

**City of Kamloops
AMENDMENTS TO THE
MASTER MUNICIPAL CONSTRUCTION
DOCUMENTS (MMDC) - 2009
Revision Date: March 07, 2011**

City of Kamloops

AMENDMENTS TO THE MMCD PLATINUM BOOK - Volume II - 2009

REVISION: 2011 March 03

City of Kamloops Amendments

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CITY OF KAMLOOPS AMENDMENTS
Amendments to General Conditions:
Supplementary General Conditions

A. SUPPLEMENTARY GENERAL CONDITIONS TO THE MMCD VOLUME II (2009 EDITION) specific to the City of Kamloops, including those approved by MMCD Board on March 7, 2011.

*Indicates as approved by MMCD Board.

- Concordance and Index** (2010-03-25)* **Add:**
Gold Edition Specification 02100 is now in the User Guide at Section 2 – 4.2.4.4
- GC 1.39.1S** (2010-05-18)* **Delete** GC 1.39.1:
Replace with:
"GST" means the federal Goods and Services Tax unless Harmonized Sales Tax is implemented in British Columbia, in which case "GST" will mean Harmonized Sales Tax in British Columbia.
- GC 1.76.1S** **Delete** portion of clause:
"...15%...".
Replace with:
"...20%...".
- GC 1.79S** **"List of Approved Products and Materials"** means the list of products prepared by the City of Kamloops Engineering Division and published on the City's website (<http://www.kamloops.ca/engineering/index.shtml>) or the same as may be amended from time to time; plus those products that have the specific written approval of the Engineering Manager.
- GC 2.2.4(i)S** (2010-03-25)* **Delete** GC 2.2.4(i):
Replace with the following:
(i) Standard Detail Drawings
- GC 3.4.5S** (2009-11-19)* **Delete** GC 3.4.5
Replace with the following:
If at any time and for any reason the *Contract Administrator* determines that inspection or testing of the *Work*, or portion of the *Work*, is required that was not called for in the *Contract Documents*, then the *Contract Administrator* may direct the *Contractor* to perform, or have performed, that inspection or testing, as provided in GC 4.12.6.

GC 4.3.4S Delete GC 4.3.4:

Replace with:

Before commencing any *Work* at the *Place of the Work*, the *Contractor* shall be responsible to locate in three dimensions all underground utilities and structures indicated on the *Contract Documents* as being at the *Place of the Work*. The *Contractor* shall also be responsible to consult with all utility corporations that provide electricity, communication, gas or other utility services in the area of the *Place of the Work*, to locate in three dimensions all underground utilities for which they have records. The *Contractor* shall also locate in three dimensions any other utilities or underground structures that are reasonably apparent in an inspection of the *Place of the Work*.

GC 4.6.2S Delete GC 4.6.2:

(2010-03-25)*

Replace with:

The *Contractor* shall update the *Baseline Construction Schedule* monthly to produce an *Adjusted Baseline Schedule* (the "*Adjusted Baseline Schedule*") that reflects any adjustments to the *Milestone Dates* or the *Contract Time* as provided by the *Contract Documents*, including without limitation if the *Contract Administrator* issues a *Change Order* or other *Contract Document(s)* which adjusts any *Milestone Date(s)*. Each *Adjusted Baseline Schedule* will replace the previous *Baseline Construction Schedule*.

GC 4.6.6S Delete GC 4.6.6:

(2010-03-25)*

Replace with:

The time for the performance of the *Work* shall commence on the date specified in the *Notice to Proceed*, or if not so specified, on the date the *Notice to Proceed* is issued. Subject to a contrary provision in the *Contract Documents*, the *Owner* shall issue the *Notice to Proceed* within 10 *Days* of receipt of the documentation required from the *Contractor* under paragraph 5.1.1 of the Form of Tender. Failure by the *Owner* to issue the *Notice to Proceed* within the 10 *Days* shall entitle the *Contractor* to a claim for delay under GC 13.1.1.

GC 4.7.4S Add sub-section:

Demonstration of Gold Seal Certification (or internship) will be required by the Prime *Contractor* for *Superintendents* on all City of Kamloops construction projects exceeding \$1 million Engineer's estimated values, or where the degree of difficulty warrants the need.

GC 4.9.3S Add sub-section:

The *Contractor* will be required to provide documentation to the *Contract Administrator* (prior to installation), that verifies that all materials and products purchased for this *Contract* comply with the City of Kamloops' List of Approved Products and Materials.

GC 7.1.3S
(2009-11-19)*

Delete GC 7.1.3

Replace with the following:

Additional work that the *Owner* may wish performed that does not satisfy the requirements of subparagraphs (a) and (b) of GC 7.1.1.1 is *Extra Work* ("Extra Work") and not a *Change*. Pursuant to GC 8, *Extra Work* may be declined by the *Contractor* or may, upon agreement between the parties, be undertaken as *Extra Work*.

GC 7.3.3S

Delete GC 7.3.3:

Replace with:

"The *Contractor* shall not be entitled to receive payment for any *Work* the *Contractor* claims as a *Change* if the *Work* was done, in part or in whole, without a prior approved *Change Order* or *Field Memo* identifying any adjustments to the *Contract Price* or *Contract Time*, except as allowed under GEN 7.3.5."

GC 9.2.4S

Delete portion of clause,

"...unless at the time of the agreement the *Contractor* expressly reserved in writing the right to claim for additional payment or *Contract Time* adjustment."

GC 9.4S
(2010-03-25)*

Delete GC 9.4:

Replace with:

If for any reason, including an addition or deletion under GC 7.1.1.1) or GC 7.1.1.2) respectively, the actual quantity of a unit price item varies by more than plus or minus the *Variance Threshold Percentage* from the estimated quantity for that unit price item as listed in the *Schedule of Quantities and Prices* (the "*Tender Quantity*") or as otherwise agreed to pursuant to these *Contract Documents*, then either the *Owner* or the *Contractor* may by written notice request the other party to agree to a revised unit price, considering the change in quantities. A party shall make a request for a revised unit price as soon as reasonably possible after the party concerned becomes aware of the quantity variation.

GC 12.2.2S
(2010-03-25)*

Delete GC 12.2.2:

Replace with:

If the *Contract Administrator* observes any materials at the *Place of the Work* that the *Contract Administrator* knows or suspects may be *Hazardous Materials*

then the *Contract Administrator* shall immediately give written notice to the *Contractor* and the *Contractor* shall immediately stop the *Work* or portion of the *Work* as required by GC 12.2.1.1.

GC 13.9.1S **Delete** GC 13.9.1 1:
(2010-03-25)

Replace with:

- 1) as a genuine pre-estimate of the *Owner's* increased costs for the *Contract Administrator* and the *Owner's* own staff caused by such delay an amount of \$900 per *Day* or pro rata portion for each *Day* that actual *Substantial Performance* is achieved after the *Substantial Performance Milestone Date*; plus

Delete portion of GC 13.9.1:

Replace with the following:

If the monies owing to the *Contractor* are less than the total amount owing by the *Contractor* to the *Owner* under (1) and (2) then any shortfall shall immediately, upon written notice from the *Owner*, and upon *Substantial Performance*, be due and owing by the *Contractor* to the *Owner*.

GC 18.1.1S **Change** clause to read:

At the end of each calendar month, the *Contractor* shall submit a written request for payment to the *Contract Administrator*. The application shall include a digital copy of the schedule of quantities indicating completed *Work* and any documentation required to support the claimed quantities.

Within 10 *Days* of receipt of the required information above, the *Contract Administrator* shall prepare and issue a certificate (the "*Payment Certificate*") for the period ending the last calendar day of the month.

GC 18.4.2S **Delete** GC 18.4.2:

Replace with:

Defects and Deficiencies: In addition to other holdbacks as provided by the *Contract Documents*, when considering *Substantial Performance*, the *Owner* may hold back from payments otherwise due to the *Contractor* 300% of a reasonable estimate, as determined by the *Contract Administrator*, on account of deficient or defective *Work*, regardless if such *Work* has been already paid for or not. This holdback may be held, without interest, until issuance of a *Total Performance Certificate*. The items of defect or deficiency and the amounts of related holdback shall be listed separately on the *Payment Certificate*.

GC 18.4.3S **Delete** GC 18.4.3:

Replace with:

Incomplete *Work*: In addition to other holdbacks as provided by the *Contract Documents*, when considering *Substantial Performance*, for incomplete *Work*:

- (1) the *Contractor* is unable to complete because of conditions beyond the *Contractor's* reasonable control, as determined by the *Contract Administrator*, then the *Owner* may hold back from payments otherwise due to the *Contractor* the cost as estimated by the *Contract Administrator* to have others complete such *Work*.
- (2) the *Contractor* is able to complete, as determined by the *Contract Administrator*, then the *Owner* may hold back from payments otherwise due to the *Contractor* 300% of a reasonable estimate, as determined by the *Contract Administrator*, on account of incomplete *Work*.

This holdback may be held until issuance of a *Total Performance Certificate*. The items of incomplete *Work* and the amounts of related holdback shall be listed separately on the *Payment Certificate*.

GC 18.5.1S **Change** clause to read:

The net amount shown for payment on a *Payment Certificate* shall be due and payable to the *Contractor* within 21 *Days* after receipt of the *Payment Certificate* from the *Contract Administrator*.

GC 21.2.1S **Delete** GC 21.2.1:

Replace with:

The *Contractor* agrees that they will be deemed to be the *Prime Contractor* for the *Work* within the meaning of the *Workers Compensation Act*, Division 3, Section 118 (1)(a), and shall be governed by WorkSafe BC Occupational Health and Safety Regulations for the Province of British Columbia.

The *Contractor* shall provide all notices of the project if required under Part 20.2 (1) of WorkSafe BC Occupational Health and Safety Regulations. These notices must be posted at the job *Site* with a copy forwarded to the board and a copy to the City of Kamloops Project Coordinator or *Contract Administrator* prior to commencement of the project.

The *Contractor* shall, for the purpose of ensuring the coordination of health and safety activities for the location, appoint a Qualified Coordinator to ensure that all safety rules or regulations are observed during performance of this *Contract*, not only by the *Contractor's* workers but also by all *Subcontractor* and their workers and by any other person engaged in the performance of this *Contract*. The *Contractor* shall ensure that written safe work procedures specific to the

Work being performed are in place and adhered to and that all pre-existing workplace hazards have been identified and that the workers have been made aware.

The *Contractor* must submit for review a printed or electronic copy of their Occupational Health and Safety Program, or a copy of the letter stating that they are already on the City of Kamloops approved *Contractor* list, to the City of Kamloops Project Coordinator or *Contract Administrator* within 15 Days of the written *Notice of Award*.

The *Contractor* must provide Occupational First Aid services for all workers at the job *Site*. The *Contractor* agrees to pay all premiums and penalties as assessed by the WorkSafe BC.

The *Contractor* shall indemnify and hold harmless the City of Kamloops from all manner of claims, demands, costs, losses, penalties, or proceedings arising out of or in any way related to unpaid WorkSafe BC assessments owing from any person employed in the performance of this *Contract*.

GC 22.1.2 S Add subsection:

For the purpose of this paragraph "claim" or "claims" shall mean those claims for damages or loss resulting from the performance of the *Work* under the *Contract* and made against the City and/or the *Contractor* by persons not involved in the performance of the *Work*, e.g. property *Owners*, pedestrians, and motorists.

The *Contractor* shall, upon receiving notice of a claim, respond promptly in a respectful manner to the claimant and notify the City of Kamloops of the particulars of the claim. Within thirty (30) days after receiving notice of a claim the *Contractor* will make its best efforts to settle the claim and, if unsuccessful, the City of Kamloops may then appoint an independent adjuster to investigate the claim.

The City of Kamloops will make its best efforts to settle any claims not settled within thirty (30) days by the *Contractor* based on the independent adjuster's report. All costs of the settlement and the adjuster are to be paid by the *Contractor* and may be taken by the City of Kamloops from monies due the *Contractor*.

Prior to the release of holdback monies, the *Contractor* and the *Contract Administrator* will confirm to the City of Kamloops that there are no unresolved claims remaining and, if they are unable to do so, then the City of Kamloops will be entitled to retain monies it deems sufficient to pay for claims and any associated costs, including legal costs on a solicitor client basis, from the holdback amount.

This section does not apply to a claim for which the *Contractor* has insurance, provided the defence of such claims has been undertaken by the *Contractor's* insurer for both the *Contractor* and the City of Kamloops in a manner which will result in no costs to the City of Kamloops.

GC 24.1S

Delete GC 24.1:

Replace with:

24.1.1. Liability Insurance

- .1 This policy shall cover the risks of liability for Bodily Injury, Death or Property damage arising from the activities at the *Site*. It shall be written in the name of the *Owner, Contractor, Subcontractors, Architects, Engineers, Contract Administrator, Consultants, and Subconsultants* engaged on the *Work*. It shall provide a limit of liability in the amount of not less than five million dollars (\$5,000,000).

The policy deductible is the responsibility of the Contractor.

The *Contractor* shall **indemnify** and **save harmless** the *Owner* from any and all third party claims that may arise from the *Contractors* operations under the *Contract* resulting in bodily injury, death, or property damage.

- .2 To comply with these specifications the *Contractor* has two options:

Option 1 Commercial General Liability Insurance:

The *Contractor* must supply the *Owner* with a Certificate of Insurance in the amount of not less than five million dollars (\$5,000,000) as per 24.1.1. (above).

The *Contractor* must also ensure that the Commercial General Liability Insurance policies, the *Contractor* and his *Subcontractor* provides, includes the *Owner* as an Additional Insured.

The *Contractor* will be responsible to the *Owner* to guarantee to the *Owner* that each *Subcontractor* hired by the *Contractor* carries Commercial General Liability Insurance subject to inclusive limits of not less than two million dollars (\$2,000,000) for bodily injury, death, or property damage. The *Contractor* will obtain for the benefit of the *Owner*, certificates of insurance from each *Subcontractor's* Broker or Insurer.

Each certificate of insurance is to be sent to and approved by the *Owner* prior to the *Subcontractor* commencing *Work* on the job/project in question.

The *Contractor* must include the *Owner* as an Additional Insured under the Commercial General Liability insurance policy they provide and must also ensure the *Owner* is included as an additional insured under each of the *Subcontractor* Commercial General Liability Insurance policies.

Option 2 Wrap Up Liability Insurance:

The insurance shall be issued in the name of the *Owner* and the *Contractor*. The insurance shall also insure as Unnamed Insureds, the *Owner*, the Engineering Consultants of the *Owner*, and their *Subcontractors* who perform a part or parts of the *Work*, but excluding suppliers whose only function is to supply and/or transport products to the project *Site*.

3. The insurance shall preclude subrogation claims by the insurer against anyone insured by the liability policy(ies).

The Commercial General Liability or Wrap Up Liability Insurance shall include coverage for:

- a) Premises and operations liability.
- b) Broad form products and/or completed operations liability extending for a two (2) year period after completion and acceptance by the City.
- c) Blanket *Contractual* liability.
- d) Cross liability.
- e) Occurrence property damage.
- f) Hoist liability, if applicable to the *Work*.
- g) Contingent employer's liability.
- h) Personal injury liability arising out of false arrest, detention, or imprisonment or malicious prosecution, libel, slander, defamation of character, invasion of privacy, wrongful eviction, wrongful entry, or discrimination.
- i) Shoring, blasting, excavating, underpinning, demolition pile driving and caisson *Work*, *Work* below ground surface, tunnelling, and grading, where such *Work* is required.
- j) Liability with respect to non-owned licensed vehicles.
- k) Contingent *Contractors* Protective Liability.
- l) Broad form loss of use.
- m) Loss of use without property damage.
- n) Employees as additional insureds.
- o) Sudden and accidental pollution – 240 hour reporting.
- p) Medical payments.

- q) Fire fighting expenses.

24.1.2 All Risk Builders Risk Insurance

The policy deductible is the responsibility of the *Contractor*.

If agreed to by the *Owner* and the *Contractor* this coverage may not be required for underground *Work* such as the installation of water mains, sanitary sewer mains, storm sewer mains, installation of road works and sidewalks. Whether the *Contractor* purchases this insurance or not the *Contractor* will still be responsible for any loss or damage to materials or supplies.

