

Transportation and Infrastructure, Municipal Infrastructure Municipal Water, Sewer and Roads Master Construction Specifications

May 2024 List of Revisions

Section Number	Section	Item/Revision
General	All	<p>Editorial changes have been made to the entire spec to introduce styles from Word for easier numbered referencing and future editing.</p> <p>All specification sections are not organized into consistent Parts, 1 References, 2 General, 3 Products, 4 Execution, 5 Basis of Payment.</p> <p>Numbering will be different from previous specifications.</p> <p>Removed numbered references when possible. Updated numbered references within same section.</p> <p>Other minor editorial changes to correct typos and coordinate existing language and edits across various parts of the specifications i.e. table of contents, Sample Schedule of Quantities and Prices, etc.</p>
User's Guide		<p>The User's Guide is not part of the specifications. A more detailed User's Guide is being created to outline for consultants specific issues like the Insurance Certificate and the Agreement Between Owner and Contractor templates, 01000 Project Specific Specifications, use of Building Design and Constructions Specifications, unpaved roadways, asphalt lifts, Owner's Site Office, major detours, as-built information, etc.</p>
Introduction		<p>Change references from 2023 to 2024.</p> <p>Add Wilfred Maloney, P. Eng Department of Transportation and Infrastructure as a member.</p>
Standard Form 14	Daily Contract Control Sheet	<p>Remove Day column to make more room for Station, etc. Rows are taller by default. To be posted as .docx and .pdf.</p> <p>Add text: To be forwarded to Contractor for their records on a minimum of a bi-weekly basis.</p>

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Standard Form 18	Daily Site Report	Form 18 – add worked hours to the top.
Standard Form 15	Contract Payment Sheet	<p>Add:</p> <p>Petroleum Products Adjustment Worksheet Has been submitted for change order approval prior to this submission? <input type="checkbox"/> Yes <input type="checkbox"/> N/A</p> <p>Force Account Has been submitted for change order approval prior to this submission? <input type="checkbox"/> Yes <input type="checkbox"/> N/A</p> <p>Remove Force Account as item 3 in table. Renumber table.</p>
Standard Form 16	Contract Detail Sheet	Form 16 – add reference to Petroleum Products Adjustment and Force Account in CO section.
ITB 15	Substitution Of Materials And Return Costs	<p>Rename Substitution of Materials. Remove 15. (d).</p>
ITB 25	Period of Work	<p>Add:</p> <p>(c) Unless otherwise specified or approved by the Owner, the contractor shall be mobilized and on the work site ten (10) business days after execution of a formal agreement with the Owner.</p>
01002 Abbreviations		<p>Add missing abbreviations. Add SI unit for Retroreflectivity.</p>
01003 Reference Documents		Replaced 'Atlantic Provinces Ready Mixed Concrete Association' with 'Atlantic Concrete Association'.
01005 General Instructions		<p>Delete:</p> <p>The Work to be done under this contract consists of supplying all materials and equipment, plant and labour necessary for the construction and installation of the Work as summarized on the Project Specific Specification and Drawings.</p>
01005 General Instructions	Documents Required	Rename 'Documents Required On Site'.
01005 General Instructions	Existing Underground Services	Replace 'governing authorities' with 'the Owner'.

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01005 General Instructions	2.14 Temporary Supply of Water and Sewer Services To Occupants	<p>Rename to place Temporaries together.</p> <p>.1 Where buildings have wells which are used as a source of potable water and should loss of water occur in individual wells as a result of lowering of the ground water table due to carrying out the Work, the Owner will supply affected occupants with water on a temporary basis. If the Owner requires that the Contractor supply water on a temporary basis, the Contractor shall be paid for this additional Work as a Cash Allowance item. The method of payment shall be in accordance with Section 01020. The Contractor will not be responsible for finding an alternative supply. The Contractor will test the temporary system as required by the Owner.</p> <p>.2 If it is not feasible, as determined by the Owner, to maintain the existing system and the Contractor is required to install and operate a temporary system; the Contractor shall be paid for this additional Work as a Cash Allowance item. The method of payment shall be in accordance with Section 01020.</p>
01005 General Instructions	2.15 Maintaining Existing Supply of Water or Sewer Services to Occupants	<p>Rename to place Maintain items together. Replace Cash allowance reference with lump sum.</p> <p>.1 Where buildings are supplied potable water by a piped system that is indicated on the drawings, the Contractor shall be responsible to maintain the existing system. The method of payment to the Contractor for maintaining the existing system shall be a lump sum item as per the MERX Schedule of Quantities and Prices.</p> <p>.2 Where buildings are serviced by a piped system that is indicated on the drawings, the Contractor shall be responsible to maintain the existing system. The method of payment to the Contractor for maintaining the existing system shall be a lump sum item as per the MERX Schedule of Quantities and Prices.</p>
MERX Price Table		Add both Maintaining options from 2.15 in MERX table under 01005.
01005 General Instructions	Requests for Information (RFI)	<p>Add new subsection 2.19 Requests for Information (RFI):</p> <p>.1 In the event that the General Contractor or any Subcontractor involved in the Work, determines that some portion of the drawings, specifications, or other contract documents requires clarification or</p>

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		<p>interpretation by the Owner, the General Contractor shall submit a Request for Information (RFI) in writing to the Owner.</p> <p>.2 RFI's may only be submitted by the General Contractor and shall only be submitted on the RFI Form as required by the Owner. Any RFI's submitted, not on the official RFI Form will be returned to the Contractor unreviewed.</p> <p>.3 In the RFI, the General Contractor shall clearly and concisely set forth the issue for which clarification or interpretation is sought and why a response is needed from the Owner.</p> <p>.4 In the RFI, the General Contractor shall set forth an interpretation or understanding of the requirement along with reasons why such an understanding was reached.</p> <p>.5 The Owner will review all RFI's to determine whether they are valid RFI's. If it is determined that the document is not a valid RFI, it will be returned to the General Contractor, unreviewed, with an explanation why it was deemed not valid.</p> <p>.6 A RFI Response shall be issued within five (5) working days of receipt of the request from the General Contractor unless the Owner determines that a longer time is necessary to provide an adequate response. If a longer time is determined necessary by the Owner, the Owner will, within five (5) working days of receipt of the request, notify the General Contractor of the anticipated response time.</p> <p>.7 If the General Contractor submits a RFI on an activity with five (5) working days or less of float on the current project schedule, the General Contractor shall not be entitled to any time extension due to the time it takes the Owner to respond to the request provided that the Owner's responds within the five (5) working days set forth above.</p> <p>.8 A RFI Response from Owner will not change any requirement of the Contract Documents. In the event</p>

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		the General Contractor believes that the RFI Response will cause a change to the requirements of the Contract Documents, the General Contractor shall within five (5) working days give written notice to the Owner stating that the General Contractor believes the RFI Response will result in a Change Order and the Contractor intends to submit a "Proposed Change Order" request. Failure to give such written notice of five (5) working days shall waive the General Contractor's right to seek additional time or cost under the requirements of the Contract Documents.
Standard Form 1	Request for Information	New standard form
01001 Definitions		Add: Specialty item: a Product that is designed and fabricated specifically for the Work and cannot be easily incorporated into other Work.
01010 Mobilization & Demobilization	Measurement for Payment	Include in Measurement for Payment items .1 and .2 'including this item'.
01015 Materials & Equipment Delivered to Site	General	Add: .1 The Contractor is responsible for accuracy of the shop drawing in accordance with the requirements of the Contract documents, and coordination with all other trades. Renumber subsequent items. Add to .2: Contractor is responsible for bringing materials to site. Replace .3 with: Materials and equipment delivered to site will be stored, handled, and protected in accordance with Section 01600. Add new:

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		<p>.7 Contractor is fully responsible for ensuring the Products stored on site are used for the Work.</p> <p>.8 Contractor is responsible for ensuring the quantity delivered is what will be required for the Work. The values in the MERX Schedule of Quantities and Prices are estimates at time of design. Contractor shall verify quantity prior to purchasing and delivering.</p>
01015 Materials & Equipment Delivered to Site	Measurement for Payment	<p>Replace 'equipment on site' with 'equipment secured on site'.</p> <p>Add:</p> <p>.2 Specialty items require documentation from the supplier at time of shop drawing submittal by the Contractor, as to whether or not the item can be returned if not used in the Work.</p> <p>.2.1 After shop drawing approval, those specialty items that cannot be returned, and are no longer needed for the Work, are the responsibility of the Owner.</p>
01015 Materials & Equipment Delivered to Site		<p>Renumber and edit newly numbered .3 to:</p> <p>.3 Pipes, fittings and pre-cast maintenance holes not incorporated in the Work, up to quantities specified in the MERX Schedule of Quantities and Prices, shall be</p> <p>.3.1 purchased by the Owner at the invoiced price from the supplier plus 10 %, or</p> <p>.3.2 supplier restocking fee shall be paid by the Owner up to a maximum of 15 % of the contract unit price, plus transportation at cost (i.e. Force Account without mark-ups) to the Contractor's closest storage facility.</p> <p>.3.3 This applies to full units (packages, lengths, etc.).</p> <p>Add:</p> <p>.4 Partially used Products will not be purchased.</p>
01015 Materials & Equipment Delivered to Site	Basis of Payment	<p>Add to .1:</p> <p>However, total payable will be for the quantity used, not only delivered, and as verified by the Owner.</p>

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01020 Cash Allowances		Delete reference to Hydro in (Hydro/Utilities) references.
01020 Cash Allowances	Basis of Payment	Replace .3 with: For payment purposes, the Contractor may charge up to 5% markup of a Utility Company invoice. No addition for Contractor profit will be accepted.
01045 Cutting, Fitting & Patching	Performance	In .3 replace '01600' with '01330'.
01155 Weigh Scales	Equipment	Add to .1: Calibration and recalibration as per manufacturers requirements and verified by suitable agency. Recalibration after each move.
01300 Construction Schedule		Renamed Construction Progress Schedule
01300 Construction Schedule	Schedules Required	Renamed Construction Schedule Requirements Replace .1 with: .1 In accordance with schedule and in form acceptable to the Owner, provide within 10 (ten) business days after Contract award, and prior to starting construction, schedule showing dates for: .1.1 The complete sequence of construction activities. .1.2 The dates for the commencement and completion of each major element of construction. .1.3 Any planned interruptions, shutdown or closure activity. .1.4 The timing of temporary services. .1.5 Submitting of shop drawings, material lists, product data, and samples. .1.6 Dates for submitting, review time, resubmission time, last date for meeting fabrication schedule. .1.7 Delivery of items of equipment and materials. .1.8 Final completion date within time period required by Contract Documents.
01300 Construction Schedule	Schedule Format	Add to the end of .1: and using Critical Path Scheduling

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01300 Construction Schedule		<p>Add:</p> <p>CRITICAL PATH SCHEDULING</p> <p>.1 Include complete sequence of construction activities.</p> <p>.2 Include dates for commencement and completion of each major element of construction.</p> <p>.3 Show projected percentage of completion of each item as of first day of month.</p> <p>.4 Indicate progress of each activity to date of submission schedule.</p> <p>.5 Show changes occurring since previous submission of schedule:</p> <p>.5.1 Major changes in scope.</p> <p>.5.2 Activities modified since previous submission.</p> <p>.5.3 Revised projections of progress and completion.</p> <p>.5.4 Other identifiable changes.</p> <p>.6 Provide a narrative report to define:</p> <p>.6.1 Problem areas, anticipated delays, and impact on schedule.</p> <p>.6.2 Corrective action recommended and its effect.</p> <p>.6.3 Effect of changes on schedules of other prime contractors.</p>
01300 Construction Schedule	Submission	<p>Rename to Submission Timing</p> <p>Replace with:</p> <p>.1 Submit initial construction schedule within 10 business days after award of Contract and prior to starting construction. The Owner will review schedule and return comments within five (5) business days after receipt.</p> <p>.2 Resubmit finalized construction schedule within five (5) business days after return of reviewed copy.</p> <p>.3 Provide revised construction progress schedule with each application for payment or when requested.</p> <p>.4 Interim review of Work progress based on Work schedule will be conducted as decided by the Owner and schedule updated by Contractor in conjunction with and to approval of the Owner.</p>
01320 Standby	Renumbered Part 2.1.3	Replace .10 with:

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Compensation		<p>.10 Any suspension of the Work that is less than four (4) hours in duration in a single business day;</p> <p>Add new .11:</p> <p>.11 Any suspension of the Work that is less than four (4) hours in duration over any three (3) consecutive business days; or</p> <p>Renumber old .11 to .12</p>
1330 Substitution Procedures		New section
Standard Form 3	Equal or Substitute Product Request Form	New standard form
01340 Shop Drawings, Samples and Submissions	General	<p>Add new:</p> <p>.5 Review submittals before submission to Owner. This review represents that necessary requirements have been determined and verified, or will be, and that each submittal has been checked and coordinated with requirements of .6 Work and Contract Documents. Submittals not stamped, signed, dated and identified as to specific project will be returned without being examined and considered rejected.</p> <p>.6 Notify Owner, in writing at time of submission, identifying deviations from requirements of Contract Documents stating reasons for deviations.</p> <p>.7 Verify site measurements and affected adjacent Work are coordinated.</p> <p>.8 Contractor's responsibility for errors and omissions in submission is not relieved by Owner's review of submittals.</p> <p>.9 Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by Owner's review.</p> <p>.10 Indicate cross references to Contract drawings and specifications including reference drawing section or specification number.</p> <p>Renumber remaining items.</p>

