

# *Supplementary General Conditions*

*Supplementary General Conditions to MMCD Volume II, 2009 Platinum Edition, specific to  
the City of Williams Lake, including those approved by MMCD Board.*

- 17.0 Optional Work (IT Part 2)** 17.1 Delete IT – Part II 17.1 and substitute the following:
- If the *Schedule of Quantities and Prices* includes any tender prices for *Optional Work*, as defined in GC 1.48, then tenderers must complete all the unit prices for such *Optional Work*. Such tender prices shall not include any general overhead costs, or other costs, or profit, not directly related to the *Optional Work*. Tenderers are directed to GC 9.4.2.
- 3.0 CONTRACT ADMINISTRATOR**
- 3.4 Contract Administration** 3.4.5 Delete GC 3.4.5 and substitute 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.
- 7.0 CHANGES**
- 7.1 Changes** 7.1.3 Delete GC 7.1.3 and substitute 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.
- 2.0 DOCUMENTS**
- 2.2 Interpretation** 2.2.4 Delete GC 2.2.4(i) and substitute the following:
- (i) Standard Detail Drawings
- 4.0 CONTRACTOR**
- 4.1 Control of the Work** 4.1.2 Add to GC 4.1.2 as follows:
- During all phases of the operation the Contractor shall take precautions to abate nuisance caused by mud or dust by clean-up, sweeping, sprinkling with water, or other means as necessary to accomplish results satisfactory to the Contract Administrator.
- The Contractor shall take care to prevent spillage on streets over which hauling is done and the Contractor shall immediately clean up any such spillage or debris deposited on streets due to his operations.
- The Contractor shall not deposit any material upon any street, sidewalk, boulevard or other property, without the Contract Administrator’s or the Owner’s permission, nor shall he allow the same to remain longer than necessary. All surplus spoil and rubbish and other waste material shall be removed from the site so that the area of work is cleaned up and restored to as clean a condition as it was before the Contract started, within four days of the Contract Administrator’s written request to do so, failing which

the Owner may carry out the work or have the work carried out by others and recover the costs from the Contractor or may deduct the cost from any monies due or that may become due to the Contractor.

4.1.3 Add GC 4.1.3 as follows:

In scheduling and performing its Work the Contractor shall comply with any ordinance, bylaw or regulation affecting or limiting the hours of Work. No work will be permitted on Sunday or a holiday, except in case of emergency and then only with the written permission of the Contract Administrator and to such extent as he deems necessary.

4.1.4 Add GC 4.1.4 as follows:

The Contractor, during the progress of the Work, shall make adequate provision to accommodate the normal traffic along streets and highways immediately adjacent to or crossing the Work so as to cause the minimum of inconvenience to the general public. No road closure is permitted.

4.1.5 Add GC 4.1.5 as follows:

The Contractor shall give due notice to local police and fire departments prior to beginning construction and shall comply in all respects with their requirements.

4.1.6 Add GC 4.1.6 as follows:

Where existing streets or roads are not available as detours, all traffic shall be permitted to pass through the Work with as little inconvenience and delay as possible unless otherwise provided or authorized. If only half the street is under improvement, the other half shall be conditioned and maintained as detour.

**4.3 Protection of Work,  
Property and the Public**

4.3.7 Add GC 4.3.7 as follows:

The Owner does not possess complete or accurate information with respect to the occurrence or the location of existing Utilities that will or may be encountered by the Contractor during the performance of the Work. Any plans, surveys, maps or descriptions of Utilities given to the Contractor, verbal or otherwise, whether part of the Contract Documents or not, are intended only as an aid to assist the Contractor in locating these construction obstacles. However, the Contractor is solely responsible to take all steps necessary to investigate, locate, verify and protect all Utilities.

4.3.8 Add GC 4.3.8 as follows:

In performing Work on or near Utilities, or where it is necessary to cut, move or alter any Utilities, the Contractor shall communicate and make arrangements with the proper authorities and perform the Work in compliance with any direction or instruction received from that authority. Any damage to Utilities

by the Contractor shall be repaired at the Contractor's expense. Where Utilities are serving the public while construction is in progress, it shall be the responsibility of the Contractor to plan and execute the Work such that the disruption of service provided by such Utilities is held to a minimum.

**4.6 Construction Schedule**      4.6.1 Delete GC 4.6.1 and substitute the following:

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.

4.6.6 Delete GC 4.6.6 and substitute the following:

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. The Notice to Proceed will not be issued until the documentation required from the Contractor under paragraph 5.1.1 of the Form of Tender has been approved.

**9.0 VALUATION OF  
CHANGES AND EXTRA  
WORK**

**9.4 Quantity Variations**      9.4.1 Delete GC 9.4.1 and substitute the following:

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.

**12.0 HAZARDOUS  
MATERIALS**

**12.2 Discovery of  
Hazardous Materials**      12.2.2 Delete GC 12.2.2 and substitute the following:

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.

**13.0 DELAYS**

13.9.1 Delete part GC 13.9.1 and substitute the following:

**13.9 Liquidated Damages for Late Completion**

If the Contractor fails to meet the Milestone Date for Substantial Performance as set out in the Form of Tender, paragraph 2.2 as may be adjusted pursuant to the provisions of the Contract Documents, then the Owner may deduct from any monies owing to the Contractor for the Work:

(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 \$1,000 per day or pro rata portion for each Day that actual Substantial Performance is achieved after the Substantial Performance Milestone Date; plus

(2) all direct out-of-pocket costs, such as costs for safety, security, or equipment rental, reasonably incurred by the Owner as a direct result of such delay.

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.

**24.0 INSURANCE**

24.1.1 Delete GC 24.0 and substitute the following:

**24.1 Required Insurance**

????????????????????????????????

**1.0 DEFINITIONS**

1.30.1 Delete GC 1.30.1

**1.30 Deleted Items**

1.39.1 Delete GC 1.39.1 and substitute the following:

**1.36 GST**

"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.

**18.0 PAYMENT**

18.5.1 The net amount shown for payment on a Payment Certificate shall be due and payable to the Contractor on or before the thirtieth (30th) Day after the issuance of the Payment Certificate.

**18.5 Payment**

# *Supplementary Specifications*

*Supplementary Specifications to MMCD Volume II, 2009 Platinum Edition, specific to the City of Williams Lake, including those approved by MMCD Board*

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A. Contract Specific Instructions

1.0 Contract Specific

- 1.1 Schedule of Work A detailed, realistic construction schedule for this project will be required to be presented at the pre-construction meeting.
- All work under this project is to be completed within the designated Contract Time. The Contractor must provide sufficient resources in a continuous effort and site presence to complete all the work within the allotted time.
- Construction Progress Schedule Format to include horizontal time scale identifying first workday of each week; listings in chronological order of start of each item of work.
- 1.2 Order of Construction The City is undertaking repair works and relocations to underground services in advance of the Work on Mackenzie Avenue. The Contractor will be required to conduct the Work in the reverse order of sections A1 to E, i.e. Start Work at Section E and End at A1. This requirement does not apply to Dog Creek Road and Likely Road and Work on these roads can be scheduled during the Contact period.
- The Contractor is required to complete the Work entirely within the time period allowed in the Form of Tender and Agreement.
- 1.3 Site Safety The Contractor is responsible to ensure the construction site is safe at all times for workers, pedestrians, and vehicle traffic. During non-working hours, the Contractor must ensure that the site has all potentially hazardous areas appropriately identified and protected, and also must provide appropriate signage, lighting, and markings for the direction of vehicle and pedestrian traffic, all to ensure the safety of the public.
- Manhole lids, valve boxes and other appurtenances within the roadway that may present a traffic hazard during construction must be clearly marked for traffic.
- Manhole lids left raised in preparation for paving must have a rubberized protector ring for traffic safety. Supply and use of this equipment is considered incidental to the Contract.

