



City of Coquitlam

Contract Documents
72497

**Johnson MUP and Atlantic
Sidewalk Rehabilitation**



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Invitation to Tender



INVITATION TO TENDER

DATE OF ISSUE: **April 2, 2026**

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 s̓q̓əciyaʔ təməxʷ (Katzie), and other Coast Salish Peoples.

Tender No. 72497

Johnson MUP and Atlantic Sidewalk Rehabilitation

The City of Coquitlam invites tenders for **72497 – Johnson MUP and Atlantic Sidewalk Rehabilitation** generally consisting of the following, but not limited to:

- 295 square metres of concrete sidewalk replacement on Atlantic Avenue between Baldwin Street and Pacific Street;
- Intersection upgrades at Atlantic Avenue and The High Street;
- 560 square metres of multi use pathway structure replacement and paving on Johnson Street;
- Boulevard enhancements; and,
- Other miscellaneous and incidental works as further described 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

April 24, 2026

("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 72497

Johnson MUP and Atlantic Sidewalk 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: **Johnson MUP and Atlantic Sidewalk Rehabilitation**

Reference No. **72497**

- | | | | |
|------------|-------------------------|-----|--|
| 1.0 | Introduction | 1.1 | <p>These Instructions apply to and govern the preparation of tenders for this <i>Contract</i>. The <i>Contract</i> is generally for the following work:</p> <ul style="list-style-type: none">• 295 square metres of concrete sidewalk replacement on Atlantic Avenue between Baldwin Street and Pacific Street;• Intersection upgrades at Atlantic Avenue and The High Street;• 560 square metres of multi use pathway structure replacement and paving on Johnson Street;• Boulevard enhancements; and,• Other miscellaneous and incidental works as further described in the Contract Documents |
| | | 1.2 | <p>All inquiries regarding this Tender are to be submitted in writing referencing the Tender Name and Number sent to:</p> <p>E-mail bid@coquitlam.ca</p> <p>The deadline for inquiries is 12:00 PM local time, Tuesday, April 21, 2026.</p> <p>INQUIRIES RECEIVED AFTER THIS DATE AND TIME MAY NOT RECEIVE A RESPONSE.</p> |
| 2.0 | Tender Documents | 2.1 | <p>The Tender Documents which a Tenderer should review to prepare a Tender consist of all of the <i>Contract Documents</i> 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 <i>Contract Documents</i> include the drawings listed in Schedule 2 to the Agreement, entitled "List of Contract Drawings".</p> |
| | | 2.2 | <p><u>A portion of the Contract Documents are included by reference. Copies of these documents have not been included with the tender package.</u> These documents are the General Conditions, Specifications and Standard Detail Drawings. They are those</p> |

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: April 24, 2026

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: <https://qfile.coquitlam.ca/filedrop/purchasing>**

- 1. In the "From" field enter:** Tenderers email address
- 2. In the "Subject" field enter:** Tender Name
- 3. In the "BID Number" field enter:** Tender Number
- 4. In the "Type" field enter:** **New** if this is a new submission or **Update** if this is an updated submission
- 5. Add consolidated Tender files in Adobe PDF format, and Appendix 1 in Microsoft Excel XLS format, and Send** (ensure your web browser remains open until you receive a files sent message. You will also receive an email from QFile confirming the submission)

Tenderers are responsible to allow ample time to complete the Tender submission process. If assistance is required, 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

Obtaining Documents

Additional Instructions to Tenderers

- 4.1 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 | 4.2 | 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 | 4.3 | 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 | 4.4 | 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 | 4.5 | 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 | 4.6 | <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 | 4.7 | 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 | 4.8 | 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 | 4.9 | 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** 4.10 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** 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
- 5.3.6 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 <i>Tender Closing Time</i> , 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 <i>Work</i> . |
| 15.0 | Award | 15.1 | In exercising its discretion, the <i>Owner</i> 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 <i>Work</i> . |
- 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. 72497

Johnson MUP and Atlantic Sidewalk 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)
Friday, April 24, 2026**

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:

<https://qfile.coquitlam.ca/filedrop/purchasing>

- 1. In the "From" field enter:** Tenderers email address
- 2. In the "Subject" field enter:** Tender Name
- 3. In the "BID Number" field enter:** Tender Number
- 4. In the "Type" field enter:** **New** if this is a new submission or **Update** if this is an updated submission
- 5. Add consolidated Tender files in Adobe PDF format, and Appendix 1 in Microsoft Excel XLS format, and Send** (ensure your web browser remains open until you receive a files sent message. You will also receive an email from QFile confirming the submission)

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

April 2026

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: Johnson MUP and Atlantic Sidewalk Rehabilitation
Reference No.: 72497

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 **August 31, 2026**; 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 72497
Johnson MUP and Atlantic Sidewalk 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
1.0	01 55 005	TRAFFIC CONTROL, VEHICLE ACCESS AND PARKING				
1.01	(1.5.1)	Traffic Control and Management				Incidental to Contract
2.0	01 57 015	ENVIRONMENTAL PROTECTION				
2.01	(1.6.1)	ESC Supply & Installation, Maintenance and Removal				Incidental to Contract
JOHNSON STREET (GLEN DRIVE - BARNET HWY)						
3.0	01 58 015	PROJECT IDENTIFICATION				
3.00	(1.3.1)	Construction Zone Information Signs	ea.	4		
3.01	(1.3.2)	CMS Board x 1	month	2		
4.0	31 11 015	CLEARING AND GRUBBING				
4.01	(1.4.1)	Clearing and Grubbing (including Tree Removals)	LS	1		
5.0	31 24 135	ROADWAY EXCAVATION, EMBANKMENT AND COMPACTION				
5.01	(1.8.4)	Removal and Disposal of Asphalt Flat Works	sq.m	525		
5.02	(1.8.5)	Common Excavation including Off Site Disposal	cu.m	739		
5.03	(1.8.10)	Over Excavation Includes Excavation, Off Site Disposal, Backfill Material, Grading & Compaction) - Provisional	cu.m	10		
6.0	32 11 16.15	GRANULAR SUBBASE				
6.01	(1.4.3)	75mm Crushed Granular Subbase	tonne	772		
7.0	32 11 235	GRANULAR BASE				
7.01	(1.4.3)	19mm Crushed Granular Base	tonne	304		
8.0	32 12 165	HOT MIX ASPHALT CONCRETE PAVING				
8.01	(1.5.3)	50mm Asphalt MUP - MMCD Upper Course #2	tonne	75		
9.0	32 91 215	TOPSOIL AND FINISH GRADING				
9.01	(1.4.1)	Imported Topsoil (150mm)	cu.m	35		
10.0	32 92 235	SODDING				
10.01	(1.8.1)	Sodding	sq.m	222		
ATLANTIC AVENUE (PACIFIC ST - BALDWIN ST)						
11.0	01 58 015	PROJECT IDENTIFICATION				
11.01	(1.3.1)	Construction Zone Information Signs	ea.	4		
12.0	03 30 205	CONCRETE WALKS, CURBS AND GUTTERS				
12.01	(1.4.5)	Concrete Sidewalk & Boulevard - 100mm thick – Broom Finished c/w 100mm Granular Base, and as shown and described in the Contract Documents	sq.m	295		
13.0	31 11 015	CLEARING AND GRUBBING				
13.01	(1.4.1)	Clearing and Grubbing	LS	1		
14.0	31 11 415	SHRUB AND TREE PRESERVATION				
14.01	1.3.1	Tree Protection incl. Tree Protection Fencing as per COQ-R26	lin.m	30		
14.02	(1.3.2)	Hydro Excavation - Provisional	Allowance		\$30,000.00	\$30,000.00
14.03	(1.3.3)	Remove and Dispose of Existing Tree Grates	each	11		
15.0	31 24 135	ROADWAY EXCAVATION, EMBANKMENT AND COMPACTION				
15.01	(1.8.4)	Removal and Disposal of Concrete Pavers and Concrete Flat Works	sq.m	295		
15.02	(1.8.5)	Common Excavation including Off Site Disposal	cu.m	88		
15.03	(1.8.10)	Over Excavation Includes Excavation, Off Site Disposal, Backfill Material, Grading & Compaction) - Provisional	cu.m	10		
16.0	32 11 16.15	GRANULAR SUBBASE				
16.01	(1.4.3)	75mm Crushed Granular Subbase	tonne	42		
17.0	32 12 33	SURFACE TREATMENTS				
17.01	1.5.1	Romex Tree Pit - 50mm Thick - Romex Profi-DEKO c/w 9mm Clear Crush	sq.m	30		
18.0	32 91 13.235	STRUCTURAL SOIL				
18.01	(1.8.1)	Structural Soil within Critical Root Zone of Existing Trees (Includes Geogrid)	tonne	630		

