notice of Award
The written notice from the Contracting Agency to the successful bidder signifying the Contracting Agency's acceptance of the bid.

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

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

1-02 BID PROCEDURES AND CONDITIONS

1-02.1 Prequalification of Bidders

Delete this Section and replace it with the following:

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

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

1-02.2 Plans and Specifications
(October 1, 2005 APWA GSP)

Delete this section and replace it with the following:

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

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

To Prime Contractor	No. of Sets	Basis of Distribution
Reduced plans (11" x 17") and Contract Provisions	N/A	Furnished automatically upon award.
Large plans (e.g., 22" x 34") and Contract Provisions	10	Furnished only upon request.

Additional plans and Contract Provisions may be purchased by the Contractor by payment of the cost stated in the Call for Bids.

1-02.5 Proposal Forms
(October 1, 2005 APWA GSP)

Delete this section and replace it with the following:

At the request of a bidder, the Contracting Agency will provide a proposal form for any project on which the bidder is eligible to bid.

The proposal form will identify the project and its location and describe the work. It will also list estimated quantities, units of measurement, the items of work, and the materials to be furnished at the unit bid prices. The bidder shall complete spaces on the proposal form that call for, but are not limited to, unit prices; extensions; summations; the total bid amount; signatures; date; and, where applicable, retail sales taxes and acknowledgment of addenda; the bidder's name, address, telephone number, and signature; the bidder's D/M/WBE commitment, if applicable; a State of Washington Contractor's Registration Number; and a

Business License Number, if applicable. Bids shall be completed by typing or shall be printed in ink by hand, preferably in black ink. The required certifications are included as part of the proposal form.

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

Any correction to a bid made by interlineation, alteration, or erasure, shall be initialed by the signer of the bid. The bidder shall make no stipulation on the Bid Form, nor qualify the bid in any manner.

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

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

A bid by a joint venture shall be executed in the joint venture name and signed by a member of the joint venture. A copy of the joint venture agreement shall be submitted with the Bid Form if any D/W/MBE requirements are to be satisfied through such an agreement.

1-02.6 Preparation of Proposal

(October 10, 2008 APWA GSP)

Supplement the second paragraph with the following:

4. If a minimum bid amount has been established for any item, the unit or lump sum price must equal or exceed the minimum amount stated.

(August 2, 2004)
The fifth and sixth paragraphs of Section 1-02.6 are deleted.

1-02.7 Bid Deposit

(October 1, 2005 APWA GSP)

Supplement this section with the following:

Bid bonds shall contain the following:

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

6. The signature of the surety's officer empowered to sign the bond and the power of attorney.

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

1-02.9 Delivery of Proposal
(January 24, 2011 APWA GSP)

Delete this section and replace it with the following:

Each proposal shall be submitted in a sealed envelope, with the Project Name and Project Number as stated in the Advertisement for Bids clearly marked on the outside of the envelope, or as otherwise required in the Bid Documents, to ensure proper handling and delivery.

The Contracting Agency will not consider Proposals it receives after the time fixed for opening Bids in the call for Bids.

1-02.13 Irregular Proposals
(March 25, 2009 APWA GSP)

Revise item 1 to read:

1. A proposal will be considered irregular and will be rejected if:
   a. The Bidder is not prequalified <u>when so required</u>;
   b. The authorized proposal form furnished by the Contracting Agency is not used or is altered;
   c. The completed proposal form contains any unauthorized additions, deletions, alternate Bids, or conditions;
   d. The Bidder adds provisions reserving the right to reject or accept the award, or enter into the Contract;
   e. A price per unit cannot be determined from the Bid Proposal;
   f. The Proposal form is not properly executed;
   g. The Bidder fails to submit or properly complete a Subcontractor list, if applicable, as required in Section 1-02.6;
   h. The Bidder fails to submit or properly complete a Disadvantaged, Minority or Women's Business Enterprise Certification, if applicable, as required in Section 1-02.6;
   i. The Bid Proposal does not constitute a definite and unqualified offer to meet the material terms of the Bid invitation; or
   j. <u>More than one proposal is submitted for the same project from a Bidder under the same or different names.</u>

1-02.15 Pre Award Information
(October 1, 2005 APWA GSP)

Revise this section to read:

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

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

1-03 AWARD AND EXECUTION OF CONTRACT

1-03.1 Consideration of Bids

(January 23, 2006 APWA GSP)

Revise the first paragraph to read:

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

1-03.3 Execution of Contract

(October 1, 2005 APWA GSP)

Revise this section to read:

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

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

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

If the bidder experiences circumstances beyond their control that prevents return of the contract documents within the calendar days after the award date stated above, the Contracting Agency may grant up to a maximum of **Twenty (20)** additional calendar days for return of the documents, provided the Contracting Agency deems the circumstances warrant it.

1-03.4 Contract Bond

(October 1, 2005 APWA GSP)

Revise the first paragraph to read:

The successful bidder shall provide an executed contract bond for the full contract amount. This contract bond shall:

1. Be on a Contracting Agency-furnished form;
2. Be signed by an approved surety (or sureties) that:
   a. Is registered with the Washington State Insurance Commissioner, and
   b. Appears on the current Authorized Insurance List in the State of Washington published by the Office of the Insurance Commissioner,
3. Be conditioned upon the faithful performance of the contract by the Contractor within the prescribed time;
4. Guarantee that the surety shall indemnify, defend, and protect the Contracting Agency against any claim of direct or indirect loss resulting from the failure:
   a. Of the Contractor (or any of the employees, subcontractors, or lower tier subcontractors of the Contractor) to faithfully perform the contract, or
   b. Of the Contractor (or the subcontractors or lower tier subcontractors of the Contractor) to pay all laborers, mechanics, subcontractors, lower tier subcontractors, material person, or any other person who provides supplies or provisions for carrying out the work;
5. Be accompanied by a power of attorney for the Surety's officer empowered to sign the bond; and
6. Be signed by an officer of the Contractor empowered to sign official statements (sole proprietor or partner). If the Contractor is a corporation, the bond must be signed by the president or vice-president, unless accompanied by written proof of the authority of the individual signing the bond to bind the corporation (i.e., corporate resolution, power of attorney or a letter to such effect by the president or vice-president).

1-03.7 Judicial Review

Revise the last sentence to read:

Such review, if any, shall be timely filed in the Superior Court of Yakima County, Washington.

1-04 SCOPE OF THE WORK

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

(October 1, 2005 APWA GSP)

Revise the second paragraph to read:

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

1. Addenda,
2. Proposal Form,
3. Special Provisions, including APWA General Special Provisions, if they are included,
4. Contract Plans,
5. Amendments to the Standard Specifications,
6. WSDOT Standard Specifications for Road, Bridge and Municipal Construction,
7. Contracting Agency's Standard Plans (if any), and
8. WSDOT Standard Plans for Road, Bridge, and Municipal Construction.

1-04.11 Final Cleanup

This section is supplemented with the following:

The Contractor shall do partial cleanup when he determines it is necessary or when, in the opinion of the Engineer, partial cleanup shall be done for public safety. The cleanup work shall e done immediately upon notification from the Engineer and other work shall not proceed until the partial cleanup is accomplished.

1-05 CONTROL OF WORK

1-05.1 Authority of the Engineer

This section is supplemented with the following:

Unless otherwise expressly provided in the Contract Drawings, Specifications and Addenda, the means and methods of construction shall be such as the Contractor may choose; subject, however, to the Engineer's right to reject means and methods proposed by the Contractor which (1) will constitute or create a hazard to the work, or to persons or property; or (2) will not produce finished work in accordance with the terms of the Contract. The Engineer's approval of the Contractor's means and methods of construction or his failure to exercise his right to reject such means or methods shall not relieve the Contractor of the obligation to accomplish the result intended by the Contract; nor shall the exercise of such right to reject create a cause for action for damages.

The Contracting Agency shall have the authority at all times to issue a stop work order at no penalty to the Contracting Agency if, in its opinion, working conditions present an undue hazard to the public, property of the work force. Such authority shall not, however, relieve the Contractor of responsibility for the maintenance of safe working conditions or assess any responsibility to the Contracting Agency or Engineer for the identification of any or all unsafe conditions.

1-05.4 Conformity With And Deviations From Plans And Stakes

This section is supplemented with the following:

The Contractor shall be responsible for all surveying required for this project. A Professional Surveyor, licensed in the State of Washington, shall be employed by the Contractor to perform all horizontal and vertical control work, and to do the construction staking, including setting offset points and grades. The Contractor shall protect all existing monuments within the construction limits from being disturbed or damaged in any way during construction. If any monuments are disturbed, damaged or removed during construction, the Licensed Surveyor shall replace such monuments in accordance with State Law including recording a Land Corner Record for each monument affected. All associated costs for the survey work shall be incidental to the other bid items of the project.

1-05.7 Removal of Defective and Unauthorized Work

(October 1, 2005 APWA GSP)

Supplement this section with the following:

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

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

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

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

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

1-05.11 Final Inspection

Delete this section and replace it with the following:

1-05.11 Final Inspections and Operational Testing
(October 1, 2005 APWA GSP)

1-05.11(1) Substantial Completion Date

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

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

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

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

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

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

If action to correct the listed deficiencies is not initiated within 7 days after receipt of the written notice listing the deficiencies, the Engineer may, upon written notice to the Contractor, take whatever steps are necessary to correct those deficiencies pursuant to Section 1-05.7.
The Contractor will not be allowed an extension of contract time because of a delay in the performance of the work attributable to the exercise of the Engineer's right hereunder.

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

1-05.11(3) Operational Testing

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

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

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

1-05.13 Superintendents, Labor and Equipment of Contractor

(March 25, 2009 APWA GSP)

Revise the seventh paragraph to read:

Whenever the Contracting Agency evaluates the Contractor's <u>qualifications pursuant to Section 1-02.14</u>, it will take these <u>performance</u> reports into account.

1-05.15 Method of Serving Notices

(March 25, 2009 APWA GSP)

Revise the second paragraph to read:

All correspondence from the Contractor shall be directed to the Project Engineer. <u>All correspondence from the Contractor constituting any notification, notice of protest, notice of dispute, or other correspondence constituting notification required to be furnished under the Contract, must be in paper format, hand delivered or sent via mail delivery service to the Project Engineer's office. Electronic copies such as e-mails or electronically delivered</u>

copies of correspondence will not constitute such notice and will not comply with the requirements of the Contract.

Add the following new section:

1-05.16 Water and Power
(October 1, 2005 APWA GSP)

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

1-06 CONTROL OF MATERIAL

Section 1-06 is supplemented with the following:

Buy America

(August 6, 2007)
The major quantities of steel and iron construction material that is permanently incorporated into the project shall consist of American-made materials only. Buy America does not apply to temporary steel items, e.g., temporary sheet piling, temporary bridges, steel scaffolding and falsework.

Minor amounts of foreign steel and iron may be utilized in this project provided the cost of the foreign material used does not exceed one-tenth of one percent of the total contract cost or $2,500.00, whichever is greater.

American-made material is defined as material having all manufacturing processes occurring domestically. To further define the coverage, a domestic product is a manufactured steel material that was produced in one of the 50 States, the District of Columbia, Puerto Rico, or in the territories and possessions of the United States.

If domestically produced steel billets or iron ingots are exported outside of the area of coverage, as defined above, for any manufacturing process then the resulting product does not conform to the Buy America requirements. Additionally, products manufactured domestically from foreign source steel billets or iron ingots do not conform to the Buy America requirements because the initial melting and mixing of alloys to create the material occurred in a foreign country.

Manufacturing begins with the initial melting and mixing, and continues through the coating stage. Any process which modifies the chemical content, the physical size or shape, or the final finish is considered a manufacturing process. The processes include rolling, extruding, machining, bending, grinding, drilling, welding, and coating. The action of applying a coating to steel or iron is deemed a manufacturing process. Coating includes epoxy coating, galvanizing, aluminizing, painting, and any other coating that protects or enhances the value of steel or iron. Any process from the original reduction from ore to the finished product constitutes a manufacturing process for iron.

Due to a nationwide waiver, Buy America does not apply to raw materials (iron ore and alloys), scrap (recycled steel or iron), and pig iron or processed, pelletized, and reduced iron ore.

The following are considered to be steel manufacturing processes:

1. Production of steel by any of the following processes:
    a. Open hearth furnace.
    b. Basic oxygen.
    c. Electric furnace.
    d. Direct reduction.
2. Rolling, heat treating, and any other similar processing.
3. Fabrication of the products.
    a. Spinning wire into cable or strand.
    b. Corrugating and rolling into culverts.
    c. Shop fabrication.

A certification of materials origin will be required for any items comprised of, or containing, steel or iron construction materials prior to such items being incorporated into the permanent work. The certification shall be on DOT Form 350-109EF provided by the Engineer, or such other form the Contractor chooses, provided it contains the same information as DOT Form 350-109EF.

1-06.2 Acceptance of Materials

1-06.2(1) Samples and Tests for Acceptance

This section is supplemented with the following:

The Contractor shall be responsible for scheduling and paying for all material testing required for this project. All testing services shall be performed by an independent, certified testing firm and/or laboratory meeting the approval of the Engineer. The Contractor shall submit information relating to the qualifications of the proposed testing firm to the Engineer for review and approval prior to the preconstruction conference. The testing frequencies listed below may be modified to assure compliance with specifications. In each case, the Engineer may require additional tests be performed at the Contractor's expense, if test results do not meet the required densities and results.

Moisture density curves for each type of material encountered and copies of all test results shall be submitted to the Engineer as construction progresses for Trench Backfilling, Embankment Compaction, Subgrade Preparation, and Ballast and Crushed Surfacing.

The sampling frequency is as follows:

Trench Backfilling

Compaction tests shall be taken at a frequency and at depths sufficient to document that the required density has been achieved. At a minimum, one (1) compaction test shall be taken for each 100 linear feet of main pipeline trench and one (1) test for each street crossing. At alternating 100-foot locations along the main trench line, tests shall be taken at 1-foot, 2-foot and 3-foot depths below finish grade.

Compaction shall conform to Section 7-08.3(3) or 7-10.3(11) as applicable to the pipeline being constructed. At a minimum, compaction within the roadway area shall be to at least 95% of maximum density as determined by ASTM D 1557 (Modified Proctor).

Embankment Construction

Compaction tests shall be taken at a frequency sufficient to document that the required density has been achieved. At a minimum, one (1) compaction test shall be taken for every 5000 square feet of surface area for each lift of roadway embankment.

Roadway embankment compaction shall be as specified in Section 2-03.3(14).

Subgrade Preparation

Compaction tests shall be taken at a frequency sufficient to document that the required density has been achieved. At a minimum, one (1) compaction test shall be taken for every 5,000 square feet of surface area for each lift of roadway subgrade.

Subgrade compaction shall be as specified in Section 2-06.3(2).

Ballast and Crushed Surfacing

Compaction tests shall be taken at a frequency sufficient to document that the required density has been achieved. At a minimum, one (1) compaction test shall be taken for every 5,000 square feet of surface area for each lift of ballast or crushed surfacing.

Compaction of ballast and crushed surfacing shall be as specified in Section 4-04.3(5).

Asphalt Concrete Pavement

Copies of the maximum Rice density test for each class of asphalt concrete pavement and copies of all test results shall be provided to the Engineer as construction progresses.

Density tests shall be taken at a frequency sufficient to document that the required density has been achieved. At a minimum, one (1) compaction test shall be taken for every 5000 square feet of surface area for each lift of asphalt concrete pavement.

Compaction of asphalt concrete pavement shall be as specified in Section 5-04.3(10) B of these Special Provisions.

Cement Concrete Curb, Gutter and Sidewalk

One test shall be taken for every 500 cubic yards of concrete placed for curb, gutter or sidewalk. The concrete shall be tested for temperature, air content, slump and compressive strength.