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01340 Shop Drawings, Samples and Submissions	General	<p>Add new:</p> <p>.12 In accordance with Section 01015, Specialty items require documentation from the supplier at time of shop drawing submittal indicating whether or not the item can be returned if not used in the Work.</p>
01340 Shop Drawings, Samples and Submissions	Submissions Required	<p>Add:</p> <p>.1 Submit the following schedules:</p> <ul style="list-style-type: none"> .1.1 Submittal Schedule for Shop Drawings and Product Data .1.2 Submittal Schedule for Samples .1.3 Submittal Schedule for Timeliness of Owner Furnished Products .1.4 Product Delivery Schedule .1.5 Cash Allowance Schedule for Purchasing Products
01340 Shop Drawings, Samples and Submissions	Shop Drawings and Product Data	<p>Add and renumber subsequent items accordingly:</p> <p>.2 Submit drawings stamped and signed by professional engineer registered or licensed in Province of Newfoundland and Labrador.</p> <p>Delete from .3:</p> <p>Indicate cross references to design drawings and specifications.</p> <p>Add:</p> <p>.6 Accompany submissions with transmittal letter, containing:</p> <ul style="list-style-type: none"> .6.1 Date. .6.2 Project title and number. .6.3 Contractor's name and address. .6.4 Identification and quantity of each shop drawing, product data, and sample. .6.5 Other pertinent data. <p>Delete from .7.6 'of appropriate portions of the Work; and add 'including'.</p> <p>Add:</p> <p>.10 Submit electronic PDF copies of test reports for requirements requested in specification Sections.</p>

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		<p>.10.1 Report signed by authorized official of testing laboratory that material, product or system identical to material, product or system to be provided has been tested in accord with specified requirements.</p> <p>.10.2 Testing must have been within 3 years of date of Contract award for project.</p> <p>.11 Submit electronic PDF copies of certificates for requirements requested in specification Sections.</p> <p>.12 Statements printed on manufacturer's letterhead and signed by responsible officials of manufacturer of product, system or material attesting that product, system or material meets specification requirements.</p> <p>.13 Certificates must be dated after award of Contract complete with project name.</p> <p>.14 Submit electronic PDF copies of manufacturers installation instructions and operation and maintenance manuals requested in specification Sections.</p> <p>.14.1 Pre-printed material describing installation of product, system or material, including special notices and Safety Data Sheets concerning impedances, hazards and safety precautions.</p> <p>.15 Submit electronic PDF copies of Site Reports for requirements requested in specification Sections.</p> <p>.16 Documentation of the testing and verification actions taken by manufacturer's representative to confirm compliance with manufacturer's standards or instructions.</p> <p>.17 Submit electronic PDF copies of Operation and Maintenance Data for requirements requested in specification Sections.</p> <p>.18 Delete information not applicable to project.</p> <p>.19 Supplement standard information to provide details applicable to project.</p> <p>Renumber subsequent items.</p> <p>Add:</p>

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		<p>.21 The review of shop drawings by the Owner is for the sole purpose of ascertaining conformance with the general concept.</p> <p>.21.1 This review shall not mean that the Owner approves the detail design inherent in the shop drawings, responsibility for which shall remain with the Contractor submitting same, and such review shall not relieve the Contractor of responsibility for errors or omissions in the shop drawings or of responsibility for meeting all requirements of the construction and Contract Documents.</p> <p>.21.2 Without restricting the generality of the foregoing, the Contractor is responsible for dimensions to be confirmed and correlated at the job site, for information that pertains to fabrication processes or to techniques of construction and installation and for co-ordination of the Work of all Subcontractors.</p> <p>.22 Structural shop drawings or shop drawings for structurally attached equipment must be stamped by a Structural Professional Engineer permitted to practice in the Province of Newfoundland and Labrador.</p>
01340 Shop Drawings, Samples and Submissions	Samples	<p>Replace with:</p> <p>.1 Submit for review samples as requested in respective specification Sections. Label samples as to origin and intended use in the Work.</p> <p>.2 Deliver samples prepaid to Owner's business address.</p> <p>.3 At least ten 10 business days prior to commencing Work, inform the Owner of proposed source of materials and provide access for sampling.</p> <p>.4 Notify Owner in writing, at time of submission of deviations in samples from requirements of Contract Documents.</p> <p>.5 Where colour, pattern or texture is criterion, submit full range of samples.</p> <p>.6 Adjustments made on samples by Owner are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to Owner prior to proceeding with Work.</p> <p>.7 Make changes in samples, which Owner may require, consistent with Contract Documents.</p>

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		<p>.8 Reviewed and accepted samples will become standard of workmanship and material against which installed Work will be verified.</p> <p>.9 Submit drawings stamped and signed by Professional Engineer registered or licensed in the Province of Newfoundland and Labrador.</p>
01370 Schedule of Values	Measurement for Payment	<p>Rename Submittal Requirements</p> <p>Replace .2 with:</p> <p>.2 Submit applications for payment on a monthly basis in accordance with the Agreement Between Owner and Contractor Article 4: Payment, and General Conditions, GC -20 Application for Payment and GC 21 – Certificates and Payment.</p> <p>Add to .3:</p> <p>.3.9 Revised Construction Schedule as per Section 01300.</p>
01400 Quality Control and Testing Laboratory Services	Procedures	<p>Replace .2 with:</p> <p>.2 Submit samples and/or materials required for testing, as specifically requested in the specifications. Submit with reasonable promptness and in an orderly sequence so as not to cause delay in Work.</p>
01500 Temporary Facilities		Renamed Temporary Utilities and Construction Facilities
01500 Temporary Utilities and Construction Facilities	General	<p>Add:</p> <p>2.1 Installation and Removal</p> <p>.1 Provide construction facilities and temporary utilities in order to execute work expeditiously.</p> <p>.2 Remove from site all such work after use.</p> <p>2.2 Dewatering</p> <p>.1 Provide temporary drainage and pumping facilities to keep excavations and site free from standing water.</p>
01500 Temporary Utilities and Construction Facilities	Water Supply	<p>In .2 delete 'appropriate'</p> <p>In .3 replace 'utility' with 'usage' and replace 'town' with 'owner'.</p>
01500 Temporary Utilities and	Heating and Ventilation	<p>Rename Temporary Heating and Ventilating</p> <p>Replace .2 with:</p>

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Construction Facilities		<p>.2 Construction heaters used inside buildings must be vented to outside or be flameless (vent free) type. Solid fuel salamanders are not permitted.</p> <p>In .5 Ventilating .1 delete 'hazardous'.</p> <p>Replace .5.7 and replace with:</p> <p>.5.7 On completion of Work for which permanent heating system is used, replace filters.</p> <p>Add .5.8:</p> <p>.5.8 Date of Substantial Performance and Warranties for heating system do not start until entire system is in as near original condition as possible and is certified by the Owner.</p>
01500 Temporary Utilities and Construction Facilities	Power	<p>Rename Temporary Power and Lighting</p> <p>Add to .1: Pay for all costs for installation, maintenance and removal of cables, distribution and branch panel boards.</p> <p>Add new .2: .2 Provide and maintain temporary lighting throughout project. Ensure level of illumination on all floors and stairs is not less than 162 lx.</p>
01500 Temporary Utilities and Construction Facilities	Fire Protection	<p>Add new subsection 2.6 Fire Protection:</p> <p>.1 Provide and maintain temporary fire protection equipment during performance of Work required by insurance companies having jurisdiction and governing codes, regulations and bylaws.</p> <p>.2 Burning rubbish and construction waste materials is not permitted on Site.</p>
01500 Temporary Utilities and Construction Facilities	Sanitary Facilities	<p>In .2 delete 'private' and 'adjacent to office'.</p>
01500 Temporary Utilities and Construction Facilities	Hoisting	<p>Add new subsection 2.11 Hoisting:</p> <p>.1 Provide, operate and maintain hoists cranes required for moving of workers, materials and equipment. Make financial arrangements with Subcontractors for their use of hoists.</p> <p>.2 Hoists cranes to be operated by qualified operator only. Provide training certificate of operator.</p>

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01500 Temporary Utilities and Construction Facilities	Site Storage/Loading	Add new subsection 2.12 Site Storage/Loading: .1 Confine work and operations of employees by Contract Documents. Do not unreasonably encumber premises with products. .2 Do not load, or permit to load, any part of Work with weight or force that will endanger Work.
01500 Temporary Utilities and Construction Facilities	Owner's Site Office	Delete .6
01500 Temporary Utilities and Construction Facilities	Storage Sheds	Rename 'Equipment, Tool and Material Storage'
01500 Temporary Utilities and Construction Facilities	Clean-Up	Add new subsection 2.16 Clean-Up: .1 Separate waste materials for reuse and recycling. .2 Remove construction debris, waste materials, packaging material from work site daily. .3 Clean dirt or mud tracked onto paved or surfaced roadways. .4 Store materials resulting from demolition activities that are salvageable. .5 Stack stored new or salvaged material not in construction facilities.
01560 Environmental Requirements	References	Add: Highway Specifications Book: Section 405 Temporary Diversion of Streams Regulation 65/03, Environmental Control Water and Sewage Regulations, 2003 under the Water Resources Act (O.C. 2003-231) Infilling Bodies of Water W.R. 91-1 Use of Creosote Treated Wood in Fresh Water W.R. 92-2 Treated Utility Poles in Water Supply Areas W.R. 93-01 Land and Water Developments in Protected Public Water Supply Areas W.R. 95-01

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		<p>Fisheries Act of Canada, R.S.C., 1985, C. F-14</p> <p>Delete:</p> <p>Government of New Brunswick, Department of Transportation and Infrastructure, Standard Specifications for Highway Construction</p>
01560 Environmental I Requirements	Definitions	<p>Add new subsection 2.1 Definitions:</p> <p>.1 Environmental Pollution and Damage: presence of chemical, physical, biological elements or agents which adversely affect human health and welfare; unfavourably alter ecological balances of importance to human life; affect other species of importance to humans; or degrade environment aesthetically, culturally and/or historically.</p> <p>.2 Environment Protection: prevention/control of pollution and habitat or environment disruption during construction.</p>
01560 Environmental I Requirements	General	<p>Replace General .3 with:</p> <p>.3 The Owner's Representative is responsible for obtaining Permits required by the Provincial Department of Environment & Climate Change and the Federal Department of Fisheries and Oceans prior to tendering. Permit cost will be paid for under project costs outside of this contract.</p>
01560 Environmental I Requirements	Measurement for Payment	<p>Add new subsection 2.3 Measurement for Payment</p> <p>Move from Basis of Payment and alter to add:</p> <p>2.3.1 Silt fence, if required, will be paid by the linear meter under the unit price bid for this item.</p> <p>Add 2.3.2</p> <p>Dust control will be measured in accordance with 02250.</p>
01560 Environmental I Requirements	Submittals	<p>Add new subsection 2.4 Submittals</p> <p>.1 Submit in accordance with Section 01345.</p> <p>.2 Submit Environmental Protection Plan (EPP) for review by Owner before delivering materials to site or commencing construction activities.</p> <p>.3 EPP shall include comprehensive overview of known or potential environmental issues to be addressed on site during construction.</p> <p>.4 Address topics at level of detail commensurate with environmental issue and required construction tasks.</p> <p>.5 Include in Environmental Protection Plan (EPP):</p>

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		<p>.1 Names of persons responsible for ensuring adherence to EPP.</p> <p>.2 Names and qualifications of persons responsible for manifesting hazardous waste to be removed from site.</p> <p>.3 Names and qualifications of persons responsible for training site personnel.</p> <p>.4 Descriptions of environmental protection personnel training program.</p> <p>.5 Submit a site-specific Stormwater Pollution Prevention Plan (SPPP) in accordance with Regulation 65/03, Environmental Control Water and Sewer Regulations. Include the site-specific Erosion and Sedimentation Control Plan (ESCP) identifying the type and location of erosion and sediment control measures to be provided on site. Include monitoring and reporting requirements to ensure that ESCP control measures are in compliance with erosion and sediment control plan, Federal and Provincial regulations, and Municipal by-laws.</p> <p>.6 Submit drawings indicating locations of proposed temporary excavations or embankments for haul roads, stream crossings, material storage areas, structures, sanitary facilities, and stockpiles of excess or spoil materials including methods to control runoff and to contain materials on site.</p> <p>.7 Submit a site-specific Traffic Control Plan (TCP) including measures to reduce erosion of temporary and existing roadbeds by construction traffic, especially during wet weather.</p> <p>.1 TCP to include measures to minimize amount of material transported onto paved public roads by vehicles or runoff.</p> <p>.8 Submit a Spill Control Plan (SCP) including procedures, instructions, and reports to be used in event of unforeseen spill of regulated substance.</p> <p>.9 Submit a Solid Waste Disposal Plan (SWDP) for non-hazardous solid wastes identifying methods and locations for solid waste disposal including clearing debris.</p> <p>.10 Submit an Air Pollution Control Plan (APCP) detailing provisions to ensure that dust, debris,</p>