B. Supplementary Specifications

Section	Sub-section	Title	Supplementary Specifications
01 42 00 REFERENCE SPECIFICATIONS	1.1	Nomenclature	<i>Delete Clause 1.1.26.</i>
	1.2	Referenced Specifications	<i>Delete Clause 1.2.15.1, .2, .5, .10, .11</i>  <i>Add new Clause 1.2.18 as follows:</i>  1.2.18. CSA A3000 Cementitious Materials Compendium
			<b>END OF SECTION</b>

Section	Sub-section	Title	Supplementary Specifications
<b>01 55 00                      TRAFFIC                      CONTROL,                      VEHICLE                      ACCESS AND                      PARKING</b>	1.0	<b>GENERAL</b>	<p><i>Add new Clause 1.0.7 as follows:</i></p> <p>.7 The Contractor is required to submit a Traffic Management Plan (TMP) to the Contract Administrator for reviews and approval. The TMP is to be prepared by a professional and must be approved at least one (5) five working days prior to work commencing.</p> <p>The TMP shall outline the approach to traffic management, show recognition and minimization of risks, indicate signing locations, identify Traffic Control Persons (TCP) stations, show lane shifting, and show proposed lane closures.</p> <p>The TMP is to be adhered and resubmitted as required during the progress of the work.</p>
	1.4	Traffic Control	<p><i>Delete clause 1.4.10.3 and replace with as follows:</i></p> <p>.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.</p> <p><i>Add new Clause 1.4.14 as follows:</i></p> <p>.1 Sign colour, shape, designation, size, installation, vertical and lateral placement of traffic control devices shall conform to the most recent edition of the TAC Manual of Uniform Traffic Control Devices for Canada and/or latest edition of the BC MOT Manual of Standard Traffic Signs and Pavement Markings.</p>
			<b>END OF SECTION</b>

Section	Sub-section	Title	Supplementary Specifications
01 57 01 ENVIRONMENTAL PROTECTION	1.0	GENERAL	<i>Add New Clauses 1.3 as follows:</i> “.3 The Contractor shall provide a Construction Environmental Management Plan (CEMP) which describes in detail the approach to be taken in addressing environmental issues associated with the Project and the correlation of the CEMP to the project schedule.
	1.2	Temporary Erosion and Sediment Controls	<i>Delete clause 1.8.4 and replace with as follows:</i> Do not operate construction equipment in watercourses.
	1.4	Environmental Protection	<i>Add New Clauses to 1.4.3 as follows:</i> .5 Immediately contain and clean up any leaks and spills of prohibited materials on the job site. .6 Ensure that a well-stocked spill kit is on-site at all times and that the Contractor’s employees are familiar with appropriate spill response techniques. .7 Immediately notify the Contract Administrator of any leaks or spills of prohibited materials that occur on the job site. .8 Ensure that any fuel stored on-site is located at least 15 metres from the nearest stream, and is placed within a bermed and lined area, in order to prevent leaks or spills into the environment. .9 Ensure that no equipment fueling or servicing is conducted within 15 metres of a stream. .10 Implement procedures for drivers and equipment operators to engage in idle reduction practices.
			<b>END OF SECTION</b>

Section	Sub-section	Title	Supplementary Specifications
01 58 01 <b>PROJECT IDENTIFICATION</b>	1.2	<b>Temporary Project Signage</b>	<p><i>Delete clause 1.2.1.3 and replace with as follows:</i></p> <p>.4 Indicate on sign, name of Owner, name of project, name of Contractor, completion date, and/or other information as required of a design style approved by Contract Administrator.</p> <p><i>Add new Clause 1.2.3 as follows:</i></p> <p>.3 Special Program Signage</p> <p>.1 Erect any special funding program signage as provided by the Owner in a location designated by the Contract Administrator.</p> <p><i>Add new Clause 1.2.2.2 as follows:</i></p> <p>.2 Give minimum 3 days notice or otherwise required by local bylaws to local police, fire departments, emergency services and municipal works authorities prior to beginning construction and comply in all respects with their requirements.</p> <p><i>Add new Clause 1.2.2.3 as follows:</i></p> <p>.3 For work in public rights-of-way, road closures and detours shall be advertised in local newspapers at least 48 hours in advance and on radio the morning of the commencement of each week that the subject road is affected. The cost of advertising will be deemed to be included in the Contract Price for the Work.</p>
			<b>END OF SECTION</b>

Section	Sub-section	Title	Supplementary Specifications
03 30 20 CONCRETE WALKS, CURBS AND GUTTERS	1.0	<b>GENERAL</b>	
	1.4	Measurement and Payment	<i>Add new clause 1.4.10 as follows:</i>  Payment for monolithic curb, gutter and sidewalk, either hand formed or machine placed shall be paid on a lineal meter basis as measured along centerline between the gutter and the back of sidewalk.
	2.0	<b>PRODUCTS</b>	
			<i>Delete Clause 2.1.5.1 and replace as follows:</i>  .1 Hand-formed and hand-placed concrete: Slump: 80 mm. Air entrainment: 5 to 8%. Maximum aggregate size: 20 mm. Minimum cement content: 335 kg/m <sup>3</sup> . Minimum 28 day compressive strength: 32 MPa.
	3.0	<b>EXECUTION</b>	
	3.9	Expansion Joints	<i>Delete Clause 3.9.1 and replace as follows:</i>  Form transverse expansion joints at both ends of curb returns and at a maximum spacing of 9m for sidewalks, 9m for curb and gutter, at each end of driveway crossings at tangent points on circular work, and on either side of catchbasins.
			<b>END OF SECTION</b>

Section	Sub-section	Title	Supplementary Specifications
03 30 53 CAST-IN-PLACE CONCRETE	2.0	<b>PRODUCTS</b>	
	2.1	Materials	<i>Delete Clause 2.1.1 and replace as follows:</i>  Portland cement: to CSA A3000.  <i>Delete Clause 2.1.2 and replace as follows:</i>  Supplementary cementing materials: to CSA A3000
			<b>END OF SECTION</b>

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31 05 17  AGGREGATES AND GRANULAR MATERIALS	2.0	PRODUCTS																																																								
	2.7	Granular Pipe Bedding and Surround Material	<p><i>Delete 2.7.1 and replace with as follows:</i></p> <p>.1 Crushed or graded gravels: to conform to following gradations:</p> <table border="1" data-bbox="792 579 1286 1310"> <thead> <tr> <th colspan="4">Percent Passing</th> </tr> <tr> <th>Sieve Designation</th> <th>Type 1*</th> <th>Type 2*</th> <th>Type 3*</th> </tr> </thead> <tbody> <tr> <td>50.0 mm</td> <td>100</td> <td>100</td> <td>100 - 100</td> </tr> <tr> <td>38.0 mm</td> <td>100</td> <td>100</td> <td>90 - 100</td> </tr> <tr> <td>25.0 mm</td> <td>100</td> <td>100</td> <td>20 - 60</td> </tr> <tr> <td>19.0 mm</td> <td>90 - 100</td> <td>90 - 100</td> <td>0 - 15</td> </tr> <tr> <td>12.5 mm</td> <td>65 - 85</td> <td>70 - 100</td> <td></td> </tr> <tr> <td>9.5 mm</td> <td>50 - 75</td> <td></td> <td>0 - 5</td> </tr> <tr> <td>4.75 mm</td> <td>25 - 50</td> <td>40 - 70</td> <td></td> </tr> <tr> <td>2.36 mm</td> <td>10 - 35</td> <td>25 - 52</td> <td></td> </tr> <tr> <td>1.18 mm</td> <td>6 - 26</td> <td>15 - 38</td> <td></td> </tr> <tr> <td>0.600 mm</td> <td>3 - 17</td> <td>6 - 27</td> <td></td> </tr> <tr> <td>0.300 mm</td> <td></td> <td>3 - 20</td> <td></td> </tr> <tr> <td>0.075 mm</td> <td>0 - 5</td> <td>0 - 8</td> <td></td> </tr> </tbody> </table> <p><i>*Type 1: standard gradation</i></p> <p><i>*Type 2: to be used only in dry trench conditions and with Contract Administrator's prior approval</i></p> <p><i>*Type 3: minimum 40% Porosity</i></p> <p>Recycled concrete free from contaminated and other extraneous material, conforming to the Type 1 gradations, maybe used as pipe bedding and surround material with prior approval of the Contract Administrator.</p>	Percent Passing				Sieve Designation	Type 1*	Type 2*	Type 3*	50.0 mm	100	100	100 - 100	38.0 mm	100	100	90 - 100	25.0 mm	100	100	20 - 60	19.0 mm	90 - 100	90 - 100	0 - 15	12.5 mm	65 - 85	70 - 100		9.5 mm	50 - 75		0 - 5	4.75 mm	25 - 50	40 - 70		2.36 mm	10 - 35	25 - 52		1.18 mm	6 - 26	15 - 38		0.600 mm	3 - 17	6 - 27		0.300 mm		3 - 20		0.075 mm	0 - 5	0 - 8
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Section	Sub-section	Title	Supplementary Specifications
31 05 17 AGGREGATES AND GRANULAR MATERIALS	2.9	Crushed Granular Sub-base	<i>Delete 2.9.1 and replace with as follows:</i>  .1 All crushed granular sub-base aggregate to be well-graded 75mm crushed gravel material conforming to the MOT specification for Select Granular Sub-base (SGSB).
	2.10	Granular Base	<i>Delete 2.10.1 and replace with as follows:</i>  .1 All granular base aggregate to be well-graded 25mm minus crushed granular base material conforming to the MOT specification for Well Graded Base (WGB).
			<b>END OF SECTION</b>

