



City of Coquitlam

**Contract Documents
78035**

**Lougheed CPR Overpass
Structural Rehabilitation**



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Invitation to Tender



INVITATION TO TENDER

DATE OF ISSUE: **June 18, 2025**

We acknowledge with gratitude and respect that the name Coquitlam was derived from the hən̓q̓əmi̓n̓əm̓ word kʷikwə́ləm (kwee-kwuh-tlum) meaning “Red Fish Up the River”. The City is honoured to be located on the kʷikwə́ləm (Kwikwetlem) traditional and ancestral lands, including those parts that were historically shared with the s̓q̓əciyaʔt̓ təməxʷ (Katzie), and other Coast Salish Peoples.

Tender No. 78035

Lougheed CPR Overpass Structural Rehabilitation

The City of Coquitlam invites tenders for **Contract 78035 – Lougheed CPR Overpass Structural Rehabilitation**, generally consisting of the following, but not limited to:

- Cast-In-Place Concrete Spall Repairs
- Pressure Injection Crack Repairs
- Remove and Replace Bridge Sidewalk Compression Seals and Grouted Joints
- Other miscellaneous and incidental works as contained in the Contract Documents

Tender Documents and Drawings are available for downloading from the City of Coquitlam website: www.coquitlam.ca/BidOpportunities

Printing of Tender documents and drawings is the sole responsibility of the Tenderers.

Tenders submitted must be accompanied by a copy of the original specified 10% Bid Bond and will be received:

On or Before 2:00 pm local time

Wednesday, July 9, 2025

("Closing Date and Time")

Addenda

Tenderers are required to check the City's website for any updated information, issued before the Closing Date at: www.coquitlam.ca/BidOpportunities. Where in its sole discretion it considers it to be necessary or desirable, the City may issue Addenda to amend any portion of the Contract Documents.

Any changes to the Tender documentation will be issued by means of written Addenda and posted on the City's website and will form part of the Tender. No amendment of any kind to the Tender is effective unless it is posted in a formal written Addendum on the City website. Upon submitting a Tender, Tenderers will be deemed to have received notice of all Addenda that are posted on the City's website and deemed to have considered the information for inclusion in the Tender submitted.

The City does not retain a bidder's list or bidder's registry. Tenderers are encouraged to register as plan takers and may view the Tender Documents and Drawings by contacting the Vancouver Regional Construction Association (VRCA), website: www.my.vrca.ca, ph: 604-294-3766, or email at vrca@vrca.ca, quoting the Coquitlam Tender Reference Number.

Should there be any discrepancy in the documentation provided, the City's original file copy shall prevail.

Tenders shall remain open for acceptance for 60 days following the submission Closing Date.

The City reserves the right to accept or reject any or all Tenders and the lowest or any Tender may not necessarily be accepted. The City also reserves the right to cancel any request for Tender at any time without recourse by the Tenderer.

The City, prior to award of any Tender, may negotiate with the Tenderer presenting the lowest price compliant Tender, for changes in the Work, materials, specifications or conditions without having any duty or obligation to advise any other Tenderers or to allow them to modify their Tenders, and the City will have no liability to any Tenderer as a result of such negotiations or modifications.

The City will not be responsible for any costs incurred by the Tenderer in preparing the Tender.

Procurement of goods and services is conducted in accordance with Chapter 5 of the Canadian Free Trade Agreement (CFTA) and the New West Partnership Trade Agreement (NWPTA).

M. Pain
Manager Procurement

Instructions to Tenderers

Tender 78035

Lougheed CPR Overpass Structural Rehabilitation

INSTRUCTIONS TO TENDERERS

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INSTRUCTIONS TO TENDERERS

(FOR USE WHEN UNIT PRICES FORM THE BASIS OF PAYMENT - TO BE USED ONLY WITH THE GENERAL CONDITIONS AND OTHER STANDARD DOCUMENTS OF THE UNIT PRICE MASTER MUNICIPAL CONSTRUCTION DOCUMENTS.)

The City of Coquitlam

Contract: **Lougheed CPR Overpass Structural Rehabilitation**

Reference No. **78035**

- 1.0 Introduction**
- 1.1 These Instructions apply to and govern the preparation of tenders for this *Contract*. The *Contract* is generally for the following work:
- Cast-In-Place Concrete Spall Repairs
 - Pressure Injection Crack Repairs
 - Remove and Replace Bridge Sidewalk Compression Seals and Grouted Joints
 - Other miscellaneous and incidental works as contained in the Contract Documents
- 1.2 All inquiries regarding this Tender are to be submitted in writing referencing the **Tender Name and Number** sent to:
- E-mail** bid@coquitlam.ca
- The deadline for inquiries is **2:00 PM** local time, **Friday, July 4, 2025**.
INQUIRIES RECEIVED AFTER THIS DATE AND TIME MAY NOT RECEIVE A RESPONSE.
- 2.0 Tender Documents**
- 2.1 The Tender Documents which a Tenderer should review to prepare a Tender consist of all of the *Contract Documents* listed in Schedule 1 entitled "Schedule of Contract Documents". Schedule 1 is attached to the Agreement which is included as part of the Tender Package. The *Contract Documents* include the drawings listed in Schedule 2 to the Agreement, entitled "**List of Contract Drawings**".
- 2.2 A portion of the Contract Documents are included by reference. Copies of these documents have not been included with the tender package. These documents are the General Conditions, Specifications and Standard Detail Drawings. They are those contained in the publication entitled "Master Municipal Construction Documents - General Conditions, Specifications and Standard Detail Drawings". Refer to Schedule 1 to the Agreement or, if not specified in Schedule 1, then the applicable edition shall be the most recent edition as of the date of the *Tender Closing Date*. All sections of this publication are by reference included in the *Contract Documents*.

2.3 Any additional information made available to Tenderers prior to the Tender Closing Time by the Owner or representative of the Owner, such as geotechnical reports or as-built plans, which is not expressly included in Schedule 1 or Schedule 2 to the Agreement, is not included in the Contract Documents. Such additional information is made available only for the assistance of Tenderers who must make their own judgments about its reliability, accuracy, completeness and relevance to the *Contract*, and neither the Owner nor any representative of the Owner gives any guarantee or representation that the additional information is reliable, accurate, complete or relevant.

3.0 Submission of Tenders

3.1 Tenders must be submitted on the Tender Form provided, accompanied by a copy of the original 10% Bid Bond quoting the Tender Name and Number, and be uploaded to the City's file transfer website.

Tenders must be received on or before:

Tender Closing Time: 2:00 p.m. local time

Tender Closing Date: July 9, 2025

For the purpose of the Tender submission, digital copies of original documents and signatures sent electronically are accepted. Original documents are required upon request by the City.

Instructions for Tender Submission

3.2 **Tender submissions are to be consolidated into one (1) PDF file and uploaded electronically through QFile, the City's file transfer service accessed at website:**

<http://qfile.coquitlam.ca/bid>

- 1. In the "Subject Field" enter: Tender Number and Name**
- 2. Add consolidated Tender file in PDF format and Appendix 1 in XLS format, and Send** (ensure your web browser remains open until you receive 2 emails from Qfile to confirm upload is complete and was sent to email: bid@coquitlam.ca)

Tenderers are responsible to allow for ample time to complete the submission process. For assistance, phone 604-927-3037.

3.3 Tenders submitted shall be deemed to be received when displayed as a new email in the in-box of the above email address. The City will not be responsible for any delay or for any Tenders not received for any reason, including technological delays or issues by either party's network or email program, and the City will not be liable for any damages associated with Tenders not received.

3.4 The City reserves the right to accept late Tenders to allow for technological delays. The City also reserves the right to accept Tenders by email: bid@coquitlam.ca.

BIDS RECEIVED IN-PERSON, BY COURIER, OR BY FAX WILL NOT BE ACCEPTED.

- 3.5 Tenders will not be opened in public. The unevaluated results will be forwarded to participants by email.
- 3.6 Tender submissions are subject to the Freedom of Information and Protection of Privacy Act and contents may be disclosed if required to do so, pursuant to the Act.
- 4.0 Additional Instructions to Tenderers**
- 4.1 Additional Instructions to Tenderers
Tenderers are required to review Appendix A – Traffic Management Detail Specifications. Any work that would require closure of any traffic lanes must be completed at night.

The overhead pedestrian bridge crosses Lougheed Highway. Work on top of the overpass deck can be completed during the day. The contractor is responsible to ensure that no material, runoff, dirt or any type of debris falls into the travelled portion of the highway.

Refer to Appendix B for the minimum safety requirement when working in/near the CPR railway.
- Obtaining Documents**
- 4.2 The following documents which are referred to and form part of the Contract Document package may be obtained as follows:
- Copies of the Master Municipal Construction Documents Volume II (2009), General Conditions, Specifications and Standard Detail Drawings are available separately from:

Support Services Unlimited
Suite 102
211 Columbia Street
Vancouver, B.C. V6A 2R5
Tel: 604-681-0295
Fax: 604-305-0424
 - Copies of the City of Coquitlam Supplementary Specifications and Detailed Drawings to the MMCD 2009 Edition are available for viewing and downloading off the City of Coquitlam website: [Supplementary Specifications and Detailed Drawings to MMCD](#)
- Test Excavations**
- 4.3 Prior to the excavation of test holes on road allowances or privately owned property the Tenderer shall obtain permission from the Municipality or Owner of the property and comply with their requirements for restoration of disturbed surfaces and utilities. Failure to comply with Municipal by-laws restricting this practice may result in prosecution of the offending party.
- Business License**
- 4.4 The successful Tenderer shall provide evidence of a City of Coquitlam Business License or Tri-Cities Inter-Municipal Business License prior to commencement of work or supply of materials. For

more information, contact Business License Division Ph: 604-927-3085 or apply online at website: [City of Coquitlam Business License](#)

- | | | |
|---|------|---|
| No Claim | 4.5 | Except as expressly and specifically permitted in these Instructions to Tenderers, no Tenderer shall have any claim for any compensation of any kind whatsoever, as a result of participating in this Tender, including accepting a non-compliant bid and by submitting a Tender, each Tenderer shall be deemed to have agreed that it has no claim. |
| No Cost | 4.6 | The City will not under any circumstances be responsible for any costs incurred by the Tenderer in preparing the Tender. |
| Right to Accept or Reject any Tender | 4.7 | <p>The City reserves the right to accept or reject any or all Tenders and the lowest or any Tender may not necessarily be accepted. In its sole discretion, the City may reject or retain for its consideration, tenders which are nonconforming because they do not contain the content or form required by the instructions to tenderers or for failure to comply with the process for submission set out in these instructions to tenderers.</p> <p>The City specifically reserves the right to reject all Tenders if none is considered to be satisfactory and, in that event, at its option, to call for additional Tenders.</p> |
| Negotiation | 4.8 | The City, prior to award of any Tender, may negotiate with the Tenderer presenting the lowest price compliant Tender, for changes in the Work, materials, specifications or conditions without having any duty or obligation to advise any other Tenderers or to allow them to modify their Tenders, and the City will have no liability to any Tenderer as a result of such negotiations or modifications. |
| Cancellation of Tender | 4.9 | The City reserves the right to cancel any request for Tender at any time without recourse by the Tenderer. The City has the right to not award this work for any reason including choosing to complete the work with the City's own forces. |
| Conflict of Interest | 4.10 | Tenderers shall disclose any actual or potential conflicts of interest and existing business relationships it may have with the City, their elected or appointed officials or employees. |
| Collusion | 4.11 | Tenderers will not discuss or communicate with one another in regards to the preparation of their Tenders. Each Tenderer will ensure that its participation in the Tender process and that of its team members is conducted without collusion or fraud. Failure to comply with this requirement may lead to disqualification without further notice or warning. |
| Instruction to Tenderers – Part II | 4.12 | Delete Instructions to Tenderers – Part II Contained in the Edition of the Publication “Master Municipal Construction Documents 2009” and replace with the following: |

5.0 Tender Requirements

- 5.1 A tender should be on the Form of Tender as provided and be signed by the authorized signatory(s) as follows:
- 5.1.1 if the tenderer is a partnership or joint venture then the name of the partnership or joint venturer should be included, and each partner or joint venturer should sign personally; if a partner of joint venture is a corporation then such corporation should sign as indicated in paragraph 5.1.3 below; and
 - 5.1.2 if the tenderer is a corporation then the full name of the corporation should be included, together with the names and signatures of authorized signatories.
 - 5.1.3 For the purpose of the Tender submission, digital copies of original documents and electronic signatures are accepted. Original documents are required upon request by the City.
- 5.2 A tender must be accompanied by tender security ("*Bid Security*") in the form of:
- 5.2.1 a copy (digital or Electronic copy is acceptable) of the original bid bond in an amount equal to 10% of the Tender Price, issued by a surety licensed to carry on the business of suretyship in British Columbia in a form reasonably satisfactory to the *Owner*;
- 5.3 Tenderer should be competent and capable of performing the various items of work. Tenderer shall complete the following statement sheets appended to the Form of Tender:
- 5.3.1 Appendix 1 – the Schedule of Quantities and Prices;
 - 5.3.2 Appendix 2 – a "*Preliminary Construction Schedule*", generally in the form attached as Appendix 2 to the Form of Tender, and showing *Substantial Performance* by the date or within the duration, shown in paragraph 2.2 of the Form of Tender.
 - 5.3.3 Appendix 3 – name and brief description of the previous experience of the *Superintendent* the tenderer will use for the *Work*;
 - 5.3.4 Appendix 4 – a list of previous comparable work, including a brief description of that work, approximate contract value, and references (with phone numbers);
 - 5.3.5 Appendix 5 – a complete list of all subcontractors, if any, that the tenderer will use for the *Work* including full names.; and

Appendix 7 – is provided for information only, to indicate the Contract Insurance is to be submitted by the successful Tenderer upon Notice of Award.

- 5.4 The successful tenderer will, within 15 *Days* of receipt of the written *Notice of Award*, be required to deliver to the *Owner* the items listed in FT 5.1.1, including a Performance Bond and a Labour and Material Payment Bond as described in FT 5.1.1(a), failing which the provisions of FT 6.1 will apply.
- 6.0 Qualifications, Modifications, Alternative Tenders**
- 6.1 Tenders which contain qualifications, or omissions, so as to make comparison which other tenders difficult, may be rejected by the *Owner*.
- 6.2 A tenderer may, at the tenderer's election, submit an alternative tender ("*Alternative Tender*") which varies the materials, products, designs or equipment by the *Owner as Approved Equals* as the case may be, but an *Alternative Tender* must be in addition to, and not in substitution for a tender which conforms to the requirements of the *Contract Documents*.
- 6.3 The only *Alternative Tender* that the *Owner* may accept is an *Alternative Tender* submitted by that tenderer whose conforming tender, submitted as required by paragraph 6.2 of these Instructions to Tenderers, would have been accepted by the *Owners* in the preference to other conforming tenders, if no *Alternative Tenders* had been invited.
- 7.0 Approved Equals**
- 7.1 Prior to the *Tender Closing Time and Date*, a tenderer may request the *Owner* to approve materials, products, or equipment ("*Approved Equal*") to be included in a tender in substitution for items indicated in the Contract Documents.
- 7.2 Applications for an *Approved Equal* must be in writing, and supported by appropriate supporting information, data, specifications, and documentation.
- 7.3 If the *Owner* decides in its discretion to accept an *Approved Equal*, then the *Owner* will issue an addendum to all tenderers.
- 7.4 The *Owner* is not obligated to review or accept an application for an *Approved Equal*.
- 8.0 Inspection of the Place of the Work**
- 8.1 All tenderers, either personally or through a representative, are responsible to examine the *Place of the Work* before submitting a tender. A tenderer has full responsibility to be familiar with and make allowance in the tender for all conditions at the *Place of the Work* that might affect the tender, including any information regarding subsurface soil conditions made available by the *Owner*, the location of the *Work*, local conditions, topographical soil conditions, weather and access. Unless otherwise specified in the *Contract Documents*, a tenderer is not required to do subsurface

investigations. By submitting a tender, a tenderer represents that the tenderer has examined the *Place of the Work*, or specifically elected not to. No additional payments or time extensions shall be claimable or due because of difficulties relating to conditions at the *Place of the Work* which were reasonably foreseeable by a contractor qualified to undertake the *Work*.

- 8.2 Tenderers are referred to GC 11.2.1 regarding **Concealed or Unknown Conditions**.
- 9.0 Interpretation of Contract Documents**
- 9.1 If a tenderer is in doubt as to the correct meaning of any provision of the *Contract Documents*, the tenderer may request clarification as instructed in paragraph 1.2 of the Instructions to Tenderers.
- 9.2 If a tenderer discovers any contradictions or inconsistencies in the *Contract Documents* or its provisions, or any discrepancies between a provision of the *Contract Documents* and conditions at the *Place of the Work as* observed in an examination under paragraph 8 of the person named in paragraph 1.2 of the Instructions to Tenderers.
- 9.3 If the *Owner* considers it necessary, the *Owner* may issue written addenda to provide clarification (s) of the *Contract Documents*.
- 9.4 No oral interpretation or representations from the *Owner* or any representative of the *Owner* will affect, alter, or amend any provision of the *Contract Documents*.
- 10.0 Prices**
- 10.1 The Tendered Price will represent the entire cost excluding *GST* to the *Owner* of the complete *Work* based on the estimated quantities in the *Schedule of Quantities and Prices* of the Form of Tender. Notwithstanding the generalities of the above, tenderers shall include in the tendered prices (including unit prices, lump sum prices, or other forms of pricing) sufficient amounts to cover:
- 10.1.1 the costs of all labour, equipment and material included in or required for the *Work*, including all items which, whole not specifically listed in the *Schedule of Quantities and Prices*, are included in the *Work* specifically or by necessary inference from the *Contract Documents*;
 - 10.1.2 all assessments payable with respect to labour as required by any statutory scheme such as unemployment insurance, holiday pay, insurance, CPP and all employee benefits and the Workers Compensation Act;
 - 10.1.3 all overhead costs, including head office and on-site overhead costs, and all amounts for the *Contractor's* profit.
- 10.2 The tendered prices and all subcontracts must allow for compliance with all applicable laws regarding trade or other qualifications of

employees performing the *Work*, and payment of appropriate wages for labour included in or required for the *Work*.

11.0 Taxes

11.1 The tendered prices shall cover all taxes and assessments of any kind payable with respect to the *Work*, but shall not include *GST*. *GST* shall be listed as a separate line item as required by GC 19.3.

12.0 Amendment of Tenders

12.1 A tenderer may amend or revoke a tender by giving written notice, delivered by Email, to the office referred to in paragraph 3.4 of the Instructions to Tenderers at any time up until the *Tender Closing Date and Time*. An amendment or revocation that is received after the *Tender Closing Date and Time* shall not be considered and shall not affect a tender as submitted.

12.2 An amendment or revocation must be signed by an authorized signatory of the tenderer in the same manner as provided by paragraph 5.1 of these Instructions to Tenderers.

12.3 Any amendment that expressly or by inference discloses the tenderer's *Tender Price* or other material element of the tender such that, in the opinion of the *Owner*, the confidentiality of the tender is breached, will invalidate the entire tender.

12.4 An acceptable form of a tender amendment which tenderers may, but are not required to, use is as follows:

"Contract: _____
 (TITLE OF CONTRACT)

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

TO: _____
 (NAME OF OWNER)

We the undersigned wish to amend our tender which we submitted for the above *Contract* by deleting the following tendered prices or items from our tender:

 (TENDERED PRICES AND/OR TENDER ITEMS IN THE TENDER THAT ARE TO BE AMENDED)

and substituting the following revised tendered prices or items:

 (REVISED TENDERED PRICES OR TENDER ITEMS)

The extensions in our tender should be adjusted accordingly, and our ***Tender Price*** as set out in Appendix 1 of our submitted **Form of Tender**, and on the ***Schedule of Quantities and Prices***, increased / decreased by \$_____, excluding GST. We have not included

our revised **Tender Price** in order to preserve the confidentiality of our tender.

Signed and delivered the ___ day of _____, 20__."

13.0 Duration of Tenders

13.1 After the *Tender Closing Time*, a tender shall remain valid and irrevocable as set out in paragraph 5.1 of the Form of Tender.

14.0 Qualifications of Tenderers

14.1 By submitting a tender, a tenderer is representing that it has the competence, qualifications and relevant experience required to do the *Work*.

15.0 Award

15.1 In exercising its discretion, the *Owner* will have regard to the information provided in the Appendices to the Form of Tender as described under IT 5.3 including the proven experience of the tenderer, and any listed subcontractors, to do the *Work*.

Tenders received will be evaluated to provide the City with greatest value based on quality, service, price and experience. Evaluation Criteria will include but is not limited to:

1. Ability to meet specifications and required completion date
2. Contractor's past experience, references, reputation and compliance to specifications
3. Demonstrated successful experience on similar projects and specific equipment installation
4. Price: purchase price, maintenance costs, availability of parts and service, warranty and compatibility with existing equipment and/or conditions
5. Any other criteria, the City deems, at its sole discretion, necessary to evaluate Tenders;
6. Lowest price will not necessarily be accepted.

The City may, in its absolute discretion, not award to a Tenderer if the Tenderer, or any officer or director of a corporate Tenderer, is or has been engaged, either directly or indirectly through another corporation or legal entity, in a legal action against the City and its elected and appointed officers and employees or any of them in relation to:

- a) any other contract or services; or
- b) any matter arising from the City's exercise of its powers, duties or functions under the *Local Government Act*, the *Community Charter* or any other enactments; within five years of this Tender Offer.

For purposes of this section, the words "legal action" includes, without limitation, mediation, arbitration, hearing before an administrative tribunal or lawsuit filed in any court.

Without limiting the City's sole discretion, in determining whether or not to award to a Tenderer pursuant to this clause, the City will consider such factors as whether the legal action is likely to affect the Tenderer's ability to work with the City and its employees, agents, consultants and representatives or any of them and whether the City's past experience with the Tenderer in the matter that resulted in the legal action indicates that the City is likely to incur increased staff and legal costs or either of them in the administration of this contract if it is awarded to the Tenderer.

In the event that the lowest total Tender Price by two or more Tenderers is the same amount, the City will select a Tenderer with an overall satisfactory performance record in having completed work on previous relevant projects that are provided as references, and on City projects. Information obtained from references will not be disclosed or discussed with any Tenderer. If all references are equal, selection will be determined by a coin toss in a manner to be directed by the City.

Where only one Tender is received the City may reject such and re-tender on a selected basis.

- 15.2 The *Owner* will notify the successful tenderer in writing.
- 15.3 If there are any discrepancies in the *Schedule of Quantities and Prices* between the unit prices and the extended totals then the unit prices shall be deemed correct, and corresponding corrections shall be made to the extended totals. If a unit price or extended total has been omitted, the following shall apply:
- a) If a unit price is given but the corresponding extended total has been omitted, then the extended total shall be calculated from unit price and the estimated quantity, and inserted as the extended total;
 - b) If an extended total is given but the corresponding unit price has been omitted, then the unit price shall be calculated from the extended total and estimated quantity, and inserted as the unit price;
 - c) If both the unit price and the corresponding extended total for a tender item have been omitted, then the following test shall be applied to determine whether the tender shall be rejected as incomplete:
 - (i) the highest of the unit prices tendered by other tenderers for that tender item shall be used as the test unit price, and the corresponding test

extended total shall be calculated from the test unit price and the estimated quantity;

- (ii) if the test extended total for the tender item exceeds 1% of the revised total *Tender Price*, including the test extended total, or if the revised total *Tender Price*, including the test extended total, alters the ranking of the tenderers according to the lowest *Tender Price*, then the omitted unit price for that tender item is deemed to materially affect the *Tender Price* relative to other tenders and the tender shall be rejected;
- (iii) if the tender is not rejected under subparagraph (ii) of this IT 15.3 (c), then the unit price and the extended total for that tender item shall both be deemed to be, and the costs for that tender item shall be zero deemed to be included in other tender items prices;

d) In no event shall page totals in the *Schedule of Quantities and Prices* or the total *Tender Price* be used to calculate missing extended totals or unit prices.

16.0 Subcontractors

16.1 The *Owner* reserves the right to object to any of the subcontractors listed in a tender. If the *Owner* objects to any of the subcontractor(s) then the *Owner* will permit a tenderer to, within 5 days, propose a substitute subcontractor(s) acceptable to the *Owner* provided that there is not resulting adjustment in the *Tender Price* or the completion date set out in paragraph 2.2 of the Form of Tender. A tenderer will not be required to make such substitution and, if the *Owner* objects to a listed *Subcontractor(s)*, the tenderer may, rather than propose a substitute subcontractor(s), consider its tender rejected by the *Owner* and by written notice withdraw it tender. The *Owner* shall, in the event, return the tenderer's bid security

17.0 Optional Work

17.1 If the *Schedule of Quantities and Prices* includes any tender prices for *Optional or Provisional Work*, as defined in GC 7.4.1, the tenderers must complete all the unit prices for such *Optional or Provisional Work*. Such tender prices shall not include any general overhead costs, or other costs, or profit, not directly related to the *Optional or Provisional Work*.

17.2 Notwithstanding that the *Owner* may elect not to proceed with the *Optional or Provisional Work*, the tender prices for any *Optional or Provisional Work*, including the extended totals for *Optional or Provisional Work* unit prices, shall be included in the *Tender Price* for the purpose of any price comparisons between tenders.

Form of Tender



Form of Tender

Tender No. 78035

Lougheed CPR Overpass Structural Rehabilitation

Summary

Name of **Contractor**: _____

Tender Price (exclude GST): \$ _____
(FROM APPENDIX 1 OF FORM OF TENDER)

Tender submitted must be accompanied by a copy of the original 10% Bid Bond and will be received

On or before 2:00 pm (local time)
Wednesday, July 9, 2025

Instructions for Tender Submission

Tender submissions are to be consolidated into one (1) .pdf file and uploaded electronically through QFile, the City's file transfer service accessed at website: qfile.coquitlam.ca/bid

- 1. In the "Subject Field" enter:** Tender Number and Name
- 2. Add consolidated Tender file in PDF format, and Appendix 1 in XLS format, and Send** (ensure your web browser remains open until you receive 2 emails from Qfile to confirm upload is complete and was sent to the correct email address: bid@coquitlam.ca)

Tenderers are responsible to allow ample time to complete the Tender submission process. If assistance is required, phone 604-927-3037.

July 2025

THE CITY OF COQUITLAM
3000 Guildford Way
Coquitlam, B.C. V3B 7N2

(FOR USE WHEN UNIT PRICES FORM THE BASIS OF PAYMENT - TO BE USED ONLY WITH THE GENERAL CONDITIONS AND OTHER STANDARD DOCUMENTS OF THE UNIT PRICE MASTER MUNICIPAL CONSTRUCTION DOCUMENTS.)

Contract Name: Lougheed CPR Overpass Structural Rehabilitation

Reference No.: 78035

TO OWNER:

1 WE, THE UNDERSIGNED:

- 1.1 have received and carefully reviewed all of the *Contract Documents*, including the Instructions to Tenderers, the City of Coquitlam Supplementary General Conditions, the City of Coquitlam Supplementary Contract Specifications, the specified edition of the "Master Municipal Construction Documents – General Conditions, Specifications and Standard Detail Drawings" and the following Addenda:

_____;

(ADDENDA, IF ANY)

- 1.2 shall fully disclose any actual or potential conflicts of interest and existing business relationships we may have with the City, their elected or appointed officials or employees:
- _____
- 1.3 have full knowledge of the *Place of the Work*, and the *Work* required; and
- 1.4 have complied with the Instructions to Tenderers; and

2 ACCORDINGLY WE HEREBY OFFER:

- 2.1 to perform and complete all of the *Work* and to provide all the labour, equipment and material all as set out in the *Contract Documents*, in strict compliance with the *Contract Documents*; and
- 2.2 to achieve *Substantial Performance* of the *Work* on or before **November 24, 2025**; and
- 2.3 to do the *Work* for the price, which is the sum of the products of the actual quantities incorporated into the *Work* and the appropriate unit prices set out in Appendix 1, the "*Schedule of Quantities and Prices*", plus any lump sums or specific prices and adjustment amounts as provided by the *Contract Documents*. For the purposes of tender comparison, our offer is to complete the *Work* for the "*Tender Price*" as set out on Appendix 1 of this Form of Tender. Our *Tender Price* is based on the estimated quantities listed in the *Schedule of Quantities and Prices*, and excludes *GST*.

3 WE CONFIRM:

- 3.1 that we understand and agree that the quantities as listed in the *Schedule of Quantities and Prices* are estimated, and that the actual quantities will vary.
- 3.2 that we understand and agree that the owner is in no way obliged to accept this Tender.

4 WE CONFIRM:

- 4.1 that the following Appendices are attached to and form a part of this tender:
 - 4.1.1 the Appendices as required by paragraph 5.3 of the Instructions to Tenderers - Part II; and
 - 4.1.2 the *Bid Security* as required by paragraph 5.2 of the Instructions to Tenderers - Part II.
 - 4.1.3 the Certificate of Compliance on the form provided in Appendix 7 of this Form of Tender.

5 WE AGREE:

- 5.1 that this tender will be irrevocable and open for acceptance by the *Owner* for a period of **60** calendar days from the day following the *Tender Closing Date and Time*, even if the tender of another Tenderer is accepted by the *Owner*. If within this period the *Owner* delivers a written notice ("*Notice of Award*") by which the *Owner* accepts our tender we will:
 - 5.1.1 within **15 Days** of receipt of the written *Notice of Award* deliver to the *Owner*:
 - a) a Performance Bond and a Labour and Material Payment Bond, each in the amount of 50% of the *Contract Price*, issued by a surety licensed to carry on the business of suretyship in the province of British Columbia, and in a form acceptable to the *Owner*;
 - b) a "clearance letter" indicating that the Tenderer is in WCB compliance; and
 - c) a copy of the insurance policies as specified in SGC Section 24 indicating that all such insurance coverage is in place and;
 - d) a letter confirming the *Contractor* as "Prime Contractor" for the Contract as specified in SGC Section 21.2.1.
 - 5.1.2 within **2 Days** of receipt of written "*Notice to Proceed*", or such longer time as may be otherwise specified in the *Notice to Proceed*, commence the *Work*; and
 - 5.1.3 sign the Contract Documents as required by GC 2.1.

6 WE AGREE:

6.1 that, if we receive written *Notice of Award* of this *Contract* and, contrary to paragraph 5 of this Form of Tender, we:

6.1.1 fail or refuse to deliver the documents as specified by paragraph 5.1.1 of this Form of Tender; or

6.1.2 fail or refuse to commence the *Work* as required by the *Notice to Proceed*,

then such failure or refusal will be deemed to be a refusal by us to enter into the *Contract* and the *Owner* may, on written notice to us, award the *Contract* to another party. We further agree that, as full compensation on account of damages suffered by the *Owner* because of such failure or refusal, the *Bid Security* shall be forfeited to the *Owner*, in an amount equal to the lesser of:

6.1.3 the face value of the *Bid Security*; and

6.1.4 the amount by which our *Tender Price* is less than the amount for which the *Owner* contracts with another party to perform the *Work*.

7 OUR ADDRESS is as follows:

Phone: _____ - _____ - _____

Email: _____

Attention: _____

This Tender is executed this _____ day of _____, 20____.