ITEM NO.	MMCD Ref. / (Supplementary Contract Specifications)	DESCRIPTION	UNIT	QTY	UNIT PRICE	EXTENDED AMOUNT
ATLANTIC AVENUE AND THE HIGH STREET						
19.0	01 58 015	PROJECT IDENTIFICATION				
19.01	(1.3.1)	Construction Zone Information Signs	ea.	4		
19.02	(1.3.3)	"Businesses Open Signage"	ea.	2		
20.0	03 30 205	CONCRETE WALKS, CURBS AND GUTTERS				
20.01	(1.4.3)	Concrete Curb and Gutter - MMCD C4	lin.m	2		
20.02	(1.4.3)	Concrete Curb and Gutter - MMCD C5	lin.m	22		
20.03	(1.4.3)	Concrete Curb and Gutter - Reversed MMCD C5	lin.m	10		
20.04	(1.4.3)	Concrete Curb and Gutter - MMCD C6	lin.m	29		
20.05	(1.4.5)	Concrete Sidewalk - 100mm thick – Broom Finished c/w 100mm Granular Base, and as shown and described in the Contract Documents	sq.m	75		
20.06	(1.4.5)	Stamped Concrete Median Infill - 100mm thick (incl. granular base)	sq.m	30		
20.07	(1.4.5)	Concrete Wheelchair Letdown as per COQ-C9C	ea.	4		
20.08	(1.4.10)	Tactile Strip - 24in x 60in - Access Tile, Yellow Colour, Removable Type	ea.	4		
21.0	31 24 135	ROADWAY EXCAVATION, EMBANKMENT AND COMPACTION				
21.01	(1.8.4)	Removal and Disposal of Existing Curb	lin.m	20		
21.02	(1.8.4)	Removal and Disposal of Concrete Flat Works	sq.m	180		
21.03	(1.8.4)	Removal and Disposal of Existing Planters (including Curb Base, Allan Blocks, Topsoil, Landscaping and Delineators)	LS	1		
21.04	(1.8.5)	Common Excavation including Off Site Disposal	cu.m	78		
21.05	(1.8.10)	Over Excavation Includes Excavation, Off Site Disposal, Backfill Material, Grading & Compaction) - Provisional	cu.m	10		
22.0	32 11 235	GRANULAR BASE				
22.01	(1.4.3)	19mm Granular Base (Variable Thickness) - Provisional	tonne	46		
23.0	32 12 165	HOT MIX ASPHALT CONCRETE PAVING				
23.01	(1.5.1)	Asphaltic Concrete Paving - MMCD Upper Course #1 (50mm)	tonne	7		
23.02	(1.5.1)	Asphaltic Concrete Paving - MMCD Lower Course #1 (75mm)	tonne	11		
24.0	32 17 235	PAINTED PAVEMENT MARKINGS				
24.01	(1.5.3)	Supply and Installation of Thermoplastic Pavement Markings as shown in the Contract Drawings	LS	1		
24.02	(1.5.4.2)	Relocate Existing Signage	each	1		
25.0	33 44 015	MANHOLES AND CATCHBASINS				
25.01	(1.5.3.2)	Manhole Adjustment Only	each	1		

Total Tendered Price (exclude GST): _____

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

Name of Contractor: _____

APPENDIX 2

FORM OF TENDER

Contract 72497

Johnson MUP and Atlantic Sidewalk Rehabilitation

PRELIMINARY CONSTRUCTION SCHEDULE

(See paragraph 5.3.2 of the Instructions to Tenderers)

INDICATE SCHEDULE WITH BAR CHART WITH CONSTRUCTION DURATIONS

CONSTRUCTION ACTIVITY	MAY		JUNE					JULY				AUGUST			
	3	4	1	2	3	4	5	1	2	3	4	1	2	3	4

Substantial Completion Date: **August 31, 2026.**

Proposed Disposal Site: _____

APPENDIX 3

FORM OF TENDER

Contract 72497

Johnson MUP and Atlantic Sidewalk 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 72497

Johnson MUP and Atlantic Sidewalk 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 72497
Johnson MUP and Atlantic Sidewalk 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 72497
Johnson MUP and Atlantic Sidewalk 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
_____, 2026, 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 _____, 2026.

SIGNED, SEALED AND DELIVERED

In the presence of:

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

APPENDIX 7

FORM OF TENDER

Contract 72497
Johnson MUP and Atlantic Sidewalk 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: **72497**

Contract Name: **Johnson MUP and Atlantic Sidewalk Rehabilitation**

Description of Work:

- 295 square metres of concrete sidewalk replacement on Atlantic Avenue between Baldwin Street and Pacific Street;
- Intersection upgrades at Atlantic Avenue and The High Street;
- 560 square metres of multi use pathway structure replacement and paving on Johnson Street;
- Boulevard enhancements; and,
- Other miscellaneous and incidental works as further described in the Contract Documents

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

Special Coverage Required: **YES NO Special Coverage Description**
() (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 _____ 2026.

Contract: **Johnson MUP and Atlantic Sidewalk Rehabilitation**

Reference No. 72497

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 **August 31, 2026**, 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

Edwin Dela Rosa, ASCT
(MANAGER, CAPITAL PROJECTS AND INSPECTIONS)
Representative as Per G.C. 17

Chad Braley, ASCT
(SENIOR MANAGER, DESIGN AND CONSTRUCTION)

Johnson MUP and Atlantic Sidewalk Rehabilitation

Reference No: 72497

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

Johnson MUP and Atlantic Sidewalk Rehabilitation

Reference No: 72497

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: Archaeological Chance Find Procedures

Appendix C: Arborist Report

Appendix D: Standard Detail Drawings

Bound Separately: Contract Drawings

TITLE	SHEET NO.	REVISION NO.	DATE
COVER	00	-	-
GENERAL NOTES	01	0	2026-03-31
DETAILS	02	0	2026-03-31
ROADWORKS - PLAN	03	0	2026-03-31
ROADWORKS - PLAN	04	0	2026-03-31
ROADWORKS - PLAN	05	0	2026-03-31
ROADWORKS - PLAN	06	0	2026-03-31

Supplementary General Conditions

SUPPLEMENTARY GENERAL CONDITIONS

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24.1	General	SGC 12
24.2	Required Insurance	SGC 13
24.3	Physical Loss or Damage with Respect to New Buildings under Construction and/or Major Additions to Existing Structures	SGC 14
24.4	Additional Insured	SGC 17
Section 25: MAINTENANCE PERIOD		SGC 17
25.1	Correction of Defects	SGC 17
Section 27: CONTRACTOR PERFORMANCE EVALUATION		SGC 18
APPENDICES		SGC 19 to SGC 25
Appendix I	Performance Bond	SGC 19 to 20
Appendix II	Labour and Material Payment Bond	SGC 21 to 23
Appendix III	Certificate of Insurance	SGC 24
Appendix IV	Prime Contractor Designation Letter	SGC 25

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 Variations 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 *Substantial Performance* is achieved after the Substantial Performance Milestone Date; plus

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

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

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

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

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

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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 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

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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 Oblige 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 Oblige 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 Oblige or by joining the Oblige 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 Oblige against all costs, charges and expense or liabilities incurred thereon and any loss or damage resulting to the Oblige 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 Oblige 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 Oblige, stating with substantial accuracy the amount claimed. Such notice shall be served by mailing the same by registered mail to the Principal, Surety and Oblige 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

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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 #: **72497**
Project / Workplace: **Johnson MUP and Atlantic Sidewalk 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

Supplementary Contract Specifications

to the
MASTER MUNICIPAL SPECIFICATIONS
Volume II – Platinum Book

JOHNSON MUP AND ATLANTIC SIDEWALK REHABILITATION

CONTRACT 72497

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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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01 45 00S	Quality Control	SS 8 to SS 10
01 55 00S	Traffic Control, Vehicle Access and Parking	SS 11 to SS 12
01 57 01S	Environmental Protection	SS 13 to SS 15
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03 30 20S	Concrete Walks, Curbs, and Gutter	SS 17 to SS 18
31 05 17S	Aggregates and Granular Materials	SS 19 to SS 20
31 11 01S	Clearing and Grubbing	SS 21
31 11 41S	Shrub and Tree Preservation	SS 22 to SS 23
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32 11 16.1S	Granular Subbase	SS 26
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32 92 23S	Sodding	SS 52 to SS 58
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1.0 CONTRACT SPECIFIC INSTRUCTIONS

1.01 Schedule of Work

All work under this Contract is to be completed within the designated Contract Duration. The *Contractor* must provide sufficient resources in a continuous effort and site presence to complete all the work within the allotted time, unless otherwise approved by *Contract Administrator*. As set out in the MMCD the *Contractor* must provide updates to the construction.

1.02 Coordination of Work

The *Contractor* shall be responsible to consult with all affected businesses, residents, schools and transportation companies regarding delays, detours, and any other works affecting 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*.

1.03 Outside Agency Approval

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 Hydro, Metro Vancouver, Fortis BC, Kinder Morgan, Telus, in the area of the place of Work where applicable.

1.04 Cooperation with Emergency and Maintenance Activities

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
- Garbage and recycling pick-up
- City Utilities Maintenance, Parks and Recreation (or representatives)
- Other City Contractors

1.05 Manholes and Valves

Access to manholes and valves must be maintained at all time 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*.

1.06 Waste Collection Coordination

1. The *Contractor* is responsible to accommodate all recycling and 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:
 - i. 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):
 - i. The *Contractor* must provide residents with as much notice as possible – minimum 5 working days.
 - ii. 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 Coquitlam Recycling and Waste Centre or covering the cost associated for any missed collection to be rescheduled.

Questions: wastereduction@coquitlam.ca

**1.07 Lane Closure
Restrictions and Hours
of Work**

Refer to Appendix A: Traffic Management Detail Specifications.

1.08 Site Safety

The *Contractor* is responsible to ensure the construction site is safe at all times for workers, pedestrians, and vehicle traffic. During non-working hours, the *Contractor* must ensure that the site has all potentially hazardous areas appropriately identified and protected, and also must provide appropriate signage, lighting, and markings for the direction of vehicle and pedestrian traffic, all to ensure the safety of the public. Supply and use of this equipment is considered incidental to the contract.

Manhole lids, valve boxes and other appurtenances within the roadway that may present a traffic hazard during construction must be clearly marked for traffic.

Manhole lids left raised in preparation for paving must have a rubberized protector ring for traffic safety. Supply and use of this equipment is considered incidental to the contract.

**1.09 Location of Existing
Utilities**

The *Contractor* is responsible to **pre-locate** and verify the size, depth and location of all utilities (watermains, storm mains, sanitary mains & etc.), including outside agency utilities (i.e. Telus, BC Hydro & etc.)

and service connections (water, storm & sanitary services at the mains & property lines) by hand digging or by Hydro-Vac in the presence of the Inspector.

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 BC One for location of outside agency utilities. The Contactor will not receive any compensation or allowance for delays if work is halted due to utilities & services connections not located prior to commencing construction. Locating Metro Vancouver sanitary and watermain crossings and Fortis BC crossings must be completed by Hydro-Vac.

Payment for this work will be treated as incidental to payment for work described in other Sections.

1.10 Verification of Dimensions and Quantities

Before proceeding with the work, the *Contractor* should visit the site and check and verify dimensions and quantities. Report variations between drawings and site conditions to the *Contract Administrator* before proceeding with work.