Unless otherwise agreed to by the *Owner*, the *Contractor* will provide and maintain "All Risks" property insurance insuring the full replacement value of the *Work*. The full replacement value of the property to be provided by the *Contractor* for incorporation into the *Work*. The insurance shall be issued in the name of the *Contractor* and the *Owner*, and as unnamed insureds *Subcontractor*, and all others having an insurable interest in the *Work*.

Insurance provided is to insure against "All Risks" of physical loss or damage and be issued on a broad form "All Risks" builders risk policy to apply to:

- a) All products and supplies of any nature whatsoever, the property of the Insureds or of others for which the Insureds may have assumed responsibility, to be used in or pertaining to the *Site* preparation and demolition or existing structures, erections, and/or fabrication, and/or reconstruction, and/or repair of the *Work*, while on *Site* or in transit, subject to exclusions to be agreed to by the *Owner*.
- b) The installation, testing, and any subsequent use of machinery and equipment including boilers, pressure vessels, or vessels under vacuum.
- c) Damage to the *Work* caused by an accident to and/or the explosion of any boiler(s) or pressure vessel(s) or electrical equipment forming part of the *Work*

Such coverage shall exclude construction machinery, equipment, temporary structural and other temporary facilities, tools, and supplies used in the construction of the *Work* and which are not expendable under the *Contract*.

The insurance shall preclude subrogation claims by the insurer against anyone insured by the property insurance policy(s).

All such insurance shall be maintained continuously until ten (10) *Days* after the

date the *Contract Administrator* issues a *Certificate of Total Performance*. All such insurance will provide for the *Owner* to take occupancy of the *Work* or any part thereof during the term of the insurance.

The policies will provide that, in the event of a loss, payment for damages to the *Work* shall be made to the *Owner* and the *Contractor* as their respective interests may appear. The *Owner* will act on behalf of the *Contractor* and himself for the purpose of adjusting the amount of such loss with the Insurers. On determination of the extent of the loss, the *Contractor* shall immediately proceed to restore the *Work* and shall be entitled to receive from the *Owner* (in addition to any sum due under the *Contract*), the amount for which the *Contractors* interest in the restoration *Work* has been appraised, such amount to be paid as the *Work* of the restoration proceeds and in accordance with the *Contract Administrator's* certificates for payment. Damage shall not affect the rights and obligations of either party under the *Contract* except that the *Contractor* shall be entitled to such reasonable extensions of time for Substantial and *Total Performance* of the *Work* as the *Contract Administrator* may decide.

24.1.3. Other Insurance

The *Contractor* shall provide Commercial General Liability Insurance for any *Work* relating to correction of defects or deficiencies which occur during the warranty period for a limit of no less than \$5,000,000.

24.1.3.1. Contractor's Equipment Insurance

This policy shall cover all *Contractors'* tools and equipment used at the *Site* against "All Risks" of direct physical loss or damage including the perils of earthquake and flood subject to customary exclusions.

The *Contractor* shall require all *Subcontractor* engaged in the *Work* to purchase and maintain similar *Contractors'* equipment insurance covering their tools and equipment used at the project *Site*.

All such *Contractors'* Equipment Insurance policies shall contain a waiver of subrogation against the *Owner* and the *Contractor, Subcontractor, Architect, Engineers, Consultants, and Sub-consultants* engaged in the *Work*. Thirty (30) days prior written notice of cancellation or material *Change* adversely affecting this insurance to be given by the Insurers to the *Owner*.

24.1.3.2. Aircraft and/or Watercraft Liability Insurance, if used in the performance of the Contract.

The *Contractor* shall provide and maintain Public Liability and Property Damage insurance with respect to owned and non-owned aircraft and watercraft, as may be required, subject to inclusive limits of not less than two million dollars

(\$2,000,000). Said insurance shall be issued in the joint names of the *Contractor* and the *Owner* and as unnamed Insureds *Subcontractor*, the Engineering Consultants and any others required by the *Owner* to be added as additional unnamed Insureds.

24.1.3.3. Automobile Liability Insurance

The *Contractor*, *Subcontractor*, his agents, and employees shall provide and maintain Public Liability Property Damage Insurance in respect of owned licensed vehicles subject to inclusive limits of not less than two million dollars (\$2,000,000).

24.1.4. Insurance Certificate and Insurance Questions

24.1.4.1 Construction Certificate of Insurance

Applicable to all policies except automobile liability insurance issued by the Insurance Corporation of British Columbia.

The *Contractor* shall promptly forward a Construction Certificate of Insurance containing insuring agreements acceptable to the City. Should the insurance policies under which the certificate is drawn expire during the term of this *Contract* or any extension or renewal thereof, the *Contractor* shall forward a renewal insurance certificate to the City thirty (30) days prior to the expiry of said insurance policies on a form satisfactory to the City.

The most current Construction Certificate of Insurance can be obtained from: <http://www.kamloops.ca/business/insurancecertificates.html>

24.1.4.2. Insurance Questions

Any questions regarding insurance requirements should be made to the City of Kamloops Risk Management/Insurance Section at 250-828-3417, 250-828-3315, fax 250-828-0845, or riskmanagement@kamloops.ca.

GC 24.1.5S
(2010-03-25)*

Delete GC 24.1.5:

Replace with:

All policies referred to in this *GC* shall provide that thirty (30) *Days* notice of cancellation will be given in writing to each insured, including the *Owner*, otherwise the policies to remain in full force and effect until the *Work* has been completed. Notwithstanding the foregoing, the Comprehensive General Bodily Injury and Property Damage Liability Insurance referred to in *GC* 24.1.1.2) shall remain in full force and effect from the commencement of the performance of the *Work* for a period of not less than twelve (12) months following *Total*

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Performance, and with respect to completed operations coverage for a period of not less than 24 months following *Total Performance*.

GC 25.1.1S **Change** sub-section to read:

The *Contractor* shall, at the *Contractor's* own expense, promptly correct defects or deficiencies in the *Work* that appear prior to and during the period of two years from the date of the *Certificate of Substantial Performance*, or such longer periods as may be specified in the *Contract Documents* for certain products or *Work* (the "*Maintenance Period*").

GC 27S **Add** new clause; Good Business Clause:

Contractors and suppliers wishing to do business with the City of Kamloops agree to resolve all differences through the *Dispute* resolution procedure.

Contractors and suppliers who choose to use a public forum to air any differences run the risk of being removed from the preferred vendor list and may be prevented from doing future business with the City of Kamloops.

Schedule **Add** new schedule:

17.5.3S

(2010-03-25)*

Added to General Conditions. See next pages for content of Schedule 17.5.3.

**Schedule 17.5.3
Letter Agreement with Referee**

(Name and Address of Referee)

Contract: _____
(TITLE OF CONTRACT)

Reference No. _____
(OWNER'S CONTRACT REFERENCE NO.)

BETWEEN:

The _____
(NAME OF OWNER)

(the "Owner")

AND:

(NAME AND OFFICE ADDRESS OF CONTRACTOR)

(the "Contractor")

We write to confirm your appointment as a *Referee* under the above *Contract*. The terms of your appointment are as contained in GC 17.5 of the *Contract Documents*. The parties specifically confirm GC 17.5.5, GC 17.5.13 and GC 17.5.14.

We confirm that you agree to review any *Disputes* in accordance with the *Contract Documents* that may be sent to you by either of the parties, and perform the functions of a *Referee* as described in the *Contract Documents*. The written *Dispute* and related materials, including a copy of the *Contract Documents*, shall be forwarded to you. Platinum Edition MMCD Supplemental Update 2010-03-25 31 March 2010 Page 8 of 8

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We confirm that your daily/hourly rate for fees is \$_____. In addition to your invoiced fees the *Owner* will pay any and all reasonable disbursements incurred in providing your services.

Please submit your invoices on a monthly basis directly to the *Contract Administrator*. The *Owner* shall make payment within 20 calendar days of receipt.

Please confirm your agreement to the terms as set out in this letter by signing a copy of the enclosed letter and returning it to the *Contract Administrator*.

Yours truly,

Authorized Signatory of *Owner* _____ Date _____

Authorized Signatory of *Contractor* _____ Date _____

Referee _____ Date _____

CITY OF KAMLOOPS AMENDMENTS
Amendments to
Specifications:
Supplementary Specifications

- A. City of Kamloops - New Supplementary Specifications
- B. City of Kamloops - Specification Revisions and Supplementary Specifications

A. City of Kamloops New Supplementary Specifications

| | |
|--|--|
| TRAFFIC CONTROL DEVICES | SECTION 34 41 15S PAGE 1 2011 |
|--|--|

- 1.0 GENERAL**
 - .1 Sign colour, shape, designation, size, installation, vertical and lateral placement shall conform to the most recent edition of the TAC Manual of Uniform Traffic Control Devices for Canada.
 - .2 Where the TAC manual is deficient the most recent edition of the BC MOT Manual of Standard Traffic Signs and Pavement Markings and other applicable BC MOT manuals may apply unless otherwise specified.
 - .3 Sign substrate and sheeting shall comply with the most recent BC MOT Catalogue of Standard Traffic Signs unless otherwise specified.
 - .4 Sign and support structure installation as well as related materials and fasteners shall comply with the most recent applicable BC MOT manual unless otherwise specified.

2.0 PRODUCTS

- 2.1 Sign Materials**
 - .1 Pre-Cast Concrete Base for standard size traffic sign
300 mm diameter by 500 mm high cw insert 57mm OD by 610 mm long installed plumb with holes covered before inserting in wet concrete. Insert shall be installed at the bottom of the form with a 75 mm projection above the top of the pour.
 - .2 Standard Sign Pole
50 mm OD, 12 gauge, hot rolled steel, hot dipped galvanized square Telespar to comply with BC MOT specifications.
 - .3 Sign Sheeting
 - .1 Construction signs - approved Type I
 - .2 Pedestrian Signs – approved Type III
 - .4 Fasteners & Washers
 - .1 Stainless steel banding and clips to be used in place of drilling and tapping vertical and horizontal pole structures.
 - .2 Plated bolts and washers of appropriate diameter to fit snug for all metal to metal contact surfaces
 - .3 Non metal approved washers to be used between sheeting surfaces and fasteners.
 - .4 Non corrosive vandal-proof rivets to be used within reach of pedestrians.

END OF SECTION

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| SEGMENTAL CONCRETE WALL UNITS | SECTION 03 50 01S PAGE 1 2011 |
|--|--|

- 1.0 GENERAL**
 - .1 Section 03 50 01S refers to those portions of the *Work* that are unique to the supply and installation of segmental concrete wall units for retaining walls. This section must be referenced to and interpreted simultaneously with all other sections pertinent to the work described herein.

- 1.1 MEASUREMENT AND PAYMENT**
 - .1 Payment for segmental concrete wall units for retaining walls includes all *Work* and incidentals, excavation, crush gravel base and backfill, hollow block fill as specified, wall drainage system as specified, geosynthetics as specified, and all backfill and compaction.
 - .2 Payment will be based on the total face area installed which includes the face area of the capstones as well as the face area of the block faces buried at the toe of the wall.

- 2.0 PRODUCTS**

- 2.1 MATERIALS**
 - .1 The City of Kamloops requires that all products incorporated into the segmental concrete wall unit must be recognized on the List of Approved Products and Materials.

END OF SECTION

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B. City of Kamloops - Specification Revisions and Supplementary Specifications

| SECTION | SUB SECTION | TITLE | SUPPLEMENTARY SPECIFICATION |
|---|-------------------------|---|--|
| 01 33 01 Project Record Documents | 1.7.1S | Recording Actual <i>Site</i> Conditions | Append to clause: The <i>Contractor</i> must have available for inspection by the <i>Contract Administrator</i> detailed records and locations of all concealed, or other, <i>Work</i> as it is completed. |
| 01 33 01 Project Record Documents | 1.8.2S | Payment | Add clause: .2 For all City of Kamloops projects, the <i>Schedule of Quantities and Prices</i> shall include a separate payment item for delivery of all Project Record Document information, including survey data, as-built Drawing data, and operation and maintenance data and instructions, from the <i>Contractor</i> to the <i>Contract Administrator</i> . |
| 01 55 00 Traffic Control, Vehicle Access and Parking | 1.0.5S | General | Delete clause. Replace with: .5 Inform all <i>Owners</i> or occupants of properties where access is affected a minimum of 48 hours before the start of <i>Work</i> , unless directed otherwise in the <i>Contract Documents</i> . |
| 01 55 00 Traffic Control, Vehicle Access and Parking (2010-03-25)* | 1.4.10.3S (2010-03-25)* | Traffic Control | Delete clause. Replace with: .3 When workmen or equipment are employed on travelled way over brow of hills, around sharp curves or at other locations where oncoming traffic would not otherwise have adequate warning. |

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| <p>01 57 01 Environmental Protection (2010-03-25)*</p> | <p>1.2.2.2S (2010-03-25)*</p> | <p>Temporary Erosion and Sediment Controls</p> | <p>Append to clause: "watercourses."</p> |
| <p>01 58 01 Project Identification</p> | <p>1.2.1S</p> | <p>Temporary Project Signage</p> | <p>Delete clause. Replace with:</p> <ul style="list-style-type: none"> .1 Construction Signage <ul style="list-style-type: none"> .1 Provide and erect, within 2 weeks of signing <i>Contract</i>, a project sign in a location designated by the <i>Contract Administrator</i>. .2 Construction sign shall be as shown on Supplemental Detail Drawing SG 12. .3 Maintain sign in good condition for duration of <i>Work</i>. Clean periodically. .4 No other signs or advertisements, other than warning signs, are permitted on <i>Site</i>, unless approved by the <i>Contract Administrator</i>. .2 Public Notice <ul style="list-style-type: none"> .1 Advise residents and/or other parties within the affected area of planned construction activities and schedule a minimum of 48 hours before the start of the <i>Work</i>, unless directed otherwise in the <i>Contract Documents</i>. Coordinate with and obtain <i>Contract Administrator's</i> approval before delivery or mailing of public notices. |
| <p>03 30 20 Concrete Walks, Curbs, and Gutters</p> | <p>1.4S</p> | <p>Measurement and Payment</p> | <p>Add new clause:</p> <ul style="list-style-type: none"> .10 Payment for monolithic curb, gutter and sidewalk, either hand formed or machine placed shall be paid on a lineal metre basis as measured along centerline between the gutter and the back of sidewalk. Base materials as shown on Supplemental Detail Drawing SC1 shall be paid under items in Sections 32 11 23 and 32 11 16.1, Granular Base and Granular Sub-base, respectively. |

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| <p>03 30 20 Concrete Walks, Curbs, and Gutters</p> | <p>2.1.5.1S (2009-11-19)*</p> | <p>Concrete Mixes and Materials</p> | <p>Change clause to read: Air Entrainment to read: 5 to 8%. Minimum cement content to read: 335 kg/m³</p> |
| <p>03 30 20 Concrete Walks, Curbs, and Gutters</p> | <p>2.1.5.2S</p> | <p>Concrete mixes and materials</p> | <p>Change clause to read: Air Entrainment to read: 5 to 8%. Change maximum aggregate size to read: 20 mm minus</p> |
| <p>03 30 20 Concrete Walks, Curbs, and Gutters</p> | <p>3.9.1S</p> | <p>Expansion Joints</p> | <p>Delete clause. Replace with: .1 Expansion joints shall be installed at all curb returns or driveway crossings in non-monolithic sidewalks every ninth panel. In addition, all sidewalks must be saw cut through entire thickness of concrete every third panel.</p> |
| <p>03 30 20 Concrete Walks, Curbs, and Gutters</p> | <p>3.12.3S</p> | <p>Finishing</p> | <p>Delete this clause. No grooves or scoring is permitted. All concrete surfaces shall be brush or broom finished.</p> |
| <p>26 42 13 Cathodic Protection</p> | <p>1.9.2S-.6S</p> | <p>Inspection and Testing</p> | <p>Delete clauses. Replace with: .2 Conduct electrical resistance measurements across each bonded fitting/appurtenance prior to application of the protective coating on the welds. .3 Test DC current between the anodes and the metal components at each test station. .4 Test pipe-to-soil potential between the watermain components or service laterals and a portable copper/copper sulphate reference electrode at all test stations. Readings must satisfy NACE International Standard RP-01-69 (latest edition).</p> |