1-07 LEGAL RELATIONS AND RESPONSIBILITIES TO THE PUBLIC

1-07.1 Laws to be Observed
(October 1, 2005 APWA GSP)

Supplement this section with the following:

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

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

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

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

1-07.2 State Sales Tax
Delete this section, including its sub-sections, in its entirety and replace it with the following:

1-07.2 State Sales Tax
(October 1, 2005 APWA GSP)

1-07.2(1) General

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

The Contractor shall include all Contractor-paid taxes in the unit bid prices or other contract amounts. In some cases, however, state retail sales tax will not be included. Section 1-07.2(3) describes this exception.

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

1-07.2(2) State Sales Tax — Rule 171

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

1-07.2(3) State Sales Tax — Rule 170

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

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

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

1-07.2(4) Services

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

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(2) apply.

Environmental Regulations

Section 1-07.5 is supplemented with the following:

(September 20, 2011)
Environmental Commitments

The following Provisions summarize the requirements, in addition to those required elsewhere in the Contract, imposed upon the Contracting Agency by the various documents referenced in the Special Provision PERMITS AND LICENSES. Throughout the work, the Contractor shall comply with the following requirements:

(August 3, 2009)
The intentional bypass of stormwater from all or any portion of a stormwater treatment system is prohibited without the approval of the Engineer.

(August 3, 2009)
No Contractor staging areas will be allowed within *** **30** *** feet of any waters of the State including wetlands.

(August 3, 2009)
Payment

All costs to comply with this special provision for the environmental commitments and requirements are incidental to the contract and are the responsibility of the Contractor. The Contractor shall include all related costs in the associated bid prices of the contract.

1-07.5(4) Air Quality

This section is supplemented with the following:

The local air pollution authority is the Yakima Regional Clean Air Authority, (509) 574-1410.

Temporary Water Pollution/Erosion Control

Spill Prevention, Control and Countermeasures Plan

Section 1-07.15(1) is supplemented with the following:

(August 3, 2009)
The Contractor shall address the following items in the SPCC Plan in addition to the requirements of Section 1-07.15(1):

Mixing, Transfers, & Storage

1. All oil, fuel or chemical storage tanks or containers shall be diked and located on impervious surfaces so as to prevent spill from escaping.

2. All liquid products shall be stored and mixed on impervious surfaces in a secure water tight environment and provide containment to handle the maximum volume of liquid products on site at any given time.

3. Proper security shall be maintained to prevent vandalism.

4. Drip pans or other protective devices shall be required for all transfer operations.

Spills
Paint and solvent spills shall be treated as oil spills and shall be prevented from reaching storm drains or other discharges. No cleaning solvents or chemicals used for tool or equipment cleaning may be discharged to the ground or water.

Maintenance of Equipment
Fuel hoses, oil drums, oil or fuel transfer valves and fittings, etc, shall be checked regularly for drips or leaks and shall be maintained and stored properly to prevent spills into State waters.

Disposal
Spilled waste, chemicals or petroleum products shall be transported off site for disposal at a facility approved by the Department of Ecology. The materials shall not be discharged to any sanitary sewer without approval of the local sewer authority.

Reporting and Cleanup
The Contractor's designated person for managing and implementing the SPCC Plan shall report hazardous material spills as follows:

Spills into State water (including ponds, ditches, seasonally dry streams, and wetlands) – Immediately call all of the following:

National Response Center	1-800-424-8802
WA State Div. of Emergency Management (24 hr)	1-800-258-5990
Ecology Central Regional Office	509-575-2490

Spill to Soil (Including encounters of pre-existing contamination):

Ecology Central Regional Office	509-575-2490

Report immediately if threatening to health or environment (i.e., explosive, flammable, toxic vapors, shallow groundwater, nearby creek), otherwise within 90 days

Underground Storage Tank (confirmed release of material)

Ecology Central Regional Office	509-575-2490

Report within 24 hours

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.

It shall be the contractor's responsibility to investigate the presence and location of all utilities prior to bid opening and assess their impacts on his construction activities.

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:

QWEST	8 W. 2nd Ave., Room 304, Yakima, WA 98902	509-575-7183
Charter Communications	1005 N. 16th Ave., Yakima, WA 98902	509-575-1697
City of Yakima Water Div.	2301 Fruitvale Blvd., Yakima, WA 98902	509-575-6154
City of Yakima Wastewater Div.	2220 E. Viola, Yakima, WA 98901	509-575-6077
Cascade Natural Gas Corp.	401 N. 1st Street, Yakima, WA 98901	509-457-5905
Pacific Power	PO Box 1729, Yakima, WA 98907	509-575-3146

The Contractor shall notify the Upper Yakima Valley Utilities Coordinating Council-Area 5, telephone number 1-800-553-4344, at least 72 hours prior to start of excavation so that underground utilities may be marked. No excavation shall begin until all known facilities, in the vicinity of the excavation area, have been located and marked.

Utilities, new or old, may be renewed, relocated, or adjusted for the proposed construction. The Contractor shall, prior to beginning any work, meet with all utility organizations (public and private) in the field to familiarize himself with plans and schedules of the installations on new, relocated, or adjusted utilities. Both public and private utility organizations may be doing utility installations within the area. The proposed construction work must be coordinated with these utility installations.

The Contractor shall coordinate his work with other contractors who may be working in the project area and cooperate with them.

1-07.18 Public Liability and Property Damage Insurance

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

1-07.18 Insurance
(January 24, 2011 APWA GSP)

1-07.18(1) General Requirements

A. The Contractor shall obtain the insurance described in this section from insurers approved by the State Insurance Commissioner pursuant to RCW Title 48. The insurance must be provided by an insurer with a rating of A-: VII or higher in the A.M. Best's Key Rating Guide,

which is licensed to do business in the state of Washington (or issued as a surplus line by a Washington Surplus lines broker). The Contracting Agency reserves the right to approve or reject the insurance provided, based on the insurer (including financial condition), terms and coverage, the Certificate of Insurance, and/or endorsements.

B. The Contractor shall keep this insurance in force during the term of the contract and for thirty (30) days after the Physical Completion date, unless otherwise indicated (see C. below).

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

D. The insurance policies shall contain a "cross liability" provision.

E. The Contractor's and all subcontractors' insurance coverage shall be primary and non-contributory insurance as respects the Contracting Agency's insurance, self-insurance, or insurance pool coverage.

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

G. Upon request, the Contractor shall forward to the Contracting Agency a full and certified copy of the insurance policy(s).

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

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

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

1-07.18(2) Additional Insured

All insurance policies, with the exception of Professional Liability and Workers Compensation, shall name the following listed entities as additional insured(s):

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

- appointed officials

The above-listed entities shall be additional insured(s) for the full available limits of liability maintained by the Contractor, whether primary, excess, contingent or otherwise, irrespective of whether such limits maintained by the Contractor are greater than those required by this Contract, and irrespective of whether the Certificate of Insurance provided by the Contractor pursuant to 1-07.18(3) describes limits lower than those maintained by the Contractor.

1-07.18(3) Subcontractors

Contractor shall ensure that each subcontractor of every tier obtains and maintains at a minimum the insurance coverages listed in 1-07.18(5)A and 1-07.18(5)B. Upon request of the Contracting Agency, the Contractor shall provide evidence of such insurance.

1-07.18(4) Evidence of Insurance

The Contractor shall deliver to the Contracting Agency a Certificate(s) of Insurance and endorsements for each policy of insurance meeting the requirements set forth herein when the Contractor delivers the signed Contract for the work. The certificate and endorsements must conform to the following requirements:

1. An ACORD certificate or a form determined by the Contracting Agency to be equivalent.
2. Copies of all endorsements naming Contracting Agency and all other entities listed in 1-07.18(2) as Additional Insured(s), showing the policy number. The Contractor may submit a copy of any blanket additional insured clause from its policies instead of a separate endorsement. A statement of additional insured status on an ACORD Certificate of Insurance shall not satisfy this requirement.
3. Any other amendatory endorsements to show the coverage required herein.

1-07.18(5) Coverages and Limits

The insurance shall provide the minimum coverages and limits set forth below. Providing coverage in these stated minimum limits shall not be construed to relieve the Contractor from liability in excess of such limits. All deductibles and self-insured retentions must be disclosed and are subject to approval by the Contracting Agency. The cost of any claim payments falling within the deductible shall be the responsibility of the Contractor.

1-07.18(5)A Commercial General Liability

A policy of Commercial General Liability Insurance, including:

Per project aggregate
Premises/Operations Liability
Products/Completed Operations – for a period of one year following final acceptance of the work.
Personal/Advertising Injury
Contractual Liability
Independent Contractors Liability
Stop Gap / Employers' Liability
Explosion, Collapse, or Underground Property Damage (XCU)
Blasting (only required when the Contractor's work under this Contract includes exposures to which this specified coverage responds)

Such policy must provide the following minimum limits:

$1,000,000 Each Occurrence
$2,000,000 General Aggregate
$1,000,000 Products & Completed Operations Aggregate
$1,000,000 Personal & Advertising Injury, each offence

Stop Gap / Employers' Liability
$1,000,000 Each Accident
$1,000,000 Disease - Policy Limit
$1,000,000 Disease - Each Employee

1-07.18(5)B Automobile Liability

Automobile Liability for owned, non-owned, hired, and leased vehicles, with an MCS 90 endorsement and a CA 9948 endorsement attached if "pollutants" are to be transported. Such policy(ies) must provide the following minimum limit:

$1,000,000 combined single limit

1-07.18(5)C Workers' Compensation

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

Public Convenience and Safety

Construction Under Traffic

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

(April 2, 2007)
Work Zone Clear Zone

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

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

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

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

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

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

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

* or 2-feet beyond the outside edge of sidewalk

Minimum Work Zone Clear Zone Distance

1-07.24 Rights of Way
(October 1, 2005 APWA GSP)

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

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

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

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

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

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

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

1-08 PROSECUTION AND PROGRESS

Add the following new section:

1-08.0 Preliminary Matters

(May 25, 2006 APWA GSP)

Add the following new section:

1-08.0(1) Preconstruction Conference

(October 10, 2008 APWA GSP)

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

1. To review the initial progress schedule;
2. To establish a working understanding among the various parties associated or affected by the work;
3. To establish and review procedures for progress payment, notifications, approvals, submittals, etc.;
4. To establish normal working hours for the work;
5. To review safety standards and traffic control; and
6. To discuss such other related items as may be pertinent to the work.

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

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

Add the following new section:

1-08.0(2) Hours of Work
(May 25, 2006 APWA GSP)

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

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

Permission to work between the hours of 10:00 p.m. and 7:00 a.m. during weekdays and between the hours of 10:00 p.m. and 9:00 a.m. on weekends or holidays may also be subject to noise control requirements. Approval to continue work during these hours may be revoked at any time the Contractor exceeds the Contracting Agency's noise control regulations or complaints are received from the public or adjoining property owners regarding the noise from the Contractor's operations. The Contractor shall have no claim for damages or delays should such permission be revoked for these reasons.

Permission to work Saturdays, Sundays, holidays or other than the agreed upon normal straight time working hours Monday through Friday may be given subject to certain other conditions set forth by the Contracting Agency or Engineer. These conditions may include but are not limited to: requiring the Engineer or such assistants as the Engineer may deem necessary to be present during the work; requiring the Contractor to reimburse the Contracting Agency for the costs in excess of straight-time costs for Contracting Agency employees who worked during such times, on non Federal aid projects; considering the work performed on Saturdays, Sundays, and holidays as working days with regards to the contract time; and considering multiple work shifts as multiple working days with respect to contract time even though the multiple shifts occur in a single 24-hour period. Assistants may include, but are not limited to, survey crews; personnel from the Contracting Agency's material testing lab; inspectors; and other Contracting Agency employees when in the opinion of the Engineer, such work necessitates their presence.

Add the following new section:

1-08.0(3) Reimbursement for Overtime Work of Contracting Agency Employees
(May 25, 2006 APWA GSP; may not be used on FHWA-funded projects)

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

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

1-08.1 Subcontracting - D/M/WBE Reporting

(October 10, 2008 APWA GSP; may not be used on FHWA-funded projects)

Revise the eighth paragraph to read:

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

1-08.3 Progress Schedule

This section is supplemented with the following:

The Contractor shall prepare and submit to the Engineer a Construction Progress and Completion Schedule using the Bar Graph or Critical Path Method. Items in the Schedule shall be arranged in the order and sequence in which they will be performed. The schedule shall conform to the working modification by the Engineer. The schedule shall be drawn to a time scale, shown along the base of the diagram, using an appropriate measurement per day with weekends and holidays indicated. The Construction Progress Schedule shall be continuously updated and, if necessary, redrawn upon the first working day of each month or upon issuance of any Change Order, which substantially affects the scheduling. Copies (2 prints or 1 reproducible of newly updated Schedules shall be forwarded to the Engineer, as directed, immediately upon preparation.

If the Contractor proceeds with work not indicated on this weekly activity schedule, or in a sequence differing form the which he has shown on this schedule, the Engineer may order the Contractor to delay unscheduled activities until they are included on a subsequent weekly activity schedule.

1-08.4 Prosecution of Work

Revise this section to read:

1-08.4 <u>Notice to Proceed and</u> Prosecution of the Work

(October 1, 2005 APWA GSP)

<u>Notice to Proceed will be given after the contract has been executed and the contract bond and evidence of insurance have been approved and filed by the Contracting Agency. The Contractor shall not commence with the work until the Notice to Proceed has been given by the Engineer. The Contractor shall commence construction activities on the project site</u>

within ten days of the Notice to Proceed Date, unless otherwise approved in writing. The Contractor shall diligently pursue the work to the physical completion date within the time specified in the contract. Voluntary shutdown or slowing of operations by the Contractor shall not relieve the Contractor of the responsibility to complete the work within the time(s) specified in the contract.

1-08.5 Time for Completion

This section is supplemented with the following:

(March 13, 1995)
This project shall be physically completed within *** 80 *** working days.

(June 28, 2007 APWA GSP, Option B)

Revise the third and fourth paragraphs to read:

Contract time shall begin on the first working day following the 60th calendar day after the Notice to Proceed date. If the Contractor starts work on the project at an earlier date, then contract time shall begin on the first working day when onsite work begins.

Each working day shall be charged to the contract as it occurs, until the contract work is physically complete. If substantial completion has been granted and all the authorized working days have been used, charging of working days will cease. Each week the Engineer will provide the Contractor a statement that shows the number of working days: (1) charged to the contract the week before; (2) specified for the physical completion of the contract; and (3) remaining for the physical completion of the contract. The statement will also show the nonworking days and any partial or whole day the Engineer declares as unworkable. Within 10 calendar days after the date of each statement, the Contractor shall file a written protest of any alleged discrepancies in it. To be considered by the Engineer, the protest shall be in sufficient detail to enable the Engineer to ascertain the basis and amount of time disputed. By not filing such detailed protest in that period, the Contractor shall be deemed as having accepted the statement as correct. If the Contractor elects to work 10 hours a day and 4 days a week (a 4-10 schedule) and the fifth day of the week in which a 4-10 shift is worked would ordinarily be charged as a working day, then the fifth day of that week will be charged as a working day whether or not the Contractor works on that day.