1.11 Survey Layout

Construction layout will be the responsibility of the Contract Administrator as outlined in Supplementary General Condition 4.1.1.

1.12 Temporary Asphalt Pavement Restoration

The *Contractor* will be required to backfill all trenches at the end of each work day. A temporary pavement patch (50mm of hot mix asphalt) as per Coquitlam Standard Drawing COQ-G4 will be required at the end of each work week or as required by the Contract Administrator.

1.13 Approved Materials

Refer to the City of Coquitlam website at <https://www.coquitlam.ca/DocumentCenter/View/340/List-of-Approved-Materials-PDF?bidId=> for the *List of Approved Materials and Products* which are to be incorporated into the work.

2.00 CONSTRUCTION ACTIVITY

2.01 Pavement Markings

The *Contractor* will be responsible for temporary traffic markings necessary for traffic direction and safety until permanent markings are installed.

2.02 Construction Materials in Sewer Manholes and Pipe

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 again 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.

2.03 Site Clean-up During Construction and End of Construction

The *Contractor* will be responsible for the complete clean-up of the work site during construction and 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. 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.

Payment for all work in this section is considered incidental to payment for work described in other Sections.

3.00 MANDATORY MEETINGS AND CONTRACTOR REPRESENTATIVES AND SUBCONTRACTORS

3.01 Pre-Construction Meeting Requirements

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:

1. A Detailed Construction Schedule showing the start date, completion date and the 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.

3.02 Contract Schedule, Contract Duration, and Charges

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.

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.

No greater quantity of work shall be undertaken at any one time that cannot be properly conducted with due regard to the rights and interests of the public as determined by the Contract Administrator. This shall include a limit of one site or two interconnected sites being under construction simultaneously at any one time including the completion of temporary pavement restoration and permanent boulevard restorations. The Contract Administrator may withhold permission for the Contractor to progress into additional work zone(s) or Place of Work if the Contractor in the opinion of the Contract Administrator has undertaken more work than can properly be conducted. This permission shall be withheld free from penalties, claims, remuneration and requisition of additional Contract days from the Contractor.

**3.03 Contract
Superintendent and
Sub Contractors**

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.

This (FULL TIME) attendance is also required when work is being performed by Subcontractors.

Work done by Subcontractor 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*.

The Owner is not responsible for the direction of Subcontractor.

**3.04 Changes of Contractor
Representatives &
SubContractors**

The Superintendent and Subcontractor indicated in the Form of Tender shall not be changed unless:

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.

1.0 GENERAL

1.3 Submission

Delete 1.3.2 and
replace with the
following

Submit one copy of an accurate project record document in final form prior to applying for Substantial Performance including any video report, test reports and Operation & Maintenance manual. Record documents to include changes in the Issued for Construction Drawings, new elevation, offsets & location of all utilities, manhole rim, catchbasin rim, vaults, valve boxes, inverts walkways/sidewalks, and any unknown/new utilities found on site. Legal holdbacks will not be released until complete record documents, including reports and manuals, have been submitted and accepted by the *Contract Administrator*.

END OF SECTION

1.0 QUALITY

The Contractor shall provide a final product conforming to the Contract Documents and the intent of the work.

The work is to be accurate to the dimensional and tolerance requirements of the contract.

Payment will be subject to adjustments based on quality assurance tests performed by the Contract Administrator.

1.1 Quality Control (QC) by Contractor

The MMCD (2009) definition of “Quality Control” is the process by which the Contractor checks specific materials, products, and workmanship to ensure strict conformance with the Contract Documents.

The Contractor is fully responsible for quality control of the materials, production, and construction processes.

Quality control tests shall be performed by the Contractor, at their own expense, to ensure that products meet the contract specifications.

Failure by the Contractor to conduct adequate quality control testing during production and construction will negate the Contractor’s ability to appeal the quality assurance tests used for acceptance/rejection of the work.

Under no circumstances will QC test results produced after completion of the Quality Assurance (QA) results be considered for appeal purposes

Any changes in the Work with respect to the location, grade, or line shall be approved in advance by the Contract Administrator. Failure to notify the Contract Administrator of changes in writing may result in rejection of Work.

1.2 Inspection of Work, Quality Assurance, and Material Testing, by the Owner

The MMCD (2009) definition of “Quality Assurance” means the process by which the Owner evaluates if the work is being constructed in accordance with the Contract Documents. This definition will be used for this contract

The *Contract Administrator* may provide construction review through spot inspections and spot materials testing for Quality Assurance.

Any materials testing results indicating a non-conformance to the Contract Documents will require construction corrective action by the Contractor.

All subsequent testing to corrective action to verify conformance to the Contract Documents will be the full responsibility of the Contractor.

Inspection review by the Owner will not relieve the Contractor from providing a product that meets or exceeds the requirements of the Contract Documents.

1.3 Inspection

Materials testing shall be as described in MMCD General Conditions, Section 4.12 with the following change:

Delete Section 4.12.2(a) and insert the following:

Where the MMCD specification clauses for Inspection and Testing indicate the Contract Administrator will arrange for all testing for work described in this section will be amended to read The Contractor will arrange for and pay for all testing for work described in this section. The testing shall take place at the following prescribed rates and as directed by the Contract Administrator. The Contract Administrator has the authority to call for testing, up to the rates and frequencies specified, at the Contractors cost.

All testing covered under this item shall be performed by a CCIL 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 Contractors expense.

1.0 QUALITY

The *Contractor* shall provide a final product conforming to the Contract Documents and the intent of the work.

The work is to be accurate to the dimensional and tolerance requirements of the contract.

Payment will be subject to adjustments based on quality assurance tests performed by the *Contract Administrator*.

**1.1 Quality Control (QC)
by Contractor**

The MMCD (2009) definition of “Quality Control” is the process by which the Contractor checks specific materials, products, and workmanship to ensure strict conformance with the Contract Documents.

The *Contractor* is fully responsible for quality control of the materials, production, and construction processes.

Quality control tests shall be performed by the *Contractor*, at their own expense, to ensure that products meet the contract specifications.

Failure by the *Contractor* to conduct adequate quality control testing during production and construction will negate the *Contractor’s* ability to appeal the quality assurance tests used for acceptance/rejection of the work.

Under no circumstances will QC test results produced after completion of the Quality Assurance (QA) results be considered for appeal purposes

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All subsequent testing to corrective action to verify conformance to the Contract Documents will be the full responsibility of the *Contractor*.

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All testing covered under this item shall be performed by a CCIL 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 *Contractors* expense.

1.4 Testing

Contractor shall carry out inspection and testing (QC) to ensure compliance with Contract Documents. *Contractor* shall submit test results within one week of testing to the *Contract Administrator*.

The *Contractor* shall provide test results prior to the preparation of the payment certificate.

**1.5 *Contractors*
Responsibilities**

Furnish labour and facilities to:

2. Provide access to work to be inspected
3. Facilitate inspections and tests

Make good work disturbed by inspection and tests

1.0 GENERAL

Add 1.0.6

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 (5) five working days prior to any lane closures taking place. TMP is to be prepared by a qualified professional to the satisfaction of the Contract Administrator.

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.

The Contractor is responsible to ensure and maintain all business/residential vehicles, cyclists and pedestrian accesses open at all times. **The contractor must provide a minimum 1.5m hard surface access at all project sites fronting businesses.** All costs associated with temporary accesses will be incidental to payment for work described in other sections.

Add 1.0.7

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.

Add 1.0.8

Refer to Appendix A – Traffic Management Detail Specifications.

1.4 Traffic Control

Delete 1.4.1 and replace with the following

The Contractor shall conduct his 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.

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.

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.

Add 1.4.9.3.1

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.

The *Contractor* is responsible for the removal of the signs at the completion of the work.

Delete 1.4.10.1.3 and replace with the following

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.

1.5 Measurement for Payment

Delete 1.5.1 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.

END OF SECTION

1.0 GENERAL

1.0.3 Erosion and Sediment Control Supervisor

Add 1.03

The Erosion and Sediment Control (ESC) Supervisor is the Qualified Professional who is experienced in implementing ESC Plans and who is responsible for the inspection and monitoring of ESC Facilities to ensure these are installed and maintained in accordance with the ESC Plan, and if necessary, are modified during construction to ensure compliance with the Stream and Drainage System Protection Bylaw No. 4403, 2013.

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 a Sediment Control Plan under the City of Coquitlam Stream and Drainage System Protection Bylaw No. 4403, 2013 during construction and until the maintenance period is completed. 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 their 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 favorable 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.
1.4	Environmental Protection	Add 1.4.3.5	Immediately contain and clean up any leaks and spills of prohibited materials at the <i>Place of Work</i> .
		Add 1.4.3.6	Ensure that a well-stocked spill kit is on-site at all times and that the <i>Contractor's</i> employees are familiar with appropriate spill response techniques.
		Add 1.4.3.7	Immediately notify the <i>Contract Administrator</i> and the City of any leaks or spills of prohibited materials that occur at the <i>Place of Work</i> .
		Add 1.4.3.8	Ensure that any fuel stored on-site is located at least 15 meters from the nearest stream, and is placed within a bermed 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 refueling or servicing shall be undertaken within a minimum of 15 meters of any water course or surface water drainage.
		Add 1.4.3.10	During all phases of the operation, the <i>Contractor</i> shall 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 <i>Contract Administrator</i> .
1.6	Measurement and Payment	Delete 1.6.1 and replace with the following	Payment for all work performed under this section will be incidental, unless shown otherwise in the Schedule of Quantities and Prices..
		Add 1.6.2	Payment for the poly cover or temporary tarps over stock pile materials or exposed road subgrades shall be treated as incidental work.
1.8	Clean Up	Add 1.8.2	The work will include cleaning of all catch basins within the work area, or nearby location as affected by the Work, and all manholes and/or sewers affected by work done under this contract. All cleaning is to be performed by vacuum truck to the satisfaction of the <i>Contract Administrator</i> and will include off-site disposal of waste material.
1.9	Archaeological / Historical Resources	Add 1.9	Immediately cease work and inform the <i>Contract Administrator</i> 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 follow the City's Chance Find Procedures (*Appendix B - Archaeological Chance Find Procedures*).