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| | | | .5 Supply all necessary instrument, meters, equipment and qualified personnel to make tests at test stations and wiring required under 3.0 of this Section. .6 Cathodic protection measurements should be obtained and confirmed prior to any road paving. |
| 26 42 13 Cathodic Protection | 2.3.1S-.3S | Cables | Delete clauses. Replace with: .1 Single conductors to be stranded copper, type RWU75 XLPE insulated except as noted. .2 Size cables as follows: • Structure and test leads #10 AWG • Anode #10 AWG |
| 26 42 13 Cathodic Protection | 2.4.1S | Copper Sleeves | Delete clause. Replace with: .1 Copper sleeves for thermite welding #10 AWG cable to pipe/fittings to be CAB-133-1H. |
| 26 42 13 Cathodic Protection | 2.5.1S | Pipe Clamps | Delete clause. Replace with: .1 Pipe clamps to be Thomas & Betts (T&B) 3903 waterpipe ground clamp or approved equivalent. |
| 26 42 13 Cathodic Protection | 2.6.1S | Petrolatum Tape | Delete clause. Replace with: .1 Petrolatum tape to be Trenton #1 Wax Tape or Denso petrolatum tape. |
| 26 42 13 Cathodic Protection | 2.7.1S | Primer | Delete clause. Replace with: .1 Petrolatum tape primer to be Trenton Wax Tape primer or Denso paste. |

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| <p>26 42 13 Cathodic Protection</p> | <p>2.8.1S</p> | <p>Thermite Weld Caps</p> | <p>Delete clause. Replace with: .1 Thermite weld caps to be Royston Handy-Cap IP or approved equivalent.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--------------------------------|------------------------------|---|--------------|--------------------------------|----------|-------|------|-------|-----------|-----------|------|-------|--------|--------|--------|-------|-------|-------|-----------|---------|--------------|--------------------------------|------|------------|------|-----------|--------|-----------|
| <p>26 42 13 Cathodic Protection</p> | <p>2.8.1S</p> | <p>Test Station Terminal</p> | <p>Delete clause. Replace with: .1 Test station terminal to be Cott Manufacturing Big Fink with 0.1-ohm Holloway Shunt, as per Supplemental Detail Drawing SW111 or approved equivalent.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>26 42 13 Cathodic Protection</p> | <p>2.10.1S-.3S</p> | <p>Anodes</p> | <p>Delete clause. Replace with: .1 Use high-potential magnesium or high-purity zinc anodes with the following chemical composition.</p> <p align="center"><u>High-potential Magnesium</u></p> <table border="0"> <thead> <tr> <th align="left"><u>Metal</u></th> <th align="right"><u>Typical Composition (%)</u></th> </tr> </thead> <tbody> <tr> <td>Aluminum</td> <td align="right"><0.01</td> </tr> <tr> <td>Zinc</td> <td align="right"><0.05</td> </tr> <tr> <td>Manganese</td> <td align="right">0.5 – 1.3</td> </tr> <tr> <td>Iron</td> <td align="right"><0.03</td> </tr> <tr> <td>Nickel</td> <td align="right"><0.001</td> </tr> <tr> <td>Copper</td> <td align="right"><0.02</td> </tr> <tr> <td>Other</td> <td align="right"><0.05</td> </tr> <tr> <td>Magnesium</td> <td align="right">Balance</td> </tr> </tbody> </table> <p align="center"><u>High-purity Zinc</u></p> <table border="0"> <thead> <tr> <th align="left"><u>Metal</u></th> <th align="right"><u>Typical Composition (%)</u></th> </tr> </thead> <tbody> <tr> <td>Iron</td> <td align="right">0.0014 Max</td> </tr> <tr> <td>Lead</td> <td align="right">0.003 Max</td> </tr> <tr> <td>Copper</td> <td align="right">0.002 Max</td> </tr> </tbody> </table> | <u>Metal</u> | <u>Typical Composition (%)</u> | Aluminum | <0.01 | Zinc | <0.05 | Manganese | 0.5 – 1.3 | Iron | <0.03 | Nickel | <0.001 | Copper | <0.02 | Other | <0.05 | Magnesium | Balance | <u>Metal</u> | <u>Typical Composition (%)</u> | Iron | 0.0014 Max | Lead | 0.003 Max | Copper | 0.002 Max |
| <u>Metal</u> | <u>Typical Composition (%)</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | <0.01 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Zinc | <0.05 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manganese | 0.5 – 1.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Iron | <0.03 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nickel | <0.001 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Copper | <0.02 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Other | <0.05 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Magnesium | Balance | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <u>Metal</u> | <u>Typical Composition (%)</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Iron | 0.0014 Max | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lead | 0.003 Max | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Copper | 0.002 Max | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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| | | | <p>Cadmium 0.003 Max Aluminum 0.005 Max Zinc Balance</p> <p>.2 Package anodes in cardboard tubes with backfill composed of 75% gypsum, 20% bentonite, 5% sodium sulphate</p> <p>.3 Provide #10 AWG RWU insulated stranded copper cable with each anode. The cable length to be sized to reach the test station or the fitting as required.</p> |
| 26 42 13 Cathodic Protection | 3.1.1S-.2S | General | <p>Delete clauses.</p> <p>Replace with:</p> <p>.1 All piping, fittings, hydrants, specials, service connections (up to property line) to be cathodically protected where required except for piping and reinforcing steel in concrete chambers that is electrically isolated from the cathodically protected components.</p> <p>.2 Pipe bedding details, including granular surround (pipe cushion) and material specifications to be as shown on <i>Contract Drawings</i>, including Supplemental Detail Drawing SG4.</p> <p>.3 Damage to cable insulation should be avoided and repairs made if damage occurs.</p> <p>.4 No test station required for cathodically protected service laterals. Install monitoring wire inside of curb box as shown on Supplemental Detail Drawing SW15.</p> |
| 26 42 13 Cathodic Protection | 3.2.4S | Excavation, Trenching and Backfilling | <p>Delete clause.</p> <p>Replace with:</p> <p>.1 Cables to be backfilled with rock-free native material or bedding</p> |
| 26 42 13 Cathodic Protection | 3.2S | Excavation, Trenching and Backfilling | <p>Add new clause.</p> <p>.5 Place trench marker tape 300-mm above installed cables and conduits.</p> |

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| 26 42 13 Cathodic Protection | 3.3S | Pipe Electrical Isolation | Delete section. |
| 26 42 13 Cathodic Protection | 3.4S | Joint Continuity | Delete section. |
| 26 42 13 Cathodic Protection | 3.4S | Component Continuity | Add section. .1 Where necessary attach two #10 AWG bond cables across each isolated fitting, valve or pipe at each test station location as shown on Supplemental Detail Drawing SW107. |
| 26 42 13 Cathodic Protection | 3.5S | Cable Connections | Delete section. |
| 26 42 13 Cathodic Protection | 3.5S | Cable Connections to Steel, Ductile Iron and Cast Iron | Add section. .1 Thermite weld structure leads to the steel, ductile iron and cast iron watermain components as noted on Supplemental Detail Drawings SW111, SW107 and SW119. .2 The welder and weld charge to be sized appropriately for the size of cable and fitting/component type/thickness. .3 Thermite welds to be installed on clean, dry, bare components as per manufacturer's instructions and as shown on Supplemental Detail Drawing SW16. Thoroughly clean the surface to shiny metal using a file and metal brush or a grinder. .4 Strip the insulation for about 50-mm from the end of the cable being careful not to nick or otherwise damage the copper conductor. .5 Sleeve cables with copper sleeves and crimp the sleeves on the ends with a crimping tool. .6 After welding, remove the slag, wait for weld to cool, and apply weld cap to each weld as per the manufacturer's instructions. .7 Wrap cables around the fitting and fasten with a fibreglass reinforced packaging tape to the pipe to minimize strain on the thermite weld connections, as noted on Supplemental Detail Drawing SW107. |

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| 26 42 13 Cathodic Protection | 3.6S | Uncoated Fittings | Delete section. |
| 26 42 13 Cathodic Protection | 3.6S | Cable Connections to Copper Pipe | Add section. .1 Do not thermal weld onto copper pipe. Attach all cables to copper service laterals and standpipe copper pipe using a ground clamp. .2 Strip the insulation for about 50-mm from the end of the cable being careful not to nick or otherwise damage the copper conductor. .3 Crimp the structure leads under the ground clamp to the pipe and wrap cables around the pipe to prevent straining the cable connection as per Supplemental Detail Drawings SW15 and SW8. |
| 26 42 13 Cathodic Protection | 3.7.1S-.7S | Test Stations | Delete clauses. Replace with: .1 Locate test stations behind the curb face and/or sidewalk, or directly over the components as noted on the <i>Contract Drawings</i> . .2 Install test stations per Supplemental Detail Drawing sW104 and SW111. The cables to enter via a minimum 300-mm section of 75-mm RPVC, which supports the test station terminal. .3 All cables to be continuous from the watermain fittings/appurtenances and sacrificial anode to each test station without splicing. If splicing is required then use a heat shrink type connection. .4 Cables to have enough slack to allow terminal board removal to a minimum of 300-mm above valve box cover. .5 Place trench marker tape in trench excavations 300-mm above the structure and anode cables. .6 Test stations to be housed inside a traffic box as per Supplemental Detail Drawing SW111. |

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| <p>26 42 13</p> <p>Cathodic Protection</p> | <p>3.8.1S-.4S</p> | <p>Anode Installation</p> | <p>Delete clauses.</p> <p>Replace with:</p> <p>.1 Install anodes at all locations noted on the Drawings.</p> <p>.2 Install anodes horizontally at pipe depth a minimum of 1-m from the components to be protected as noted on Supplemental Detail Drawings SW119, SW15 and SW111.</p> <p>.3 Perforate the anodes cardboard tube liberally and thoroughly wet with a minimum of 10-litres of water immediately prior to backfilling.</p> <p>.4 Backfill around the anode with rock-free native material unless otherwise specified. Backfill material to surround the anode a minimum 300-mm and be firmly compacted</p> <p>.5 Anode lead wire must be securely connected to the anode. Lead wire should be inspected for assurance that it is not damaged.</p> <p>.6 Care should be exercised during all operations so that lead wires and connections are not damaged. Sufficient slack should exist in lead wires to avoid strain.</p> |
| <p>26 42 13</p> <p>Cathodic Protection</p> | <p>3.9S</p> | <p>Cable Extensions</p> | <p>Add section.</p> <p>.1 All cables requiring extension should be spliced using a waterproof heat shrink and double wrapped with CSA approved electrical tape.</p> |
| <p>26 56 01</p> <p>Roadway Lighting</p> | <p>1.4.1S</p> | <p>Electrical Energy Supply</p> | <p>Append to clause:</p> <p>.1 Energy supply shall be 120/240 volt.</p> |
| <p>26 56 01</p> <p>Roadway Lighting</p> | <p>1.6.2S</p> | <p>Permits and Tests</p> | <p>Append to clause:</p> <p>Forward Electrical Permits to City of Kamloops Electrical Department.</p> |
| <p>26 56 01</p> <p>Roadway Lighting</p> | <p>2.1.3S</p> | <p>Products General</p> | <p>Delete clause.</p> <p>Replace with:</p> <p>.3 The City of Kamloops requires that all electronic products incorporated into the <i>Work</i> must be recognized on the List of Approved</p> |

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| | | | Products and Materials. |
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| 26 56 01 Roadway Lighting | 2.4S | Plastic Junction Boxes | Delete section. |
| 26 56 01 Roadway Lighting | 2.7.5S | Poles and Anchor Bolts | Delete clause. Replace with: .5 Steel Decorative Poles: The City of Kamloops requires that all products incorporated into the <i>Work</i> must be recognized on the List of Approved Products and Materials. |
| 26 56 01 Roadway Lighting | 2.10.1.1S | Conductor Connectors | Append to clause: .1 The City of Kamloops requires that all products incorporated into the <i>Work</i> must be recognized on the List of Approved Products and Materials. |
| 26 56 01 Roadway Lighting | 2.14.1S | Luminaires | Delete clause. Replace with: .1 The City of Kamloops requires that all products incorporated into the <i>Work</i> must be recognized on the List of Approved Products and Materials. |
| 26 56 01 Roadway Lighting | 2.17S | Extruded Aluminum Signs | Delete section. Replace with: .1 Refer to New City of Kamloops Supplementary Specification, Section 34 41 15 S. |
| 26 56 01 Roadway Lighting | 2.19S | Service Panels | Add section. .1 Refer to Supplemental Detail Drawing SE7.6 |

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| 26 56 01 Roadway Lighting | 3.3.4S | Concrete Bases | Delete clause. Replace with: .4 Cast-in-place bases shall not be permitted. Round sonotube forms shall not be permitted. |
| 26 56 01 Roadway Lighting | 3.3S | Concrete Bases | Add new clause: .7 Bases for Lumec decorative poles shall be 1.2 m deep for post top type and 1.5 m deep for davit type. These bases shall come with 19 mm diameter x 686 mm long anchor bolts. The bolt circle diameter shall be 240 mm. These bases shall come with 2 x 30 mm conduits. |
| 26 56 01 Roadway Lighting | 3.3.1S | Concrete Bases | Delete clause. Replace with: .1 Install concrete bases in accordance with Section 03 30 53 – Cast-In-Place Concrete and as shown on Standard Detail Drawings CE1.8, CE1.9, CE1.13, SCE1.14 and Supplemental Detail Drawings SE1.1, SE1.2, SE1.4. |
| 26 56 01 Roadway Lighting | 3.4.1S | Junction Boxes and Vaults | Delete clause. Replace with: .1 Install junction boxes and vaults as shown on Standard Detail Drawings E2.2 to E2.6 |
| 26 56 01 Roadway Lighting | 3.6.1S | Poles and Related Equipment | Delete clause. Replace with: .1 Install poles and related equipment as shown on Supplemental Detail Drawings SE4.1, SE4.17 and SE4.18. |
| 26 56 01 Roadway Lighting | 3.7.2S | Electrical | Delete clause. Replace with: .2 Mount electrical service panels in service base or on poles as shown on Standard Detail |

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| | | | Drawings E7.2 to E7.4, E7.7, E7.8 and Supplemental Detail Drawing SE7.6. |
| 26 56 01 Roadway Lighting | 3.8.3S | Wiring | Delete clause. Replace with: .3 Make conductor splices in pole handholes. |
| 26 56 01 Roadway Lighting | 3.8.10S | Wiring | Delete clause. Replace with: .10 Completely cover multiple wire termination splice with Scotch 88 or 33. Completely cover 2 to 4 wire terminations with Scotch Kit DBR6. |
| 26 56 01 Roadway Lighting | 3.8.11S | Wiring | Delete clause. Replace with: .11 Bond all steel junction box lids and vault lids with a No.8 RW90 conductor. |
| 26 56 01 Roadway Lighting | 3.9.1S | Pole Mounted Receptacles | Append to clause: Receptacle to be 15A – 120V corrosion resistant duplex spec grade GFCI. |
| 26 56 01 Roadway Lighting | 3.10.2S | Luminaires and Photocells | Append to clause: Any required tilt angle shall be provided on design Drawing. Power supply shall be 120 volt. |
| 26 56 01 Roadway Lighting | 3.10S | Luminaires Fusing | Add new clause: .4 Luminaire fusing shall be 10 amp 600 volt. All luminaries shall have dropglass of Type II, III or V distribution. |
| 26 56 01 Roadway Lighting | 3.10S | Luminaires Ballast | Add new clause: .5 All luminaire ballast shall be constant wattage integral (CWI) 120/240. |