Revise the sixth paragraph to read:

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

1. The physical work on the project must be complete; and
2. The Contractor must furnish all documentation required by the contract and required by law, to allow the Contracting Agency to process final acceptance of the contract. The following documents must be received by the Project Engineer prior to establishing a completion date:
   a. Certified Payrolls (Federal-aid Projects)

b. Material Acceptance Certification Documents
c. Annual Report of Amounts Paid as MBE/WBE Participants or Quarterly Report of Amounts Credited as DBE Participation, as required by the Contract Provisions.
d. Final Contract Voucher Certification
e. Property owner releases per Section 1-07.24

1-08.7 Maintenance During Suspension
(October 1, 2005 APWA GSP)

Revise the second paragraph to read:

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

1-09 MEASUREMENT AND PAYMENT

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

Supplement this section with the following:

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

1-09.9 Payments
(October 10, 2008 APWA GSP)

Revise the first paragraph to read:

The basis of payment will be the actual quantities of Work performed according to the Contract and as specified for payment. For items Bid as lump sum, with a bid price of more than or equal to $20,000, the Contractor shall submit a breakdown of their lump sum price in sufficient detail for the Project Engineer to determine the value of the Work performed on a monthly basis. Lump sum breakdowns shall be provided to the Project Engineer no later than the date of the preconstruction conference.

Delete the third paragraph and replace it with the following:

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

The initial progress estimate will be made not later than 30 days after the Contractor commences the work, and successive progress estimates will be made every month

thereafter until the Completion Date. Progress estimates made during progress of the work are tentative, and made only for the purpose of determining progress payment. The progress estimates are subject to change at any time prior to the calculation of the Final Payment.

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

1. Unit Price Items in the Bid Form — the approximate quantity of acceptable units of work completed multiplied by the unit price.
2. Lump Sum Items in the Bid Form — partial payment for lump sum Bid items will be a percentage of the price in the Proposal based on the Engineer's determination of the amount of Work performed, with consideration given to, but not exclusively based on, the Contractor's lump sum breakdown for that item.
3. Materials on Hand — 100 percent of invoiced cost of material delivered to Job site or other storage area approved by the Engineer.
4. Change Orders — entitlement for approved extra cost or completed extra work as determined by the Engineer.

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

1. Retainage per Section 1-09.9(1);
2. The amount of Progress Payments previously made; and
3. Funds withheld by the Contracting Agency for disbursement in accordance with the Contract Documents.

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

Payments will be made by warrants, issued by the Contracting Agency's fiscal officer, against the appropriate fund source for the project. Payments received on account of work performed by a subcontractor are subject to the provisions of RCW 39.04.250.

1-10 TEMPORARY TRAFFIC CONTROL

1-10.2 Traffic Control Management

1-10.2(1) General

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

(December 1, 2008)
Only training with WSDOT TCS card and WSDOT training curriculum is recognized in the State of Washington. The Traffic Control Supervisor shall be certified by one of the following:

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

Evergreen Safety Council
401 Pontius Ave. N.
Seattle, WA 98109
1-800-521-0778 or
(206) 382-4090

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

1-10.4 Measurement

(August 2, 2004)
Section 1-10.4(2) is supplemented with the following:

The bid proposal does not contain the item “Project Temporary Traffic Control,” lump sum. The provisions of Section 1-10.4(2) shall apply.

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:

Between the existing curb and right of way limits on the west side of 16th Avenue from Sta. 96+60 to Sta. 103+55. Between the existing curb and right of way limits on the south side of Washington Avenue from Sta. 46+58 to Sta. 53+72.`

2-01.2 Disposal of Usable Material and Debris
This section is revised as follows:

Change the word “three” in the third paragraph to “two”.

2-01.2(1) Disposal Method N. 1 – Open Burning
This section is deleted.

2-02 REMOVAL OF STRUCTURES AND OBSTRUCTIONS

2-02.1 Description
This section is supplemented with the following:

This work consists of removing the existing traffic signal system and six street lights.

The materials removed shall be salvaged and delivered to the City of Yakima Public Works Facility, 2301 Fruitvale Boulevard, Yakima, WA. Contractor to coordinate with Joe Rosenlund, City of Yakima Streets and Operations Manager. 509-576-6430.

2-02.3 Construction Requirements
This section is supplemented with the following:

Prior to removal, the Contractor shall use a vertical saw cut to delineate the areas of pavement removal from those areas that pavement is to remain.

Concrete curb, gutter and sidewalks shall be r4emoved to the nearest convenient joint if practical. If not practical to remove to the nearest joint, the Contractor shall saw cut these structures I a neat vertical and straight transverse horizontal line to provide a matching joint for the new construction.

The materials to be removed under this section shall become the property of the Contractor. The Contractor shall remove and dispose of the materials outside of the project limits

Any damage caused to the pavement, curb, gutter or sidewalk that is scheduled to remain, due to the Contractor's operation, shall be repaired by the Contractor to the satisfaction of the Engineer at no expense to the Contracting Agency.

2-02.3(3) Removal of Pavements, Sidewalks, Curbs, and Gutters

This section is supplemented with the following:

Item 1 is revised to read:

Haul all broken pieces to an off-project site to be obtained by the Contractor.

Item 3 is revised by adding the following to the end of the first sentence:

"or remove to the nearest joint as directed."

2-02.4 Measurement

This section is supplemented with the following:

Where saw cutting is necessary, the Contractor shall be paid by the linear foot, per inch depth, which includes all labor and equipment required to do the cut.

2-02.5 Payment

This section is supplemented by adding the following pay item:

"Saw Cut, Per Inch Depth", per linear foot.

2-07 WATERING

2-07.3 Construction Requirements

Supplement this section with the following:

The Contractor shall secure permission from and comply with all requirements of the water utility before obtaining water from fire hydrants. The Contractor shall notify the Engineer as soon as such permission is granted.

The Contractor shall use hydrant wrenches only to open hydrants. While using hydrants, the contractor shall make certain that the hydrant valve is fully open in order to prevent damage to the hydrant valve. A metered hydrant connection furnished by the water utility shall be used as an auxiliary valve on the outlet line for control purposes. Fire hydrant valves shall be closed slowly to avoid a surge in the system causing undue pressure on the water lines. The Contractor shall carefully note the importance of following these directions.

If a hydrant is damaged due to the Contractor or an employee of the Contractor, the Contractor shall immediately notify the water utility so that the damage can be repaired as quickly as possible.

Upon completing the use of the hydrants, the Contractor shall notify the water utility so that the hydrants may be inspected for possible damage. Any damage resulting from the use of the hydrants by the Contractor will be repaired by the water utility, and the cost thereof shall be withheld, if necessary, from the final payment to the Contractor.

The Contractor shall furnish all equipment and tools, except the metered hydrant connection, that may be necessary to meet the requirements of the water distribution agency pertaining to hydrant us.

Violation of these requirements will result in fines and will lay the Contractor liable for damage suits because of malfunctioning of damaged fire hydrants, in the event of fire.

2-07.4 Measurement

This section is revised to read:

Water will be measured with the metered hydrant connection.

2-07.5 Payment

This section is revised to read as follows:

Water will be furnished by the water utility without charge, but the Contractor shall convey the water from the nearest convenient hydrant or other source at his expense.

DIVISION 4
BASES

4-06 ASPHALT TREATED BASE

4-06.2 Materials

Section 4-06.2 is supplemented with the following:

(October 25, 1999)
The grade of paving asphalt used in asphalt treated base shall be PG 64-28 unless otherwise ordered by the Engineer.

DIVISION 5
SURFACE TREATMENTS AND PAVEMENTS

5-04 HOT MIX ASPHALT

5-04.3(7)A Mix Design

(March 10, 2011 APWA GSP)

Delete this section and replace it with the following;

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 submit the HMA mix design on DOT form 350-042 demonstrating the design meets the requirements of Sections 9-03.8(2) and 9-03.8(6). HMA accepted by nonstatistical evaluation requires a mix design verification. For HMA accepted by commercial evaluation only the first page of DOT form 350-042 and the percent of asphalt binder is required. In no case shall the

paving begin before the determination of anti-strip requirements has been made. Anti-strip requirements will be determined by:

a. Testing by WSDOT in accordance with TM 718.
b. Testing by Contractor in accordance with WSDOT TM 718.
c. Historical aggregate source ant-strip use provided by WDOT.

The mix design will be the initial Job Mix Formula (JMF) for the HMA being produced. Any additional adjustments to the JMF will require the approval of the Project Engineer and may be made per Section 9-03.8(7).

2. **Mix Design Verification.** Verification shall be accomplished by one of the following processes:

a. Submit samples to WSDOT State Materials Lab for WSDOT verification testing in accordance with WSDOT Standard Specifications.
b. The contracting agency will perform tests to verify the mix design in accordance with the Field Verification Testing Process.
c. Reference a mix design that has been previously verified by the Field Verification Testing Process or verified by WSDOT State Materials Lab on a previous project.
d. Perform Field Verification Testing on a sample of HMA provided by the Contractor prior to paving.

Mix design verification is valid for one year from the date of verification. At the discretion of the Engineer, agencies may accept mix designs verified beyond the verification year with certification from the Contractor that the materials and sources are the same as those shown on the original mix design.

3. **Field Verification Testing Process.** The Contracting agency will collect three Production Samples of HMA on the first day of paving per AASHTO T 168 sampling procedures.

a. The Contracting agency will test one Production Sample in accordance with section 5-04.3(8)A for field verification per the requirements of Section 9-03.8(7).
b. If the test results from the first Production Sample are within the tolerances of section 9-03.8(7), the mix design will be considered verified and the test results will be used as acceptance sample number one.
c. If the test results from the first Production Sample are outside the tolerances of section 9-03.8(7), the other two samples will be tested and the results of all three tests will be used for acceptance in accordance with Section 5-04.5(1) and will be used in the calculation of the CPF the maximum CPF shall be 1.00.

4. Prior to the first day of paving, six Ignition Furnace Calibration Samples shall be obtained to calibrate the Ignition Furnaces used for acceptance testing of the HMA. Calibration samples shall be provided by the Contractor when directed by the Engineer. Calibration samples shall be prepared in accordance with WSDOT SOP 728.

5-04.3(8)A1, General
(March 10, 2011 APWA GSP)

Delete these sections and replace them with the following:

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

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

Commercial evaluation will be used for Commercial HMA and for other classes of HMA in the following applications: sidewalks, road approaches, ditches, slopes, paths, trails, gores, prelevel, and pavement repair. Other nonstructural applications of HMA accepted by commercial evaluation shall be as approved by the Project Engineer. Sampling and testing of HMA accepted by commercial evaluation will be at the option of the Project Engineer. Commercial HMA can be accepted by a contractor certification letter stating the material meets the HMA requirements defined in the contract.

5-04.3(8)A4, Definition of Sampling Lot and Sublot
(March 10, 2011 APWA GSP)

Delete this section and replace it with the following:

For the purpose of acceptance sampling and testing, a lot is defined as the total quantity of material or work produced for each job mix formula (JMF) placed. Only one lot per mix design will be expected to occur. The initial JMF is defined in Section 5-04.3(7)A Mix Design. The Contractor may request a change in the JMF in accordance with Section 9-03.8(7). If the request is approved, all of the material produced up to the time of the change will be evaluated on the basis of tests on samples taken from that material and a new lot will begin.

For proposal quantities less then 2500 tons sampling and testing for evaluation shall be performed as described in 5-04.3(7)A, item 3, Field Verification Testing Process. The verification sample referenced in item 3b may be used as an acceptance sample, additional testing will be at the discretion of the Engineer. When using a previously verified mix design, testing for volumetric properties may be waived at the engineer’s discretion. At least one acceptance sample is required when using this method of acceptance.

For proposal quantities greater than 2500 tons sampling and testing for evaluation shall be performed as described in 5-04.3(7)A, item 3, Field Verification Testing Process, for the first 2500 tons of mix placed. The verification sample referenced in item 3b may be used as an acceptance sample for the first 2500 tons of mix placed. Additional testing will be at the rate of one sample per 800 tons of mix placed or as directed by the Engineer. When using a previously verified mix design, testing for volumetric properties may be waived at the engineer’s discretion.

5-04.3(8)A5, Test Results
(March 10, 2011 APWA GSP)

Delete this section and replace it with the following:

The Engineer will furnish the Contractor with a copy of the results of all acceptance testing performed in the field at the beginning of the next paving shift. The Engineer will also provide the Composite Pay Factor (CPF) of the completed sublots after three sublots have been produced. The CPF will be provided by the midpoint of the next paving shift after sampling. 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 7-calendar 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 Laboratory or the State Materials Laboratory 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

If the results of the challenge sample testing are within the allowable deviation established above for each parameter, the acceptance sample test results will be used for acceptance of the HMA. The cost of testing will be deducted from any monies due or that may come due the Contractor under the Contract at the rate of $250 per challenge sample. If the results of the challenge sample testing are outside of any one parameter established above, the challenge sample will be used for acceptance of the HMA and the cost of testing will be the Contracting Agency's responsibility.

5-04.3(8)A7 Test Section – HMA Mixtures
(March 10, 2011 APWA GSP)

Delete this section.

5-04.3(13) Surface Smoothness
(January 5, 2004)
The second sentence of this section is revised to read:

The completed surface of the wearing course shall not vary more than 1/4 inch from the lower edge of a 10-foot straightedge placed on the surface parallel to centerline.

The last paragraph of this section is supplemented with the following:

When utility appurtenances such as manhole rings and covers and valve boxes are encountered of are to be located within the HMA pavement area, these items are either to be removed or not put in place until after the paving operation has been completed. The location of each utility appurtenance and all Monuments shall be referenced prior to the start of paving operations and a temporary covering shall be placed over the appurtenances to facilitate the continuous paving operation. After paving has been completed, the Contractor shall furnish, install and adjust new castings on all new and existing public utility structures and new monument cases for all monuments as shown on the plans.

Utility casting shall not be adjusted until the paving is complete. After which, the center of each structure and each monument shall be relocated from the references previously established by the Contractor.

The HMA shall be cut and removed to a neat circle, the diameter of which shall be equal to the outside diameter of the rim plus two feet. The new rim shall be placed on cement concrete or adjustment rings and wedged up to the desired grade. The base materials shall be removed and Class 3000 cement concrete shall be placed within the entire volume of the excavation up to, but not to exceed, 1-1/2 inches below the finished pavement surface.

On the following day, the concrete, the edges of the HMA and the outer edge of the casting shall be painted with a hot asphalt tack coat. HMA Class 3/8 In. shall then be placed and compacted with hand tampers and a patching roller.

The completed patch shall match the existing paved surface for texture, density and uniformity of grade. The joint between the patch and existing pavement shall then be painted with hot asphalt cement or asphalt emulsion and shall be immediately covered with dry paving sand before the asphalt cement solidifies.

5-04.3(15) HMA Road Approaches

Add the following verbiage to the first sentence of this section:

"or reconstructed" after the word "constructed".

5-04.3(17) Paving Under Traffic

Revise the last paragraph of Section 5-04.3(17) as follows:

Change the phrase "except cost of temporary pavement markings," to "including the cost of temporary pavement markings,"

5-04.5(1)A Price Adjustments for Quality of HMA Mixture

(March 10, 2011 APWA GSP)

Delete the first paragraph and table and replaced them with the following:

Statistical analysis of quality of gradation and asphalt content will be performed based on Section 1-06.2 using the following price adjustment factors:

Table of Price Adjustment Factors

Constituent	Factor "f"
All aggregate passing: 1 ½", 1", ¾", ½", 3/8" and No. 4 sieves	2

All aggregate passing No. 8	15
All aggregate passing No. 200 sieve	20
Asphalt binder	52

Delete items 1-3 in Paragraph two and replaced with the following:

A pay factor will be calculated for sieves listed in Section 9-03.8(7) for the class of HMA and for the asphalt binder.

1. **Nonstatistical Evaluation.** Each lot of HMA produced under Nonstatisical Evaluation and having all constituents falling within the tolerance limits of the job mix formula shall be accepted at the unit contract price with no further evaluation. When one or more constituents fall outside the nonstatistical acceptance tolerance limits in Section 9-03.8(7), the lot shall be evaluated in accordance with Section 1-06.2 to determine the appropriate CPF. The nonstatistical tolerance limits will be used in the calculation of the CPF and the maximum CPF shall be 1.00. When less than three sublots exist, backup samples of the existing sublots or samples from the street shall be tested to provide a minimum of three sets of results for evaluation.