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		<p>materials, and trash, are contained within the project site.</p> <p>.11 Submit a site-specific Contaminant Prevention Plan (CPP) identifying the proper procedures and actions to be implemented to prevent potentially or expected hazardous substances due to the presence of any hazardous substances within the project site. The intent of the CPP is to:</p> <ul style="list-style-type: none"> .1 Prevent introduction of designated substances (DS) into air, water, or ground; .2 Detail provisions for storage and handling of these materials in compliance with Federal, Provincial, and Municipal laws. <p>.12 Submit a Wastewater Management Plan (WMP) identifying methods and procedures for management [and][or] discharge of waste waters which are directly derived from construction activities, such as concrete curing water, clean-up water, dewatering of ground water, disinfection water, hydrostatic test water, and water used in flushing of lines.</p> <p>.13 Owner to confirm if historical, archaeological, cultural, or biological resources and wetlands are likely to be present on site. If required by Owner, submit an Identification and Protection Plan (IPP) that defines procedures for identifying and protecting historical, archaeological, cultural and biological resources and wetlands.</p> <p>.14 Submit a Pesticide Treatment Plan (PTP) identifying the presence of any pesticides within the site. PTP to be updated as required.</p>
01560 Environmental I Requirements	Environmental I Compliance Inspection	<p>Replace .1 with:</p> <p>The Contractor shall be responsible for designating an on-site environmental representative who is familiar with the Contractors submitted Environmental Protection Plan. They shall have the ability to address environmental issues, acquire staff, and procure materials when there is the potential for water and runoff issues, including holidays and weekends</p> <p>Replace .2 with:</p> <p>The Contractor's representative shall monitor the weather forecasts and prior, during, and after wind or rainfall events the entire site shall be inspected for</p>

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		environmental mitigation deficiencies, and any deficiencies immediately addressed. The erosion and sediment controls shall also be inspected periodically, at the start of each day of work. The Contractor shall report to the Owner on the inspections including any deficiencies and action taken to address.
01560 Environmental I Requirements	Dust Control	<p>Add new subsection 2.6 Dust Control</p> <p>.1 The Contractor shall ensure that dust does not become a problem for adjacent property Owners or construction site personnel or a hazard to vehicular traffic.</p> <p>.2 When required, or as directed by the Owner's representative, water or an acceptable dust suppressant such as calcium chloride shall be used by the Contractor on haul routes or other locations on the project to control dust.</p>
01560 Environmental I Requirements	Fires	<p>Replace subsection with:</p> <p>.1 Fires and burning of rubbish on site are not permitted.</p>
01560 Environmental I Requirements	Drainage	<p>Replace subsection with:</p> <p>.1 Ensure that the ESCP measures are provided and that its recommendations are followed on site, in accordance with the site-specific SPPP, at all times during construction.</p> <p>.2 Provide temporary drainage and pumping as necessary to keep excavations and site free from water.</p> <p>.3 Do not pump water containing suspended materials into waterways, sewer or drainage system.</p> <p>.4 Control disposal or run-off of water containing suspended materials or other harmful substances in accordance with local Authority Having Jurisdiction.</p> <p>.5 Construct temporary silt traps or sediment curtain of adequate height and length to effectively isolate sediment-laden water, as directed by Owner, prior to commencing excavation of any nature. Non-woven geotextile should never be used.</p>
01560 Environmental I Requirements	Site Clearing and Plant Protection	<p>Add to the end of .1 "and as per Section 02104."</p> <p>Replace .4 with:</p> <p>Minimize stripping of topsoil and footprint of disturbed vegetation. Adopt a segmented approach to construction whenever possible.</p>

Section Number	Section	Item/Revision
01560 Environmental I Requirements	Work Adjacent to Waterways	<p>Add: .2 Construction equipment to be operated on land only.</p> <p>Renumber subsequent items.</p> <p>Replace .3 with: Keep waterways free of excavated fill, waste material and debris.</p> <p>Replace .4 with: Design and construct temporary crossings to minimize erosion and sedimentation in waterways. Select the most appropriate sediment and erosion control measures specific to site characteristics and potential erosion/sedimentation sources. Submit sediment and erosion control plan as per this specification.</p> <p>Replace .6 with: As required, and as per the sediment and erosion control plan, intercept sediment laden surface water runoff during cut operations and direct to silt traps before entry into waterways.</p> <p>Replace .7 with: As required, and as per the sediment and erosion control plan, sandbags to be used to construct sediment traps in active streams.</p> <p>A number of items were moved without edits from other subsections within this section to place them under subsection Work Adjacent to Waterways. These include:</p> <ul style="list-style-type: none"> • .16 and .17 from Erosion Control • .18, .19, .20, .21, .22, .23, .24, and .25 from Environmental Mitigation..
01560 Environmental I Requirements	Pollution Control	<p>Replace with:</p> <p>.1 Maintain temporary erosion and pollution control features installed under this contract in accordance with site specific SPPP.</p> <p>.2 Control emissions from equipment and plant in accordance with local authorities' emission requirements. Check with local authorities for any environmental compliance requirements.</p>

Section Number	Section	Item/Revision
		<p>.3 Prevent sandblasting and other extraneous materials from contaminating air and waterways beyond application area.</p> <p>.1 Provide temporary enclosures as required.</p> <p>.4 Cover or wet down dry materials and rubbish to prevent blowing dust and debris. Provide dust control for temporary roads.</p>
01560 Environmental I Requirements	Waste Disposal Areas	<p>Replace .2 with: Limits of waste disposal area shall be clearly defined and approved by the Owner prior to clearing and reinstating to conditions at start of Work.</p> <p>Add .7: Do not bury rubbish and waste materials on site.</p> <p>Add .8: Do not dispose of waste or volatile materials, such as mineral spirits, oil or paint thinner into waterways, storm or sanitary sewers</p>
01560 Environmental I Requirements	Erosion Control	<p>Rename Temporary Erosion and Sedimentation Control</p> <p>Add:</p> <p>.1 Submit an Erosion and Sedimentation Control Plan as per this specification to control negative impacts on water and air quality; plan should meet these objectives:</p> <p>.1 Prevent loss of soil during construction by storm water runoff and wind erosion.</p> <p>.2 Protect stockpiled topsoil.</p> <p>.3 Prevent sedimentation of storm sewers, receiving streams and air pollution with dust or particulate matter.</p> <p>Move from Environmental Mitigation and alter to:</p> <p>.2 Erosion and sedimentation control measures shall be carried out as detailed in the contract documents and the submitted ESCP. Sediment and erosion control measures shall be inspected, maintained, and repaired prior to and after wind or rainfall events to the satisfaction of the Owner.</p>
01560 Environmental I Requirements	Environmental I Mitigation	<p>Replace 2.15.1.1.1 with: Erosion and sedimentation control measures required to achieve this level of compliance when dewatering is conducted for roadway or</p>

Section Number	Section	Item/Revision
		<p>foundation excavations shall be constructed, inspected, maintained and repaired in accordance with the Contract Documents.</p> <p>Replace 2.15.1.3 with: Instream Work shall be carried out between June 1st and September 30th unless explicitly approved by the Authority Having Jurisdiction. Instream Work consists of work below the shoulder of the bank of the watercourse, whether wetted or not. The Contractor shall notify the Owner, in writing, at least 7 business days in advance of the anticipated date of commencement of instream Work.</p> <p>Replace 2.15.1.4 with: .4 Water control for all culvert installations in natural watercourses, other than those for which a site-specific method and/or sequence is indicated in the Contract Documents is specified, shall be accomplished using one of the following methods: .1 Installing the new culvert in the dry and diverting the watercourse through it upon completion. This method is to be completed in accordance with TI, Highway Specifications Book, Section 405; .2 Constructing a temporary clear/light coloured plastic-lined diversion channel in the dry; or .3 Stemming the flow upstream and pumping the flow around the Work Area, ensuring the pump runs whenever there is sufficient water, and having the discharge back into the stream immediately below the Work Area.</p> <p>Replace 2.15.1.7 with: Erosion control measures shall be as detailed in the Contract Documents and if additional measures are required in addition to those indicated, the Owner shall order and approve such Work under the appropriate Items.</p>
01560 Environmental Requirements	Fuel Storage and Handling	<p>Move from Environmental Mitigation and insert: .4 Machinery and pollutants shall be located or stored in areas not in danger of floodwaters.</p> <p>Move from Environmental Requirements and Approvals and insert:</p>

Section Number	Section	Item/Revision
		5. Hydrocarbon storage shall be in accordance with TI, Highway Design and Construction Specifications Book, Section 820. Furthermore, all on-site storage and handling of petroleum shall comply with the Storage and Handling of Gasoline and Associated Products and Regulations, NLR 58/03. All storage tanks shall be registered and approved by Department of Digital Government and Service NL. The Contractor shall follow the procedure for spill reporting. Any spillage in excess of 70 L of gasoline or associated product, or of a substance that is deleterious to fish shall be reported immediately through the Environmental Emergencies telephone line at 1-800-563-9080.
01560 Environmental I Requirements	Environment I Requirements and Approvals	Replace 2.17.2 with: All asphalt being removed shall be disposed of in accordance with TI, Highway Specifications Book, Section 520 and as outlined in the Certificate of Approval issued from the Authority Having Jurisdiction. A well-defined area shall be designated for the temporary storage of off-spec and waste asphalt. Where possible, off-spec and waste asphalt shall be recycled on-site. Otherwise, this material shall be removed on a minimum of a weekly basis to either an approved waste disposal site for disposal, or an approved waste asphalt storage site for recycling. These sites must be approved by the Authority Having Jurisdiction.
01560 Environmental I Requirements	Notification	Add new subsection Notification .1 Owner will notify Contractor in writing of observed non-compliance with Federal, Provincial, or Municipal environmental laws or regulations, permits, and other elements of environmental protection. .2 Contractor: after receipt of such notice, inform Owner of proposed corrective action and take such action as approved by the Authorities Having Jurisdiction. .1 Take action only after receipt of written approval by the Authorities Having Jurisdiction. .3 Owner may issue stop order of work until satisfactory corrective action has been taken. .4 No time extensions will be granted or equitable adjustments allowed to Contractor for such suspensions.
01560 Environment	Basis of Payment	Replace .1 with: With the exception of silt fence, no separate or direct payment will be made for all other Wwork specified in

Section Number	Section	Item/Revision										
I Requirements		this specification. Silt fence, if required, will be included as a pay item in the MERX Schedule of Quantities and Prices. Costs of all other work specified in this section are deemed to be included in the lump sum and unit prices quoted in the MERX Schedule of Quantities and Prices.										
01570	Traffic Regulations	<p>Previously removed item is reinstated and reworded to allow 'similar'.</p> <p>Add to Basis of Payment:</p> <p>.2 Contractors are advised that only employees who are trained in accordance with the Traffic Control Person Certification Training program administered through Workplace NL or similar can be claimed under this section.</p>										
01571 Informational Warning Devices	General	In .6 replace 'assistance' with 'approval' in reference to major construction detours.										
01573 Delineation Devices	Application	<p>Reinstate accidentally deleted minimum tangent between tapers table.</p> <table border="1"> <thead> <tr> <th>Regulatory Speed Limit (km/h)</th> <th>Minimum Tangent Between Tapers</th> </tr> </thead> <tbody> <tr> <td>90 or greater</td> <td>240</td> </tr> <tr> <td>80</td> <td>150</td> </tr> <tr> <td>60 to 70</td> <td>100</td> </tr> <tr> <td>50 or less</td> <td>50</td> </tr> </tbody> </table>	Regulatory Speed Limit (km/h)	Minimum Tangent Between Tapers	90 or greater	240	80	150	60 to 70	100	50 or less	50
Regulatory Speed Limit (km/h)	Minimum Tangent Between Tapers											
90 or greater	240											
80	150											
60 to 70	100											
50 or less	50											
01574 Barricades	Function and Location of Barricades	<p>In .3 replace 'reflectorized' with 'reflectorized or illuminated'.</p> <p>In .4 replace 'Department' with 'Owner'.</p>										
01574 Barricades	Light Barricades	<p>Replace with:</p> <p>.1 Light barricades shall be used for works of short duration to provide the closure of a traffic lane or roadway or blocking road excavation sites or other work site hazards.</p> <p>.2 Light barricades shall not be used as a channelizing device.</p> <p>.3 TC-64A of the Traffic Control Manual is required on each light barricade.</p>										
01574 Barricades	Heavy Barricades	Replace with:										

Section Number	Section	Item/Revision
		<p>.1 Heavy barricades shall be used to provide a complete closure of a road or lane for an extended period of longer than 5 (five) days.</p> <p>.2 Their supports may consist of posts set in the ground or of weighted bases with two (2) heavy barricade faces attached as shown in TC-64C of the Traffic Control Manual.</p> <p>.3 Where no direction is required barricade TC-64B of the Traffic Control Manual shall be used.</p>
01575 Miscellaneous Warning Devices	References	<p>Add: TI Traffic Control Manual</p>
01575 Miscellaneous Warning Devices	Portable Lane Control Signals	<p>In .1 replace 'possible' with 'credit'.</p> <p>Replace .2 with:</p> <p>.2 Traffic light timings are calculated using the table shown in Traffic Control Manual drawing 791-1. The user will be required to adjust the timing to the approval of the Owner.</p>
01580 Project Signs & Sign Supports	General	<p>New subsection Timing to organized language from opening paragraph.</p>
01580 Project Sign & Sign Supports	Project Sign & Sign Supports	<p>In Materials replace .3 with:</p> <p>.3 Project sign is to be supplied by the Contractor. Project sign to be 1.22 m x 2.44 m and made of Dibond or 13 mm plywood or as otherwise approved by the Regional Engineer.</p> <p>In Construction add:</p> <p>.9 Remove sign and make good the area 30 days after Total Performance.</p>
DWG 04010 Project Sign for Provincially Funded Projects	Notes	<p>Replace Note 3. With:</p> <p>3. Sign Panel to be Dibond or 13mm Plywood or Otherwise Approved by The Regional Engineer.</p>
01600 Material and Equipment		<p>Add paragraph at top of section:</p> <p>This specification outlines the general requirements for Product quality, availability, storage, handling, protection, transportation, and installation.</p> <p>Requirements that are more specific may be outlined in other specifications.</p>