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| 26 56 01 Roadway Lighting | 3.11S | Grounding and Bonding | Add new clause: .5 Bond all power bases. | | | | | | | | | | | | | | | | | | |
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| 31 05 17 Aggregates and Granular Materials | 2.2S | Native Material | Add new clause: .2 For pipe bedding, "approved native material" shall meet the gradations of: a) Granular Pipe Bedding and Surround Material or; b) Pit Run Sand or; c) River Sand. | | | | | | | | | | | | | | | | | | |
| 31 05 17 Aggregates and Granular Materials | 2.7.2S | Granular Pipe Bedding and Surround Material | Delete clause: Replace with: 2.2 Refer to Section 31 05 17, new Clause 2.2.2 above. | | | | | | | | | | | | | | | | | | |
| 31 05 17 Aggregates and Granular Materials | 2.7S | Approved Native Material | Add new clause: .3 If not specified in the <i>Contract Documents</i> or on the <i>Contract Drawings</i> , the <i>Contractor</i> , at their expense, must supply material and gradation test information to the <i>Contract Administrator</i> for approval before using native material as pipe bedding and surround. | | | | | | | | | | | | | | | | | | |
| 31 05 17 Aggregates and Granular Materials | 2.10.1S | Granular Base | Delete clause: Replace with: <table border="0" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: center;"><u>Sieve Designation</u> (Wet sieving)</th> <th style="text-align: center;"><u>Percent Passing</u></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">25 mm</td> <td style="text-align: center;">100</td> </tr> <tr> <td style="text-align: center;">19 mm</td> <td style="text-align: center;">80-100</td> </tr> <tr> <td style="text-align: center;">9.5 mm</td> <td style="text-align: center;">50-90</td> </tr> <tr> <td style="text-align: center;">4.75 mm</td> <td style="text-align: center;">35-70</td> </tr> <tr> <td style="text-align: center;">2.36 mm</td> <td style="text-align: center;">25-50</td> </tr> <tr> <td style="text-align: center;">1.18 mm</td> <td style="text-align: center;">15-35</td> </tr> <tr> <td style="text-align: center;">0.30 mm</td> <td style="text-align: center;">5-20</td> </tr> <tr> <td style="text-align: center;">0.075 mm</td> <td style="text-align: center;">0-5</td> </tr> </tbody> </table> | <u>Sieve Designation</u> (Wet sieving) | <u>Percent Passing</u> | 25 mm | 100 | 19 mm | 80-100 | 9.5 mm | 50-90 | 4.75 mm | 35-70 | 2.36 mm | 25-50 | 1.18 mm | 15-35 | 0.30 mm | 5-20 | 0.075 mm | 0-5 |
| <u>Sieve Designation</u> (Wet sieving) | <u>Percent Passing</u> | | | | | | | | | | | | | | | | | | | | |
| 25 mm | 100 | | | | | | | | | | | | | | | | | | | | |
| 19 mm | 80-100 | | | | | | | | | | | | | | | | | | | | |
| 9.5 mm | 50-90 | | | | | | | | | | | | | | | | | | | | |
| 4.75 mm | 35-70 | | | | | | | | | | | | | | | | | | | | |
| 2.36 mm | 25-50 | | | | | | | | | | | | | | | | | | | | |
| 1.18 mm | 15-35 | | | | | | | | | | | | | | | | | | | | |
| 0.30 mm | 5-20 | | | | | | | | | | | | | | | | | | | | |
| 0.075 mm | 0-5 | | | | | | | | | | | | | | | | | | | | |

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| <p>31 05 17</p> <p>Aggregates and Granular Materials</p> | <p>2.11.1S</p> | <p>Recycled Aggregate Material</p> | <p>Delete sentence:</p> <p>"Recycled material should consist only of crushed Portland cement concrete; other construction and demolition materials such as asphaltic pavements, bricks, plaster, etc. are not acceptable."</p> <p>Replace sentence with:</p> <p>"Recycled material for granular base aggregate only should consist of crushed Portland cement concrete or asphaltic pavement; other construction and demolition materials such as bricks, plaster, etc. are not acceptable. Granular base aggregate may contain up to a maximum 20% by mass of recycled material."</p> | | | | | | | | | | | | | | | | | | | | | | |
|--|------------------------|--|--|---|------------------------|-------|-----|---------|--------|--------|-------|---------|-------|---------|-------|---------|-------|----------|-------|----------|-------|----------|------|----------|-----|
| <p>31 05 17</p> <p>Aggregates and Granular Materials</p> | <p>2.13S</p> | <p>Shoulder Aggregate</p> | <p>Add new clause:</p> <table border="0" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: center;"><u>Sieve Designation</u> (Wet sieving)</th> <th style="text-align: center;"><u>Percent Passing</u></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">19 mm</td> <td style="text-align: center;">100</td> </tr> <tr> <td style="text-align: center;">13.2 mm</td> <td style="text-align: center;">84-100</td> </tr> <tr> <td style="text-align: center;">9.5 mm</td> <td style="text-align: center;">73-90</td> </tr> <tr> <td style="text-align: center;">4.75 mm</td> <td style="text-align: center;">50-75</td> </tr> <tr> <td style="text-align: center;">2.36 mm</td> <td style="text-align: center;">35-57</td> </tr> <tr> <td style="text-align: center;">1.18 mm</td> <td style="text-align: center;">26-45</td> </tr> <tr> <td style="text-align: center;">0.600 mm</td> <td style="text-align: center;">18-34</td> </tr> <tr> <td style="text-align: center;">0.300 mm</td> <td style="text-align: center;">10-26</td> </tr> <tr> <td style="text-align: center;">0.150 mm</td> <td style="text-align: center;">5-17</td> </tr> <tr> <td style="text-align: center;">0.075 mm</td> <td style="text-align: center;">3-7</td> </tr> </tbody> </table> | <u>Sieve Designation</u> (Wet sieving) | <u>Percent Passing</u> | 19 mm | 100 | 13.2 mm | 84-100 | 9.5 mm | 73-90 | 4.75 mm | 50-75 | 2.36 mm | 35-57 | 1.18 mm | 26-45 | 0.600 mm | 18-34 | 0.300 mm | 10-26 | 0.150 mm | 5-17 | 0.075 mm | 3-7 |
| <u>Sieve Designation</u> (Wet sieving) | <u>Percent Passing</u> | | | | | | | | | | | | | | | | | | | | | | | | |
| 19 mm | 100 | | | | | | | | | | | | | | | | | | | | | | | | |
| 13.2 mm | 84-100 | | | | | | | | | | | | | | | | | | | | | | | | |
| 9.5 mm | 73-90 | | | | | | | | | | | | | | | | | | | | | | | | |
| 4.75 mm | 50-75 | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.36 mm | 35-57 | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.18 mm | 26-45 | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.600 mm | 18-34 | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.300 mm | 10-26 | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.150 mm | 5-17 | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.075 mm | 3-7 | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>31 11 01</p> <p>Clearing and Grubbing</p> | <p>1.3.2S</p> | <p>Protection of Existing Features</p> | <p>Delete clause:</p> | | | | | | | | | | | | | | | | | | | | | | |
| <p>31 11 41</p> <p>Shrub and Tree Preservation</p> | <p>1.2S</p> | <p>References</p> | <p>Add clause:</p> <p>.4 Trees and Development: A technical Guide to Preservation of trees during land development.</p> | | | | | | | | | | | | | | | | | | | | | | |

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| | | | |
|---|--------|-------------------------------------|---|
| 31 11 41 Shrub and Tree Preservation | 2.1.9S | Materials | Delete clause. |
| 31 11 41 Shrub and Tree Preservation | 3.1.6S | Existing Trees | Delete: Water retained trees 3 times during summer. Replace with: Water retained trees once every two weeks during May 1st to October 31st. |
| 31 11 41 Shrub and Tree Preservation | 3.2S | Raising Grade Around | Delete: Raising Grade Around Replace with: Raising Grade Around Existing Trees |
| 31 11 41 Shrub and Tree Preservation | 3.2.4S | Raising Grade Around Existing Trees | Delete: Protect bark of buried portion of tree from abrasion by surrounding trunk with asphalted felt. Replace with: Protect bark of buried portion of tree from abrasion by surrounding trunk with 100 mm plastic weeping tile. |
| 31 11 41 Shrub and Tree Preservation | 3.3.2S | Raising Grade Around Existing Trees | Delete: Seal cut edges 10 mm in diameter and larger with wound dressing. |
| 31 11 41 Shrub and Tree Preservation | 3.4.1S | Pruning | Delete clause: Replace with: Selectively remove only the diseased portions or dead branches within the canopy of the tree. |

| <p>31 22 01 <i>Site Grading</i></p> | <p>3.3.1S (2009-11-19)*</p> | <p>Tolerances</p> | <p>Delete clause: Replace with:</p> <p>TABLE 2: TOLERANCES FOR SUBGRADES WHERE GROWING MEDIUM (TOPSOIL) TO BE PLACED OVER SUBGRADE</p> <table border="1"> <thead> <tr> <th><u>Conditions</u></th> <th><u>Intended Growing Medium Depth</u></th> <th><u>Tolerance</u></th> </tr> </thead> <tbody> <tr> <td rowspan="3">Within 3 m from fixed elevations (e.g., paving edges, curbs, etc.)</td> <td>0 - 150 mm</td> <td>± 25 mm</td> </tr> <tr> <td>151 - 300 mm</td> <td>± 25 mm</td> </tr> <tr> <td>301 -600 mm</td> <td>± 50 mm</td> </tr> <tr> <td rowspan="3">Other areas</td> <td>0 - 150 mm</td> <td>± 25 mm</td> </tr> <tr> <td>151 - 300 mm</td> <td>± 50 mm</td> </tr> <tr> <td>301 -600 mm</td> <td>± 50 mm</td> </tr> </tbody> </table> | <u>Conditions</u> | <u>Intended Growing Medium Depth</u> | <u>Tolerance</u> | Within 3 m from fixed elevations (e.g., paving edges, curbs, etc.) | 0 - 150 mm | ± 25 mm | 151 - 300 mm | ± 25 mm | 301 -600 mm | ± 50 mm | Other areas | 0 - 150 mm | ± 25 mm | 151 - 300 mm | ± 50 mm | 301 -600 mm | ± 50 mm |
|--|--------------------------------------|----------------------------|---|-------------------|--------------------------------------|------------------|--|------------|---------|--------------|---------|-------------|---------|-------------|------------|---------|--------------|---------|-------------|---------|
| <u>Conditions</u> | <u>Intended Growing Medium Depth</u> | <u>Tolerance</u> | | | | | | | | | | | | | | | | | | |
| Within 3 m from fixed elevations (e.g., paving edges, curbs, etc.) | 0 - 150 mm | ± 25 mm | | | | | | | | | | | | | | | | | | |
| | 151 - 300 mm | ± 25 mm | | | | | | | | | | | | | | | | | | |
| | 301 -600 mm | ± 50 mm | | | | | | | | | | | | | | | | | | |
| Other areas | 0 - 150 mm | ± 25 mm | | | | | | | | | | | | | | | | | | |
| | 151 - 300 mm | ± 50 mm | | | | | | | | | | | | | | | | | | |
| | 301 -600 mm | ± 50 mm | | | | | | | | | | | | | | | | | | |
| <p>31 23 01 Excavating, Trenching and Backfilling</p> | <p>3.6.7.5S</p> | <p>Surface Restoration</p> | <p>Delete clause: Replace with</p> <p>Restore pavement as detailed on Supplemental Detail Drawing SG5.</p> <ol style="list-style-type: none"> .1 All asphalt shall be saw cut 500 mm wider and longer than the surface dimensions of the actual trench excavation. This saw cut must extend cleanly through the existing asphalt to the base material prior to asphalt removal. .2 If the average thickness of the existing asphalt is greater than 100 mm, and is competent and stable, grind it to a depth of 40 mm and a width of 200 mm along the saw cut edge. This can be done just prior to the final asphalt restoration. .3 Where the edge of the saw cut or milled asphalt, whichever is wider, extends into the travel lane, it should be extended to the midpoint of that line. Where the edge extends | | | | | | | | | | | | | | | | | |

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| | | | <p>past the midpoint of the travel lane, it should be extended to the far edge of that travel lane.</p> <p>.4 Where the edge of the saw cut or milled asphalt, whichever is wider, is less than 1.5 m from the lip of gutter edge of paved shoulder, it should be extended to the lip of gutter or edge of paved shoulder.</p> <p>.5 When an area of existing asphalt between two transverse trenches is less than one third (1/3) of the total area of the proposed paving of the two trenches plus the area between them (based on the shortest trench), the existing asphalt shall be removed and the area paved in conjunction with the paving of the two trenches.</p> <p>.6 Regardless of 3.6.7.5.5, if the longitudinal distance between two trenches is less than three 3 m it shall be removed and the area paved in conjunction with the paving of the two trenches</p> <p>.7 Longitudinal trenches must be paved with a paving machine.</p> <p>.8 Hot-mix paving shall meet the thickness of the existing pavement or that shown on the Drawings. If the thickness of the hot-mix paving is 75 mm or less, it shall be placed in one lift. If the thickness of the hot-mix paving is greater than 75 mm it shall be placed in two lifts.</p> <p>.9 Vertical faces and the surface of the lower course of asphalt must be painted with bituminous material prior to hot mix paving.</p> | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|-------------------------------------|---------------------------|---|----------------------|----------------|-------------------|--|--|---------------------|---------------------|------------------|-------------------|----------------------|---|-----|--------------|--|--|----|----|----|--|--|-----|---|---------------------------|--|--|
| <p>31 37 10 Riprap</p> | <p>2.1.1.1.1 S(2009-11-19)*</p> | <p>Riprap</p> | <p>Delete table:</p> <p>Replace with:</p> <table border="0"> <thead> <tr> <th><u>Percent</u></th> <th><u>Percent</u></th> <th colspan="3"><u>Equivalent</u></th> </tr> <tr> <th><u>Heavier Than</u></th> <th><u>Lighter Than</u></th> <th><u>Mass (kg)</u></th> <th><u>Weight (N)</u></th> <th><u>Diameter (mm)</u></th> </tr> </thead> <tbody> <tr> <td align="center">0</td> <td align="center">100</td> <td align="center" colspan="3">As specified</td> </tr> <tr> <td align="center">50</td> <td align="center">50</td> <td align="center" colspan="3">in</td> </tr> <tr> <td align="center">100</td> <td align="center">0</td> <td align="center" colspan="3"><i>Contract Documents</i></td> </tr> </tbody> </table> | <u>Percent</u> | <u>Percent</u> | <u>Equivalent</u> | | | <u>Heavier Than</u> | <u>Lighter Than</u> | <u>Mass (kg)</u> | <u>Weight (N)</u> | <u>Diameter (mm)</u> | 0 | 100 | As specified | | | 50 | 50 | in | | | 100 | 0 | <i>Contract Documents</i> | | |
| <u>Percent</u> | <u>Percent</u> | <u>Equivalent</u> | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <u>Heavier Than</u> | <u>Lighter Than</u> | <u>Mass (kg)</u> | <u>Weight (N)</u> | <u>Diameter (mm)</u> | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 100 | As specified | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 50 | 50 | in | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 100 | 0 | <i>Contract Documents</i> | | | | | | | | | | | | | | | | | | | | | | | | | | |