2. **Commercial Evaluation.** If sampled and tested, HMA produced under Commercial Evaluation and having all constituents falling within the tolerance limits of the job mix formula shall be accepted at the unit contract price with no further evaluation. When one or more constituents fall outside the commercial acceptance tolerance limits in Section 9-03.8(7), the lot shall be evaluated to determine the appropriate CPF. The commercial tolerance limits will be used in the calculation of the CPF and the maximum CPF shall be 1.00. When less than three sublots exist, backup samples of the existing sublots or samples from the street shall be tested to provide a minimum of three sets of results for evaluation.

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

If a constituent is not measured in accordance with these Specifications, its individual pay factor will be considered 1.00 in calculating the composite pay factor.

5-04.5(1)B Price Adjustments for Quality of HMA Compaction
(March 10, 2011 APWA GSP)

Delete this section and replace it with the following:

The maximum CPF of a compaction lot is 1.00

For each compaction lot of HMA when the CPF is less than 1.00, a Nonconforming Compaction Factor (NCCF) will be determined. THE NCCF equals the algebraic difference of CPF minus 1.00 multiplied by 40 percent. The Compaction Price Adjustment will be calculated as the product of the NCCF, the quantity of HMA in the lot in tons and the unit contract price per ton of the mix.

5.05 CEMENT CONCRETE PAVEMENT

5-05.1 Description

Section 5-05.1 is supplemented with the following:

This work also consists of furnishing and placing masonry payers as planter brick — in place where shown and as detailed in the Plans.

5-05.2 Materials

This section is supplemented with the following:

The masonry payers used as planter brick shall be the cobblestone size with a running bond pattern in the rustic blend color, as manufactured by the Mutual Materials Company, or an approved equivalent. The concrete block payers shall meet the specifications of ASTM C 936.

5-05.3 Construction Requirements

5-05.3(23) Masonry Payers (New Section)

The masonry payers used as planter brick shall be installed per the manufacturer's specifications, and as detailed in the Plans. In areas where the outer edge of the payers is not adjacent to curbing, sidewalk or pavement, an approved edge restraint that meets the manufacturer's specification shall be installed prior to the placing of the payers.

5-05.4 Measurement

Section 5-05.4 is supplemented with the following:

Planter brick — in place will be measured by the square yard in their final location.

5-05.5 Payment

Section 5-05.5 is supplemented by the following:

"Planter Brick — In Place", per square yard.

The unit contract price per square yard for "Planter Brick — In Place" shall include all cost for furnishing and placing the masonry payers, including furnishing and placing the sand around the payers and the compacted sand layer beneath the payers.

DIVISION 7
DRAINAGE STRUCTURES, STORM SEWERS, SANITARY SEWERS, WATER MAINS AND CONDUITS

7-05 STORM SEWERS

7-04.2 Materials

This section is supplemented with the following:

The new 12 inch drainage pipe in the northwest corner connecting the new catch basin to the existing storm drainage manhole shall be Corrugated Polyethylene Storm Sewer Pipe. The new drainage pipes connecting to the existing drainage pipes shall be of the size and type that is compatible with the existing pipe to accomplish a tight, leak proof connection. After exposing the pipe, the Contractor shall make his recommendation to the Engineer. With the Engineer's approval, the Contractor may use any of the approved types of pipe listed in this section.

7-05 MANHOLES, INLETS, CATCH BASINS, AND DRYWELLS

7-05.3 Construction Requirements

7-05.3(1) Adjusting Manholes and Catch Basins to Grade

This section is supplemented with the following:

Manholes, catch basin frames and grates, inlet frames and grates, water valve boxes and other utility castings shall be adjusted in accordance with Section 5-04.3(13) Surface Smoothness.

Existing cast iron rings and lids on sanitary sewer and storm drain manholes shall be removed and disposed of, and shall be replaced in accordance with Section 9-05.15(1) of these Special Provisions. Existing catch basin frames and grates and

7-08 GENERAL PIPE INSTALLATION REQUIREMENTS

7-08.2 Materials

This section is supplemented by adding the following item:

Crushed Surfacing Top Course (for Trench Backfill)

7-08.3(3) Backfilling

This section is supplemented with the following:

All street-crossing trenches and all other areas as directed by the Engineer, shall be backfilled for the full depth of the trenches with Crushed Surfacing Top Course (for Trench Backfill)

7-08.4 Measurement

This section is supplemented by the following:

Crushed Surfacing Top Course (for Trench Backfill) will be measured by the ton.

7-08.5 Payment

This section is supplemented by adding the following pay item:

"Crushed Surfacing Top Course (for Trench Backfill)", per ton.

7-09 WATER MAINS

7-09.1 Description

This section is supplemented with the following:

This work shall include adjusting valve boxes to the finished grade of the asphalt concrete pavement or sidewalk.

7-09.3 Construction Requirements

This section is supplemented with the following:

Where existing valve boxes are located in the existing or proposed asphalt roadway, they shall be adjusted as detailed in Section 5-04.3(13) of these Standard Specifications.

Where existing valve boxes are located in the proposed sidewalk, they shall be adjusted to finish grade prior to placing the concrete.

7-09.4 Measurement

The following item is added to this section:

Adjust valve box will be measured per each, for each valve box adjusted.

7-09.5 Payment

The following item is added to this section:

"Adjust Valve Box", per each.

The unit contract price per each for "Adjust Valve Box" shall be full pay for all labor, equipment and material required to adjust the valve box.

DIVISION 8
MISCELLANEOUS CONSTRUCTION

8-01 EROSION CONTROL AND WATER POLLUTION CONTROL

8-01.3 Construction Requirements

8-01.3 General

The tenth paragraph of Section 8-01.3(1) is revised to read:

(January 25, 2011)

Erodible Soil Eastern Washington

Erodible soil not being worked whether at final grade or not, shall be covered within the following time period using an approved soil cover practice:

July 1 through September 30	30 days
October 1 through June 30	15 days

8-01.3(1)A Submittals

Section 8-01.3(1)A is supplemented with the following:

(April 3, 2006)

Prior to beginning any concrete or grinding work, the Contractor shall submit a plan, for the Engineer's review and approval, outlining the procedures to be used to prevent high pH stormwater or dewatering water from entering surface waters. The plan shall include how the pH of the water will be maintained between pH 6.5 and pH 8.5 prior to being discharged from the project or entering surface waters.

8-06 CEMENT CONCRETE DRIVEWAY ENTRANCES

8-06.1 Description

This section is supplemented with the following:

This work shall include the installation of cement concrete residential driveway approaches in accordance with the City of Yakima Standard Detail R-4, Residential Driveway Approach.

8-06.3 Construction Requirements

Replace the first paragraph with the following:

Cement concrete residential driveway approaches shall be constructed with air entrained concrete Class 3000 conforming to the requirements of Section 6-02 or Portland Cement Concrete Pavement conforming to the requirements of Section 5-05.

8-06.4 Measurement

Add the following:

Cement Concrete Residential Driveway Approach will be measured by the square yard at the locations shown on the plans.

8-06.5 Payment

Add the following pay item:

"Cement Concrete Residential Driveway Approach", per square yard.

8-12 CHAIN LINK FENCE AND WIRE FENCE

8-12.1 Description

This section is supplemented with the following:

This work shall consist of furnishing and installing airport fence and temporary security fencing in accordance with these specifications and the details in the Plans, in conformity with the lines and grades shown on the Plans or as established by the Engineer.

8-12.2 Materials

This section is supplemented with the following:

Fabric:

The fabric shall be woven with a 9-guage galvanized steel wire in a 2-inch mesh and shall meet the requirements of ASTM 392, Class 2. The fabric shall be six feet in height.

Barbed Wire:

Barbed wire shall be 3-strand 12-1/2 gauge zinc-coated wire with 4-point barbs and shall conform to the requirements of ASTM A 121, Class 3, Chain Link Fence Grade.

Posts, Rails and Braces:

Posts, rails, and braces furnished for use in conjunction with zinc-coated, shall be of zinc-coated steel framework.

Line posts, rails, and braces shall be galvanized steel pipe conforming to the requirements of ASTM F 1083.

Posts, rails and braces shall demonstrate the ability to withstand testing in salt spray in accordance with ASTM B 117 as follows:

Exterior: 1,000 hours with a maximum of 5% red rust.
Interior: 650 hours with a maximum of 5% red rust.

The dimensions of the posts, rails, and braces shall be in accordance with the following tables: (Tables I through VI of Fed. Spec. RR-F-191/3)

Gates:

Gate frames shall consist of galvanized steel pipe and shall conform to the specifications as described in Posts, Rails, and Braces. The fabric shall be of the same type material as described in Fabric.

Wire Ties and Tension Wires:

Wire ties, for use in conjunction with a given type of fabric shall be of the same material and coating weight identified with the fabric type. Tension wire shall be 7-guage marcelled steel wire with the same coating as the fabric type and shall conform to ASTM A 824.

All materials shall conform to Fed. Spec. RR-F-191/4.

Miscellaneous Fitting and Hardware:
Miscellaneous steel fittings and hardware for use with zinc-coated, aluminum-coated, or zinc-5% aluminum mischmetal alloy-coated steel fabric shall be of commercial grade steel or better quality, wrought or cast as appropriate to the article, and sufficient in strength to provide a balanced design when used in conjunction with fabric posts, and wires of the quality specified herein. All steel fittings and hardware shall be protected with a zinc coating applied in conformance with ASTM A 153.

The temporary security fencing shall consist of free standing six-foot chain link fence.

8-12.3 Construction Requirements

This section is supplemented with the following:

Eighteen-inch brackets set at an angle of 45 degrees shall be attached to the top of each of the fence posts. Three strands of barbed wire shall be strung across these brackets as detailed in the Plans.

At locations of small natural swales or drainage ditches and where it is not practical to have the fence conform too the general contour of the ground surface, longer posts may be used and multiple strands of barbed wire stretched thereon to span the opening below the fence. The vertical clearance between strands of barbed wire shall be 6 inches or less.

Openings below the fence may also be spanned with barbed wire fastened to stakes at locations where directed by the Engineer.

Tension wire shall be installed along the bottom of the chain link fence fabric.

Electrical grounds shall be constructed where a power line passes over the fence at 500 foot intervals. The ground shall be installed directly below the point of crossing. The ground shall be accomplished with a copper clad rod 8 feet long and a minimum of 5/8 inch in diameter driven vertically until the top is 6 inches below thee ground surface. A No. 6 solid copper conductor shall be clamped to the rod and to the fence in such a manner that each element of the fence is grounded. Installation of ground rods shall not constitute a pay item and shall be considered incidental to fence construction.

8-12.4 Measurement

This section is supplemented with the following:

Airport fence will be measured by the linear foot of completed fence, along the ground line, exclusive of openings.

End, gate, corner and pull posts for airport fence will be measured per each for the posts furnished and installed complete in place.

Temporary security fencing shall be measured by the linear foot.

8-12.5 Payment

This section is supplemented with the following:

The following pay items are added:

"Airport Fence", per linear foot.

"Temporary Security Fencing", per linear foot.

8-14 CEMENT CONCRETE SIDEWALKS

8-14.3 Construction Requirements

8-14.3(3) Placing and Finishing Concrete

This section is supplemented with the following:

All sidewalks not located within driveway approach areas shall be four-inch thick cement concrete over a two-inch base of crushed surfacing top course. All sidewalks located within a driveway approach area shall be six-inch thick cement concrete over a two-inch base of crushed surfacing top course. See City of Yakima Standard Detail R-5.

8-14.4 Payment

This section is supplemented with the following:

All costs required to furnish, place and compact the Crushed Surfacing Top Course beneath the cement concrete shall be incidental to, and included in the per square yard unit contract prices for "Cement Concrete Sidewalk" and "Cement Concrete Residential Driveway Approach" and the per each unit contract price for "Commercial Driveway Approach".

8-20 ILLUMINATION, TRAFFIC SIGNAL SYSTEMS, AND ELECTRICAL

(8-20.3(1) General

Supplement this section with the following:

Electrical Order of Work

The Contractor shall not remove any signal poles designated for removal from the job site without prior approval by the City Engineer. And, the Contractor shall install new signal displays no more than 30 days prior to a scheduled new signal turn-on.

Work shall be coordinated so that electrical equipment, with the exception of the service cabinet, is energized within 72 hours of installation.

Removals and Delivery of Removed Items (Subsections combined)

The Contractor shall disassemble, (incrementally as project schedule dictates), and remove all existing wires, multi-conductors and/or cables from conduits, including those to be used for new wires, multi-conductors and/or cables. (Discontinued signal runs and electrical circuits.) The Contractor shall also remove elbow sections of abandoned

conduit entering junction boxes, and any abandoned conduit encountered during excavation shall be removed to the nearest outlets, junction boxes or as otherwise directed by the City Engineer.

The Contractor shall also disassemble and remove, as the project schedule dictates, all existing Type-III (3) Signal poles, including removal or the entire concrete foundations, unless directed otherwise by the City Engineer. Also, the Contractor shall properly backfill voids created by the removal of foundations and junction boxes and shall perform all backfilling and compact in accordance with all applicable sections of The WSDOT Standard Specifications, as well as any applicable WSDOT Standard Plan notes.

Unless otherwise directed by the City Engineer, all items removed from this project site shall remain the property of the City of Yakima. Removals associated with the electrical system shall not be stockpiled on the job site without the City Engineer's prior approval. The contractor shall disassemble and remove, as per, the City Inspector, and/or City Engineer, and as the project schedule dictates, all existing electrical equipment as shown and described on the plans, and including, but not limited to, the following items: signal poles & arms, vehicle and pedestrian signals, push buttons, luminaries, preemption devices, signal controller, monitors, auxiliary equipment and signal control cabinet, all mounting hardware, wires, conductors and cable from salvaged light and signal standards, and any other related traffic signal control and illumination items.

The Contractor shall deliver all equipment removed from the **South 16th Avenue and West Washington Avenue** job site to the City of Yakima, Public Works, Traffic Signal Operations at the address shown below:

City of Yakima
Public Works Department
Traffic Signal Operations
2301 Fruitvale Blvd.
Yakima, WA 98902
Attn: Rick Dwyer- Signal Supervisor

The Contractor shall notify the City through the Engineer, two (2) working days before delivery of the removed items. The Contractor shall be responsible for unloading the equipment as directed by the City Traffic Operations Supervisor at the delivery site noted above. All removals associated with the signal or lighting electrical system, which are not designated to remain the property of the Contracting Agency or City of Yakima, shall become the property of the Contractor and shall be removed from the project job site.

8-20.3(5) Conduit

Supplement this section with the following:

All underground electrical conduits shall be (gray- electrical grade) schedule 40 PVC pipe, installed in all conduit runs as shown on the Plans. All 90-degree elbows shall be galvanized steel. A 1/8-inch braided nylon rope with a 450-pound breaking strength shall be installed in each conduit run with two (2) feet doubled back at each termination.

8-20.3(6) Junction Boxes, Cable Vaults, and Pull Boxes
Supplement this section with the following:

Junction boxes shall not be located in ADA sidewalk ramps or landing areas, and, when possible, shall be approximately centered in the concrete sidewalk area between concrete curb edges and soft-surface dirt edges, and located such that no less than four (4) inches of solid concrete sidewalk separates the near edge of the junction box from soft-surface dirt areas that abut the sidewalk edge. Asphalt joint filler material shall not be installed between junction boxes and concrete surfaces.