Section Number	Section	Item/Revision
01600 Material and Equipment	2.1 Quality	<p>Replace .2 with:</p> <p>.2 Products, materials, equipment and articles incorporated in Work shall be new, not damaged or defective, and of best quality for purpose intended. If requested, furnish evidence as to type, source and quality of products provided.</p> <p>Add new .3:</p> <p>.3 Procurement policy is to acquire, in cost effective manner, items containing highest percentage of recycled and recovered materials practicable consistent with maintaining satisfactory levels of competition. Make reasonable efforts to use recycled and recovered materials and in otherwise utilizing recycled and recovered materials in execution of work.</p> <p>Add new .7:</p> <p>.7 Permanent labels, trademarks and nameplates on products are not acceptable in prominent locations, except where required for operating instructions, or when located in mechanical or electrical rooms.</p>
01600 Material and Equipment	Availability	In .2 replace 'similar' with 'equal or better'.
01600 Material and Equipment	Storage, Handling and Protection	<p>Replace .7 with:</p> <p>.7 Store and mix paints in a heated and ventilated room. Remove oily rags and other combustible debris from site daily. Take every precaution necessary to prevent spontaneous combustion.</p> <p>In .9 replace 'primer or enamel' with 'touch-up materials'.</p>
01600 Material and Equipment	Manufacturer's Instructions	<p>Replace .1 with:</p> <p>.1 Unless otherwise indicated in specifications, install or erect products in accordance with manufacturer's latest printed instructions. Do not rely on labels or enclosures provided with products. Obtain written instructions directly from manufacturers.</p> <p>Add new .3:</p>

Section Number	Section	Item/Revision
		.3 Improper installation or erection of products, due to failure in complying with these requirements, authorizes the Owner to require removal and re-installation at no increase in Contract Price or Contract Time.
01600 Material and Equipment	Products and Quality	<p>Rename Quality of Work.</p> <p>In .3 replace 'the quality' with 'standard'.</p>
01600 Material and Equipment	2.10 Concealment	<p>Add new subsection 2.10 Concealment:</p> <p>.1 In finished areas conceal pipes, ducts and wiring in floors, walls and ceilings, except where indicated otherwise.</p> <p>.2 Before installation inform the Owner if there is interference. Install as directed by the Owner.</p>
01600 Material and Equipment	2.12 Location of Fixtures	<p>Add new subsection 2.12 Location of Fixtures:</p> <p>.1 Consider location of fixtures, outlets, and mechanical and electrical items indicated as approximate.</p> <p>.2 Inform the Owner of conflicting installation. Install as directed.</p>
01600 Material and Equipment	2.14 Fastenings - Equipment	<p>Add new subsection 2.14 Fastenings – Equipment:</p> <p>.1 Use fastenings of standard commercial sizes and patterns with material and finish suitable for service.</p> <p>.2 Use heavy hexagon heads, semi-finished unless otherwise specified. Use No. 304 stainless steel for exterior areas.</p> <p>.3 Bolts may not project more than one diameter beyond nuts.</p> <p>.4 Use plain type washers on equipment, sheet metal and soft gasket lock type washers where vibrations occur. Use resilient washers with stainless steel.</p>
01600 Material and Equipment	2.16 Existing Utilities	<p>Add new subsection 2.16 Existing Utilities</p> <p>.1 When breaking into or connecting to existing services or utilities, execute Work at times directed by local governing authorities, with minimum of disturbance to Work, and/or building occupants and pedestrian and vehicular traffic.</p> <p>.2 Protect, relocate or maintain existing active services. When services are encountered, cap off in manner approved by authority having jurisdiction. Stake and record location of capped service.</p>

Section Number	Section	Item/Revision
01600 Material and Equipment	2,17 Selection of Material and Equipment	<p>Add new subsection 2,17 Selection of Material and Equipment:</p> <p>.1 Material and equipment will be specified in the tender documents, and selected by Contractor, by one or more of the following methods:</p> <ul style="list-style-type: none"> .1.1 Specification by reference to a relevant Standard, such as CSA, ASTM, ULC, etc., select any material or equipment that meets or exceeds the specified. .1.2 Specification by reference to an accepted product evaluation publication, such as the CGSB “Qualified Products List”, or CCMC Registry of Product Evaluations”, - select any manufacturer’s product so listed. .1.3 Specification by Prescriptive or Performance specification – select any material or equipment meeting or exceeding specification. .1.4 Specification by identification of one or more Manufacturer’s specific product(s) as an “Acceptable Product”, along with a listing of other manufacturers who may offer equivalent products – select any product so named, or select from equivalent product(s) of other listed manufacturers. <p>.2 “Acceptable Product” is deemed to be a complete and working commodity as described by a manufacturer’s name, catalogue number, trade name, or any combination thereof, and will constitute the minimum standard of acceptance.</p> <p>.3 Owner will determine acceptability of Contractor’s selection of material and equipment at time of Shop Drawing review.</p> <p>.4 When material or equipment is specified by a Standard, Prescriptive or Performance specification, upon request of the Owner, obtain from manufacturer an independent laboratory reporting, showing that material or equipment meets or exceeds the specified requirements.</p>

Section Number	Section	Item/Revision
01600 Material and Equipment	2.18 Substitution of Material and Equipment	<p>Add new subsection 2.18 Substitution of Material And Equipment:</p> <p>.1 Substitution prior to Tender closing will be considered by Owner only if the conditions of Section 01330 are met.</p> <p>.2 After Contract award substitutions of material or equipment, other than as selected by Contractor from those specified, will be considered by Owner only if the conditions of Section 01330 are met.</p> <p>.3 Requests for substitutions after Contract award must be accompanied by sufficient information in the form of shop drawings, manufacturer's literature, samples or other data to permit proper investigation of the substitutes used. Requests must also include statements of respective costs of material or equipment originally specified and the proposed substitution.</p> <p>.4 Should a proposed substitution be accepted after Contract award either in part or in whole, assume full responsibility and costs when substitution affects other work on Project. Contractor to pay for design or drawing changes required as a result of the substitution.</p> <p>.5 Amounts of all credits arising from approval of substitutions after Contract award will be determined by Owner and the Contract amount will be reduced accordingly.</p>
01600 Material and Equipment	Cutting and Remedial Work	<p>Replace .2 with:</p> <p>.2 Perform cutting and remedial Work required to repair or replace parts of the Work identified as defective or unacceptable and make them come together properly. Co-ordinate adjacent affected Work as required.</p> <p>Add new .3:</p> <p>.3 Perform remedial work by specialists familiar with materials affected. Perform in a manner to neither damage nor put at risk any portion of Work.</p> <p>Renumber subsequent items.</p>

Section Number	Section	Item/Revision										
01600 Material and Equipment	Fastenings	<p>Rename Fastenings – General</p> <p>In .4 replace ‘their’ with ‘individual’.</p>										
01610 Force Account Payments	Force Account Payments	<p>Replace General .3 with:</p> <p>.3 Accommodations at a licenced establishment, shall be approved in writing by the Owner before work commences. Board and Lodging expenses, including meals, are only for those workers currently in accommodations paid for by the Contractor and supported by invoices per Treasury Board guidelines. The Board and Lodging rates claimed will be on a prorated basis of the total work day.</p>										
Standard Form 6	Daily Force Account Report	Updated form to provide place to list board and lodging as per specification 01610, prorated and no markups.										
Rental Rate Schedule		<p>Replace values for 18-9 Survey Equipment with:</p> <table border="1"> <tr><td>Sewer Laser</td><td>\$4.95</td></tr> <tr><td>Theodolite</td><td>\$3.00</td></tr> <tr><td>Level and Rod</td><td>\$2.75</td></tr> <tr><td>Total Station</td><td>\$15.92</td></tr> <tr><td>GPS</td><td>\$15.92</td></tr> </table>	Sewer Laser	\$4.95	Theodolite	\$3.00	Level and Rod	\$2.75	Total Station	\$15.92	GPS	\$15.92
Sewer Laser	\$4.95											
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01700 Contract Close-Out		<p>Rename Closeout Procedures</p> <p>Most of this section (except Inspection/Takeover Procedures and Basis of Payment) were replaced or moved to 01710 Reinstatement and Cleaning or 1720 Project Record Documents (renamed Closeout Submittals).</p>										
01700 Contract Close-out	Final Inspection and Declaration Procedures	<p>Add new subsection 2.1 Final Inspection and Declaration Procedures:</p> <p>.1 Contractor's Inspection: The Contractor and all Subcontractors shall conduct an inspection of Work, identify deficiencies and defects; repair as required.</p> <p>.1 Notify the Owner in writing of satisfactory completion of the Contractor's Inspection and submit verification that corrections have been made.</p> <p>.2 Request an Owner's Inspection.</p> <p>.2 Owner's Inspection: Owner and the Contractor will perform an inspection of the Work to identify obvious defects or deficiencies. The contractor shall correct Work accordingly.</p>										

Section Number	Section	Item/Revision
		<p>.3 Completion: submit written certificate that the following have been performed:</p> <ul style="list-style-type: none"> .1 Work has been completed and inspected for compliance with Contract Documents. .2 Defects have been corrected and deficiencies have been completed. .3 Equipment and systems have been tested, adjusted and balanced and are fully operational. .4 Certificates required by Fire Commissioner and Utility companies have been submitted. .5 Operation of systems have been demonstrated to Owner's personnel. .6 Commissioning of all electrical, mechanical, and controls system and copies of final Commissioning Report submitted to Owner. .7 Work is complete and ready for Final Inspection. <p>.4 Final Inspection: When items noted above are completed, request final inspection of Work by the Owner, representative of MI and the Contractor. If Work is deemed incomplete by the Owner, complete outstanding items and request a reinspection.</p> <p>.5 Declaration of Substantial Performance: When the Owner considers deficiencies and defects have been corrected and it appears requirements of Contract have been substantially performed, make application for Certificate of Substantial Performance. Refer to General Conditions for specifics to application.</p> <p>.6 Commencement of Lien and Warranty Periods: The date of Owner acceptance of the submitted declaration of Substantial Performance shall be the date for commencement for the warranty period and commencement of the lien period.</p> <p>.7 Declaration of Total Performance: When the Owner considers final deficiencies and defects have been corrected and it appears requirements of the Contract have been totally performed, make application for certificate of Total Performance. Refer to General Conditions for specifics to application. If Work is deemed incomplete by the Consultant, complete the outstanding items and request a re-inspection.</p> <p>.8 Final Payment: When the Owner considers final deficiencies and defects corrected and requirements of Contract met, make application for final payment.</p>

Section Number	Section	Item/Revision
01700 Contract Close-out	Re-inspection	<p>Add new subsection 2.2 Re-Inspection:</p> <p>.1 Should status of work require re-inspection by Owner due to failure of work to comply with Contractor's claims for inspection, Owner will deduct amount of compensation for re-inspection services from payment to Contractor.</p>
01700 Contract Close-out	Final Cleaning	<p>Add new subsection 2.3 Final Cleaning:</p> <p>.1 In accordance with the General Conditions, GC 37 – Cleanup and Final Cleaning of Work.</p> <p>.2 Clean in accordance with Section 01710 Reinstatement and Cleaning.</p> <p>.3 Remove surplus materials, excess materials, rubbish, tools, and equipment.</p>
01710 Reinstatement and Cleaning	General Conditions	<p>Renamed Project Cleanliness</p> <p>Add:</p> <p>.1 During the construction period and after Substantial and Total Performance:</p> <p>Place previous items .1 to .6 under this item.</p> <p>Replace .2 with:</p> <p>.2 Maintain Work in tidy condition, free from accumulation of waste products and debris, other than that caused by the Owner or other Contractors.</p> <p>Add:</p> <p>.3 Remove waste materials and debris from site at daily regularly scheduled times or dispose of as directed by the Owner. Do not burn waste materials on site.</p> <p>.4 Clear snow and ice from access to the Work.</p> <p>.5 Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.</p> <p>.6 Dispose of waste materials and debris off site.</p> <p>.7 Clean interior areas prior to start of finishing work, and maintain areas free of dust and other contaminants during finishing operations.</p> <p>Renumber subsequent items.</p> <p>Replace newly numbered .9 with:</p>