Section	Sub-section	Title	Supplementary Specifications																
31 22 01 SITE GRADING	3.0	<b>EXECUTION</b>																	
	3.3	Tolerances	<i>Delete Clause 3.3.1 and replace as follows:</i>  <hr/> <b>TABLE 2: TOLERANCES FOR SUBGRADES WHERE GROWING MEDIUM (TOPSOIL) TO BE PLACED OVER SUBGRADE</b> <hr/> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Conditions</th> <th style="text-align: center;">Intended Growing Medium Depth</th> <th style="text-align: center;">Tolerance</th> </tr> </thead> <tbody> <tr> <td rowspan="3" style="vertical-align: top;">Within 3 m from fixed elevations (e.g., paving edges, curbs, etc.)</td> <td style="text-align: center;">0 - 150 mm</td> <td style="text-align: center;">± 25 mm</td> </tr> <tr> <td style="text-align: center;">151 - 300 mm</td> <td style="text-align: center;">± 25 mm</td> </tr> <tr> <td style="text-align: center;">301 - 600 mm</td> <td style="text-align: center;">± 50 mm</td> </tr> <tr> <td rowspan="3" style="vertical-align: top;">Other areas</td> <td style="text-align: center;">0 - 150 mm</td> <td style="text-align: center;">± 25 mm</td> </tr> <tr> <td style="text-align: center;">151 - 300 mm</td> <td style="text-align: center;">± 50 mm</td> </tr> <tr> <td style="text-align: center;">301 - 600 mm</td> <td style="text-align: center;">± 50 mm</td> </tr> </tbody> </table> <hr/>	Conditions	Intended Growing Medium Depth	Tolerance	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
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Section	Sub-section	Title	Supplementary Specifications
31 22 16.1 RESHAPING EXISTING SUBGRADE	1.0	GENERAL	
	1.4	Measurement and Payment	<p><i>Delete Clause 1.4.1 and replace with as follows:</i></p> <p>Payment for reshaping existing sub-grade includes adjustment of moisture content, compaction and disposal of excess material.</p> <p>Compaction of embankments 300 mm or greater in depth, including the sub-grade level shall be considered incidental to excavation and fill, and no extra payment will be made for this work.</p> <p>No extra payment will be made for reworking the sub-grade after rain.</p>
			<b>END OF SECTION</b>

Section	Sub-section	Title	Supplementary Specifications
31 23 01 EXCAVATING, TRENCHING AND BACKFILL	3.6	Surface Restoration	<p><i>Delete clause 3.6.7.5 and replace as follows:</i></p> <p>.5 Restore pavement as detailed on Standard Detail Drawing G5.</p> <p>.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.</p> <p>.2 If the thickness of the existing asphalt is greater than 75 mm, 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.</p> <p>.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 mid point of that lane. Where the edge extends past the mid point of the travel lane, it should be extended to the far edge of that travel lane.</p> <p>.</p>

Section	Sub-section	Title	Supplementary Specifications
<p><b>31 23 01                      EXCAVATING,                      TRENCHING                      AND BACKFILL</b></p>	<p>3.6</p>	<p>Surface Restoration</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 or 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 7.5.5, if the longitudinal distance between two trenches is less than three (3) meters 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 design drawings, whichever is greater. 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 75mm it shall be placed in two lifts as shown on Drawing SS-G5.</p> <p>.9 Vertical faces and the surface of the bottom lift of asphalt must be painted with bituminous material prior to hot mix paving.</p>
<p><b>END OF SECTION</b></p>			

Section	Sub-section	Title	Supplementary Specifications
31 23 23 CONTROLLED DENSITY FILL	2.0	<b>PRODUCTS</b>	
	2.1	Materials	<p><i>Delete Clause 2.1.1 and replace as follows:</i></p> <p>Portland cement: to CSA A3000.</p> <p><i>Delete Clause 2.1.2 and replace as follows:</i></p> <p>Fly ash: to CSA A3000</p>
			<b>END OF SECTION</b>

Section	Sub-section	Title	Supplementary Specifications
<p>31 24 13  <b>ROADWAY                      EXCAVATION,                      EMBANKMENT                      AND                      COMPACTION</b></p>	<p>1.8</p>	<p><b>Measurement                      and Payment</b></p>	<p><i>Delete clause 1.8.4 and replace with as follows:</i></p> <p>.4 Payment under this item will only apply to removal of the components included in this item under a separate operation as shown on the drawings or as directed by the Contractor Administrator. No payment will be made under this item for removal of these components as part of the operation for common excavation, and such removal will be treated as common excavation.</p> <p>1) Removal of existing curb or curb and gutter will be the actual number of linear metres removed, calculated from measurements taken by the Contract Administrator. No differentiation will be made between various types of curb and gutter structures.</p> <p>2) Removal of existing sidewalks or walkways will be measured in square meters, calculated from measurements taken by the Contract Administrator in the area of excavation. No differentiation will be made between various types of sidewalk structures.</p> <p><i>Delete Clause 1.8.5.4 and replace with as follows:</i></p> <p>.4 Where the average thickness of excavation is less than 0.5 meters, volume will be established from using 75% of loose truck box volume as determined by the Contract Administrator.</p> <p><i>Delete Clause 1.8.8 and replace with as follows:</i></p> <p>.8 Measurements of peat excavation and off-site disposal will be made by 75% of loose truck box volume in watertight truck box.</p>
			<b>END OF SECTION</b>

Section	Sub-section	Title	Supplementary Specifications																			
31 37 10 RIPRAP	2.0	PRODUCTS																				
	2.1	Riprap	<p><i>Delete Table 2.1.1.1 and replace as follows:</i></p> <table border="1"> <thead> <tr> <th>Percent Heavier Than</th> <th>Percent Lighter Than</th> <th>Mass (kg)</th> <th>Equivalent Weight (N)</th> <th>Diameter (mm)</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>100</td> <td></td> <td></td> <td><i>As specified</i></td> </tr> <tr> <td>50</td> <td>50</td> <td></td> <td></td> <td><i>in</i></td> </tr> <tr> <td>100</td> <td>0</td> <td></td> <td></td> <td><i>Contract Documents</i></td> </tr> </tbody> </table>	Percent Heavier Than	Percent Lighter Than	Mass (kg)	Equivalent Weight (N)	Diameter (mm)	0	100			<i>As specified</i>	50	50			<i>in</i>	100	0		
Percent Heavier Than	Percent Lighter Than	Mass (kg)	Equivalent Weight (N)	Diameter (mm)																		
0	100			<i>As specified</i>																		
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100	0			<i>Contract Documents</i>																		
			<b>END OF SECTION</b>																			