A porous concrete slab that meets the requirements of ACI specification 522.1, "specification for pervious concrete pavement," shall be constructed beneath the junction boxes as detailed in the plans.

8-20.3(8) Wiring
Supplement this section with the following:

Illumination (street lighting) conductors and wires are the only type which may be spliced in junction boxes, using only the *3M Scotchcast-* permanent, watertight, non-re-enterable splice kit. Wire marking sleeves and/or approved wire and cable tags are required in loop-wire splicing junction boxes and for loop lead-in to home run wires, identifying the loop numbers served. And, tags are required at the controller cabinet for optical preemption detection cable-to-detector identification. Marking sleeves and tags are NOT required for any other individual conductors, multi-conductor, coax or power cables

Section 8-20.3(11) Testing
Revise this section to read as follows:

The standard WSDOT testing procedures shall not be required for this project. The City of Yakima Traffic Engineer shall inspect, test, and monitor all signal equipment including the signal controller, controller cabinet, malfunction monitoring unit (MMU), and other auxiliary electronic equipment and devices requiring pre-installation testing. All applicable signal control equipment shall be delivered to the City of Yakima Traffic Signal Shop for complete operational testing—the duration and type of which shall be at the sole discretion of the City Engineer and City Traffic Engineer. The tests shall confirm the proper functioning, operation and performance of the above-mentioned signal equipment.

<u>Traffic Signal Turn-On Procedures (Subsection of "Testing")</u>

The contractor shall provide the City Engineer or City Inspector a 72-hour pre-notification of a traffic signal turn-on, with information about the applicable location, date, time and duration.

The contractor shall follow the signal turn-on procedures listed below in descending order. And, unless directed otherwise by the City Engineer, the turn-on procedures shall be initiated in the presence of the City Engineer, the City Project Inspector, the City Traffic Operations Supervisor, and a qualified technical representative from the signal cabinet and controller supplier and/or manufacturer. The City Project Inspector shall provide the Yakima Police Department no less than 48 hours notice of the date and time

of the scheduled traffic signal turn-on. The Pre-turn-on and turn-on procedures for all new and/or upgraded traffic signals are as follows:

1. Confirm that all circuit breakers for signal and lighting power are turned OFF.

2. Turn on the Service and verify correct voltage levels.

3. Turn on the circuit breakers and verify proper operation of cabinet light and GFCI.

4. Crosscheck the signal driver terminal wiring with the plans to ensure conformity with the intended phase sequencing, FYLTA/Overlaps, if to be activated; and confirm the correct jumper configurations on the CMU/MMU program card.

5. Flash all signal face indications by signal phase for Red / Yellow / Green / Walk / Don't Walk, and Flashing Yellow if applicable.

6. With the Controller Power switch OFF and both Auto/Flash switches in the Flash position, install the flasher and verify "In-Flash" operations (Red/Red or Red/Yellow) by signal head, phase and approach.

7. Install all required equipment in the cabinet.

8. Place the police door Auto/Flash switch in Auto

9. Turn the Controller Power switch to the ON position

10. Monitor to confirm proper operation of the controller and CMU/MMU, and correct any malfunctions and/or failures, then reconfirm the proper operation.

11. Turn the Camera Power to the ON position and adjust video camera zoom and vertical and horizontal view alignment angles to optimize detection performance.

12. Place Min. Recall on all phases

13. Confirm that all detector switches are in the Operate position.

14. Stop traffic in all directions (Yakima Police Department assistance if possible.)

15. Toggle the "Signals" switch from the OFF to the ON position.

16. Allow no less than one complete cycle to operate and visually verify the correct sequence of all signal indications.

17. Remove traffic control and allow normal vehicular traffic through the intersection. If the City Engineer or appointed designee, with assistance of the Signal Operations Supervisor, determines that the signal operates correctly, direct the Contractor's Project Foreman to place the traffic signal in normal stop-and-go cycling operation.

18. Walk the intersection to confirm the intended and proper operation of the pedestrian push buttons and Walk and Don't Walk indications.

19. With the requirement of no more than the presence of the Signal Operations Supervisor and the cabinet/controller manufacturer's technical representative, configure the video detection zones, or adjust road loop amplifiers, remove min.

recall from all phases and confirm proper actuated operation for 30 minutes and monitor detection performance at sunrise and at sunset.

If the Traffic Engineer determines, upon initial turn-on and traffic release, that the traffic signal is malfunctioning or is operating improperly, the contractor shall be directed to either return the signal to flash mode for a period not to exceed five calendar days, or turn the signal off and cover all signal displays. In either case, the contractor shall provide 24-hour notification to the Traffic Engineer of the rescheduled signal turn-on date (Above-listed procedures apply.) Termination of and/or alterations to "Green/Yellow/Red" (Stop-and-Go) operation shall be prohibited, unless otherwise approved by the Traffic Engineer, 7 days a week, before 8 a.m. or after 1 p.m. This same restriction applies- 24 hours a day on Fridays, weekends, holidays, or the day preceding a holiday.

8-20.3(14) B Signal Heads

Supplement this section with the following:

Signal heads shall not be installed at any intersection until all other signal equipment is installed and the controller is in place, inspected, and ready for operation at that intersection, unless ordered by the City Engineer. If the City Engineer orders advance installation, the signal heads shall be covered to clearly indicate the signal is not in operation. The signal head covering material shall be of sufficient size to entirely cover the display. The covering shall extend over all edges of the signal housing and shall be securely fastened at the back.

8-29 ILLUMINATION, SIGNALS, ELECTRICAL

8-29.1 Conduit, Innerduct, and Outerduct

Supplement this section with the following:

All underground conduit shown on the plans shall be schedule 40 PVC (electrical grade - gray color), with pull rope. Additional materials to be installed on this project include, but are not limited to, junction boxes cables and electrical conductors. The pull rope shall be a 1/8-inch braided nylon rope, 450 pound breaking strength (similar to King Cotton Products #5051-4-1/8), and shall be installed in each conduit run with two (2) feet doubled back at each termination. When cable is pulled, this rope shall be re-pulled along with the cable.

8-29.2 Junction Boxes

Supplement this section with the following:

Junction boxes shall be Quazite- PG Style, or approved equivalent, called out on the Plans as Junction Boxes: Type-1 (13" x 24"), Type-2 (17" x 30") and Type-3 (24" x 36"). They shall be constructed of polymer concrete and reinforced by a heavy-weave fiberglass, and they shall have a design load of 22,500 lbs. and a test load of 33,765 lbs.- in compliance with 2005 NEC, and meet SCTE 77/ANSI Tier 22 test provisions. The enclosures shall be stackable with finished depths of 12" to 48". Enclosures and covers shall be concrete gray color and designed and tested to temperatures of -50^{o} F.

The covers shall be “lockable”, and shall be marked with a “Traffic Signal” logo. See Quazite Details for all technical data for each of the three enclosure sizes specified.

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8-29.6(1) Steel Light and Signal Standards (Poles)

Revise this section by adding the following paragraph:

All new Traffic Signal Standards (Poles) shall be Octagonal in Cross Section (See the pole layout sheet and octagonal pole specifications project detail.)

Supplement this section with the following:

Luminaire mast arms that support video cameras shall have a free-end diameter of not less than 3” and a thickness of not less than .250”.

The poles and mast arms will be hot-dipped galvanized over their entire length to ASTM designation A123. The primary terminal compartment shall be sized to house a 24-position terminal strip, (See detail on pole layout sheet) which, in turn, shall have a 4” x 6” hand hole opening in its bottom section. The compartment shall be located 48” above the base of the pole and 180^{o} CW from the centerline of the signal mast arm attachment point. The cover for the terminal compartment shall be stainless steel with a gasket and a built-in “Best” slamming lock with key. There shall also be two other separate hand holes, each with removable covers. One shall be 4” x 6” (vertically-oriented -Typical), located 12” above the pole base, directly in line with 24” compartment described above, and the other shall be located 12” above the signal mast arm, oriented 180^{o} CW from the centerline of the signal mast arm. A ½” NC ground stud shall be available inside the pole base.

All poles and arms shall have end caps and all bases shall have covers installed. Poles, anchor bolts, and signal mast arms will be designed to accommodate installation of signal mast arms with loadings as specified on the applicable details and layout plans. Poles shall be designed to a maximum arm length of 40’, unless a longer arm is specified and pre-approved by the Traffic Engineer.

It shall be the responsibility of the vendor/manufacturer to determine the sizes, locations, and proper installation and/or fabrication methods of all pole and arm hubs and openings to establish and build-in the minimum required and guaranteed structural integrity of the pole. The arm-connection plate, arm-connection bolt circle, base plate, and base-plate bolt circle shall be uniform among all poles called for in the plans. The final drill locations for all signal pole and mast arm hardware and equipment shall be field approved by the City Engineer or Traffic Engineer prior to drilling of the holes.

8-29.10 Luminaires

Supplement this section with the following:

All new luminaries shall be installed as shown on the plans. All new luminaires (fixtures) shall be LED-type with the following specifications: BETA LED- #STR-LWY-3M-12-C-UL-SV. Equivalents and/or alternate wattage LED’s shall be pre-approved by the City and Traffic Engineers.

8-29.12(1) Illumination Circuit Splices
Revise this section as follows:

The Contractor shall use only 3M *Scotchcast*, or pre-approved equal, watertight and non re-enterable splice kits for light circuit wiring splices in junction boxes. Otherwise, all standard NEMA/UL and IMSA-approved splicing methods shall be allowed for multi-conductor and single wire splicing that is required in new signal poles including locations adjacent to specified closable hand hole openings.

8-29.14 Signal Controller, Controller Cabinet, & Auxiliary Equipment- (New Section)
The following new section shall apply to this project:

Traffic Signal Controller and Cabinet- Primary Equipment

Traffic Signal Controller

The contractor shall supply a new Pre-approved "NEMA" NWS M-1 ATC actuated traffic signal controller in a newly-supplied cabinet (see next section), consistent with the applicable portions of the plans. The controller shall have been tested by the manufacturer, following NEMA/IMSA standards, and approved for standard field operation, prior to shipment to the contractor The controller shall be shipped complete with the most current version of the controller software (firmware) (IE: NEMA-Voyage), and the latest version of the accompanying NWSCentral (Coordinated-System Operation) Software—on a download-ready CD, or, alternately, loaded directly to city TE and operations' staff laptop(s). The controller manufacturer or distributor shall provide two days of controller and system software training for all applicable City of Yakima technical traffic signal staff.

The controller shall be shop tested by the City of Yakima, along with the cabinet, as described in section 8-20.3(11) prior to the traffic signal turn**.** The contractor shall also supply an EDI MMU-16 Channel, or approved equivalent, Malfunction Monitor Unit, with front panel keypad entry. The MMU must be fully compatible with M-1 and 2070N controllers and be configured to monitor MUTCD-approved Flashing Yellow Arrow (FYLTA) Protected/Permissive left turn operation—compatible with type TS-1 or TS-2 NEMA cabinet designs.

Signal Controller Cabinet

The contractor shall supply a "Pre-approved" Standard "NEMA" Type-P traffic signal controller cabinet. (Approx. dimensions: Height – 55", Width – 44", Depth-26") and the cabinet shall be mounted on a concrete foundation. (See the cab Below is a list of the required cabinet features, components, and configuration specifics:

The cabinet shall be wired to operate a "NEMA" NWS M-1 ATC actuated traffic signal controller (described above.)

The cabinet shall be U.L. approved with a "U.L." sticker attached upon delivery to the contractor

The cabinet shall have a 16-load switch position back-panel with eight vehicle phases (channels 1 through 8), four Overlap phases (channels 9 through 12), and four (4) pedestrian WALK(+)FDW Phases- numerically matching the even vehicle phases 2/4/6/8. The cabinet detector rack shall be wired for standard NEMA detector input/phase assignments, routing, and functionality.

The cabinet shall have the applicable number of NWS 4000 HDP load switches, or approved equivalent, mechanical flash transfer relays, 40-amp triacs, input and output indicators, and a solid-state bus transfer relay.

The cabinet shall have a 50-amp main circuit breaker, a 15-amp auxiliary equipment breaker, a 95-amp (min) to 125-amp (max) Teledyne block power relay, a neutral bus bar isolated from cabinet ground, a ground bus bar, power line surge protector, and a transient voltage suppressor. And, the power panel shall be covered with a suitable insulating transparent cover.

The 50-amp main circuit breaker shall supply power to all cabinet components and devices except the cabinet light, fan maintenance panel and G.F.I convenience outlet.

The Teledyne block contactor shall, in its energized position, supply power to the load switches, and shall be normally open and capable of switching the (95 to 125) amps at 120 Volts AC (VAC). All power used for signal displays shall be routed through the Teledyne block contactor.

Pomona and/or Molex brand Plugs/Jumpers shall not be allowed and the signal outputs shall be wired in this left-to-right order: Red / Yellow / Green.

The cabinet shall have a six position detector card rack installed per City of Yakima Standards, with Detector Input – to – Controller Phase Assignments per rack slot as shown on the plans. (See Detector Rack Diagram on plan sheet #6.)

The cabinet shall be configured for four emergency preempts wired to the two far right detector rack slots (Positions 7 and 8), and the cabinet shall be wired to Flash “ALL RED” for all active phases.

The transient voltage protector shall supply power to all devices in the cabinet that are microprocessor based, and sufficient terminal blocks with pressure connectors shall be provided for individual terminals for each field wire.

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The terminal block numbering strip shall be made of laminate and the legend shall be engraved into the strip so as to provide black lettering on a white background. The strips shall be fastened to the terminal block or between the terminal block and its mounting.

- All DC returns (logic ground) from vehicle detector amplifiers, pedestrian pushbuttons, controller and auxiliary cabinet equipment shall be separate from the AC neutral and earth ground. These DC returns shall all be terminated at one location on the controller matrix panel.

- The cabinet wiring shall include noise suppression of AC and DC circuits, and all relay coils, thermostat, convenience outlets and switches controlling inductive loads, shall include spike suppression circuits.

- The cabinet shall also include an alternate power feed switch and connector, which shall power all devices in the cabinet. The switch shall be fed via a cabinet-mounted "Alternate Feed Connector" to allow an exterior-wall bypass plug-in connection to a mobile stand-alone power generator. (For use during signal-power outages.) The connector shall be an Electro switch #KW402201C6, or equivalent, with nameplate labeled NRML – OFF – GEN. The Alternate Feed Connector shall be a Hubbell Flanged Inlet #CS6375M2 with lift cover. The alternate feed switch shall be mounted as close as possible to the power feed terminal strip on the power panel. The Alternate Feed Connector shall be mounted on the cabinet exterior wall below the power panel for switch accessibility from the cabinet interior.
- The transient voltage protector shall supply power to all devices in the cabinet that are microprocessor based.
- The cabinet shall be wired to disable preempt functions when the signal is in flashing operation.
- All external cabinet welds shall be "Tig" welds.
- The cabinet shall include a CD loaded with the applicable Autocad file of the cabinet drawing, and, three (3) Tyvek copies of the cabinet drawing and one service manual.
- The cabinet shall have a heavy-duty neoprene gasket around all doors to assure a weather tight seal.
- All applicable hardware "parts" including, but not limited to, hinge pins and locking devices, shall be made of non-corrosive materials.
- The cabinet door shall hinge on the right, and the lock shall be a *Best Lock* CX series, cored for the City of Yakima YT-1 key.
- The cabinet door shall have a heavy-duty disposable (fiber mesh material) furnace-grade air filter which fits properly in the cabinet door's interior filter shelf flanges.
- The cabinet door SHALL NOT INCLUDE a signal-interval indication display panel.
- The cabinet door shall have a standard exterior-accessed "Police Door" with standard police door lock and key.