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| 32 12 13.2 Asphalt Prime | | | Delete the entire Section as the City of Kamloops does not apply a prime coat. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---------------|----------------------------|---|-------------------|---------------|---------------|-------------|-------------|--|------------|------------|------------|------------|--------|-----|--|--|--|-------|--------|--|--|--|--------|-------|-----|--|--|--------|-------|-------|-----|--|--------|-------|-------|--------|-----|--------|-------|-------|-------|--------|--------|-------|-------|-------|-------|--------|-------|-------|-------|-------|--------|------|-------|-------|-------|--------|------|-------|-------|-------|--------|------|------|------|------|---------|-----|-----|------|------|
| 32 12 16 Hot-mix Asphalt Concrete Paving | 1.5.2S | Measurement and Payment | Delete clause and sub-clauses: Replace with: .1 Refer to new Sub-section 4.0 Testing Frequency and Procedures and Sub-section 5.0 Payment Adjustment for Noncompliance. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 32 12 16 Hot-mix Asphalt Concrete Paving | 2.1.1S | Materials | Delete clause. Replace with: .1 Asphalt cement shall be 80-100 Group "A", or 85-100 for all roads. 120-150 Group "A" asphalt cement may be used, with approved special mix designs, on residential roads and lanes. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 32 12 16 Hot-mix Asphalt Concrete Paving | 2.1.3.2S | Aggregates | Change table to read as follows: <table border="0" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"><u>Sieve size</u></th> <th style="text-align: center;"><u>Coarse</u></th> <th style="text-align: center;"><u>Medium</u></th> <th style="text-align: center;"><u>Fine</u></th> <th style="text-align: center;"><u>Sand</u></th> </tr> <tr> <th></th> <th style="text-align: center;"><u>Mix</u></th> <th style="text-align: center;"><u>Mix</u></th> <th style="text-align: center;"><u>Mix</u></th> <th style="text-align: center;"><u>Mix</u></th> </tr> </thead> <tbody> <tr> <td>37.5mm</td> <td style="text-align: center;">100</td> <td></td> <td></td> <td></td> </tr> <tr> <td>25 mm</td> <td style="text-align: center;">80-100</td> <td></td> <td></td> <td></td> </tr> <tr> <td>19.5mm</td> <td style="text-align: center;">60-92</td> <td style="text-align: center;">100</td> <td></td> <td></td> </tr> <tr> <td>12.5mm</td> <td style="text-align: center;">50-85</td> <td style="text-align: center;">84-95</td> <td style="text-align: center;">100</td> <td></td> </tr> <tr> <td>9.5 mm</td> <td style="text-align: center;">40-80</td> <td style="text-align: center;">73-90</td> <td style="text-align: center;">90-100</td> <td style="text-align: center;">100</td> </tr> <tr> <td>4.75mm</td> <td style="text-align: center;">30-65</td> <td style="text-align: center;">50-75</td> <td style="text-align: center;">55-80</td> <td style="text-align: center;">80-100</td> </tr> <tr> <td>2.36mm</td> <td style="text-align: center;">20-50</td> <td style="text-align: center;">35-57</td> <td style="text-align: center;">32-64</td> <td style="text-align: center;">67-94</td> </tr> <tr> <td>1.18mm</td> <td style="text-align: center;">15-35</td> <td style="text-align: center;">26-45</td> <td style="text-align: center;">24-51</td> <td style="text-align: center;">56-88</td> </tr> <tr> <td>0.60mm</td> <td style="text-align: center;">8-30</td> <td style="text-align: center;">18-34</td> <td style="text-align: center;">17-40</td> <td style="text-align: center;">40-78</td> </tr> <tr> <td>0.30mm</td> <td style="text-align: center;">6-22</td> <td style="text-align: center;">10-26</td> <td style="text-align: center;">13-29</td> <td style="text-align: center;">22-57</td> </tr> <tr> <td>0.15mm</td> <td style="text-align: center;">3-15</td> <td style="text-align: center;">6-17</td> <td style="text-align: center;">7-18</td> <td style="text-align: center;">8-35</td> </tr> <tr> <td>0.075mm</td> <td style="text-align: center;">1-7</td> <td style="text-align: center;">3-7</td> <td style="text-align: center;">4-10</td> <td style="text-align: center;">5-14</td> </tr> </tbody> </table> | <u>Sieve size</u> | <u>Coarse</u> | <u>Medium</u> | <u>Fine</u> | <u>Sand</u> | | <u>Mix</u> | <u>Mix</u> | <u>Mix</u> | <u>Mix</u> | 37.5mm | 100 | | | | 25 mm | 80-100 | | | | 19.5mm | 60-92 | 100 | | | 12.5mm | 50-85 | 84-95 | 100 | | 9.5 mm | 40-80 | 73-90 | 90-100 | 100 | 4.75mm | 30-65 | 50-75 | 55-80 | 80-100 | 2.36mm | 20-50 | 35-57 | 32-64 | 67-94 | 1.18mm | 15-35 | 26-45 | 24-51 | 56-88 | 0.60mm | 8-30 | 18-34 | 17-40 | 40-78 | 0.30mm | 6-22 | 10-26 | 13-29 | 22-57 | 0.15mm | 3-15 | 6-17 | 7-18 | 8-35 | 0.075mm | 1-7 | 3-7 | 4-10 | 5-14 |
| <u>Sieve size</u> | <u>Coarse</u> | <u>Medium</u> | <u>Fine</u> | <u>Sand</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <u>Mix</u> | <u>Mix</u> | <u>Mix</u> | <u>Mix</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 37.5mm | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 25 mm | 80-100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19.5mm | 60-92 | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12.5mm | 50-85 | 84-95 | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9.5 mm | 40-80 | 73-90 | 90-100 | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4.75mm | 30-65 | 50-75 | 55-80 | 80-100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.36mm | 20-50 | 35-57 | 32-64 | 67-94 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.18mm | 15-35 | 26-45 | 24-51 | 56-88 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.60mm | 8-30 | 18-34 | 17-40 | 40-78 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.30mm | 6-22 | 10-26 | 13-29 | 22-57 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.15mm | 3-15 | 6-17 | 7-18 | 8-35 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.075mm | 1-7 | 3-7 | 4-10 | 5-14 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 32 12 16 Hot-mix Asphalt | 2.1.3.12S | Aggregates | Delete first paragraph. Replace with: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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| Concrete Paving | | | <p>Crushed fragments: at least 85% of particles retained on sieves from 4.75 mm and larger shall have at least two freshly fractured faces. Material shall be tested in accordance with ASTM C136 and ASTM C117.</p> <p>Remainder of 2.1.3.12 shall remain unchanged.</p> |
| 32 12 16 Hot-mix Asphalt Concrete Paving | 2.2.2S | Mix Design | <p>Delete clause.</p> <p>Replace with:</p> <p>.2 On roads classified as "Locals", asphalt mix may contain up to a maximum 20% by mass of R.A.P. without a change in the mix design, provided all other specifications are being met. <i>Contract Administrator</i> may approve a higher proportion of R.A.P. if the <i>Contractor</i> demonstrates the ability to meet the specifications.</p> |
| 32 12 16 Hot-mix Asphalt Concrete Paving | 2.2.4S | Mix Design | <p>Add Clause:</p> <p>Adjustments to job mix formula:</p> <p>.1 After the production job mix formula has been established in accordance with 2.2.1, no field adjustment to that job mix formula will be permitted without prior written authorization by the <i>Contract Administrator</i>.</p> <p>.2 Any request for a field adjustment shall be in writing together with supporting documentation to the <i>Contract Administrator</i>. Within four hours of receipt of the proposed field adjustments, the <i>Contract Administrator</i> will review and notify the <i>Contractor</i> if the adjustment is acceptable. Acceptance of the field adjustment by the <i>Contract Administrator</i> does not negate the responsibility of the <i>Contractor</i> to maintain the acceptable parameters of the other Marshall Properties including but not limited to; Stability, Flow Value, Air Voids, VMA and Retained Stability.</p> <p>.3 The <i>Contract Administrator</i> will limit the number of field adjustments to the laboratory prepared job mix formula to two and maximum one per lot.</p> <p>.4 No field adjustment will be acceptable if it</p> |

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| | | | <p>results in a change from the job mix formula, for any property, in excess of the maximum adjustment for that property permitted in the following table:</p> <table border="0"> <thead> <tr> <th align="left"><u>Job Mix Formula Property</u></th> <th align="right"><u>Max Field Adjustment</u></th> </tr> </thead> <tbody> <tr> <td colspan="2">Percentage Passing by Sieve Size (mm):</td> </tr> <tr> <td>25, 19</td> <td align="right">+/- 2.0%</td> </tr> <tr> <td>12.5 and 9.5</td> <td align="right">+/- 2.0%</td> </tr> <tr> <td>4.75 and 2.36</td> <td align="right">+/- 1.5%</td> </tr> <tr> <td>1.18 and .6</td> <td align="right">+/- 1.5%</td> </tr> <tr> <td>.3 and .15</td> <td align="right">+/- 1.5%</td> </tr> <tr> <td>0.075</td> <td align="right">+/- 0.5%</td> </tr> <tr> <td>Asphalt Cement content</td> <td align="right">+/- 0.2%</td> </tr> </tbody> </table> <p>.5 Ignition Oven Calibration</p> <p>.1 Within five <i>Days</i> after the <i>Contractor</i> has received acceptance of the job mix formula from the <i>Contract Administrator</i>, the <i>Contractor</i> must prepare five blank aggregate samples and sufficient oil to allow for the testing firm/City laboratory staff to calibrate their ignition oven.</p> <p>.2 If the job mix formula does not change for a period of 4 months or greater, the <i>Contract Administrator</i> may require addition blanks to be provided. No additional payment shall be provided for production of these extra blanks.</p> | <u>Job Mix Formula Property</u> | <u>Max Field Adjustment</u> | Percentage Passing by Sieve Size (mm): | | 25, 19 | +/- 2.0% | 12.5 and 9.5 | +/- 2.0% | 4.75 and 2.36 | +/- 1.5% | 1.18 and .6 | +/- 1.5% | .3 and .15 | +/- 1.5% | 0.075 | +/- 0.5% | Asphalt Cement content | +/- 0.2% |
|--|-----------------------------|----------------|---|---------------------------------|-----------------------------|--|--|--------|----------|--------------|----------|---------------|----------|-------------|----------|------------|----------|-------|----------|------------------------|----------|
| <u>Job Mix Formula Property</u> | <u>Max Field Adjustment</u> | | | | | | | | | | | | | | | | | | | | |
| Percentage Passing by Sieve Size (mm): | | | | | | | | | | | | | | | | | | | | | |
| 25, 19 | +/- 2.0% | | | | | | | | | | | | | | | | | | | | |
| 12.5 and 9.5 | +/- 2.0% | | | | | | | | | | | | | | | | | | | | |
| 4.75 and 2.36 | +/- 1.5% | | | | | | | | | | | | | | | | | | | | |
| 1.18 and .6 | +/- 1.5% | | | | | | | | | | | | | | | | | | | | |
| .3 and .15 | +/- 1.5% | | | | | | | | | | | | | | | | | | | | |
| 0.075 | +/- 0.5% | | | | | | | | | | | | | | | | | | | | |
| Asphalt Cement content | +/- 0.2% | | | | | | | | | | | | | | | | | | | | |
| <p>32 12 16</p> <p>Hot-mix Asphalt Concrete Paving</p> | <p>3.5.4.1S</p> | <p>Placing</p> | <p>Delete clauses .1 and .2</p> <p>Replace with:</p> <p>.1 Levelling course(s) and lower course in layers not exceeding 75 mm each.</p> | | | | | | | | | | | | | | | | | | |

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| <p>32 12 16</p> <p>Hot-mix Asphalt Concrete Paving</p> | <p>3.5.4.2S</p> | <p>Placing</p> | <p>Delete clauses .2 - .3</p> <p>Replace with:</p> <p>.2 Surface and lower course in layers not exceeding 75 mm each, and a minimum of 40 mm.</p> |
| <p>32 12 16</p> <p>Hot-Mix Asphalt Concrete Paving</p> | <p>4.0S</p> | <p>Testing Frequency and Procedures</p> | <p>Add new sub-section.</p> <p>.1 Unless otherwise specified in the <i>Contract Documents</i>, the following definitions shall apply:</p> <p>.1 Lot</p> <p>.1 For the purposes of this Section, a Lot shall be defined as one days scheduled production of at least 100 tones where no changes have occurred, for each individual project.</p> <p>.2 Where one days production is less than 100 tones the material will be added to the next Lot that has the same criteria as described above, except that:</p> <ul style="list-style-type: none"> • If the test indicates that this production is subject to a payment adjustment or to rejection, it shall be designated as a separate lot and additional testing may be directed by the <i>Contract Administrator</i> to ensure sufficient test results are available. • If no further material will be produced with the same criteria, this production will be added to the previous day's production as an additional sub-lot. • If there is no previous or subsequent lot, testing shall be at the |

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| | | | <p align="right">discretion of the <i>Contract Administrator</i>.</p> <p>.3 A Lot shall be no more than 2 days total production even if the above criteria have not been changed or met.</p> <p>.2 Sub-Lot</p> <p>.1 A Lot shall be divided in to 3 equal sub-lots defined by lineal meters of production.</p> <p>.2 In accordance with section 4.0.1.1.2 a Lot may be divided in to as many as 5 sub-lots.</p> <p>.2 Special testing will be undertaken by a third party testing firm, agreed on by both parties.</p> |
| <p>32 12 16</p> <p>Hot-Mix Asphalt Concrete Paving</p> | <p>4.1S</p> | <p>Aggregate Gradation and Asphalt Cement Content</p> | <p>Add new clause:</p> <p>.1 A Marshall analysis shall be performed per sub-lot by both parties or at the <i>Contract Administrator's</i> discretion.</p> <p>.2 Asphalt content shall be determined in accordance with ASTM D2172 or D6307. Gradation analysis of extracted aggregate shall be performed in accordance with ASTM C136 and C117.</p> <p>.3 Additional loose samples (<i>Dispute</i> bags) for special testing will be taken concurrently with <i>Quality Assurance</i> sampling by the <i>Contract Administrator</i> and will only be tested by a third party in the case of adjudication of results from <i>Quality Control</i> and <i>Quality Assurance</i> test results. These samples shall be delivered and stored at the City of Kamloops Laboratory at 955 Concordia Way.</p> <p>.4 The <i>Contractor</i> shall, prior to requesting payment in accordance with GC 18.1.1S, provide all <i>Quality Control</i> testing results to the <i>Contract Administrator</i>.</p> <p>.5 When analyses identifies non-conformance with specified properties, the <i>Contractor</i> must immediately initiate remedial measures, and submit, at its expense, evidence that compliance exists with the approved mix design. Failure to do so will result in suspension of plant mixing operations.</p> <p>.6 The asphalt content of the asphalt mix will be determined using the average of the sub-lot results. The actual asphalt cement content</p> |

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| | | | <p>will be compared to the approved mix design asphalt cement content and the deviation will be used for payment adjustment.</p> <p>.7 If the asphalt cement content is within the remove and replace criteria, the area is rejected automatically regardless of the values of other acceptance parameters.</p> <p>.8 When the average of the sub-lot aggregate analyses fail to comply with tolerances set forth in 3.1.4 of the specification, the <i>Contractor</i> will suspend production and shall not commence construction again until it has demonstrated that corrective action has been taken and that the aggregate gradation is within the specified tolerance limits</p> |
| 32 12 16 Hot-Mix Asphalt Concrete Paving | 4.2S | Thickness | <p>Add new clause:</p> <p>.1 Cores shall be taken at a minimum of one per sub-lot, unless specified otherwise by <i>Contract Administrator</i>.</p> <p>.2 If the deficiency of any individual core exceeds 10mm, the <i>Contractor</i> shall have the opportunity to pay for the cost of extracting and sampling, by the <i>Contract Administrator</i>, additional cores on either side of the failed core (location to be generally agreed upon by the <i>Contract Administrator</i> and the <i>Contractor</i>) to minimize the area for removal and replacement, provided the area being re-cored will be included in the new removal limits.</p> <p>.3 Sampling and testing for thickness determination shall be in accordance with ASTM D3549.</p> |
| 32 12 16 Hot-Mix Asphalt Concrete Paving | 4.3S | Density | <p>Add new clause:</p> <p>.1 Cores shall be taken at a minimum of one per sub-lot, unless specified otherwise by <i>Contract Administrator</i>.</p> <p>.2 The <i>Contract Administrator</i> shall notify the <i>Contractor</i> and the <i>Owner</i> 24 hours prior to core extraction to allow the <i>Contractor</i> and <i>Owner</i> the opportunity to be present.</p> <p>.3 The average of the three cores shall be used to determine the density of the Lot provided no individual core is less than 95%.</p> <p>.4 In the event that the three core average is</p> |

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| | | | <p>below 97%, but none fall below 95%, the <i>Contractor</i> shall have ONE opportunity to pay for the cost of extracting and sampling, by the <i>Contract Administrator</i>, additional cores on either side of the failed core (location to be agreed upon by the <i>Contract Administrator</i> and the <i>Contractor</i>) to minimize the area for payment adjustment.</p> <p>.5 In the event that the three core average exceeds 97%, but at least one core falls below 95%, the <i>Contractor</i> shall have the opportunity to pay for the cost of extracting and sampling, by the <i>Contract Administrator</i>, additional cores on either side of the failed core (location to be generally agreed upon by the <i>Contract Administrator</i> and the <i>Contractor</i>) to minimize the area for removal and replacement, provided the area being re-cored will be included in the new removal limits.</p> |
| 32 12 16 Hot-mix Asphalt Concrete Paving | 5.0S | Payment Adjustment for Noncompliance | Add new subsection. |
| 32 12 16 Hot-Mix Asphalt Concrete Paving | 5.1S | Aggregate Gradation | Add new clause: .1 Non-compliance shall be subject to removal and replacement of the Lot at the discretion of the <i>Contract Administrator</i> . |
| 32 12 16 Hot-Mix Asphalt Concrete Paving | 5.2S | Asphalt Cement | Add new clause: .1 Payment adjustment for noncompliance with the tolerance specified: |