Section	Sub-section	Title	Supplementary Specifications
32 01 16.7 COLD MILLING	1.0	GENERAL	
	1.5	Measurement and Payment	<p><i>Add Clause 1.5.4 as follows:</i></p> <p>Payment for this item is for the milling of existing asphalt and base gravel within the roadway, to varying depths specified as detailed in the Contract Documents.</p> <p>Payment for cold milling includes costs of mobilization, demobilization, demonstration milling test section, and incidentals required to do all cutting, breaking out, removal, disposal, temporary removal of concrete barriers and general cleanup, street sweeping, grading and compaction to allow for placement of required thickness of asphaltic concrete and disposal off-site or delivery to another location as specified;</p> <p>No payment will be made under this item for removal of the existing asphalt pavement that may not be suitable for cold milling and is part of the operation for common excavation and such removal will be treated as common excavation.</p> <p>Saw cutting and milled key at project limits will be incidental under payment item Section 02512 – Hot-Mix Asphalt Concrete Paving.</p> <p>Payment for disposal sites under this item will include Control of work and pit cleanup including laying a uniform gravel surface prepared before the stockpile material is deposited on the stockpile site and all associated work for construction of stockpiles.</p>
			<b>END OF SECTION</b>

Section	Sub-section	Title	Supplementary Specifications
<b>32 11 16.1 GRANULAR SUBBASE</b>	<b>1.0</b>	<b>GENERAL</b>	
	1.4	Measurement and Payment	<i>Delete 1.4.1 and replace with as follows:</i> Measurement for granular sub-base of variable thickness will be for actual quantity placed based on weigh tickets provided to Contract Administrator, and as accepted, as loads are delivered. Weigh tickets not submitted and accepted at the time of delivery will not be accepted for payment.
	<b>2.0</b>	<b>PRODUCTS</b>	
	2.1	Specified Materials	(Delete Clause 2.1.1.1): Select granular subbase (Delete Clause 2.1.1.2): 75mm pit run gravel (Delete Clause 2.1.1.4): pit run sand (Delete Clause 2.1.1.5): approved native material (Delete Clause 2.1.1.6): Other approved materials
	<b>3.0</b>	<b>EXECUTION</b>	
	3.5	Proof Rolling	<i>Clause 3.5.1:</i> <i>Delete "or dual".</i> <i>Add to end of sentence: ... "to 80KN (18,000 lb) minimum."</i>
			<b>END OF SECTION</b>

Section	Sub-section	Title	Supplementary Specifications
<b>32 11 23 GRANULAR BASE</b>	<b>1.0</b>	<b>GENERAL</b>	
	1.4	Measurement and Payment	<p><i>Delete 1.4.1 and replace with as follows:</i>                      Measurement for granular base of variable thickness will be for actual quantity placed based on weigh tickets provided to Contract Administrator, and as accepted, as loads are delivered. Weigh tickets not submitted and accepted at the time of delivery will not be accepted for payment.</p> <p><i>Delete 1.4.3 and replace with as follows:</i></p> <ol style="list-style-type: none"> <li>1. Payment for Sub-section 1 and 2 above includes supply, placement and compaction of granular base material, adjustment of moisture content will include all work necessary to reshape and bone to establish the road cross-section, incorporate additional granular base material as required, provide compaction, and fine grade the base to meet the required elevations.</li> <li>2. Payment for Sub-section 1 and 2 includes supply, placement, grading and compaction of granular base material for shoulder/ boulevard Gravel of varying thickness will include all work necessary in the "Schedule of Quantities and Prices".</li> </ol>
	<b>3.0</b>	<b>EXECUTION</b>	
	3.5	Proof Rolling	<p><i>Clause 3.5.1:</i>  <i>Delete "or dual".</i></p> <p><i>Add to end of sentence:...</i>"to 80KN (18,000 lb) minimum."</p> <p><i>Add Clause 3.5.7 as follows:</i>                      Prior to paving, the base surface shall be checked by the Contract Administrator, for deflections utilizing a Benkleman Beam (or other means as determined by the Contract Administrator), in order to ensure that acceptable rebound values can be obtained.</p>
			<b>END OF SECTION</b>

Section	Sub-section	Title	Supplementary Specifications
32 12 13.1 ASPHALT TACK COAT	1.0	<b>GENERAL</b>	
	1.5	Measurement and Payment	<i>Delete Clause 1.5.1 and replace as follows:</i> Payment for asphalt tack coat will be at the Unit Price bid per Liter for the spray of undiluted product at an application rate of approximately 0.25 L/m <sup>2</sup> of all surface areas to be tack coated in preparation for placement of hot-mix asphalt concrete and will include for the storing, heating, cleaning dust, contaminants, loose and foreign materials, oil, grease as directed by Contract Administrator and all work necessary to complete the Work.
	2.0	<b>PRODUCTS</b>	
	2.1	Material	<i>Add Clause 2.1.2 as follows:</i> .3 Diluting of the product will not be permitted unless approved by the Contract Administrator.
			<b>END OF SECTION</b>

Section	Sub-section	Title	Supplementary Specifications
32 12 13.2 ASPHALT PRIME	1.0	<b>GENERAL</b>	
	1.5	Measurement and Payment	<i>Delete Clause 1.5.1 and replace as follows:</i> Payment for asphalt prime will be at the Unit Price bid per Liter for the spray of undiluted product at an application rate of approximately 1.5 L/m <sup>2</sup> on all portions of completed granular base to be primed in preparation for placement of hot-mix asphalt concrete and will include for storing, heating and all preparation work necessary to complete the Work.
	2.0	<b>PRODUCTS</b>	
	2.1	Material	<i>Add Clause 2.1.3 as follows:</i> Diluting of the product will not be permitted unless approved by the Contract Administrator.
			<b>END OF SECTION</b>

Section	Sub-section	Title	Supplementary Specifications
32 12 16 HOT MIX ASPHALT CONCRETE PAVING	1.0	<b>GENERAL</b>	
	1.2	Reference	<i>Add to end of sentence:</i>  ...and Ministry of Transportation and Infrastructure's Standard Specifications for Highway Construction 2012.
	1.5	Measurement and Payment	<i>Add to Clause 1.5.1 the following:</i> In addition, includes all work involved with asphalt cutting, saw-cutting and milling of "keyed" connections at tie-ins to existing pavement, and adjusting and cleaning of valve boxes.  <i>Delete Clause 1.5.2 and replace with as follows:</i>  Refer to Section 4 – Quality Control

Section	Sub-section	Title	Supplementary Specifications
32 12 16 HOT MIX ASPHALT CONCRETE PAVING	2.0	PRODUCTS	
	2.1	Materials	<p><i>Delete Clause 2.1.1 and replace with as follows:</i></p> <p>“1 Asphalt Cement: to MoT SS952 Group A, and shall meet or exceed Penetration Grade 120-150.</p> <p><i>Delete Clause 2.1.3.2 and replace with as follows:</i></p> <p>“MoT Standard Specifications Section 502; Table 502–C– 1 Asphalt Mix Aggregate Gradation Limits.”</p> <p><i>In Clause 2.1.3.12, replace as follows:</i></p> <p>“Crushed fragments: ...</p> <p>Delete “60%” and replace with “85%”.</p> <p><i>Add new Clause 2.1.5 as follows:</i></p> <p>“Aggregates: The following shall apply:</p> <p>a) Course Aggregates</p> <p>Table 502 – B Requirements for Coarse Aggregates:                      Test Ref. No.: ASTM D5821                      Procedures:</p> <ul style="list-style-type: none"> <li>• 2 Fractured Faces, Minimum 85% by Mass retained on the 4.75mm sieve;</li> </ul> <p>b) Fine Aggregate</p> <ul style="list-style-type: none"> <li>• Shall be all mineral material passing the sieve designated in the test procedure for each individual test.</li> <li>• Shall be clean, tough, durable, moderately sharp, and free from coatings of clay, silt, or other deleterious material, and shall contain no clay balls or other aggregations of fine material.</li> <li>• Shall have a sand equivalent of not less than 40 when tested in accordance with ASTM Test D 2419</li> </ul>