The cabinet shall have a fully integrated Tech (Door) Switch-control panel assembly configured as described below:

The Tech Panel shall have one horizontal row of eight (8) 3-position Single Pole Double Throw (SPDT) switches, (each labeled with a corresponding phase number for Vehicle Phase 1 through 8. Below this panel there shall be a second single row of four (4) 3-position switches, with one switch per pedestrian phase for phases 2/4/6/8, each aligned vertically (directly below) their associated vehicle phase switch (IE: Pedestrian Phase-6 switch is positioned directly below Vehicle Phase-6 switch.)

The SPDT switches shall "Lock" in each of these 3 positions: ON / OFF / ON. They shall be labeled (at left of each row) as follows (position-to-function assignments): switch in <u>up</u> position = OPERATE (ON-normal vehicle actuations), switch in <u>center</u> position = OFF (NO input to controller), switch in <u>down</u> position = TEST (input to

controller only by manual switch toggling). Below these vehicle detector switches, there shall be a separate panel with a horizontal row of heavy-duty toggle switches with functions as listed below. (Label as listed):

FLASH Switch: up=AUTO, dn=FLASH

CONTROLLER POWER Switch: up=CONTROLLER ON, dn=OFF

STOP TIME Switch: {3-position}: up=AUTO-[normal], center=OFF, dn=ON-for manual control.

CAMERA POWER Switch: up=CAMERA POWER ON, dn=OFF)

LIGHT Switch: up=LIGHT ON, dn=OFF.

All rows of switches shall have a smooth metal dowel-style shroud bar placed & attached so as to minimize accidental switch-bumping

Auxiliary Equipment

Preemption Equipment

The contractor shall install two (2), Model 752 (3-M), or equivalent, two-channel Preemption selector/processor module in the far two right detector rack slots (Positions 7 and 8). One selector shall operate the Preemption Service for the eastbound and westbound approach, and the other selector shall operate the southbound approach. (See the Preemption Assignments Chart on the Plans.)

Install on the mast arms as shown on the plans a total of three (4) 3-M Opticom model 721 single-channel preemption detectors. All required optical detection system auxiliary equipment shall be included to assure the proper detection, processing and phase preemption service as programmed in the controller. Any necessary assistance with set up, adjustments and programming shall be included and provided by the cabinet and/or Opticom manufacturer as deemed necessary by the City Traffic Engineer.

Malfunction Management Unit (MMU)

The contractor shall supply and install in the cabinet a new EDI (16 Channel) Smart Monitor, or approved equivalent, malfunction monitoring unit (MMU), with front panel displays and keypad setting adjustment capabilities**.** The MMU must be fully compatible with NEMA M-1 ATC and 2070N controllers and type TS-1/TS-2 NEMA controller cabinets, and shall be fully compatible with Flashing Yellow Permissive Left Turn Phase wiring and operations.

RadioModem Interconnect System

The contractor shall install an Encom model 5200 (or approved equivalent), spread spectrum Radiomodem in the new controller cabinet. The interconnect Radiomodem shall be compatible with all the signal controller and all communications configurations (hardware and software). The Contractor shall suplply and install an ample amount of the applicable “Radio-interconnect aerial

antenna coax cable to pull from the new controller cabinet to the calculated highest point on the Mast Arm Pole (Pole #1 on the Plans.- pole and cabinet on NW corner) The Contractor shall install and connect the cable to a new (min. 6db) BlueWave, (or approved equivalent), “Yagi” aerial antenna (Note #19 on plans), with the fewest cable splices required. The final orientation and position on the pole (or luminaire arm) shall be approved by the Traffic Engineer.

Video Camera Vehicle Detection System

The contractor shall supply and install a complete video (vehicle detection) camera and electronic detection processing system to adequately detect and service vehicular traffic consistent with the accompanying plans and project specifications. All video detection equipment shall be compatible with NEMA-Type-TS1 and TS2 controllers. The vehicle video detection system shall meet all the specific and/or applicable requirements and specifications as described below.

The system shall be able to detect vehicle presence with 98% accuracy under normal conditions (days and nights), and 96% accuracy under adverse conditions (fog, rain, snow). All items and materials furnished shall be new, unused, current production models installed and operational in a user environment and shall be items currently in distribution. The detection algorithms shall have a proven record of field use at other installations for at least three (3) years of service-- not including prototype field trials prior to installation.

The Video Detection System shall include the following basic components, items, and service provisions:

- Video Detection Modules VIP3.1/D and/or VIP3.2/D. (for 4 vehicle approaches & 8 vehicle phases)
- ViewCom/E – MAX Remote Monitoring, Video Image Storage, and Communication Module. (1 minimum)
- Video Camera(s) with IR Filter, Lens, Enclosure, and Sunshield. (4 total)
- Luminaire Arm or Signal Mast Arm Sensor Bracket(s) (If applicable per the specific project plans.)
- Surge Suppressor(s). (1 per camera)
- Programming Devices and/or Software.
- Video Monitor. (1)
- Coaxial/Power Cable.
- All Other Necessary Equipment for Operation.
- Training for Installation, Operation, and Maintenance.

The following “video detection” equipment package has been pre-approved for use on this project:

- Traficon VIP3.1/D and/or VIP3.2/D.
- Traficon ViewCom/E-MAX
- Aigis Outdoor Camera Housing – HS9384.
- Aigis Camera Housing Sunshield – HS9384SS.
- Rainbow Camera Model BL58D
- Rainbow Motorized Zoom Lens 6.5mm to 65mm Model – L10X65DC4P.
- Rainbow LCD 8” Flat Screen Monitor-RL8.

- Pelco Extended Mast Arm Camera Mount - AB-0172-L, and/or Kar-Gor, Inc., Universal Camera Mount –MA/SOP-16. (as specified on the plans)
- Hesco/RLS Coaxial Surge Suppressor – HE75CX
- Coaxial + 5 Conductor Wire - RG59/U + STR PE/PVC 600V KG-9915.

Video Detection System- Basic Component Specifications:

The **V**ideo **I**mage **P**rocessor (VIP) shall be modular by design and housed in either a self-contained stand-alone unit or fit directly into NEMA TS1 & TS2 type racks . The VIPs shall allow a shelf or rack mount installation without replacing or modifying existing VIP units. Each VIP board shall have 4 opto-isolated open collector outputs. Twenty (20) additional outputs shall be available via the expansion port. The VIP/3D shall have 20 presence detection zones and 4 data detection zones per camera. Data zones shall collect and store vehicle counts, volume, speed, gap time, headway, occupancy, and classification. Data shall be time-stamped (6713 intervals) and stored onboard (non-volatile memory) in intervals from 1-60 minutes. The system shall control from 1 to 4 VIP boards allowing for 1 to 8 image sensors.

The system shall be designed to operate reliably in the adverse environment of roadside cabinets and shall meet or exceed all NEMA TS1 and TS2, as well as Type 170/2070 environmental specifications Ambient operating temperature shall be from –34 to +74 degrees Centigrade at 0 to 95% relative humidity non-condensing. The system shall be powered by 12-40 VDC and draw less than 2 amperes. And, the system shall utilize cabinet 24-Volt DC for rack mount installations or external 24-Volt DC for stand-alone shelf installations. Surge ratings shall be set forth in the NEMA TS1 and TS2 specifications.

Serial communications shall be through an RS232 serial port. This port can be used for communications into a modem or laptop to upload/download detector configurations, count data and software upgrades. RS485 on the rear edge connector shall facilitate communications to other VIP boards.

The detection zones must be able to provide single or double loop emulation, and the presence hold time must have parameters that range from 10 to 600 seconds.

Each VIP board shall allow for 20 digital inputs via the I/O Expansion port, and each VIP board shall have error detection. Outputs shall be turned “ON” if the video signal is bad or the VIP board is not functioning properly. A user defined quality level will automatically put selected outputs to recall in cases of severe degraded visibility (i.e., fog, blizzard, etc.). Normal detection shall resume when visibility improves above a user defined quality level. Operator selectable recall shall be available via the VIP front panel. Holding the recall switch on for 5 seconds shall activate this function.

A video select button on the VIP front panel will switch between camera images of the VIP3D.2, and the VIP3D.1 board shall have 1 video input; the VIP3D.2 board shall have 2 video inputs (RS-170 NTSC or CCIR composite video) and

one video out. The VIP board shall have a reset button on the front panel to reset video detectors to “learn” the roadway image. During “relearn”, selectable recall can be enabled or disabled for immediate operation. Learning time of video detectors shall be less than 6 minutes.

External surge suppression, independent of the VIP board shall separate the VIP from the image sensor.

The VIP board shall also have separate buttons for Video Select, for Recall (to manually place calls on detectors),and to manually reset detectors to learn backgrounds. The VIP board shall also have a video out female RCA style connector, and a B9 female Service port and DB9 I/O Expansion port.

The **VIP** board shall have separate light emitting diodes (LED) that indicate the following:

POWER = Red LED to verify power supply.
I/O COMM = Red LED to indicate communications to expansion bds.
VIDEO 1 & 2 = Red LED to verify the presence of video input 75 Ohm.
TX & RX = Red LED to indicate comms. to other VIP modules via the RS485.
OUT1- OUT4 = Green LED if the corresponding det-group is active.

The VIP Expansion board shall have 8 dip switches that define inputs and outputs used (range: 1-12 or 13-24), plus, separate light emitting diodes (LED) that indicate the following:

POWER = Red LED to verify power supply.
COMM = Red LED to indicate communications to VIP board.
I/O1- I/O4 = Green LED to indicate corresponding det-group is active

Functional Capabilities for Real-time Video (Vehicle) Detection:

Each VIP board shall be capable of processing the video signal of one or two cameras. The video signal shall be analyzed in real time (30 times per second for NTSC video format and 25 frames per second for pal video format).

The system shall be expandable up to 8 cameras that may be connected to different VIP units and programmed independently. The system shall be capable of displaying detectors on the video image with associated outputs. Outputs/Inputs status will be indicated on the screen. Parameters will also include the ability to view raw video without any verbiage and/or detectors for surveillance purposes.

Each VIP board shall detect, within the view of the connected camera, the presence of vehicles in user defined zones. Detector zones shall be programmable by type- IE: presence, count, delay, extension, or pulse mode for vehicles approaching or leaving the zones in each field of view. Delay and extension range shall be between 0.1 – 99.9 seconds and pulse mode between 0 – 200 msin 33ms increments if NTSC is used. The VIP boards shall also collect a within the view of the connected camera traffic data of passing vehicles in user-defined zones.

The VIP boards shall be able to do the following: delay or extend a detector zone output in combination with an input from the controller; detect wrong-way drivers; provide an alarm/event via communication board and/or output; provide an alarm and/or output when the user selected queue detection threshold of occupancy is exceeded for more than a user selected time threshold; distinguish five classes of detected vehicles based upon user selectable vehicle length thresholds; emulate loop emulation with user selectable loop dimensions: activate its internal clock with daylight saving time system, which can be enabled or disabled; provide overlaid tool tips for each individual menu- and submenu-items;
allow input of an optional password as well as different user-levels with optional sets of “user rights”. (a minimum of 10 users can be defined for each user-level.)

The VIP board shall be programmed without the use of a supervisor computer. A standard CCTV monitor and keypad plugged into the VIP serial port will facilitate detector programming. The VIP board shall store up to 4 detector configurations

It shall be possible to switch between detector configurations manually, automatically by time of day, or via remote input. Via the serial port, detector configurations can be uploaded to a laptop and stored on disk. Detectors may be linked to 24 outputs and 20 inputs using Boolean Logic features: AND, OR, NOT. It will be possible to generate conditional outputs based upon inputs from a controller.

It shall be possible to make a detector directional sensitive. Options will include an omni-directional detector or a detector that only senses movement: from right to left, left to right, up to down or down to up as you look at the monitor. All detectors and parameters shall be changeable without interrupting detection. “Learning” time duration for newly established detector zones shall not exceed 6 minutes.

Four data detection zones per camera on a two camera VIP board may be used for collection of vehicle count, speed, classification, occupancy, density, headway, and gap time. Eight data detection zones may be used on a single camera VIP board. These detectors will detect and store traffic data at user-defined intervals of 1, 2, 3, 5, 6, 10, 15, 30 & 60 minutes. It shall be possible for each VIP board to store up to 6713 intervals of data in non-volatile memory.

The VIP module shall have an onboard database capable of time stamping and storing 500 events. The Event Log Database can be viewed or downloaded to a selected spreadsheet. Erasure of the Event Log Database shall not alter programmed configurations. As a minimum, the VIP shall log and time stamp the following events: Firmware upgrades, loss and resumption o f video signal, configuration change, bad video quality, loss and resumption of power to VIP module, speed alarm, inverse direction, and Recall activation.

Associated software may be used with a PC to download data and export to a spreadsheet. Software will also be used to upload and download detector configurations, traffic data, technical events, send software versions upgrades and do remote setup of detectors.

Image Sensor- Camera

The unit shall be a high resolution, 1/3" image format CCD camera, designed for professional video surveillance systems. Incorporating the latest in CCD technology, the video camera shall provide detailed video without lag, image retention, or geometric distortion. Image Sensor Lens, Housing and Surge Protection

The camera lens shall be a motorized vari-focal 6.5-65mm with auto iris. The environmental housing shall be an aluminum enclosure designed for outdoor CCD camera installations. A video surge suppressor(s) shall be available for installation inside the traffic signal controller cabinet. The suppressor shall provide coaxial cable connection points to an EDCO CX06-M or approved equal transient suppresser for each image sensor.

Image Sensor Mounting Brackets

Mast Arm installations shall be mounted at a sufficient height to prevent occlusion from cross traffic between the stop bar and the mast arm on which the camera is installed. A six- (6) ft. maximum length of internally reinforced tube shall be attached to the mast arm bracket for camera mounting above the mast arm. Camera shall be mounted to the top of the tube with the camera manufacturers recommended bracket. Camera bracket shall provide adjustments for both vertical and horizontal positioning for the camera. Camera attachments shall be designed to securely fasten the camera to prevent the extension tube from falling into the path of vehicles and/or becoming loose. Miscellaneous hardware shall be stainless steel or galvanized steel. The cameras and associated pole/arm attachment unit shall be designed to withstand a wind load of 90 MPH with a 30-second gust factor.

Luminaire arm installations shall be installed on the luminaire arm, with the camera/video manufacturers recommended brackets. Camera luminaire brackets shall provide adjustments for both vertical and horizontal positioning of the camera. Camera attachments shall be designed to securely fasten the camera to the luminaire arm. Miscellaneous hardware shall be stainless steel or galvanized steel. The cameras and associated pole/arm attachment unit shall be designed to withstand a wind load of 90 MPH with a 30-second gust factor.

Image Sensor – Cable (Coaxial & Power

Coaxial & Power cable (Siamese-type) shall be installed in conduits or overhead as indicated in the plans. Coaxial cable shall be suitable for exterior use and in direct sunlight. Power cable shall have a minimum of 5 conductors. Coaxial cable will be terminated in the surge suppressor before being connected directly to VIP boards. Power cable will be terminated into a fuse panel provided by the manufacturer and connected to 120 VAC in the controller cabinet.

Description of cable: Composite, 6 Conductors 2 elements:

18awg 5 conductors 7/26 bare copper, .016” polyethylene, 20awg 1 conductor, solid bare copper, 056” foam polyethylene jacket black, overall .030” PVC jacket black.

Video System Communication Module (Viewcom/E-MAX)

By establishing communication between the PC management software on the central computer and the Video Image Processor (VIP) detectors, the Viewcom/E-MAX board performs all primary functions for communication and transmission of traffic data and alarm events issued by the VIP detectors. The Viewcom/E-MAX also provides MPEG-4 compressed streaming video for remote monitoring.

Viewcom Specifications:

Dimensions- 170, 2070, and NEMA compatible card rack unit.