Section Number	Section	Item/Revision
		<p>.9 Provide adequate ventilation during use of volatile or noxious substances. Use of building ventilation is not permitted for this purpose.</p> <p>Add new:</p> <p>.10 Use only cleaning materials recommended by manufacturer of surface to be cleaned, and as recommended by cleaning material manufacturer.</p> <p>.11 Schedule cleaning operations so that resulting dust, debris and other contaminants will not fall on wet, newly painted surfaces nor contaminate building systems.</p> <p>Renumber subsequent items.</p>
01710 Reinstatement and Cleaning	General Reinstatement	<p>Move from General Reinstatement to the newly named Project Cleanliness:</p> <p>.14 Permanently provide for and maintain the flow, where required, of all sewers, drains, house or inlet connections, and all water courses that may be met with during the progress of the Work. Prevent the contents of any sewer, drain, and house or inlet connection from flowing into the trench or sewers to be constructed under the Contract, except where written permission is given by the Owner.</p>
01710 Reinstatement and Cleaning	Final Cleaning of Site	<p>Rename Final Cleaning.</p> <p>Replace with:</p>

Section Number	Section	Item/Revision
		<p>.1 Refer to General Conditions.</p> <p>.2 When Work is Substantially Performed, remove all surplus materials, tools, equipment, and temporary structures not required for performance of remaining work.</p> <p>.3 Remove waste products and debris other than that caused by others, and leave Work clean and suitable for occupancy.</p> <p>.4 Remove all surplus usable materials furnished by the Owner from the site and deliver to locations designated by the Owner.</p> <p>.5 When the Work is Totally Performed, remove surplus products, tools, construction machinery and equipment.</p> <p>.6 Remove waste products and debris other than that caused by the Owner.</p> <p>.7 Inspect finishes, fitments and equipment and ensure specified workmanship and operation.</p> <p>.8 Broom clean and wash exterior walks, steps and surfaces; rake clean other surfaces of grounds.</p> <p>.9 Remove dirt and other disfiguration from exterior surfaces.</p> <p>.10 Clean and sweep roofs, gutters, areaways, and sunken wells.</p> <p>.11 Sweep and wash clean paved areas.</p> <p>.12 Clean equipment and fixtures to sanitary condition; clean or replace filters of mechanical equipment.</p> <p>.13 Clean roofs, downspouts, and drainage systems.</p> <p>.14 Remove debris and surplus materials from crawl areas and other accessible concealed spaces.</p> <p>.15 Remove snow and ice from access to the Work.</p> <p>.16 Replace all temporary bulbs, alarms, and filters.</p>
01710 Reinstate ment and Cleaning		<p>New Finishing of Project</p> <p>Add:</p>

Section Number	Section	Item/Revision
		<p>.1 After all other work encompassed in the contract is completed, and before acceptance and final payment will be made, the entire project shall be neatly finished and trimmed to the lines, grades, and cross sections shown on the plans, or as directed by the Owner, to produce smooth surfaces and slopes and a uniform cross section. All construction operations related debris, fallen trees, boulders, bog, and surplus materials, shall be disposed of as provided by these specifications.</p> <p>.2 All drainage ditches, waterways, and culverts shall be opened up and cleared out to restore to their full effectiveness.</p> <p>.3 Should the surface of any structure or road be contaminated as a result of the Contractor's operations, then the Contractor shall clean off all such mud, or deleterious substances, and restore the surface to the satisfaction of the Owner's Representative.</p> <p>.4 All grubbed areas adjoining excavations or embankments shall be graded to conform to the general ground lines.</p> <p>.5 Finishing of project will be considered as subsidiary work pertaining to the contract and no extra payment will be made.</p>
01710	Reinstatement and Cleaning	<p>Replace Maintenance with:</p> <p>.1 Following the issuance of the Certificate of Substantial Performance, items requiring maintenance or repair will be corrected during the warranty period or specified maintenance period.</p> <p>.2 Maintenance or reinstatement, partial reinstatement, repairs, replacement or restoration until the next construction season starts for the respective area of the Province for the area of the Work (spring start up) will be:</p> <p>.1 at the Contractor's expense where the continuance of the Contract beyond Period of Work is under the Contractor's control;</p> <p>.2 at the Owner's expense where completion of the contract beyond Period of Work is under the Owner's control. In this case, payment for maintenance shall be in accordance with Section 01610.</p>

Section Number	Section	Item/Revision
01710 Reinstate ment and Cleaning	Reinstate ment of Roads	In .2.4 replace 'Both installations shall be at the Contractor's expense' with 'Both installations shall be at the Contractor's expense and accepted by the Owner.'
01720 Project Record Documents		Rename Closeout Submittals
01720 Closeout Submittals	2.2 Submission	<p>Replace with:</p> <ul style="list-style-type: none"> .1 Collect reviewed submittals and assemble documents executed by Subcontractors, suppliers and manufacturers. .2 Submit material prior to final Application for Payment. .3 Submit operation and maintenance data, and record (as-built) drawings. .4 Execute Performance, Labour and Materials Payment Bond to warranty period requirements. .5 Owner will issue a final change order reflecting approved adjustments to Contract Price not previously made. .6 Commissioning Manuals. .7 Submit copy of completed volumes in draft form 15 business days prior to issuing of substantial performance. .8 Copy will be returned after final inspection, with the Owner's comments. .9 Revise content of documents as required prior to final submittal. .10 Submit revised files in final form within ten (10) business days after final inspection. .11 Ensure spare parts, maintenance materials and special tools provided are new, undamaged or defective, and of same quality and manufacture as products provided in Work. .12 If requested, furnish evidence as to type, source and quality of products provided. .13 Defective products will be rejected, regardless of previous inspections. Replace products at own expense. .14 Pay costs of transportation.
01720 Closeout Submittals	Format	<p>Add:</p> <ul style="list-style-type: none"> .6 Provide CAD files in DWG format and PDF format

Section Number	Section	Item/Revision
01720 Closeout Submittals	Contents of Each Volume	<p>Add:</p> <p>.6 Training: provide records of required training.</p>
01720 Closeout Submittals	2.5 As-Builts and Samples	<p>Add new subsection 2.5 As-Builts and Samples:</p> <p>.1 In addition to requirements in General Conditions, maintain at the site for Owner one record copy of:</p> <ul style="list-style-type: none"> .1 Contract Drawings. .2 Specifications. .3 Amendments. .4 Change Orders and other modifications to the Contract. .5 Reviewed shop drawings, product data, and samples. .6 Field test records. .7 Inspection certificates. .8 Manufacturer's certificates. <p>.2 Store record documents and samples in field office apart from documents used for construction. Provide files, racks, and secure storage.</p> <p>.3 Label record documents and file in accordance with Section number listings in List of Contents of this Project Manual.</p> <ul style="list-style-type: none"> .1 Label each document "PROJECT RECORD" in neat, large, printed letters. <p>.4 Maintain record documents in clean, dry and legible condition.</p> <ul style="list-style-type: none"> .1 Do not use record documents for construction purposes. <p>.5 Keep record documents and samples available for inspection by Owner.</p>
01720 Closeout Submittals	Recording As-Built Conditions	<p>Add to the end of .1 'Contractor shall pay costs for uncovering and making good Work that is covered before required as-built information is recorded.'</p> <p>Replace .2 with:</p>

Section Number	Section	Item/Revision
		<p>.2 In projects where a building or building systems is the a component, the Contractor shall provide the mechanical, electrical, and other related as-built information to the Owner's Representative before Substantial Performance issued. The information may be provided on marked up contract drawings.</p> <p>Replace .3 with:</p> <p>.3 Do not conceal Work until required information is recorded. Contractor shall pay costs for uncovering and making good Work that is covered before required as-built information is recorded.</p> <p>In .5 replace 'maintain' with 'submit'.</p> <p>Add:</p> <p>.6 Record information concurrently with construction progress. Do not conceal Work until required information is recorded.</p> <p>.7 Contract Drawings and shop drawings: legibly mark each item to record actual construction, including:</p> <ul style="list-style-type: none"> .1 Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements. .2 Measured locations of internal utilities and appurtenances, referenced to visible and accessible features of construction. .3 Field changes of dimension and detail. .4 Changes made by change orders. .5 Details not on original Contract Drawings. .6 References to related shop drawings and modifications. <p>.8 At completion of project, provide all recorded information on print drawings. Transfer recorded information to AutoCAD files in DWG format. Submit DWG files, also with electronic files in PDF format as part of the Closeout Submittals.</p>
New SGC	7.0 As-Builts	Add new SGC As-Builts

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		<p>In reference to GC 1.13 Substantial Performance, GC 21 Certificates and Payments, and Section 01720, the recording of the as-built conditions are required to be submitted for review prior to the issuance of the Substantial Performance Certificate. This forms part of the requirement to be deemed substantially performed.</p>
Standard Form 12	Certificate of Substantial Performance	<p>Alter language immediately above signatures:</p> <p>Replace with:</p> <p>I certify that the work under this Contract is substantially performed, and is acceptable for use, including the receipt of accurate as-builts, except for the portion of the work listed under deficiencies. Pursuant to the Authority of Section 21 of the General Conditions, I hereby issue this Certificate of Substantial Performance.</p> <p>Add:</p> <p>Planned Total Performance Date field</p>
01720 Closeout Submittals	2.7 Final Survey	<p>Add new subsection 2.7 Final Survey:</p> <p>.1 Submit final site survey certificate certifying that elevations and locations of completed Work are in conformance, or non-conformance with Contract Documents.</p>
01720 Closeout Submittals	2.10 Maintenance Materials	<p>Add new subsection 2.10 Maintenance Materials:</p> <p>.1 Spare Parts:</p> <p>.1 Provide spare parts, in quantities specified in individual specification sections.</p> <p>.2 Provide items of same manufacture and quality as items in Work.</p> <p>.3 Deliver to site or location as directed; place and store.</p> <p>.4 Receive and catalogue items.</p> <p>.1 Submit inventory listing to the Owner.</p> <p>.2 Include approved listings in Maintenance Manual.</p>

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		<p>.5 Obtain receipt for delivered products and submit before final payment.</p> <p>.2 Extra Stock Materials:</p> <ul style="list-style-type: none"> .1 Provide maintenance and extra materials, in quantities specified in individual specification sections. .2 Provide items of same manufacture and quality as items in Work. .3 Deliver to site or location as directed; place and store. .4 Receive and catalogue items. <ul style="list-style-type: none"> .1 Submit inventory listing to the Owner. .2 Include approved listings in Maintenance Manual. .5 Obtain receipt for delivered products and submit before to final payment. <p>.3 Special Tools:</p> <ul style="list-style-type: none"> .1 Provide special tools, in quantities specified in individual specification Section. .2 Provide items with tags identifying their associated function and equipment. .3 Deliver to site or location as directed; place and store. .4 Receive and catalogue items. <ul style="list-style-type: none"> .1 Submit inventory listing to the Owner. .2 Include approved listings in Maintenance Manual.
01720 Closeout Submittals	2.11 Delivery, Storage, and Handling	<p>Add new subsection 2.11 Delivery, Storage, and Handling:</p> <ul style="list-style-type: none"> .1 Store spare parts, maintenance materials, and special tools in manner to prevent damage or deterioration. .2 Store in original and undamaged condition with manufacturer's seal and labels intact. .3 Store components subject to damage from weather in weatherproof enclosures. .4 Store paints and freezable materials in a heated and ventilated room. .5 Remove and replace damaged products at own expense and to the satisfaction of the Owner.

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01720 Closeout Submittals	2.12 Pre-Warranty Meeting	<p>Add new subsection 2.12 Pre-Warranty Meeting:</p> <ul style="list-style-type: none"> .1 Convene meeting in conjunction with request for Substantial Performance or with review of deficiencies with contractor's representative, Owner, Owner's Representative and Departmental Representative, in accordance with Section 01200 to: .1 Verify Project requirements. .2 Review manufacturer's installation instructions and warranty requirements. .2 Owner to establish communication procedures for: <ul style="list-style-type: none"> .1 Notifying construction warranty defects. .2 Determine priorities for type of defects. .3 Determine reasonable response time. .3 Contact information for bonded and licensed company for warranty work action: provide name, telephone number and address of company authorized for construction warranty work action.
01720 Closeout Submittals	Warranties and Bonds	<p>Add:</p> <ul style="list-style-type: none"> .1 Develop warranty management plan to contain information relevant to Warranties. .2 Submit warranty management plan 10 business days before planned pre-warranty meeting, to the Owner for approval. .3 Warranty management plan to include required actions and documents to assure that the Owner receives warranties to which it is entitled. .4 Provide plan in narrative form and contain sufficient detail to make it suitable for use by future maintenance and repair personnel. .5 Assemble approved information and submit upon acceptance of work, organized as follows: <p>Renumber the existing .1, .2, .3, .5, and .6 under the newly numbered 2.13.5. Renumber .4 to the newly numbered 2.13.6</p> <p>Add:</p> <ul style="list-style-type: none"> .7 Contractor is encouraged to attend joint ten (10) month warranty inspection, measured from the time of acceptance, with the contractor's representative, Owner, Owner's Representative and Departmental Representative.