END OF SECTION

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 and as described in Appendix A – Traffic Management Detail Specifications includes supply, placement & removal and will be incidental, 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 and removal as required for traffic and pedestrian safety 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 boards used for only a fraction of a month will be paid prorata.

Add 1.3.3

Payment for “businesses open” signage includes supply, placement, communication management and removal as required and will be considered incidental to payment for work described in other Sections, unless otherwise shown in the Schedule of Quantities and Prices.

END OF SECTION

1.4	Measurement and Payment	Delete 1.4.3 and replace with the following	Payment for machine placed or hand formed C4, C5 or C6 concrete curb and gutter, includes supply and placing of the concrete curb and gutter, saw cutting, subgrade preparation, granular base, compaction, tie-ins, transitions, and will cover all straight and curved sections and will be made separately for each specified type. Payment for removal of existing concrete curb work up to will made made under payment item 32 24 13S – Roadway Excavation, Embankment and Compaction.
		Delete 1.4.5 and replace with the following	Payment for concrete sidewalks, letdowns, median infill, and driveways includes supply and installation, saw cutting, granular base, regrading of driveways and sidewalks for proper tie-in, and will be made separately for each specified thickness and type of finish. Adjustment to existing junction boxes, water valves and water meter boxes will be considered incidental. Payment for removal of existing concrete flat work up to 190mm depth will made made under payment item 32 24 13S – Roadway Excavation, Embankment and Compaction.
		Add 1.4.10	Payment for Detectable/Tactile Warning Surface Tile includes supply and placing of Access Tile Model # ACC-R-2x5 (or approved equal) Truncated Dome Detectable Warning Tactile Surface 2'x5' replaceable cast in place - Yellow Color and installation as per the Manufacture's Specifications.
2.1	Materials	Delete 2.1.5.1 and replace with the following	Hand-formed and hand-placed concrete: Slump: 80 mm. Air entrainment: 5 to 8%. Maximum aggregate size: 20 mm. Minimum cement content: 335 kg/m ³ . Minimum 28 day compressive strength: 32 MPa.
		Add 2.1.7	Tactile warning surface tile shall be replaceable cast-in-place style. Truncated domes shall be in square grid pattern with a 5 mm nominal raised height, base diameter of 23 mm and top diameter of 11.5 mm. Dome spacing range shall be between 40 mm – 60 mm. Color of the panel shall be Federal Yellow (Y) per US Federal Standard 595B Table IV, Color No. 335.

Minimum size of the panel shall be 600 mm by 1200 mm.

3.0 EXECUTION

3.5 Concrete Placement

Delete 3.5.9 and replace with the following

The *Contractor* is responsible for adjusting all utility manhole frames and valve boxes, belonging to Coquitlam and/or other agencies that are affected by the road works. All adjustments to utilities must be completed to the satisfaction of the utility owner. Riser rings will not be accepted.

The *Contractor* should note that certain utility owners may decide to complete their own adjustments. The *Contractor* will be required to cooperate with any utility company providing their own adjustments.

The *Contractor* shall be responsible to contact the appropriate utility company within a minimum of seventy-two (72) hours of the work. No adjustment shall be made without the written approval of the utility company. All manholes must be vertically adjusted a minimum of twenty-four (24) hours prior to concrete placement.

3.9 Expansion Joints

Delete 3.9.1 and replace with the following

Form transverse expansion joints at both ends of curb returns and at maximum spacing of 9.0 m for sidewalks, 30.0 m of curb and gutter, at each end of driveway crossing, at tangent point of circular work, and on either side of catch basins.

END OF SECTION

2.0 PRODUCTS

2.3 Pit Run Gravel

Add to 2.3.2

The use of recycled concrete shall be approved by the *Contract Administrator* and the City prior to use.

Add 2.3.3

Asphalt millings free from contaminated and other extraneous material, conforming to the specified gradations may be used as pit run gravel. The use of asphalt millings shall be approved by the *Contract Administrator* and the City prior to use.

2.7 Granular Pipe Bedding and Surround Material

Add to 2.7.1

All recycled or other extraneous materials shall be approved by *Contract Administrator* and the City prior to use.

2.10 Granular Base

Delete 2.10.2

Add 2.10.3

All 25 mm minus granular base is to conform to the following gradation specifications for Collector / Arterial Roads:

Sieve Designation (mm)	Percent Passing (%)
25	100
19	80-100
12.5	75-90
9.5	50-85
4.75	35-70
2.36	25-50
1.18	15-35
0.30	5-20
0.075	0-5

Add 2.10.4

The intention of the Gradation Chart is to identify the desired mix of size of aggregate in the granular base. The Target Percentage Passing is the middle of the shown Range.

Tests that show sieve values of Percent Passing that are consistently low or consistently high in two (2) or more consecutive tests will be considered to be non-conforming.

2.11 Recycled Aggregate Material

Delete 2.11.1 and replace with the following

Aggregates containing recycled material may be utilized if approved by the *Contract Administrator* and the City. In addition to meeting all other conditions of the specifications, recycled material should not reduce the quality of the construction achievable with quarried

materials. Recycled material shall consist only of aggregates, crushed portland cement concrete, or asphalt that is free of impurities.

END OF SECTION

1.4 Measurement and Payment

Delete 1.4.1 and replace with the following

Payment for all clearing and grubbing will be made at lump sum price bid or as shown on the Schedule of Quantities and shall include removal and offsite disposal of all trees, branches, stumps, timbers, organic matter and vegetation to complete the work as shown on the Contract Drawings or as directed by the Contract Administrator. Works include cutting of branches & trees as required to create the necessary clearance to accommodate the construction.

A bird nesting survey will be required prior to tree removals occurring. The City will appoint an arborist to complete the bird nesting survey. Trees cannot be removed until bird nesting survey is received and accepted. The Contractor is to provide at least 7 Days notice to allow for coordination of works prior to removal. A copy of the bird nesting survey will be provided to the Contractor for reference.

END OF SECTION

- 1.3 Measurement and Payment**
- Add 1.3.2 Payment by allowance for Hydro Excavation around existing trees includes all labor, material, equipment, removal and disposal to complete the work as shown on the Contract Drawings or as directed by the Contract Administrator. Payment includes coordinating the work of all locations requiring hydro excavation to maximize the use of the hydro excavation machine and coordination with the Site Arborist.
- Payment shall be made for the actual cost on a Force Account basis as defined in GC 10.0.
- Add 1.3.3 Payment for the removal and offsite disposal of existing metal tree grates includes all labour, material and equipment required to complete the work as shown on the Contract Drawings.
- 2.0 PRODUCTS**
- 2.1 Materials**
- Add 2.1.10 Protective Fencing: Posts - Pressure treated wood 100 mm dia.; Post to be 1.8 m to 2.0m in height at 2.0 m O.C. Snow fence as per Coquitlam Approved Products List; Flagging Tape - 4" Orange glow - 'Tree Retention Area'.
- 2.0 EXECUTION**
- 3.1 Existing Trees**
- Add 3.1.7 The *Contractor* is responsible to minimize damage to all trees which are to remain.
- Add 3.1.8 The *Contractor* will be responsible for all claims and costs including the cost of examination by an Arborist, repair, removal and replacement of trees, as required by the Arborist, the *Contract Administrator* and the City for tree damage where proper notification was not received from the *Contractor*. Damage will be assessed based on the International Society of Arboriculture Guidelines. The term shall be for a period of one year following the date of Substantial Performance of the *Work*.
- Add 3.1.9 Place protective fencing/barricades as per Coquitlam Standard Detail Drawings COQ-R26, where identified on the Contract Drawings. *Contractor* shall maintain fence in good condition during construction
- Add 3.1.10 When work is to be performed inside fenced areas, *Contractor* shall take care to avoid damage to existing vegetation. Work to be done inside areas of existing vegetation to be retained includes:
- .1 Removal of isolated trees as directed by the *Contract Administrator* and the City.

.2 Selective pruning and tree removal at edges to create tidy and well-shaped forest edge.

.3 Placing planting soil and planting of trees.

Add 3.1.11

Do not park, service or fuel vehicles within the vegetation retention areas.

3.4 Pruning

Add 3.4.2

Do not cut roots or branches of retained trees without approval of the *Contract Administrator* and the City.

END OF SECTION

1.8 Measurement and Payment

Delete 1.8.4 and replace with the following

Payment under this item will only apply to removal of the components included in this item under a separate operation as shown on the Contract Drawings or as directed by the Contract Administrator. No payment will be made under this item for removal of these components as part of the operation for common excavation.

Payment will be made at the respective unit prices bid in the Schedule of Quantities and Prices and will include all labour, and equipment required to complete the work, including offsite disposal. It is the responsibility of the contractor to locate and verify all utilities.

Delete 1.8.5 and replace with the following

Payment for Common Excavation includes:

1. Unless noted in the Schedule of Quantities and Prices as removal in square meters, common excavation will be measured in cubic meters calculated from measurements taken by the Contract Administrator in the areas of excavation for road widening areas.
2. Cross-sections will be taken after clearing and grubbing and after stripping of existing topsoil immediately prior to excavation of material to be incorporated into work.
3. Where determined by the Contract Administrator that truck box volume will be used to determine excavation quantities the volume per load shall be determined using 75% of the truck load quantity. The following is to be used for payment:

Truck Type	Material Type	Volume (cu.m)
Tandem	ordinary material	7
Tandem	asphalt/concrete/pipe	4
Triaxle	ordinary material	8
Triaxle	asphalt/concrete/pipe	5
Tandem and Pony	ordinary material	11
Tandem and Pony	asphalt/concrete/pipe	7.5
Triaxle and Pony	ordinary material	13
Triaxle and Pony	asphalt/concrete/pipe	9
Tandem and Transfer	ordinary material	19

Tandem and Transfer	asphalt/concrete/pipe	13
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4. Contractor to provide truck slips detailing location type of common excavation, time loaded and location of dump site. The slips are to be given to Contract Administrator by the end of shift or Contract Administrator can deny quantities subsequently submitted.
5. Payment for on site re-use includes excavation, transport, temporary stockpiling, placement, compaction, boning, adjustment of moisture content, spreading and grading of material anywhere on site or within the work zone, as needed, to establish the roadway & pathway cross-section.