Communication/Ethernet communication for image-data and streaming video transfer (10/100 Mbps RJ-45 connector-

RS-232 serial communication port for local service access and set-up with keypad., and RS-485 communication within a rack for data acquisition via edge connector Inputs.

Composite video 75 Ohm at 1 Volt peak to peak, CCIR/EIA. Power supply. Reset button on front panel.

Outputs- Analog video output with overlay of system information and Power LED indicator.

Connector- Double row 22 pins EDGE (NEMA TS 2-2003).

Power Supply Consumption10.8 volts to 26.5 volts DC.170 mA @ 24 volts DC**.**

Environmental30 degrees F to +165 degrees F (-34C to +74 C). 0 to 95% relative humidity – non condensing.

8-29.16 Vehicle Signal Heads

Supplement this section with the following:

The contractor shall install new vehicle signal heads with these configurations: Quantities are indicated on the plans, and signal face layouts are shown horizontally below for diagrammatic purposes only— the actual signal heads shall all be VERTICAL in configuration as shown on the plans.

- 3-section with G/Y/R balls: (O O O)

- 3-section with G/Y/R Left Arrows (←/←/←)
- 4-section with G/Y/R balls & single G/Y bimodal left arrow (O O O ←)
- 4-section with G/Y/R balls & single G/Y bimodal right arrow (O O O →)
- 4-section with ALL left arrows “FYLTA” (←/←/←/←)

The contractor shall supply and install the vehicle signals as called for in the plans and details. They shall all have “12 inch” sections”- to house 12 Inch LED (All 12” GELCORE, or approved equivalent signal indications. (Standard Specifications apply. See other applicable section for LED specs.-this document.) NO 8 INCH SIGNAL SECTIONS ARE ALLOWED. The signal housings, tunnel visors and standard 5” back-plates, shall all be aluminum, with a flat black, fully-powder coated finish (NO GREEN). All signal displays shall be *Dialight*, or approved equivalent, standard 12” LED modules. (Standard Specification 9-29.16(2) A.) All new vehicle signals shall be installed vertically, using Type-N PELCO mounting and Type-D for Top –of-Type-1 pole mounting assemblies, with locations, positions and orientations as shown on the plans, applicable WSDOT Standard Plans and/or City of Yakima project details.

8-29.19 Pedestrian Push Buttons

Supplement this section with the following:

The contractor shall supply and install an ADA (Americans w/ Disabilities Act) and Federal Manual on Uniform Traffic Devices (MUTCD) compliant Audible/Tactile pedestrian push button system as shown on the plans and as described below.

The ***Polara- 2-Wire Navigator Accessible (Audible/Tactile) Pedestrian Push Button System*** is an example of one such system approved for this project***.***

The Audible-Tactile Pedestrian Push Button system shall be a “2-wire controlled” (per station) pedestrian push button system approved for urban traffic signal installations with actuated pedestrian service. The system shall include the following components, features, and capabilities:

Push Button Station (PBS)

The PBS push button assembly, part of each separate push button station (PBS), shall have an ADA-compliant 2-inch diameter push button with raised vibrating tactile directional arrow, and it shall have the ability to produce a variety of audible sounds during all pedestrian cycles. The sounds are emitted out from behind the unit via a recessed weatherproof speaker with a vandal resistant screen. The PBS push button shall have a sunlight visible LED, which latches “ON” to confirm the button has been pushed. The raised vibrating tactile arrow shall point in the direction pedestrians are to walk. (IE: PBS push button unit installs 90 degrees in rotation from standard H-bracket style push buttons.) A custom voice-on-location message can be provided with an extended push of the button. The message shall give information about the intersection and street being crossed. The PBS Push Buttons shall be rated for 100 million+ operations with > 2 lb. actuation force. PBS push button failures or system failures shall default to transmitting a constant pedestrian call, and, the PBS shall allow extended push times from 1 to 4 seconds in .5-second increments—which shall be can be set when installed by the manufacturer or distributor field technician .

The system shall provide the following audible features; a locating tone, five field selectable WALK interval sound choices including Chirp, Cuckoo, and “Walk Sign Is On” voice message, three field selectable pedestrian-clearance sound choices, fixed and automatic volume adjustments, and special voice messages from extended push button activation, such as name of the street to be crossed and messages in alternate languages. The system shall have the ability to verbally countdown pedestrian clearance interval. The system shall have independent minimum and maximum volume settings for informational messages, locate sounds, clearance sounds and walk sounds. The independent minimum and maximum volume settings shall be available for both standard and extended push operating conditions. The system shall be “self-testing” with the ability to obtain data from a remote (Central) site for real-time monitoring and system maintenance. Extended push priority (mutes entire intersection except selected crosswalk to minimize confusion caused by other sounds). All PBS stations shall have a synchronized Audible output so as to minimize audible confusion and clutter. All inputs and outputs shall be optically isolated, and the maximum volume dynamic range shall be 60 dB per PBS.

Central Control Unit (CCU)

The PBS shall function as part of an accessible pedestrian signal which also includes a Central Control Unit (CCU) and which shall be installed in the controller cabinet. The system shall require no modification to the pedestrian display.

The CCU shall be able to control up to 12 PBS’s, three per phase and up to four pedestrian phases. It shall include additional general-purpose inputs and outputs for custom advanced/warning audible messages. All CCU inputs and outputs shall have full optical isolation and include transient voltage protection. The Push Button Stations and CCU shall be installed per manufacturer’s installation instructions, shall include all auxiliary components and parts, including (but not limited to), required circuit boards, special system installation wires or conductors and connectors and/or other custom parts, hardware or components.

Handheld Navigator- Configurator

The system shall include a a handheld remote programming unit (IE: Polara Navigator-Configurator), which can be used after installation to program the PBS.stations and the CCU. The system shall allow global configuration changes where one PBS can be set up and the changes can then be saved to the other Push Button Stations. The handheld remote device (Configurator)-- shall remotely configure an individual PBS or all Push Button Stations using infrared communications. The remote unit shall be interactive such that the user can hear the selected sounds and volumes when configuring the PPB Stations. One handheld remote shall be supplied complete with required batteries.

Custom Message and Sound Options

Custom-programmable “emergency-related” or other special messages shall be optionally available from the manufacturer if requested by the Traffic Engineer

Custom Locate Sound - Plays a sound at a selectable interval to assist a blind pedestrian in locating the Push Button Station.

Custom Location Message(s) - message states street being crossed and cross street names, and other vital information to help pedestrian with location and direction.

Custom Walk Message(s) - alerts pedestrians that the walk interval has begun and name of street being crossed.

Custom Clearance Sounds/Countdown - Plays a sound to let pedestrians know they should clear intersection crosswalk. This optional tone typically would sound similar to the locate tone but is played at a faster rate or counts down the number of seconds in the clearance phase.

Two custom messages available, both override all other sounds or messages and plays once every time its assigned input is activated on the Central Control Unit.

The system shall include one hardcopy set of **Installation Instructions**, and one **Operating Manual** hardcopy. Procedures for programming special voice messages and/or locator sounds/messages shall be provided by the manufacturer, if requested by the City of Yakima, Traffic Engineer. Following is a summary of such features.

8-29.20 Pedestrian Signals

Supplement this section with the following:

The contractor shall install new "Countdown" Pedestrian signals- (IE: **Dialight- No. 430-6479-001**, or approved equivalent, with standard 16" x 18" housings, which shall be die-cast aluminum. The modules shall be Light Emitting Diode (LED) type. The "Countdown Numerals" and "HAND (Don't Walk) symbol shall be "Portland" Orange LED's ", and the LED "WALKING PERSON" symbol shall be Lunar White. The pedestrian signals shall be MUTCD and ADA compliant. The contractor shall install the pedestrian signals at the locations shown on the plans, with Type E ("clamshell") side-of-pole mounting. (See WSDOT Standard Plan J-75.10-00.), and, if applicable, Type "D" Top-of-Pole mounting.

8-29.20(1) LED Pedestrian Signal Display Modules

Supplement this section with the following:

The surface of the lens shall be textured to reduce glare. The supplied egg crate visors shall not be installed.

All pedestrian "HAND" and "COUNTDOWN NUMERALS" shall be Portland Orange and shall conform to current ITE standards for size, chromaticity and intensity. LED pedestrian "HAND" modules shall be manufactured with a matrix of AlInGaP LED light sources. All pedestrian walking "MAN" modules shall be Lunar White and shall conform to current ITE standards for size, chromaticity and intensity. LED pedestrian walking "MAN" modules shall be manufactured with a matrix of InGaN LED light sources. The "HAND" and walking "MAN" message bearing surfaces shall be filled, not outline, symbols and shall be side by side. The LED pedestrian modules shall be operationally compatible with controllers and conflict monitors on this project.

Each LED pedestrian module shall be protected against dust and moisture intrusion per the NEMA Moisture Resistant STD 250-1991 for Type-4 enclosures to protect all internal components. The assembly, manufacturing, and mounting of the LED pedestrian module shall be designed to assure all internal LED and electronic components are adequately supported to withstand mechanical shock and vibration from high winds and other sources. The manufacturer's name, trademark, serial number and other necessary identification shall be permanently marked on the backside of the LED pedestrian module. A label shall be provided on the LED housing and the Contractor shall mark the label with a permanent marker to note the installation date.

Each LED pedestrian module shall operate from a 60±3 Hz AC line. Nominal operating voltage for all measurements shall be 120±3 volts rms. The LED circuitry shall prevent flicker at less than 100 Hz over the voltage range specified above. Fluctuations in the line voltage specified above shall not affect luminous intensity by more than ±10%. The signal module on-board circuitry shall include voltage surge protection to withstand high-repetition noise transients and low-repetition high-energy transients as stated in Section 2.1.6, NEMA Standard TS-2, 1992. The individual LED light sources shall be wired so that catastrophic failure of any one LED light source will result in the loss of not more than 20% of the signal module light sources. LED pedestrian signal modules shall provide a power factor of 0.90 or greater when operated at nominal operating voltage, and 77°C. Total harmonic distortion induced into an AC power line by an LED pedestrian module shall not exceed 20%. Each LED pedestrian module and associated onboard circuitry shall meet Federal Communications Commission (FCC) Title 47, Sub-Part B, Section 15 regulations concerning the emission of electrical noise. Two secured, color coded, 600V, 20AWG minimum, jacketed wires, conforming to the National Electrical Code, rated for service at 221°C, are to be provided for electrical connection.

8-29.24 Service Cabinet (Electrical)

Supplement this section with the following:

The electrical service shall be 120/240VAC multi-panel, electrical service with components, panels, and enclosures installed as per the Plans and City of Yakima Project Detail- Modified Electrical (Signal/Lighting) Service on Wood Pole.

This new service shall replace the current non-metered electrical assembly on the same existing wood pole (QWEST Tag# 1819R/ Inventory #A0615146, located on the north side of the east leg of W. Washington Avenue, approximately 160 feet east of centerline of S. 16th Avenue. It shall consist of a new 0-200 Amp, Type- 120/240, Single Phase Electrical Service, with a meter base, and a new 200 Amp, 2-Pole, 120/240-VAC, 6-position (minimum) electrical circuit-breaker panel. (See the applicable Electrical Service- Project Detail for the required components, layouts, as well as for orientation, and references to plan and WSDOT details for connections and other hardware requirements.

The service shall be inspected by the applicable local utility company (Pacific Power & Light) for temporary and final service drops, meter and service inspections and permits. The new service shall meet all applicable Electrical codes.

DIVISION 9
MATERIALS

9-05 DRAINAGE STRUCTURES, CULVERTS, AND CONDUITS

9-05.15(1) Manhole Ring and Cover

Revise this section to read:

All manhole rings and lids to be adjusted on this project shall be replaced with locking manhole rings and lids that will be supplied by the City at no cost to the Contractor. The locking manhole rings and lids shall be picked up from the Wastewater Collections Shop located at 204 W. Pine Street at the Contractor's expense. The locking lids are marked as "Sewer" for the sanitary sewer system and "Storm" for the storm water system. The Contractor will be responsible for placing the correct lid on each system manhole upon completion of adjustment. Prior arrangements shall be made by the Contractor to assure that the facility will be open for pickup of the rings and lids.

STANDARD PLANS
January 3, 2011

The State of Washington Standard Plans for Road, Bridge and Municipal Construction M21-01 transmitted under Publications Transmittal No. PT 09-013, effective January 3, 2011 is made a part of this contract.

The Standard Plans are revised as follows:

B-10.20 and B10.40
Substitute “step” in lieu of “handhold” on plan

C-1
Note 6 is revised as follows: Type 1-_ is replaced with a blank (fill-in) following Type _-

C-1b
Note 5 is revised as follows: Type 1-_ is replaced with a blank (fill-in) following Type _-

C-3, C-3B, C-3C
Note 1 is revised as follows: replace reference F-2b with F-10.42

C-5
Note 1. Attach guardrail to bridge rail or concrete barrier with 7/8” diameter high strength bolts Standard Spec. 9-06.5(4), with thin slab ferrule inserts or resin bonded anchors. See Contract Plans.

Is revised as follows:
Attach guardrail to bridge rail or concrete barrier with 7/8” diameter bolts per Standard Spec. 9-06.5(4), with thin slab ferrule inserts or resin bonded anchors. See Contract Plans.

C-7
Note 2. Attach guardrail to bridge rail or concrete barrier with 7/8” diameter high strength bolts (Standard Spec. 9-06.5(4)), with thin slab ferrule inserts or resin bonded anchors. See Contract Plans.

Is revised as follows:
Attach guardrail to bridge rail or concrete barrier with 7/8” diameter bolts (5 MIN.)
per Standard Spec. 9-06.5(4), with thin slab ferrule inserts or resin bonded anchors. See Contract Plans.

C-7a
Note 1. Attach guardrail to bridge rail or concrete barrier with 7/8” diameter high strength bolts (Standard Spec. 9-06.5(4)), with thin slab ferrule inserts or resin bonded anchors. See Contract Plans.

Is revised as follows:
Attach guardrail to bridge rail or concrete barrier with 7/8” diameter bolts (5 MIN.) per Standard Spec. 9-06.5(4), with thin slab ferrule inserts or resin bonded anchors. See Contract Plans.

C-14a

SECTION B, callout – 1½" PVC CONDUIT (TYP.) is revised to read: 1¼" PVC CONDUIT (TYP.) callout (mark) 8 #9 ~ 36" (TYP.) is revised to read: callout (mark) 8 #8 ~ 36" (TYP.) EPOXY BAR EXPANSION JOINT DETAIL, callout (mark) W #9 (epoxy coated symbol) ~ 36" (TYP.) is revised to read: callout (mark) 8 #8 (epoxy coated symbol) ~ 36" (TYP.)

C20.40
Plan View, Remove (Cases 19A & B-31) (Case 20-31) (case 21-31) from the span dimension

D-3
Sheet 1, Key Note 1, the term "Low Survivability" is revised to "Moderate Survivability"

D-3b
Key Note 7,reference D-3a is revised to D-3.10
TYPICAL SECTION, lower left corner, reference D-3a is revised to D-3.10

D-3c
Key Note 7,reference D-3a is revised to D-3.10
TYPICAL SECTION, lower left corner, references (2x) D-3a are revised to D-3.10

G-24.40
Existing callout - CORNER BOLT (TYP.)
New callout - CORNER BOLT OR SHOULDER BOLT (TYP.)