Contractor:

(FULL LEGAL NAME OF CORPORATION, PARTNERSHIP OR INDIVIDUAL)

(AUTHORIZED SIGNATORY)

(AUTHORIZED SIGNATORY)

8 WE CONFIRM:

8.1 our Goods and Services Tax (GST) registration status is as follows:

8.1.1 for information purposes, our GST Registration Number is:

(GST REGISTRATION NUMBER)

or;

8.1.2 by signature hereunder, we certify we are **not required** to provide a registration number:

(AUTHORIZED SIGNATORY)

(AUTHORIZED SIGNATORY)

**APPENDIX 1
 FORM OF TENDER**

Contract 78035

Lougheed CPR Overpass Structural Rehabilitation

SCHEDULE OF QUANTITIES AND PRICES

(see paragraph 5.3.1 of the Instruction to Tenderers)

(All Tender and Contract Prices shall NOT include GST. GST will apply upon payment)

(Should there be any discrepancy in the information provided, the City's original file copy shall prevail)

ITEM NO.	MMCD Ref. / (Supplementary Contract Specifications)	DESCRIPTION	UNIT	QTY	UNIT PRICE	EXTENDED AMOUNT
1.00	01 55 005	TRAFFIC CONTROL, VEHICLE ACCESS AND PARKING				
1.01	(1.5.1)	Traffic Control and Management			Incidental to Contract	
2.00	01 57 015	ENVIRONMENTAL PROTECTION				
2.01	(1.6.1)	ESC supply & installation, maintenance and removal			Incidental to Contract	
3.00	01 58 015	PROJECT IDENTIFICATION				
3.01	(1.3.1)	Construction Zone Information Signs	ea.	3		
3.02	(1.3.2)	Changeable Message Signs (CMS) (x3 Signs)	month	2		
4.00	03 30 535	CAST-IN-PLACE CONCRETE				
4.01	(1.5.9)	Cast-In-Place Vertical Concrete Spall Repairs	sq. m	5		
4.02	(1.5.9)	Cast-In-Place Overhead Concrete Spall Repairs	sq. m	6		
4.03	(1.5.9)	Cast-In-Place Horizontal Concrete Spall Repairs	sq. m	2		
4.04	(1.5.10)	Power Washing Concrete Surfaces	LS	1		
4.05	(1.5.11)	Pressure Injection Crack Repair Vertical Cracks in Concrete Columns	m	12		
5.00	05 53 005	METAL FABRICATIONS				
5.01	(1.5.2)	Supply and Install New Angle on Sidewalk	m	220		
6.00	07 91 005	JOINTS				
6.01	(1.4.2)	Remove and Replace Grouted Joints in Side Walk	each	28		
6.02	(1.4.2)	Remove and Replace Compression Seals in Side Walk	each	14		
6.03	(1.4.3)	Reseal Exterior Gap Between Girders at Piers and Abutments	each	14		
7.00	26 56 015	ROADWAY LIGHTING				
7.01	(1.9.1)	Repair of Lighting Fixtures	LS	1		
8.00	33 40 015	STORM SEWERS				
8.01	(1.6.1)	Remove and Replace 152 mm diameter Storm Sewer Drain Pipes	LS	1		

Total Tended Price (exclude GST):

(Transfer the amount to Form of Tender Summary Page 1)

Name of Contractor: _____

APPENDIX 2

FORM OF TENDER

Contract 78035

Lougheed CPR Overpass Structural Rehabilitation

PRELIMINARY CONSTRUCTION SCHEDULE

(See paragraph 5.3.2 of the Instructions to Tenderers)

INDICATE SCHEDULE WITH BAR CHART WITH CONSTRUCTION DURATIONS

Construction Activity	August				September					October				November		
	1	2	3	4	1	2	3	4	5	1	2	3	4	1	2	3

Substantial Completion Date: **November 24, 2025**

Proposed Disposal Site: _____

APPENDIX 3

FORM OF TENDER

Contract 78035

Lougheed CPR Overpass Structural Rehabilitation

EXPERIENCE OF SUPERINTENDENT

(See paragraph 5.3.3 of the Instructions to Tenderers)

Proposed Project Superintendent _____

List of Project Experience

PROJECT:		Dates:	
Work Description:			
Responsibility:			
Owner/Reference:		Phone No.:	

PROJECT:		Dates:	
Work Description:			
Responsibility:			
Owner/Reference:		Phone No.:	

PROJECT:		Dates:	
Work Description:			
Responsibility:			
Owner/Reference:		Phone No.:	

APPENDIX 4

FORM OF TENDER

Contract 78035

Lougheed CPR Overpass Structural Rehabilitation

CONTRACTOR'S COMPARABLE WORK EXPERIENCE

(See paragraph 5.3.4 of the Instructions to Tenderers)

PROJECT:		VALUE (\$):	
OWNER:		Phone No.:	
Work Description:			

PROJECT:		VALUE (\$):	
OWNER:		Phone No.:	
Work Description:			

PROJECT:		VALUE (\$):	
OWNER:		Phone No.:	
Work Description:			

PROJECT:		VALUE (\$):	
OWNER:		Phone No.:	
Work Description:			

APPENDIX 5

FORM OF TENDER

**Contract 78035
Lougheed CPR Overpass Structural Rehabilitation**

SUBCONTRACTORS

(See paragraph 5.3.5 of the Instructions to Tenderers)

Trade:		Tender Item:	
Work Description:			
Subcontractor:		Phone No.:	

Trade:		Tender Item:	
Work Description:			
Subcontractor:		Phone No.:	

Trade:		Tender Item:	
Work Description:			
Subcontractor:		Phone No.:	

Trade:		Tender Item:	
Work Description:			
Subcontractor:		Phone No.:	

Trade:		Tender Item:	
Work Description:			
Subcontractor:		Phone No.:	

APPENDIX 6

FORM OF TENDER

**Contract 78035
Lougheed CPR Overpass Structural Rehabilitation**

Bid Bond

NO. _____

\$ _____

KNOW ALL MEN BY THESE PRESENTS THAT

As Principal, hereinafter called the Principal, and

As Surety, hereinafter called the Surety, are held and firmly bound unto

As Obligee, hereinafter called the Obligee, in the amount of

_____ Dollars (\$_____) lawful money of
Canada, for the payment of which sum, well and truly to be made, the Principal and the Surety bind
themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these
presents.

WHEREAS, the Principal has submitted a written Tender to the Obligee, dated the _____ day of
_____, 2025, for Contract _____.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if the aforesaid Principal shall have the
Tender accepted within sixty (60) days from the Closing Date of Tender and the said Principal will, within the
time required, enter into a formal contract and give good and sufficient bonds to secure the performance of
the terms and conditions of the Contract, then this obligation shall be null and void; otherwise the Principal
and Surety will pay unto the Obligee the difference in money between the amount of the bid of the said
Principal and the amount for which the Obligee legally contracts with another party to perform the work if the
latter amount be in excess of the former.

The Surety shall not be liable for a greater sum than the specified penalty of this Bond.

Any suit under this Bond must be instituted before the expiration of six (6) months from the date of this Bond.

IN TESTIMONY WHEREOF, the Principal has hereto set its hand and affixed its seal, and the Surety has caused
these presents to be sealed with its corporate seal duly attested by the signature of its Attorney-In-Fact,
this _____ day of _____, 2025.

SIGNED, SEALED AND DELIVERED

In the presence of:

_____)	_____
_____)	PRINCIPAL
_____)	
_____)	_____
_____)	SURETY

APPENDIX 7

FORM OF TENDER

**Contract 78035
Lougheed CPR Overpass Structural Rehabilitation**

CERTIFICATE OF COMPLIANCE for CONTRACT INSURANCE

This is provided for information to certify that the Tenderer does hereby undertake and agree to supply to the City of Coquitlam, upon award, contract insurance listed below for the project requirements indicated:

Contract Number: 78035

Contract Name: Lougheed CPR Overpass Structural Rehabilitation

Description of Work:

- Cast-In-Place Concrete Spall Repairs
- Pressure Injection Crack Repairs
- Remove and Replace Bridge Sidewalk Compression Seals and Grouted Joints
- Other miscellaneous and incidental works as contained in the Contract Documents

Other miscellaneous and incidental work as contained in the Contract Documents

Commercial General Liability: \$5,000,000 limit

Special Coverage Required:

<u>YES</u>	<u>NO</u>	<u>Special Coverage Description</u>
()	(X)	Shoring and Underpinning Hazard
()	(X)	Pile Driving and Vibrations
()	(X)	Excavation Hazard
()	(X)	Demolition
()	(X)	Blasting

We also certify that the insurance coverage will meet the requirements of the Supplementary General Conditions Section 24 - Insurance, included as part of the Contract Documents, and that the proof of insurance will be provided on the City of Coquitlam Certificate of Insurance form, without amendments, except for the exclusions noted above.

Name of Tenderer (printed)

Authorized Signature

Date

Agreement

AGREEMENT

Between Owner and Contractor

(FOR USE WHEN UNIT PRICES FORM THE BASIS OF PAYMENT - TO BE USED ONLY WITH THE GENERAL CONDITIONS AND OTHER STANDARD DOCUMENTS OF THE UNIT PRICE MASTER MUNICIPAL CONSTRUCTION DOCUMENTS.)

THIS AGREEMENT made in duplicate this ____ day of _____ 2025.

Contract: Lougheed CPR Overpass Structural Rehabilitation

Reference No. 78035

BETWEEN:

The City of Coquitlam
3000 Guildford Way
Coquitlam, B.C. V3B 7N2

(the "Owner")

AND:

(the "Contractor")

The *Owner* and the *Contractor* agree as follows:

1 THE WORK - START/COMPLETION DATES

- 1.1 The *Contractor* will perform all *Work* and provide all labour, equipment and material and do all things strictly as required by the *Contract Documents*.
- 1.2 The *Contractor* will commence the *Work* in accordance with the *Notice to Proceed*. The *Contractor* will proceed with the *Work* diligently, will perform the *Work* generally in accordance with the construction schedules as required by the *Contract Documents* and will achieve *Substantial Performance* of the *Work* on or before **November 24, 2025** subject to the provisions of the *Contract Documents* for adjustments to the *Contract Time*.
- 1.3 Time shall be the essence of the Contract.

2 CONTRACT DOCUMENTS

- 2.1 The "*Contract Documents*" consist of the documents listed or referred to in Schedule 1, entitled "*Schedule of Contract Documents*", which is attached and forms a part of this Agreement, and includes any and all additional and amending documents issued in accordance with the provisions of the *Contract Documents*. All of the *Contract Documents* shall constitute the entire *Contract* between the *Owner* and the *Contractor*.
- 2.2 The *Contract* supersedes all prior negotiations, representations or agreements, whether written or oral, and the *Contract* may be amended only in strict accordance with the provisions of the *Contract Documents*.

3 CONTRACT PRICE

- 3.1 The price for the *Work* ("*Contract Price*") shall be the sum in Canadian dollars of the following:
- a) the product of the actual quantities of the items of *Work* listed in the *Schedule of Quantities and Prices* which are incorporated into or made necessary by the *Work* and the unit prices listed in the *Schedule of Quantities and Prices*; plus
 - b) all lump sums, if any, as listed in the *Schedule of Quantities and Prices*, for items relating to or incorporated into the *Work*; plus
 - c) any adjustments, including any payments owing on account of *Changes* and agreed to *Extra Work*, approved in accordance with the provisions of the *Contract Documents*.
- 3.2 The *Contract Price* shall be the entire compensation owing to the *Contractor* for the *Work* and this compensation shall cover and include all profit and all costs of supervision, labour, material, equipment, overhead, financing, and all other costs and expenses whatsoever incurred in performing the *Work*.

4 PAYMENT

- 4.1 Subject to applicable legislation and the provisions of the *Contract Documents*, the *Owner* shall make payments to the *Contractor*.
- 4.2 If the *Owner* fails to make payments to the *Contractor* as they become due in accordance with the terms of the *Contract Documents* then interest calculated at 2% per annum over the prime commercial lending rate of the Royal Bank of Canada on such unpaid amounts shall also become due and payable until payment. Such interest shall be calculated and added to any unpaid amounts monthly.

5 RIGHTS AND REMEDIES

- 5.1 The duties and obligations imposed by the *Contract Documents* and the rights and remedies available hereunder shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law.

5.2 Except as specifically set out in the *Contract Documents*, no action or failure to act by the *Owner*, *Contract Administrator* or *Contractor* shall constitute a waiver of any of the parties' rights or duties afforded under the *Contract*, nor shall any such action or failure to act constitute an approval of or acquiescence in any breach under the *Contract*.

6 NOTICES

6.1 Communications among the *Owner*, the *Contract Administrator* and the *Contractor*, including all written notices required by the *Contract Documents*, may be delivered by email, or by hand, or by pre-paid registered mail to the addresses as set out below:

The *Owner*:

The City of Coquitlam
3000 Guildford Way
Coquitlam, B.C. V3B 7N2

Tel: 604-927-3500

The *Contractor*:

Tel:
Email:
Attention:

The *Contract Administrator*:

The City of Coquitlam
3000 Guildford Way
Coquitlam, B.C. V3B 7N2

Tel:
Email:
Attention:

6.2 A communication or notice that is addressed as above shall be considered to have been received:

- a) immediately upon delivery, if delivered by hand; or
- b) immediately upon transmission if sent or received by email; or
- c) after 5 days from date of posting if sent by registered mail.

6.3 The *Owner* or the *Contractor* may, at any time, change its address for notice by giving written notice to the other at the address then applicable. Similarly if the *Contract Administrator* changes its address for notice then the *Owner* will give or cause to be given written notice to the *Contractor*.

7 GENERAL

7.1 This *Contract* shall be construed according to the laws of British Columbia.

- 7.2 The *Contractor* shall not, without the express written consent of the *Owner*, assign this *Contract*, or any portion of this *Contract*.
- 7.3 The headings included in the *Contract Documents* are for convenience only and do not form part of this *Contract* and will not be used to interpret, define or limit the scope or intent of this *Contract* or any of the provisions of the *Contract Documents*.
- 7.4 A word in the *Contract Documents* in the singular includes the plural and, in each case, vice versa.
- 7.5 This agreement shall enure to the benefit of and be binding upon the parties and their successors, executors, administrators and assigns

IN WITNESS WHEREOF the parties hereto have executed this Agreement the day and year first written above.

Contractor:

(FULL LEGAL NAME OF CORPORATION, PARTNERSHIP OR INDIVIDUAL)

(AUTHORIZED SIGNATORY)

(AUTHORIZED SIGNATORY AND POSITION - PRINT)

Owner:

The City of Coquitlam

(MANAGER, CAPITAL PROJECTS AND INSPECTIONS)
Representative as Per G.C. 17

(SENIOR MANAGER, DESIGN AND CONSTRUCTION)

Lougheed CPR Overpass Structural Rehabilitation

Reference No: 78035

Schedule 1

Schedule of Contract Documents

(INCLUDE IN LIST ALL DOCUMENTS INCLUDING, IF ANY, SUPPLEMENTARY GENERAL CONDITIONS, SUPPLEMENTARY SPECIFICATIONS, SUPPLEMENTARY STANDARD DETAIL DRAWINGS)

The following is an exact and complete list of the *Contract Documents*, as referred to in Article 2.1 of the Agreement.

NOTE: The documents noted with "*" are contained in the "Master Municipal Construction Documents – General Conditions, Specifications and Standard Detail Drawings", edition dated 2009. All sections of this publication are included in the *Contract Documents*.

1. Agreement, including all Schedules;
2. The following Addenda:
 - As issued
3. Supplementary General Conditions, if any;
4. General Conditions*;
5. Supplementary Specifications, if any;
6. Detail Specifications, if any;
7. Specifications*;
8. Supplementary Detail Drawings, if any;
9. Standard Detail Drawings*;
10. Executed Form of Tender, including all Appendices;
11. Drawings listed in Schedule 2 to the Agreement –"List of Drawings", if any;
12. Instructions to Tenderers;
13. COQUITLAM "Supplementary Specifications Master Municipal Construction Documents" March 2022

Lougheed CPR Overpass Structural Rehabilitation

Reference No: 78035

Schedule 2

LIST OF DRAWINGS

(Complete Listing of All Drawings, Plans and Sketches That Are Part of the Contract Documents)

Bound in this Document:

Appendix A: Traffic Management Detail Specifications

Appendix B: CPKC Safety Requirements

Bound Separately: Contract Drawings

TITLE	SHEET NO.	REVISION NO.	DATE
COVER PAGE & DRAWING INDEX	1	0	2025MAY29
GENERAL NOTES	2	0	2025MAY29
SITE PLAN	3	0	2025MAY29
GENERAL ARRANGEMENT	4	0	2025MAY29
REPAIR A: CONCRETE PATCH AND SPALL REPAIRS	5	0	2025MAY29
REPAIR B: DRAINAGE PIPE REPAIR AND REPLACEMENT	6	0	2025MAY29
REPAIR C: JOINT REPAIRS BETWEEN SIDEWALK PANELS	7	0	2025MAY29
REPAIR D, E & F: MISCELLANEOUS REPAIRS	8	0	2025MAY29

Supplementary General Conditions

SUPPLEMENTARY GENERAL CONDITIONS

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1.0 DEFINITIONS

- 1.1 Abnormal Weather** 1.1.1 **(Replace clause 1.1.1 as follows):**
Abnormal Weather” means temperature, precipitation, wind or other weather conditions in which the monthly average, differs from the statistical average for that condition in that period by more than one standard deviation, calculated based on data available from Environment Canada. Coquitlam’s Burke Mountain Rain Gauge will be used to compare the rainfall summary versus the available data from Environment Canada.
[City of Coquitlam Rainfall](#)

2.0 DOCUMENTS

- 2.2 Interpretation** 2.2.4 (1) **(Replace clause 2.2.4 (1) as follows):**
The Contract Documents shall govern and take precedence in the following order as listed in Schedule 1 of the Agreement, taking precedence over all Contract Documents.

4.0 CONTRACTOR

- 4.1 Control of the Work** 4.1.1 **(Add to clause 4.1.1 as follows):**
The *Contractor* is responsible for all survey layout for the construction of the Work to the design specifications and/or elevations as shown on the contract drawings or as amended on site by the Contract Administrator, unless otherwise described in the Contract Document.
- 4.1.2 **(Add to clause 4.1.2 as follows):**
The Contractor shall not deposit any material upon any street, sidewalk, boulevard or other property, without the Contract Administrator’s or the Owner’s permission, nor shall they allow the same to remain longer than necessary. All surplus spoil and rubbish and other waste material shall be removed from the site so that the area of work is cleaned up and restored to as clean a condition as it was before the Contract started, within four days of the Contract Administrator’s written request to do so, failing which the Owner may carry out the work or have the work carried out by others and recover the costs from the Contractor or may deduct the cost from any monies due or that may become due to the Contractor.
- 4.1.3 **(Add new clause 4.1.3 as follows):**
Work can be performed during the normal weekday working hours of 0700h to 1900h, unless specified otherwise in Supplementary Specifications - Appendix A:

These Supplementary General Conditions must be read in conjunction with the General Conditions contained in the Master Municipal Construction Documents, Volume II, Printed 2009

Traffic Management Detail Specifications. Written permission from the Contract Administrator will be required for any works to be performed outside of the normal working days of Monday to Friday.

No Sunday work will be permitted, except in case of emergency and then only with the written permission of the Contract Administrator and to such extent as he deems necessary.

In case the Contractor decides to work on a day which is a Statutory Holiday, they shall provide the Contract Administrator in writing at least (4) days in advance of such holiday, stating those places where said work is to be conducted. In case the Contractor fails to give such notice in advance of any Statutory Holiday, no work within the terms of the contract shall be done on such holiday.

The cost of inspections on a Sunday or on a Statutory Holiday by City staff/s will be at Contractor's expense.

4.2 Safety

4.2.2

(Add new clause 4.2.2 as follows):

In an emergency, gas pipeline rupture or leak, Contact FortisBC's 24 Hour Emergency Line (1-800-663-9911) and Coquitlam Fire (911) immediately and then City of Coquitlam's Utility Control Centre (604-927-6287).

4.3 Protection of Work, Property and the Public

4.3.1

(Replace clause 4.3.1 as follows):

In performing the Work, the Contractor shall protect the Work and the Owner's property and other person's property from damage. The Contractor shall at the Contractor's own expense make good any such damage which arises as the result of the Contractor's operations. If the Contractor causes damage to private property, the Contractor must obtain a written release from the owner of the damaged property.

4.3.5.1

(Add clause 4.3.5.1 as follows):

The Contractor shall notify the Contract Administrator immediately if damage occurs to any City or third party utility or structure.

4.3.7

(Add new clause 4.3.7 as follows):

Any lands other than those upon which the work is to be performed, which may be required for temporary facilities, storage purposes or access to the work site, other than those provided by the *Owner*, shall be provided by the *Contractor* at their own cost, with no liability to the *Owner*.

-
- | | | | |
|------------|------------------------------|-------|---|
| 4.6 | Construction Schedule | 4.6.1 | <i>(Replace clause 4.6.1 as follows):</i>
The Contractor shall within the time set out in the Form of Tender prepare and submit to the Contract Administrator for their approval a construction schedule (the Baseline Construction Schedule) indicating the planned start and completion dates of major activities of the Work. The Baseline Construction Schedule shall be in more detail than the Preliminary Construction Schedule and shall indicate completion of the Work in compliance with any specified Milestone Dates, including Substantial Performance. |
| | | 4.6.6 | <i>(Replace clause 4.6.6 as follows):</i>
The time for the performance of the Work shall commence on the date specified in the Notice to Proceed, or if not so specified, on the date the Notice to Proceed is issued. The Notice to Proceed will not be issued until the documentation required under paragraph 5.1.1 of the Form of Tender has been submitted and the construction schedule has been approved. |
| | | 4.6.8 | <i>(Add new clause 4.6.8 as follows):</i>
Any requests to lengthen the work schedule shall be made in writing by the Contractor within five working days of knowledge of the reason for the extension. The Contract Administrator will adjust the schedule at their discretion upon receipt of a written request. |
| 4.7 | Superintendent | 4.7.4 | <i>(Add new clause 4.7.4 as follows):</i>
The key personnel named in the Contractor's Tender response, shall remain in these key positions throughout the project. In the event that key personnel leave the Contractor's firm, or for any unknown reason are unable to continue fulfilling their role, the Contractor must propose a suitable replacement, and obtain written consent from the Owner. Acceptance of the proposed replacement is at the sole discretion of the Contract Administrator and the Owner. |
| 4.8 | Workers | 4.8.2 | <i>(Add new clause 4.8.2 as follows):</i>
The Contractor shall, upon the request of the Contract Administrator, remove any person employed by them for the purposes of the Contract who, in the opinion of the Contract Administrator, is incompetent or has conducted themselves improperly, and the Contractor shall not permit a person who has been removed to return to the Place of Work. |
| 4.9 | Materials | 4.9.3 | <i>(Add new clause 4.9.3 as follows):</i>
The Contractor shall, at their cost, |
-

These Supplementary General Conditions must be read in conjunction with the General Conditions contained in the Master Municipal Construction Documents, Volume II, Printed 2009

- a) Be responsible for storing all of the materials supplied for the Work either by themselves or the Owner, until it has been incorporated into the completed Work;
- b) Store all materials in a manner which will prevent damage from the weather, dirt, foreign matter, vandalism and theft;
- c) Arrange for and/or verify the time of delivery of all materials to be supplied by themselves or the Owner to ensure that delivery will coincide with their work schedules.
- d) Examine with the Contract Administrator the quantities and details of all materials supplied by the Owner at the time and place of delivery or those materials already at the Place of Work, and prepare and sign a Statement of Materials Acceptance, specifically noting and rejecting any defective material;
- e) Replace all materials supplied by themselves or the Owner which are found to be stolen, missing or damaged while under their care;
- f) Replace all materials found to be defective in manufacture which have been supplied by themselves.

4.11 Subcontractors 4.11.3

(Replace clause 4.11.3 as follows):

The Contractor shall, upon notice of the Contract Administrator, remove any Subcontractor employed by them for the purposes of the Contract who, in the opinion of the Contract Administrator, is incompetent or has conducted themselves improperly, and the Contractor shall not permit the Subcontractor who has been removed to return to the Place of Work. The removal of a Subcontractor under this clause shall not be considered a Change and the Contract Price and the Contract Time shall not be adjusted.

4.12 Test and Inspections 4.12.1

(Replace clause 4.12.1 as follows):

The Contractor shall perform or cause to be performed all tests, inspections and approvals of the Work as described in the Contract Documents or as required by the Contract Administrator as part of Quality Control. The Contractor shall complete all the necessary testing at the frequencies described in the Contract Document unless otherwise approved by the Contract Administrator.

Acceptable test and inspection results will not relieve the Contractor of its obligations under the Contract to correct defects or deficiencies in the Work.

4.12.11 ***(Add clause 4.12.11 as follows):***

Failure to follow DFO/FLNRO BMPs and the approved permit for Instream Works or as instructed by Contract Administrator will result in shut-down of the work. The

These Supplementary General Conditions must be read in conjunction with the General Conditions contained in the Master Municipal Construction Documents, Volume II, Printed 2009

Contractor must take all steps to mitigate impacts to aquatic resources, environment and habitats before work can re-start on site. No claim will be accepted by the Owner for costs associated with this work shut-down.

4.14 Final Clean-up

4.14.1

(Replace clause 4.14.1 as follows):

Prior to applying for Substantial Performance, the Contractor shall remove all surplus products, tools, construction machinery and equipment relating to the Work that is not required for the performance of the remaining Work. The Contractor shall also remove waste, debris and waste products other than caused by the Owner or Other Contractors, and leave the Place of Work clean and suitable for occupancy by the Owner unless otherwise specified in the Contract Documents or directed by the Contract Administrator.

4.16 Notice of Disruption

4.16.2

(Add new clause 4.16.2 as follows):

Written notice must be provided to all properties which may be physically affected by the construction not less than one week and not more than two weeks prior to construction.

Notify occupants directly affected by the work 48 hours in advance of commencement of construction. Cost of notifying area occupants of ensuing construction and delivery of the notices is incidental to the Contract.

7.0 CHANGES

7.1 Changes

7.1.3

(Replace clause 7.1.3 as follows):

Additional work that the Owner may wished performed that does not satisfy the requirements of subparagraphs (a) and (b) of GC 7.1.1 is extra work (Extra Work) and is not a Change. Pursuant to GC 8, Extra Work may be declined by the Contractor or may, upon agreement between the parties, be undertaken as Extra Work.

7.4 Optional Work

7.4.2

(Add new clause 7.4.2 as follows):

If there are Optional items or Provisional items included in the *Schedule of Quantities and Prices*, those items shall be used only as directed and at the sole discretion of the Contract Administrator through the issue of a Change Order. These items will be paid at the contract unit price as part of regular progress payments. Only quantities used will be eligible for payment. No claim will be accepted for unused Optional or Provisional quantities. Clause 9.4 Quantity Variations will not be applicable for these items.

**9.0 VALUATION OF
CHANGES AND
EXTRA WORK**

9.2 Valuation Method 9.2.4

(Replace clause 9.2.4 as follows):

Once a quotation is accepted by the Contract Administrator, or other agreement reached between the Contract Administrator and the Contractor regarding adjustments to the Contract Price or Contract Time on account of a Change or Extra Work, the Contractor shall not be entitled to claim or receive additional payment, or adjustment to the Contract Time on account of a Change or Extra Work.

9.4 Quantity Variation 9.4.1

(Replace clause 9.4.1 as follows):

If for any reason, including an addition or deletion under GC 7.1.1(1) or 7.1.1(2) respectively, the actual quantity of a unit price item varies by more than plus or minus the Variance Threshold Percentage from the estimated quantity for that unit price item listed in the Schedule of Quantities and Prices (the "Tender Quantity") or as otherwise agreed to pursuant to these Contract Documents, then either the Owner or the Contractor may by written notice request the other party to agree to a revised unit price, considering the change in quantities. A party shall make a request for a revised unit price as soon as reasonably possible after the party concerned becomes aware of the quantity variation.

9.4.2 ***(Delete clause 9.4.2 (2))***

10.0 FORCE ACCOUNTS

**10.1 Force Account
Costs** 10.1.1(1)

(Add to clause 10.1.1(1) as follows):

Costs for the Contractor's Superintendent, Project Managers, Health and Safety Personnel, and Office/Administration Staff are not eligible for labour costs as those costs are considered incidental to the mark up owing for overhead and labour.

10.1.1(4) ***(Replace clause 10.1.1(4) as follows):***

Force Account Work performed by a subcontractor shall be paid for in the lesser of: (i) the amount provided by subparagraphs (1), (2) and (3) of this GC, plus a mark-up of 5%, or (ii) the actual amount the Contractor pays the subcontractor including a mark-up of 10% on such actual costs to cover all overhead and profit.

**12.0 HAZARDOUS
MATERIALS**

12.2	Discovery of Hazardous Materials	12.2.2	(Replace clause 12.2.2 as follows): If the Contract Administrator observes any materials at the Place of Work that the Contract Administrator knows or suspects may be Hazardous Materials, then the Contract Administrator shall immediately give written notice to the Contractor and the Contractor shall immediately stop the Work or portion of the Work as required by GC 12.2.1(1).
13.0	DELAYS		
13.1	Delay by Owner or Contract Administrator	13.1.2	(Add new clause 13.1.2 as follows): The Owner may at any time suspend the work or any portion thereof provided they give the Contractor five (5) days' written notice of delay. The Contractor shall resume work upon written notice from the Owner. The Contractor shall be entitled to: a) An extension of the Contract time equivalent to the length of suspension of work. b) Reimbursement by the Owner for directly related out-of-pocket additional costs, reasonably and necessarily incurred by the Contractor as a result of such suspension. No additional payment will be made to the Contractor for any loss of profits or overhead.
13.3	Unavoidable Delay	13.3.1	(Add to clause 13.3.1 as follows): Beyond the reasonable control of the Contractor also includes pandemic or community outbreak
13.8	Direction to Stop or Delay	13.8.3	(Add new clause 13.8.3 as follows): The Contract Administrator may order the Contractor to stop work if at any time the Contract Administrator is of the opinion that there exists a danger to life or property.
13.9	Liquidated Damages for Late Completion	13.9.1	(Replace clause 13.9.1 as follows): If the Contractor fails to meet the Milestone Date for Substantial Performance as set out in the Form of Tender, paragraph 2.2 as may be adjusted pursuant to the provisions of the Contract Documents, then the Owner may deduct from any monies owing to the Contractor for the Work: (1) An amount of \$1,000.00 for each calendar day the actual <i>Substantial Performance</i> is achieved after the Substantial Performance Milestone Date; plus (2) All direct out of pocket costs, such as costs for safety, security or equipment rental, reasonably incurred by the Owner as a direct result of such delay.

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

18.0 PAYMENT

18.1 Preparation of Payment Certificate

18.1.1

(Replace clause 18.1.1 as follows):

The Contract Administrator shall prepare and issue a certificate for the period ending the last calendar day of the month.

18.4 Holdbacks

18.4.2

(Add to clause 18.4.2 as follows):

At the sole discretion of the Contract Administrator, an amount equivalent to 10% of the contract award value or 200% of a reasonable estimate, whichever is higher, may be held without interest until all deficiencies have been remedied and accepted by the Contract Administrator.

18.6 Substantial Performance

18.6.5

(Replace clause 18.6.5 as follows):

The Owner may release any builders lien holdback on the 56th day following the date of Substantial Performance, or other date as required by law, but the Owner may hold back the amounts for any deficiencies or filed builders liens as provided in GC 18.4.2, 18.4.3 and 18.4.4.

18.6.6

(Replace clause 18.6.6 as follows):

The *Contract Administrator*, as defined herein, shall be the *Payment Certifier* responsible under Section 7 of the *Builders Lien Act* for certifying *Substantial Performance* of the *Work* of the *Contractor*, but not the *Work* of *Subcontractors*. The *Contractor* shall cooperate with and assist the *Contract Administrator* by providing information and assistance in a timely manner as the *Contract Administrator* considers necessary to carry out the duties of the *Payment Certifier* for the *Contract*.

The *Contractor* shall be the *Payment Certifier* responsible under Section 7 of the *Builders Lien Act* for certifying *Substantial Performance* of the *Work* of each *Subcontractor*. Prior to certifying completion for a *Subcontractor*, the *Contractor* shall consult the *Contract Administrator* and obtain the *Contract Administrator's* comments on the status of completion by the *Subcontractor*, including any deficiencies or defects in the *Subcontractor's Work* noted by the *Contract Administrator*. The *Contractor* will indemnify and save the *Owner* harmless from any and all liability the *Owner* may have to anyone arising out of the certification by

the *Contractor* of *Substantial Performance* for that *Subcontractor*.

Notwithstanding any other provision of the *Contract*, no payments will be due or owing to the *Contractor* so long as a Lien filed by anyone claiming under or through the *Contractor* remains registered against the Project of any lands, or interest therein, on which *Work* for the project was performed. Failure of the *Contractor* to remove all Liens promptly will entitle the *Owner* to damages.

**19.0 TAXES, DUTIES AND
GST**

19.4 Tariffs or Duties

19.4.1

Tariffs or Duties refer to taxes, levies, or charges imposed by any level of government (including foreign governments) on imported or domestic goods, materials, or equipment used in the performance of the Work. The Contract Price is based on the tariffs and duties in effect as of the date of the Tender Closing. If, after the Tender Closing Date, any new Tariffs or Duties are imposed, or existing rates are materially increased, and such changes directly and demonstrably affect the cost of materials or equipment required for the performance of the Work, the Contractor shall notify the Contract Administrator in writing within ten (10) Working Days of becoming aware of such change, providing supporting documentation, including but not limited to:

- (1) Affected materials
- (2) Quantity and cost impact
- (3) Evidence of original and new tariff rates
- (4) Reasonable efforts made to mitigate the cost impact (e.g., sourcing alternatives)

19.4.2

If the Contract Administrator is satisfied that the Contractor has incurred additional direct costs solely due to the change in Tariffs or Duties, the Owner will issue a Change Order to adjust the Contract Price accordingly. No adjustment shall be made for Tariffs or Duties that were publicly announced or reasonably foreseeable before the Tender Closing Date.

19.4.3

This clause does not apply to costs incurred due to delays caused by the Contractor's procurement or supply chain management. It also does not apply if the Contractor fails to take reasonable steps to mitigate the impact of the change.

19.4.4 If the imposition of new Tariffs or Duties causes unavoidable delays in material delivery, the Contractor may request an extension of the Contract Time under GC 13.3, subject to approval by the Contract Administrator.

**21.0 WORKERS
COMPENSATION
REGULATIONS**

**21.2 Contractor is
"Prime Contractor"**

21.2.1

(Add to clause 21.2.1 as follows):

Prior to the issuance of the "Notice to Proceed" the Contractor must provide a signed "Prime Contractor Designation" form as provided in Appendix IV of these Supplementary General Conditions.

24.0 INSURANCE

(Replace section 24.0 as follows):

24.1 General

24.1.1

Importance of Prompt Attention to Insurance Requirements:

The Contractor shall provide the Owner with satisfactory evidence that the insurance required to be provided under this GC is in full force and effect.