Payment will be made at the respective unit prices bid in the Schedule of Quantities and Prices and will include all labour, and equipment required to complete the work, including offsite disposal. It is the responsibility of the contractor to locate and verify all utilities.

Delete 1.8.10 and replace with the following

Payment for replacement of areas of unsuitable sub-grade revealed during compaction or as directed by the Contract Administrator will include excavation with off-site disposal, supply & compaction of crushed granular base material and all remedial work required to achieve a suitable subgrade. Payment will be based on the cubic metre volume removed.

2.0 PRODUCTS

2.2 Specified Materials

- Delete 2.2.1.3 Pit Run Sand
- Delete 2.2.1.4 River Sand
- Delete 2.2.2

END OF SECTION

GRANULAR SUBBASE

- 1.4 Measurement and Payment**
- Delete 1.4.1 and replace with the following
- Delete 1.4.2 and replace with the following
- Delete 1.4.3 and replace with the following
- Delete 1.4.4 and replace with the following
- Measurement for granular subbase of variable thickness will be for actual quantity placed based on weigh tickets provided to Contract Administrator as loads are delivered.
- Measurement for granular subbase for each specified thickness will be for the actual area placed.
- Payment for Subsection 1.4.1 & 1.4.2 above includes supply, placement and compaction of granular subbase material, adjustment of moisture content, and boning to establish the road cross-section, shall be included in the unit price bid in the Schedule of Quantities and Prices. Payment includes submission of tickets as loads are delivered. Tickets not submitted within 24 hours of load delivery to site will not be paid.
- Payment for removal of unsuitable road structure, including disposal off-site prior to direct placement of granular subbase, will be made under Section 31 24 135 – Roadway Excavation, Embankment and Compaction.
- 2.0 PRODUCTS**
- 2.1 Specified Materials**
- Delete
- 2.1.1.1: Select Granular Subbase
2.1.1.2: 75 mm Pit Run Gravel
2.1.1.4: Pit Run Sand
2.1.1.5: Approved Native Material
2.1.1.7: River Sand

END OF SECTION

GRANULAR BASE

1.4	Measurement and Payment	Delete 1.4.1 and replace with the following	Measurement for granular base of variable thickness will be for actual quantity placed based on weigh tickets provided to <i>Contract Administrator</i> as loads are delivered.
		Delete 1.4.2 and replace with the following	Measurement for granular base for each specified thickness will be for the actual area placed.
		Delete 1.4.3 and replace with the following	Payment for Subsection 1.4.1 & 1.4.2 above includes supply, placement and compaction of granular base material, adjustment of moisture content, and boning to establish the road cross-section, factored into the unit price bid in the Schedule of Quantities and Prices. Payment includes submission of tickets as loads are delivered. Tickets not submitted within 72 hours of load delivery to site will not be paid.
		Delete 1.4.4 and replace with the following	Payment for removal of unsuitable subgrade including disposal off-site prior to direct placement of granular subbase will be made under Section 31 24 13S – Roadway Excavation, Embankment and Compaction.
		Add 1.4.5	
2.0	PRODUCTS		
2.1	Granular Base	Add 2.1.1.3	25 mm minus crushed gravel conforming to the gradation specifications for Collector/Arterial Roads under Section 31 05 17S – 2.10.3.
3.0	EXECUTION		
3.5	Proof Rolling	Delete 3.5.1 and replace with the following	For proof rolling, use fully loaded single axle, to 80 KN (18,000 lb) minimum, dump truck.
		Add 3.5.7	Prior to paving with asphalt concrete, the base surface shall be checked by the <i>Contract Administrator</i> and the City, for deflections utilizing a Benkelman Beam, in order to ensure that the final rebound requirements can be obtained with the asphalt pavement. In the event that such deflection is in excess of those required to produce the final standards, then the base shall be adequately strengthened by additional gravel or asphalt concrete to insure that final deflections as follows are not exceeded. The Benkelman spring rebound value of the completed pavement surface shall not at any point exceed 0.75 mm for arterial industrial roads and lanes, 1.15 mm for

collector roads, and 1.5 mm for local roads and lanes as determined in the procedures outlined in the Transportation Association of Canada publication "Pavement Management Guide."

END OF SECTION

1.0 GENERAL

1.4 Submission of
Mix Design

Delete 1.4.1 and
replace with the
following

Submit asphalt concrete mix design, including RAP content and trial mix test results to *Contract Administrator* for review at least two weeks prior to commencing work.

1.5 Measurement and
Payment

Delete 1.5.1 and
replace with the
following

Payment for asphaltic concrete paving includes all construction joint preparation, surface milling to tie into existing asphalt, saw cutting, supply and placing of the asphaltic concrete, compaction and cleaning frames, covers and lids of castings affected and taped temporary pavement markings.

Curb face cleaning of dust and debris prior to asphalt paving will be considered incidental to the work as described above.

Measurement for asphaltic concrete paving for the specified design mixes will be made at the respective unit prices bid in the Schedule of Quantities and Prices and incorporated into Work will be asphalt concrete actually based on weigh tickets provided to the *Contract Administrator* as loads are delivered. Payment includes submission of tickets as loads are delivered. Tickets not submitted within 72 hours of load delivery to site will not be paid.

The *Contractor* will not receive any additional compensation above the respective unit prices bid in the Schedule of Quantities and Prices for Hand Work, Special Equipment & Machinery to complete the Hot Mix Asphaltic Paving Work as shown on the Contract Drawings or as directed by the *Contract Administrator*.

MILLED SURFACES MUST BE PAVED WITHIN 48 HOURS PERIOD (2 DAYS) UNLESS OTHERWISE NOTED BY THE CONTRACT ADMINISTRATOR.

Delete 1.5.3 and
replace with the
following

Payment for machine/hand placed asphaltic concrete pathways includes all construction joint preparation, tie-in to curb, tie-in to new or existing asphalt, saw cutting, supply and placing of the asphaltic concrete, tack coat, compaction, cleaning frames, covers and lids of castings affected.

Measurement for asphaltic concrete paving for the specified design mixes will be made at the respective unit prices bid in the Schedule of Quantities and Prices will be

made for asphalt concrete actually based on weigh tickets provided to the *Contract Administrator* as loads are delivered. Payment includes submission of tickets as loads are delivered. Tickets not submitted within 72 hours of load delivery to site will not be paid.

Payment for this item includes all applicable materials, specifications and work described in 1.5.1.

Add 1.5.9

The *Contractor* or the *Owner* may request adjustment of the unit prices submitted for Asphalt Pavement if the Composite Rack Posting (CRP) varies by more than 5.0% from Tender Closing Date to the time the asphalt paving is actually performed.

The CRP is a composite of the available Rack Postings for PG 64-22 FOB Langley BC.

Requests for asphalt pavement unit price adjustment must be made prior to commencing asphalt paving. Payment for asphalt paving performed prior to a request for price adjustment will be made at the unit price submitted.

Unit prices will be increased or decreased as applicable using the following formula:

$$\text{Adjustment} = (\text{CRP}_{\text{work}} - \text{CRP}_{\text{tender}}) \times \text{AC}_{\text{volume}}$$

Adjustment is the amount in dollars per tonne the unit price is modified. CRP_{work} is the CRP at the time paving is performed. $\text{CRP}_{\text{tender}}$ is the CRP at the Tender Closing Date. $\text{AC}_{\text{volume}}$ is the mixture design percent asphalt content, by volume.

1.6 Inspection and Testing

Add 1.6.3

Test cores are to be taken at the discretion of the *Contract Administrator* in the areas of new paving and will include cores along construction joints to ensure compliance with the required design and compaction.

2.0 PRODUCTS

2.1 Materials

Add 2.1.2.1

Usage of recycled asphalt shingles or any other materials not specified in the Contract Documents will not be permitted.

Add 2.1.2.2

Usage of softening agents, rejuvenators, or recycling agents will not be permitted.

- 2.2 Mix Design** Delete 2.2.2 and replace with the following
- Mix may contain up to a maximum of 10 % by mass of RAP for Upper Course Asphalt and 15 % by mass of RAP for Lower Course Asphalt without a special mix design. The *Contract Administrator* and the City may approve higher proportion of RAP if *Contractor* demonstrates ability to produce mix meeting requirements of the specification.
- Delete 2.2.3.2 Marshall Stability and replace with the following
- Marshall Stability at 60°C for both lower and upper courses to be 10 KN min.
- 3.0 EXECUTION**
- 3.3 Preparation** Delete 3.3.3 and replace with the following
- The *Contractor* is responsible for adjusting all utility manhole frames and valve boxes, belonging to Coquitlam and/or other agencies that are affected by the road works. All adjustments to utilities must be completed to the satisfaction of the utility owner. Utility adjustment within the paved surface will be considered incidental to the *Work* unless otherwise noted in the *Contract Documents*.
- The *Contractor* should note that certain utility owners may decide to complete their own adjustments. The *Contractor* will be required to cooperate with any utility company providing their own adjustments.
- The *Contractor* shall be responsible to contact the appropriate utility company with in minimum of seventy-two (72) hours of the work. No adjustment shall be made without the written approval of the utility company.
- All manholes must be vertically adjusted a minimum of twenty-four (24) hours prior to paving. The use of riser rings for adjusting manhole frames and value boxes will not be permitted.
- 3.7 Joints** Delete 3.7.5 and replace with the following
- Construct butt joints at locations as shown on the *Contract Drawing* and as directed in the field by the *Contract Administrator* and the City.

END OF SECTION

1.0 GENERAL

1.2 Scope

Delete 1.2.1 and replace with the following

Pavement Markings: Miscellaneous taped temporary and permanent pavement paint markings including pedestrian crosswalk, merge and diverge markings, stop lines, solid and broken line road lane markings including edge lines of merge and diverge markings, bike symbols, etc. to be provided as shown on the Contract Drawing.