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		<p>.8 Include information contained in warranty management plan as follows:</p> <p>.1 Roles and responsibilities of personnel associated with warranty process, including points of contact and telephone numbers within the organizations of Contractors, Subcontractors, manufacturers, or suppliers involved.</p> <p>.2 Listing and status of delivery of Certificates of Warranty for extended warranty items, to include roofs, HVAC balancing, pumps, motors, transformers, and commissioned systems such as fire protection, alarm systems, sprinkler systems, and lightning protection systems.</p> <p>.3 Provide list for each warranted equipment, item, feature of construction or system indicating:</p> <p>.1 Name of item.</p> <p>.2 Model and serial numbers.</p> <p>.3 Location where installed.</p> <p>.4 Name and phone numbers of manufacturers or suppliers.</p> <p>.5 Names, addresses and telephone numbers of sources of spare parts.</p> <p>.6 Warranties and terms of warranty: include one-year overall warranty of construction. Indicate items that have extended warranties and show separate warranty expiration dates.</p> <p>.7 Cross-reference to warranty certificates as applicable.</p> <p>.8 Starting point and duration of warranty period.</p> <p>.9 Summary of maintenance procedures required to continue warranty in force.</p> <p>.10 Cross-Reference to specific pertinent Operation and Maintenance manuals.</p> <p>.11 Organization, names and phone numbers of persons to call for warranty service.</p> <p>.12 Typical response time and repair time expected for various warranted equipment.</p> <p>.4 Contractor's plans for attendance at ten (10) month post-construction warranty inspections.</p> <p>.5 Procedure and status of tagging of equipment covered by extended warranties.</p> <p>.6 Post copies of instructions near selected pieces of equipment where operation is critical for warranty and/or safety reasons.</p>

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		<p>.9 Respond in timely manner to oral or written notification of required construction warranty repair work.</p> <p>.10 Written verification to follow oral instructions.</p> <p>.1 Failure to respond will be cause for the Owner to proceed with action against Contractor.</p>
01720 Closeout Submittals	2.14 Warranty Tags	<p>Add new subsection 2.14 Warranty Tags:</p> <p>.1 Tag, at time of installation, each warranted item. Provide durable, oil- and water-resistant tag approved by Owner.</p> <p>.2 Attach tags with copper wire and spray with waterproof silicone coating.</p> <p>.3 Leave date of acceptance until project is accepted for occupancy.</p> <p>.4 Indicate the following information on tag:</p> <p>.1 Type of product/material.</p> <p>.2 Model number.</p> <p>.3 Serial number.</p> <p>.4 Contract number.</p> <p>.5 Warranty period.</p> <p>.6 Inspector's signature.</p> <p>.7 Construction Contractor.</p>
02070 Sitework Demolition & Removal of Structures	Opening paragraph	Replace 'demolishing, salvaging and removing' with 'demolishing, salvaging, recycling and removing'.
02070 Sitework Demolition & Removal of Structures	2.2 Coordination	<p>Add new subsection 2.2 Coordination</p> <p>.1 Coordinate with the Owner for the material ownership including the following:</p> <p>.1 Except for items or materials indicated to be reused, salvaged, reinstalled, or otherwise indicated to remain the Owner's property, demolished materials shall become the Contractor's property and shall be removed from Project site.</p> <p>.2 Historic items, relics, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, antiques, and other items of interest or value to the Owner that may be encountered during demolition remain the Owner's property:</p>

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		<p>.1 Carefully remove and salvage each item or object in a manner to prevent damage and deliver promptly to the Owner.</p> <p>.2 Coordinate with the Owner, who will establish special procedures for removal and salvage operations.</p>
02070 Sitework Demolition & Removal of Structures	4.3 Demolition	In 4.3.2 replace 'Keep floor drains' with 'Keep building drains'
02070 Sitework Demolition & Removal of Structures	4.4 Salvage	In 4.4.2 replace 'maintenance holes, catch basins, and ditch inlets' with "maintenance holes, catch basins, valve chambers, and ditch inlets".
02070 Sitework Demolition & Removal of Structures	4.9 Restoration	Add new 4.9.1: Clean and reinstate in accordance with Section 01710.
02111 Clearing & Grubbing	References	<p>Delete: United States Environmental; Protection Agency (EPA)/Office of Water. EEPA 833 R 06 004, Developing Your Stormwater Pollution Prevention Plan, A Guide for Construction Sites.</p> <p>Add: Canadian Pest Control Products Act (S.C. 2002, C. 28)</p>
02111 Clearing & Grubbing	Regulatory Agencies	In .1 delete 'and burning' and 'Obtain permission from the Owner prior to any burning activities'.
02111 Clearing & Grubbing	Removal and Disposal	<p>In .1 delete 'burning'.</p> <p>Delete .3</p> <p>Renumber subsequent items.</p>
02111 Clearing & Grubbing	Cleaning	<p>Add: .1 Cleaning as per Section 01710.</p> <p>Renumber subsequent items.</p>
02232 Reshaping	4.1 Scarifying and Reshaping	Rename Reshaping.

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Only (Up to 100 mm)		
02250 Calcium Chloride	Application	<p>Add:</p> <p>.8 Contractors are reminded that the Dust Control subsection of Section 01560, applies.</p>
02282 Supply & Installation of Guide Rail	References	<p>Delete:</p> <p>ASTM A653/A653M Standard Specification for Steel Sheet, Zinc Coated (Galvanized) or Zinc Iron Allow Coated (Galvannealed) by the Hot Dip Process</p> <p>Add:</p> <p>ASTM A780/A780M Standard Practice for Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings</p> <p>Delete:</p> <p>CGSB references</p> <p>Add:</p> <p>CSA G164 Hot Dip Galvanizing of Irregularly Shaped Articles</p>
02282 Supply & Installation of Guide Rail	2.2 Submittals	<p>New subsection 2.2 Submittals:</p> <p>.1 Submit in accordance with Section 01340.</p> <p>.2 Product Data:</p> <ul style="list-style-type: none"> .1 Submit manufacturer's instructions, printed product literature and data sheets for guide rail, wood, and coatings and include product characteristics, performance criteria, physical size, finish and limitations. .2 Submit product data and manufacturer's installation/application instructions for paints and coating products to be used. .1 Submit WHMIS - SDS - Safety Data Sheets. <p>.3 Shop Drawings:</p> <ul style="list-style-type: none"> .1 Submit drawings stamped and signed by professional engineer registered or licensed in Newfoundland and Labrador, Canada.
02282 Supply & Installation of Guide Rail	Materials .1 Guide Rail	<p>Replace .3 with:</p> <p>.3 The individual rail elements shall be of the Standard Type (W-beam) consisting of 2.75 mm thick (12 gauge) rail of length not less than 4125 mm, having post bolt slots 3810 mm apart centre to centre for Standard Type Guide Rail; and 1905 mm apart centre to centre for Guide Rail with Additional Posts.</p>

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		In .5 replace 'ASTM A653/A653M or ASTM A123/A123M' with 'ASTM A123/A123M or CSA G164'.
02282 Supply & Installation of Guide Rail	Materials .2 Angled Rail Section	Replace references to 'angled', 'sloped' or 'buried' with 'sloped and buried'. In .4 replace 'CGSB 1.181-99' with 'ASTM A780/A780M'
02282 Supply & Installation of Guide Rail	Materials .6 New Posts and Anchors	Add: .2 Only birch wood will be acceptable for 150 mm x 150 mm guide rail posts. Hemlock or other approved species will be acceptable for 200 mm x 200 mm guide rail posts. Renumber subsequent items. Replace .3 with: Posts shall have minimum dimensions of 150 mm x 150 mm x2400 mm for "Standard Type Guide Rail" and for "Standard Type Guide Rail with Additional Posts".
02282 Supply & Installation of Guide Rail	4.1 Execution	Add new 4.1 Examination: .1 Verification of Conditions: Verify that conditions of substrate previously installed under other Sections or Contracts are acceptable for guide rail installation in accordance with manufacturer's written instructions. .1 Inform the Owner of unacceptable conditions immediately upon discovery. .2 Proceed with installation only after unacceptable conditions have been remedied and after receipt of written approval to proceed from the Owner.
02282 Supply & Installation of Guide Rail	4.2 Installation	Replace 3 with: .3 A sloped rail section shall be placed at each end of a run of guide rail, unless directed otherwise by the Owner. In .8 replace '1000mm' with '1500mm'. In .13 replace '500mm' with '635mm'. Replace .18 with: Signal reflectors shall be attached to posts at terminal sections, posts at the welded angled sections, and to every fourth post in a length of guide rail. Silver reflection shall be placed facing oncoming traffic and yellow reflectors shall be placed on the opposite side except for divided highway.

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		<p>Add new .19:</p> <p>On divided highway, silver reflectors shall be placed facing oncoming traffic on the outside shoulder and yellow reflectors shall be placed facing traffic on the median shoulder.</p> <p>Renumber subsequent items.</p>
02282 Supply & Installation of Guide Rail	4.3 Painting and Touch-ups	<p>Add new subsection 4.3 Painting and Touch-ups:</p> <p>.1 Galvanized steel touch-ups:</p> <ul style="list-style-type: none"> .1 Clean damaged surfaces with wire brush removing loose and cracked coatings. .1 Apply two (2) coats of organic zinc-rich paint to damaged areas. <p>.2 Pre-treat damaged surfaces in accordance with manufacturer's written recommendations for zinc-rich paint.</p> <p>.3 Painted steel:</p> <ul style="list-style-type: none"> .1 Apply one (1) coat of primer and two (2) coats of finish paint to exposed surface. <p>.4 Painted posts and offset blocks:</p> <ul style="list-style-type: none"> .1 Apply two (2) coats of paint to exposed surfaces of posts and offset blocks.
02282 Supply & Installation of Guide Rai	4.4 Cleaning	<p>Add new subsection 4.4 Cleaning</p> <p>.1 Progress Cleaning: Clean in accordance with Section 01710.</p> <p>.2 Final Cleaning: Upon completion, remove surplus materials, rubbish, tools and equipment in accordance with Section 01710.</p>
02283 Salvage & Reinstallation of Guide Rail	2.2 Environmental Requirements	<p>Add new subsection 2.2 Environmental Requirements:</p> <p>.1 Guide rail posts located in Protected Water Supply areas but outside the buffer zones indicated on the Section 39 Permit issued by ECC, Water Resources Management Division shall only be chromated copper arsenate (CCA) treated type.</p> <p>.2 Guide rail posts located in Protected Water Supply areas but inside the buffer zones indicated on the Section 39 Permit issued by ECC, Water Resources Management Division shall be untreated.</p>
02283 Salvage & Reinstallation of Guide Rail	3.1 Materials	<p>Add to .1 'Sloped and Buried Rail Sections,'</p> <p>Rename .2 to 'Fasteners'.</p> <p>Replace .3 with:</p>

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		<p>Post bolts shall be 16 mm diameter and 200 mm long for use with standard 150 mm x 150 mm, or 16 mm diameter and 250 mm long for use with 200 mm x 200 mm posts.</p> <p>Add .4:</p> <p>Post bolt washers for the back of the post shall be 45 mm round and 4 mm thick.</p> <p>Replace .5 with:</p> <p>Bolts for anchors shall be 16 mm diameter and 350 mm long for use with standard 150 mm x 150 mm posts and anchors, or 16 mm diameter and 450 mm long for use with 200 mm x 200 mm posts and anchors. Washers shall be 45 mm round and 4 mm thick.</p>
02283 Salvage & Reinstallation of Guide Rail	3.1 Materials .4 New Posts and Anchors	<p>Add new .2:</p> <p>Only birch wood will be acceptable for 150 mm x 150 mm guide rail posts. Hemlock or other approved species will be acceptable for 200 mm x 200 mm guide rail posts.</p> <p>Renumber subsequent items.</p> <p>Replace .3 with:</p> <p>Posts shall have minimum dimensions of 150 mm x 150 mm x 2400 mm for "Standard Type Guide Rail" and for , "Standard Type Guide Rail with Additional Posts".</p>
02283 Salvage & Reinstallation of Guide Rail	4.2 Removal and Salvage of Existing Posts	In .4 replace 'designated for salvage,' with 'designated for salvage and reinstallation,'.
02283 Salvage & Reinstallation of Guide Rail	4.3 Backfilling Post Holes	In .4 replace 'vibrating vibratory compactor roller' with 'vibrating vibratory compactor with vibratory roller'.
02283 Salvage & Reinstallation of Guide Rail	4.4 Installation	<p>Replace .1 with:</p> <p>The guide rail sections, sloped and buried rail sections, terminal rail sections and posts shall be transported to the location where they are required.</p> <p>Replace .3 with:</p> <p>A sloped and buried rail section shall be placed at each end of a run of guide rail, unless directed otherwise by the Owner.</p>

Section Number	Section	Item/Revision
		<p>Replace in .4 'an angled' with 'a sloped and buried'.</p> <p>Replace in .9 '1000 mm' with '1500 mm'.</p> <p>Replace .13 with: All surplus excavated material shall be disposed of along the sides of fill, or in other locations as directed by the Owner.</p> <p>In .14 replace '500 mm' with '635 mm'.</p> <p>Replace .19 with: Signal reflectors shall be attached to posts at terminal sections, posts at the welded angled sections, and to every fourth post in a length of guide rail. Silver reflectors shall be placed facing oncoming traffic and yellow reflectors shall be placed on the opposite side except for divided highway.</p> <p>Add new .20: On divided highways, silver reflectors will be placed facing oncoming traffic on the outside shoulder and yellow reflectors will be placed facing traffic on the median shoulder.</p> <p>Renumber subsequent items.</p>
02496 Timber Cribwork	References	Add: G164 Hot Dip Galvanizing of Irregularly Shaped Articles
02496 Timber Cribwork	4.1 Preparation	Replace .3 with: Take closely spaced accurate soundings 1500 mm centre to centre or less precisely located by template to determine actual slope of base area of crib and construct crib bottom to match base slope.
02528 Concrete Walks, Curbs & Gutters		Rename Curbs, Gutters and Sidewalks
Section 02552 Hot Mix Asphaltic Concrete Pavement	References	Add: Highway Specifications Book Section 331 Performance Grade Asphalt Binder and Section 337 Warm Mix Asphalt.