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| | | | <p><u>Asphalt Content</u> <u>Payment Adjustment</u> <u>Deviation from Design %</u> <u>Factor</u></p> <p>+ 0.50 or Greater Remove and Replace + 0.41 to 0.50 0.25 + 0.31 to 0.40 0.10 + 0.30 or Less 0.00</p> <p align="center">DESIGN %</p> <p>- 0.30 or Less 0.00 - 0.31 to 0.40 0.20 - 0.41 to 0.50 0.50 - 0.50 or Greater Remove and Replace</p> <p>.2 Adjustment for asphalt cement content non-compliance to the amount payable for Hot Mix Asphalt Paving equals the unit bid price times the payment adjustment factor times the quantity to which the factor is to be applied, i.e.:</p> <p align="center">$A_c = P(F_c)(Q_n)$</p> <p>where:</p> <p>A_c = Adjustment for asphalt cement content compliance. P = Unit Bid Price. F_c = Payment Adjustment Factor for Asphalt Cement Content noncompliance. Q_n = Asphalt measured for payment per Lot.</p> |
| 32 12 16 Hot-Mix Asphalt Concrete Paving | 5.3S | Pavement Thickness | <p>Add new clause:</p> <p>.1 Pavement of any type found to be deficient in thickness by more than 10mm must be removed and replaced by pavement, of specified thickness, at the <i>Contractor's</i> expense. .2 No payment will be made for additional thickness.</p> |
| 32 12 16 Hot-Mix Asphalt Concrete Paving | 5.4S | Density | <p>Add new clause:</p> <p>.1 The minimum specified density for acceptance, without payment adjustment, must be 97% of the 75 blow Marshall Density as determined by the <i>Quality Assurance</i> results. .2 Payment adjustment for density non-compliance will be as follows:</p> |

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| | | | <u>Density (% of 75 Blow Marshall)</u> | <u>Payment Adjustment Factor</u> |
|--|--|--|--|--|
| | | | 97 and greater | 0.0 |
| | | | 96.9 | 0.01 |
| | | | 96.8 | 0.03 |
| | | | 96.7 | 0.05 |
| | | | 96.6 | 0.07 |
| | | | 96.5 | 0.09 |
| | | | 96.4 | 0.11 |
| | | | 96.3 | 0.13 |
| | | | 96.2 | 0.15 |
| | | | 96.1 | 0.17 |
| | | | 96.0 | 0.19 |
| | | | 95.9 | 0.23 |
| | | | 95.8 | 0.26 |
| | | | 95.7 | 0.29 |
| | | | 95.6 | 0.32 |
| | | | 95.5 | 0.35 |
| | | | 95.4 | 0.38 |
| | | | 95.3 | 0.41 |
| | | | 95.2 | 0.44 |
| | | | 95.1 | 0.47 |
| | | | 95.0 | 0.50 |
| | | | Less than 95.0 | No Payment (subject to removal and replacement after review by the <i>Contract Administrator</i>) |
| | | | .3 | Adjustment for density specification non-compliance shall be determined as follows: |
| | | | | $AD = P(FD)(QnD)$ |
| | | | | where: |
| | | | | AD = Adjustment for density noncompliance. |
| | | | | P = Unit Bid Price. |
| | | | | FD = Payment Adjustment Factor for density noncompliance. |
| | | | | QnD = Asphalt measured for payment within a unit of test area as defined in 4.3. |

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| <p>32 12 16</p> <p>Hot-Mix Asphalt Concrete Paving</p> | <p>5.5S</p> | <p>Adjusted Payments</p> | <p>Add new clause:</p> <p>.1 The total adjustment arising from pavement deficiencies identified in the foregoing shall be determined as follows:</p> <p align="center">$Ar = Ac + At + AD$</p> <p>where:</p> <p>Ar = Total Adjustment. Ac = Adjustment for asphalt cement content noncompliance. At = Adjustment for thickness deficiency. AD = Adjustment for density noncompliance.</p> <p>The total adjustment (Ar) shall be paid to the City of Kamloops.</p> <p>.2 In the event that the <i>Owner</i> is not privy to the unit rate for the asphalt <i>Work</i>, the <i>Contract Administrator</i> shall determine an estimated rate based on factors such as current market pricing, scope of project etc.</p> |
| <p>32 17 23</p> <p>Painted Pavement Markings</p> | <p>2.1.3S</p> | <p>Materials</p> | <p>Delete clause.</p> <p>Replace with:</p> <p>.3 Paint</p> <p>.1 May 1st through Oct 14th paint must be water bourne complying with Can/CGSB-1.219-2001 including the most recent amendments, max VOC 150g/L.</p> <p>Oct 15th through April 30th alkyd traffic paint may be used complying with Can/CGSB-1.220-2001 including the most recent amendments, max VOC 450g/L.</p> <p>.2 Colour: Yellow to Federal #33538, black 512-301, white 513-301.</p> <p>.3 All paint shall be to British Columbia Ministry of Transportation approved</p> |

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| | | | mix design. |
| 32 17 23 Painted Pavement Markings | 2.1.4S | Materials | Delete clause. Replace with: .4 Thinner: to Can/CGSB-1.5 |
| 32 17 23 Painted Pavement Markings | 2.1.5.1S | Glass beads | Delete clause. Replace with: .5 Glass beads: overlay type to AASHTO PER SQUARE METRE 47, Type I, double coated. .6 Glass beads shall be to British Columbia Ministry of Transportation approved specifications. |
| 32 17 23 Painted Pavement Markings | 2.1.7S (2009-11-19)* | Materials | Delete clause. Replace with: Thermoplastic material. .1 Material composition shall be at the discretion of the manufacturer subject to the approval of the <i>Contract Administrator</i> . Each formulation shall be identified by a code number .2 No retained water when tested by ASTM D-570 .3 Specific gravity of the supplied product shall be within 3% of that specified for the selected formulation. .4 Material shall not deteriorate upon contact with de-icing chemicals, gasoline, diesel fuel or grease dropped by traffic. .5 Material shall not break down, deteriorate, scorch or discolour, if held within the application temperature range specified by the manufacturer for a period of four hours and it must be able to be reheated from room temperature to the application temperature four (4) times without showing any of these detrimental effects. .6 When applied at the temperature recommended by the manufacturer and at a film thickness of 2 to 4mm, the material shall set solid and show no tracking under |

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| | | | <p>traffic after elapsed times as follows:</p> <ul style="list-style-type: none"> .1 Two (2) minutes at an air temperature of 10 degrees C, relative humidity less than 75%, and road surface temperature from 10 degrees C to 20 degrees C. .2 Five (5) minutes at an air temperature of 32 degrees C, relative humidity less than 75%, and road surface temperature from 35 degrees C to 50 degrees C. .3 The drying time under conditions intermediate between the two air temperatures shall be interpolated using a straight line model. .7 The quantity, type, and gradation of the component reflecting glass spheres premixed in the thermoplastic material shall be at the discretion of the manufacturer, but shall provide retro-reflection levels specified below. |
| 32 17 23 Painted Pavement Markings | 3.1.3S | Equipment Requirements | <p>Add new clause:</p> <ul style="list-style-type: none"> .3 <i>Contract Administrator</i> may approve alternate painting equipment. |
| 32 17 23 Painted Pavement Markings | 3.2.1S | Condition of Surfaces | <p>Add new clause:</p> <ul style="list-style-type: none"> .1 Ensure pavement and atmospheric conditions comply with paint manufacturer's recommendations. |
| 32 17 23 Painted Pavement Markings | 3.3.2.3S | Painted Markings | <p>Delete clause.</p> <p>Replace with:</p> <ul style="list-style-type: none"> .3 Paint application rate to comply with manufacturer's recommendation. |

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| <p>32 17 23</p> <p>Painted Pavement Markings</p> | <p>3.3.2.8S</p> | <p>Painted Markings</p> | <p>Delete clause.</p> <p>Replace with:</p> <p>.8 Glass beads: apply at a rate of 600g per litre of paint.</p> |
| <p>32 17 23</p> <p>Painted Pavement Markings</p> | <p>3.4.1S</p> | <p>Tolerance</p> | <p>Delete clause.</p> <p>Replace with:</p> <p>.1 Ensure painted markings are within plus or minus 10mm of specified dimensions.</p> |
| <p>32 31 13</p> <p>Chain Link Fences and Gates</p> | <p>3.3S; 3.4S; 3.5S (2009-11-19)*</p> | | <p>Append to section:</p> <p>3.3 Installation of Gates .1 Install gates in locations as shown on <i>Contract Drawings</i>.</p> <p>.2 Level contours between gate posts and set gate bottom approximately 40 mm above ground surface.</p> <p>.3 Determine position of centre gate rest for double gate. Cast gate rest in concrete as directed. Dome concrete above ground level to shed water.</p> <p>.4 Install gate stops where specified.</p> <p>3.4 Touch up .1 Clean damaged surfaces with wire brush removing loose and cracked coatings. Apply two coats of organic zinc-rich paint to damaged areas. Pre-treat damaged surfaces according to manufacturer's instructions for zinc-rich paint.</p> <p>3.5 Cleaning .1 Clean and trim areas disturbed by</p> |

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| | | | operations. Dispose of surplus material as specified in <i>Contract Documents</i> . |
| 32 92 19 Hydraulic Seeding | 2.1.2S | Grass Seed | Append to clause: Dryland seed mixture for nonwatered areas shall be proportioned as follows: 20% Hard Fescue, 10% Creeping Red Fescue, 10% Annual Rye, 10% Alfalfa, 50% Crested Wheat Grass. |
| 32 92 19 Hydraulic Seeding | 3.2.1S | Seeding General | Delete clause. Replace with: .1 Scheduling: carry out seeding during the fall or spring period. Seed only during calm weather and on soil that is free of frost, snow and standing water to ensure successful germination and continued growth of all varieties of seed in grass mix. |
| 32 92 19 Hydraulic Seeding | 3.2.2S | Seeding General | Delete clause. Replace with: .2 Rates of Application: .1 Fertilizer – use a slow release at 1632 or <i>Approved Equal</i> at 15.0 kg/1,000 per square metre. .2 Mulch – 160 kg/1,000 per square metre, minimum. .3 Tackifier – 25 kg/1,000 per square metre, minimum. .4 Seed – 100 kg/1,000 per square metre, minimum. |
| 32 92 20 Seeding | 2.1.2S | Grass Seed | Append to clause: Dryland seed mixture for watered areas shall be proportioned as follows: 25% Crested Wheat Grass, 25% Western Wheat Grass, 25% Hard Fescue, and 25% Ryegrass. Dryland seed mixture for non-watered areas shall be as per mix for Supplementary Specification 32 92 19 Hydraulic Seeding, 2.1.2. |

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| <p>32 92 23 Sodding</p> | <p>3.1S</p> | <p>Finish Grade Preparation</p> | <p>Add new clause: .6 The <i>Contractor</i> must notify the property <i>Owner</i> in writing within 48 hours in advance of when sodding will occur so that the property <i>Owner</i> can establish watering cycles within 12 hours of sod being laid. Documentation with respect to contact with property <i>Owner</i> will be required.</p> |
| <p>32 92 23 Sodding</p> | <p>3.4S</p> | <p>Grass Maintenance</p> | <p>Delete clauses: 3.4.1 and 3.4.2 Replace with: .1 The <i>Contractor</i> will be required to provide initial watering of the sod. .2 Protect all sodded areas with warning signs, temporary wire or twine fences, or equivalent as approved by the <i>Contract Administrator</i>.</p> |
| <p>32 92 23 Sodding</p> | <p>3.5.1.4S</p> | <p>Conditions for <i>Total Performance</i></p> | <p>Delete clause. Replace with: .4 Documentation is provided to the <i>Contract Administrator</i> that property <i>Owners</i> have been contacted by written notification to assume maintenance of sod.</p> |
| <p>32 92 23 Sodding</p> | <p>3.5.1S</p> | <p>Conditions for <i>Total Performance</i></p> | <p>Delete clauses: 3.5.1.5, 3.5.1.6, and 3.5.1.7.</p> |
| <p>32 92 23 Sodding</p> | <p>3.6S</p> | <p>Guarantee/ Maintenance</p> | <p>Delete clauses: 3.6.1 and 3.6.2.</p> |

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| 32 93 01 Planting of Trees, Shrubs, and Ground Covers | 1.2S | References | Add new clause: .4 Trees and Development: A technical guide to preservation of trees during land development. |
| 32 93 01 Planting of Trees, Shrubs, and Ground Covers | 2.4.1S | Mulch | Delete: "Bark mulch to be 25 mm minus Douglas Fir or Hemlock bark chips and fines, or combination of both," Replace with: "Bark chips to be 50 mm minus Douglas Fir or Hemlock bark chips and fines, or Pine chips and fines, or combination of Fir, Hemlock, and Pine," |
| 32 93 01 Planting of Trees, Shrubs, and Ground Covers | 2.5.1S | Stakes | Delete: "Pressure treated wood 50 to 70 mm diameter approximately 2 m long." Replace with: "Pressure treated wood 50 to 70 mm diameter approximately 2 m long or Tbar metal." |
| 32 93 01 Planting of Trees, Shrubs, and Ground Covers | 2.6.1S | Guying Collar | Delete clause. Replace with: 25 mm cloth straps. |
| 32 93 01 Planting of Trees, Shrubs, and Ground Covers | 3.3.1S | Planting | Delete clause. Replace with: Ensure all planting in general compliance with ISA tree planting standard found at: www.treesaregood.com/treecare/tree_planting.aspx |
| 32 93 01 Planting of Trees, Shrubs, and Ground Covers | 3.3.4.2S | Planting | Delete clause. Replace with: .2 Fold back and cut off the top 1/3 of burlap and wire basket on ball and burlapped stock without disturbing root ball. Remove container from grown stock before planting. |

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| 32 93 01 | 3.6.1S | Pruning | Delete clause. Replace with: .1 Limit pruning to minimum necessary to remove dead or injured branches. |
| 32 93 01 | 3.6.6S | Pruning | Delete clause. |
| 33 01 30.1 | 1.3.1S | Submission of Certification | Append to clause: "current NAAPI", SPIMA or NASSCO |
| 33 01 30.1 | 3.1.1S | CCTV Inspection | Append to clause: "by NAAPI", SPIMA or NASSCO |
| 33 01 30.1 | 3.8.3S | Inspection Reporting Hard Copies & Digital Format | Delete "not" |
| 33 01 30.1 | 3.12.4S | Inspection Reporting Hard Copies & Digital Format | Append to clause: "passed the NAAPI", SPIMA or NASSCO |
| 33 11 01 | 1.8.14S (2009-11-19)* | Measurement and Payment | Add new clause: .14 Payment for hydrants includes the hydrant body, lateral connections from mainline tee off watermain to hydrants, isolation valve at the mainline tee and curb valve with adjustable valve box and all other incidental <i>Work</i> as shown on Supplemental Detail |

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| | | | Drawing SW4. |
| 33 11 01 Water Works | 1.8.13S (2009-11-19)* | Measurement and Payment | Delete clause. Replace with: .13 Payment for tie-ins to existing mains where all pipework is to be undertaken by the <i>Contractor</i> will be as 1.8.12 of this Section, including all pipes, fittings and necessary tie-in <i>Work</i> to complete tie-in as shown on <i>Contract Drawings</i> . |
| 33 11 01 Water Works | 2.1S | Products General | Add new clause: .4 The City of Kamloops requires that all products incorporated into the distribution system must be recognized on the List of Approved Products and Materials. |
| 33 11 01 Water Works | 2.1S | General | Add new clause: .5 The City of Kamloops requires that all water main pipe is to be factory capped or bagged at both ends. Caps or bags shall not be removed until pipe is installed. |
| 33 11 01 Water Works | 2.2.2S | Polyvinyl Chloride (PVC) Pipe | Add new clause: .5 Steel ring and pin gasketed joint restraint pipe engineered for Horizontal Directional Drilling (HDD) and other trenchless applications are acceptable to the City of Kamloops. Refer to List of Approved Products and Materials. |
| 33 11 01 Water Works | 2.2.4.1S | Fittings | Delete clause: This product is not used in the City of Kamloops. |