1.5 Measurement and Payment

Delete 1.5.2 and replace with the following

All permanent markings shall be marked with thermoplastic road markings as specified under Section 32 17 23S, 2.1 Materials, unless shown otherwise in the Schedule of Quantities and Prices.

Delete 1.5.3 and replace with the following

The lump sum payment for permanent thermoplastic pavement markings covers supplying all materials and completing all the permanent thermoplastic pavement markings necessary to provide markings, including repainting of affected markings, as shown on the Contract Drawings.

NOTE: PAYMENT FOR PERMANENT THERMOPLASTIC PAVEMENT MARKINGS WILL NOT BE MADE UNTIL ALL TEMPORARY PAVEMENT MARKINGS AND REFLECTIVE DEVICES HAVE BEEN REMOVED.

Delete 1.5.4 and replace with the following

Payment for signage includes all sign poles, bases, sleeves, sign relocations, temporary removal, cleaning and re-installation of existing, and sign installations (complete). The City will supply signs as required in Schedule of Quantities and Prices. Payment includes all labor, materials and incidentals to complete the work.

- .1 Installation of each new sign pole, cap, sleeve and trapezoidal base includes all costs to supply all materials, labour and equipment and incidentals, as shown on Standard Detail Drawings SS-E11.1 & SS-E11.2, necessary to the install sign structure as shown on the Contract Drawings and as directed by the Contract Administrator. The unit price payment for each city supplied aluminum sign installed on a new sign pole includes sign mount clamps & all costs to supply all materials, labour and equipment and incidentals necessary to install each sign as directed by the Contract Administrator

- .2 The unit price payment for each relocated or reinstated sign, pole, and base will include labour and equipment and incidentals necessary to remove, securely store, and re-install each sign as indicated on the Contract Drawings.

2.0 PRODUCTS

2.1 Materials

Delete 2.1.1 and replace with the following

All permanent paint markings shall be marked with thermoplastic manufactured by LAFRENTZ Road Markings, HITEX North America (HiBrite Extrude Thermoplastic), or ENNIS-FLINT (Extruded Thermoplastic).

Delete 2.1.6 and replace with the following

Pavement Markings:

Delete 2.1.7 and replace with the following

Thermoplastic material

.1 Material composition shall be at the discretion of the manufacturer subject to the approval of the Contract Administrator and the City. Each formulation shall be identified by a code number.

.2 No retained water when tested by ASTM D-570.

.3 Specific gravity of the supplied product shall be within 3 % of that specified for the selected formulation.

.4 Material shall not deteriorate upon contact with deicing chemicals, gasoline, diesel fuel or grease dropped by traffic.

.5 Material shall not break down, deteriorate, scorch or discolour, if held within the application temperature range specified by the manufacturer for a period of four hours and it must be able to be reheated from room temperature to the application temperature four (4) times without showing any of these detrimental effects.

.6 When applied at the temperature recommended by the manufacturer and at a film thickness of 2 to 4 mm, the material shall set solid and show no tracking under traffic after elapsed times as follows:

- .1 Two (2) minutes at an air temperature of 10o C, relative humidity less than 75 %, and road surface temperature from 10o C to 20o C.
- .2 Five (5) minutes at an air temperature of 32o C, relative humidity less than 75 %, and road surface temperature from 35o C to 50o C.
- .3 The drying time under conditions intermediate between the two air temperatures shall be interpolated using a straight line model.
- .7 The quantity, type, and gradation of the component reflecting glass spheres premixed in the thermoplastic material shall be at the discretion of the manufacturer, but shall provide retroreflection levels specified below.

Add 2.1.11

Green Surface Treatment:

- .1 Material approved shall be “Traffic Patterns” thermoplastic by Ennis-Flint or MMA (Methyl Methacrylate).
- .2 The MMA Skid Resistant Material shall meet the following requirements:
 - .1 Be Ultra-Violet Stable.
 - .2 Be ISO Certified Durable Road Marking Material.
 - .3 Utilize 0.5mm – 1mm aggregate within the MMA to create skid resistance of 49 BPN.
 - .4 Green Colour (Pantone #) to be approved prior to application.
- .3 Product details and specification to be submitted to Owner for Final Approval.

3.0 EXECUTION

Add to 3.3.1.3

Temporary raised pavement markings (TRPMs) are to be provided on all collector and arterial roadways as directed by the Contract Administrator and the City.

3.3 Application

Delete 3.3.3.3 and replace with the following

Thermoplastic material shall be heated in the melter to a temperature of 382 °F.

END OF SECTION

- 1.0 GENERAL**
- .1 Section 32 91 13.23 refers to the labour, materials, and equipment necessary for the supply and installation of materials specified herein.
1. Structural soil
 2. Filter fabric
- 1.1 Related Works and Standards**
- .1 Excavating, Trenching and Backfilling
Section 31 23 01
- .2 Clearing and Grubbing
Section 31 11 01
- .3 Shrub and Tree Preservation
Section 31 11 41
- .4 Waterworks
Section 33 11 01
- .5 Storm Sewers
Section 33 40 01
- .6 Manholes and Catch Basins
Section 33 44 01
- .7 Irrigation System
Section 32 94 01S
- .8 Trees, Shrubs and Ornamentals
Section 32 93 10S
- 1.2 Quality Assurance**
- .1 All structural soil material used in planting shall be from a source approved by the Contract Administrator and all similar materials supplied to the site shall be of similar nature and from a single source. 21 days prior to supplying any material to the site, inform the Contract Administrator of proposed source and provide a copy of an analysis undertaken by a recognized testing agency appointed by the Contract Administrator, at the Contractor's expense and indicating the particle size characteristics of the proposed material in written form as laid out in 2.1.1 of this Section.
- .2 All nutritive admixtures to structural soil material supplied to the site shall be from a source approved by the Contract Administrator and all similar nutritive admixtures supplied to the site shall be of similar nature and from a single source. 21 days prior to supplying any nutritive admixture, inform the Contract Administrator of proposed source and provide a copy of an analysis undertaken by a recognized testing agency appointed by the Contract Administrator, at the Contractor's expense and indicating the following characteristics of the proposed nutritive admixture:
1. Gravel, sand and fines content each as a percentage of dry weight mineral fractions.

STRUCTURAL SOIL

2. Organic material content as a percentage of dry weight. Acidity (pH).
 3. Salinity in millimhos/cm at 25oC.
 4. Basic fertility (total nitrogen available K, Ca, Mg, P).
 5. Recommendations for incorporation of necessary amendments.
- .3 Costs of imported materials shall include cost of modifications from source to ensure that these materials meet specifications.
- .4 The Owner may appoint a qualified Contract Administrator for the purpose of interpreting and evaluating the quality of the installation and materials used before, during and after construction.
- .5 Acceptance of material at source does not preclude future rejection if material fails to conform to requirements specified, or if its field performance is found to be unsatisfactory.
- .6 Structural Soil volume requirements for a tree is calculated at 60m³ per tree in beds shared with other trees and 100m³ per tree for isolated trees based on 25% planting median by volume.
- 1.3 Scheduling**
- .1 Obtain approval from Contract Administrator of Schedule 14 days in advance of structural soil preparation or delivery of material to site.
- Schedule to include:
1. Date for commencement of preparation of structural soil at source.
 2. Shipping dates.
 3. Arrival dates on site.
 4. Installation dates.
- 1.4 Field Review**
- .1 Start-up meeting with Contract Administrator is required to confirm the areas of installation and mixing. If not previously submitted, ensure growing medium sample and test report, aggregate stone sample and structural soil sample and report are supplied at the start-up meeting.
- .2 Coordinate site meeting with Contract Administrator at the following times:
1. Drainage installation and connection;
 2. Irrigation installation;
 3. Mixing of structural soil mixture;
 4. Installation of structural soil mixture;
 5. Sub-grade preparation and layout; and
 6. Installation of trees.
- 1.5 Samples**
- .1 Provide 2 kg samples of all materials required for the preparation of structural soil minimum 14 days prior to commencement of installation as required by the Contract Administrator.
- 1.6 Product Handling**
- .1 All materials used in the composition of structural soil shall not be prepared, worked or travelled upon when in a wet or frozen condition.

- .2 Limestone and other chemical amendments shall be supplied and handled in standard sealed, waterproof containers with net weight and product analysis clearly marked on the exterior package
- 1.7 Delivery, Storage and Protection**
- .1 For structural soil prepared at source and delivered to site, deliver all materials to site in such a manner as to prevent damage to or separation of all materials used in the preparation of structural soil.
- .2 On-site storage of prepared structural soil shall be undertaken in such a manner as to prevent damage of separation of any materials.
- .3 Structural soils to be installed as soon as practicable after mixing, any structural soils stored overnight whether on-site or at source shall be covered with tarpaulin of material approved by the Contract Administrator until such time as material is installed.
- .4 All material to be stockpiled shall be protected in accordance with B.C. Ministry of Environment guidelines.
- 1.8 Measurement and Payment**
- .1 Measurement for structural soil will be for actual quantity placed based on weight tickets provided to Contract Administrator as loads are delivered. Payment will include supply, installation, compaction of soil, and filter cloth (Non Woven Geotextile - Nilex 4535 or approved equal). All other costs will be considered incidental to the payment item.
- 2.0 PRODUCTS**
- 2.1 Soil Stabilizer / Nutritive Admixture**
- .1
1. Unless indicated otherwise, all material shall be imported from a source approved by the Contract Administrator.
 2. Material shall be friable, containing a minimum of four percent (4%) and maximum six percent (6%) organic matter by dry weight or 25% by volume (whichever is higher), free from stones and debris over 30mm. Acidity (pH) shall be in the range 5.5 to 7.5. Carbon to nitrogen ratio shall not exceed 40:1, and salinity shall not exceed 3.0 millimhos at 25 degrees Celsius. Gravel greater than 2mm shall not exceed ten percent (10%) of total by weight.
 3. Non-toxic organic binder to be approved by the Contract Administrator prior to inclusion in any structural soil mixture.
 - 1) "Humus Builder" by The Answer! Garden Products
 - 2) "The Natural Solution" by Sport Turf Inc.
 - 3) Equivalent product approved by Contract Administrator prior to commencement of mixing operations.
 - 4) Submit 5 kg sample of mixture to Contract Administrator prior to commencement of large scale mixing procedures.
 4. Planting Medium
 - 1) Provide all growing medium required to complete the work.