Section	Sub-section	Title	Supplementary Specifications
<p><b>32 12 16                      HOT MIX                      ASPHALT                      CONCRETE                      PAVING</b></p>	<p>2.2</p>	<p>Mix Design</p>	<p><i>Delete Clause 2.2.1 and replace with as follows:</i></p> <p>The Contractor, at their cost, must retain an independent testing consultant to perform trial mix designs and to submit the job mix formula. The trial mix design must include five (5) separate trial values of asphalt content. Contractor must pay for trial mix designs and submissions.</p> <p><i>Add to Clause 2.2.2 the following:</i></p> <p>RAP material will not be permitted in the Upper Course.</p> <p><i>Delete Clause 2.2.3.2 and replace with as follows:</i></p> <p>Design of mix: by Marshall method as per requirements of MoT Standard Specifications 2012 Section 502, Table 502-C-2 Marshall Design and Production Criteria</p> <p>As part of the mix design process, the IRMS is determined in accordance with ASTM D1075 and for IRMS of less than 85% an antistripping additive shall be added to the mix at an application rate of 0.3% additive by weight of asphalt cement.</p> <p><i>Add Clause 2.2.4 as follows:</i></p> <p>Paving work shall not proceed until the Contractor receives the results of the review in writing from the Contract Administrator. The Contractor's submissions shall include the following information:</p> <ul style="list-style-type: none"> <li>• The gradation of each aggregate to be used in each mixture.</li> <li>• The percentage by mass of each aggregate to be used in each mixture.</li> <li>• The design gradation of the combined aggregate for each mixture for each of the sieve sizes applicable to the mix, per the first column of MoT Table 502-C-1.</li> <li>• The estimated dry sieve gradation corresponding to the JMF gradation.</li> </ul>

Section	Sub-section	Title	Supplementary Specifications
32 12 16 HOT MIX ASPHALT CONCRETE PAVING	2.2	Mix Design	<ul style="list-style-type: none"> <li>• All Asphalt Mix Design Data used in arriving at the final mix designs.</li> <li>• The Design Asphalt Content expressed as a percentage of the dry weight of the aggregate.</li> <li>• The Design Mix Temperature, which shall be the temperature at which the kinematic viscosity of the asphalt cement is 0.17 Pa•s (170 centistokes) or as per the Asphalt Cement supplier's recommendations.</li> <li>• The recommended compaction temperature.</li> </ul> <p><i>Add Clause 2.2.5 as follows:</i></p> <p>.1 Should it become necessary to change the source of aggregates or asphalt cement, a new mix design shall be completed and submitted to the Contract Administrator for review and approval. This cost shall be the responsibility of the Contractor.</p>
	<b>3.0</b>	<b>EXECUTION</b>	
	3.2	Equipment	<i>Add to Clause 3.5.4.3 as follows:</i> Pavers must be capable of placing a standard mat width not less than 3m.
	3.5	Placing	<i>Add to Clause 3.5.4.3 as follows:</i> Minimum lift thickness for surface course shall not be less than 50mm.
	3.7	Joints	<p><i>Delete Clause 3.7.5 and replace as follows:</i></p> <p>Construct butt joints as directed in the field by the Contract Administrator.</p> <p><i>Delete Clause 3.7.6 and replace as follows:</i></p> <p>Longitudinal joints in the top lift of asphalt pavement will only be permitted under pavement markings where lane dividing lines are to be painted.</p>

Section	Sub-section	Title	Supplementary Specifications
<b>32 12 16                      HOT MIX                      ASPHALT                      CONCRETE                      PAVING</b>	4.0	Add new Section as follows:  <b>QUALITY CONTROL</b>	
	4.1	General	Quality Control shall be performed by the Contractor in accordance with and the requirements of this Section.
	4.2	Quality Control Plan	<p>.1 A Quality Control Plan (QCP) shall be submitted to the Contract Administrator at the preconstruction meeting. No paving will be permitted until the QCP has been approved by the Contract Administrator. The Quality Control Plan must include a detailed description of the means by which the Contractor shall use the quality control test results to ensure that the workmanship, asphalt materials, aggregate, mix production, paving and pavement compaction processes will be controlled to keep the product within the specified limits. It will include full details of means, methods, frequencies of construction quality control measures including the paving equipment, rate of placement, proposed rolling patterns for breakdown, intermediate and finishing rollers, in-situ density testing during and after compaction and monitoring of temperature of the asphalt mix in the trucks.</p> <p>The Contractor shall employ qualified personnel, including at least one certified technician to implement and oversee the QCP.</p>

Section	Sub-section	Title	Supplementary Specifications
<b>32 12 16                      HOT MIX                      ASPHALT                      CONCRETE                      PAVING</b>	4.3	Quality Control Testing and Inspection	<p>.1 The Contractor shall provide and maintain equipment and qualified personnel to perform all laboratory testing, field testing and inspection necessary to determine and monitor the characteristics and properties of all the materials produced and incorporated into the work. They shall also monitor the workmanship of the final product in accordance with the Quality Control Plan as most recently submitted.</p> <p>The Contractor shall provide a testing facility(s) that meets the requirements necessary to carry out all the test procedures listed within this Section. The facility(s) must have the equipment specified under the appropriate test designation to perform the tests.</p>
	4.4	Application Summary	<p>.1 For the purposes of confirming delivery of asphalt mix and shouldering aggregate to the road and the calculation of material application rates, the Contractor shall provide to the Contract Administrator a copy of the Road Checker's Summary and the weigh tickets for each load received at the placement operation at the end of each shift. The Road Checker's Summary shall include, but not be limited to, the following information:</p> <ul style="list-style-type: none"> <li>• Truck Number.</li> <li>• Weigh Ticket Number and Net Weight of load.</li> <li>• Date, time and location by station of delivery.</li> <li>• Material Application Rate Dimensions and Calculations. Calculation frequency minimally shall be for every 10 loads.</li> <li>• Notes pertaining to the paving of any appurtenances (letdowns, intersections, tapers, etc.)</li> </ul>

Section	Sub-section	Title	Supplementary Specifications
<p><b>32 12 16                      HOT MIX                      ASPHALT                      CONCRETE                      PAVING</b></p>	<p>4.5</p>	<p>Lot and Sub-Lot</p>	<p>.1 A Lot shall be one day's scheduled production of at least 7 hours plant production where no changes have occurred to criteria such as but not limited to:</p> <ul style="list-style-type: none"> <li>• accepted Job Mix Formula,</li> <li>• the specific Lift that is being placed,</li> <li>• the required material application rate.</li> </ul> <p>A change in any above criteria may require a new Lot designation.</p> <p>Where one day's production is less than 7 hours the material will be added to the next Lot that has the same criteria, as described above, except that if a test indicates that this production is subject to rejection, or if no further material will be produced with the same criteria, this production will be designated as a separate Lot.</p> <p>A Lot shall be no more than two days total production even if the above criteria has not changed or been met.</p> <p>.2 For testing, a Lot shall be divided into three equal Sub-Lots, defined by lineal metres of production.</p> <p>.3 A Marshall analysis will performed from a sample obtained at the paving site on a frequency of one analysis per Sub-Lot.</p> <p>.4 Additional loose samples (Dispute bags) for special testing will be taken concurrently with Quality Assurance sampling by the Contract Administrator and will only be tested by a third party in the case of adjudication of results from Quality Control and Quality Assurance test results.</p>