24.1.2

Acceptable Insurance Carriers:

The insurer issuing any policy, or other document which is evidence of insurance to the Contractor, shall be an insurer licensed by the Superintendent of Insurance in the Province of British Columbia and registered with the Department of Insurance for Canada in Ottawa, except the Insurance Corporation of British Columbia, which is not subject to this condition.

24.1.3

Owner's Right to Change Terms:

Notwithstanding anything contained in the Contract Documents, the Owner will have the right to request a change to the specified terms and conditions respecting insurance at the sole option of the Owner. The Contractor will be notified in writing of any changes required by the Owner and will provide a quotation for such work.

24.1.4

Delivery of Insurance Documents:

All insurance policies or other acceptable specified documents shall be delivered to, and accepted by, the Owner before the Contract Documents are signed. No work shall be commenced by the Contractor or by anyone acting on the instructions of the Contractor, until the required Insurance Documents have been accepted by the Owner

These Supplementary General Conditions must be read in conjunction with the General Conditions contained in the Master Municipal Construction Documents, Volume II, Printed 2009

and the Contract Documents have been duly signed by the Owner and the Contractor.

24.1.5 **Owner's Right to Insure:**

Should the Contractor for any reason not comply with the specified requirements with respect to the insurance, the Owner will, at the Owner's option, have the right to purchase all or any part of such insurance which, in the opinion of the Owner, may be required to provide the specified insurance, and, in the event of so doing, the Owner will have the right to pay the premiums for such insurance and to withhold the amount of premiums so paid from any amount due and payable to the Contractor under the Contract.

24.2 Required Insurance

24.2.1 **General**

Damage to work (excluding Building Contracts where Section 24.3, Paragraph 24.3.1, Further Responsibilities of Contractor, applies).

The Contractor shall be responsible for any and all loss, or damage, whatsoever which may occur on or to the works, completed or otherwise, until such time as the entire works have been completed and the Notice of Acceptance has been issued by the Owner, except that loss or damage caused solely by an act of the Owner. In the event of any loss or damage occurring, the Contractor shall, on notice from the Contract Administrator, immediately put the works into the condition it was immediately prior to such loss or damage, all at the

Contractor's expense, except where such loss or damage was caused solely by an act of the Owner.

The Contractor shall be responsible for any and all loss or damage whatsoever which may occur on or to the works, completed or otherwise, arising out of the negligence of the Contractor, any subcontractors, and the employees or agents of any of them.

24.2.2 **Public Liability Insurance:**

(Other than Automobile Third Party Liability Insurance):

Evidence of Insurance:

The Contractor shall deposit with the Owner, before the work commences, a Certificate of Insurance, signed by an authorized representative of the insurer, such certificate to be as shown in Appendix III.

Effective Dates and Terms:

The effective date of the Certificate of Insurance shall be the date of the execution of the Contract Agreement and the term of this policy shall be from such effective date until a date not less than twelve (12) months after the date of Substantial Performance completion of all work under the Contract.

Limits of Liability:

For bodily injury and for property damage shall be inclusive limits not less than \$5,000,000.

24.2.3 **Public Liability Insurance (Automobile):**

The Contractor shall deposit with the Owner before the work commences a Certificate of Insurance with respect to owned automobiles on ICBC Form No. APV 47 entitled "Confirmation of Insurance Coverage" and with respect to Non-Owned Automobiles including hired automobiles and Contractual Liability on ICBC non-owned automobile policy Form APV 29 (if non-owned automobile coverage is not included under the comprehensive general liability coverage) each signed by an authorized representative of the Insurance Corporation of British Columbia.

24.3 Physical Loss or Damage With Respect to New Buildings under Construction and/or Major Additions to Existing Structures

24.3.1 **Responsibility for Placing Insurance:**

The types of insurance required under this section will be provided and maintained at the expense of the City of Coquitlam during the term of the Contract and will be as follows unless otherwise changed by specific endorsement to these Insurance Specifications.

24.3.2 **Insurance Coverage Required:**

Builders Risk Completed Value "All Risks" Course of Construction Insurance. This policy will be written in the names of the City of Coquitlam and the Contractor with loss payable as their respective interests may appear.

24.3.3 **Responsibility of Contractor - Limitations of cover and deductibles:**

The insurance provided by the City of Coquitlam as described herein will not provide the Contractor with full protection against any and all kinds of loss or damage which may arise out of the Contract. It is, therefore, the responsibility of the Contractor to fully understand the scope of the cover provided with particular attention to the exclusions, limitations of cover and deductible provisions

contained in the Insuring Agreements of the policies and it is further the responsibility of the Contractor to take out at the Contractor's expense, whatever other additional insurance the Contractor may consider necessary or desirable for his protection subject as hereinafter provided. The Contractor shall act in the same manner on insurance made available through the City of Coquitlam as he would if he had arranged such insurance himself.

24.3.4 **Responsibility of Contractor – Direct Damage Insurance:**

If the Contractor fails to do all or anything that is required of them concerning insurance, the City of Coquitlam may do what is required and any monies expended by the City of Coquitlam for that purpose shall be repayable and recoverable from the Contractor. Should any action, failure or negligence of the Contractor result in higher insurance costs being incurred by the City of Coquitlam, such additional costs shall be payable or recoverable from the Contractor.

24.3.5 **Responsibility of Contractor – Machinery and Equipment Belonging to Others:**

Unless otherwise directed by the City of Coquitlam in writing, the Contractor shall carry insurance covering loss or damage to construction machinery, tools and equipment owned by and/or on bare rental from a third party or parties and used by the Contractor in performing the work, which insurance shall be in a form satisfactory to the City of Coquitlam and having coverage in accordance with the actual cash value of such construction machinery, tools and equipment. Such policies shall also provide for subrogation to be waived against the City of Coquitlam. A certified copy of the policy shall be delivered to the City of Coquitlam not later than thirty days after the commencement of work under the Contract.

24.3.6 **Contractor's Waiver of Liability to Coquitlam:**

The Contractor hereby releases the City of Coquitlam from any and all liability for damages to the extent that such damages are covered by the course of construction insurance referred to in Section 24.3 of these specifications.

24.3.7 **Liability of Contractor:**

Neither the providing of insurance by the Contractor or the City of Coquitlam in accordance with the requirements hereof, nor the insolvency, bankruptcy, nor failure of any insurance company to pay any claim accruing shall be held to waive any of the provisions of this Contract with respect to the liability of the Contractor or otherwise.

24.3.8 **Responsibility of Contractor for protection of work, persons and property:**

The Contractor and all persons employed by the Contractor or under their control, and all employees and subcontractors, shall use due care that no person or property is injured, and that no rights are infringed in the prosecution of the work. Contractors shall take particular care to protect the work against loss or damage caused by riot, vandalism or malicious mischief and shall be at the expense of the Contractor provide all necessary safeguards in the form of watchmen and/or watch dog protection to prevent loss or damage of this type. The payment of deductibles is the responsibility of the Contractor and if not paid by the Contractor such amounts shall be deducted by the City of Coquitlam from payment due to the Contractor. These deductibles will normally be \$250.00 each claim.

24.3.9 **Action to be taken in the event of loss or damage to the work covered by the Contract:**

When any loss or damage occurs to the work or to any materials and supplies on the site of the work, the Contractor shall remove any and all damaged or destroyed property and shall rebuild or replace the damaged or destroyed work, materials, or supplies and complete the work to the satisfaction of the Owner. For such removal, rebuilding, or replacing, the Contractor shall be entitled to receive from the Owner the amount of insurance monies received by the Owner pursuant to the said adjustment which amount shall be paid to the Contractor as the work of rebuilding or replacing proceeds, and in accordance with the Agreement. Damage or destruction of the whole or any part of the work shall not affect the rights and obligations of either party under the Agreement, except that in such event the Contractor shall be entitled to such reasonable extension of time to complete the work as the Architect and/or Contract Administrator may decide.

24.3.10 **Further responsibility of Contractor:**

Other than with respect to loss or damage arising out of insured risks and herein before specified, the Contractor shall be responsible for all loss or damage whatsoever which may occur on or to the works completed or otherwise, until such time as the entire works have been completed and the Notice of Acceptance has been issued by the Owner, except that loss or damage caused solely by an act of the Owner.

In the event of any loss or damage occurring, the Contractor shall on notice from the Owner immediately put the works into the condition it was immediately prior to such loss or damage, all at the Contractor's expense except as previously stated.

24.3.11 **Owner Not Responsible for Loss or Damage or Loss of Use of Property of Contractors and their Employees:**

The Owner will not be responsible for securing or paying for insurance of any kind other than as specified in Section 24.3 of these specifications nor will the Owner have any responsibility whatsoever for loss or damage from whatever cause occurring to property owned, leased, or otherwise in the possession of the Contractor, subcontractors or their employees including, without restricting the generality of the foregoing, machinery, equipment, tools, supplies, and clothing at the construction site or elsewhere including loss of use of same.

24.4 **Additional Insured** 24.4.1

The Contractor shall ensure the following are named as "additional insured" on the liability policy for this contract:

- The City of Coquitlam

The City may identify private properties that are directly affected by construction. If so, the Contractor shall include the legal owners of these properties named as "additional insured" on the liability policy for this contract.

25.0 **MAINTENANCE PERIOD**

25.1 **Correction of Defects** 25.1.4

(Add new clause 25.1.4 as follows):

The Owner is authorized to make repairs to defects or deficiencies if, ten days after giving written notice, the Contractor has failed to make or undertake with due diligence the required repairs. However, in the case of emergency where, in the opinion of the Owner, delay is not reasonable, repairs may be made without notice being sent to the Contractor. All expenses incurred by the Owner in connection with repairs made pursuant to GC 25 shall be paid by the Contractor or may be deducted from the Maintenance Security, or other holdbacks. The Contractor shall promptly pay any shortfall.

**27.0 CONTRACTOR
PERFORMANCE
EVALUATION**

27.1

(Add new clause 27.1 as follows):

After the completion of the Contract, the Contractor will be evaluated on their performance of the Work. The evaluation will provide percentage scores on the following categories:

1. *Contract Administration*
2. *Construction Management*
3. *Schedule Management*
4. *Communications*
5. *Resource Management and Contractor Performance*
6. *Quality Management*

An evaluation summary report may be issued to the Contractor with scores for each of these categories. Upon request, the Contractor may attend a meeting with the City to discuss the evaluation.

This internal evaluation may be reviewed for reference on subsequent tenders with the City. Evaluation scores can form part of the tender analysis and influence contract award decisions.

Evaluation Scores in categories that are below 50% may result in a suspension of tendering privileges with the City.

APPENDIX I

PERFORMANCE BOND

NO. _____ \$ _____

KNOW ALL MEN BY THESE PRESENTS THAT

As Principal, hereinafter called the Principal, and

As Surety, hereinafter called the Surety, are held and firmly bound unto

As Obligee, hereinafter called the Obligee, in the amount of

_____ Dollars
(\$ _____)

lawful money of Canada, for the payment of which sum, well and truly to be made, the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has entered into a written contract with the Obligee, dated the _____ day of _____ 20____, for

in accordance with the drawings and specifications submitted, therefore, which contract, drawings and specifications and addenda thereto, to the extent provided for, are by reference made part hereof and are hereinafter referred to as the Contract.

NOW THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if the Principal shall promptly and faithfully perform said Contract (including any addenda thereto, provided such addenda do not collectively increase the amount to be paid to the Principal by more than twenty per cent (20%) of the amount of the Contract except with the written consent of the Surety) then this obligation shall be null and void; otherwise, it shall remain in full force and effect.

These Supplementary General Conditions must be read in conjunction with the General Conditions contained in the Master Municipal Construction Documents, Volume II, Printed 2009

Whenever the Principal shall be, and declared by Obligee to be, in default under the Contract, the Obligee having performed Obligee's obligations thereunder, the Surety may promptly remedy the default, or shall promptly:

1. Complete the Contract in accordance with its terms and conditions, or
2. Obtain a bid or bids for submission to Obligee for completing the Contract in accordance with its terms and conditions, and upon determination by Obligee and Surety of the lowest responsible bidder, arrange for a contract between such bidder and Obligee and make available as work progresses (even though there should be a default or a succession of defaults under the contract or contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the contract price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term 'balance of the contract price', as used in this paragraph, shall mean the total amount payable by Obligee to Principal under the Contract less the amount properly paid by Obligee to Principal.

Any suit under this Bond must be instituted before the expiration of two (2) years from date on which the Notice of Acceptance under the Contract is issued.

The Surety shall not be liable for a greater sum than the specified penalty of this Bond.

No right of action shall accrue on this Bond to or for the use of any person or corporation other than the Obligee named herein or the heirs, executors, administrators, or successors of Obligee.

IN TESTIMONY WHEREOF, the Principal has hereto set its hand and affixed its seal, and the Surety has caused these presents to be sealed with its corporate seal duly attested by the signature of its Attorney-in-fact, this ____ day of _____ 20 ____.

SIGNED, SEALED and DELIVERED

In the presence of

)
)
)
)
)

PRINCIPAL

SURETY

APPENDIX II

LABOUR AND MATERIAL PAYMENT BOND

(Private Contracts – Trustee Form)

NO. _____

\$ _____

Note: This Bond is issued simultaneously with another Bond in favour of the Obligee conditioned for the full and faithful performance of the Contract.

KNOW ALL MEN BY THESE PRESENTS THAT

As Principal, hereinafter called the Principal, and

As Surety, hereinafter called the Surety, are, subject to the conditions hereinafter contained, held and firmly bound unto

As Trustee, hereinafter called the Obligee, for the use and benefit of the Claimants, their and each of their heirs, executors, administrators, successors and assigns in the amount of

_____ Dollars
(\$ _____) lawful money of Canada, for the payment of which sum well and truly to be made, the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns jointly and severally, firmly by these presents.

SIGNED AND SEALED this _____ day of _____, 20____.

WHEREAS, the Principal has entered into a written contract with the Obligee dated the _____ day of _____, 20____, for

which contract is by reference made a part hereof, and is hereinafter referred to as the Contract.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if the Principal shall make payment to all Claimants for all labour and material used or reasonably required for use in the performance of the Contract, then this obligation shall be null and void; otherwise it shall remain in full force and effect, subject, however, to the following conditions:

These Supplementary General Conditions must be read in conjunction with the General Conditions contained in the Master Municipal Construction Documents, Volume II, Printed 2009

1. A Claimant for the purpose of this Bond, is defined as one having a direct contract with the Principal for labour, material, or both, used or reasonably required for use in the performance of the Contract, labour and material being construed to include the part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment directly applicable to the Contract provided that a person, firm or corporation who rents equipment to the Principal to be used in the performance of the Contract under a contract which provides that all or any part of the rent is to be applied towards the purchase price thereof shall only be a Claimant to the extent of the prevailing industrial rental value of such equipment for the period during which the equipment was used in the performance of the Contract. The prevailing industrial rental value of equipment shall be determined, insofar as it is practical to do so, in accordance with and in the manner provided for in the latest revised edition of the publication of the Canadian Construction Association entitled "Rental Rates on Contractors' Equipment" published prior to the period during which the equipment was used in the performance of the Contract.
2. The Principal and the Surety hereby jointly and severally agree with the Obligee as Trustee that every Claimant who has not been paid as provided for under the terms of his contract with the Principal before the expiration of a period of ninety (90) days after the date on which the last of such Claimant's work or labour was done or performed or materials were furnished by such Claimant, may as a beneficiary of the trust herein provided for, sue on this Bond, prosecute the suite to final judgment for such sum or sums as may be justly due to such Claimant under the terms of his said contract with the Principal and have execution thereon. Provided that the Obligee is not obliged to do or take any act, action or proceeding against the Surety on behalf of the Claimants or any of them to enforce the provisions of this Bond. If any act, action or proceeding is taken either in the name of the Obligee or by joining the Obligee as a party to such proceedings then such act, action or proceeding shall be taken on the understanding and basis that the Claimants or any of them who take such act, action or proceeding shall indemnify and save harmless the Obligee against all costs, charges and expense or liabilities incurred thereon and any loss or damage resulting to the Obligee by reasons thereof. Provided still further that subject to the foregoing terms and conditions, the Claimants or any of them may use the name of the Obligee to sue on and enforce the provisions of this Bond.
3. No suit or action shall be commenced hereunder by any Claimant:
 - a) unless such Claimant shall have given written notice within the time limits hereinafter set forth to each of the Principal, Surety and Obligee, stating with substantial accuracy the amount claimed. Such notice shall be served by mailing the same by registered mail to the Principal, Surety and Obligee at any place where an office is regularly maintained for the transaction of business by such persons or served in any manner in which legal process may be served in the Province or other part of Canada in which the subject matter of the contract is located. Such notice shall be given (i) in respect of any claim for the amount or any portion thereof required to be held back from the Claimant by the Principal under either the terms of the Claimant's contract with the Principal or under the Mechanic's Liens Legislation applicable to the Claimant's contract with the Principal whichever is the greater within one hundred and twenty (120) days after such Claimant should have been paid in full under the Claimant's contract with the Principal; (ii) in respect of any claim other than for the holdback or portion thereof referred to above within one hundred and twenty (120) days after the date upon which such claimant did

or performed the last of the work or labour or furnished the last of the materials for which such claim is made under the Claimant's contract with the Principal.

- b) after the expiration of one (1) year following the date on which Principal ceased work on the Contract including work performed under guarantees provided in the Contract.
- c) Other than in a court of competent jurisdiction in the Province or District of Canada in which the subject matter of the Contract or any part thereof is situated and none elsewhere, and the parties hereto agree to submit to the jurisdiction of such court.

4. The amount of this Bond shall be reduced by and to the extent of any payments made in good further and in accordance with the provisions which may be filed of record against the subject matter of the Contract, whether or not claim for the amount of such lien be presented under and against this Bond.

5. The Surety shall not be liable for a greater sum than the specified penalty of this Bond.

IN TESTIMONY WHEREOF, the Principal has hereto set its hand and affixed its seal, and the Surety has caused these presents to be sealed with its corporate seal duly attested by the signature of its Attorney-in-fact the day and year first above written.

SIGNED, SEALED and DELIVERED

In the presence of

)
)
)
)
)

PRINCIPAL

SURETY

APPENDIX III

CERTIFICATE OF INSURANCE

This Certificate issued to the City of Coquitlam is to certify that policies of insurance, as described below, have been issued to the Insured named below and are in force at this time. It is understood and agreed that thirty (30) days' prior written notice by registered mail of any material alterations, transfer, assignment or cancellation of any of the policies listed below, either in part or in whole, will be given to the holder of this Certificate.

A. This Certificate is issued to: Named Insured and Mailing Address:

City of Coquitlam
3000 Guildford Way
Coquitlam, BC V3B 7N2

B. CONTRACT NUMBER AND/OR NAME Description of the Work:

C. INSURANCE POLICY

Name of Insurer:
Policy Number:
Effective Date:

Liability Limit:
Expiry Date:

D. INSURANCE COVERAGE

COMMERCIAL GENERAL LIABILITY coverage is required to insure against liability from the activities arising out of operations or work in connection with the above-described project, including liability arising out of the use of City property.

D.1 The minimum limit shall be \$5,000,000.00 inclusive per occurrence against bodily injury, personal injury and property damage.

D.2 The City of Coquitlam, its employees, officers, agents and volunteers are added as Additional Insureds, but only with respect to operations conducted by or on behalf of the Named Insured in connection with the above-described project, operations or work.

D.3 This insurance shall be primary as regards the City of Coquitlam, its employees, officers, agents and volunteers as Additional Insureds.

D.4 Any deductible or reimbursement clause contained in the policy shall not apply to the City of Coquitlam and shall be the sole responsibility of the Named Insured.

D.5 The insurance shall include the following coverages:

- D.5.1 Cross Liability Clause
- D.5.2 Non-Owned Automobile Liability
- D.5.3 Unlicensed Automobile Liability
- D.5.4 Blanket Contractual Liability
- D.5.5 Broad Form Property Damage Liability
- D.5.6 Owner's & Contractor's Protective Liability
- D.5.7 Products & Completed Operations Liability

D.6 Indicate provision of special coverage for this project as required by the City:

YES	NO	Special Coverage Description
-----	----	------------------------------

- | | | |
|--------------------------|-------------------------------------|---------------------------------|
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Shoring and Underpinning Hazard |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Pile Driving and Vibrations |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Excavation Hazard |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Demolition |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Blasting |

Authorized Signature and Stamp

Date

Name and Title

City' broker to return to City Representative

Department

These Supplementary General Conditions must be read in conjunction with the General Conditions contained in the Master Municipal Construction Documents, Volume II, Printed 2009



APPENDIX IV

PRIME CONTRACTOR DESIGNATION

Owner: **CITY OF COQUITLAM**
Contractor: _____
Contract / Permit #: **78035**
Project / Workplace: **Lougheed CPR Overpass Structural Rehabilitation** (the "Project")

By signing this Prime Contractor Designation form, the Contractor hereby:

1. agrees to be, and accepts designation as, the "prime contractor" for the purposes of the Workers Compensation Act, R.S.B.C. 2019, c. 1 (the "Act") and the Occupational Health and Safety Regulation, B.C. Reg. 223/2022 (the "Regulation") in respect of the Project and Workplace noted above;
2. represents and warrants that the Contractor is qualified and capable to perform the duties of prime contractor and that the undersigned signatory has the authority to accept designation as prime contractor and to bind the Contractor;
3. accepts the duty and responsibility for ensuring the activities of employers, workers and other persons at the Workplace relating to occupational health and safety are coordinated and agrees to do everything that is reasonably practicable to establish and maintain a system or process that will ensure compliance with the Act and the Regulation in respect of the Workplace;
4. covenants and agrees to comply with the occupational health and safety provisions of the Act, the Regulation, any other applicable regulations under the Act, and any applicable orders;
5. acknowledges and agrees that the Owner has provided the Contractor the information known to the Owner that is necessary to identify and eliminate or control hazards to the health or safety of persons at the Workplace; and
6. agrees that the designation as prime contractor hereunder may not be assigned or revoked without the prior written consent of the Owner.

Prime Contractor Name: _____

Prime Contractor Address: _____

Prime Contractor Signature **Date**

Print Name

Please return a signed copy of this designation to the City of Coquitlam, 3000 Guildford Way, Coquitlam, BC, V3B 7N2. If you have any questions, please contact the City of Coquitlam Health & Safety Manager at 604-927-3070.

Supplementary Contract Specifications

These Supplementary Contract Specifications must be read in conjunction with the Specifications contained in the Master Municipal Construction Documents, Volume II, Printed 2009 and the City of Coquitlam Supplementary Specifications and Detailed Drawings

Supplementary Contract Specifications

to the

MASTER MUNICIPAL SPECIFICATIONS
Volume II – Platinum Book

LOUGHEED CPR OVERPASS STRUCTURAL REHABILITATION

CONTRACT 78035

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The following Supplementary Specifications are to be considered part of the Specifications. These Supplementary Specifications take precedence over the Master Municipal Specifications.

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1.0 GENERAL

1.1 **Coordination of Work** Add 1.1.1 The Contractor shall be responsible to consult with all affected businesses, residents and transportation companies regarding delays, detours, and any other works affecting any transit service in the area, and will be responsible to coordinate the works with City crews and other contractors working in the area. If working area is to become a multiple-employer workplace as defined by WorkSafe BC, the Contractor shall remain the Prime Contractor.

1.2 **Outside Agency Approval** Add 1.2.1 In accordance with the Contract Documents, the Contractor is responsible to consult with and obtain any approval required to meet and comply with all the conditions required from outside agency such as, but not limited to, BC One Call, Metro Vancouver, BC Hydro, TELUS, Kinder Morgan, and Fortis BC in the area of the place of Work.

For CP Rail, the City will obtain and enter into an agreement with CP rail. The Contractor is responsible for complying with conditions including coordinating flagging and providing construction management/safety plans as required.

1.3 **Waste Collection Coordination** Add 1.3.1

1. Contractor is responsible to accommodate all waste collection vehicles and cart pick up schedules throughout construction. Collection schedule can be found in <https://www.coquitlam.ca/157/Collection-Calendar-Guidelines>.
2. If waste collection will be impacted the Contractor is responsible to:
 - a. Provide advanced notification to:
 - i. The City's Solid Waste staff at 604-927-3500 or wastereduction@coquitlam.ca; and
 - ii. The City's Contract Administrator.
 - b. Provide access for collection trucks to closed streets due to road work; or
 - c. Move waste carts for collection. The Contractor is required to ensure each cart is labelled with the property address and returned to the correct address after collection (each cart has its own individual cart identification code and is specifically assigned to each property). **Contractors will be responsible for the costs to replace missing carts.**
3. Contractor's Request for Change in Collection Time (e.g. PM to AM):
 - a. The Contractor must provide residents with as much notice as possible – minimum 5 working days.
 - b. The contractor must follow all conditions of Clause 1.04 and is responsible to deal with any missed collections. For example, taking garbage to the United Boulevard Recycling and Waste Centre or covering the cost associated for any missed collection to be rescheduled.

Questions: wastereduction@coquitlam.ca

1.4 **Cooperation with Emergency and Maintenance Activities** Add 1.4.1 The Contractor will be responsible to cooperate with regular maintenance or emergency vehicles and staff for access to the site when required including:

- Fire, Police, and Ambulance
- Collection (garbage/recycling pick-up)
- City Utilities Maintenance (or representatives)
- Other Contractors

CONTRACT SPECIFIC NOTATIONS

- | | | | |
|-------------|--|------------|---|
| 1.5 | Site Safety | Add 1.5.1 | <p>The Contractor is responsible to ensure the construction site is safe at all times for workers, pedestrians, and vehicle traffic. During non-working hours, the Contractor must ensure that the site has all potentially hazardous areas appropriately identified and protected, and also must provide appropriate signage, lighting, and markings for the direction of vehicle and pedestrian traffic, all to ensure the safety of the public. Supply and use of this equipment is considered incidental to the contract.</p> <p>Manhole lids, valve boxes and other appurtenances within the roadway that may present a traffic hazard during construction must be clearly marked for traffic.</p> <p>Manhole lids left raised in preparation for paving must have a rubberized protector ring painted with bright colour for traffic safety. Supply and use of this equipment is considered incidental to the contract.</p> |
| 1.6 | Lane Closure Restrictions | Add 1.6.1 | <p>The Contractor shall refer to Contract Supplementary Specifications Section 01 55 00S and to Appendix A: Traffic Management Detail Specifications.</p> <p>The Contractor must take the above information into account in the preparation and submission of the Tender.</p> |
| 1.7 | Location of Existing Utilities | Add 1.7.1 | <p>The Contractor is responsible to verify the depth and location of all utilities (watermains, storm mains, sanitary mains etc.), including outside agency utilities (i.e. Fortis BC Gas Mains etc.) and service connections (water, storm and sanitary services at the mains, and property lines) by hand digging or by Hydro-Vac in the presence of the Site Inspector.</p> <p>Pre-locates must be completed as soon as possible after award of the Contract so changes can be completed by the Engineer prior to site construction. Contact Metro Vancouver for location of their utilities and BC One for location of other outside agency utilities. The Contractor will not receive any compensation or allowance for delays if work is halted due to utility and service connections not located prior to commencing construction.</p> <p>City of Coquitlam does not guarantee water, storm or sanitary services connections are perpendicular to the mains or property lines, the Contractor will not receive any compensation for the time to locate these connections or for exposing hidden services at the property lines.</p> <p>Payment for this work will be treated as incidental to payment for work described in other Sections.</p> |
| 1.8 | Manholes and Valves | Add 1.8.1 | <p>Access to manholes and valves must be maintained at all times for City utilities crews and external utility companies. In case of an emergency the cost for exposing any buried manhole or valve covers during construction will be paid by the Contractor.</p> |
| 1.9 | Verification of Dimensions and Quantities | Add 1.9.1 | <p>Before proceeding with work, the Contractor shall visit the site and check and verify dimensions and quantities. Report variations between Contract Drawings and site conditions to the Contract Administrator before proceeding with work. Payment for this work will be treated as incidental to payment for work described in other Sections.</p> |
| 1.10 | Precautions | Add 1.10.1 | <p>Protect areas under construction from damage caused by excessive erosion, flooding, heavy rains, etc. Repair or replace unprotected damaged areas as directed by the Contract Administrator at no cost to the Owner.</p> |

CONTRACT SPECIFIC NOTATIONS

1.11	FORTIS BC Emergency Protocol	Add 1.11.1	In an emergency, gas pipeline rupture or leak, Contact Fortis BC 24 Hour Emergency Line (1-800-663-9911) & Fire Department (911) immediately and then City of Coquitlam's Utility Control Centre (604-927-6287)
1.12	Temporary Asphalt Pavement Restoration	Add 1.12.1	The Contractor will be required to backfill all trenches (in paved areas) and place a temporary patch (50mm of hot mix asphalt), as per Coquitlam Standard Drawing COQ-G4, the same day excavation is made, unless otherwise approved by the Contract Administrator. Temporary asphalt patch on driveways is not required, but access must be maintained for property owners.
		Add 1.12.2	Payment for this work will be treated as incidental to payment for work described in other Sections.
2.0 CONSTRUCTION ACTIVITY			
2.1	Construction Materials in Sewer Manholes and Pipe	Add 2.1.1	The Contractor is responsible to ensure that construction activities do not deposit construction materials (e.g. gravels) into the storm sewer or sanitary sewer manholes or pipe. The City has a video record of the pipe before construction. Prior to Substantial Performance, the City may video inspect the lines to ensure no problems exist due to construction activities under this contract. If problems are encountered, the Contractor will be responsible for the cost of the video and all costs associated with the cleaning of the pipe.
2.2	Site Clean-up During Construction and End of Construction	Add 2.2.1	The Contractor will be responsible for the complete clean-up of the work site during construction, at the end of construction, and prior to the Substantial Performance review. The work will include cleaning of all catch basins periodically or as directed by the Contract Administrator within the Work area, or nearby location as affected by the Work, to the same condition of the catch basins prior to starting the Work. All cleaning is to be performed by vacuum truck to the satisfaction of the Contract Administrator and will include off-site disposal of waste material.
		Add 2.2.2	Payment for this work will be treated as incidental to payment for work described in other Sections.
3.0 MANDATORY MEETINGS, CONTRACTOR REPRESENTATIVES AND SUBCONTRACTORS			
3.1	Pre-Construction Meeting Requirements	Add 3.1.1	After the Award of the Contract, the Contractor (Project Manager and Superintendent) will be required to attend a Pre-Construction Meeting with the Contract Administrator and provide all necessary information required by the Contract Administrator prior to provision of a Notice to Proceed. Items required to be provided at the meeting include: <ol style="list-style-type: none"> 1. A Detailed Construction Schedule showing the start date, completion date, and durations of major work components showing how all work will be completed within the Contract Duration. 2. Proof of Insurance 3. Performance Bond and Labour and Materials Payment Bond 4. WCB Clearance Letter and Copy of Notice of Project 5. City of Coquitlam Business License 6. A copy of portions of your Health and Safety Plan including the Title Page, Table of Contents, and portion showing latest revision date.

CONTRACT SPECIFIC NOTATIONS

3.2	Contract Schedule, Contract Duration, and Charges	Add 3.2.1	<p>A detailed, realistic construction schedule for this project will be required to be presented at the pre-construction meeting. The schedule must show major components and durations.</p> <p>All work under this project is to be completed within the designated Contract Duration as contained in the signed Contract Agreement, or as formally amended.</p>
3.3	Contract Superintendent and Subcontractors	Add 3.3.1	<p>In compliance with the MMCD General Conditions, Section 4.7, Superintendent, the Contractor shall have a competent senior representative, (the "Superintendent") in FULL TIME attendance at the Place of Work while work is being performed for the duration of the contract.</p> <p>This FULL-TIME attendance is also required when work is being performed by Subcontractors.</p> <p>Work done by Subcontractors is to be directed by the Superintendent and monitored on site ensuring conformance to the Contract Documents and other particular direction to the Superintendent by the Contract Administrator.</p> <p>The Owner and Contract Administrator are not responsible for the direction of Subcontractors.</p>
3.4	Changes of Contractor Representatives & Subcontractors	Add 3.4.1	<p>The Superintendent and Subcontractors indicated in the Form of Tender shall not be changed unless:</p> <ol style="list-style-type: none">1. The Owner requests a replacement.2. The Contractor submits an application for a change, in writing, to the Contract Administrator with the change being approved in writing.
3.5	Mobilization and Demobilization		<p>Payment for Mobilization and Demobilization shall be incidental. Payment shall be considered full compensation for all activities, resources, and incidental costs associated with mobilizing to, maintaining, and demobilizing from the site. This includes, but is not limited to:</p> <ul style="list-style-type: none">• Provision of all labour, materials, equipment, and supervision required for mobilization and demobilization, including those of subcontractors.• Establishment of temporary site facilities, including site offices, storage areas, workshops, and sanitary facilities.• Installation and removal of temporary fencing, hoarding, access gates, and reinstating chainlink fences.• Provision, maintenance and removal of safe and secure access to and within the site, including haul roads and pedestrian routes.• Provision, maintenance, and eventual removal of site security, including lighting, surveillance, and personnel.• Maintenance and clean-up of laydown area.