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| <p>33 11 01 Water Works</p> | <p>2.3.3S</p> | <p>Mainline Butterfly Valves</p> | <p>Delete clause. Replace with: .3 Butterfly valves shall be installed on mains larger than or equal to 350 mm diameter. Butterfly valves shall be full body, fusion bonded epoxy coated to AWWA C550, suitable for direct bury and conforming to AWWA C504. Refer to City of Kamloops Amendments to Supplemental Detail Drawings SW11 and SW12 for installation requirements.</p> |
| <p>33 11 01 Water Works</p> | <p>2.3.4S</p> | <p>Blowdown or Blowoff Valves Standpipes</p> | <p>Delete clause. Replace with: .4 Standpipes shall be self draining and come with hose thread nozzle adapters. Hose nozzles shall be nominal 64 mm I.D. with 4 threads per 25.4 mm.</p> |
| <p>33 11 01 Water Works</p> | <p>2.3.7S</p> | <p>Service Valve Boxes</p> | <p>Add clause: .6 Curb boxes in corrosive soils shall be 'telescoping type' galvanized steel.</p> |
| <p>33 11 01 Water Works</p> | <p>2.5.1S</p> | <p>Service Connections, Pipe, Joints and Fittings</p> | <p>Delete clause. Replace with: .1 Pipe diameters 19 mm to 50 mm shall be Type K annealed copper to ASTM B88M and Warnock Hersey Certified. Pipe diameters from 19 mm to 25 mm, material may be a flexible aluminum core pipe, permanently bonded to layers of durable high temperature polyethylene plastic to AWWA C903. Service line pipe may be cross linked polyethylene (PEXa) pipe with an approved cell classification of 354400 in accordance with ASTM D 3350, and a minimum degree of cross linking of 80% in accordance with ASTM D 2765, Method B. Pipe to have a co-extruded UV shield made from UV resistant,</p> |

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| | | | <p>high density polyethylene, colour blue. UV shield to allow exposure to natural sunlight for up to one year. Pipe to be certified to standards, by an approved testing agency: CSA B 137.5; ASTM F 876; ASTM F 877; PPI TR4; NSF 14; NSF 14; NSF 61.</p> <p>Pipe to be certified to AWWA C 904 "Cross-linked Polyethylene (PEX) Pressure Pipe, 12.5 mm through 75 mm, for water service. Pipe to be manufactured in an ISO 9001 Certified production facility. Pipe to be certified to AWWA C 904, "Crosslinked Polyethylene (PEX) Pressure Pipe, 12.5 mm to 75 mm, for Water Service" by an approved testing agency. Pipe to be manufactured in an ISO 901 Certified production facility.</p> <p>Polyethylene pipe is not approved as service pipe.</p> |
| 33 11 01 Water Works | 2.5.3.2.1 S | Service Saddles | <p>Delete clause.</p> <p>Replace with:</p> <p>.1 Water service saddles shall be constructed of "passivated" stainless steel for corrosion resistance. Stainless steel components shall be Type 304 or 304 L. Welding must be performed in a controlled environment to prevent sensitization.</p> |
| 33 11 01 Water Works | 2.6.1.6.1 S | Hydrants | <p>Delete clause.</p> <p>Replace with:</p> <p>.1 Hose nozzles shall conform to the NFPA standards for fire hydrants.</p> |
| 33 11 01 Water Works | 2.6.1.6.2 S | Hydrants | <p>Delete clause.</p> <p>Replace with:</p> <p>.2 Pumper nozzles shall be nominal 100 mm I.D., UFE STORZ Nozzles.</p> |

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| 33 11 01 Water Works | 2.6.1.6.3 S | Hydrants | Delete clause. |
| 33 11 01 Water Works | 2.6.2S | Colour | Delete clause. Replace with: .2 All hydrants shall be painted as follows, or as approved by the <i>Contract Administrator</i> : Body of 3 port hydrants: Safety Yellow. Body of 2 port hydrants: Safety Red. Bonnets for 2 and 3 port hydrants: High Gloss White. For STORZ cap: Black. |
| 33 11 01 Water Works | 2.7.1S | Underground Service Line Valves and Fittings | Append to clause: 50 mm stops shall be non-draining ball type with full flow and full port. |
| 33 11 01 Water Works | 2.7.3.3S | Curb Stops | Delete clause. Replace with: .3 Curb stops shall be non-draining ball type, full flow and full port. |
| 33 11 01 Water Works | 3.3.3S | Trenching | Delete clause. Replace with: .3 Trench depth to provide cover over pipe of not less than 1.8 m from finished grade unless shown otherwise on <i>Contract Drawings</i> . |
| 33 11 01 Water Works | 3.5.8S | Granular Bedding | Delete clause. |
| 33 11 01 Water Works | 3.6.6S | Pipe Installation | Delete clause. Replace with: .6 Do not exceed maximum joint deflection specified in AWWA C600 nor one half of the maximum joint deflection recommended by pipe manufacturer. Deflections in pipelines in excess of those allowed above shall be |

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| | | | achieved using bends. PVC pipe shall not be bent to achieve required curvature. |
| 33 11 01 Water Works | 3.9.13S | Undercrossing | Delete clause. Replace with: .13 Use fabricated high density polyethylene casing spacers to maintain carrier pipe in true alignment and uniform separation from encasing pipe. |
| 33 11 01 Water Works | 3.9.14S | Undercrossing | Delete clause. Replace with: .14 Clearance between casing spacers and encasing pipe to be a maximum of 15 mm when carrier pipe is in position. |
| 33 11 01 Water Works | 3.12.3S | Hydrants | Append to clause: Hydrants shall be offset 600 mm from property line to spindle. |
| 33 11 01 Water Works | 3.12.6S | Hydrants | Delete clause. Replace with: .6 Hydrants not in service shall be identified by securing a canvas bag over the hydrant. |
| 33 11 01 Water Works | 3.13.6S | Backfill | Append to clause: , or as approved by the <i>Contract Administrator</i> . |
| 33 11 01 Water Works | 3.18.3S | Cleaning and Preliminary Flushing | Delete clause. Replace with: .3 Water for pressure testing and flushing may be obtained from the City water fill station. Water used for disinfection, or flushing, shall not be disposed of in a storm main unless it has been de-chlorinated. |

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| <p>33 11 01 Water Works</p> | <p>3.19.2S</p> | <p>Testing Procedure</p> | <p>Delete paragraph: Submit pipeline to a test of 1.5 times working pressure applied at highest elevation in each section, with a minimum 1380 kPa applied at lowest point of test section.</p> <p>Replace with: The minimum test pressure shall be the greater of either 1034 kPa or 1.5 times the operating pressure, imposed at the low point of any main in each test section.</p> <p>Delete paragraph: Maximum allowable leakage rate at test pressure to not exceed 1.25 litres per millimetre diameter of pipe per kilometre per 24 hour period.</p> |
| <p>33 11 01 Water Works</p> | <p>3.19.2S</p> | <p>Testing Procedure</p> | <p>Replace with: Allowable leakage shall be determined by the formula $L = ND(\sqrt{P})$ divided by 131,000. L shall equal the allowable leakage per hour, N is the number of allowed joints ** in the test section, D is the inside diameter of the pipe in mm and P is the test pressure in kilopascals.</p> <p>**The number of joints in a test section shall be calculated by using the total length of mains (excluding hydrant leads) divided by the standard length of pipe used. Only one joint will be allowed for the combined hydrant, lead, isolation valve and tee.</p> |
| <p>33 11 01 Water Works</p> | <p>3.21S</p> | <p>Disinfection and Flushing Procedures</p> | <p>Delete wording: "25 mg/l free chlorine" in clauses 3.21.2, 3.21.4, 3.21.5, and 3.21.6.</p> <p>Replace with: "50 mg/l free chlorine" in clauses 3.21.2, 3.21.4, 3.21.5, and 3.21.6.</p> |

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| <p>33 11 01 Water Works</p> | <p>3.21.5S</p> | <p>Disinfection and Flushing Procedures</p> | <p>Delete table.</p> <p>Replace with:</p> <table border="1"> <thead> <tr> <th><u>Pipe Size Chlorine</u> (mm)</th> <th><u>100% Chlorine</u> Solution (kg)</th> <th><u>1% Chlorine</u> Solution (litres)</th> </tr> </thead> <tbody> <tr> <td>100</td> <td>0.012</td> <td>1.20</td> </tr> <tr> <td>150</td> <td>0.027</td> <td>2.65</td> </tr> <tr> <td>200</td> <td>0.047</td> <td>4.71</td> </tr> <tr> <td>250</td> <td>0.074</td> <td>7.37</td> </tr> <tr> <td>300</td> <td>0.106</td> <td>10.60</td> </tr> <tr> <td>400</td> <td>0.189</td> <td>18.85</td> </tr> </tbody> </table> | <u>Pipe Size Chlorine</u> (mm) | <u>100% Chlorine</u> Solution (kg) | <u>1% Chlorine</u> Solution (litres) | 100 | 0.012 | 1.20 | 150 | 0.027 | 2.65 | 200 | 0.047 | 4.71 | 250 | 0.074 | 7.37 | 300 | 0.106 | 10.60 | 400 | 0.189 | 18.85 |
|-------------------------------------|---------------------------------------|--|--|-----------------------------------|---------------------------------------|--|-----|-------|------|-----|-------|------|-----|-------|------|-----|-------|------|-----|-------|-------|-----|-------|-------|
| <u>Pipe Size Chlorine</u> (mm) | <u>100% Chlorine</u> Solution (kg) | <u>1% Chlorine</u> Solution (litres) | | | | | | | | | | | | | | | | | | | | | | |
| 100 | 0.012 | 1.20 | | | | | | | | | | | | | | | | | | | | | | |
| 150 | 0.027 | 2.65 | | | | | | | | | | | | | | | | | | | | | | |
| 200 | 0.047 | 4.71 | | | | | | | | | | | | | | | | | | | | | | |
| 250 | 0.074 | 7.37 | | | | | | | | | | | | | | | | | | | | | | |
| 300 | 0.106 | 10.60 | | | | | | | | | | | | | | | | | | | | | | |
| 400 | 0.189 | 18.85 | | | | | | | | | | | | | | | | | | | | | | |
| <p>33 11 01 Water Works</p> | <p>3.24S</p> | <p>Bacteriological Tests</p> | <p>Add new clause:</p> <p>Bacteriological tests shall be as per the current ANSI/AWWA C651 Standard for Disinfecting Water Mains.</p> <p>Quoting from a part of Section 5: Verification:</p> <p>“Standard conditions. After final flushing and before the new water main is connected to the distribution system, two consecutive sets of acceptable samples, taken 24 hr apart, shall be collected from the new main.”</p> | | | | | | | | | | | | | | | | | | | | | |
| <p>33 30 01 Sanitary Sewers</p> | <p>1.6.5S (2009-11-19)*</p> | <p>Measurement and Payment</p> | <p>Delete clause.</p> <p>Replace with:</p> <p>.5 Payment for concrete bedding or controlled density fill, where shown on <i>Contract Drawings</i>, will be made as extra-over payment to sanitary sewer under 1.6.4 of this Section. No payment will be made for concrete bedding or controlled density fill required as a result of unauthorized excavation beyond neat lines or limits of excavation shown on <i>Contract Drawings</i> or Supplemental Detail Drawing SG4 .</p> | | | | | | | | | | | | | | | | | | | | | |
| <p>33 30 01 Sanitary Sewers</p> | <p>2.1.1S</p> | <p>Non-reinforced Concrete Pipe and Fittings</p> | <p>Delete clause.</p> <p>Non-reinforced concrete pipe shall not be used within the City of Kamloops.</p> | | | | | | | | | | | | | | | | | | | | | |

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| 33 30 01 Sanitary Sewers | 2.1.3.4S (2009- 11-19)* | Concrete Pipe | Delete: "Life". Replace with: "Lift" |
| 33 30 01 Sanitary Sewers | 2.3.5S | Service Connections | Delete clause. Replace with: .5 Service connections to reinforced concrete pipe shall be made using approved PVC saddles. |
| 33 30 01 Sanitary Sewers | 2.4.2S | Concrete | Delete clause. Replace with: .2 Concrete to be 25 MPa and cement shall be Type 50 (or approved equivalent). |
| 33 30 01 Sanitary Sewers | 2.7S | Products General | Add new clause: The City of Kamloops requires that all products incorporated into the collection system must be recognized on the List of Approved Products and Materials. |
| 33 30 01 Sanitary Sewers | 3.6.6S | Pipe Installation | Delete clause. Replace with: .6 Do not exceed one half of the maximum joint deflection recommended by pipe manufacturer. PVC pipe shall not be bent to achieve required curvature. |
| 33 30 01 Sanitary Sewers | 3.10.3S | Service Connection Installation | Append to clause: Inspection chamber shall be 200 mm diameter and shall not be installed with a plug. |
| 33 30 01 Sanitary Sewers | 3.10.4S | Service Connection Installation | Delete clause. |

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| <p>33 30 01 Sanitary Sewers</p> | <p>3.11.2S</p> | <p>Cleaning and Flushing</p> | <p>Delete clause.</p> <p>Replace with:</p> <p>.2 Water for testing and flushing may be obtained from the City water fill station. Water used for disinfection, or flushing, shall not be disposed of in a storm main unless it has been de-chlorinated.</p> |
| <p>33 30 01 Sanitary Sewers</p> | <p>3.12.1S</p> | <p>Leakage Testing General</p> | <p>Delete clause.</p> <p>Replace with:</p> <p>.1 Upon completion of cleaning and flushing of each section, the <i>Contractor</i> shall carry out leakage testing as follows:</p> <ul style="list-style-type: none"> .1 Water exfiltration test when specified on the Drawings or in the <i>Contract Documents</i>. .2 Low pressure air test on all sewer installations. .3 Infiltration test when specified on the Drawings or in the <i>Contract Documents</i>. .4 Rubber ball test, lamp test, mandrel test when specified on the Drawings or in the <i>Contract Documents</i>. .5 Individual joint tests in lieu of low pressure air test with the approval of the <i>Contract Administrator</i>. |
| <p>33 30 01 Sanitary Sewers</p> | <p>3.14.4S</p> | <p>Low Pressure Air Test</p> | <p>Delete clause.</p> <p>Replace with:</p> <p>.4 Commence test period when pressure decreases to 24 kPa above average groundwater pressure and end when pressure decreases to 20.5 kPa above average groundwater pressure. Do not add air to test section during test period. If test period is less than 1 minute per 25 mm of pipe diameter, then the section of sanitary pipe and services shall be deemed to have failed. Retest upon completion of repairs to any leaks.</p> |

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| <p>33 34 01 Sewage Force Mains</p> | <p>2.1S</p> | <p>Products General</p> | <p>Add new clause: .3 The City of Kamloops requires that all products incorporated into the collection system must be recognized on the List of Approved Products and Materials.</p> |
| <p>33 34 01 Sewage Force Mains</p> | <p>3.6.6S</p> | <p>Pipe Installation</p> | <p>Delete clause. Replace with: .6 Do not exceed maximum joint deflection specified in AWWA C600 nor one half of the maximum joint deflection recommended by pipe manufacturer. Deflections in pipelines in excess of those allowed above shall be achieved using bends. PVC pipe shall not be bent to achieve required curvature. For HDPE pipe, pipe cold bending shall be allowed to a minimum radius of 50 times the nominal pipe size without special fittings.</p> |
| <p>33 34 01 Sewage Force Mains</p> | <p>3.15.2S (2009- 11-19)*</p> | <p>Pressure Testing Procedure</p> | <p>Delete clause. Replace with: .2 Before pipe is filled with water, pipe bedding, concreting of all valves and fittings and backfilling to be completed as required in this specification. Each section of pipe to be filled and allowed to remain full of water for a period of at least 24 hours prior to commencement of any pressure tests. Pipeline to be submitted to a test of 1.5 x working pressure applied at highest elevation in each section. At no time shall test pressure exceed pipe or thrust restraint design pressures. Maximum allowable leakage rate at test pressure to not exceed 1.25 litres per millimetre diameter of pipe per kilometre per 24 hour period. Minimum duration of test period to be 2 hours.</p> |
| <p>33 40 01 Storm Sewers</p> | <p>1.7.2S</p> | <p>Inspection and Testing</p> | <p>Add new clause: Storm sewer mains shall be tested as per Sanitary Sewer mains, Section 33 30 01 items 3.11 to 3.17.</p> |