Section	Sub-section	Title	Supplementary Specifications
<b>32 12 16                      HOT MIX                      ASPHALT                      CONCRETE                      PAVING</b>	4.6	Aggregate Gradation and Asphalt Cement Content	<p>.1 The asphalt content of the asphalt mix will be determined from loose mix samples obtained from each Sub-Lot (3 per Lot) and tested in accordance with ASTM D 6307 test procedures.</p> <p>.2 One random sample will be obtained from each Sub-lot. The asphalt content of the asphalt mix will be determined using the average of the results obtained from all of the Sub-lot samples. The actual Asphalt Content of the Lot will be compared to the Job Mix Formula Asphalt Content.</p> <p>.2 Aggregate gradation will be determined from loose mix samples obtained from each Sub-Lot (3 per Lot). Gradation analysis of extracted aggregate shall be performed in accordance with ASTM C136 and C117.</p> <p>.3 One random sample will be obtained from each Sub-lot, and the aggregate gradation for the Lot will be determined by using the average of the 3 Sub-Lot tests to determine the Sample Mean.</p> <p>.4 During plant production, the gradation of the asphalt mix shall be tested. Samples shall be obtained at the plant both prior to and after the addition of the asphalt cement. Test results shall be made available as soon as possible to allow for adjustments to the process. The mixture properties shall be within the specified tolerances of the design.</p>
	4.7	Material Application Rate	<p>.1 Asphalt mix shall be applied to the roadway at the rate or rates as approved in the QCP. Material Application Rates will be determined by the tonnage delivered to the paver as recorded by weigh tickets generated by automated scales, divided by the area covered by the Lot. The Contractor shall provide the material application rate calculations to the Contract Administrator at the end of each shift.</p>

Section	Sub-section	Title	Supplementary Specifications
<b>32 12 16                      HOT MIX                      ASPHALT                      CONCRETE                      PAVING</b>	4.8	Thickness	<p>.1 The actual pavement thickness for will be determined from core samples of the completed Lift of pavement.</p> <p>One random core sample will be obtained from each Sub-Lot and the test results for the three Sub-Lots will be averaged to determine the thickness for the Lot.</p> <p>.2 If the deficiency of any individual core exceeds 10mm, the Contractor shall have the opportunity to pay for the cost of extracting and sampling, by the Contract Administrator, additional cores on either side of the failed core (location to be generally agreed upon by the Contract Administrator and the Contractor) to minimize the area for removal and replacement, provided the area being re-cored will be included in the new removal.</p> <p>.3 Sampling and testing for thickness determination shall be in accordance with ASTM D3549.</p>
	4.9	Density	<p>.1 The average in-place density will be determined from core samples of the completed Lift of pavement. One random core sample will be obtained from each Sub-Lot and the test results for the three Sub-Lots will be averaged to determine the percent density for the Lot.</p> <p>.2 From each Sub-lot sample, the Contractor will form three briquettes and the ASTM D 2726 test results will be averaged to obtain the test value for that sample, provided no individual core is less than 95%.</p> <p>.3 In the event that the three core average exceeds 97%, but at least one core falls below 95%, the Contractor shall have the opportunity to pay for the cost of extracting and sampling, by the Contract Administrator, additional cores on either side of the failed core (location to be generally agreed upon by the Contract Administrator and the Contractor) to minimize the area for removal and replacement, provided the area being re-cored will be included in the new removal limits.</p>

Section	Sub-section	Title	Supplementary Specifications
<p><b>32 12 16                      HOT MIX                      ASPHALT                      CONCRETE                      PAVING</b></p>	<p>4.10</p>	<p>Rejection Limits</p>	<p>There will be no Payment Adjustments and Rejection limits shall apply to:</p> <ul style="list-style-type: none"> <li>• Gradation</li> <li>• Asphalt Content</li> <li>• Density</li> <li>• Application Rate</li> <li>• Thickness</li> <li>• Segregation</li> <li>• Smoothness</li> </ul> <p>1. Gradation: Where one or more values of the Sample Mean for the specified sieves falls outside the limiting value specified in Table 502-C-1, the Lot is rejected and the Contractor shall remove and replace the Lot.</p> <p>2. Asphalt Cement: A deviation from design of 0.50% or greater will mean the Lot is rejected and the Contractor shall remove and replace the Lot.</p> <p>3. Density: The rejection limit for density is &lt;96% for Lot average. If any Sub-Lot has a value within the reject zone, the Sub-Lot is rejected and not paid for.</p> <p>4. Application Rate: Where actual application rate for the Lot is &lt;94% or in excess of 106%, the Lot is rejected. A Lot rejected for application rate may be corrected by mill-and-fill or rejected with no remedial work required, subject to authorization by the Contract Administrator.</p> <p>5. Thickness: Pavement of any type found to be deficient by more than 10mm must be removed and replaced by pavement, of specified thickness, at the Contractor's expense.</p> <p>6. Segregation: As specified in MoT Standard Specifications 2012 Section 502.56.</p> <p>7. Smoothness: Deficiencies (bumps and dips) in excess of 12mm over 3m will require remedial work as directed by the Contract Administrator.</p>
			<p><b>END OF SECTION</b></p>

Section	Sub-section	Title	Supplementary Specifications
32 13 13 PORTLAND CEMENT CONCRETE PAVING	2.0	PRODUCTS	
	2.1	Materials	<i>Delete Clause 2.1.4 and replace as follows:</i>  Concrete mixes and materials: to Section 03 30 53 – Cast-in-place Concrete meeting CSA A23.1 Exposure Class C2.
			<b>END OF SECTION</b>

Section	Sub-section	Title	Supplementary Specifications
32 13 16.1 ROLLER COMPACTED CONCRETE PAVING	2.0	PRODUCTS	
	2.1	Materials	<i>Delete Clause 2.1.3 and replace as follows:</i>  Portland cement: to CSA A3000.  <i>Delete Clause 2.1.4 and replace as follows:</i>  Fly Ash: to CSA A3000.
			<b>END OF SECTION</b>

Section	Sub-section	Title	Supplementary Specifications
32 17 23 PAINTED PAVEMENT MARKINGS	2.0	PRODUCTS	
	2.1	Materials	<p><i>Delete Clause 2.1.3 and replace as follows:</i></p> <p>.3 Paint:</p> <p>.1 To BC Ministry of Transportation Standard Specifications 2012 Section 321.04 and latest BC Ministry of Transportation Recognized Product Book specification.</p> <p>.2 Paint products shall meet Environment Canada's Federal Regulations on VOC limits</p> <p><i>Delete Clause 2.1.5 and replace as follows:</i></p> <p>.5 Glass beads to BC Ministry of Transportation Standard Specifications 2012 Section 321.04i</p> <p><i>Change section reference title of 2.1.6 to:</i></p> <p>.6 Pavement Markings:</p> <p><i>Delete Clause 2.1.6.1 and replace as follows:</i></p> <p>.6 Thermoplastic Material:</p> <p>.1 To latest BC Ministry of Transportation Recognized Product Book specification.</p> <p><i>Add new clause 2.1.8 as follows:</i></p> <p>.8 Paint Retroreflectivity:</p> <p>.1 Retroreflectivity shall be in accordance with ASTM D 4061 "Standard Test for Retro reflectance of Horizontal Coatings."</p> <p>.2 Retroreflectivity properties of not less than 200 millicandela·m<sup>-2</sup>·lux<sup>-1</sup> for White Paint under dry conditions are achieved markings for at least 30 days from the time of application;</p> <p>.3 Retroreflectivity properties of not less than 150 millicandela·m<sup>-2</sup>·lux<sup>-1</sup> for Yellow Paint under dry conditions are achieved markings for at least 30 days from the time of application;</p>

Section	Sub-section	Title	Supplementary Specifications
32 17 23 PAINTED PAVEMENT MARKINGS	3.0	EXECUTION	
	3.2	Condition of Surfaces	<i>Add new clause 3.2.2 as follows:</i> .2 Ensure pavement and atmospheric conditions comply with paint manufacturer's recommendations.
	3.3	Application	<i>Delete Clause 3.3.2.1 and replace as follows:</i> .1 Layout all Longitudinal, Transverse, Chevron, and Crosshatch Pavement Markings as identified in the Contract Drawings or existing pavement markings in accordance with the BC Ministry of Transportation Manual of Standard Traffic Signs and Pavement Markings or as instructed by the Contract Administrator. All layout to be done by the Contractor for any pavement marking, new or otherwise, and will be considered incidental to the Work.  <i>Delete Clause 3.3.2.2 and replace as follows:</i> .2 Unless approved otherwise by Contract Administrator, apply paint only when air temperature is above 10°C and no rain is forecast.  <i>Delete Clause 3.3.2.3 and replace as follows:</i> .3 Paint application rate to comply with manufacturer's specifications and recommendations.  <i>Delete Clause 3.3.2.5 and replace as follows:</i> .5 Symbols, letters, and numerals to conform to dimensions shown on Contract Drawings or latest edition of TAC Manual of Uniform Traffic Control Devices for Canada.  <i>Delete Clause 3.3.2.8 and replace as follows:</i> .8 Apply glass beads immediately following paint application at a uniform application rate as required by manufacturer.  <i>Delete Clause 3.3.2.10 and replace as follows:</i> .10 Ensure all pavement markings in accordance with latest edition of BC Ministry of Transportation Manual of Standard Traffic Signs and Pavement Markings.