END OF SECTION

1.0 GENERAL

1.3 Submission

Delete 1.3.2
and replace
with the
following

Submit one copy of accurate project record documents in final form prior to applying for Substantial Performance including material testing reports. Record documents to include changes in the Issued for Construction Drawings, new elevation, location of all walkways and sidewalks, all utilities affected by the Work.

Substantial Performance and release of Holdbacks will not be issued until record documents have been submitted and accepted by the Contract Administrator and the City.

END OF SECTION

REFERENCE SPECIFICATIONS

1.0 GENERAL

Add 1.0.6

The Supplementary Specifications contained herein must be read in conjunction with the Master Municipal Specifications contained in the Master Municipal Construction Documents, Volume II (**Platinum Edition 2009**) as identified in the Instructions to Tender.

Add 1.0.7

The Supplementary Contract Specifications follow the same format and numbering system as the Master Municipal Specifications, but is differentiated from it by having the letter "S" placed after the section number.

END OF SECTION

QUALITY CONTROL

All testing covered under this item shall be performed by a CSA certified laboratory and technicians with copies of all test results to be sent directly to the Contract Administrator. Re-testing resulting from failed first tests shall be at the Contractor's expense.

- | | | |
|---|-----------|---|
| 1.5 Testing | Add 1.5.1 | The Contractor shall carry out inspection and testing (QC) to ensure compliance with Contract Documents. The Contractor shall submit test results within one week of testing to the Contract Administrator and prior to the preparation of the payment certificate where required. |
| 1.6 Contractors Responsibilities | Add 1.6.1 | <p>Furnish labour and facilities to:</p> <ol style="list-style-type: none"> 1. Provide access to work to be inspected 2. Facilitate inspections and tests 3. Make good work disturbed by inspection and tests |
| 1.7 Access to Work | Add 1.7.1 | The Contractor shall allow inspection testing agencies access to Work. |
| 1.8 Tests | Add 1.8.1 | <p>Test rates and frequencies (excluding failed tests), when not defined in the MMCD or Contract Specifications Sections, shall be at the following frequencies:</p> <ol style="list-style-type: none"> 1. Trench Backfilling and Compaction: <ol style="list-style-type: none"> a. Compaction: 1 test / 25 linear m / 300 mm lift b. Sieve: 1 test / placed material / 50 m³ 2. Granular Base: <ol style="list-style-type: none"> a. Compaction: 1 test / 500 m² / 100mm depth of granular base b. Sieve: 1 test / placed material / 250 tonnes 3. Granular Subbase: <ol style="list-style-type: none"> a. Compaction: 1 test/500 m² / 300mm depth of granular subbase b. Sieve: 1 test / placed material / 250 tonnes 4. Embankment (Subgrade): <ol style="list-style-type: none"> a. Compaction: 1 test/ 50 m² / 300 mm depth of fill b. Sieve: 1 test / placed material / 100 tonnes 5. Asphalt: <ol style="list-style-type: none"> a. Marshall test: Test per 250 tonnes placed, per specified mix, min. 1 / day b. ASTM D1559, D3203, C117, C136 c. Superpave: Test per 250 tonnes placed, per mix specified, min. 1 / day d. CAI-SP2, ASTM D3203, C117, C136 e. Cores: 1 per 500 m²/lift f. Continuous asphalt density testing during paving. 6. Subgrade Preparation: <ol style="list-style-type: none"> a. Compaction & Moisture: 1 test / 500 m² 7. Concrete Tests: <ol style="list-style-type: none"> a. Air, Slump & 1 Set Cylinders: 1 test / truck, min. 1 set / day 8. Cementitious Grout Tests: <ol style="list-style-type: none"> a. CSA A23.2-09 |
| 1.9 Measurement and Payment | Add 1.9.1 | Payment for all work performed under this section will be considered incidental to payment for work described in other Sections. |

END OF SECTION

TRAFFIC CONTROL, VEHICLE ACCESS AND PARKING

1.0 GENERAL	Add 1.0.6	<p>The Contractor is responsible for all temporary traffic control on the streets required for completion of the work. The Contractor will be responsible to provide a Traffic Management Plan (TMP) for approval ten (10) working days prior to any lane closures taking place. TMP is to be prepared by a professional certified by the American Traffic Safety Services Association.</p> <p>The TMP shall outline the approach to traffic management, show recognition and minimization of risks indicates signing locations, identify Traffic Control Persons (TCP) stations, show lane shifting and proposed closures.</p> <p>The Contractor shall ensure safe passage of vehicles, cyclists and pedestrian through the work zone.</p>
	Add 1.0.7	<p>A Road and Sidewalk Closure Permit is required from Coquitlam for all work affecting pedestrian and traffic flow related to construction. A permit is required for each specific construction interference with pedestrian and traffic flow. The road and sidewalk closure permit form can be obtained for use from the City's website at http://www.coquitlam.ca. The Contractor must follow the approved TMP. Any changes to this TMP must be submitted to City's Traffic Operations for approval</p>
	Add 1.0.8	<p>Refer to Appendix A – Traffic Management Detail Specifications</p>
1.4 Traffic Control	Delete 1.4.1 and replace with the following	<p>The Contractor shall conduct their operations so as to cause the minimum obstruction and inconvenience to traffic and to places of business and residences adjacent to the Place of Work. No greater quantity of work shall be undertaken at any one time than can be properly conducted with due regard to the rights and interests of the public as may be determined by the Contract Administrator.</p> <p>The Contractor is to provide at all times safe and convenient means of approach and entrance to adjoining lanes, driveways, buildings and property both for vehicles and pedestrians to the satisfaction of the Contract Administrator. For this purpose, they shall construct and maintain suitable and safe platforms, approaches, structures, bridges, diversions or other works.</p> <p>Where traffic must cross open trenches, the Contractor shall provide suitable bridges. Where trenches have been backfilled or where road improvements are incomplete the Contractor shall take any steps necessary to prevent potholes or other traffic hazards. Where the Contract Administrator so instructs or where Contract Specifications so require, the Contractor shall provide temporary asphalt patching of such hazards.</p>
	Add 1.4.9.3.1	<p>The Contractor, as required by the Contract Administrator and the City, is to supply Construction Zone information signs (stationary), refer to MMCD 01 58 01 for the required identification signage.</p> <p>The Contractor is responsible for the removal of the signs at the completion of the work.</p>
	Delete 1.4.10.1.3 and replace with the following	<p>When workmen or equipment are employed over travelled way over brow of hills, around sharp curves or at other locations where oncoming traffic would not otherwise have adequate warning.</p>

**1.5 Measurement and
Payment**

Delete 1.5.1
and replace
with the
following

Payment for all work performed under this section including submission of Traffic Management Plan (TMP), Traffic Control Persons (TCP), and all temporary traffic signs, devices as required for traffic and pedestrian safety; and all other items described in the Traffic Regulation Section, and all labor, material, equipment, and work described under **Appendix A: Traffic Management Detail Specifications** shall be treated as incidental to payment for work described in other Sections unless shown otherwise in the Schedule of Quantities and Prices.

END OF SECTION

ENVIRONMENTAL PROTECTION

1.0 GENERAL

1.2 Temporary Erosion and Sediment Controls

Delete 1.2.1.1 and replace with the following

Properly drain all portions of the site. Protect the site and the watercourses to which it drains, directly or indirectly, against erosion and siltation in accordance with the City of Coquitlam Stream and Drainage System Protection Bylaw No. 4403, 2013 during construction and until the Place of Work has been restored to the satisfaction of the Contract Administrator. Ensure no silt, gravel, debris or other deleterious substance resulting from construction activity discharges into existing drainage systems or watercourses or onto highways or adjacent property. The Contractor is responsible for all damage that may be caused by water backing up or flowing over, through, from or along any part of the work or otherwise resulting from his operations.

Keep existing culverts, drains, ditches and watercourses affected by the work clear of excavated material at all times. When it is necessary to remove or alter any existing drainage structure, provide suitable alternative measures for handling the drainage. Adequately support culverts and drainpipes across trenches to prevent displacement and interference with the proper flow of water due to trench settlement.

Sweep streets, and clean catch basins, manhole sumps, detention tanks, and maintain siltation controls as often as the Contract Administrator and the City deems necessary.

Delete 1.2.2.2 and replace with the following

Do not operate construction equipment in watercourses.

Add 1.2.2.9

All work must be carried out during favourable and low water conditions.

Add 1.2.2.10

Any fill used on this project shall be certified inert and from a source which is confirmed to be free of contaminants.

Add 1.2.2.11

All work within a watercourse must be undertaken and completed in isolation of all flowing water to maintain downstream water quality and unrestricted flows.

Add 1.2.6

Complete construction in a manner that will prevent the release of sediment or sediment laden waters to the watercourses, ditches, and swales draining to fish habitat.

1.4 Environmental Protection

Add 1.4.3.5

Immediately contain and clean up any leaks and spills of prohibited materials at the Place of Work.

Add 1.4.3.6

Ensure that a well-stocked spill kit is on-site at all times and that the Contractor's employees are familiar with appropriate spill response techniques. Any spill of reportable quantities must be immediately reported to the Provincial Emergency Program's 24-hour phone line at 1-800-663-3456.

Add 1.4.3.7

Immediately notify the Contract Administrator and the City of any leaks or spills of prohibited materials that occur at the Place of Work.

Add 1.4.3.8

Ensure that any fuel stored on-site is located at least 15 metres from the nearest stream, and is placed within a bermed off and lined area, in order to prevent leaks or spills into the environment.

Add 1.4.3.9

All equipment and machinery must be in good working condition (power washed), free of leaks or excess oil and grease. No equipment refuelling

ENVIRONMENTAL PROTECTION

		or servicing shall be undertaken within a minimum of 15 metres of any water course or surface water drainage.
	Add 1.4.3.10	During all phases of the operation, take precautions to abate nuisance caused by mud or dust by clean up, sweeping, sprinkling with water or dust control, or other means as necessary to accomplish results satisfactory to the Contract Administrator.
1.6 Measurement and Payment	Delete 1.6.1 and replace with the following	Payment for all work, unless included in the Schedule of Quantities and Prices, performed under this section will be incidental to payment for work described in other Sections. All works for Erosion and Sediment Control (ESC) shall include silt fencing, interceptor channel/swale/ditch construction, interceptor drainpipe, check dams, catch basin, socks, and all materials to complete the work as shown on the Contract Drawings or as directed by the Contract Administrator
	Add 1.6.2	Payment for this item as directed by the Contractor Administrator includes supply, placement, maintenance, materials, removal and incidentals required for environmental protection.
	Add 1.6.3	Payment for the poly cover or temporary tarps over stockpile materials or exposed road subgrades shall be treated as incidental work.
1.9 Archaeological / Historical Resources	Add 1.9	Immediately cease work and inform the Contract Administrator and the City, if any archaeological or historical resources are encountered during construction. Leave these resources in place and do not disturb them in any way. The Contractor must allow the Archaeological and Historical Resources group to perform duties around the site during construction. The Contract Administrator shall coordinate all other work being performed at the site with the Contractor
1.10 Contractor's Hydrocarbon Wastes and Fuel Spill Mitigation Measures	Add 1.10	The Contractor will prepare a Spill Response Plan prior to Construction. Costs of the preparation of the spill response plan are incidental to the Contract. The Contractor will develop and identify waste receptacles for the safe disposal of hydrocarbons and lubricant fouled waste material, and use those receptacles. There will be no machine refuelling within 30 m of a watercourse. The Contractor must keep emergency spill kit at each bridge repair site. The Environmental Monitor will inspect and confirm that a spill kit is on site prior to commencement of bridge repair work. Each spill kit will at a minimum have the following: <ul style="list-style-type: none">• 2 - 5 m long absorbent spill booms• 50 - 16" x 20" Sorbent Pads (Oil, Gas & Diesel)• 6 - 48" x 3" Sorbent Socks (Oil, Gas & Diesel)• 4 - 120" x 3" Sorbent Socks (Oil, Gas & Diesel)• 4 - 8" x 18" Sorbent Pillows (Oil, Gas & Diesel)• Nitrile Gloves• Hand Wipes• 2 - Disposable Respirators N958 HD• Hazmat Disposal Bags

Spills of any substance toxic to aquatic life of reportable quantities will be immediately reported to the Provincial Emergency Program 24-hour phone line at 1-800-663-3456.

Contractor shall immediately notify the Contract Administrator of any leaks or spills of prohibited materials that occur on the job site.

The Contractor is wholly responsible for costs associated with clean-up of spills originating from their equipment or work practices.

1.11 Non-Hazardous Waste Handling Requirements Add 1.11

There will be no disposal of solid wastes into sumps, ditches, streams, culverts, road edges or private property.

The Contractor's will supply trash cans for the disposal of crew generated wastes.

Littering is prohibited and monitoring for this activity will be ongoing throughout the project.

1.12 Control of Cement and Cement Grouts Add 1.12

The Contractor shall undertake all concrete/grouting work with caution and comply with, at a minimum, the following procedures:

1. The Work shall be isolated from watercourses through the use of berms, pits or tarpaulins.
2. There shall be no direct contact between work activity and any watercourse through spillage, hosing off surfaces, rain or cleaning of tools.
3. Complete isolation of all grouting from any watercourse for a minimum of 72 hours.
4. Exposed concrete will be covered if there are forecast rains.
5. No wash water shall be allowed to discharge to any watercourse.
6. The Contractor must follow BC Environmental Management Act – Spill reporting regulation procedures relating to emergency mitigation and clean up measures for managing the cleanup and recovery of concrete materials.
7. All wash water from concrete works shall be contained and removed from site.
8. If required, concrete wash water may be disposed in a temporary disposal location that has been reviewed and accepted by the Owner. This location may be a rock pit or grassy area, provided the wash water will be contained in an upland location at least 30m away from the high-water mark, and at least 30m away from the top of bank of watercourses and there is landowner approval.
9. All accepted temporary disposal area locations must be cleaned up and re-seeded prior to demobilization.
10. Concrete dust from saw cutting and drilling shall be prevented from entering any watercourse.

END OF SECTION

PROJECT IDENTIFICATION

1.3 Measurement and Payment

Delete 1.3.1 and replace with the following

Payment for the installation of 1.2m x 1.2m static construction Information signs as shown in Appendix A – Traffic Management Detail Specifications includes supply, placement and removal, and will be incidental to payment for work described in other Sections, unless shown otherwise in the Schedule of Quantities and Prices.

Add 1.3.2

Payment for changeable message signs (CMS) including supply, placement, communication management & removal as required for traffic & pedestrian safety and as shown in in Appendix A – Traffic Management Detail Specifications will be incidental to payment for work described in other Sections, unless shown otherwise in the Schedule of Quantities and Prices.

When shown in the Schedule of Quantities and Prices, payment for CMS used for only a fraction of a month will be paid prorated.

END OF SECTION

1.0 GENERAL

1.1 References

Add 1.1.1

Canadian Standards Associated (CSA)

1. CSA-A23.1/A23.2, Concrete Materials and Methods of Concrete Construction/Methods of Test and Standard Practices for Concrete, 2019 Edition.
2. CSA O86S1, Supplement No. 1 to CAN/CSA-O86-01, Engineering Design in Wood.
3. CSA O121, Douglas Fir Plywood.
4. CSA O151, Canadian Softwood Plywood.
5. CSA O153, Poplar Plywood.
6. CAN/CSA-O325.0, Construction Sheathing.
7. CSA O437 Series, Standards for OSB and Waferboard, CSA S269.1, Falsework for Construction Purposes.
8. CSA S269.1, Falsework and Formwork.
9. CAN/CSA S269.3, Concrete Formwork, National Standard of Canada.

Add 1.1.2

Underwriters' Laboratories of Canada (ULC):

1. CAN/ULC-S701, Standard for Thermal Insulation, Polystyrene, Boards and Pipe Covering.

1.2 Delivery, Storage, and Handling

Add 1.2.1

Store and manage hazardous materials in accordance with manufacturer's written instructions and applicable federal and provincial laws, regulations, codes, and guidelines.

Add 1.2.2

Storage and Handling Requirements:

1. Store materials in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
2. Store and protect formwork from damage.
3. Replace defective or damaged materials with new.

Add 1.2.3

Waste Management and Disposal:

1. Separate waste materials for reuse and recycling.

1.3 Measurement and Payment

Add 1.3.1

Payment for all work performed under this Section will be incidental to payment for work described in other Sections unless shown otherwise in the Schedule of Quantities and Prices. No separate payment will be made for the supply, transport and installation of the formwork required as part of another Item.

2.0 PRODUCTS

2.1 Materials

Add 2.1.1

Formwork Materials:

1. For concrete without special architectural features, use wood and wood product formwork materials to CAN/CSA O86.
2. For concrete with special architectural features, use formwork materials to CSA A23.1/A23.2.

Add 2.1.2

Form Ties: Removable or snap-off metal ties, fixed or adjustable length, free of devices leaving holes minimum 25 mm diameter in concrete surface.

Add 2.1.3

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.

Add 2.1.4 Form stripping agent: Colourless mineral oil, non-toxic, biodegradable, low VOC, free of kerosene, with viscosity between 15 to 24 mm²/s at 40°C, flashpoint minimum 150°C, open cup.

Add 2.1.5 Falsework Materials: To CSA S269.1.

3.0 EXECUTION

3.1 Fabrication and Erection

Add 3.1.1 Verify lines, levels and centres before proceeding with formwork/falsework and ensure dimensions agree with drawings.

Add 3.1.2 Fabricate and erect falsework in accordance with CSA S269.1. Falsework shall not impeded traffic lane height beneath overpass.

Add 3.1.3 Do not place shores and mud sills on frozen ground.

Add 3.1.4 Provide site drainage to prevent washout of soil supporting mud sills and shores.

Add 3.1.5 Fabricate and erect formwork in accordance with CAN/CSA S269.3 to produce finished concrete conforming to shape, dimensions, locations and levels indicated within tolerances required by CSA A23.1/A23.2.

Add 3.1.6 Align form joints and make watertight.

Add 3.1.7 Keep form joints to minimum.

Add 3.1.8 Chamfers and fillets:

1. Use 20 mm chamfer strips on external corners and / or 20 mm fillets at interior corners, joints, unless specified otherwise.
2. When casting new concrete against existing concrete surfaces, use chamfers and fillets to match existing concrete.

Add 3.1.9 Form chases, slots, openings, drips, recesses, expansion and control joints as indicated.

Add 3.1.10 Build in anchors, sleeves, and other inserts required to accommodate Work specified in other sections.

Add 3.1.11 Ensure that anchors and inserts will not protrude beyond surfaces designated to receive applied finishes, including painting.

Add 3.1.12 Clean formwork in accordance with CSA A23.1/A23.2, before placing concrete.

3.2 Removal and Reshoring

Add 3.2.1 Provide necessary re-shoring of members where early removal of formwork may be required or where members may be subjected to additional loads during construction as required.

Add 3.2.2 Re use formwork and falsework subject to requirements of CSA A23.1/A23.2.

END OF SECTION

CONCRETE REINFORCEMENT

1.0 GENERAL

1.1 References

Add 1.1.1

American Concrete Institute (ACI):

1. ACI 315R, Manual of Engineering and Placing Drawings for Reinforced Concrete Structure.
2. SP-66, ACI Detailing Manual 2004.

Add 1.1.2

American National Standards Institute/American Concrete Institute (ANSI/ACI):

1. ANSI/ACI 315, Details and Detailing of Concrete Reinforcement.

Add 1.1.3

American Society for Testing and Materials (ASTM)

1. ASTM A123, Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
2. ASTM A143/A143M, Standard Practice for Safeguarding Against Embrittlement of Hot-Dip Galvanized Structural Steel Products and Procedure for Detecting Embrittlement.
3. ASTM A276, Standard Specification for Stainless Steel Bars and Shapes.
4. ASTM A995M, Standard Specification for Castings, Austenitic-Ferritic (Duplex) Stainless Steel, for Pressure-Containing Parts.

Add 1.1.4

Canadian Standards Associated (CSA)

1. CAN/CSA A23.1, Concrete Materials and Methods of Concrete Construction, 2019 Edition.
2. CAN3 A23.3, Design of Concrete Structures for Buildings.
3. CSA G30.3, Cold Drawn Steel Wire for Concrete Reinforcement.
4. CAN/CSA G30.18, Billet Steel Bars for Concrete Reinforcement.
5. CAN/CSA G40.21, Structural Quality Steels.

Add 1.1.5

Reinforcing Steel Institute of Canada (RSIC):

1. RSIC, Reinforcing Steel Manual of Standard Practice.

Add 1.1.6

Where there are differences between the Specifications and Drawings and the codes, standards, or acts, the most stringent shall govern.

1.2 Delivery, Storage, and Handling

Add 1.2.1

Delivery and Acceptance Requirements: Deliver materials to site in original factory packaging, labelled with manufacturer's name and address.

Add 1.2.2

Storage and Handling Requirements:

1. Store materials in accordance with manufacturer's recommendations in clean, dry, well-ventilated areas.
2. Store reinforcing bars clear of the ground on timber or other suitable protective cribbing spaced to prevent sags in bundles. Stacks of bundles of straight bars shall have adequate blocking to prevent contact between the layers of bundles.
3. Store and handle stainless steel reinforcing bars with non-corrosive materials and keep contaminate free.
4. Store stainless steel reinforcing bars separate from uncoated bars.
5. Replace defective or damaged materials with new.

CONCRETE REINFORCEMENT

1.3 Measurement and Payment Add 1.3.1 Payment for all work performed under this Section will be incidental to payment for work described in other Sections unless shown otherwise in the Schedule of Quantities and Prices.

2.0 PRODUCTS

2.1 Materials Add 2.1.1 Substitute different size bars only if permitted in writing by Contract Administrator.

Add 2.1.2 Reinforcing steel: billet steel, grade 400W, deformed bars to CAN/CSA G30.18, unless indicated otherwise.

Add 2.1.3 Stainless reinforcing steel: Stainless steel, Grade 420, deformed bars to ASTM A276 and ASTM A995M, of type specified in the table below. Provide one-piece bars with required lengths and bends.

Permitted Types of Stainless Steel	
Type / ASTM Designation	UNS Designation
316 LN – A955	S31653
Duplex 2205 – A995	S31803
Duplex 2304*	S32034

*Chemical composition shall be within the ranges identified in Table 1 (Typical Composition %) of and in conformance to the requirements of ASTM A276. The dimensioning and mechanical properties shall be in conformance with ASTM A955M

Add 2.1.4 Stainless steel reinforcing bars shall be hot-rolled, de-scaled and pickled to the required mechanical properties and dimensions.

Add 2.1.5 Tie Wire: Smooth, equal or greater than 16 Ga (U.S. Steel Wire Gauge) to CSA G30.3. Tie wires to be made of non-metallic material or stainless steel.

Add 2.1.6 Galvanizing of Non-Prestressed Reinforcement: To ASTM A123, minimum zinc coating 610 g/m².

Add 2.1.7 Chairs, Bolsters, Bar Supports, Spacers: To CAN/CSA A23.1, rust-proof, galvanized steel or approved equivalent.

Add 2.1.8 Mechanical Splices: Subject to approval of Contract Administrator.

Add 2.1.9 Plain Round Bars: To CAN/CSA G40.21.

2.2 Source Quality Control Add 2.2.1 Provide Contract Administrator with certified copy of mill test report of reinforcing steel, showing physical and chemical analysis, minimum 4 weeks prior to commencing reinforcing work.

Add 2.2.2 Inform Contract Administrator of proposed source of material to be supplied.

3.0 EXECUTION

3.1 Fabrication Add 3.1.1 Fabricate reinforcing steel in accordance with CAN/CSA A23.1, ANSI/ACI 315, and RSIC Reinforcing Steel Manual of Standard Practice unless indicated otherwise.

Add 3.1.2 Fabricate stainless-steel reinforcing bars such that the bar surfaces are not contaminated with deposits of iron and non-stainless steel and that the surfaces are not damaged due to straightening from coil.

CONCRETE REINFORCEMENT

	Add 3.1.3	Cold bend reinforcing bars. Do not straighten or re-bend bars.
3.2 Construction	Add 3.2.1	Welding of reinforcing bars and welded splices is not permitted.
	Add 3.2.2	Mechanical Coupler Splices: <ol style="list-style-type: none">1. Mechanical couplers shall be approved by the Contract Administrator. Such couplers shall develop tension or compression, as required, at least 120% of the specific yield strength of the bars, but not less than 110% of the mean yield strength, representative of the bars to be used, in the test of the mechanical connection.2. Wedge couplers shall not be used in bars greater than 15 mm diameter. When Mechanical couplers are used the Contractor shall ensure that the minimum concrete cover as specified is maintained.
	Add 3.2.3	Obtain Contract Administrator's approval for locations of reinforcement splices other than those shown on placing drawings.
	Add 3.2.4	Ship bundles of bar reinforcement, clearly identified in accordance with bar bending details and lists.
	Add 3.2.5	Detail reinforcement in accordance with Contract Documents, CSA A23.1, and detailing standards in RSIC Manual of Standard Practice.
3.3 Field Bending	Add 3.3.1	Do not field bend or field weld reinforcement except when indicated or authorized by Contract Administrator.
	Add 3.3.2	Only bend stainless steel reinforcement using equipment specifically designed for that purpose.
	Add 3.3.3	When field bending is authorized, bend without heat, applying a slow and steady pressure.
	Add 3.3.4	Do not field bend bars partially embedded in concrete except as shown on the Drawings or where authorized by the Contract Administrator.
	Add 3.3.5	Replace bars which develop cracks or splits.
3.4 Placing Reinforcement	Add 3.4.1	Place reinforcing steel as indicated on accepted placing drawings and in accordance with CAN/CSA A23.1.
	Add 3.4.2	Perform fabrication and setting so completed work will be within tolerances set out in CSA A23.1 unless otherwise shown on the Drawings or determined by the Contract Administrator. These tolerances are acceptable with regard to structural requirements. Interfacing tolerances may not be compatible with the above. Review and coordinate interfacing tolerances so various elements come together properly.
	Add 3.4.3	Do not place concrete prior to having obtained Contract Administrator's review of reinforcing material and placement and having completed any required changes or adjustments.
	Add 3.4.4	Ensure cover to reinforcement is maintained during concrete pour.
	Add 3.4.5	Protect stainless bars with covering during transportation and handling.
	Add 3.4.6	For dowel installation, see requirements in Section 03 30 00S – Structural Cast-in-Place Concrete.

END OF SECTION

CAST-IN-PLACE CONCRETE

1.0	GENERAL	Add 1.0.4	This section describes requirements for materials, proportioning, and placing of cast-in-place concrete.	
1.1	Related Work	Add 1.1.10	Concrete Forming and Accessories	Section 03 10 00S
		Add 1.1.11	Concrete Reinforcement	Section 03 20 01S
1.2	References	Add 1.2.1	Canadian Standards Associated (CSA)	
			<ol style="list-style-type: none"> 1. CSA A23.1/CSA A23.2, Concrete Materials and Methods of Concrete Construction / Test Methods and Standard Practices for Concrete, 2019 Edition. 2. CSA S6, Canadian Highway Bridge Design Code 3. CSA A283, Qualification Code for Concrete Testing Laboratories. 4. CAN/CSA A3000, Cementitious Materials Compendium. 	
		Add 1.2.2	American Society for Testing and Materials (ASTM)	
			<ol style="list-style-type: none"> 1. ASTM C1017/C1017M, Standard Specification for Chemical Admixtures for Use in Producing Flowing Concrete. 2. ASTM C C1059/C1059M, Standard Specification for Latex Agents for Bonding Fresh To Hardened Concrete. 3. ASTM C260, Standard Specification for Air-Entraining Admixtures for Concrete 4. ASTM C309, Specification for Liquid Membrane Forming Compounds for Curing Concrete. 5. ASTM C494, Standard Specification for Chemical Admixtures for Concrete. 	
		Add 1.2.3	Where there are differences between the Specifications and Drawings and the codes, standards, or acts, the most stringent shall govern.	
		Add 1.2.4	The 2019 Edition of CSA A23.1/A23.2 shall be used. No exceptions will be made.	
1.4.1	Submittals	Add 1.4.1.1	Submit a concrete mix design and mix design review letter for each type of concrete used on the project for review and acceptance by the Contract Administrator a minimum of two (2) weeks prior to commencement of placing concrete. Any change to the materials, admixtures, additives, or proportions of components of a mix design constitutes a new type of concrete and requires a separate mix design submission and review letter.	
		Add 1.4.1.2	Concrete mix design review letters shall document compliance with all specification requirements for the associated type of concrete including an evaluation and summary of all mix constituents, material test reports, mix proportion quantities, and if applicable, trial batch test results, mass concrete design considerations, and portable batch plant batching procedures, aggregate source, producers' names, gradations, specific gravities, compliance with CSA A23.1 Section 4.2.3, and evidence that this data is not more than 12 months old, except that expansion tests in accordance with CSA A23.2-14A may be up to 24 months old. The concrete mix design review letter shall confirm that the mix design satisfies the requirements of CSA A23.1 and these Specifications for strength, exposure class, durability, and performance requirements. The concrete mix design review letter shall be signed and sealed by a Professional	

CAST-IN-PLACE CONCRETE

			Engineer registered with Engineers and Geoscientists of British Columbia who has a minimum 5 years' experience in concrete mix design reviews.
		Add 1.4.1.3	Submit results of testing completed by an independent test agency showing compliance with the concrete mix design requirements specified in Clause 1.3.2.
		Add 1.4.1.4	When concrete suppliers request confidentiality of mix proportion quantities, the Professional Engineer providing the concrete mix design review letter, subject to a mutually agreeable confidentiality agreement with the concrete supplier, shall be granted full disclosure of mix proportion quantities and used materials such that a general mix proportioning discussion can be provided in the mix design review letter.
		Add 1.4.1.5	An interruption in production of a particular type of concrete shall not constitute the need for additional testing when the Contractor provides aggregate sieve analysis, organic impurities in sands for concrete, petrographic examination of aggregates, and letter of evaluation from the mix design review letter professional indicating that the material initially tested is still representative. Provide additional analyses when requested by the Contract Administrator to confirm that the mix constituents continue to meet specification requirements and provide sign-off by the Professional Engineer providing the concrete mix design review letter.
		Add 1.4.1.6	Where available, submit material safety data sheets (MSDS) for all constituent materials.
		Add 1.4.1.7	If the fine aggregate consists of a blend from more than one source, the fine aggregate sieve analysis shall show the gradation of the blended fine aggregates. Similarly in the case of blended coarse aggregates, the coarse aggregate sieve analysis shall indicate the gradation of the blended coarse aggregates.
		Add 1.4.1.8	Provide other information in accordance with CSA A23.1 if requested by the Contract Administrator.
		Add 1.4.1.9	Submit temporary works drawings and procedures required to facilitate the concrete works. Temporary works drawings shall be prepared and sealed by a Professional Engineer registered with Engineers and Geoscientists of British Columbia, experienced in the design of temporary works of the type required for this project at least two (2) weeks prior to starting construction of the temporary works. Temporary works or structures cannot impact height of travel lanes beneath the overpass.
1.4.2	Delivery, Storage, and Handling	Add 1.4.2.1	Concrete hauling time: Deliver to site of Work and discharged within ninety (90) minutes maximum after batching.
		Add 1.4.2.2	Modifying maximum time limit without receipt of prior written agreement from the Contract Administrator and concrete producer as described in CSA A23.1/A23.2. is prohibited.
		Add 1.4.2.3	Submit deviations for review by Contract Administrator.
1.4.3	Site Conditions	Add 1.4.3.1	Placing concrete during rain or weather events that could damage concrete is prohibited.