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| <p>33 40 01 Storm Sewers</p> | <p>2.1.1S</p> | <p>Non-reinforced Circular Concrete Pipe and Fittings</p> | <p>Delete clause. Non-reinforced concrete pipe and fittings shall not be used within the City of Kamloops.</p> |
| <p>33 40 01 Storm Sewers</p> | <p>2.4S</p> | <p>HDPE Pipe, Mainline Open Profile</p> | <p>Append to clause: .5 Restrictions for use in the City of Kamloops: .1 Use only for trunkmains with no potential for any services to be connected. .2 Minimum 5% grade. .3 Designer must consider expansion and Contraction.</p> |
| <p>33 40 01 Storm Sewers</p> | <p>2.11S</p> | <p>HDPE Pipe</p> | <p>Add new section: .1 High Density Polyethylene Pipe .1 Pipe: .1 To ASTM F894, or CSA B182.6. .2 Smooth wall only. .2 Joints: .1 Bell and spigot, gasketed type. .2 Plain end extrusion weld. .3 Restrictions for use in the City of Kamloops: .1 Use only for trunkmains with no potential for any services to be connected. .2 Minimum 5% grade. .3 Designer must consider expansion and Contraction.</p> |
| <p>33 40 01 Storm Sewers</p> | <p>2.5.1S</p> | <p>Spiral Rib Pipe Steel</p> | <p>Append to clause: Spiral ribbed steel pipe shall be used only when specifically recognized on the List of Approved Products and Materials.</p> |

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| <p>33 40 01</p> <p>Storm Sewers</p> | <p>2.6.1S</p> | <p>Service Connections</p> | <p>Delete clause.</p> <p>Replace with:</p> <p>.1 Storm sewer service connections shall be 150 mm minimum diameter. Maximum diameter shall be as specified on the <i>Contract Drawings</i>.</p> |
| <p>33 40 01</p> <p>Storm Sewers</p> | <p>2.6.5S</p> | <p>Service Connections</p> | <p>Delete clause.</p> <p>Replace with:</p> <p>.5 Manufactured connections to reinforced concrete pipe to be made using approved PVC saddles.</p> |
| <p>33 40 01</p> <p>Storm Sewers</p> | <p>3.6.6S</p> | <p>Pipe Installation</p> | <p>Delete clause.</p> <p>Replace with:</p> <p>.6 Do not exceed one half of the maximum joint deflection recommended by pipe manufacturer.</p> |
| <p>33 40 01</p> <p>Storm Sewers</p> | <p>3.10.3S</p> | <p>Service Connection Installation</p> | <p>Delete clause.</p> <p>Replace with:</p> <p>.3 Install inspection chambers at all storm sewer service connections, set plumb and to specified elevation as shown on Supplemental Detail Drawing SS8 or Standard Detail Drawing S10 as applicable. If inspection chamber located in driveway, lane, or paved surface, install cover or lid as shown on Supplemental Detail Drawing SS9 or Standard Detail Drawing S10 as applicable. Inspection chambers shall be 200mm diameter, and shall not be installed with a plug.</p> |
| <p>33 40 01</p> <p>Storm Sewers</p> | <p>3.10.4S</p> | <p>Service Connection Installation</p> | <p>Delete clause.</p> |

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| 33 40 01 Storm Sewers | 3.11.2S | Cleaning and Flushing | Delete clause. Replace with: .2 Water for testing and flushing may be obtained from the City water fill station.. Water used for disinfection, or flushing, shall not be disposed of in a storm main unless it has been de-chlorinated. |
| 33 40 01 Storm Sewers | 3.15.1S | Perforated Drain Pipe | Append to clause: Drain pipe shall be factory drilled PVC or HDPE. |
| 33 42 13 Pipe Culverts | 2.9S | High Strength Glass Reinforced Composite Headwalls | Add new clause: Fabricated, lightweight composite headwall structures may be used on approval from the Engineer. Composite headwalls should be manufactured with glass reinforced composites that will have polymer concrete cores in strategic areas as required for stiffness, high impact and high loading. |
| 33 44 01 Manholes and Catch Basins | 2.1.2S | Materials | Delete clause. Replace with: .2 Concrete shall be a minimum 25 MPa, Type 50 cement (or approved equivalent), or as otherwise specified in the <i>Contract Drawings</i> . |
| 33 44 01 Manholes and Catch Basins | 2.1.11S | Materials | Delete clause. Replace with: .11 Catch basin leads shall be a minimum of 200 mm diameter and of PVC SDR 35. |
| 33 44 01 Manholes and Catch Basins | 2.1.23S | Materials | Delete this clause. The City of Kamloops does not permit the installation of corrugated steel pipe manholes. |

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| 33 44 01 Manholes and Catch Basins | 2.2S | Products General | Add new clause: The City of Kamloops requires that all products incorporated into the sanitary collection or storm sewer must be recognized on the List of Approved Products and Materials. |
| 33 44 01 Manholes and Catch Basins | 3.3.12S | Manhole Installation | Delete the words. "masonry &". |
| 33 44 01 Manholes and Catch Basins | 3.4S | Cleanout Installation | Delete this clause. The City of Kamloops does not permit the installation of cleanouts. |
| 33 44 01 Manholes and Catch Basins | 3.11.1S | Leakage Test | Delete clause. Replace with: .1 Perform leakage testing of all manholes in accordance with Section 33 30 01 Sanitary Sewers. |
| 34 41 13 Traffic Signals | 1.4.1S | Electrical Energy Supply | Append to clause: Energy supply shall be 120/240 volt. |
| 34 41 13 Traffic Signals | 2.1.3S | Products General | Delete clause. Replace with: .3 The City of Kamloops requires that all products incorporated into the <i>Work</i> must be recognized on the List of Approved Products and Materials. |
| 34 41 13 Traffic Signals | 2.4.1S | Plastic Junction Boxes | Delete clause. This product is not used in the City of Kamloops. |

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| 34 41 13 Traffic Signals | 2.7S | Conductors and Cables | Add new clause: .5 Refer to Supplemental Detail Drawing SE7.13. |
| 34 41 13 Traffic Signals | 2.9.1.1S | Conductor Connectors | Append to clause: The City of Kamloops requires that all products incorporated into the <i>Work</i> must be recognized on the List of Approved Products and Materials. |
| 34 41 13 Traffic Signals | 2.11.1S, .2S, .3S, .4S | Service Panels | Delete clause. Replace with: .1 Refer to Supplemental Detail Drawing SE7.6 |
| 34 41 13 Traffic Signals | 2.15S | Loop Sealant and Backer Rod | Delete clause. |
| 34 41 13 Traffic Signals | 2.16.1S | Traffic and Pedestrian Signals | Delete clause. Replace with: .1 Poly carbonate casing with yellow aluminum backboards complete with 3M reflective tape. Refer to the City of Kamloops approved product list. |
| 34 41 13 Traffic Signals | 2.17.1S | LED Signal Modules | Delete clause. Replace with: .1 The City of Kamloops requires that all products incorporated into the <i>Work</i> must be recognized on the List of Approved Products and Materials. |
| 34 41 13 Traffic Signals | 2.18S | Traffic Signal Lamps | Delete clause. |
| 34 41 13 Traffic Signals | 2.19.1S - .7S | Signal Mounting Hardware | Delete clause. Replace with: |

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| | | | .1 Refer to the City of Kamloops approved product list and Supplemental Detail Drawings SE5.7, SE4.17, and SE4.18. |
| 34 41 13 Traffic Signals | 2.20.1S | Audible Signals | Delete clause. Replace with: .1 The City of Kamloops requires that all products incorporated into the <i>Work</i> must be recognized on the List of Approved Products and Materials. |
| 34 41 13 Traffic Signals | 2.21.1S | Pedestrian/ Cyclist Pushbuttons | Delete clause. Replace with: .1 Pushbutton, round diameter 80mm black on yellow high density polyethylene or aluminum housing with yellow or stainless steel finish. |
| 34 41 13 Traffic Signals | 2.22.1S | Luminaires | Delete clause. Replace with: .1 The City of Kamloops requires that all products incorporated into the <i>Work</i> must be recognized on the List of Approved Products and Materials. |
| 34 41 13 Traffic Signals | 2.23.1S | High Intensity Discharge Lamps | Delete clause. Replace with: .1 The City of Kamloops requires that all products incorporated into the <i>Work</i> must be recognized on the List of Approved Products and Materials. |
| 34 41 13 Traffic Signals | 2.24.1S | Photo Controls | Delete clause. Replace with: .1 The City of Kamloops requires that all products incorporated into the <i>Work</i> must be recognized on the List of Approved Products and Materials. |

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| 34 41 13 Traffic Signals | 2.25S | Post Mount Flasher | Delete all clauses. |
| 34 41 13 Traffic Signals | 2.26.1S-.4S | NEMA Traffic Controllers | Delete clause. Replace with: .1 The City of Kamloops requires that all products incorporated into the <i>Work</i> must be recognized on the List of Approved Products and Materials. |
| 34 41 13 Traffic Signals | 2.27.6S | Video Detection Systems | Delete clause. Replace with: .6 Video detection system mounts to Standard Detail Drawing E5.13 (camera on type 2A arm) and Supplemental Detail Drawing SE5.14 (signal arm mounting). |
| 34 41 13 Traffic Signals | 2.28.1S | Uninterruptable Power Supply | Delete clause. Replace with: .1 The City of Kamloops requires that all products incorporated into the <i>Work</i> must be recognized on the List of Approved Products and Materials. |
| 34 41 13 Traffic Signals | 2.29.1S | Illuminated Crosswalk Signs | Delete clause. Replace with: .1 Refer to <i>Contract Drawings</i> and Supplemental Detail Drawing SE5.15 |
| 34 41 13 Traffic Signals | 2.32S | Extruded Aluminum Signs | Delete section. Replace with: .1 Refer to New City of Kamloops Supplementary Specification, Section 34 41 15 S. |
| 34 41 13 | 3.3.1S | Concrete Bases | Delete clause. |

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| Traffic Signals | | | <p>Replace with:</p> <p>.1 Install concrete bases in accordance with Section 03 30 53 – Cast-In-Place Concrete and as shown on Standard Detail Drawings CE1.8, CE1.9, CE1.13, CE1.14 and Supplemental Detail Drawings SE1.1, SE1.2, SE1.4.</p> |
| 34 41 13 Traffic Signals | 3.4.1S | Junction Boxes and Vaults | <p>Delete clause.</p> <p>Replace with:</p> <p>.1 Install junction boxes and vaults as shown on Standard Detail Drawings E2.2 to E2.6</p> |
| 34 41 13 Traffic Signals | 3.6.1S | Poles and Related Equipment | <p>Delete clause.</p> <p>Replace with:</p> <p>.1 Install poles and related equipment as shown on Supplemental Detail Drawings SE4.1, SE4.17 and SE4.18.</p> |
| 34 41 13 Traffic Signals | 3.6.7S | Poles and Related Equipment | <p>Delete clause.</p> <p>Replace with:</p> <p>.7 Field drilling of holes larger than 33 mm diameter not allowed in Type 1, 3, 6, 7, S & L shafts, and all arms and extensions. Where larger holes are required, reinforce holes with welded bushing prior to galvanizing.</p> |
| 34 41 13 Traffic Signals | 3.6S | Poles and Related Equipment | <p>Add new clause:</p> <p>.13 The City of Kamloops requires that all products incorporated into the <i>Work</i> must be recognized on the List of Approved Products and Materials.</p> |
| 34 41 13 Traffic Signals | 3.7.1S | Traffic and Pedestrian Signal Head Mounting | <p>Delete clause.</p> <p>Replace with:</p> <p>.1 Install traffic and pedestrian signal heads as shown on Standard Detail Drawing E5.2, and Supplemental Detail Drawings SE5.7 and</p> |

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| | | | SE5.8. Side of pole mounting hardware shall be Clamshell type model P/N 4805 for pedestrian heads. |
| 34 41 13 Traffic Signals | 3.7.2S | Traffic and Pedestrian Signal Head Mounting | Append to clause: Traffic heads shall be tethered to mast arm using 4.763 mm (3/16 inch) stainless steel aircraft cable. type model P/N 4805 for pedestrian heads. |
| 34 41 13 Traffic Signals | 3.7.4S | Traffic and Pedestrian Signal Head Mounting | Delete clause. Replace with: .4 Completely cover all traffic and pedestrian signal heads with a signal bag, of correct size and shape, from time they are installed to system start-up. |
| 34 41 13 Traffic Signals | 3.8.1S | Audible Signals | Delete clause. Replace with: .1 Install audible signals inside pedestrian heads. |
| 34 41 13 Traffic Signals | 3.8.3S | Audible Signals | Delete clause. |
| 34 41 13 Traffic Signals | 3.9.1S | Pedestrian Pushbuttons | Delete clause. Replace with: .1 Install pedestrian pushbuttons and posts as shown on Standard Detail Drawing E6.3 and Supplemental Detail Drawing SE6.2. |
| 34 41 13 Traffic Signals | 3.10.2S | Luminaires and Photocells | Append to clause: Any required tilt angle shall be provided on design Drawing. Power supply shall be 120 volt. |

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| 34 41 13 Traffic Signals | 3.10S | Luminaires and Photocells | Add new clause: .4 Luminaire fusing shall be 10 amp 600 volt. All luminaries shall have drop-glass of Type II, III or V distribution. |
| 34 41 13 Traffic Signals | 3.10S | Luminaires and Photocells | Add new clause: .5 All luminaire ballast shall be constant wattage integral (CWI) 120/240. |
| 34 41 13 Traffic Signals | 3.12.1S | Electrical Service and Telephone Demarcation Panels | Delete clause. Replace with: .1 Mount electrical service panels in service base or on poles as shown Supplemental Detail Drawing SE7.6. |
| 34 41 13 Traffic Signals | 3.12S | Electrical Service and Telephone Demarcation Panels | Add new clause: .3 All conduits exiting a panel or powerbase shall be sealed with duct seal. A positive adhesive, waterproof seal (ex silicone sealant) is required between the powerbase and the powerbase pole. Powerbase door shall be 90 degrees to road opposite to traffic flow. |
| 34 41 13 Traffic Signals | 3.12.1S | Electrical Service Panels | Delete clause. Replace with: .1 Mount electrical service panels in service base or on poles as shown Supplemental Detail Drawing SE7.6. |
| 34 41 13 Traffic Signals | 3.14.1S | Wiring | Delete clause. Replace with: .1 Spices for signal cable to be in junction boxes, splices for camera wire, pedestrian pushbutton and luminaires to be in pole handholes. |

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| 34 41 13 Traffic Signals | 3.14.3S | Wiring | Delete clause. |
| 34 41 13 Traffic Signals | 3.14.4S | Wiring | Delete clause. Replace with: .4 Signal cable colour coding to be as shown on Supplemental Detail Drawing SE7.13. |
| 34 41 13 Traffic Signals | 3.14.8S | Wiring | Delete clause. |
| 34 41 13 Traffic Signals | 3.14.11S | Wiring | Delete clause. Replace with: .11 Completely cover multiple wire termination splice with Scotch 88. Completely cover 2 to 4 wire terminations with Scotch Kit DBR6. |
| 34 41 13 Traffic Signals | 3.14.12S | Wiring | Delete clause. Replace with: .12 If conductor connections require use of split bolts or similar style devices due to wire size, completely cover splice with Scotch 88 tape. |
| 34 41 13 Traffic Signals | 3.14.13S | Wiring | Delete clause. Replace with: .13 Bond all steel junction box lids and vault lids with a No.8 RW90 conductor. |
| 34 41 13 Traffic Signals | 3.15.1S | Pole Mounted Receptacles | Append to clause. Receptacle to be 15A120V corrosion resistant duplex spec. grade GFCI. |
| 34 41 13 Traffic | 3.16.1S | Traffic Controller | Delete clause. Replace with: |

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| Signals | | | .1 Install traffic controllers as shown on Supplemental Detail Drawings SE1.1, SE1.2 and SE 1.4. |
| 34 41 13 Traffic Signals | 3.17.1S-.2S | Detector Loops | Delete clauses. Replace with: .1 Detector loops shall be installed as shown on Supplemental Detail Drawing SE8.7. |
| 34 41 13 Traffic Signals | 3.18S | Flasher Luminaires | Delete clause: This product is not used in the City of Kamloops. |
| 34 41 13 Traffic Signals | 3.19.1S | Advance Warning Signs | Delete clause. Replace with: .1 Install advance warning signs as shown on Standard Detail Drawings E10.1, E10.2, Supplemental Detail Drawing SE10.3 and Standard Detail Drawings E10.4 to E 10.10. |
| 34 41 13 Traffic Signals | 3.25.2S | Video Detection | Delete clause. Replace with: .2 Mount on signal pole as shown Standard Detail Drawing E5.13 and Supplemental Detail Drawing SE5.14. |
| 34 41 13 Traffic Signals | 3.26.1 | Illuminated Crosswalk Signs | Delete clause. Replace with: .1 Install illuminated crosswalk sign as shown on Supplemental Detail Drawing SE5.15 |