Section	Sub-section	Title	Supplementary Specifications
<b>32 17 23                      PAINTED                      PAVEMENT                      MARKINGS</b>	3.3	Applicaton	<p><i>Delete Clause 3.3.3.3 and replace as follows:</i></p> <p>Thermoplastic material shall be heated in the melter to a temperature of 382°F.</p>
	3.4	Tolerance	<p><i>Delete Clause 3.4 and replace as follows:</i></p> <p>.1 Ensure Longitudinal painted markings are straight, or of uniform curvature, and conform with the alignment.</p> <p>.2 Ensure Transverse, Chevron, and Crosshatch Pavement Markings are straight or of uniform curvature, have well defined edges and are free from horizontal fluctuations, and intersect or parallel longitudinal markings or pavement edges in a neat and tidy fashion.</p> <p>.3 Where applicable, newly applied pavement markings shall have a sufficiently thick cross-section throughout their entire length and width, and completely cover existing older markings in a neat and tidy fashion, except where apparent that an existing pavement marking is incorrect.</p> <p>.4 Ensure painted markings within plus or minus 10mm of specified dimensions and specifications. Pavement markings of any type found to be deficient shall be eradicated and replaced at the Contractor's expense.</p>
			<b>END OF SECTION</b>

Section	Sub-section	Title	Supplementary Specifications
<b>32 31 13 CHAIN LINK FENCES AND GATES</b>	<b>3.0</b>	<b>EXECUTION</b>	
	3.3	Installation of Gates	<p><i>Add new Subsection 3.3 as follows:</i></p> <ul style="list-style-type: none"> <li>.1 Install gates in locations as shown on Contract Drawings.</li> <li>.2 Level contours between gate posts and set gate bottom approximately 40 mm above ground surface.</li> <li>.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.</li> <li>.4 Install gate stops where specified.</li> </ul>
	3.4	Touch up	<p><i>Add new Subsection 3.4 as follows:</i></p> <ul style="list-style-type: none"> <li>.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.</li> </ul>
	3.5	Cleaning	<p><i>Add new Subsection 3.5 as follows:</i></p> <ul style="list-style-type: none"> <li>.1 Clean and trim areas disturbed by operations. Dispose of surplus material as specified in Contract Documents.</li> </ul>
			<b>END OF SECTION</b>

Section	Sub-section	Title	Supplementary Specifications
<b>32 91 21 TOPSOIL AND FINISHING GRADE</b>	<b>1.0</b>	<b>GENERAL</b>	
	1.1	Related Work	<i>Add Clause 1.1.6 as follows:</i>  “.6 Shrubs & Tree Preservation.....Section 02104”
	1.3	Source Quality Control	<i>(Delete Clause 1.3.2 and replace as follows):</i>  The Owner is responsible for the cost of initial testing of the planting soil. The Contractor shall submit the soil test results to the Contract Administrator for approval of the proposed material prior to placing of the planting soil on site. The test results shall determine soil amendment requirements. Testing shall be carried out by independent laboratory specializing in soil analysis.
	<b>2.0</b>	<b>PRODUCTS</b>	
	2.1	General	<i>Add Clause 2.1.2 as follows:</i>  .2 All materials and execution shall conform to the latest edition of the BCSLA\BCNTA British Columbia Landscape Standard following standards or as otherwise specified herein.
	<b>3.0</b>	<b>EXECUTION</b>	
	3.4	Placing Growing Medium	<i>Add Clause 3.4.6 as follows:</i>  .6 Scarify soil, feather grades and remove noxious weeds from the edge of tree preservation areas.
			<b>END OF SECTION</b>

Section	Sub-section	Title	Supplementary Specifications
32 92 19 HYDRAULIC SEEDING	3.0	<b>EXECUTION</b>	
	3.3	Equipment	<i>Delete Clause 3.3.1 and replace as follows:</i> All hydraulic seeding/mulching equipment adjustment to reflect Rates of Application determined for the project.
	3.5	Application for Hydraulic Seeding	<i>Delete Clause 3.5.4 and replace as follows:</i> If required, add legume seed to grass mixture at time of seeding. Inoculate legume seed with standard product humus culture before mixing with grass seed. Protect inoculated seed from exposure to sunlight for periods of over one-half hour. Use seed within eight hours from inoculation; otherwise, seed to be reinoculated.
			<b>END OF SECTION</b>

Section	Sub-section	Title	Supplementary Specifications
32 92 20 SEEDING	3.0	<b>EXECUTION</b>	
	3.3	Application for Mechanical Dry Seeding	<i>Delete Clause 3.3.5 and replace as follows:</i> Apply mulch with seed; or apply mulch immediately after seeding. Do not seed areas which cannot be mulched the same day.
	3.8	Guarantee / Maintenance	<i>Delete Clause 3.8.2 and replace as follows:</i> Guarantee includes replacing all seeded areas determined by Contract Administrator to be dead or failing at end of Maintenance Period. Replacements to be made at next appropriate season, and conditions of guarantee will apply to all replacement seeding for one full growth season.
			<b>END OF SECTION</b>

Section	Sub-section	Title	Supplementary Specifications
32 92 23 SODDING	3.2	Sodding	<p><i>(Delete Clause 3.2.5 and replace as follows):</i></p> <p>Lay sod smooth and flush with adjoining grass areas and paving and top surface of curbs unless shown otherwise on Contract Drawings. Ensure there is a full roll width between the new sod and adjoining surfaces. Small cut pieces from a full roll will not be accepted.</p> <p><i>(Delete Clause 3.2.12 and replace as follows):</i></p> <p>Water sod area immediately with sufficient amounts to saturate sod and upper 100 mm of growing medium. Do not allow the sod to dry out so that the joints become visible.</p>
	3.5	Conditions for Total Performance	<p><i>Add Clause 3.5.1.8 as follows:</i></p> <p>.8 The prime consideration for acceptance of work of this section shall be the establishment of a dense, uniform cover of growth over 100% of all sodded areas.</p>
			<b>END OF SECTION</b>

Section	Sub-section	Title	Supplementary Specifications
<b>32 93 01                      PLANTING OF                      TREES, SHRUBS                      AND GROUND                      COVERS</b>	<b>3.0</b>	<b>EXECUTION</b>	
	3.11	Guarantee / Maintenance	<p><i>Delete Clause 3.11.2 and replace as follows:</i></p> <p>Guarantee includes replacing all plants determined by Contract Administrator to be dead or failing at end of Maintenance Period. Replacements to be made at next appropriate season, and conditions of guarantee will apply to all replacement plants for one full growing season.</p> <p><i>Delete Clause 3.11.3 and replace as follows:</i></p> <p>Contract Administrator reserves the right to extend Contractor's guarantee responsibilities for an additional one year if, at the end of initial Maintenance Period, leaf development growth is not sufficient to ensure future survival.</p>
			<b>END OF SECTION</b>

Section	Sub-section	Title	Supplementary Specifications
33 01 30.1 CCTV INSPECTION OF PIPELINES	1.0	<b>GENERAL</b>	
	1.3	Submission of Certification	<i>Delete Clause 1.3.1 and replace as follows:</i>  .1 Submit copy of the CCTV operator's current NASSCO certification certificate to the Contract Administrator at least one week prior to the start of the CCTV inspection operations
	3.0	<b>EXECUTION</b>	
	3.1	CCTV Inspection	<i>Delete Clause 3.1.1 and replace as follows:</i>  .1 CCTV operator to be certified by NASSCO
	3.12	Coding Accuracy	<i>Delete Clause 3.12.4 and replace as follows:</i>  .4 An operator failing to meet the accuracy requirements on two occasions will not be permitted to code on the remainder of the project until they have successfully passed the NASSCO Level of Qualification for CSA Operators.
			<b>END OF SECTION</b>