CAST-IN-PLACE CONCRETE

- Add 1. 4.3.2 Protect newly placed concrete from rain, wind, or weather events in accordance with CSA A23.1/A23.2.
- Add 1. 4.3.3 Cold weather protection:
1. Maintain protection equipment, in readiness, on Site.
 2. Use such equipment when ambient temperature below +5°C, or when temperature may fall below +5°C before the concrete has finished the curing period in accordance with Clause 3.8.
 3. Placing concrete upon or against surface at temperature below +5°C is prohibited.
 4. If the project schedule requires concrete to be placed when the ambient temperature is less than +5°C, submit a written plan detailing protective measures that will be undertaken to protect freshly placed concrete from extreme temperatures. Concrete shall not be placed until the Contract Administrator has reviewed the Contractor's submittal and all of the Contract Administrator's comments have been addressed.
- Add 1. 4.3.4 Hot weather protection:
1. Protect concrete from direct sunlight when ambient temperature above +27°C.
 2. Prevent formwork from getting too hot before concrete placed. Apply accepted methods of cooling not to Adversely affect concrete.
 3. If the project schedule requires concrete to be placed when the ambient temperature exceeds +30°C or is expected to exceed +30°C prior to the commencement of curing, submit a written plan detailing protective measures that will be undertaken to protect freshly placed concrete from extreme temperatures. Concrete shall not be placed until the Contract Administrator has reviewed the Contractor's submittal and all of the Contract Administrator's comments have been addressed.
- Add 1. 4.3.5 Make note of special curing and protection requirements for concrete placed during periods of extreme temperatures.
- Add 1. 4.3.6 Protect from drying during the minimum curing period specified in Clause 3.8.
- 1.4.4 Waste Management and Disposal**
- Add 1.4.4.1 Separate waste materials for reuse and recycling.
- Add 1. 4.4.2 Use trigger operated spray nozzles for water hoses.
- Add 1. 4.4.3 Designate a cleaning area for tools to limit water use and run-off.
- Add 1. 4.4.4 Ensure emptied containers are sealed and stored safely for disposal away from the public.
- Add 1. 4.4.5 Prevent plasticizers, water reducing agents, air entraining agents, and any fresh concrete or fresh concrete constituents from entering drinking water supplies or streams. Using appropriate safety precautions, collect liquid or solidify liquid with an inert, non-combustible material and remove for

			disposal. Dispose of all waste in accordance with applicable local, provincial, and national regulations
		Add 1. 4.4.6	Choose least harmful, appropriate cleaning method which will perform adequately.
1.5	Measurement and Payment	Add 1.5.6	Quantities indicated in the Schedule of Quantities and Prices measured in meters shall be rounded to the nearest 0.1 m, and calculated as the lineal length of item indicated. No variations to the unit price per metre will be authorized regardless of the width or depth of the work.
		Add 1.5.7	Quantities indicated in the Schedule of Quantities and Prices in square meters shall be rounded to the nearest 0.1 m ² , and calculated as the product of the lineal length and width of the repair areas. No variations to the unit price per square metre will be authorized regardless of the depth of the work.
		Add 1.5.8	Quantities indicated in the Schedule of Quantities and Prices in cubic meters shall be rounded to the nearest 0.1 m ³ , and calculated as the product of the lineal length, the average width and average depth of the work areas. No variations to the unit price per cubic metre will be authorized based on the location of the work. Payment includes supply and installation of rebar, concrete, dowelling, all falsework, form work, temporary removal of utilities to facilitate repairs, and access to the locations as required to complete the work as shown in the Contract Drawings.
		Add 1.5.9	Payment for Cast-In-Place Concrete Spall Repairs shall be at the unit price bid as indicated in the Schedule of Quantities and Prices. The amount provided shall be considered full compensation for all work required including, but not limited to, mobilization, demobilization, removal and disposal of unsound concrete, cleaning corrosion from exposed reinforcing, concrete surface preparation, supply and placement of the concrete or proprietary cementitious mortar, supply and placement of the reinforcement steel or dowels and adhesive required for repair, finishing of the repair surface and curing. Payment shall include pre-construction testing for quality control as well as all falsework, formwork, temporary removal of utilities to facilitate repairs, and access to the locations required to complete the work. Payment includes sealing of all repaired cracks.
		Add 1.5.10	Payment for Power Washing Concrete Surfaces shall be made at the lump sum price indicated in the Schedule of Quantities and Prices. The amount provided shall be considered full compensation for all work required to complete installation as shown on the Contract Drawings. Cleaning and power washing of concrete areas shall be to all visible and exposed surfaces, covered in vegetation and moss, including both faces of the parapets, sidewalks and exterior faces of the concrete girders, piers and abutments. Payment includes all necessary measures to ensure that no dirt, washout, or debris falls into the travelled lane.

CAST-IN-PLACE CONCRETE

Add 1.5.11 Payment Pressure Injection Crack Repair will be made at the unit price bid as indicated in the Schedule of Quantities and Prices. The amount provided shall be considered full compensation for all work required to complete installation as shown on the Contract Drawings.

Payment includes sealing of all repaired cracks.

2.0 PRODUCTS

2.1 Materials

Delete 2.1 and replace with the following:

Add 2.1.1 Portland cement: To CAN/CSA A3000 and CSA A23.1

Add 2.1.2 Water: To CAN/CSA A23.1.

Add 2.1.3 Aggregates:

1. To CAN/CSA A23.1/2.
2. Coarse aggregates to be normal density.

Add 2.1.4 Air entraining admixture: To ASTM C260.

Add 2.1.5 Chemical admixtures:

1. To ASTM C494.
2. Accelerating or set retarding admixtures during cold and hot weather placing require acceptance by the Contract Administrator prior to use.
3. Do not use admixtures containing calcium chloride.

Add 2.1.6 Supplementary cementing materials: To CAN/CSA A3000.

Add 2.1.7 Mixing water shall be potable. If non-potable water is to be used for batching, water shall comply with the requirements of ASTM C1602/C1602M. Do not use wash water in concrete.

Add 2.1.8 Super-plasticizing admixtures: To ASTM C494.

Add 2.1.9 Concrete retarders:

1. To ASTM C494.
2. Do not allow moisture of any kind to come in contact with the retarder film.

Add 2.1.10 Grouts:

1. Epoxy grout shall be Sikadur 31 Hi – Mod, unless bedding thickness exceeds 35 mm where Sikadur 42 shall be used with minimum strength of 35 MPa at 28 days.
2. Cementitious grout shall be pre-bagged, non-shrink grout with minimum compressive strength of 45 MPa at 28 days.
3. Alternative products shall be equivalent and require acceptance by the Contract Administrator

Add 2.1.11 Test materials originating from outside Canada or the United States of America intended for use in the production of concrete to the required standard by a laboratory in Canada certified to CSA A283. Provide a verification letter by the certified laboratory

and shall include references to the appropriate mill test report(s), material specification number(s), testing date(s), and statements indicating compliance of the material to the requirements of the Contract documents. Verification letters shall be signed and sealed by a Professional Engineer registered with the Engineers and Geoscientists of British Columbia, experienced with materials engineering.

Add 2.1.12

Any cement types, water, aggregates, admixtures, supplementary cementing materials, superplasticizers, additives, and other concrete constituents not explicitly mentioned in this section shall not be used without acceptance by the Contract Administrator and the City Engineer. If the Contractor proposes to use other materials/concrete constituents, it is the onus of the Contractor to demonstrate equivalent or better performance of the material component and the concrete mix proposed. This may include material documentations, including but not limited to material properties/test results, material data sheets, signed and sealed mix design reviews deemed necessary by the Contract Administrator to carry out the review. No additional payment or delay claim will be entertained for changes to material /concrete constituents.

2.2

Concrete Mixes

Delete 2.2.1 and replace with the following:

Proportion normal density concrete in accordance with CAN/CSA-A23.1, Alternative 1 to give following properties for all concrete:

1. Cement Types, except where noted on the drawings:
 - a. Type GU or GUL Portland cement.
 - b. Minimum compressive strength at 28 days: 45 MPa,
 - c. Exposure class C1, except as noted.
 - d. Maximum water cement ratio: 0.38.
2. Cement aggregate ratio to be kept as low as possible while remaining consistent with strength and durability requirements.
3. Nominal maximum size of coarse aggregate: 14 mm or 20 mm, dependent on depth of component.
4. Supplementary cementitious materials:
 - a. To CSA A3000 for fly ash, slag cement, and silica fume.
 - b. Fly ash: Type F.
 - c. Silica fume: Type SF.
5. Limitations on supplementary cementitious materials:
 - a. Fly ash content shall not exceed 15% by mass of total cementing materials content unless accepted by the Contract Administrator. Concretes using Type GUL cement and with a moderate to severe degree of sulphate exposure may require a higher percentage of fly ash, which requires acceptance by the Contract Administrator
 - b. Slag content shall not exceed 30% by mass of total cementing materials content unless accepted by the Contract Administrator.
 - c. Silica fume content shall not exceed 11% by mass of total cementing materials content unless accepted by the Contract Administrator.
 - d. Use of other supplementary cementing materials are subject to acceptance by the Contract Administrator.

6. Slump at time and point of discharge (prior to addition of superplasticizer):
 - a. 75 mm \pm 20 mm.
7. Air Content: 5 to 8%.
8. Maximum shrinkage at 35 days: 0.07% (700 microstrain)
9. Chemical Admixtures: In accordance with ASTM C260 and ASTM C494.
10. Do not add calcium chloride or admixtures containing calcium chloride to concrete.
11. Do not use accelerating admixtures unless accepted by the Contract Administrator.
12. When Type GUL cement is used, the following conditions shall apply:
 - a. Incorporate appropriate supplementary cementitious materials into mix design to obtain desired performance for specified exposure class.
 - b. Assume low sulphate exposure for site.
 - c. Provide sulphate exposure as defined by CSA A23.1 for aggregates, new materials placed, mixing water and any other components that may impact the sulphate exposure where concrete is placed. Propose sulphate exposure class for acceptance by Contract Administrator prior to submitting mix designs.
 - d. Include a minimum of 15% Type F fly ash by mass of cementing materials where late exposure (more than 35 days after placement of concrete) of the concrete to chlorides is expected.
 - e. Include a minimum of 8% of silica fume and 12% Type F fly ash by mass of cementing materials where early exposure (between 14 and 28 days after casting concrete) of the concrete to chlorides is expected.
13. Super-plasticizer: may only be added on site.
14. Do not change concrete mix designs or mix design requirements beyond CSA A23.1 tolerances without prior acceptance by the Contract Administrator. If an alternate mix design is considered, a new mix design submission in accordance with Clause 1.3 is required. No additional payment or delay claim will be entertained for changes to mix designs and required additional mix design submissions and review process.

2.4

**Cast-In-Place Concrete
Patch Repairs**

Add 2.4.1

Use a proprietary pre-bagged concrete or a concrete supplied by a ready-mix plant, minimum strength 35MPa at 28 days. Regardless of proprietary pre-bagged concrete or supplied ready-mix, concrete shall be in accordance with Clause 2.2, except that the requirements for proprietary pre-bagged concrete shall be modified as noted in this clause.

1. Proprietary pre-bagged concrete shall be flowable, shrinkage-compensated, and high-quality concrete with maximum aggregate size of 10 mm applied by pumping or pouring in repair areas provided with formwork with letter box / bird-mouth arrangement or confined formwork for patch repairs to girder side faces and girder soffits.
2. Proprietary pre-bagged concrete shall be designed for low early age heat release.
3. Mix and place proprietary pre-bagged concrete in accordance with the manufacturer's recommendations and in accordance with these specifications.

CAST-IN-PLACE CONCRETE

2.5	Concrete Trowel Patch Repairs	Add 2.5.1	Use a proprietary cementitious pre-bagged mortar mix, one-component, shrinkage-compensated mortar applied by trowel for patch repairs.
		Add 2.5.2	Use SikaTop 123 Plus or Target SC100W, or other equivalent product accepted by the Contract Administrator.
		Add 2.5.3	Use product in accordance with the manufacturer's recommendations.
3.0	EXECUTION		
3.1	General	Add 3.1.1	Do cast-in-place concrete work in accordance with CSA A23.1.
3.3	Workmanship	Delete 3.3 and replace with the following:	
		Add 3.2.1	Do not place concrete prior to the Contract Administrator's review and prior to having resolved any comments made by the Contract Administrator and having completed required adjustments. Provide a minimum 48 hours notice prior to placing of concrete to allow for inspection of reinforcement and formwork.
		Add 3.2.2	Prior to concrete placement, remove all sawdust chips and other construction debris from the interior of the formwork.
		Add 3.2.3	Clean reinforcement of debris and other deleterious materials by means acceptable to the Contract Administrator prior to placement. Refer to Section 03 20 01S - Concrete Reinforcement.
		Add 3.2.4	Pumping of concrete is permitted only after acceptance of equipment and mix.
		Add 3.2.5	Ensure reinforcement and inserts are not disturbed during concrete placement.
		Add 3.2.6	Prior to placing of concrete, obtain Contract Administrator's acceptance of proposed method for protection of concrete during placing and curing in adverse weather.
		Add 3.2.7	Maintain accurate records of poured concrete items to indicate date, location of pour, quality, air temperature and test samples taken.
		Add 3.2.8	Concrete tolerance shall be in accordance with CSA A23.1 straight edge method.
		Add 3.2.9	Proprietary products shall be installed in accordance with manufacturer's instructions. Grouts shall not be disturbed until a minimum compressive strength of 25 MPa is reached.
3.5	Installing Dowels	Add 3.5.1	Meet the following requirements for dowel installation personnel: <ul style="list-style-type: none"> 1. All personnel installing dowels into existing concrete shall be trained by the dowel adhesive manufacturer for the installation of dowels in the orientations shown on the

- Drawings within the past twelve (12) months or be an ACI certified adhesive anchor installer with a valid certificate.
2. The installers of dowels in horizontal, upwardly inclined, or overhead orientations shall have been trained specifically to install dowels in these orientations and for use of the required installation accessories by the manufacturer within the past twelve (12) months.
 3. Provide proof of training of all dowel installers to the Contract Administrator at least seven (7) days prior to starting the installation of dowels. Alternatively, the dowel adhesive manufacturer shall provide training and certify all dowel installers on site at the beginning of the dowel installation for each type of dowel.
- Add 3.5.2 Fill all dowelled and abandoned holes with Hilti Hit HY-200 or an equivalent product as accepted by the Contract Administrator.
- Add 3.5.3 Temporarily support overhead or upwardly inclined dowels after bonding, as necessary, to prevent their movement during curing period. The dowels shall remain undisturbed, and no load shall be placed on the dowels until curing is achieved.
- 3.6 Placing Concrete**
- Add 3.6.1 Handle and place concrete so as to avoid segregation of materials and the displacement of reinforcement. Deposit concrete as closely as practical to its final position.
- Add 3.6.2 When placing involves dropping concrete more than 1.5 m, deposit concrete through an elephant trunk. Alternate methods require demonstration by the Contractor of equivalent or better performance and require acceptance by the Contract Administrator.
- Add 3.6.3 Consolidate concrete thoroughly and uniformly. Perform the consolidation by mechanical vibration. Vibrators shall be equipped with non-metallic or rubber heads.
- Add 3.6.4 Supply a sufficient number of vibrators to properly consolidate concrete at the rate it is being placed. Have standby vibrators and AC generator available at all times.
- Add 3.6.5 Manipulate vibrators so as to thoroughly work the concrete around the reinforcement and embedded fixtures and into corners and angles of formwork.
- Add 3.6.6 Apply vibration at the point of deposit and in areas of freshly deposited concrete.
- Add 3.6.7 Insert vibrators vertically and withdraw slowly from the concrete. The vibration shall be of a sufficient duration and intensity to thoroughly impact the concrete but shall not be continued as to cause segregation.
- Add 3.6.8 Place concrete in horizontal layers not exceeding 300 mm thickness. Consolidate each layer so as to avoid a construction joint with the layer below.
- Add 3.6.9 Do not use concrete which does not reach its final position within 90 minutes after batching.

CAST-IN-PLACE CONCRETE

3.7	Finishing	Add 3.7.1	Patch and finish formed surfaces to CAN/CSA A23.1 except as noted.
		Add 3.7.2	Finish: <ol style="list-style-type: none"> 1. Class 2 – Common Finish. 2. Finish all formed concrete exposed to view. 3. Common finish to consist of smooth form finish to CAN/CSA A23.1
		Add 3.7.3	Repair honeycombed and defective concrete with method accepted by Contract Administrator. This may include removal and recasting, if required.
		Add 3.7.4	Rub exposed sharp edges of concrete with carborundum to produce 3 mm radius edges unless otherwise indicated.
3.8	Construction Joints and Casting to Existing Concrete	Add 3.8.1	Prepare construction joints and surfaces to existing concrete to CAN/CSA A23.1 and roughen existing surface to a nominal amplitude of 6 mm.
		Add 3.8.2	Dampen receiving surface and allow to dry to a saturated surface-dry (SSD) condition just prior to concrete application.
		Add 3.8.3	The location of construction joints not shown on the drawings require approval by the Contract Administrator prior to placing concrete.
3.9	Curing	Add 3.9.1	Cure concrete to CAN/CSA-A23.1 except where specified otherwise. Do not use curing compounds without approval of the Contract Administrator.
		Add 3.9.2	For concrete placed when ambient air temperature is below +5°C comply with the cold weather requirements of CAN/CSA-A23.1. Do not place concrete when the ambient temperature exceeds +25°C.
		Add 3.9.3	Unformed Surfaces: <ol style="list-style-type: none"> 1. Cure with burlap and water for a minimum of seven (7) days. 2. Carefully place two (2) layers of damp burlap on the surface of the concrete as soon as practicable following placement. 3. Overlap each strip by at least 75 mm and secure against displacement by wind. 4. Maintain burlap in place and keep thoroughly and continuously wet for seven (7) days after day of placing. 5. Provide misting as described in CAN/CSA A23.1 when water evaporation from the concrete surface is predicted to exceed 1.5 kg/m²/hr and according to CAN/CSA A23.1 Appendix D.
		Add 3.9.4	Formed Surfaces: <ol style="list-style-type: none"> 1. If formwork is left in place for seven (7) days or more, no additional curing will be required. 2. If formwork is removed in less than seven (7) days, cure in manner specified for unformed surfaces for remainder of seven (7) day period.

CAST-IN-PLACE CONCRETE

		Add 3.9.5	During curing period uncover only such areas as are immediately needed for finish treatment. Recover and continue curing.
		Add 3.9.6	Continuously maintain the in-place concrete at a minimum temperature of +10°C for a minimum of 7 consecutive days or for the time necessary to attain 70% of the specified compressive or flexural strength, whichever period is shorter. This may require the erection of hoarding around the placed concrete and the provision of external heat. If required, do not vent heat to the enclosure directly at the in-place concrete.
3.10	Field Quality Control	Add 3.10.1	Retain certified Independent Testing Laboratory in accordance with CSA A283 to carry out field quality testing.
		Add 3.10.2	Inspection and testing of concrete and concrete materials shall be carried out in accordance with CAN/CSA A23.1, except as follows: <ol style="list-style-type: none">1. A strength test shall consist of 3 standard cylinders, tested at 3, 7 and 28 days.2. Frequency of testing may be increased at Contract Administrator's discretion.3. Contractor shall pay for costs of tests.4. Contract Administrator may take additional test cylinders during cold weather concreting. Cure cylinders on job site under same conditions as concrete which they represent.5. Non-destructive Methods for Testing Concrete shall be in accordance with CAN/CSA A23.2.6. Inspection or testing by Contract Administrator will not augment or replace Contractor quality control nor relieve the Contractor of their contractual responsibility.7. Concrete failing to meet the requirements shall be retested, strengthened, or rejected in accordance with CAN/CSA A23.2. All additional testing, strengthening, and/or replacement shall be at the Contractor's expense, and no delay claims will be entertained.8. In the event that air content is outside the specified tolerance range as determined by testing, the Contract Administrator may accept adjustments to the mix as an alternate to rejection, provided adjustment are made within the maximum time allowed.9. Do not add additional water to adjust slump.
		Add 3.10.3	Acceptance Testing for Dowels: <ol style="list-style-type: none">1. Carry out all acceptance testing on selected dowels. Testing shall be performed by an independent testing agency acceptable to the Contract Administrator. All required repairs and retesting shall be at the Contractor's expense, and no delay claims will be entertained.2. Carry out testing intermittently as installation proceeds. The Contract Administrator will randomly select up to 10% of the installed dowels or a minimum of three dowels whichever is larger, in each work zone for tensile (pull-out) testing. The Contract Administrator will review the installation and testing program with the Contractor prior to the start of dowel installation.3. Reinstate hooks cut off to facilitate testing using lap splices, couplers, or other means accepted by the Contract Administrator.

4. Re-install and retest any dowel that fails the test at no expense to the Contract Administrator.
5. Pull-out tests shall conform to ASTM E488 "Test Methods for Strength of Anchors in Concrete and Masonry Elements". Tension dowels to 80% of the specified minimum yield strength of the dowel. Dowel must hold the load for 5 min. without measurable movement of the dowel.
6. Testing will be increased to up to 10% of all dowels or an additional 3 dowels whichever is larger, following a dowel failure or following the change of any installer contributing to the successful installation of previous dowels.
7. If test results indicate that more than 5% of the total dowels fail the tensile test, the Contract Administrator may require the Contractor to carry out tensile testing of all dowels. No additional payment will be made.

3.11	Power Washing Surfaces	Add 3.11.1	Do not use abrasives when power washing surfaces.
		Add 3.11.2	Exercise care to avoid dislodging of coarse aggregate particles, excessive removal of fines, damage to bituminous binder or damage to joint and crack sealers
		Add 3.11.3	Prevent water, loose material or vegetation being washed into active traffic lanes during Power washing.
		Add 3.11.4	Do not use heated water above 40°C on surfaces
		Add 3.11.5	Collect and dispose of loose and fallen materials as per the contract specifications.

END OF SECTION

METAL FABRICATIONS

1.0 GENERAL

1.1 References

1.1.1

American Society for Testing and Materials (ASTM):

1. ASTM A53/A53M, Standard Specification for Pipe, Steel, Black and Hot Dipped, Zinc Coated Welded and Seamless.
2. ASTM A123/A123M, Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
3. ASTM A153/A153M, Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware
4. ASTM A193 / A193M, Standard Specification for Alloy-Steel and Stainless Steel Bolting for High Temperature or High-Pressure Service and other Special Purpose Applications.
5. ASTM A269, Standard Specification for Seamless and Welded Austenitic Stainless Steel Tubing for General Service.
6. ASTM A307, Standard Specification for Carbon Steel Bolts and Studs, 60,000 PSI Tensile Strength.
7. ASTM A385, Standard Practice for Providing High-Quality Zinc Coatings (Hot-Dip)
8. ASTM A563/ A563M, Standard Specification for Carbon and Alloy Steel Nuts
9. ASTM B695, Standard Specification for Coatings of Zinc Mechanically Deposited on Iron and Steel
10. .ASTM F436/F436M, Standard Specification for Hardened Steel Washers Inch and Metric Dimensions
11. .ASTM F3125/F3125M, Standard Specification for High Strength Structural Bolts, Steel and Alloy Steel, Heat Treated, 830 MPa and 1040 MPa Minimum Tensile Strength, Inch and Metric Dimensions.
12. ASTM Practice A 143, Standard Practice for Safeguarding Against Embrittlement of Hot-Dip Galvanized Structural Steel Products and Procedure for Detecting Embrittlement

1.1.2

American Welding Society (AWS):

1. AWS A5.4/A5.4M, Specification for Stainless Steel Electrodes for Shielded Metal Arc Welding
2. AWS D1.6/D1.6M, Structural Welding Code -Stainless Steel

1.1.3

Canadian Standards Association (CSA):

1. CSA G40.20/G40.21, General Requirements for Rolled or Welded Structural Quality Steel/Structural Quality Steel.
2. CSA S16, Design of Steel Structures.
3. CSA S6, Canadian Highway Bridge Design Code.
4. CSA W47.1, Certification of companies for fusion welding of steel
5. CSA W48, Filler Metals and Allied Materials for Metal Arc Welding (developed in cooperation with the Canadian Welding Bureau).
6. CSA W59, Welded Steel Construction (Metal Arc Welding).
7. CSA W178.2, Certification of welding inspectors.
8. CSA G279, Steel for Prestressed Concrete Tendons.

1.1.4

Health Canada / Workplace Hazardous Materials Information System (WHMIS):

1. Material Safety Data Sheets (MSDS).

1.2 Submittals

1.2.1

Submit in accordance with the General Conditions and Section 01 33 015 – Project Record Documents.

METAL FABRICATIONS

- 1.2.2 Product Data:
1. Submit manufacturer's instructions, printed product literature and data sheets for sections, plates, couplers, anchors, and joints. Include product characteristics, performance criteria, physical size, finish and limitations.
 2. Submit load-strain curves certifying physical properties for each mill heat of bar steel and/or wire steel. Physical properties and chemical composition to conform to minimum specification requirements indicated for bar steel and/or wire steel.
- 1.2.2 Shop Drawings:
1. Submit drawings to Contract Administrator for review two weeks prior to fabrication.
 2. Shop drawings shall be supplied for all steel and joint components including, but not limited to, plates, built up sections and proprietary joint hardware.
 3. Indicate on all shop drawings materials, core thicknesses, finishes, connections, joints, method of anchorage, number of anchors, supports, reinforcement, details, adjustable level devices for deck joints and accessories.
- 1.2.3 Welding procedures:
1. Submit welding procedures, including welding procedure datasheets, for each type of weld proposed. The welding procedures shall bear the approval of the CWB and be reviewed and accepted by the Contract Administrator a minimum of one week prior to shop welding and three weeks prior to the commencement of field welding.
- 1.2.4 Mill Certificate Reports:
1. The contractor shall provide certified mill test results for all reinforcing steel and any other structural and miscellaneous steel components required for the construction of the works, specifying the minimum ultimate strength, yield strength, elongation and chemical composition upon delivery to the site.
 2. Mill test reports that originate from a mill outside Canada, or the United States of America shall be verified and certified by a laboratory in Canada by testing the material to the specified material standards, including boron content.
 3. The testing laboratory shall be certified to ISO/IEC 17025 by an organization accredited by the Standards Council of Canada for the tests required. Samples for testing shall be collected by personnel employed by the certified laboratory.
 4. A verification letter shall be provided by the certified laboratory that includes at a minimum, the applicable mill test reports, testing standards, date of verification testing, and declaration of material compliance with Contract requirements. The verification letter shall be signed by an authorized officer of the certified laboratory.
- 1.3 Quality Control**
- 1.3.1 Submit certified test reports showing compliance with specified performance characteristics and physical properties.
- 1.3.2 Submit product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.

METAL FABRICATIONS

- 1.3.3 Notify and submit a fabrication schedule to the Contract Administrator at least fourteen (14) days before fabrication commences. Allow the Contract Administrator access to all parts of the Work and supply such information and assistance as is required.
- 1.3.4 Provide samples of any materials when requested by the Contract Administrator.
- 1.3.5 Inspection by the Contract Administrator shall not relieve the Contractor from obligation to perform the work in accordance with the Contract.
- 1.3.6 Retain and pay for an independent qualified inspection company to complete in-plant fabrication inspection. The inspection company will:
1. Verify that the correct materials are incorporated into the structure.
 2. Complete all non-destructive weld testing.
- 1.3.7 Upon completion of the fabrication, the inspection company shall provide a report summarizing the work completed including summaries of all inspection work completed.
- 1.3.8 Welding inspectors shall be qualified by the CWB to the requirements of CSA W178.2. Any welding work found to be unacceptable shall be corrected in accordance with CSA W59, Section 5.10.
- 1.3.9 Perform, as a minimum, the following non-destructive testing of all welds:
1. Visual inspection of all welds.
 2. Magnetic particle inspection of fillet welds, as follows:
 - Submerged-arc welds: 25%.
 - Semi-automatic welds: 50%.
 - Manual welds: 25%.
- 1.3.10 The Contract Administrator, at their discretion, may complete independent quality assurance inspection(s). Provide suitable access to allow these inspection(s) to be completed including moving and supporting components as required. The Contract Administrator will attempt to schedule non-destructive testing so as not to interfere with the progress of the work. Cost of re-inspection after defects are repaired shall be borne by the Contractor. The Contract Administrator's quality assurance inspection(s) will not absolve the Contractor of its responsibility for the quality control of the Work nor for completing the Work in accordance with the requirements of the Contract.
- 1.3.11 Correct any welding work found to be unacceptable in accordance with CSA W59.
- 1.3.12 In the fabricator's plant, the specification and grade of steel used for main components shall be identified by use of suitable markings or recognized colour coding. Cut pieces that are identified by piece mark and contract number need not continue to carry specification identification markings when it has been established that such pieces conform to the required material specifications.
- 1.4 Delivery, Storage, And Handling**
- 1.4.1 Deliver, store and handle materials in accordance with manufacturer's written instructions.
- 1.4.2 Delivery and Acceptance Requirements: Deliver materials to site in original factory packaging, labelled with manufacturer's name and address.

METAL FABRICATIONS

	1.4.3	Storage and Handling Requirements: <ol style="list-style-type: none">1. Store materials off ground, in dry location, and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area. Keep free from dirt and other foreign matter and protect as far as practicable from corrosion. Support long members on skids placed near enough together to prevent injury from deflection.2. Replace defective or damaged materials with new.
1.5 Measurement and Payment	Add 1.5.1	Payment for all work performed under this Section will be incidental to payment for work described in other Sections, unless shown otherwise in the Schedule of Quantities and Prices.
	Add 1.5.2	Payment for Metal Fabrications shown in the Schedule of Quantities and Prices shall be at the unit price bid as indicated. The amount provided shall be considered full compensation for all work required to complete installation as shown on the Contract Drawings.
2.0 PRODUCTS		
2.1 Materials	2.1.1	Miscellaneous metal, angles, channels, sections and plates: to CSA G40.20/G40.21, Grade 300W, unless indicated on the drawings.
	2.1.2	Anchor rods: to ASTM A193, Grade B7 (Fy = 725 MPa, Fu = 860 MPa)
	2.1.3	Maximum steel boron content not to exceed 0.0008%.
	2.1.4	Welding materials: to CSA W59 and certified by Canadian Welding Bureau.
	2.1.5	Welding electrodes except for stainless steel: to CSA W48 Series and certified by Canadian Welding Bureau.
2.2 Finishes	2.2.1	Galvanizing: <ol style="list-style-type: none">1. Hot dipped galvanizing to ASTM A123/A123M, ASTM A153/A153M and ASTM A385 to a minimum coating of 610 g/m².2. Safeguard against embrittlement as required in ASTM A143.3. Upon request by Contract Administrator, provide tests for embrittlement outlined in ASTM A143.4. Chemical composition of steel being galvanized shall be as follows:<ul style="list-style-type: none">• Carbon less than 0.25%• Phosphorus less than 0.04%• Manganese less than 1.3%• Silicon less than 0.04% or between 0.15% and 0.22%5. For steel not meeting these chemical composition requirements, develop special galvanizing techniques to ensure that the specified coating thickness and adherence is achieved. A detailed description of the special techniques shall be submitted to the Contract Administrator for review 2 weeks prior to galvanizing.
	2.2.2	Zinc Rich Primer Coating: <ol style="list-style-type: none">1. Zinc rich primer shall be in accordance with CAN/CGSB 1.181 or MPI EXT 5.2C.2. Application rate of zinc rich primer shall be heavy.3. Use primer unadulterated, as prepared by the manufacturer. Paint on dry surfaces, free from rust, scale, and grease. Paint when temperature is minimum 7°C.

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- 2.2.3 Isolate aluminum from the following components, by means of bituminous paint:
1. Dissimilar metals.
 2. Concrete, mortar, and masonry
- 3.0 EXECUTION**
- 3.1 Erection**
- 3.1.1 Erect metalwork and temporary supports square, plumb, straight, and true, accurately fitted, with tight joints and intersections.
- 3.1.2 Provide suitable means of anchorage acceptable to Contract Administrator such as dowels, anchor clips, bar anchors, expansion bolts and shields, and toggles.
- 3.1.3 Exposed fastening devices to match finish and be compatible with material through which they pass.
- 3.1.4 Supply components for work by other trades in accordance with shop drawings and schedule.
- 3.1.5 Make field connections as shown on shop drawings.
- 3.1.6 Deliver items over for casting into concrete together with setting templates to appropriate location and construction personnel.
- 3.1.7 All field welds and other damage in galvanized coatings shall be thoroughly cleaned and painted with two coats of organic and zinc-rich paint.
- 3.1.8 Couplers and anchorages shall not be welded.
- 3.1.9 Couplers shall be manufactured by the coupler manufacturer and shall be capable of developing full tensile strength of the reinforcement. Couplers shall be stop-put and furnished with counter nuts, unless otherwise acceptable to the Contract Administrator.
- 3.2 Fabrication**
- 3.2.1 Fabricate work square, true, straight, and accurate to required size, with joints closely fitted and properly secured.
- 3.2.2 Where possible, fit and shop assemble work, ready for erection.
- 3.2.3 Ensure exposed welds are continuous for length of each joint. File or grind exposed welds smooth and flush.
- 3.3 Welding**
- 3.3.1 Welding shall be undertaken by a company approved by the CWB to the requirements of CSA W47.1, Division 3 or better.
- 3.3.2 All welding shall be done in accordance with procedures approved by the Canadian Welding Bureau (CWB) and CSA W59
- 3.3.3 Provide evidence that all welders and welding operators to be employed on the work are currently qualified by CWB in the processes in which they are to be employed.
- 3.3.4 Welding of stainless steel in accordance with AWS D1.6/AWS D1.6M.
- 3.3.5 Use low hydrogen filler, fluxes and low hydrogen welding practices throughout.
- 3.3.7 Field welding:

METAL FABRICATIONS

1. When the ambient air temperature is below 10°C, all material to be welded shall be preheated and sheltered from wind. When the ambient air temperature is below 0 °C, welding will not be permitted unless hoarding and heating acceptable to the Contract Administrator is provided.
2. Welding completed near or adjacent to existing strip seals or other rubber components shall be protected. All existing components damaged during field welding shall be repaired, as determined by the Contract Administrator, at Contractor's expense.
3. Field welding will only be permitted as shown on shop drawings accepted by the Contract Administrator. Field welding to be completed by a company certified to CSA W471. Division

3.4 Clean Up

- 3.4.1 Leave Work area clean at end of each day.
- 3.4.2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment to the satisfaction of the Contract Administrator.
- 3.4.3 Waste Management: separate waste materials for reuse and recycling.
- 3.4.4 Remove recycling containers and bins from site and dispose of materials at appropriate facility.

3.5 Protection

- 3.5.1 Protect installed products and components from damage during construction.
- 3.5.2 Repair damage to adjacent materials caused by metal fabrications installation.