STRUCTURAL SOIL

- 2) Comply with the requirements of table below.
- 3) Organic material in the growing medium must be well decomposed to prevent oxygen consumption caused as a result of decomposition of the organic matter in the soil

GROWING MEDIUM PROPERTIES FOR GAP-GRADED MIXTURE

Texture*	Percentage of Mixture
Gravel: greater than 2 mm – less than 75 mm	0%
Sand: greater than 0.05 mm – less than 2 mm	maximum 30%
Silt: greater than 0.002 mm – less than 0.05 mm	maximum 50%
Clay: less than 0.002 mm	maximum 30%
Clay & Silt Combined	maximum 60%
Acidity (pH)	6.0-7.0
Drainage: Minimum saturated hydraulic conductivity (cm/hr) in place	3.0
Salinity: Saturated extract conductivity shall not exceed:	3.0 millimhos/cm at 25oC
Organic Content: Percent of Dry Weight (%)	8 – 12%

* Particle size classes by the Canadian System of Soil Classification

- 2.2 Stone**
- .1 Clean inert stone of high angularity is preferred over washed gravel.
 - .2 Stone dimension aspect ratio should approach 1:1:1 with a maximum of 2:1:1 length: width: depth.
 - .3 Single size stone, 60 mm to 75 mm clear sieve designation: Blasted Quarry Rock.
 - .4 Aggregate to be used for structural soil shall be free of any foreign elements or material. Provide samples and test reports as described in Section 1.5 and 1.8.
 - .5 Aggregate quality: Material shall be sound hard, durable, free from soft, thin, elongated or laminated particles, organic material, clay lumps or material, or other substances that would act in a deleterious manner for use intended.
- 2.3 Granular Base**
- .1 To Master Municipal Specification Section 31 05 17 – Aggregates and Granular Materials.
- 2.4 Filter Fabric**
- .1 Non-woven filter fabric shall be installed as a separation layer directly above the compacted structural soil mixture. Do not install fabric until adequate compaction of the structural soil mixture has been confirmed.

- .2 Filter fabric shall be selected and designed to withstand wear and tear during construction without deterioration of its strength and filtering properties. Conform to the following ASTM designations.
 - 1. Grab Tensile Strength ASTM-D-4632 .400 kN
 - 2. Tensile Elongation ASTM-D-4632 50%
 - 3. Mullen Burst ASTM-D-3786 1270 kPa
 - 4. Flow Rate ASTM-D-4491 6110 l/min/m²
- .3 Fabric shall be Nilex 4535 or approved equivalent.

3.0 EXECUTION

3.1 Existing Subgrade

- .1 Excavate subgrade to establish tree pit/trench as indicated.
- .2 Areas designated as tree pits/trench for street tree planting shall be prepared to ninety five percent (95%) Modified Proctor Density and shall be free of stones, debris, roots branches, toxic materials, building materials and other deleterious materials, greater than 30 mm.

3.2 Preparation of Existing Grade

- .1 Verify that grades are correct. If discrepancies occur, notify Contract Administrator and do not commence work until directed.
- .2 Subgrade elevations shall slope parallel to the finished grades and/or toward the subsurface drain lines as indicated on the civil engineering drawings.
- .3 Do not proceed with the installation of the structural soil material until all walls, curbs, and utility work in the area has been installed.
- .4 Re-compact subgrade to requirements of Master Municipal Specifications and civil engineering drawings.

3.3 Mixing of Structural Soil

- .1 Ensure consistent even distribution of all components by thorough mixing. The ratio of components will vary and may require adjustment to ensure the soil volume is adequate to fill all voids.
- .2 Base Ratio of Materials for Structural Soil.
 - 1) Mix structural soil to create a homogeneous product to the following table.

MATERIAL	AMOUNT	REFERENCE
Stone	4 m ³	Part 2.3
Growing Medium	1 m ³	Part 2.2
Soil Stabilizer	2 kg	Part 2.1

- .3 Moisten mixture with fine spray of clean potable water while mixing to activate soil stabilizer product.
- .4 Do not OVER MIX, OVER HANDLING can result in separation of the constituent materials. Further and final mixing will occur during the placement of the material.

- .5 All mixing shall be performed at the contractor's yard using appropriate soil mixing equipment. No mixing of soils at the project site shall be permitted unless approved by the Contract Administrator.
- 3.4 Placement of Structural Soil**
- .1 Subgrade shall be approved by the Contract Administrator and unfrozen prior to placing structural soil.
- .2 Structural soil shall be moist, twenty-five to seventy-five percent (25%-75%) of field capacity, but not saturated with water when placed. Placement shall be handled to avoid damage to drainage structures, irrigation equipment, concrete structures or pavement.
- .3 Place mixture in 300mm lifts through entire area of structural soil mixture. Compact each lift to 95% MPD prior to placement of next lift.
- .4 Place structural soil such that finished grades are achieved as indicated and compact to achieve 95% of MPD.
- .5 Provide stamped Professional Engineer's Report to confirm compaction. Test to ensure uniform compaction rates have been achieved for each lift and in all areas of structural soil mixture. Refer to Quality Assurance, Section 1.4.
- 3.5 Installation of Filter Fabric**
- .1 After approval of structural soil mixture compaction, install filter fabric, as indicated.
- .2 Ensure minimum 60cm overlap of all fabric seams and beyond edge of structural soil.
- 3.6 Finish Grading, Restoration and Reinstatement**
- .1 All areas shall be graded to contours and elevations as indicated on contract drawings. Eliminate rough spots and low areas to ensure positive drainage.
- .2 Finish grade shall be as indicated and shall follow a level line
- 3.7 Tolerances**
- .1 Finish grade shall be to within 15 mm of proposed grades within 3.0 m of any adjacent fixed elevation points and to within 15 mm of proposed grades over any other 3.0 m length. Finish grades shall be neither uniformly high nor low.
- 3.8 Surplus Material and Clean-Up**
- .1 Dispose of surplus material off site to location approved by the Contract Administrator.
- .2 Leave all hard surfaces groomed clean of soil, amendments and debris following completion of structural soil preparation and placement.

END SECTION

1.0 General Requirements

Delete 1.0.1 and replace with the following

- .1 Section 32 91 21 refers to those portions of the *Works* that are unique to the supply, placement and finish grading of *Growing Medium*. This section must be referenced to and interpreted simultaneously with all other sections pertinent to the *Works* described herein.

For the purpose of this specification, the term "*Growing Medium*" shall mean a soil produced offsite by homogeneous blending of mineral particulates, micro-organisms and organic matter which provides suitable medium for supporting intended plant growth and the term "*Topsoil*" shall mean on-site native or surface soil material which may be used as *Growing Medium* provided it meets standards set for imported material *Growing Medium* and can be modified to meet the requirements set out for specified *Growing Medium*.

Add 1.0.3

- .3 For the purpose of this specification, the term '*Soil-Testing Laboratory*' shall mean an independent laboratory, recognized by the landscape nursery industry, with the experience and capability to conduct the testing indicated and that specializes in types of tests to be performed.

1.4 Measurement and Payment

Delete 1.4.1 and replace with the following

Payment includes supply and installation of growing medium, boulevard tree trench and imported top soil that is free from any noxious weeds, fungal growth, mushroom, and any contaminants, and as described in the Schedule of Quantities and Proces. Payment will be made separately and includes supply of material, on-site handling, preparing the landscape area subgrade, placing, grading, raking, compacting top soil and application of fertilizers.

Payment for imported top soil will be for actual volume placed onsite at specified thickness.

1.5 Inspection and Testing

Delete 1.5 and replace with the following

- .1 The *Contractor* is responsible for testing imported *Growing Medium* and all related cost incurred. Testing shall be carried out by an approved *Soil Testing Laboratory*.
- .2 The sample analysis shall be of tests done on the proposed *Growing Medium* from samples taken at the supply source within a minimum of 14 days in advance of *Growing Medium* placement. Allow 7 days for soil testing by the laboratory for each sample. The sample shall be picked up by the *Soil Testing Laboratory* from the supply source. The *Growing Medium* sample shall be a composite of at

least three (3) samplings for the proposed source and shall be at least one (1) litre in volume.

- .3 Forward a copy of all test results directly to the *Contract Administrator* and the City for review. The analysis shall outline the testing laboratory's required amendments such as sand, organic matter, fertilizers and lime to achieve adequate growing conditions.
- .4 The *Contractor* shall not deliver any *Growing Medium* to the site until the test results have been reviewed and approved by the *Contract Administrator* and the City.
- .5 All submitted soil analysis must be dated and include supplier name and phone number, project location and submitted to *Contract Administrator* and the City for approval prior to commencing work. Soil analysis shall include measurements of:
 - .1 Percent sand, fines, silt and clay
 - .2 Organic matter to 100%
 - .3 pH, acidifying additive required to achieve noted herein
 - .4 Water soluble salts
 - .5 Total carbon to nitrogen ration
 - .6 Total nitrogen and available levels of phosphorus, potassium, calcium & magnesium
- .6 At the discretion of the *Contract Administrator* and the City submit up to two (2) additional samples, at intervals outlined by the *Contract Administrator* and the City, of *Growing Medium* taken from material delivered to the site. Samples shall be taken from a minimum of three (3) random locations and mixed to create a single uniform sample of testing. Results of these tests shall be forwarded to the *Contract Administrator* and the City for review.
- .7 The *Contractor* is responsible for soil analysis and requirements for amendments to supply *Growing Medium* as specified. Failure to satisfy these contractual requirements could result in the *Contractor* being required to remove unacceptable *Growing Medium* at their expense.
- .8 Notify the Contract Administrator at least forty-eight (48) hours prior to *Growing Medium* placement for inspection.
- .9 Refer to General Conditions, Clause 4.12 Tests and Inspections.
- .1 All materials to be handled and adequately protected to prevent damage. Do not handle

1.6 Product Handling Add 1.6

Growing Medium in an excessively wet, extremely dry, frozen condition or in any manner in which structure may be adversely affected. *Growing Medium* whose structure has been damaged by handling under these conditions shall be rejected and shall be replaced by the *Contractor* at their expense.