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Section 02552	Exceptions to Highway Specifications Book	<p>Replace 2.1.1 with:</p> <p>The latest edition of the TI, Highway Specifications Book, as published by the Highway Design and Construction Division, Sections listed in the References subsection of this section will apply to all asphalt, granular and associated works placed on municipal projects, funded by the Department, with the following exceptions:</p> <p>Delete .9. Renumber subsequent items.</p> <p>Add:</p> <p>.10 Placement of roadway paving is only permitted after the cut-off dates (330.05) and before the spring season with the approval of the Owner and MI's Regional Office. All other placement conditions must also be met.</p> <p>.11 Inherent to the request to place asphalt after the cut-off dates (330.05) and before the spring season, the Contractor agrees to supply a two (2) year warranty on the quality of the asphalt placed.</p> <p>.12 If a roadway consists of only one asphaltic lift, the cut-off dates for placement (330.05) is that of a Surface Mix.</p>
02574 Reshaping & Patching Asphalt Pavement	Measurement for Payment	In .3 replace 'Asphalt removal designated' with 'Asphalt removal and disposal designated'.
02576 Pulverize Existing Asphalt	References	Delete: Highway Specifications Book Section 840 Dust Control.
02576 Pulverize Existing Asphalt	Procedure	<p>Replace .6 with:</p> <p>.6 Contractors are reminded that the Dust Control subsection of Section 01560, applies.</p>
02704 Sanitary Sewer Outfall Pipe	4.5 Underwater Video And/Or Photo Inspection	<p>Replace .1 under Safety with:</p> <p>The underwater diving and preparation operations are to meet all the safety codes for diving practices both for the Federal and Provincial governing bodies, including "The Occupational Health & Safety Regulations, 2012, NL" and the Occupational Safety Code for Diving Operations CAN/CSA - Z275.4 and the Competency</p>

Section Number	Section	Item/Revision
		Standard for Diving, Hyperbaric Chamber, and Remotely Operated Vehicle Operations CAN/CSA - Z275.2.
02710 Foundation & Underslab Drainage	Installation	<p>Replace .2 Pipe laying: .2 with:</p> <p>.2 Lay perforated pipe to a minimum slope of 1:100 or grade as indicated. Face perforations and coupling slots downward.</p> <p>Replace .2 Pipe laying: .4 with:</p> <p>.4 Do not use shims to establish pipe slope. Grade bedding to establish pipe slope.</p>
02729 Water Wells	Drilling	In .9 replace 'obtain water samples' with 'obtain clear water samples'.
02831 Chain Link Fences & Gates	References	<p>Delete 'CAN/CGSB 1 GP-178 Primer, Zinc Dust/Zinc Oxide, Alkyd (For Galvanized Surfaces)</p> <p>Add: CAN/CGSB-1.181 Ready-Mixed Organic Zinc-Rich Coating</p>
02831 Chain Link Fences & Gates	3.1 Materials	Replace .12 with: Organic zinc rich coating: to CAN/CGSB-1.181.
02831 Chain Link Fences & Gates	4.4 Touch Up	<p>Replace with:</p> <p>.1 Repair damaged galvanized surfaces. Clean damaged surfaces with wire brush removing loose and cracked coatings. Apply two coats of organic zinc-rich paint to damaged areas.</p> <p>.2 Pre-treat damaged surfaces according to manufacturers' instructions for zinc-rich paint.</p>
03100 Concrete Formwork and Falsework	2.2 Submittals	<p>Add:</p> <p>.3 For concrete pours above 1.5 metres in height or with spans greater than 3 metres calculations of formwork shall be provided.</p> <p>Renumber subsequent items.</p>
03100 Concrete Formwork and Falsework	3.1 Materials	<p>Replace .3 and .4 with:</p> <p>.3 Form release agent: Proprietary, non-volatile material not to stain concrete or impair subsequent application of finishes or coatings to surface of concrete, derived from agricultural sources, non-petroleum containing, non-toxic, biodegradable, low VOC, colourless mineral oil, with viscosity between 15 to 24 mm/s at 40 °C, flash point minimum 150 °C, open cup.</p> <p>Renumber subsequent items.</p>

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		Replace in .5 'now' with 'not'.
03100 Concrete Formwork and Falsework	Erection	Add: .6 Unless indicated otherwise form ply shall be used on all exposed faces
03200 Concrete Reinforcement	References	Add: ASTM A641/A641M Standard Specification for Zinc-Coated (Galvanized) Carbon Steel Wire Delete: CSA S6 Canadian Highway Bridge Design Code
03200 Concrete Reinforcement	3.1 Materials	Add to .6: .1 Finish as indicated: .1 Galvanized: having Class A coating in accordance with ASTM A 641/A 641M. .2 Epoxy Coated: Epoxy coated after welding in accordance with ASTM A 884/A 884M, Class A coated <175 µm, Type 1 intended for use in concrete or masonry, colour contrasting with rust.
03300 Cast-in-Place Concrete	References	Add: CSA A3001 Cementitious Materials for Use in Concrete Replace: 'Atlantic Provinces Ready Mixed Concrete Association' with Atlantic Concrete Association (ACA).
03300 Cast-in-Place Concrete	Submittals	Add: .4 Concrete pours: provide accurate records of poured concrete items indicating date and location of pour, quality, air temperature and test samples taken as described in Field Quality Control of this specification section. .5 Concrete hauling time: provide for review by Owner deviations exceeding maximum allowable time of 120 minutes for concrete delivered to site of Work and discharged after batching.
03300 Cast-in-Place Concrete	2.4 Quality Assurance	Add new subsection 2.4 Quality Assurance: .1 Minimum 4 weeks prior to starting concrete work, submit proposed quality control procedures in accordance with Section 01400 for Owner approval for following items: .1 Falsework erection. .2 Hot weather concrete.

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		<p>.3 Cold weather concrete.</p> <p>.4 Curing.</p> <p>.5 Finishes.</p> <p>.6 Formwork removal.</p> <p>.7 Joints.</p>
03300 Cast-in-Place Concrete	2.5 Delivery, Storage and Handling	<p>Add new subsection 2.5 Delivery, Storage and Handling:</p> <p>.1 Concrete hauling time: maximum allowable time for concrete to be delivered to site of Work and discharged not to exceed 120 minutes after batching.</p> <p>.1 Modifications to maximum time limit must be agreed to Owner and concrete producer as described in CSA A23.1/A23.2.</p> <p>.2 Deviations to be submitted for review by Owner.</p> <p>.3 Concrete delivery: ensure continuous concrete delivery from plant meets CSA A23.1/A23.2.</p> <p>.2 Waste Management and Disposal:</p> <p>.1 Divert unused concrete materials from landfill to local facility approved by Owner.</p> <p>.2 Provide an appropriate area on the job site where concrete trucks can be safely washed.</p> <p>.3 Divert unused admixtures and additive materials (pigments, fibres) from landfill to official hazardous material collections site as approved by the Owner.</p> <p>.4 Unused admixtures and additive materials must not be disposed of into sewer systems, into lakes, streams, onto ground or in other location where it will pose health or environmental hazard.</p> <p>.5 Prevent admixtures and additive materials from entering drinking water supplies or streams. Using appropriate safety precautions, collect liquid or solidify liquid with inert, noncombustible material and remove for disposal. Dispose of waste in accordance with applicable local, Provincial and National regulations.</p>
03300 Cast-in-Place Concrete	3.1 Materials	<p>Replace .4 with:</p> <p>.4 Cementitious hydraulic slag as a Supplementary Cementitious Material (SCM) in accordance with CSA A3001.</p> <p>Renumber subsequent items. There were two .7s.</p> <p>Add to the end of .12: ', net shrinkage as specified'.</p>

Section Number	Section	Item/Revision
		<p>Replace .17 with: Labyrinth waterstops: extruded PVC of sizes indicated with shop welded corner and intersecting pieces with legs not less than 500 mm long:</p> <p>Leave items under .17 (.1 to .3) unaltered.</p> <p>Add:</p> <p>.22 Dampproof membrane:</p> <ul style="list-style-type: none"> .1 Kraft/polyethylene membrane: .1 Plain: polyethylene film of specified thickness, bonded to asphalt treated creped kraft. .2 Reinforced: two polyethylene films of specified thickness, bonded each side of asphalt treated creped kraft paper, reinforced with 13 x 13 mm fibreglass scrim. .3 Membrane adhesive: as recommended by membrane manufacturer. .2 Bitumen impregnated protection board as specified. .3 Cavity drainage board as specified. <p>Add:</p> <p>.25 Concrete Bonding Agents as specified.</p>
03300 Cast-in-Place Concrete	3.2 Mixes	<p>Replace .1 with: Proportion normal density concrete in accordance with CSA-A23.1/A23.2.</p> <p>Replace .1.1.7 with: Air content: 5 to 8 % except for pile concrete, levelling, mass and tremie concrete which shall be 4 to 7 %.</p>
03300 Cast-in-Place Concrete	4.2 Installation/Application .3 Anchor bolts	<p>Replace .2 with: With the Owner's approval, grout anchor bolts in preformed holes or holes drilled after concrete has set. Formed holes to be at least 100 mm in diameter. Drilled holes to be minimum 25 mm larger in diameter than bolts used or to manufacturer's recommendations.</p>
03300 Cast-in-Place Concrete	4.2 Installation/Application	<p>Replace .7.2 with: Use procedures noted in CSA A23.1/A23.2 or as reviewed by Owner to remove excess bleed water. Ensure surface is not damaged.</p> <p>Replace .7.3 with:</p>

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		<p>Cure concrete in accordance with CSA A23.1/A23.2. If required, use curing compounds compatible with applied finish on concrete surfaces. Applied finish on concrete as specified. Provide written declaration of compatibility of compounds used.</p> <p>Replace .7.5 with new .5,.6, and .7:</p> <ul style="list-style-type: none"> .5 All concrete surfaces, unless specified otherwise, that will be visible on completion of the work shall be rubbed finish. .6 The Contractor shall take special care during the planning, forming, concrete placing, curing, and stripping phases to ensure defect-free surfaces. Should remedial measures be required, they shall be carried out by personnel expert in this aspect of concrete work. .7 The surface shall be uniform in colour and texture when viewed from a distance of 15 m. <p>Renumber subsequent items.</p> <p>Delete from .8 'Class 2'.</p> <p>Replace .8.2 with:</p> <p>After having been kept saturated with water for a period of not less than three (3) hours, the cavities shall be carefully pointed and trued with a mortar of cement and fine aggregate mixed in the proportions used in the grade of the concrete being finished or an approved product. The mortar patches shall be placed and cured as specified by the manufacturer. No mortar shall be placed when the air temperature is forecasted to fall below 5 °C within 24 hours. All construction and expansion joints in the completed work shall be left carefully tooled and free of all mortar and concrete. The joint filler shall be left exposed for its full length with clean and true edges. The resulting surfaces shall be true and uniform.</p> <p>Replace .8.3 with:</p> <p>After removal of forms, the rubbing of concrete shall be started as soon as its condition will permit. However, before starting this work the concrete shall be kept thoroughly saturated with water for a minimum period of</p>

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		<p>three (3) hours but sufficient time shall have elapsed before the wetting down to allow the mortar used in the pointing of rod holes and defects to thoroughly set. Surfaces to be finished shall be rubbed with a medium coarse carborundum stone.</p> <p>Replace .8.4 with:</p> <p>When insufficient cement paste can be drawn from the concrete from rubbing, use a small amount of mortar on its face. The mortar shall be composed of extra cement and fine sand mixed in proportions such as to match existing concrete verified by a patch test. Rubbing shall be continued until all form marks, projections and irregularities have been removed, all voids filled, and a uniform surface has been obtained. The paste produced by this rubbing shall be left in place at this item.</p>
03300 Cast-in-Place Concrete	4.6 Surface Tolerance	<p>Add new subsection 4.6 Surface Tolerance:</p> <p>.1 Concrete slab tolerances in accordance with CSA-A23.1/A23.2, F-number Method, FF =25, FL = 20.</p> <p>.2 Finish all interior exposed concrete slabs to a tight consistent steel trowel appearance without burnishing the surface.</p>
03300 Cast-in-Place Concrete	Field Quality Control	<p>Replace .1 with:</p> <p>.1 Inspection and testing of concrete and concrete materials will be carried out by a Testing Laboratory designated by the Owner in accordance with CSA A23.1/A23.2, and Section 01400. Ensure testing laboratory certified to CSA A283.</p>
03300 Cast-in-Place Concrete	4.8 Defective Work	<p>Add new subsection 4.8 Defective Work:</p> <p>.1 Repairs and classification of unacceptable concrete to be in accordance with CAN/CSA-A23.1.</p> <p>.2 Remove defective concrete and embedded debris and repair as directed by Owner.</p> <p>.3 Remove to bare concrete curing compounds detrimental to application of specified finishes.</p> <p>.4 Concrete to be supplied at the minimum strength requirement at 28 days. Tests indicating strengths lower than specified will necessitate further testing as required by the Owner. Cost for such testing to be at the Contractor's expense. Should further tests confirm low values, the Owner has the right to require strengthening of the affected area or removal and replacing of the weak concrete all to the Contractor's expense.</p>