END OF SECTION

JOINTS

1.0 GENERAL

1.1	Description	Add 1.1.1	This section covers all Work associated with Joints including poured joint sealant, strip seals and compression seals.
1.2	Submittals	Add 1.2.1	Submit in accordance with the General Conditions and Section 01 33 01S – Project Record Documents.
		Add 1.2.2	Submit manufacturer's product data, printed product literature and PDS sheets for joint materials. Include product characteristics, performance criteria, installation instructions, physical size, finish and limitations.
1.3	Delivery, Storage and Handling	Add 1.3.1	Deliver, store and handle materials in accordance with manufacturer's written instructions.
		Add 1.3.2	Deliver materials to Site in original factory packaging, labelled with manufacturer's name and address.
		Add 1.3.3	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 joint sealants from nicks, scratches, and blemishes. 3. Replace defective or damaged materials with new
1.4	Measurement and Payment	Add 1.4.1	Payment for Expansion Joint Replacement will be at the lump sum amount indicated, unless shown otherwise, in the Schedule of Quantities and Prices. The amount provided shall be considered full compensation for all work required to complete the installation as shown on the Contract Drawings. Work includes, but is not limited to, all submittals, removal of existing joint seal, armouring, and surrounding concrete, local asphalt demolition, concrete milling, cleaning and surface preparation, supply and installation of new joint seal including armouring and concrete, supply and installation of asphalt, supply and installation of new reinforcing steel, curing, access, and temporary cover plating if required. Payment will include all equipment, labour, materials, waste disposal, and everything supplied and done in connection therewith.
		Add 1.4.2	Payment will be at the unit rate indicated, unless shown otherwise, in the Schedule of Quantities and Prices. The amount provided shall be considered full compensation for all work required to complete the installation as shown on the Contract Drawings and as described in the Contract Documents.
		Add 1.4.3	Payment for Joint Sealants will be at the unit rate indicated, unless shown otherwise, in the Schedule of Quantities and Prices. The amount provided shall be considered full compensation for all work required to complete the installation as shown on the Contract Drawings and as described in the Contract Documents. Work includes, but is not limited to, all submittals, removal of existing joint sealants, cleaning and surface preparation, supply and installation of the joint sealants. Payment will include all equipment, labour, materials, waste disposal, and everything supplied and done in connection therewith.
2.0	PRODUCTS		
2.1	Materials	Add 2.1.1	Grout materials for joints shall be in accordance with Section 03 30 53S – Structural Cast-in-Place Concrete

JOINTS

	Add 2.1.2	Steel for joints shall be in accordance with Section 05 53 00S – Metal Fabrications.
	Add 2.1.3	Compression seals shall be as shown on the Contract Drawings and shall be installed in accordance with the manufacturer’s specification. The use of alternate equivalent compression seals requires acceptance by the Contract Administrator based on documentation provided by the Contractor.
	Add 2.1.4	Materials for joint sealant shall be as follows: <ol style="list-style-type: none">1. Vertical Joint Seams: Sealant shall be Sikaflex 1A or approved equivalent.2. Horizontal Joint Seams: Sealant shall be Wabo Silicone Seal or approved equivalent.
	Add 2.1.5	All certified material test reports for the joints shall be submitted to, and accepted by, the Contract Administrator prior to installation.
3.0	EXECUTION	
3.1	Site Conditions	
	Add 3.1.1	Proceed with installation of pourable joint sealants only when: <ol style="list-style-type: none">1. Ambient and substrate temperature conditions are within limits permitted by joint sealant manufacturer or are above 4.4 degrees C.2. Joint substrates are dry.3. Conform to manufacturer's recommended temperatures, relative humidity, and substrate moisture content for application and curing of sealants including special conditions governing use
	Add 3.1.2	Proceed with installation of joints only where joint widths are more than those allowed by joint manufacturer for applications indicated
3.2	Installation	
	Add 3.2.1	The Contractor shall form or excavate for each deck joint as shown in the Contract Drawings.
	Add 3.2.2	Each joint seal shall be supplied in a single length, without splices. Vulcanized locations for rubber seals shall be submitted to the Contractor Administrator for review prior to installation.
	Add 3.2.3	Following the removal of the existing seal, the surfaces of the concrete or steel to receive the new seal shall be cleaned of any residual that may be present by blast cleaning or other approved mechanical means. Ensure joint surfaces are dry and frost free. Following the cleaning, the joint should be blown free of debris using compressed air in accordance with the manufacturer’s instructions.
	Add 3.2.4	The seal shall be installed in accordance with the manufacturer’s recommendations, including requirements for lubricant adhesive.
	Add 3.2.5	After installation, deck joints shall be water tested by the Contractor in accordance with the Contract Drawings and to the approval of the Contract Administrator who shall be present for the tests. Contractor shall ensure joints are watertight. If joints are not watertight, joint seal shall be removed, reinstated, and retested.
	Add 3.2.6	<u>Flood Test</u>

JOINTS

Deck joints to be flooded by the Contractor will have the Contract Administrator present and be checked for leaks to ensure they are watertight. The requirements for flood testing the joints are as follows:

1. The air, concrete, and deck joint assembly temperature shall be 2 °C or higher at time of testing.
2. After the epoxy has set and prior to acceptance, the joint shall be water tested over its entire length when there are no upturns. When there are upturns, the joint shall be tested between the gutter lines.
3. The water shall be continuously ponded for a minimum of one hour, maintaining a minimum depth of 25 mm along the tested length and a minimum depth of 100 mm above the deck joint assembly at the gutter lines. For superelevated decks, only the lower gutter line requires the testing at a depth of 100 mm.
4. The width shall extend 50 mm beyond the concrete dams on both sides of the deck joint assembly.
5. When the staging of traffic is required, the joint shall be tested in overlapping sections. The Contract Administrator shall be present for the entirety of the test.

Leakage of water through the deck joint assembly during this test, including the interface between the preformed seal and the seal retainers, concrete to steel interfaces, and the concrete construction joints, shall constitute failure of the deck joint assembly.

If such failure occurs, the deck joint assembly shall be repaired or replaced and the water test repeated. The method of repair shall be submitted in writing to the Contract Administrator for review prior to commencement of repair work.

The water test and any related corrective work shall be completed prior to any seasonal shutdowns. When this is not feasible, a proposal detailing an alternative solution shall be submitted to the Contractor Administrator for approval.

Pour test

Sidewalk joints to be water tested by the Contractor will have the Contract Administrator present and be checked for leaks to ensure they are watertight. The requirements for water testing the joints are as follows:

1. Contractor shall pour water over each completed joint and note any water leaks below the joint.
2. A minimum of 5 litres of water shall be used in joint testing.
3. Water shall be poured over the entire length of the joint.
4. A passing test will only be given if no water is observed passing through the joint from the underside of the bridge. If water ingress is observed, the contractor shall reset the joint seal.

3.3 Surface Preparation

Add 3.3.1

Examine joint sizes and conditions to establish correct depth to width relationship for installation of backup materials and sealants.

Add 3.3.3

Do not apply sealants to joint surfaces treated with sealer, curing compound, water repellent, or other coatings unless tests have been

JOINTS

			performed to ensure compatibility of materials. Remove coatings as required.
3.4	Priming	Add 3.4.1	Where necessary to prevent staining, mask adjacent surfaces prior to priming and caulking.
		Add 3.4.2	Prime sides of joints in accordance with joint manufacturer's instructions immediately prior to installation.
		Add 3.4.1	Apply bond breaker tape where required to manufacturer's instructions.
			Install joint filler to achieve correct joint depth and shape, with approximately 30% compression.
3.5	Application	Add 3.5.1	Sealant: <ol style="list-style-type: none">1. Apply sealant in continuous beads.2. Apply sealant using gun with proper size nozzle.3. Use sufficient pressure to fill voids and joints solid.4. Form surface of sealant with full bead, smooth, free from ridges, wrinkles, sags, air pockets, embedded impurities.5. Tool exposed surfaces before skinning begins to give slightly concave shape.6. Remove excess compound promptly as work progresses and upon completion
		Add 3.5.2	Curing <ol style="list-style-type: none">1. Cure sealants in accordance with sealant manufacturer's instructions.2. Do not cover up sealants until proper curing has taken place.
3.6	Protection	Add 3.6.1	Protect installed products and components from damage during construction.
		Add 3.6.2	Repair damage to adjacent materials caused by joint sealant installation.

END OF SECTION

ROADWAY LIGHTING

1.0 GENERAL

Shop Drawings Delete 1.3.4 and replace with the following Shop drawings for pole structures, where required, to be sealed by a Professional Engineer registered in British Columbia.

1.4 Electrical Energy Supply Add 1.4.4 The Electrical Contractor shall process a letter of application to the City of Coquitlam for the Utility Company and attain all required permits.

1.5 Contractor Qualifications Add 1.5.3 All on-site traffic signal installations shall be under the responsibility of a primary journeyman electrician with IMSA Level 1 Roadway Lighting Certification and have a minimum of three (3) years experience maintaining and installing street lighting systems. This primary journeyman electrician is expected to be on the work site and report work progress to City of Coquitlam's Traffic Operations staff, in addition to reporting to the Contract Administrator.

1.6 Permits and Tests Add 1.6.4 Contractor shall provide the BC Safety Electrical Permit and arrange all inspections with the City. The inspection entails, but not limited to, Coquitlam's Street Lighting Inspection Report, which can be obtained from Coquitlam's Traffic Operations staff.

Add 1.6.5 Contractor to obtain approval of all buried portions of the installation from the City Inspector before any backfill is commenced.

1.8 Record Drawings Add 1.8.2 Final payment(s) will be withheld until record drawings are received.

1.9 Measurement and Payment Add to 1.9.1 Lump sum payment for roadway and pedestrian lighting includes supply and installation of all labor, equipment and materials required to complete the installation as specified in the contract and/or shown on Contract Drawings.

2.0 PRODUCTS

2.1 General Delete 2.1.2 and replace with the following All products supplied to be new, in accordance with Contract Documents. All products are to meet Canadian Electrical Code requirements and be certified by either CSA, UL®, or Intertek Testing Systems (Warnock Hersey) and be supplied with the certifier's label.

Delete 2.1.3 and replace with the following All products shall be in accordance with the City of Coquitlam's List of Approved Materials and Products List. Any products not listed within the Approved List shall default to the current BCMOTI specification.

Delete 2.1.5 and replace with the following Equipment models listed within the City of Coquitlam's List of Approved Materials and Products shall be confirmed with the City immediately prior to their order to ensure that they are current. Cut-sheets, equipment make, model and serial number list to be provided to the City by the Contractor.

2.2 Conduit Add 2.2.1.3 All exposed metallic surfaces to be hot dip galvanized.

2.3 Trench marker Tape Add 2.3.2 Detectable (Magnetic) marker tape shall be used in all trenches containing interconnection (communications) conduit.

2.6 Concrete Bases Add 2.6.2 Maximum of four (4) conduits shall enter the base of a luminaire pole, however more than four (4) may enter a service base.

ROADWAY LIGHTING

2.8	Conductors and Cables	Add 2.8.5	<p>1. Minimum conductor size to be as follows, unless specified otherwise on <i>Contract Drawing</i>:</p> <p>.1 No 6 AWG for feeder conductors in conduit.</p> <p>.2 No 8 AWG for bond conductors in conduit.</p> <p>.3 No 12 AWG for luminaire conductors in poles.</p>
2.9	Conductor Tags	Delete 2.9 and replace with the following	Refer to the City of Coquitlam's List of Approved Materials and Products.
2.11	Fuses and Fuse Holders	Delete 2.11 and replace with the following	Refer to the City of Coquitlam's List of Approved Materials and Products.
2.13	Receptacles	Add 2.13.3	Receptacles shall have a spring loaded cast aluminum covers.
		Add 2.13.4	Refer to the City of Coquitlam's List of Approved Materials and Products.
	Luminaires	Add 2.14.6	Refer to the City of Coquitlam's List of Approved Materials and Products.
	Service Panels	Add 2.19.1	Type 40A 120/240V, 60A 120/240V roadway lighting and 100A 120/240V combination roadway lighting / traffic signal, per Contract Drawing to include items listed within the 2009 MMCD Section 34 41 13 - Traffic Signals - 2.11.2
		Add 2.19.2	Refer to the City of Coquitlam's List of Approved Materials and Products.
2.20	Wire Anti-Theft Devices	Add 2.20.1	Handhole access shall utilize security covers with reinforced backing bars.
3.0	EXECUTION		
3.1	General	Add 3.1.5	During the installation of the lighting system, maintain the existing system as noted on the Contract Drawing. If temporary or permanent relocations of related lighting equipment are required, such equipment shall be reinstated as required under the Contract Documents or as directed by the Contract Administrator.
3.3	Concrete Bases	Add 3.3.7	Concrete service bases detailed on Standard Detail Drawings CE1.3 and CE1.4, Type C1 and C3 service bases shall have five (5) conduits. See Coquitlam Standard Detail Drawing SS-E7.3.
		Add 3.3.8	All concrete bases shall be pre-cast concrete only, unless noted on Contract Drawing or directed by the Contract Administrator.
3.4	Junction Boxes and Vaults	Delete 3.4.1 and replace with the following	Install junction boxes as shown on Standard Detail Drawings E2.2 to E2.4. Install vaults as shown on Coquitlam Standard Detail Drawing SS-E2.5.
		Add 3.4.5	Bell end fittings shall be installed in all conduits entering junction boxes or vaults.
		Add 3.4.6	All junction boxes shall be provided with RPVC bars to support electrical connections and fuse holders. The RPVC bars shall be attached into the junction box side walls with the electrical connections/fuse holders tie-wrapped in place and installed in the up-right position.
		Add 3.4.7	Junction boxes requiring 3 or more sections must be approved by the City of Coquitlam's Traffic Operations staff.

ROADWAY LIGHTING

3.5	Underground Conduit	Delete 3.5.2 and replace with the following	Minimum cover over conduits to be 600 mm in boulevard areas and 900 mm in roadway areas.
		Delete 3.5.3 and replace with the following	Place trench marker tape 300 mm above installed conduit in trench. Trench marker tape not required for conduits installed via trenchless technology.
		Delete 3.5.5 and replace with the following	Empty conduits shall have a No. 8 HB Yellow/Green Mk pull string and capped at both ends.
		Add 3.5.6	Conduit run shall contain no more than the equivalent of 4 – 90-degree bends.
		Add 3.5.7	Conduits shall be blown out with compressed air, from both ends if necessary, then swabbed out to remove stones, dirt, water and other material which may have entered during installation.
		Add 3.5.8	All conduits entering poles and cabinets shall be sealed with “Duct Seal”.
		Add 3.5.9	Conduit depth of bury to be recorded when a trenchless technology method is used.
		Add 3.5.10	Conduit shall not be bent in the field. Only factory bends will be accepted.
3.7	Electrical	Delete 3.7.2 and replace with the following	Mount electrical service panels in service base or on poles as shown on Standard Detail Drawings E7.2, E7.6 to E7.9, as well as Coquitlam Standard Detail Drawings SS-E7.3 to SS-E7.5.
3.8	Wiring	Delete 3.8.3 and replace with the following	Make conductor splices in handholes. See Standard Detail Drawing E7.11 for splice details.
		Delete 3.8.6 and replace with the following	Wire each luminaire and receptacle separately from the base of pole.
		Delete 3.8.7 and replace with the following	Neatly arrange and bundle wiring in junction boxes, pole handholes and service panels. Conductor connections in all access points to be installed in the up-right position, allowing for easy access
		Delete 3.8.11 and replace with the following	Bond all luminaires and receptacles with No. 12 RW90 green conductor, and steel junction box lids with No. 8 RW90 green conductor.
3.9	Pole Mounted Receptacle	Delete 3.9.1 and replace with the following	Pole mounted receptacles to be installed as detailed on the Contract Drawing and Coquitlam Standard Detail Drawings SS-E7.19 to SS-E7.23.
3.10	Luminaires and Photocells	Add 3.10.4	NEMA wattage label shall be visible at the bottom of the luminaire on all fixtures.

ROADWAY LIGHTING

- 3.11 Grounding & Bonding**
- Add 3.11.5 Ground plates and grounding conductors are to have a minimum of 5 meters clearance between them and other utility grounding.
 - Add 3.11.6 Remove all paint around bonding studs on inside of pole to expose the galvanized or metal surface prior to bonding equipment.
- 3.13 Pole Finish Application**
- Delete 3.13 and replace with the following
- .1 Prior to producing a powder finish product, the supplier must provide a Certificate of Compliance indicating that they have met or exceeded the following specifications. The supplier will name their independent testing agency and this information will be submitted to the City for their files.
 - .2 The application process will be as follows:
 - .1 The pole or product will be hot dip galvanized.
 - .2 Powder will only be applied after the product is completely fabricated. No welding or bending will take place after the powder is applied.
 - .3 The pole or product will be thoroughly cleaned by brush blasting in accordance with SSPC-SP7. The brush blast will maintain a minimum profile of 0.5 mils. If brush blasting is done off site then the product will be covered and shielded from any dirt or moisture during its return to the powder applicators facility. Where poles or products are not kept clean and dry or have any signs of flash rust they will be returned for further brush blasting.
 - .4 Once at the applicators facility the pole or product will be thoroughly cleaned and dried with an air gun. All hand marks or grease spots will be cleaned with a mild solvent.
 - .5 After brush blasting the entire pole or product will be pre-baked in an oven at 220 degrees C for at least 30 minutes to 1 hour, depending on steel thickness. The pre-baking must be done to prevent out-gassing during the curing cycle.
 - .6 The base powder coat will then be applied electrostatically while the pole or product is cooling from the 220 degrees C pre-bake period to allow the powder to melt and fuse to the surface. The base coat will be a minimum of 3 mils in thickness.
 - .7 After base coat is applied and set the topcoat will be applied to a thickness of 3 to 5 mils. The pole or product will be returned to the oven and heated to 190 to 220 degrees C (temperature will not exceed pre-bake) for a minimum of 25 minutes, depending on steel thickness. Thicker product material may require longer bake cycles to fully cure. Upon removal of the pole or product from the oven it will be left to rest until the pole or product is cool enough to the touch.
 - .8 Once the topcoat has cured and the poles or product cooled, they will then be individually wrapped (min 4" overlapping method) with 1/8" foam wrap over the entire pole or product. The poles or product will be bundled together and separated with suitable wood dunnage to avoid contact between the poles, product or other bundles. All bundles themselves will be fully wrapped with foam and with stretch-wrap as noted above. The poles or products will be handled and shipped with great care to prevent damage; damaged product will be cause for rejection of the item(s).
 - .3 Testing process will be as follows:
 - .1 Each run of product in an oven will have at least one sample tested for:
 - .2 Adhesion – The finished powder surface will have minimum pull-off strength exceeding 1000 PSI as tested in accordance with ASTM D4541.

- .3 Quality – The finished powder surface will be free from any holidays (skips or misses) as tested in accordance with ASTM D4541. The product will also be free from wrinkles, orange peel, cracking, pinholes, fish eyes, blisters, etc by visual inspection.
 - .4 Color – The color will be verified to be within 3 DE of specialized color.
 - .5 An independent firm such as CanSpec Testing who are qualified to test powder finish will do the testing at the supplier's expense. The result of tests must accompany the Certificate of Compliance and will be made available to the City or their representative upon request. A supplier who fails to test product as noted above will have their product rejected until the testing is completed and the product deemed acceptable by the testing agency.
 - .6 Where the tested product fails on a given production run then a minimum of 30 % of the entire production run will be tested. If no other failures are found then the individual failed product will be stripped, reapplied and re-tested until it passes. If any of the 30% of product tested fails then the entire order will be stripped, reapplied and retested until it passes.
- .4 Field repairs will be undertaken as required to fix any scratches or imperfections in the final finish. Field repairs will be done as follows:
- .1 Feather the damaged area with sandpaper.
 - .2 Clean area with solvent.
 - .3 Let dry.
 - .4 Neatly brush on an application of Aliphatic Urethane Acrylic Semi-Gloss High Build applied at 2-4 mils DFT over the entire sanded and damaged area. The ambient conditions will be dry and over 10 degrees C when the paint is applied.
 - .5 The pole supplier will warranty the integrity of the surface for a minimum of 1 year from the date of installation. The warranty will include all labour and materials required to provide replacement product if required. The powder finish will be the responsibility of the pole supplier. The warranty will apply to fading, blistering, cracking or chipping of the surface.

END OF SECTION

CLEARING AND GRUBBING

**1.4 Measurement and
Payment**

Delete 1.4.1
and replace
with the
following

Payment for all work performed under this section, unless listed in the Schedule of Quantities and Prices, will be incidental to payment for Work described in other Sections.

Clearing and grubbing includes removal and disposal of all branches, stumps, trees, debris, hedges, timbers, logs and vegetation to complete the work and as shown on the Contract Drawings or as directed by the Contract Administrator. Works include cutting branches affected by Work to create the necessary clearance to accommodate the construction and intended function of the Work, and as shown on Contract Drawing.

Payment includes trimming of small branches from trees or hedges as required to provide minimum 2.5m vertical and 0.5m horizontal clearance from edge of new road or rail. Branch cutting/pruning to have a clean-cut flush to branch collar and use of an approved tree paint to repair damage to surviving vegetation where branches have been removed.

END OF SECTION

STORM SEWERS

1.0 GENERAL

1.6 Measurement and Payment Delete 1.6.1 and replace with the following Payment for Storm Sewer Drainpipes will be at the lump sum amount indicated, unless shown otherwise, in the Schedule of Quantities and Prices. The amount provided shall be considered full compensation for all work required to complete installation as shown on the Contract Drawings.

2.0 PRODUCTS

2.2 PVC Pipe, Mainline Smooth Wall Delete 2.2.1 and replace with the following 200 mm dia. – 375 mm dia. to ASTM D3034
450 mm dia. – 1,200 mm dia. to ASTM F679

2.3 PVC Pipe, Mainline Profile Delete 2.3

2.6 Service Connections Delete 2.6.1 and replace with the following Storm service connections to be PVC DR 28 152 mm diameter minimum or as specified on Contract Drawings.

Delete 2.6.8.1

Delete 2.6.8.2 and replace with the following Connections to PVC pipe to be made with a performed wye fitting where mainline pipe is 300 mm diameter or smaller. For connections to PVC mainline pipes larger than 300 mm diameter an insertable tee for PVC pipe is permitted.

Add 2.6.8.3 Insertable tee fitting shall have a rubber collar which inserts into the mainline pipe to form a tight seal and shall have stainless steel band to secure the tee insert. The tee insert shall be a standard bell end with depth control lugs. The joint shall provide a minimum seal of 90 kPa on concrete and polyethylene pipe, and 190 kPa on PVC pipe.

2.9 Granular Pipe Bedding and Surround Material Delete 2.9.3 Pipe bedding shall be 19 mm clear crushed rock or as approved by the Contract Administrator and the City.

3.0 EXECUTION

3.8 Connections to Existing Mainline Pipe Delete 3.8.3 and replace with the following New connections to existing, smooth wall or profile, mainline sewers 300 mm and smaller, shall be made by removal of the section of the main and replacement with a preformed PVC wye fitting complete with stubs and double hub PVC couplings for PVC mains and approved shear band couplings for other mainline materials. For new connections to existing mainlines greater than 300 mm, use of insertable tee is permitted.

3.10 Service Connection Installation Delete 3.10.3 and replace with the following Inspection chambers shall be provided on all storm service connections as per Standard Detail Drawing S7. If inspection chamber is located in driveway, lane, or paved surface, Series 37 Brooks concrete box with lid shall be installed as per Standard Detail Drawing S9.

3.12 Inspection and Testing The contractor shall video inspect completed storm sewers under 900 mm in diameter and all service connections following completion of the installation. The video inspection report shall be in a form specified by the Contract Administrator and the City. Copies of the video DVD and written report shall be forwarded to the Contract Administrator and the City. Refer to Section 33 01 30.1 and 33 01 30.1S CCTV Inspection of Pipelines.

STORM SEWERS

**3.16 Permanent Capping of
Service Connections**

Add 3.16.1

Permanent capping of existing storm sewer connections to be completed as per Coquitlam Standard Detail Drawing COQ-S18.

Add 3.16.2

A trenchless method of permanently capping a service may be required on an arterial road or on a road which has been paved within 5 years, as directed by the Manager. The trenchless technology used to cap the service must be approved by the Manager.

END OF SECTION

***Appendix A -
Traffic Management Detail
Specifications***

- 1.0 GENERAL**
- 1.1 Related Works .1 Traffic Control, Vehicle Access and Parking MMCD Section 01 55 00S.
- 1.2 References .1 WorkSafe BC, Occupational Health and Safety (OHS) Regulation, Section 18 – Traffic Control.
.2 B.C. Ministry of Transportation and Transit (MOTT) Traffic Management Manual for Work on Roadways.
- 1.3 Project Requirements .1 A Road and Sidewalk Closure Permit is required by Coquitlam for all work affecting traffic flow related to construction. A permit is required for each specific construction interference with traffic flow. The Road and Sidewalk Closure Permit Request form is attached as **Appendix 1** to this document. A digital copy of the Road and Sidewalk Closure Permit form can be obtained for use during the contract from the City’s website at

A Road and Sidewalk Closure Permit form application must be submitted to City’s Traffic Operation Division 10 working days prior to start of work.
- 1.4 Measurement and Payment .1 For this Contract, all work associated with Traffic Management Plan (TMP) and Traffic Control will be as shown in the Schedule of Quantities and Prices.
- 2.0 PRODUCTS**
- 2.1 Traffic Management Plan (TMP) .1 The Contractor is required to assign a Traffic Manager for the Contract with the responsibility of preparing the Traffic Management Plan and the Traffic Control Plans, as well as the responsibility for continuing implementation of traffic control for the Work.
.2 The Traffic Management Plan (TMP) will consist of the following components:
.1 Category identification through risks and project category assessment as per MOTI Traffic Management Manual for Work on Roadways;
.2 Traffic Control Plans for individual stages of the construction;
.3 Incident Management Plan for the response to an unplanned event and recording of incident information;
.4 Category 3 TMP must be signed and sealed by a qualified Professional Engineer.
.3 Submission of the TMP is to be made to the *Contract Administrator* within five (5) days of the *Notice of Award* of the *Contract*, and must be approved by the *Contract Administrator* prior to start of the *Work*.
.4 Review of the TMP will be performed by the Contract Administrator. Comments for revisions to the TMP will be returned to the *Traffic Manager* for implementations.

- .5 The Contractor shall comply with all the requirements of applicable laws, rules, regulations, codes and orders of the municipal and other appropriate authorities concerned with work on streets or highways and shall post proper notices and/or signals, and provide necessary barriers, guards, lights, flagmen or watchmen as may be necessary for proper maintenance of traffic and protection of persons and property from injury or damage. All costs involved in respect to the above requirements will be deemed to be included in the Contract Price.
 - .6 The Contractor, during the progress of the work, shall make adequate provision to accommodate the normal traffic along streets and highways immediately adjacent to or crossing the work so as to cause the minimum of inconvenience to the general public.
 - .7 The Contractor is required to maintain local traffic and driveway access during all stages of construction. This includes maintaining a 1.5m width walkway or pathway through the construction site for pedestrians.
 - .8 Where existing streets or roads are not available as detours, all traffic shall be permitted to pass through the work with as little inconvenience and delay as possible unless otherwise provided or authorized by the Contract Administrator. If half the street only is under improvement, the other half shall be conditioned and maintained as detour.
- 2.2 Incident Management and Reporting
- .1 The Contractor shall facilitate incident response vehicles and staff and move traffic safely and expeditiously through or around an incident on site and provide assistance to emergency response personnel as required. An incident includes, but is not limited to, motor vehicle accidents, emergency road repairs, disabled vehicles, and debris on the road. The immediate response to an emergency shall by necessity make use of available devices and equipment.
 - .2 If an incident occurs on site, the Contractor will be required to submit a report to the Contract Administrator documenting details of the incident including event, location, date, time, action taken, duration and restoration of site.
- 2.3 Traffic Control Plans
- .1 The Contractor shall designate a qualified Traffic Control Supervisor for the works, per the requirements of WCB regulations Section 18.

The designated Traffic Control Supervisor may be the same individual that is designated as the Traffic Manager, or may be a separate individual qualified for the responsibilities of this function.
 - .2 The Contractor shall prepare weekly the anticipated traffic control activities, locations, and durations for the upcoming week.
 - .3 Permissible delays shall only be considered outside Peak Hours. Permissible delays are categorized as follows:
 - a) Minor Delays - Less than two (2) minutes in duration; for occasional interruption due to construction activities. These delays shall be coordinated with available breaks in the traffic flow.

b) Major Delays - Maximum five (5) minutes in duration; for occasional interruption of traffic for construction activities if traffic volumes permit.

.4 The Contractor is responsible for ensuring that the flow of traffic is unimpeded by construction-related activities.

3.0 EXECUTION

3.1 Traffic Control Plan

.1 A copy of the approved current Traffic Plan and Road and Sidewalk Closure Permit must be held on site by both the Site Superintendent as well as the person/company responsible for the traffic control implementation.

.2 Failure to produce a valid approved Traffic Plan on site, or having work not follow the Traffic Control Plan will result in immediate shut-down of the work. The Contractor will be required to safely restore facility conditions to allow traffic flow at their expense. The Contractor must take all steps to acquire an approved Traffic control Plan before work can re-start on site. No claim will be accepted by the Owner for costs associated with this work shut-down.

3.2 Traffic Control Personnel & Equipment

.1 The Contractor shall supply all necessary traffic control devices required to perform traffic control services for the project. Signs and traffic control devices not applying to existing conditions shall be removed. Where operations are carried out in stages, only those traffic control devices that apply to the current stage are to be left in place.

.2 There must be sufficient Traffic Control Persons (TCPs) on site to appropriately and safely direct traffic in all sections of the Work.

3.3 Signage

Supply, installation, maintenance and removal of all works-related signs shall be the responsibility of the Contractor. The location and type of each sign shall be indicated on the approved Traffic Control Plan, for each stage of the works.

Traffic control signs and devices must be positioned and used as specified in the Traffic Control Plan and signs and devices must be located so as to allow traffic to move by or through the work area in a controlled manner and, if necessary, to come to a controlled stop with due regard for the prevailing weather and road conditions.

Signs shall be checked daily for legibility, damage, suitability and location. Signs and delineators shall be cleaned as frequently as necessary to ensure full legibility and reflectance.

3.4 Detours

Any proposed detours must be approved by the Contract Administrator and conducted in accordance with the approved Traffic Plan and the Traffic Control Manual for Work on Roadways.

3.5	Abrupt Changes in Surface Elevations	<p>The Contractor shall minimize any abrupt changes in roadway elevation left exposed to traffic during both working and non-working hours.</p> <p>A wedge of asphalt must be used as a transition to vertical differences in travelled areas and have a slope of 4:1 or less.</p>
3.6	Cyclist and Pedestrian Access	<p>The Contractor shall make provision for pedestrians, wheel chairs and bicycles to have safe access across the work zone at all times. If this cannot be readily accommodated then acceptable detours and appropriate signs shall be provided.</p>
3.7	Temporary Pavement Markings	<p>The Contractor shall be responsible for the application and removal of all temporary pavement markings and reflective devices.</p> <p>All temporary markings must be removed after installation of permanent markings.</p>
4.0	TRAFFIC RESTRICTIONS	
4.1	Road and Sidewalk Closure Permits	<p>.1 A Road and Sidewalk Closure Permit is required for each instance of closure and will be valid for a maximum period of one (1) week and, if still necessary, re-submittal of a Road and Sidewalk Closure Request is required. The permit fee is waived on this project.</p> <p>A copy of the approved Road and Sidewalk Closure Permit must be held on site by both the Site Superintendent and the person/company responsible for the traffic control implementation.</p> <p>.2 Contractor to refer to Clause 5.2 Road Specific Considerations below.</p> <p>.3 Detours will only be permitted as approved by the Contract Administrator and must have a complete Traffic Control Plan indicating detour route, signing, and duration. Detours will not be allowed without sufficient lead time for commercial and retail operation to react appropriately to detour information provided to them.</p>
4.2	Lane Closure Restrictions	<p>.1 For each of the road sections affected:</p> <ul style="list-style-type: none">• Road and Sidewalk Closures will be reviewed for appropriateness during the allowable hours of work.• Minimum single lane traffic is required at all times unless otherwise described in this document.• Access to properties to be maintained• Sufficient Traffic Control Persons are required for each Road and Sidewalk Closure (or any work activities), <u>including side street intersections</u>, to safely guide traffic through the work site.
4.3	Hours of Work	<p>.1 Refer to Clause 5.2</p> <p>.2 Some allowances may be made for paving operations, depending on a proposal acceptable to the Contract Administrator.</p>
4.4	LIQUIDATED DAMAGES FOR NON-COMPLIANCE TO TIME OF DAY RESTRICTIONS	<p>All lanes of traffic must be opened to traffic on or before the designated restricted hours and schedule. An amount of \$1,500.00 per 15-minute delay beyond the restricted hours and schedule specified in Clause 5.2, unless otherwise approved in writing by the Contract Administrator, shall be deducted by the Owner from any monies owing to the Contractor for the work.</p>

These supplementary Specifications must be read in conjunction with the Master Municipal Specifications contained in the Master Municipal Construction Documents (Platinum), Volume II, 2009.