Section	Sub-section	Title	Supplementary Specifications
33 11 01 WATERWORKS	1.0	<b>GENERAL</b>	
	1.8	Measurement and Payment	<p><i>Delete Clause 1.8.13 and replace as follows:</i></p> <p>Payment for tie-ins to existing mains where all pipework is to be undertaken by the Contractor will be as 1.8.12 of this Section, including all pipes, fittings and necessary tie-in work to complete tie-in as shown on Contract Drawings.</p> <p><i>Add Clause 1.8.14 as follows:</i></p> <p>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 work as shown on Standard Detail Drawing W4.</p>
	2.0	<b>PRODUCTS</b>	
	2.2	Mainline Pipe, Joints and Fittings	<p><i>Delete Clause 2.2.2.2 and replace as follows:</i></p> <p>Joints: It is mandatory that the push-on integrally thickened bell and spigot type conform to ASTM D3139 Clause 6.2 with single elastomeric gasket to ASTM F477.</p>
	2.3	Valves and Valve Boxes	<p><i>Delete Clause 2.3.3 and replace as follows:</i></p> <p>Mainline Butterfly Valves: Butterfly valves: may only be installed on mains 350mm diameter or larger. Butterfly valves shall be full body, fusion bonded epoxy coated to AWWA C550, suitable for direct bury and conforming to AWWA C504.</p>
	2.4	Valve and Large Meter Chambers	<p><i>Delete Clause 2.4.7 and replace as follows:</i></p> <p>Mortar: aggregate to CAN/CSA-A82.56, Masonry cement to CSA A3000.</p>
	2.5	Service Connections, Pipe, Joints and Fittings	<p><i>Add to Clause 2.5.1 as follows:</i></p> <p>Or 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 to CSA B 137.5, AWWA C904.</p>

Section	Sub-section	Title	Supplementary Specifications
<b>33 11 01 WATERWORKS</b>	2.6	Hydrants	<i>Delete Clause 2.6.1.6.1 and replace as follows:</i> .1 Hose nozzle threads to BC standard for Fire Hydrants. Hose nozzle to Storz pumper port type.
	2.7	Underground Service Line Valves and Fittings	<i>Add new Clause 2.7.3.6 as follows:</i> All curb stops to be non-draining type unless otherwise specified in Contract Documents.
	<b>3.0</b>	<b>EXECUTION</b>	
	3.3	Trenching	<i>Delete Clause 3.3.3 and replace as follows:</i> Trench depth to provide cover over pipe of not less than 1.8m from finished grade unless otherwise shown in Contract Drawings.
	3.19	Testing Procedure	<i>Delete sentence from Clause 3.19.2:</i> Maximum allowable leakage rate at test pressure to not exceed 1.25 litres per millimetre diameter of pipe per kilometre per 24 hour period.
	3.20	Disinfection, General	<i>Add to Clause 2.5.1 as follows:</i> Perform bacteriological tests in accordance with AWWA C651 Section 5. Results from approved testing laboratory to be submitted to Contract Administrator.
			<b>END OF SECTION</b>

Section	Sub-section	Title	Supplementary Specifications
<b>33 30 01 SANITARY SEWERS</b>	<b>1.0</b>	<b>GENERAL</b>	
	1.6	Measurement and Payment	<i>Delete Clause 1.6.5 and replace as follows:</i> Payment for concrete bedding or controlled density fill, where shown on Contract Drawings, 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 Contract Drawings or Standard Detail Drawing G4.
	<b>2.0</b>	<b>PRODUCTS</b>	
	2.1	Concrete Pipe	<i>Delete Clause 2.1.3.4 and replace as follows:</i> Lift insert opening not required to be grouted provided it does not extend beyond the depth of the engineered design.
	<b>3.0</b>	<b>EXECUTION</b>	
	3.10	Service Connection Installation	<i>Add to Clause 3.10.3 as follows:</i> Inspection chambers shall be 200mm diameter.  <i>Delete Clause 3.10.4.</i>
			<b>END OF SECTION</b>

Section	Sub-section	Title	Supplementary Specifications
33 34 01 SEWAGE FORCEMANS	3.0	<b>EXECUTION</b>	
	3.15	Pressure Testing Procedure	<i>Delete Clause 3.15.2 and replace as follows:</i> 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.
			<b>END OF SECTION</b>

Section	Sub-section	Title	Supplementary Specifications
33 40 01 STORM SEWERS	3.0	<b>EXECUTION</b>	
	3.12	Inspection and Testing	<i>Add new Clause 3.12.4 as follows:</i> Storm sewer mains to be tested as per Sanitary sewer mains, Section 33 30 01.
			<b>END OF SECTION</b>

Section	Sub-section	Title	Supplementary Specifications
02725 MANHOLES AND CATCHBASINS	1.0	GENERAL	
	1.5	Measurement and Payment	<p><i>Delete Clause 1.5.3 and replace as follows:</i></p> <p>Payment for adjustment of tops of existing catchbasins, lawn drains, cleanouts, and inspection chambers will only be made for adjustments not related to paving work under sections 32 12 13 and 32 13 13.</p> <p>Adjustment of tops of existing units will be measured in units adjusted for each type as defined below:</p> <ol style="list-style-type: none"> <li>1. Manhole adjustments will be defined as resetting of the cast frame and lid to finished grade. Adjustments will include jackhammering, replacement, removal or addition of concrete brick (maximum of 3 or minimum of 1) or precast concrete riser rings, cement mortar, concrete, temporary asphalt ramping and all other incidental work. <u>All manholes must be vertically adjusted a minimum of twenty four (24) hours prior to paving.</u></li> <li>2. Valve box and monument box adjustments will be defined as resetting of the casting to finished grade. Adjustments will include jackhammering, cement mortar, concrete, temporary asphalt ramping and all other incidental work. No payment will be made for the adjustment of valve boxes and monument box which can be adjusted to the correct elevation by moving the box up or down within the limits of the slack allowed in the box as this work is considered to be incidental to payment for work described in other sections. <u>All valve boxes must be vertically adjusted a minimum of twenty four (24) hours prior to paving.</u></li> </ol>

Section	Sub-section	Title	Supplementary Specifications
<p><b>02725                      MANHOLES                      AND                      CATCHBASINS</b></p>	<p>1.5</p>	<p>Measurement and Payment</p>	<p><i>Add Clause 1.5.7</i></p> <p>Payment for adjustment of other utility manholes, such as BC Hydro, Telus and others, will be include resetting of the cast frame and cover. Adjustments will include jackhammering, replacement, removal or addition of concrete brick, cement mortar, concrete, temporary asphalt ramping and all other incidental work. The Contractor is responsible to contact the appropriate utility company with in minimum of seventy two (72) hours of the work. No adjustment shall be made without the written approval of the utility company.</p> <p><i>Add Clause 1.5.8</i></p> <p>Payment for replacing manhole frames and lids will include all work associated with the removal and disposal of existing frame, lid and risers; supply of frame, cover and all materials to the City’s specifications installing a new manhole frame and lid and setting to the finished grade. Replacements will include jackhammering, replacement, removal or addition of concrete brick (maximum of 3 or minimum of 1) or precast concrete riser rings, cement mortar, temporary asphalt ramping and all other incidental work. Payment will be made for each manhole frame and lid replaced.</p> <p><i>Add Clause 1.5.9</i></p> <p>Payment for replacing a catchbasin frame and grate will include all work associated with the removal and disposal of existing frame and grate; supply of replacement frame and grate, installation of the new frame and grate including all materials required for final adjustment; temporary asphalt ramping and all other incidental work. Payment will be made for each catchbasin frame and grate replaced.</p>
	<p>2.1</p>	<p>Materials</p>	<p><i>Delete Clause 2.1.15.2 and replace as follows:</i></p> <p>Cement: to CSA A3000.</p>
			<p><b>END OF SECTION</b></p>