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		.5 Repair all shrinkage cracks in the completed slab-on-grade to remain exposed employing a suitable epoxy injection technique acceptable to Owner to completely seal all such cracks, all to the Contractor's expense.
03300 Cast-in-Place Concrete	4.9 Cleaning	<p>Add new subsection 4.9 Cleaning:</p> <p>.1 Clean in accordance with 01710.</p> <p>.2 Divert unused concrete materials from landfill.</p> <p>.3 Provide appropriate area on job site where concrete trucks can be safely washed.</p> <p>.4 Divert unused admixtures and additive materials (pigments, fibres) from landfill to official hazardous material collections site as approved by the Department of Environment and Climate Change.</p> <p>.5 Disposal of unused admixtures and additive materials, concrete, concrete washwater, or cleaning materials and residues into sewer systems, into lakes, streams, onto ground or in other location to pose health or environmental hazard is prohibited.</p> <p>.6 Prevent admixtures and additive materials from entering drinking water supplies or streams.</p> <p>.7 Using appropriate safety precautions, collect liquid or solidify liquid with inert, noncombustible material and remove for disposal.</p> <p>.8 Dispose of waste in accordance with applicable local, Provincial and National regulations.</p>
03306 Underwater Concreting	References	<p>Add:</p> <p>CSA A23.1/A23.2 Concrete Materials and Methods of Concrete Construction/Test Methods and Standard Practices for Concrete</p>
03306 Underwater Concreting	General 2.1 Terminology	<p>Rename 2.1 Definitions</p> <p>Replace .2 with:</p> <p>.2 Tremie pipe has a hopper at upper end and may be open ended or may have a foot valve, plug or travelling plug to control flow of concrete. Pipe has diameter of 200 mm minimum, constructed from sections with flange couplings fitted with gaskets.</p> <p>.1 Concrete is placed in hopper and a sufficient head of concrete is maintained in tremie pipe to provide desired rate of flow.</p>
03306 Underwater Concreting	2.3 Administrativ	Add new subsection 2.3 Administrative Requirements:

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	e Requirements	<ul style="list-style-type: none"> .1 Concrete pre-placement meeting; conduct pre-placement meeting 5 business days minimum before tremie operation. .1 Ensure meeting includes as minimum attendees as follows: <ul style="list-style-type: none"> .1 General contractor. .2 Ready-mix concrete supplier. .3 Admixture supplier. .4 Placing/formwork sub-contractor. .5 Reinforcing sub-contractor. .6 Testing agency representative. .7 Structural engineer. .8 Owner's Representative. .2 Distribute to attendees copies of concrete mix designs, aggregate physical properties, placing schedule, rate of delivery, testing program, and contingency plan for delay and breakdown.
03306 Underwater Concreting	2.4 Action and Informational Submittals	<p>Add new subsection 2.4 Action and Informational Submittals</p> <ul style="list-style-type: none"> .1 Submit in accordance with Section 01340. .2 Product Data: <ul style="list-style-type: none"> .1 Submit manufacturer's instructions, printed product literature and data sheets for concrete and include product characteristics, performance criteria, physical size, finish and limitations.
03306 Underwater Concreting	2.5 Delivery, Storage, and Handling	<p>Add new subsection: 2.5 Delivery, Storage, and Handling:</p> <ul style="list-style-type: none"> .1 Deliver, store and handle materials in accordance with Section 01015 and with manufacturer's written instructions. .2 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address. .3 Storage and Handling Requirements: <ul style="list-style-type: none"> .1 Store materials in accordance with manufacturer's recommendations in clean, dry, well-ventilated area. .2 Store and protect concrete from nicks, scratches, and blemishes. .3 Replace defective or damaged materials with new.
03306 Underwater Concreting	3.2 Concrete Mixes	<p>Add:</p> <ul style="list-style-type: none"> .3 Air Content 4 - 7 % <p>Renumber subsequent items</p>

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		<p>Replace .4 with:</p> <p>.4 For tremie concrete, produce a mix with a slump of 190 ± 40 mm and a water cement ratio of not more than 0.45</p>
03306 Underwater Concreting	Admixtures	<p>Add .4:</p> <p>Submit admixtures to produce self-consolidating calcium chloride to Owner for review.</p>
03306 Underwater Concreting	4.1 Examination	<p>Add new subsection 4.1 Examination:</p> <p>.1 Verification of Conditions: verify that conditions of substrate previously installed under other Sections or Contracts are acceptable for concrete placement installation in accordance with manufacturer's written instructions.</p> <p>.1 Visually inspect substrate in presence of the Owner.</p> <p>.2 Inform the Owner of unacceptable conditions immediately upon discovery.</p> <p>.3 Proceed with installation only after unacceptable conditions have been remedied and after receipt of written approval to proceed from the Owner.</p>
03306 Underwater Concreting	4.3 General	<p>Rename 4.3 Installation</p> <p>Replace .1 with:</p> <p>Do concrete work in accordance with Sections 03300 and 03200, CSA A23.1/A23.2 and as specified herein. Testing for concrete to CSA A23.1/A23.2.</p> <p>Replace .2 with:</p> <p>Where concrete placement extends above water surface, protect concrete from direct contact with air at temperature below 5°C for Owner's specified number of days.</p>
03306 Underwater Concreting	4.3 Installation .4 Tremie Method	<p>Add:</p> <p>.1 To prevent segregation, concrete shall be carefully placed in a compact mass, in its final position, by means of a tremie tube or other approved method. Still water shall be maintained at the point of deposit and the forms underwater shall be watertight. Precautions shall be taken to prevent the loss of concrete by washing action of the water.</p> <p>.2 No concrete shall be spread at any greater distance than 3 m from the discharge end of the tremie tube. When large areas are to be covered tremie tubes at</p>

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		<p>maximum 6 m centres shall be used and concrete placed simultaneously.</p> <p>.3 If the tremie operation is unavoidably interrupted below water level, the surface laitance shall be removed by jetting one day after placing and removed by pumping.</p> <p>Renumber subsequent items.</p> <p>Replace .11 with:</p> <p>Do not place concrete in flowing water when current exceeds 3 m/min. Do not vibrate, disturb or puddle concrete after it has been placed.</p>
03306 Underwater Concreting	4.5 Bottom-Dump Bucket Method	<p>Replace with:</p> <p>.1 Completely fill bucket with concrete, cover top surface and lower slowly through water to prevent backwash.</p> <p>.2 Discharge concrete only when bucket is in contact with surface on which concrete is to be deposited.</p> <p>.3 Withdraw bucket slowly until it is well above concrete to maintain as nearly as possible still water at point of discharge to approval of the Owner.</p> <p>.4 Do not place concrete in flowing water when current exceeds 3 m/min.</p>
03306 Underwater Concreting	4.8 Sampling and Testing	<p>Add new subsection 4.8 Sampling and Testing:</p> <p>.1 The Contractor shall co-operate fully with the Owner's Representative in enabling quality assurance tests to be carried out. Samples for quality testing purposes will normally be taken from concrete as delivered to the site (at the point of discharge from the delivery equipment). However, depending on the method of placement, random sampling of the concrete as incorporated into the structure shall also be performed to verify the above specified properties. This process shall entail the sampling of fresh concrete as close to the point of deposit in the structure as is practicable. Coring of the in-place hardened concrete may also be performed to verify the specified air void system. The Department reserves the right to designate the point of acceptance, with prior notice given to the Contractor.</p> <p>.2 Field quality assurance testing will be carried out by an Owner's Representative in accordance with CSA A23.2.</p>

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		<p>.3 Quality assurance tests carried out by the Department shall conform to the following guidelines:</p> <p>.1 Air & Slum Tests: Each load until 5 consecutive batches meet the requirements then test every third load thereafter.</p> <p>.2 Strength & Temperature Tests: At least 1 set of Laboratory cylinders per 100 cubic metres, minimum 1 set per day plus 1 set of field cures per category of concrete if required by the Owner's Representative.</p> <p>.3 Additional strength tests will be required when early indications of strength are required such as before prestressing, girder transport, removal of falsework, backfilling structure, etc.</p> <p>.4 If either the measured slump, air content or temperature fall outside the limits specified, a repeat test shall be made. Failure to meet the contract requirements shall result in rejection of the concrete. Acceptance of the concrete will depend on the results and consistency of all of the above test's results being satisfactory.</p>
	4.9 Cleaning	<p>Add new subsection 4.9 Cleaning:</p> <p>.1 Progress Cleaning: clean in accordance with Section 01710.</p> <p>.1 Leave Work area clean at end of each day.</p> <p>.2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01710</p> <p>.3 Waste Management: separate waste materials for reuse and recycling.</p> <p>.1 Remove recycling containers and bins from site and dispose of materials at appropriate facility.</p>
03345 Concrete Floor Finishes	References	<p>Add:</p> <p>ASTM C171 Standard Specification for Sheet Materials for Curing Concrete</p> <p>CGSB 25.20 Surface Sealer for Floors</p>
03345 Concrete Floor Finishes	2.2 Submittals	<p>Add new subsection 2.2 Submittals:</p> <p>.1 Submit submittals in accordance with Section 01340.</p> <p>.2 Product Data:</p> <p>.1 Provide manufacturer's printed product literature and data sheets for concrete finishes and include product characteristics, performance criteria, physical size, finish and limitations.</p>

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		.2 Submit WHMIS Safety Data Sheet (SDS) in accordance with Section 01720 .3 Include application instructions for concrete floor treatments.
03345 Concrete Floor Finishes	3.1 Performance Requirements	Add new subsection 3.1 Performance Requirements: .1 Product quality and quality of work in accordance with Section 01600. .2 Submit written declaration that components used are compatible and will not adversely affect finished flooring products and their installation adhesives.
03345 Concrete Floor Finishes	3.2 Material	Rename General
03345 Concrete Floor Finishes	3.3 Chemical Hardener	Add new subsection 3.3 Chemical Hardener: .1 Sodium silicate, magnesium fluosilicate, or zinc fluosilicate blend as indicated. .2 Water: potable
03345 Concrete Floor Finishes	3.4 Sealing Compounds	Add new subsection 3.4 Sealing Compounds: .1 Surface sealer: to CAN/CGSB-25.20, Type 2 - water based. .2 Surface sealers may not be manufactured or formulated with aromatic solvents formaldehyde halogenated solvents mercury lead cadmium hexavalent chromium and their compounds.
03345 Concrete Floor Finishes	3.5 Curing Compounds	Add new subsection 3.5 Curing Compounds: .1 Waterborne membrane forming curing membrane to ASTM C 309, specified, Class B. .1 Verify compatibility with subsequent finishes.
03345 Concrete Floor Finishes	3.6 Concrete Stains	Add new subsection 3.6 Concrete Stains: .1 Select low VOC, water-based concrete stains.
03345 Concrete Floor Finishes	3.7 Wet Cure	Add new subsection 3.7 Wet Cure: .1 Clear polyethylene film to ASTM C171, minimum thickness 0.15 mm.
03345 Concrete Floor Finishes	3.8 Mixes	Add new subsection 3.8 Mixes: .1 Mixing, ratios and application in accordance with manufacturer's instructions.
03345 Concrete	4.1 Examination	Add new subsection 4.1 Examination:

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Floor Finishes		.1 Verify that slab surfaces are ready to receive work and elevations are as indicated on drawings by manufacturer.
03345 Concrete Floor Finishes	4.2 Preparation of Existing Slab	<p>Add new subsection 4.2 Preparation of Existing Slab:</p> <p>.1 Rub exposed sharp edges of concrete with carborundum to produce 3 mm radius edges unless otherwise indicated.</p> <p>.2 Saw cut control joints to CSA-A23.1/A23.2, 24 hours maximum after placing of concrete.</p> <p>.3 Use mechanical stripping and/or strong solvent to remove chlorinated rubber or existing surface coatings.</p> <p>.4 Use protective clothing, eye protection, and respiratory equipment during stripping of chlorinated rubber or existing surface coatings.</p>
03345 Concrete Floor Finishes	4.3 Concrete Staining	<p>Add new subsection 4.3 Concrete Staining:</p> <p>.1 Coordinate with Section 03300 for wet curing. Liquid curing compounds not permitted under staining.</p> <p>.2 Cure concrete for minimum 60 days.</p> <p>.3 Clean and prepare concrete in accordance with manufacturers written instructions.</p> <p>.4 Apply two (2) coats of chemical stain materials in accordance with manufacturers written instructions; obtain Owner's acceptance after application of both first and second coats.</p> <p>.5 Apply recommended cure/seal materials in accordance with manufacturer's written instructions, in number of coats to achieve required floor lustre.</p>
03345 Concrete Floor Finishes	4.4 Floor Finish	<p>Rename Application Finish</p> <p>Add:</p> <p>.1 Apply concrete finishing floor hardener in accordance with manufacturer's instructions. Cure to manufacturers recommendations.</p> <p>Renumber subsequent items.</p> <p>Delete .5. Renumber subsequent items.</p> <p>In .5 replace 'wax' with 'treatment' and replace 'manufacturer's instructions with 'Sealer manufacturer's instructions'.</p> <p>Add:</p>

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		.7 Clean over spray: Clean sealant from adjacent surfaces.
03345 Concrete Floor Finishes	4.6 Protection	Add new subsection 4.6 Protection: .1 Protect finished installation in accordance with manufacturer's instructions.