5.0 CONSTRUCTION OPERATIONS

5.1 Truck Routes .1 The Contractor is restricted to the City’s designated Truck Routes. The current Truck Route Map is available on the City’s website at <https://www.coquitlam.ca/171/Trucks-Goods>.

5.2 Road Specific Considerations .1 Ensure that Traffic Management Plan accommodates businesses and residences during construction activities.

.2 Any work that requires closure of traffic lanes on Lougheed Hwy beneath the CPR Overpass will be restricted to the following hours to minimize public impacts. For work that can be completed above the deck and no traffic lanes are impacted, that scope shall be completed during the daytime and with coordination with CPR.

LOCATION	ALLOWABLE TIME (includes set-up and take down)	COMMENTS
Lougheed Highway	Monday to Saturday 10:00PM to 5:00AM	Minimum 1-lane traffic in each direction must be maintained. Any falsework or scaffolding cannot reduce the bridge height for traffic below the overpass. Sidewalks may be utilized only with traffic control maintaining pedestrian flows.

.3 Any work that can be completed above the deck and no traffic lanes are impacted, that scope must be completed during the normal weekday working hours of 7:00AM to 7:00PM.

The Contractor shall schedule the work to minimize the requirement for night time work that requires traffic lane closures.

5.3 Work stoppage due to traffic The City will not control or direct traffic control activities of the Contractor, but may require an immediate stop to any work where, in the sole opinion of the Contract Administrator, the provided traffic management plan is ineffective.

5.4 Construction Activity and Signage The Contractor will be responsible to place other construction information signs as required to inform the public of construction activities, and ensure safe travel through the work site.

5.5 Temporary Traffic Control Signal Contractor must provide a Continuously Operating Temporary Traffic Control Signal during non-working hours. Contractor must have the timing signal programmed to properly accommodate the vehicular traffic volume to be provided by the Contract Administrator.

5.6 Changeable Message Sign (CMS) Board The following locations will require Changeable Message Signs (CMS) for the duration of the project:

1. Northbound on Lougheed Hwy, north of Dewdney Trunk Rd
2. Southbound on Lougheed Hwy, south of Barnet Hwy
3. Southbound on Pinetree Way, south of Anson Ave

Exact locations to be discussed at the pre-construction meeting. These signs are required to be in service at least five **normal work days prior to construction start** to provide advance warning to motorists. CMS must be able to handle minimum of three lines per page/screen. CMS Boards are required only for duration of night work where traffic lanes are impacted.

5.7 Construction Zone Information Signs

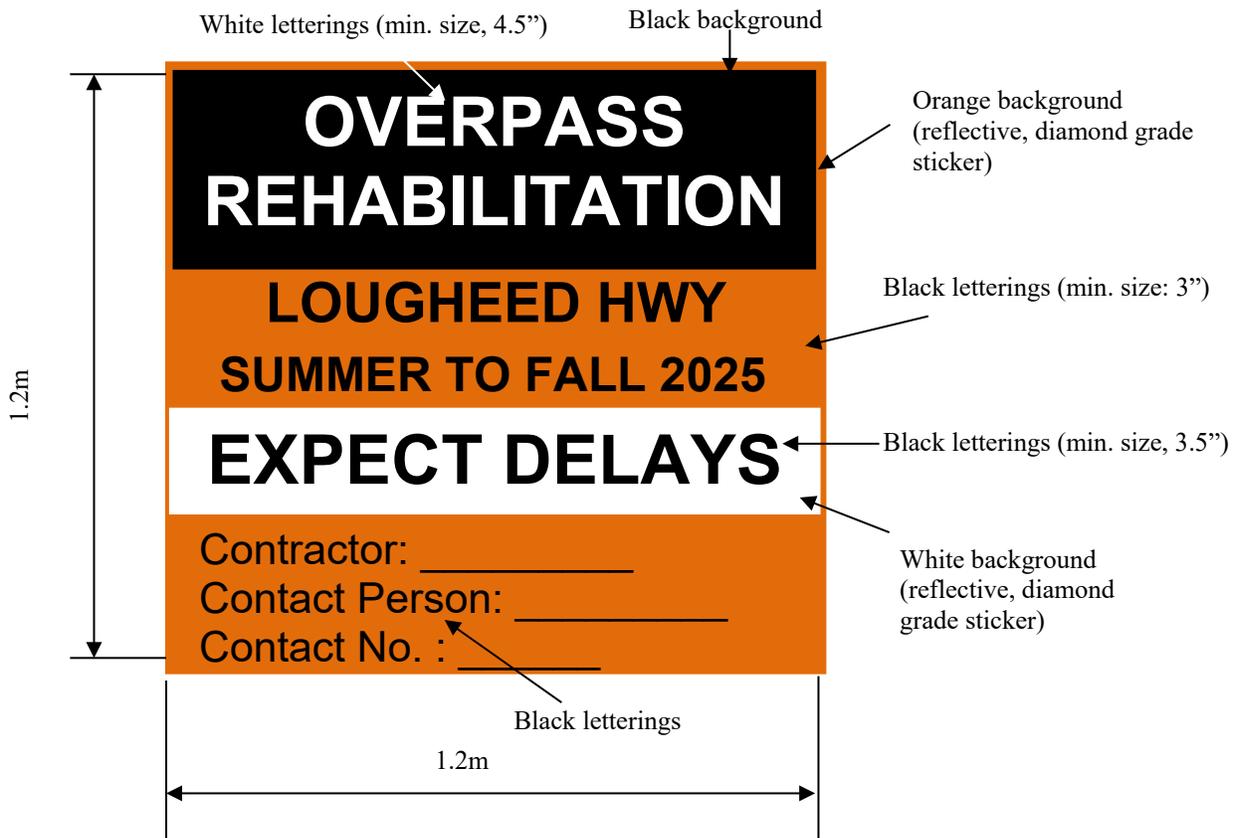
The Contractor is required to provide, one week prior to start of work, stationary signs to inform traffic of existing and anticipated conditions.

Ensure that signs and locations are addressed in the Traffic Management Plan. Signs are to be located at least 3m away from any travelled roadway edge and 0.6m away from sidewalk or travelled shoulder edge with minimum head clearance of 2m. All signs are to be removed at the end of the construction period on each location.

Exact locations to be determined on site by Contract Administrator.

- Southbound, Northwest corner of Pinetree Way and Barnet Hwy
- Northbound, Northeast corner of Lougheed Hwy and Dewdney Trunk Rd
- Eastbound, Southwest corner of Pinetree Way and Barnet Hwy
- Westbound, Northwest corner of Lougheed Hwy and Ponderosa St

Construction Zone Information Signs to follow specifications below. Draft must be submitted to Contract Administrator prior to sending to production:



APPENDIX 1



City of Coquitlam
Road and Sidewalk
Closure Permit Request

Traffic and Street Use Management Section

3000 Guildford Way, Coquitlam BC V3B 7N2

Phone: [604-927-6250](tel:604-927-6250) Email: StreetPermits@coquitlam.ca

~~Initial Permit: \$150~~ ~~Renewal Permit: \$75~~

Application Date: _____ City Project or Film Permit Number (if applicable): **78035**

- An Initial Permit is required for all new applications and when the location, type of work, or the type of traffic controls change from what was approved for the Initial Permit. The application needs to be received a minimum of 10 business days prior to the intended closure date.
- A Renewal Permit extends the rights and privileges of the approved Initial Permit and is required when the timeline needs to be extended. The application must be received a minimum of 5 business days prior to the intended extension date.

Development Site Address (if applicable): _____

Work location (street name, block number, to/from, at, etc.) _____

Contact Information

Applicant Company Name: _____

Applicant (person completing application form)

Name: _____ Title: _____

Phone: _____ Email: _____

Applicant's Signature: _____

Company Name (Prime Contractor): _____

Site Superintendent

Name: _____ Title: _____

Phone: _____ Mobile: _____ Email: _____

Permit Information

Start Date: _____ End Date: _____

Day(s) and Time(s): Monday Tuesday Wednesday Thursday Friday From: 00:00 To: 00:00
 Saturday From: 00:00 To: 00:00 Sunday From: 00:00 To: 00:00

Specific Lanes: Curb Inside/Centre Lane Left Turn Lane Right Turn Lane Parking Lane
 All Lanes Sidewalk/MUP Bicycle Lane

Direction: Northbound Southbound Westbound Eastbound

Purpose of Work: Concrete Pour Utility Installation Curb Installation Other _____

This permit is related to: City Design and Construction City Parks External Environmental
 Development External/Utilities

City Contact (if applicable): _____

Office Use Only

Permit Conditions/Comments:

Approved by

Date

Application Checklist



The following information must be provided. Incomplete applications will not be reviewed.

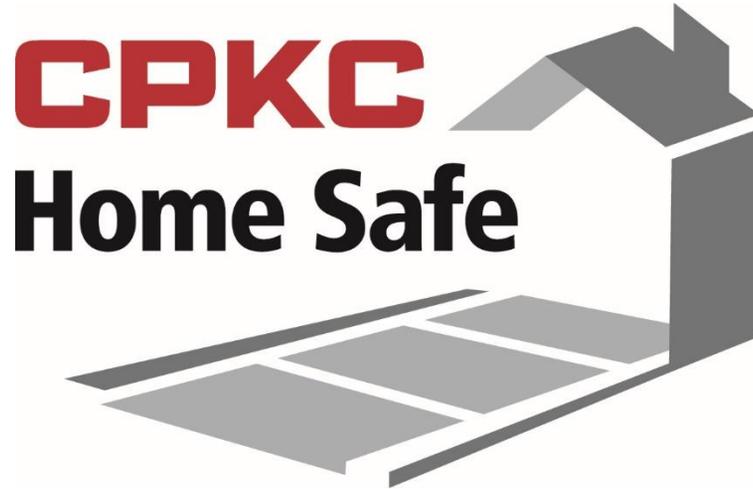
1. Traffic Management Plan (TMP); **OR**
 Traffic Management Manual for Work on Roadways Figure Number: _____
2. **Project Category Determination** (per [2020 Traffic Manual for Work on Roadways](#)).
 Initial Project Category Assessment
 Project Risk Analysis
 Category 1 Category 2 Category 3
3. **Prime Contractor Designation Letter**
4. **City of Coquitlam Certificate of Insurance**
5. **Notification Letter and Map** (required for all full road closures). A Notification Letter must be provided to all affected residents and businesses.
 Yes No Not Applicable
6. **Traffic Control Persons** (flag persons) **required?** All operations within the road right-of-way must comply with WorkSafe BC regulations and BC Ministry of Transportation standards for work on roadways.
 Yes No If yes, how many? _____
7. **Bus routes/stops impacted?** Applicant is to contact Coast Mountain Bus Company (with a minimum of 3 days' notice) [Temporary Transit Changes Request Form](#). General information can be found by visiting [Temporary Transit Changes](#).
8. **City of Coquitlam Solid Waste has been contacted?** Coquitlam Environmental Services contacted regarding impact to garbage/recycling routes and pick up Phone: [604-927-4300](tel:604-927-4300) Email: wastereduction@coquitlam.ca
 Yes No
Are operations impacted? Yes No
If Yes:
 - a plan to ensure continuous collection has been provided: Yes No
 - Day(s) of the week impacted: _____
 - Time(s) of the day impacted: a.m. p.m.
9. **Pedestrian / Bike Lanes impacted?** Please describe sidewalks and/or bicycle facilities that will be impacted by the proposed work.

10. **Is the work on, or will it impact a road along our [Major Road Network](#)?**
 Yes No

Additional information

- Only vehicles actively engaged in the performance of cleaning, clearing, maintenance, repair, construction or other work are permitted within work zones. Vehicles being used by Superintendents, Traffic Control Persons, and other construction personnel that are not actively engaged in work described above are not permitted within the work zone and are not permitted parking /stopping prohibitions.
- Closures of sidewalks, cycling facilities, lanes, and full road closures are only permitted during the time periods indicated on the approved permit. Traffic controls are not permitted outside of these approved permit hours.

***Appendix B -
CPKC Safety Requirements***



Minimum Safety Requirements for Contractors Working on CPKC Property - Canada

Approval Authority:	Safety Management Systems	Effective Date:	Nov. 8, 2023
Version:	4.0	Next Review Date:	Nov. 8, 2026

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Minimum Safety Requirements for Contractors Working on CPKC Property - Canada

1.0 Introduction

At CPKC, safety is an integral part of the way we do business. We expect everyone working for CPKC to be unconditionally committed to safety. Safety must be given top priority and will take precedence over deadlines, production schedules, and all other considerations.

2.0 Application

- 2.1 These Minimum Safety Requirements are applicable to all who work on CPKC property (except as noted in 2.3 and 2.4 below) including contractors and other persons performing work or otherwise providing services to CPKC on its property in the Canada.
- 2.2 These Minimum Safety Requirements cannot be waived or altered, in whole or in part, without a prior risk Assessment specific to the work being conducted, and written consent has been provided by the Manager-in-Charge.
- 2.3 Notwithstanding the foregoing, these Minimum Safety Requirements do not apply to other railroad companies who only operate trains on CPKC property under various trackage or interchange agreements.
- 2.4 Further notwithstanding the foregoing, these Minimum Safety Requirements may not apply to work or services provided in CPKC office premises.

3.0 Definitions and Interpretation

3.1 Definitions

- 3.1.1 In these Minimum Safety Requirements, the following capitalized terms shall have the ascribed meaning below:

Applicable Legislation - means all applicable legislation, regulations, by-laws, codes, rules, standards, policies, procedures, promulgated by any federal, provincial, and municipal governmental body, including those of its agencies, having authority over CPKC and, or a contractor in relation to the work in the matter of health and safety of the person, property and, or the environment.

Canadian Pacific Kansas City or CPKC - means Canadian Pacific Kansas City Limited, and its subsidiaries and affiliates, and includes each of their respective directors, officers, employees, agent, and representatives.

CPKC Personnel - means CPKC's employees, agents, and representatives.

CPKC Property - means any building, facility, yard, track, right of way or other property owned or controlled by CPKC.

Contractor - means the company or person, and their respective employees and authorized agents, representative and subcontractors who are providing goods or services to CPKC; or on behalf of a third party working on CPKC property.

Contractor Personnel - means the contractor's employees, and authorized agents, representative and subcontractors.

"Co-mingled Work" - means Work where contractor personnel works directly with or, in close proximity (time or space) to CPKC personnel;

Efficiency Test (eTest) – means a planned procedure to evaluate compliance with rules, instructions, and procedures, with or without the employee's knowledge.

Minimum Safety Requirements for Contractors Working on CPKC Property in Canada

Foul of Track- means the placement of an individual or equipment within 4 feet (1.2 m) of the outside rail of a railway track that could be struck by a moving train or on-track work equipment (e.g., hi-rail equipment).

Hazardous Materials- means any substance, which is hazardous to persons or property and includes, without limiting the generality of the foregoing:

- i) radioactive, explosive, poisonous, or toxic substances.
- ii) any substance that if added to any water, would degrade, or alter the quality of the water to the extent that it is detrimental to its use by man or by any animal, or plant.
- iii) any solid, liquid, gas or odor or combination of any of them that, if emitted into the air, would create, or contribute to the creation of a condition of the air that endangers the health, safety, or welfare of persons, or the health of animal life, or causes damage to plant life or to property, or
- iv) substances declared to be hazardous, toxic, or dangerous under any law or regulation now or hereafter enacted by any governmental authority having jurisdiction.

Manager-in-Charge- means a CPKC manager as designated or otherwise identified by CPKC as being responsible for overseeing the work to be performed, such Manager-in-Charge may include, but is not limited to local CPKC Management, Superintendents, Chief Engineers, and Project Managers, etc.

Mobile Equipment- means any motorized and self-propelled equipment, excluding railroad equipment and highway vehicles, but including, for example, forklifts, tractors, cranes, ATVs, mules, motorized scissor lifts, telescopic boom lifts, and similar equipment that are not designed to operate or move on railroad tracks.

Office Premises- means any building, facility, or portion thereof, or other premises, whether owned or controlled by CPKC, which is used solely for clerical or administrative purposes, and which does not contain heavy equipment or machinery, as designated by CPKC from time to time.

Qualified and Authorized- means a status attained by a person who has successfully completed any required training and demonstrated proficiency in the duties of a particular position or function and who has been given the right to act.

Railroad Equipment- means trains, locomotives, railcars, on track equipment (track units), hi-rail vehicles and any other equipment designed to operate or move on railroad tracks.

Site Safety Plan- means a documented plan which set out how work is to be conducted in a safe manner, as required by applicable legislation, see 6.1).

Third Party Project- means any work being performed on CPKC property that CPKC is not managing (i.e., road authority, utility company, commuter agency, or other similar entity, are on CPKC property for their own purposes, and not a project sponsored or managed by CPKC).

Work- means the provision of products and services and related activities.

Work Site- means any CPKC property where CPKC personnel or contractor personnel are present, or permitted to be present, while engaged in any Work, including any railroad equipment, mobile equipment and highway vehicles operated by or used to convey a person engaged in such Work. This applies also to work immediately adjacent to CPKC property which can pose a risk to safe railway operations (i.e., blasting, excavation next to right-of-way (ROW), etc.).

Minimum Safety Requirements for Contractors Working on CPKC Property in Canada

4.0 Interpretation and Application

- 4.1 Where legislation is referred to in these Minimum Safety Requirements, it shall include all amendments and replacements thereto as promulgated from time to time.
- 4.2 Where standards, such as those of the Canadian Standards Association (CSA), are referred to in these Minimum Safety Requirements, they shall include all amendments and replacements thereof from time to time.
- 4.3 Where there is any ambiguity, inconsistencies, or omissions between or among any agreements with CPKC, expressed or implied; any applicable legislations; any applicable CPKC policies and practices; and any applicable industrial standards and practices, contractor and contractor personnel shall adhere to that which is most stringent and current.

5.0 Contractor Compliance and Responsibilities

5.1 General Compliance

- 5.1.1 The contractor shall be fully and solely responsible for ensuring the health and safety of contractor personnel and for ensuring that its work and other activities do not compromise the health and safety of CPKC personnel or any other party, the protection of the environment, the protection of CPKC's property and those of any other party, and do not interfere with the safety of CPKC's railroad operations.
- 5.1.2 The contractor shall comply with and shall ensure all of contractor personnel are trained and qualified to safely perform the Work and that they comply with all Applicable Legislation pertaining to the protection against fire, safety, health, and environmental hazards, and with any license, permits, authorizations issued by the respective authority.
- 5.1.3 The contractor shall comply with and shall ensure all of contractor personnel comply with all terms and conditions of all agreements, expressed or implied, between contractor and CPKC, and all applicable CPKC policies and practices.
- 5.1.4 Subject to the requirements of CPKC's Access Control Procedures, the contractor shall provide CPKC eRailsafe training for each employee engaged in work on CPKC property.

Where there is no agreement between CPKC and the contractor, the contractor is responsible for meeting the additional requirements outlines within CPKC's Access Control Procedures.

- 5.1.5 The contractor shall provide contractor personnel, at its own expense, all safety equipment required to protect against injuries during the performance of the work and shall ensure that contractor personnel are knowledgeable of and utilize safe practices in performing the work.
- 5.1.6 The contractor shall always have a copy of the documents listed below at the work site, and shall produce them as and when requested by CPKC:
 - a) Minimum Safety Requirements for Contractors Working on CPKC Property in Canada.
 - b) Licenses, certifications, permits, training records or other documents required by applicable legislation or these minimum safety requirements.
 - c) Contractor's site safety plan.
 - d) Contractor's Emergency Information Sheet (see Attachment A) / Worksite Information Sheet (see Attachment B).
 - e) Any additional documents required by contract or by agreement with Manager-in-Charge.
 - f) Employee identification (eRailsafe badge or equivalent, see 11.1.1).

Minimum Safety Requirements for Contractors Working on CPKC Property in Canada

5.2 Compliance Assurance

- 5.2.1 CPKC reserves the right to observe, inspect, test and audit contractor and contractor personnel for compliance with all requirements herein, and to demand and receive all relevant records, documentation, and materials evidencing compliance, at any time, and from time to time.
- 5.2.2 Failure of the contractor or contractor personnel to comply with any applicable provisions herein may be considered a material breach, and in addition to all other remedies available, CPKC may without prejudice:
- a) take over control of that work or activity.
 - b) order the work to stop, and / or
 - c) order contractor personnel to leave CPKC Property.
- 5.2.3 Upon the earlier of the completion of the work, the expiration of the applicable agreement, or the request of a Manager-in-Charge, contractor and contractor personnel shall return all identification, badges, access cards, and decals, issued or provided by CPKC to the Manager-in-Charge.

6.0 Site Safety Plans

6.1 General Requirements

- 6.1.1 Prior to starting any work on CPKC Property, the contractor must have a written site safety plan that identifies:
- a) All applicable legislation, rules, policies, and work practices in relation to the work being performed.
 - b) Specific hazards that are associated with the work being performed on CPKC property for CPKC, and work being performed not for CPKC:
- For example:
- i) Construction, maintenance, or inspections of buildings.
 - ii) Working on or adjacent to railroad tracks.
 - iii) Maintenance or inspection of railroad tracks, crossings, or signal systems.
 - iv) Operating railroad equipment on CPKC tracks, or
 - v) When / where contractor personnel work directly with or in proximity (time or space) to CPKC personnel.
- c) Methods of verifying compliance.
- 6.1.2 The contractor will provide Manager-In-Charge with a copy of this site safety plan on reasonable request.
- 6.1.3 The contractor must be able to demonstrate an awareness of applicable legislation, rules, policies, and work practices in relation to the work being performed.

Minimum Safety Requirements for Contractors Working on CPKC Property in Canada

7.0 Safety Training

7.1 Minimum Training & Qualifications

- 7.1.1 At its sole cost and expense, contractor shall ensure that all contractor personnel be fully trained and qualified for the work they will be performing. Contractors and contractor personnel shall meet, or exceed, all applicable legislation requirements relating to training and qualification, including but not limited to provide training documentation to ISNetwork for filing / record keeping as per CPKC Access Control Policy / Procedure.
- 7.1.2 Additionally, contractor personnel training and qualification shall meet or exceed all applicable industry standards.

7.2 Proof of Training & Qualification

- 7.2.1 Contractor personnel shall always have proof of such training and qualifications and shall produce them as and when requested by the Manager-in-Charge.
- 7.2.2 CPKC reserves the right to inspect qualification certificates, licenses, training records and / or work history records for any contractor personnel, and, or to be provided with copies thereof, on reasonable request. In addition, CPKC reserves the right to perform eTests on contractor employees, and request discipline for non-conformance.

8.0 Safety Orientation

8.1 General Requirements

- 8.1.1 Prior to beginning work, all contractor personnel shall participate in a CPKC authorized safety orientation, including on-site orientation presented by the Manager-in-Charge or designate.
- 8.1.2 Any time the scope of work, location, condition or supervision changes, contractor personnel may be required to attend additional safety orientation sessions.
- 8.1.3 After successful completion of such safety orientation, contractors must be able to produce company identification or an eRailsafe photo identification badge authorizing access to CPKC property unescorted for the purposes of conducting work. Managers can enter the tracking code into Compliance Management (CM). Third parties who hire subcontractors must ensure required compliance while on CPKC property. An eRailsafe identification card shall be worn or be always made visible or produced upon request and cannot be transferred under any circumstances.

9.0 Job Safety Briefing

- 9.1.1 Contractor personnel shall attend all job safety briefings as and when conducted. Contractor personnel shall be solely and fully responsible for understanding the content of the job safety briefing, and at a minimum shall:
- a) understand the scope of work to be performed and an appreciation of the nature of the location, environment, and conditions where such work is to be performed.
 - b) be aware of specific or unusual hazardous condition, existing or potential and the control measures required to protect against, control, mitigate, or where possible, avoid said hazard, and
 - c) have an emergency response plan / evacuation procedures.

Minimum Safety Requirements for Contractors Working on CPKC Property in Canada

- 9.1.2 Where contractor personnel are working directly with or in proximity (time or space) to CPKC personnel, job safety briefings must include both CPKC personnel and contractor personnel, and any other affected third parties. The job safety briefing shall identify nature and extent of the interaction between the work being performed by contractor personnel, and those performed by CPKC personnel or other third parties. Contractor personnel shall inform CPKC personnel, and any other third parties of known or potential unsafe conditions and hazards that may be created by, resulting from, or inherent in their work and the corresponding preventative, mitigation, and / or control measures at all job briefings prior to commencing work, or as soon as contractor personnel becomes aware of such conditions.
- 9.1.3 In all situations, all contractor personnel are expected to:
- a) continually identify hazards and assess risk of hazards and to communicate all hazards continually and clearly to the Manager-in-Charge and to all other parties that may be affected at job safety briefings, and at any other time as and when appropriate or necessary.
 - b) take actions that are within their assigned responsibility to eliminate or control hazards and risks, and
 - c) immediately notify their supervisor or the Manager-in-Charge of hazards that pose unacceptable risk that they are unable to eliminate or control.
- 9.1.4 Where contractor personnel are unable to eliminate or control a hazard, contractor personnel shall take interim measures to protect people, property, equipment, and the environment until the hazard can be accurately assessed and appropriate corrective actions taken.

10.0 Applicable Legislation

10.1 General Requirements

- 10.1.1 Contractor and contractor personnel shall be solely responsible for identifying and complying with all applicable legislation. Contractors and contractor personnel providing work to CPKC are likewise required to comply with all applicable provincial and federal legislation. At a minimum, contractor and contractor personnel shall comply with the federal legislations set out below which list is intended solely for general guidance, and not as a comprehensive list of all applicable legislation.
- 10.1.2 Additionally, the Railway Association of Canada (RAC) is an industry association which can provide support and guidance on matters related to railroad safety and the transportation of dangerous goods.

10.2 Transportation of Dangerous Goods

- 10.2.1 When work involves the handling or transportation of dangerous goods, that work must comply with Transportation of Dangerous Goods Act (TDG).
- 10.2.2 Contractors shall be solely responsible for ensuring that all contractor personnel who handles, offers for transport and / or transports hazmat by any transportation mode are trained and hold a valid training certificate or is working under the direct supervision of someone who is trained and holds a valid training certificate. That training must be based on the work that the person is expected to perform and the hazmat that the person is expected to handle, offer for transport or transport.
- 10.2.3 Transport Canada enables the Transportation of Dangerous Goods Act to publish Transportation of Dangerous Goods Regulation. The TDG Regulations divide dangerous goods into 9 classes according to the type of hazard they present.

Minimum Safety Requirements for Contractors Working on CPKC Property in Canada

10.3 Canada Labour Code

- 10.3.1 When work involves the construction, alteration, operation, inspection, and maintenance of any part work of the general railroad system of transportation, that work must comply with the Part II of the Canada Labour Code.
- 10.3.2 Additionally, contractor and contractor personnel shall comply with all applicable provisions of the Occupational Health and Safety Regulations (COHS) which are intended to prevent accidents and injuries to employees working for federally regulated companies. Compliance with these regulations may extend to contractors, depending on the type of Work being done and their proximity to CPKC Personnel (i.e., Co-mingled Work). Alternatively, provincial occupational health & safety regulations will govern contractors.

10.4 Railway Safety Act

- 10.4.1 The Railway Safety Act (RSA) governs all federally certified railways in Canada and some provincial railways through various agreements with Transport Canada.
- 10.4.2 The Railway Safety Act addresses all matters relating to the construction, alteration, operation, inspection, and maintenance of all railway equipment, and contains training and qualification requirements for certain types of Work. When applicable, contractor and contractor personnel shall perform Work in accordance with the Railway Safety Act, as directly bound by it.

10.5 Environmental Protection Act

- 10.5.1 Where work is being performed that may impact the environment, that work must comply with all applicable federal and provincial environmental acts and regulations.
- 10.5.2 Some examples of applicable legislations include the Canadian Environmental Protection Act, Fisheries Act, Navigable Waters Protection Act, Species at Risk Act, Migratory Birds Convention Act, and all corresponding Regulations. Provincial requirements are normally set out in a general Environmental Protection Act which is complemented by numerous regulations addressing more specific areas of concern. Canadian Environmental Protection Act: <https://laws-lois.justice.gc.ca/eng/acts/c-15.31/>

11.0 Security Access to CPKC Property

- 11.1.1 All contractor personnel must have a valid eRailsafe photo identification card (when / where required) or personal identification (as per the list below) authorizing access and in their possession at all times while on CPKC property, and present them for review to any Manager-in-Charge, other CPKC managers and employees, police officer, security guard, or regulatory officer upon request:
- Photo identification (e.g., driver's license); and
 - Proof of employment, document, or card; and
 - CPKC safety orientation certificate, or
 - Building access pass issued by CPKC, or third-party having control over CPKC premises, or
 - CPKC security photo ID card or badge, or
 - Other proof of safety orientation and access authorization issued by CPKC.
- 11.1.2 Where any work requires contractor personnel to ride in locomotive or other non-passenger railroad equipment, the contractor must also possess a CPKC Access Pass for riding non-passenger railroad equipment, signed by the responsible operating manager. Such a signed pass must be presented to the train crew or operator when boarding the equipment. Failure to possess such a pass will result in the equipment not moving, removal from the equipment, and / or the filing of trespasser charges.

Minimum Safety Requirements for Contractors Working on CPKC Property in Canada

11.2 Security Awareness

- 11.2.1 Contractor shall conduct employee background checks as is necessary to ensure that contractor personnel do not pose a security risk to CPKC, such security risk includes the risk of the commission of terrorist activities, sabotage, vandalism, theft, and violence. CPKC reserves the right, at all times, to require that contractors undertake certain security training and / or performs background checks on contractor personnel, prior to allowing such contractor personnel to enter onto CPKC property.
- 11.2.2 On request CPKC can make available a copy of CPKC's Railway Security Awareness Program for use by contractor personnel.

11.3 Firearms & Explosives

- 11.3.1 Firearms (loaded or empty) are not permitted on CPKC property, except for police officers and other designated government officials when authorized to do so.
- 11.3.2 No explosives will be permitted on CPKC property without written approval by the Manager-in-Charge.

11.4 Reporting

Contractor personnel must report any security concern, security incident, criminal activity (known or suspected), suspicious happenings and / or suspicious persons on CPKC property to the Manager-in-Charge or to CPKC Police Services in accordance with Section 20.

12.0 Personal Conduct

12.1 Drug and Alcohol Standards

CPKC recognizes the problem of alcohol and substance abuse in today's society. This problem poses concerns to an employer who is subject to governmental regulations and seeks to promote the safety of the general public. Periodic audits to ensure compliance with these regulations may be performed and cooperation and compliance is expected upon request.

- 12.1.1 Contractor personnel shall comply with CPKC Alcohol and Drug Policy and Procedure while under contract to perform services for CPKC. Any contravention of these requirements will be considered a breach of contract.
- 12.1.2 Entry onto CPKC property when in possession of, or under the influence of alcohol, intoxicants, narcotics, or controlled substances is strictly prohibited. Controlled substances include all Schedule 1 drugs (such as marijuana and "medical marijuana") and synthetic / designer drugs and / or any intoxicants or products labeled "not intended for human consumption".
- 12.1.3 The sale, trade, and / or offer for sale alcohol or controlled substances are prohibited.
- 12.1.4 Additionally, contractor personnel shall be free of any condition which may in any way adversely affect alertness, concentration, responsiveness, or the ability react calmly and responsibly to safety hazards.
- 12.1.5 CPKC reserves the right to request drug and / or alcohol tests for contractor personnel as and where required or permitted by law.
- 12.1.6 In the event of a contract worker is directly involved in a significant work-related incident as described by CPKC Alcohol and Drug Policy and Procedure, the work may be subject to Post Incident testing under the CPKC Testing program. They may be removed from CPKC premises pending the results of the investigation, including receipt of alcohol and drug testing results.

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Depending on the test results and the outcome of the investigation, a fitness for work medical assessment may also be required through the primary contractor before the contractor can return to CPKC premises or work. CPKC reserves the right not to allow a contractor back on the property or to CPKC work.

12.2 Inappropriate Behavior

- 12.2.1 CPKC is committed to maintaining a work environment that supports the dignity of all individuals. No person working at CPKC may be subjected to any form of discrimination or harassment, including sexual harassment.
- 12.2.2 Acts or threats of violence are always unacceptable on CPKC property. Uttering of threats or committing acts of violence will result in the removal of the responsible contractor personnel from CPKC property, termination of the contract, and / or criminal charges.
- 12.2.3 Horseplay, practical jokes, fighting or any other activity that may create a safety hazard is not permitted.
- 12.2.4 Inappropriate language directed at any CPKC employee or agent of CPKC, will not be tolerated.