G-24.60
ELEVATION, upper left corner, callout W6x12 STEEL SIGN POST (TYP.) is revised to read: STEEL SIGN POST (TYP.)-(See Contract Plans for Post Sizes) ELEVATION, upper center, callout Steel Sign Post~ (W6x12 through W10x26~See Contract) is revised to read: Steel Sign Post (Typ.)-(See Contract Plans for Post Sizes)

Both Elevations, dimension for "post height" should be to the top of the post not the sign

J-1f
Note 2, reference to J-7d is revised to J-15.15

J-3b
Sheet 2 of 2, Plan View of Service Cabinet, Boxed Note, "SEE STANDARD PLAN J-6C…" is revised to read:

"SEE STANDARD PLAN J-10.10…"

J-7c
Note 3, reference to J-7d is revised to J-15.15

J-10.10
Sheet 1,Plan Note 11. If the slope is 3H:1V or steeper, special considerations may be necessary for safety reasons. Easier access using a stairway may be used. See Plan Sheet Library RD-15 for details. Coordinate with Maintenance and Project Engineer.

Is revised to read as follows:

If the slope is 3H:1V or steeper, special considerations may be necessary for safety reasons. Easier access using a stairway may be prudent. Contact WSDOT Bridge and Structures office for stairway design.

J-16b
Key Note 1, reference to J-16a is revised to J-40.36

J-16c
Key Note 1, reference to J-16a is revised to J-40.36

J-20.10
Sheet 2, 2-Way Mounting Angle Detail,
Dimension 1.625” is revised to 1.8125”
Dimension 2.375” is revised to 2.1875”

J-21.10
Sheet 1, Detail C, callout 4-3/4” x 2’-6” Anchor Bolt (Typ.)~ASTM A-307 or F 1554 GR 36 (See Note 4) is revised to 3/4” x 2’-6” Anchor Bolt (Typ. of 4)~ASTM A-307 or F 1554 GR 36 (See Note 4)

Sheet 2, Detail F, callout 3-3/4” x 2’-6”x4” Anchor Bolt (Typ.)~ASTM A-307 or F 1554 GR 36 (See Note 4) is revised to 3/4” x 2’-6” Anchor Bolt (Typ. of 3)~ASTM A-307 or F 1554 GR 36 (See Note 4)

K-80.30
In the NARROW BASE, END view, the reference to Std. Plan C-8e is revised to Std. Plan K-80.35

L-20.10, Sheet 1
Delete all references to tension cable and substitute tension wire.
Add knuckled selvage is required on the top edge of the fence fabric.

L-20.10, Sheet 2
Delete all references to tension cable and substitute tension wire.
All rope thimbles, wire rope clips and seizing are not required.

L-30.10, Sheet 1
Delete all references to tension cable and substitute tension wire.

L-30.10, Sheet 2
Delete all references to tension cable and substitute tension wire.
All rope thimbles, wire rope clips and seizing are not required.

M-1.60
COLLECTOR DISTRIBUTOR ROAD OFF- CONNECTION, taper dimensions of 225’ MIN. is changed to 300’ MIN.

M-65.10
PERSPECTIVE VIEW, add dim. “SEE NOTE 1” to right side of PERSPECTIVE VIEW.
To clarify that the requirement must be met on both sides of the roadway

The following are the Standard Plan numbers applicable at the time this project was advertised. The date shown with each plan number is the publication approval date shown in the lower right-hand corner of that plan. Standard Plans showing different dates shall not be used in this contract.

A-10.10-00.....8/07/07
A-10.20-00.....10/05/07
A-10.30-00.....10/05/07
A-20.10-00.....8/31/07
A-30.10-00.....11/08/07
A-30.15-00.....11/08/07
A-30.30-00.....11/08/07
A-30.35-00.....10/12/07
A-40.00-00.....8/11/09
A-40.10-01.....8/11/09
A-40.15-00.....8/11/09
A-40.20-00.....9/20/07
A-40.50-00.....11/08/07
A-50.10-00…..11/17/08
A-50.20-01…....9/22/09
A-50.30-00…..11/17/08
A-50.40-00…..11/17/08
A-60.10-01.....10/14/09
A-60.20-01.....8/11/09
A-60.30-00.....11/08/07
A-60.40-00.....8/31/07

B-5.20-00.....6/01/06
B-5.40-00.....6/01/06
B-5.60-00.....6/01/06
B-10.20-00.....6/01/06
B-10.40-00.....6/01/06
B-10.60-00.....6/08/06
B-15.20-00.....6/01/06
B-15.40-00.....6/01/06
B-15.60-00.....6/01/06
B-20.20-01.....11/21/06
B-20.40-02.....6/10/08
B-20.60-02.....6/10/08
B-25.20-00.....6/08/06
B-25.60-00.....6/01/06
B-30.10-00.....6/08/06
B-30.20-01.....11/21/06
B-30.30-00.....6/01/06
B-30.40-00.....6/01/06
B-30.50-00.....6/01/06
B-30.70-01.....8/31/07
B-30.80-00.....6/08/06
B-30.90-01.....9/20/07
B-35.20-00.....6/08/06
B-35.40-00.....6/08/06
B-40.20-00.....6/01/06
B-40.40-01.....6/16/10
B-45.20-00.....6/01/06
B-45.40-00.....6/01/06
B-50.20-00.....6/01/06
B-55.20-00.....6/01/06
B-60.20-00.....6/08/06
B-60.40-00.....6/01/06
B-65.20-00.....6/01/06
B-65.40-00.....6/01/06
B-70.20-00.....6/01/06
B-70.60-00.....6/01/06
B-75.20-01.....6/10/08
B-75.50-01.....6/10/08
B-75.60-00.....6/08/06
B-80.20-00.....6/08/06
B-80.40-00.....6/01/06
B-82.20-00.....6/01/06
B-85.10-01.....6/10/08
B-85.20-00.....6/01/06
B-85.30-00.....6/01/06
B-85.40-00.....6/08/06
B-85.50-01.....6/10/08
B-90.10-00.....6/08/06
B-90.20-00.....6/08/06
B-90.30-00.....6/08/06
B-90.40-00.....6/08/06
B-90.50-00.....6/08/06
B-95.20-01.....2/03/09
B-95.40-00.....6/08/06

C-1.....2/10/09
C-1a.....10/14/09
C-1b.....6/3/10
C-1c.....5/30/97
C-1d.....10/31/03
C-2.....1/06/00
C-2a.....6/21/06
C-2b.....6/21/06
C-2c.....6/21/06
C-2d.....6/21/06
C-2e.....6/21/06
C-2f.....3/14/97
C-2g.....7/27/01
C-2h.....3/28/97
C-2i.....3/28/97
C-2j.....6/12/98
C-2k.....7/27/01
C-2n.....7/27/01
C-2o.....7/13/01
C-4e.....2/20/03
C-4f.....6/30/04
C-5.....10/14/09
C-6.....5/30/97
C-6a.....10/14/09
C-6c.....1/06/00
C-6d.....5/30/97
C-6f.....7/25/97
C-7.....10/31/03
C-7a.....10/31/03
C-8.....2/10/09
C-8a.....7/25/97
C-8b.....2/10/09
C-8e.....2/21/07
C-8f.....6/30/04
C-10.....6/3/10
C-13.....7/3/08
C-13a.....7/3/08
C-13b.....7/3/08
C-14i.....2/10/09
C-14j.....12/02/03
C-14k.....2/10/09
C-15a.....7/3/08
C-15b.....7/3/08
C-16a.....6/3/10
C-16b.....6/3/10
C-20.14-01.....10/14/09
C-20.15-00.....10/14/09
C-20.18-00.....10/14/09
C-20.19-00.....10/14/09
C-20.40-01.....10/14/09
C-20.42-01.....10/14/09
C-22.14-01.....6/3/10
C-22.16-01.....6/3/10
C-22.40-02.....6/16/10
C-23.60-01.....10/14/09
C-25.18-01.....9/20/07
C-25.20-04.....10/14/09

C-2p.....10/31/03
C-3.....10/04/05
C-3a.....10/04/05
C-3b.....10/04/05
C-3c.....6/21/06
C-4b.....6/08/06
C-4b.....6/08/06
C-13c.....7/3/08
C-14a.....7/3/08
C-14b.....7/26/02
C-14c.....7/3/08
C-14d.....7/3/08
C-14e.....7/3/08
C-14h.....2/10/09
C-25.22-03.....10/14/09
C-25.26-01.....10/14/09
C-25.80-01.....7/3/08
C-28.40-00.....2/06/07
C-40.14-01.....6/3/10
C-40.16-01.....6/3/10
C-40.18-01.....10/14/09
C-90.10-00.....7/3/08

D-2.02-00.....11/10/05
D-2.04-00.....11/10/05
D-2.06-01.....1/06/09
D-2.08-00.....11/10/05
D-2.10-00.....11/10/05
D-2.12-00.....11/10/05
D-2.14-00.....11/10/05
D-2.16-00.....11/10/05
D-2.18-00.....11/10/05
D-2.20-00.....11/10/05
D-2.30-00.....11/10/05
D-2.32-00.....11/10/05
D-2.34-01.....1/06/09
D-2.36-02.....1/06/09
D-2.38-00.....11/10/05
D-2.40-00.....11/10/05
D-2.42-00.....11/10/05
D-2.44-00.....11/10/05
D-2.46-00.....11/10/05
D-2.48-00.....11/10/05
D-2.60-00.....11/10/05
D-2.62-00.....11/10/05
D-2.64-01.....1/06/09
D-2.66-00.....11/10/05
D-2.68-00.....11/10/05
D-2.78-00.....11/10/05
D-2.80-00.....11/10/05
D-2.82-00.....11/10/05
D-2.84-00.....11/10/05
D-2.86-00.....11/10/05
D-2.88-00.....11/10/05
D-2.92-00.....11/10/05
D-3.....6/16/10
D-3.10-00……6/16/10
D-3.11-00……6/16/10
D-3b.....6/30/04
D-3c.....6/30/04
D-4.....12/11/98
D-6.....6/19/98
D-10.10-01.....12/02/08
D-10.15-01.....12/02/08
D-10.20-00.....7/8/08
D-10.25-00.....7/8/08
D-10.30-00.....7/8/08
D-10.35-00.....7/8/08
D-10.40-01.....12/02/08
D-10.45-01.....12/02/08
D-15.10-01.....12/02/08
D-15.20-01.....1/06/09
D-15.30-01.....12/02/08

E-1.....2/21/07
E-2.....5/29/98
E-4.....8/27/03
E-4a.....8/27/03

F-10.12-01.....6/3/10
F-10.16-00.....12/20/06
F-10.40-01.....7/3/08
F-10.42-00.....1/23/07
F-80.10-01.....6/3/10
F-10.62-01.....9/05/07
F-10.64-02.....7/3/08
F-30.10-01.....6/3/10
F-40.12-01.....6/3/10
F-40.14-01.....6/3/10
F-40.15-01.....6/3/10
F-40.16-01.....6/3/10
F-45.10-00.....6/3/10

G-10.10-00.....9/20/07
G-20.10-00.....9/20/07
G-22.10-01.....7/3/08
G-24.10-00.....11/08/07
G-24.20-00.....11/08/07
G-24.30-00.....11/08/07
G-24.40-01.....12/02/08
G-24.50-00.....11/08/07
G-24.60-00.....11/08/07
G-25.10-01.....1/06/09
G-30.10-00.....11/08/07
G-50.10-00.....11/08/07
G-60.10-00.....8/31/07
G-60.20-00.....8/31/07
G-60.30-00.....8/31/07
G-70.10-00.....10/5/07
G-70.20-00.....10/5/07
G-70.30-00.....10/5/07
G-90.10-00…..1/06/09
G-90.20-00…..1/06/09
G-90.30-00…..1/06/09
G-90.40-01…..10/14/09
G-95.10-00.....11/08/07
G-95.20-01.....7/10/08
G-95.30-01.....7/10/08

H-10.10-00.....7/3/08
H-10.15-00.....7/3/08
H-30.10-00.....10/12/07
H-32.10-00.....9/20/07
H-60.10-01.....7/3/08
H-60.20-01.....7/3/08
H-70.10-00.....9/05/07
H-70.20-00.....9/05/07
H-70.30-01.....11/17/08

I-10.10-01.....8/11/09
I-30.40-00.....10/12/07
I-50.20-00.....8/31/07

I-30.10-01.....8/11/09
I-30.15-00.....8/11/09
I-30.20-00.....9/20/07
I-30.30-00.....9/20/07
I-30.50-00.....11/14/07
I-40.10-00.....9/20/07
I-40.20-00.....9/20/07
I-50.10-00.....9/20/07
I-60.10-00.....8/31/07
I-60.20-00.....8/31/07
I-80.10-01.....8/11/09

J-1f.....6/23/00
J-3.....8/01/97
J-3b.....3/04/05
J-3c.....6/24/02
J-3d.....11/05/03
J-7c.....6/19/98
J-8a.....5/20/04
J-8b.....5/20/04
J-8c.....5/20/04
J-8d.....5/20/04
J-9a.....4/24/98
J-10.....7/18/97
J-10.10-00……6/16/10
J-11b.....9/02/05
J-12.....2/10/09
J-15.15-00……6/16/10
J-16b.....2/10/09
J-16c.....2/10/09
J-18.....2/10/09
J-19.....2/10/09
J-20.....9/02/05
J-20.10-00.....10/14/09
J-20.15-00.....10/14/09
J-20.16-00.....10/14/09
J-20.20-00.....10/14/09
J-20.26-00.....10/14/09
J-21.10-01.....6/3/10
J-21.15-00.....10/14/09
J-21.16-00.....10/14/09
J-21.17-00.....10/14/09
J-21.20-00.....10/14/09
J-22.15-00.....10/14/09
J-22.16-01.....6/3/10
J-26.10-00…..6/16/10
J-26.15-00…..6/16/10
J-28.10-00.....8/07/07
J-28.22-00.....8/07/07
J-28.24-00.....8/07/07
J-28.26-01.....12/02/08
J-28.30-01.....10/14/09
J-28.40-01.....10/14/09
J-28.42-00.....8/07/07
J-28.45-00.....8/07/07
J-28.50-01.....6/16/10
J-28.60-00.....8/07/07
J-28.70-00.....11/08/07
J-40.10-01……10/14/09
J-40.30-01……6/3/10
J-40.36-00…….6/3/10
J-40.37-00…….6/3/10
J-60.13-00…….6/16/10
J-60.14-00……6/16/10
J-75.10-00……2/10/09
J-75.20-00……2/10/09
J-75.30-00…….2/10/09
J-75.40-00……10/14/09
J-75.45-00……10/14/09
J-90.10-00…….2/10/09
J-90.20-00…….2/10/09

K-10.20-01.....10/12/07
K-10.40-00.....2/15/07
K-20.20-01.....10/12/07
K-20.40-00.....2/15/07
K-20.60-00.....2/15/07
K-22.20-01.....10/12/07
K-24.20-00.....2/15/07
K-24.40-01.....10/12/07
K-24.60-00.....2/15/07
K-24.80-01.....10/12/07
K-26.20-00.....2/15/07
K-26.40-01.....10/12/07
K-30.20-00.....2/15/07
K-30.40-01.....10/12/07
K-32.20-00.....2/15/07
K-32.40-00.....2/15/07
K-32.60-00.....2/15/07
K-32.80-00.....2/15/07
K-34.20-00.....2/15/07
K-36.20-00.....2/15/07
K-40.20-00.....2/15/07
K-40.40-00.....2/15/07
K-40.60-00.....2/15/07
K-40.80-00.....2/15/07
K-55.20-00.....2/15/07
K-60.20-02.....7/3/08
K-60.40-00.....2/15/07
K-70.20-00.....2/15/07
K-80.10-00.....2/21/07
K-80.20-00.....12/20/06
K-80.30-00.....2/21/07
K-80.35-00.....2/21/07
K-80.37-00.....2/21/07

L-10.10-00.....2/21/07
L-20.10-00.....2/07/07
L-30.10-00.....2/07/07
L-40.10-00.....2/21/07
L-40.15-00.....2/21/07
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