12.3 Electronic Entertainment and Communication Devices

- 12.3.1 The use of personal cell phones, personal entertainment devices, including portable audio and video devices such as compact DVD, CD, video game players, iPads / tablets, SMART watches, and MP3 players, is prohibited:
 - a) while working on CPKC property.
 - b) while transporting CPKC personnel, whether on and off CPKC property, and
 - c) while operating any CPKC highway vehicle, railroad equipment or mobile equipment, whether on and off CPKC property.
- 12.3.2 The use of electronic communication devices, including cell phones, walkie-talkies, PDAs, iPads, tablets, GPS navigation units, portable computers, and similar devices, is prohibited:
 - a) while operating any highway vehicle unless it is stopped and parked in a safe location.
 - b) while transporting CPKC personnel, whether on and off CPKC property.
 - c) while operating or assisting in the operation of any railroad equipment or mobile equipment.
 - d) while operating power tools, equipment, or machinery.
 - e) when Foul of Track for any reason.
 - f) wherever use is prohibited by signage or by a CPKC manager, or
 - g) whenever use of such a device creates an unsafe condition.
- 12.3.3 Notwithstanding the foregoing, company cell phones, radios, walkie-talkies, GPS units, iPads / tablets, and other communication devices may be used solely for the conduct of business when authorized by the CPKC Manager-in-Charge and where not prohibited by municipal or provincial legislation. Any electronic communication device may be used when it is necessary to communicate an emergency condition.

12.4 Smoking

- 12.4.1 Smoking, including the use of e-cigarettes is prohibited on all CPKC property, and in or on all highway vehicles, railroad equipment, and mobile equipment, except for CPKC designated outdoor smoking areas.

Minimum Safety Requirements for Contractors Working on CPKC Property in Canada

13.0 Personal Protection

13.1 Work Clothing

13.1.1 The contractor must ensure that contractor personnel wear clothing that meets applicable legislation and is suitable to perform the work safely. This always includes at minimum ankle length pants and waist length shirts with a minimum quarter-length sleeves. Clothing must not interfere with vision, hearing or use of hands and feet.

13.2 Personal Protective Equipment (PPE)

13.2.1 The contractor shall ensure that contractor personnel wear personal protective equipment required by applicable legislation, regulations, codes and industry standards as necessary to protect against personal injuries while on railroad property. All personal protective equipment shall be approved by the Canadian Standards Associations (CSA) or by the American National Standards Institute (ANSI) and shall be in good condition and be properly fitted.

13.2.2 The following mandatory personal protective equipment (“PPE”) shall be supplied by the contractor at its own expense, and shall be always worn by contractor personnel while on CPKC property:

- Safety hard hat, meeting CSA standard Z94.1 or ANSI 89.1 standards, except in office buildings or in enclosed vehicles or equipment.
- Safety footwear with protective toe caps and puncture resistant soles, meeting CSA standard Z195 (Green Triangle – Grade 1).
- Safety glasses with permanently attached side shields meeting CSA standard Z94.3 standards, except in office buildings or enclosed highway vehicles.
- High visibility fluorescent outerwear with retro reflective striping meeting CSA standard Z96 Class 2 Level 2 standards not covered by other clothing or equipment, except where necessary for safety reasons such as where fall protection or pole climbing equipment is being used.
- Any other PPE as required by applicable legislation, CSA / ANSI standard, or as otherwise required to protect contractor personnel from injuries.

Type of Protection	Additional Recommendations
Hard Hats	Have hi-visibility characteristics which are not obscured by markings or decals.
Safety Eyewear	Tinted safety eyewear must meet military tinting standards for red signal recognition if operating railway equipment (safety eyewear meeting this requirement is available from Grainger Canada, ask for CPKC approved tinted safety eyewear). Polarized lenses are discouraged and should be worn with caution when required to view LCD / LED screens. Transition lenses are discouraged and should be worn with caution when working in changing light conditions. Personal sunglasses are discouraged and must not be worn when operating railway equipment. Wear mesh face shields over top safety glasses when using any striking tool while performing on track maintenance work (e.g., spiking, snapping on/off anchors, etc.). If working alongside CPKC employees, you will be required to comply with this practice.
Safety Footwear	Have defined heels. Laced fully to the top and tied securely for ankle support. When required to walk or work on snow and ice wear anti-slip winter footwear.
High Visibility Apparel	Lime-green is recommended when working on, or near tracks, or when performing work in proximity to CPKC personnel.

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- 13.2.3 Contractor and contractor personnel shall be solely and fully responsible for assessing the risks related to the work and determining whether additional PPE may be required such as:
- a) Nomex or Proban fire-retardant protective gear when performing certain Transportation of Dangerous Goods (TDG) work and / or handling certain Hazardous Materials or performing specialized work.
 - b) Hearing protection when working in any area where noise exposure levels:
 - i) are consistently equal to or greater 85 dBA.
 - ii) exceed 115 dBA at any time.
 - iii) any other work areas where posted, or so notified by CPKC management.
 - c) Respiratory protection where contractor personnel may be exposed to occupational dusts / particulates, fumes, mists, gases and vapors, in which case, in which case contractors must have a written Respiratory Protection Program that meets or exceeds applicable legislation.
 - d) Additional eye and face protection meeting CSA standard Z94.3 (i.e. face shields, impact / splash goggles, welding / cutting goggles and welding helmets).
 - e) Fall protection systems and equipment meeting appropriate ANSI Z359 standards as required by applicable legislation and as appropriate for the related fall hazards.
 - f) Fall protection when working on an unguarded surface over water, where the water is deeper than 4 feet (1.2 m), or where there is a hazard of drowning due to terrain, winter conditions, water velocity or current; contractors must use a fall protection system or a personal floatation device (PFD) meeting approved standards.

14.0 Railroad Track Protection

14.1 Contractor's Responsibilities for the Protection of Railroad Traffic and Property

- 14.1.1 Where the work site is in close proximity to, or is located on, above, or below railroad tracks, special attention, care and precautions shall be taken to ensure the safety of all contractor personnel, CPKC personnel, all other third parties and to protect CPKC's property and railroad operations.
- 14.1.2 Contractor shall ensure that contractor personnel are made aware of all unique and inherent hazards in working near, on, above or below railroad tracks and shall ensure that all contractor personnel are fully trained and equipped to work safely.
- 14.1.3 Contractors will not be allowed to foul a track unless:
- a) They have been properly advised of the On Track Safety awareness procedures.
 - b) A railroad employee who is qualified to provide protection is present at the work site, or
 - c) The contractor has personnel present who are specifically trained, qualified, and authorized to provide that protection.
- 14.1.4 All work shall be organized or executed in such a manner as to ensure no interference with the regularity and safety of railroad operations. No step or sequence of any work that might directly or indirectly affect the safe movement of railroad traffic shall be started without the approval of the Manager-in-Charge.
- 14.1.5 No temporary structure, materials, or equipment shall be permitted closer than 12 feet (3.7 m) to the nearest rail of any track without prior approval in writing of the Manager-in-Charge.

Contractor personnel shall always remain alert to the movement of trains, rolling stock and other railroad equipment.

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- 14.1.6 Contractor Personnel shall be especially alert in yards and terminal areas as
- a) Railroad equipment that appears to be stationary may be moving.
 - b) Rate of movement of railroad equipment may be faster than it appears.
 - c) Railroad equipment change tracks often; and movements may be occurring simultaneously on adjacent tracks.
- 14.1.7 The contractor shall always conduct its operations in a wholly responsible manner to avoid damage to the CPKC's tracks or property.

14.2 Clearance Requirements (50 feet / 15.2 m)

- 14.2.1 All work shall be performed as far away from railroad tracks as possible.
- 14.2.2 Unless authorized by CPKC, contractor personnel, equipment, and vehicles are not permitted to be within 50 feet (15.2 m) of the closest track centerline.
- 14.2.3 In the event work must be carried out within 50 feet (15.2 m) of the closest track written authorization must be obtained from the Manager-in-Charge, and contractor personnel must always remain at the maximum practicable distance from all railroad tracks.
- 14.2.4 When crossing tracks, contractor personnel shall ensure a minimum of 50 feet (15.2 m) separation between standing railroad equipment, stay at least 15 feet (4.6 m) away from the end of the nearest equipment, and look both ways before crossing tracks, and if clear, walk at a right angle to the tracks.
- 14.2.5 No work activities or processes are allowed within 50 feet (15.2 m) of the track while trains are passing through the work site unless specifically authorized.

14.3 Flagging Protection

- 14.3.1 When the work requires contractor personnel to be within 50 feet (15.2 m) of any railroad tracks, contractor or contractor personnel shall notify and obtain the written approval of the Manager-in-Charge in advance of the intended start date, and when approved, shall only perform work strictly in accordance with all terms and conditions of that approval.
- 14.3.2 Unless otherwise indicated by the Manager-in-Charge, proper protection against the movement of trains, rolling stock and other railroad equipment shall be deemed always required whenever work or contractor personnel must be within 50 feet (15.2 m) of the closet track. Protection may be provided only by a qualified CPKC employee through use of a flag person.
- 14.3.3 Where CPKC determines that flagging is required, then work must be strictly conducted under the direction of a CPKC flag person, or such other person designated by the Manager-in-Charge.
- 14.3.4 Contractor personnel shall ensure that there is always clear communication between contractor personnel and any CPKC flag person. Contractor personnel shall ensure that they are aware of:
- (a) flagging distance limits.
 - (b) time limits, and
 - (c) any adjacent tracks where movement of railroad equipment may still occur.
- 14.3.5 Contractor personnel shall not assume that a train movement is being stopped or cleared unless clear communication is received directly from the CPKC flag person.

Minimum Safety Requirements for Contractors Working on CPKC Property in Canada

- 14.3.6 A job briefing between the CPKC flag person, and all contractor personnel must occur before beginning any work on or foul of track.
- 14.3.7 Blue signal protection is used to indicate that CPKC or contractor personnel are working on, under or between railroad equipment and movement of trains or other railroad equipment is prohibited. Blue signals must not be tampered with or obstructed. Blue signals can only be removed by the person or group of persons who originally applied it. Application, use, and removal of blue signals, when appropriate, may only be done under the authorization and guidance of the Manager-in-Charge.
- 14.3.8 Red flag protection is used to indicate that CPKC or contractor personnel are working on or foul of track, or the track is out of service and movement of trains or other railroad equipment is prohibited. Red flags must not be tampered with or obstructed. Application, use, and removal of red flags, when appropriate, may only be done under the authorization and guidance of the Manager-in-Charge.

14.4 Working on or near Tracks

- 14.4.1 When authorized to perform work foul of track or otherwise be near railroad tracks, contractor personnel shall ensure all contractor personnel, equipment, and vehicles are kept as far away from railroad tracks as practicable, and shall at all times:
- (a) be alert to train movements and shall expect the movement of trains, engines, cars, or other mobile railroad equipment at any time, on any track, and in any direction, even if they appear to be stationary or in storage.
 - (b) not rely on others to protect them from train movement.
 - (c) stay at least 15 feet (4.6 m) away from the ends of railroad equipment when crossing the track.
 - (d) ensure a minimum of 50 feet (15.2 m) separation prior to crossing between railroad equipment.
 - (e) look both ways before crossing tracks, and if clear, walk at a right angle to them.
 - (f) never climb on, under or between railroad equipment.
 - (g) be aware of the location of structures or obstructions where track clearances are close.
 - (h) not stand on the track in front of an approaching engine, car, or other equipment.
 - (i) stand at least 20 feet (6.1 m) from the track(s) when there is a passing movement of trains, engines, cars, or other mobile railroad equipment, to prevent injury from flying debris or loose rigging and shall observe the train as it passes and be prepared to take evasive action in the event of an emergency.
 - (j) not stand on or between adjacent tracks in multiple track territory when a train is passing.
 - (k) not walk, stand or sit on the rails, between rails or on the end of ties, unless necessary. As the rail surface can be extremely slippery, personnel must step over the rails when crossing tracks. Personnel shall also be aware railroad ties can also be slippery and that railroad ballast can shift while walking on top of it. Situational awareness and use of proper footwear is important.
 - (l) not remain in a vehicle that is within 50 feet (15.2 m) of a passing train unless specifically authorized, or where this is not possible.
 - (m) keep away from track switches as remotely operated switch points can move unexpectedly with enough force to crush ballast rock. Personnel shall stay away from any other railroad devices they are unsure of. Personnel shall not disturb or foul the ballast at any time.
 - (n) Third party work that has a potential to impact rail traffic must consider machine swing radius, vertical grade differences, overhead work, etc. to ensure it will not impact a passing train; work and equipment must maintain 50 feet (15.2 m) of a passing train.

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- (o) When exiting on track machinery as trains are passing; exit on the opposite side.
 - i) use 3-point contact when getting on / off any vehicle, equipment, or track unit.
 - ii) face the vehicle or equipment / track unit when getting on / off.
 - iii) place handheld items onto equipment / track unit or seek help prior to getting on / off.
 - iv) get on / off on the operators' side when possible.

14.5 Equipment on or near tracks

- 14.5.1 Contractor personnel shall not be Foul of Track with any piece of equipment without a CPKC flag person or other authorized track protection.
- 14.5.2 Contractor personnel shall not move equipment across the tracks except at established road crossings, or unless under the protection and authorization of a CPKC flag person and only if the work site has been properly prepared for such a move. Tracked equipment will require a CPKC flag person any time railroad tracks are crossed.
- 14.5.3 Contractor personnel shall not move equipment across railroad bridges or through tunnels, except as expressly authorized and only under such conditions as stipulated by the Manager-in-Charge.
- 14.5.4 When there is passing rail traffic, contractor personnel shall move equipment away from the tracks at least 50 feet (15.2 m), or where not possible, park the equipment as far away from the tracks as possible, exit to the side away from the track where the movement is taking place, and walk to a safe distance.
- 14.5.5 When there is passing rail traffic, buckets, shovels, and loads on cranes must be lowered to the ground to rest, and cranes without a load must have their load line tightened or retracted to prevent movement.

14.6 Railroad Signs, Signals, Flags, and other Communication Infrastructure

- 14.6.1 Signs, signals and flags shall not be obstructed, removed, relocated, disabled, or altered in any way without proper authorization and qualification.
- 14.6.2 Only qualified contractor personnel who are authorized by CPKC are permitted to operate switches, derails, electric track mechanisms, signal and communication systems or other track control appliances.
- 14.6.3 Railroad pole lines carry electric power and should be treated as any other power lines.
- 14.6.4 The contractor shall keep all contractor personnel informed of current weather conditions. Personnel shall stay alert for possible high-water conditions, or flash floods. During severe weather conditions:
 - a) Personnel shall be prepared to take cover in the event of a tornado.
 - b) Personnel shall not work while lightning is occurring.
 - c) If storm conditions arise unexpectedly, contractor personnel shall ensure that equipment is in the clear of the tracks and secured before seeking cover. Contractor personnel shall stay away from railroad tracks when visibility is poor, such as during fog or blizzard conditions.

Any contractor personnel discovering a hazardous or potentially unsafe condition, which may affect the safe passage of railroad traffic, must advise CPKC immediately by calling:

- 1-800-716-9132 - CPKC Public Safety Communication Centre (PSCC)

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14.7 Excavation

- 14.7.1 Before starting excavation operations, the contractor shall ascertain that there are no underground wires, fiber optic cables, pipelines or other utilities which could be damaged or, if present, that such installations are properly protected. Fiber optic cables are present on most segments of the right-of-way. Prior to commencing any excavation, the contractor shall contact the proper authority CPKC and / or public utility to obtain the necessary permit and to locate and protect such cables or other underground utilities.
- 14.7.2 Excavations shall not be left unattended unless they are properly protected; and the Manager-in-Charge shall be notified.
- 14.7.3 Contractors must obtain and maintain utility locates in accordance with applicable law.

15.0 WHMIS

15.1 General Requirements

- 15.1.1 If at any time contractor's work involves the use, handling, storage, or disposal of hazardous materials ("Handling of Hazardous Materials"), contractor personnel must inform the Manager-in-Charge.
- 15.1.2 Contractors shall ensure that all contractor personnel are fully trained in the handling of hazardous materials and that contractor and contractor personnel are in full compliance with all applicable legislation, and as directed by the Manager-in-Charge.
- 15.1.3 Contractor personnel shall have appropriate processes, systems and controls in place to prevent or otherwise mitigate potential environmental, health and safety risks associated with the handling of hazardous materials.

15.2 Access to Safety Data Sheets (SDS)

- 15.2.1 Prior to beginning any work that may expose CPKC personnel to hazardous materials, contractor or contractor personnel shall:
 - a) provide a copy of the respective SDS to the Manager-in-Charge, and
 - b) keep a copy of the SDS at the work site and ensure that it is always readily available.

15.3 Hazardous Material Incident or Spill

- 15.3.1 In the event of a hazardous material incident or spill, the contractor must:
 - (a) ensure that no contractor or CPKC personnel have or will be exposed
 - (b) take all reasonable actions to contain the spill
 - (c) respond in accordance with its emergency response plan, and
 - (d) notify CPKC immediately in accordance with Section 18 below.

Minimum Safety Requirements for Contractors Working on CPKC Property in Canada

16.0 Operation of Highway Vehicles

16.1 Highway Vehicles

16.1.1 The following requirements apply to all highway vehicles, when operated on CPKC property; or used to transport CPKC personnel.

16.2 Regulations and Inspection

16.2.1 Before using a highway vehicle, contractor personnel shall:

- (a) complete a pre-trip inspection.
- (b) maintain an inspection log.
- (c) ensure periodic inspections are completed at official testing locations as required.
- (d) ensure the vehicle is always maintained and in safe operating conditions, and
- (e) ensure the vehicle is in compliance with applicable motor vehicle regulations and license requirements.

16.2.2 Vehicle maintenance, inspection records and logs must be made available to the Manager-in-Charge on request.

16.3 Vehicle Operator Requirements

16.3.1 Operation of highway vehicles is restricted to those contractor personnel who are licensed, qualified and authorized to do so. Such contractor personnel shall be always responsible for the safety of all passengers. For greater certainty, such contractor personnel shall:

- (a) hold a valid license for the class of vehicle being operated, in accordance with applicable local, provincial, and federal requirements.
- (b) strictly comply with all posted traffic signs, signals, and all shall obey all applicable legislation,
- (c) maintain the required driver log, and make the log available to the Manager-in-Charge on request, and
- (d) comply with the requirements on the use of electronic devices as set out in Section 12 above.

16.4 Driving on CPKC Property

16.4.1 In addition to the requirements set out above, while on CPKC property, contractor personnel shall:

- (a) travel only on designated roadways unless otherwise instructed.
- (b) keep daytime running lights on (if so equipped).
- (c) not exceed 15 mph (25 Km/h) unless otherwise posted.
- (d) come to a full stop at all blind corners, rail, and roadway crossings.
- (e) yield the right of way to all mobile equipment and other non-highway equipment or service vehicles.
- (f) not operate vehicles (or any internal combustion equipment) inside buildings or enclosed structures unless adequate ventilation is provided.
- (g) not park foul of track unless on-track protection is provided.
- (h) not leave vehicles running unnecessarily.
- (i) park only in pre-determined or designated areas.

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- (j) always use the parking brake (or wheel chocks) when leaving an unoccupied vehicle running.
- (k) prior to operation of a vehicle the driver must conduct a walk around of the vehicle to identify any obstacles, clearance restrictions, or adjacent vehicles that may interfere with executing a safe movement.
- (l) where safe and practicable, pull vehicles through or back into marked parking spaces to avoid reverse collisions when exiting.
- (m) If a passenger is present, in commercial vehicles or vehicles with restricted rear views, he / she must exit the vehicle prior to a reverse movement to provide guidance and direction to the driver while backing up.

16.4.2 All contractor personnel who will be operating a highway vehicle or mobile equipment in any CPKC intermodal facility must complete the local Driver Safety Orientation (DSO) program prior to first entry, and from time-to-time thereafter as directed by the Manager-in-Charge.

16.5 Seat Belts

16.5.1 Seat belts must always be worn while operating or riding in any equipped vehicle unless contractor personnel is actively engaged in inspections requiring said contractor personnel to be free of such restraint, and then only when the vehicle is operating at less than 15 mph / 25 Km/h.

16.6 Loads

16.6.1 Contractor personnel shall ensure vehicles are loaded according to weight and dimensional requirements as authorized by provincial regulations and permits, and properly load and secure tools, material, equipment, and freight to avoid shifting, falling, leaking or otherwise escaping from vehicles during operation.

16.7 Riding in CPKC Vehicles

16.7.1 Contractor personnel are prohibited from operating or riding in any CPKC vehicles unless authorized to do so, or in case of emergency.

17.0 Tools, Equipment and Machinery

17.1 General Safety Requirements Respecting All Tools, Equipment and Machinery

- 17.1.1 Contractor personnel shall ensure that all tools, equipment, and machinery used be:
- (a) in compliance with all applicable legislation.
 - (b) in good working order, properly serviced and maintained.
 - (c) safe for their proposed use and used only for purposes specified by the manufacturer.
 - (d) operated and maintained only by persons properly trained and qualified for that duty.
 - (e) seat belts (if present on equipment) must be worn while operating or riding any such equipped mobile equipment.
 - (f) if mobile, equipped with appropriate safety devices (e.g., lights, horns, back-up alarms, safety beacons), and
 - (g) be prevented from moving, through use of the hand brake, wheel blocking, wheel chocking and / or a derail, where applicable.
- 17.1.2 The contractor shall provide adequate lighting when performing work between sunset and sunrise.

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- 17.1.3 Use of CPKC tools, equipment and machinery by contractor personnel is prohibited unless specifically authorized by local CPKC management.

17.2 Hazardous Energy Control- Lockout /Tagout

- 17.2.1 Contractor personnel shall employ lockout / tagout procedures as required to eliminate the accidental or unexpected start-up, energizing, or release of stored (residual) energy during maintenance, repair and / or servicing activities.
- 17.2.2 All tools, equipment and machinery must be made safe and isolated from all energy sources rendering the machine, equipment, or process inoperative prior to performing maintenance, repair or servicing related tasks.
- 17.2.3 No contractor personnel can remove any CPKC applied lock or tag, including bad-order tags.
- 17.2.4 Notwithstanding the foregoing, if contractor's work may create an energy hazard to any CPKC. Personnel, then all affected parties must follow the requirements set forth in CPKC's Lockout – Hazardous Energy Control Policy and Code of Practice.
- 17.2.5 If CPKC personnel and contractors are jointly performing maintenance, repair or servicing activities on the same machine, equipment or using the same energy source, then a multi-lock hasp must be applied with individual locks and tags affixed (as per CPKC's Hazardous Energy Control – Lockout Policy and Procedure).

17.3 Electrical Safety Requirements

- 17.3.1 In addition to the hazardous energy control lockout requirements above, all electrical work must comply with applicable legislation, National Electrical Code (NEC), and National Fire Protection Association (NFPA) requirements.
- 17.3.2 Contractor personnel working on electrical systems must:
- (a) if in proximity to CPKC Personnel, inform them of:
 - (i) existing or potential electrical hazards,
 - (ii) any specific additional personal protective equipment that may be required,
 - (iii) applicable safe work practices,
 - (iv) applicable emergency and evacuation procedures, and
 - (v) apply lock out procedures as per the section above on Hazardous Energy Control- Lockout.
 - (b) have practices, procedures and training that comply with:
 - (i) Applicable sections of the NEC and NFPA electrical safety standards.
 - (ii) Any other applicable legislation.
 - (c) not operate or allow cranes or other mobile equipment to approach closer to any live electrical power line as per CSA Z150 Safety Code on Mobile Cranes.

17.4 Lifting Devices

- 17.4.1 All lifting devices, including but not limited to jacks, cranes, cables, slings, chains, and hooks shall:
- (a) meet applicable legislation governing design, inspection, maintenance, and operation.
 - (b) be safety certified and labeled or tagged with load capacity limits where required.
 - (c) have sufficient capacity for the planned lift.

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- (d) have sufficient footing or support area to properly distribute the load during a lift.

17.5 Welding and Torch Cutting

17.5.1 When welding or torch cutting, contractor personnel shall:

- (a) be properly trained and qualified.
- (b) ensure that all closed containers have been properly purged.
- (c) direct flame or sparks away from other workers, equipment and flammable material.
- (d) have a fire extinguisher readily available.
- (e) keep compressed gas and oxygen cylinders stored in a secure, vertical position, with regulators removed and caps applied, labeled properly, and located in vented cabinets or other designated locations.

17.6 Explosive Actuated Tools

17.6.1 Only contractor personnel who are qualified and licensed in accordance with applicable legislation, and authorized by CPKC, may use explosives or explosive actuated tools.

17.7 Unattended Equipment or Machinery

17.7.1 Tools, equipment and machinery shall not be left unattended at any time and shall not be stored on CPKC property, unless expressly permitted pursuant to a written agreement with CPKC or by the Manager-in-Charge in writing, and where so permitted, contractor shall ensure that:

- (a) storage shall be restricted to the designated area, or as otherwise specified by CPKC.
- (b) all such tools, equipment and machinery shall be secured in a safe position well clear of all railroad tracks to prevent accidental contact with trains and moving equipment and not restrict train crew sightlines.
- (c) as much as possible, tools, equipment and machinery shall be stored in locations out of public view.
- (d) Machines must be secured in accordance with on-track machinery rules.

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18.0 Emergency Response

18.1 Emergency Response Plan

- 18.1.1 The contractor must maintain a current emergency response plan and make it available to CPKC on request. Emergency response plans must include at a minimum:
- (a) contractor reporting procedures in the event of an incident or spill.
 - (b) emergency response contacts and phone numbers, including phone numbers for CPKC incident reporting and local CPKC managers (See Attachment A), and
 - (c) containment measures to be taken in the event of an incident or spill.

18.2 Initial Response

- 18.2.1 Initial response to any emergency condition must follow the following sequence:
- (a) Protect the safety and security of all individuals and communities.
 - (b) Provide environmental protection and mitigation.
 - (c) Conduct incident investigation and evidence preservation.
 - (d) Restore railroad operations.

18.3 First Aid

- 18.3.1 Contractor personnel must have sufficient first aid qualified personnel and the required first aid kit / supplies and any other required first aid equipment at the work site, suitable for the crew size, nature of work being performed and location, all of which shall, at a minimum, comply with Part II of the Canada Labour Code and / or provincial OHS regulations.

18.4 Fire Protection

- 18.4.1 The contractor must have appropriate fire extinguishers suitable (i.e., type, size and quantity) for nature of the work being done, in compliance with applicable legislation, and be always readily available on:
- (a) the work site, and
 - (b) all contractor equipment, machinery, and highway vehicles.
- 18.4.2 Contractor personnel shall ensure that all necessary precautions are taken to prevent fires, including the following:
- (a) storing flammable material (e.g., paper, rubbish, sawdust, oily or greasy rags, etc.) in proper containers.
 - (b) storing and transporting fuel, gasoline, or other flammable liquids in approved containers / vented compartments as required in. Use of unapproved containers is prohibited.
 - (c) proper disposal of flammable material daily.
 - (d) preventing static electricity when dispensing or transferring flammable liquids by using proper grounding and bonding techniques.
 - (e) avoid using cutting or welding torches during the last one-half hour of shifts, if possible.
 - (f) taking special precautions with fusees, including:
 - (i) store and transport in approved containers.
 - (ii) do not allow fusees to come in contact with any combustible material, including railroad ties or wooden timbers, and

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(iii) fully extinguish fusees before leaving the location where used.

(g) promptly advise CPKC management of any fire on CPKC property or in proximity to, and

(h) fully extinguish or provide protection for any fire prior to leaving the work site.

18.4.3 Contractors working on the CPKC right-of-way where a high risk of fire exists (e.g., during rail grinding, rail welding) must have:

(a) appropriate fire prevention and suppression plans (including emergency numbers for CPKC, local fire and fire control districts), and

(b) additional firefighting equipment and trained contractor personnel on site, as required by applicable legislation or the Manager-in-Charge.

19.0 Confined Space

19.1 Confined Space

19.1.1 Qualified and authorized contractor personnel must follow all required confined space entry procedures in accordance with applicable legislation and standards prior to entering into a confined space.

19.1.2 Rescue procedures and equipment must readily available when required to enter a confined space.

20.0 Reportable Accidents, Incidents, and Injuries

20.1 Reportable Injuries

20.1.1 Reportable injuries include any personal injury to:

- (a) Contractor personnel.
- (b) any CPKC personnel, or
- (c) to any third party on CPK property.

20.2 Reportable Accidents

20.2.1 Reportable accidents include any occurrence that results in:

- (a) damage to railroad tracks, right of way, buildings or other CPKC property,
- (b) damage to railroad equipment,
- (c) damage to CPKC highway vehicles,
- (d) release of hazardous material,
- (e) spill or loss of transported commodities, and
- (f) any threat to the environment.

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20.3 Reportable Incidents

20.3.1 Reportable incidents include:

- (a) unintended movement of railroad equipment.
- (b) failure to provide track protection for workers when required.
- (c) movement of railroad equipment beyond authorized limits.
- (d) operation of railroad equipment by an unqualified person.
- (e) unauthorized handling of a track switch.
- (f) damage, vandalism or tampering with any railroad signals, structures or railroad safety device.
- (g) seepage, leakage, spills of, or other contamination from, hazardous materials.
- (h) actual, threaten or suspected security related incidents.
- (i) slides, washouts, or other on-track obstructions, or
- (j) any occurrence that may disrupt the movement of trains or affect safe rail operations.

21.0 Reporting

21.1 Emergency Reporting

21.1.1 In the case of an emergency, contractor personnel must call:

- (a) 911, where this emergency response system exists, or
- (b) the local police, fire or emergency department in all cases, and
- (c) CPKC Police Services Communication Center- 1-800-716-9132.

21.2 Accident, Incident, Injury Reporting

21.2.1 When an accident, incident or injury occurs on CPKC property, the contractor must:

- (a) immediately report it to the
 - (i) CPKC Public Safety Communication Centre (PSCC) 1-800-716-9132, and
 - (ii) CPKC Manager-in-Charge.
- (b) follow all instructions given to protect the scene.

21.2.2 CPKC is obligated to report contractor personnel injuries occurring on CPKC property to the required provincial or federal regulators as required. Reporting to CPKC remains the contractor's responsibility.

21.3 Information to Report

21.3.1 Information required with the initial report includes:

- (a) type of incident.
- (b) date and time of occurrence.
- (c) location (mileage, subdivision, building, yard, or other physical description).
- (d) identity of person(s) involved or injured (company & name).
- (e) description of any hazardous materials involved.
- (f) type & unit number of any railroad equipment or vehicle involved.

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- (g) description of occurrence, damage and/or injury, and cause if known.
- (h) description of any emergency response.
- (i) name and contact information of person making the report, and
- (j) any such other information that CPKC may require.

21.4 Environmental Incidents and Spills

21.4.1 In the event of an environmental incident or spill that could have a negative impact on the environment, the contractor must immediately:

- (a) Report the incident to the Public Safety Communication Centre (PSCC) 1-800-716-9132, the Manager-in-Charge, and the designated CPKC contact as per the governing agreement relating to the work.
- (b) take all reasonable actions to contain the spill.
- (c) respond in accordance with its emergency response plan, and
- (d) provide CPKC with the following information:
 - (i) description of location and surrounding area, including any sensitive environmental areas nearby (e.g., rivers, parks, sewers).
 - (ii) type and quantity of substance released.
 - (iii) cause of spill or deposit, if known, and
 - (iv) details of any immediate action taken, or action proposed to be taken to contain spill and recover substance.

21.5 Additional Contractor Requirements

21.5.1 Contractor and contractor personnel must:

- (a) ensure an appropriate emergency response is initiated.
- (b) protect any evidence until released by the CPKC Manager-in-Charge.
- (c) cooperate fully with any CPKC investigation.
- (d) cooperate fully with any investigating government agency, and
- (e) notify CPKC if information is requested by any investigating government agency.

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22.0 Contractor and Contractor Personnel Acknowledgement

Acknowledgement

- 20.1.1 Contractor and contractor personnel who work on CPKC property shall be deemed to have read and understood the content of these Minimum Safety Requirements for Contractors While Working on CPKC property in Canada, as amended from time to time, and to agree to be bound by them.
- 20.1.2 These Minimum Safety Requirements for Contractors Working on CPKC property in Canada are subject to change without prior notice.



Home Safe is a commitment to be vigilant about personal safety and the safety of co-workers.

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21.0 Attachment A – Emergency Information Sheet

Emergency Contact Information:		
Emergency Contacts:	Phone:	Location:
CPKC Public Safety Communication Centre (PSCC):	1-800-716-9132	
CPKC Calgary Operations Center	1-800-796-7851	
Manager-in-Charge (MIC):		
Local Emergency Services (EMS):		
Local Police Services:		
Local Fire Services:		
Hospital:		
Physician:		
Aircraft service, (if applicable):		
Watercraft service, (if applicable):		
Other Emergency Services:		
Emergency Evacuation Route: (Describe nearest evacuation assembly location or provide sketch on back)		

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22.0 Attachment B – Work Site Information Sheet

Work Site Information:	Details:
Worksite Location Name:	
Worksite Location Address:	
Railroad Subdivision Name and Mileage:	
Nearest Town:	
Manager-in-Charge: (Name / Phone Number)	
Contractor Supervisor: (Name / Phone Number)	
Worksite Phone Number:	
Certified First Aid Attendant(s): (Name(s) / Phone Number(s))	
Location of First Aid Kit(s):	
Location of AED (if onsite):	
Location of Fire Extinguishing Equipment:	
Location of Safety Data Sheets (SDSs):	