- .2 Stockpile materials in bulk form in paved areas or in pre-approved areas of the site. Provide additional protection of storage under roof or tarpaulins.
- .3 Take all precautions to prevent contamination of *Growing Medium* and amendments from windblown soil particles, weed seeds and from insects. Contamination of the *Growing Medium* and amendments may result in their rejection for use.
- .4 Store fertilizer and chemical amendments in the manufacturer's original containers.
- .5 All *Growing Medium* shall be delivered to site premixed from a recognized *Growing Medium* source ensuring consistency throughout the mix.

2.0 PRODUCTS

Delete 2.0 and replace with the following

2.1 Materials

- .1 *Growing Medium* Preparation
 - .1 Shall be prepared from Compost Material with Sand and other Soil Amendments as required to meet the specifications herein.
 - .2 Ensure commercial processing and mixing of *Growing Medium* components are done thoroughly by a mechanized screening process. Do not mix the components by hand. Ensure the resulting product is a homogeneous mixture having the required properties throughout free of stones 25 mm or larger in any dimension, woody plant parts, toxic materials, foreign object and other extraneous materials harmful to plant growth. Provide composted soil free from crabgrass, couch grass, equisetum, convolvulus, or other noxious weeds or seed or parts thereof.
- .2 Inorganic Soil Amendments
 - .1 Sand: Imported pit sand or river pump sand, free of impurities, chemicals, horsetails, and other noxious weeds. The saturation extract electrical conductivity of salinity shall not be greater than 3.0 millimhos/cm at 25 degrees C.

Sieve Size (mm)	Percent passing (%)
4.75	95-100
0.50	0-40
0.050	0-5

- .2 Fertilizers: Uniform in composition, free flowing and dry, granular, pill form, or pelleted commercial product with 50% of total nitrogen (if applicable) derived from natural organic material in a slowly available form delivered in unopened water proof containers with the manufacturer's guaranteed N-P-K analysis, type and trade name attached to each container. The planting soil test results will specify a formulation and application rate to achieve the levels of nitrogen, phosphorous and potassium required. Fertilizer to meet the requirements of the Canada Fertilizer Act.
 - .1 Lime: ASTM C 602, agricultural limestone containing a minimum 80 percent calcium carbonate equivalent and as follows:
 - .1 Class: Class T, with a minimum 99 percent passing through No. 8 (2.36 mm) sieve and a minimum 75 percent passing through No. 60 (0.25 mm) sieve.
 - .2 Provide lime in form of dolomitic limestone.
 - .3 Perlite: Horticultural perlite, soil amendment grade.
- .3 Organic Soil Amendments
 - .1 Compost: Well-composted, stable, and weed-free organic matter, pH range of 5.5 to 8; moisture content 35 to 55 percent by weight; 100 percent passing through 25 mm sieve; soluble salt content of 5 to 10 decisiemens/m; not exceeding 0.5 percent inert contaminants and free of substances toxic to plantings; and as follows:
 - .1 Organic Matter Content: 50 to 60 percent of dry weight containing no cedar, redwood, wood or bark.
 - .2 Colour: dark brown to black in colour.
 - .2 Peat:
 - .1 Finely divided or granular texture, with a pH range of 6 to 7.5, containing partially decomposed moss peat, native peat, or reed-sedge peat and having a water-absorbing capacity of 1100 to 2000 percent.
 - .3 Wood Residual

- .1 Content of wood residuals such as Fir or Hemlock sawdust present in the *Growing Medium* shall not cause the total carbon to total Nitrogen ration to exceed 40:1.
 - .2 Cedar or redwood sawdust shall not be present in *Growing Medium*.
 - .4 Manure
 - .1 Well-rotted, unleached, stable or cattle manure containing not more than 25 percent by volume of straw, sawdust, or other bedding materials; free of toxic substances, stones, sticks, soil, weed seed, and material harmful to plant growth and free from salt or other harmful chemicals, such as any used to artificially hasten decomposition.
 - .2 All particles in manure to pass a 6.35 mmm sieve.
 - .3 Salt content shall give a reading of less than 0.5 millimhos/cm at 25 degrees C.
- 2.2 **Nutrient Requirements**
 - .1 Nutrient requirements shall meet the BCSLA/BCNTA Landscape Standard *Growing Medium* requirements for nitrogen, phosphorus, potassium, calcium, magnesium, boron, sodium cation exchange capacity, carbon to nitrogen ratio.
 - .1 Boron: not to exceed 1.0ppm
 - .2 Sodium: Sodium absorption ratio(SAR) not to exceed 8.0
 - .3 Total Nitrogen: to be 0.2-0.4% by weight
 - .4 Available Phosphorous: to be 50-100 ppm
 - .5 Available Potassium: to be 50-70 ppm
 - .6 Cation Exchange Capacity: to be 30 to 50 meq.
 - .7 Carbon to nitrogen ratio: Maximum 40:1.
- 2.3 **Salinity**
 - .1 The electrical conductivity of the liquid taken from the soil pH evaluation shall not exceed 3.0 millimhos/cm at 25 degrees C before additions of fertilizers and/or liming agents.
- 2.4 **Drainage Rate**
 - .1 Percolation shall be such that mixing, handling and placement to be done in such a manner that the minimum saturated hydraulic conductivity show on Table - '*Growing Medium Properties for Different Applications*' (found herein these specifications) is achieved and no standing water is visible 60 minutes after at least 10 minutes of moderate to heavy rain or irrigation.

2.5 Growing Medium Source

- .1 Import planting medium or manufactured planting medium from off-site sources. Do not obtain from agricultural land, bogs or marshes.
- .2 Supplier of Growing Medium shall be as per the Coquitlam Approved Products List.

2.6 Bark Mulch

- .1 Mulch backfilled surfaces of planting beds and other areas indicated on drawings.
 - .1 Organic Mulch: Apply 50 mm average thickness of organic mulch, and finish level with adjacent *Finish Grades*. Do not place mulch against plant stems.
- .2 Supplier of Bark Mulch shall be as per the Coquitlam Approved Products List.
- .3 Dark brown in colour and free of all soil, stones, roots or other extraneous matter, and free of weeds, seeds and spores.

2.7 Growing Medium Properties for Different Applications

Properties	Low Traffic Lawn Areas, Trees and Large Shrubs	High Traffic Lawn Areas	Planting Areas, Planters Shrubs & Groundcover
Texture: Particle size classes by Canadian System of Soil Classification	Percent of Dry Weight Mineral Fraction (%)		
Gravel (greater than 2 mm less than 75 mm)	0-10	0	0
Sand (greater than 0.05 mm and less than 2 mm)	50-70	80-90	50-70
Silt (larger than 0.002 mm and less than 0.5 mm)	10-30	5-20	10-30
Clay (less than 0.002 mm)	7-20	2-5	7-20
Organic Content Percent of Dry Weight	5-10	3-5	25-30
Drainage Minimum saturated hydraulic conductivity (cm/hr) in place	2.0	7.0	2.0
Acidity (pH)	6.0-6.5	6.0-6.5	5.0-6.0

2.8 Miscellaneous Products

- .1 Root Barrier: 400x610 mm linear root barrier, copolymer polypropylene, 50% recycled plastic, black

- in colour. Supplier of Root Barrier shall be as per the Coquitlam Approved Products List.
- .2 Construction Adhesive shall be as per the Coquitlam Approved Products List.
 - .3 Drain Mat: Light duty, uv stable, impermeable cusped core bonded to a layer of non-woven filter fabric with the following minimum properties:
 - .1 Compressive Strength -718 kN/m² as per ASTM D-1621
 - .2 Flow Rate – 188 l/min/Metre as per ASTM D-4716
 - .3 Approximate profile thickness of 10 mm.
 - .4 Supplier of Drain Mat shall be as per the Coquitlam Approved Products List.
 - .4 Filter Fabric: Install root barriers in accordance with manufacturer’s reviewed installation instructions where indicated on reviewed drawings with vertical root directing ribs facing inwards towards trees or plants; connect panels together as required.
 1. Supplier of Filter Fabric shall be as per the Coquitlam Approved Products List.
 - .5 Drain Rock: Shall consist of clean round stone or crushed rock. Acceptable material includes 19 mm drain rock or torpedo gravel conforming to the following gradations.

Sieve Designation	Percent Passing	
	Coarse	Fine (Torpedo gravel)
25 mm	100	
19 mm	0-100	
9.5 mm	0-5	100
4.75 mm	0	50-100
2.36 mm		10-35
1.18 mm		5-15
0.60 mm		0-8
0.30 mm		0-5
0.15 mm		0-2

2.9 Structural Soil

- .1 Soil stabilizer shall be friable, containing a minimum of 4% and maximum of 6% organic matter by dry weight, free from stones and debris over 30 mm. Acidity (ph.) shall be in the range 5.5-7.5. Carbon to nitrogen ratio shall not exceed 40:1, and salinity shall not exceed 3.0 milliohms at 25 deg C. Gravel greater than 2 mm shall not exceed 10% of total weight.
- .2 Supplier of Structural Soil shall be as per the Coquitlam Approved Products List.

- .9 Moisten mixture with fine spray of clean potable water while mixing to activate soil stabilizer product. Do not over mix. Place mixture in 300 mm lifts through entire area of structural soil mixture. Compact each lift to 95% MPD prior to placement of next lift. Install filter fabric such to ensure a minimum of 60 cm overlap of all fabric seams and beyond edge of structural soil.

3.0 EXECUTION

3.2 Preparation of Subgrade

Delete 3.2.4 and replace with the following

Remove debris, roots, branches, stones in excess of 50 mm diameter and other deleterious materials, soil contaminated with calcium chloride, toxic materials and petroleum products, and debris which protrudes more than 25 mm above the surface. Dispose of all removed material off site to approved offsite disposal area at no additional cost to the *Owner*.

Delete 3.2.5 and replace with the following

Course cultivate entire area which is to receive *Growing Medium* to depth of 250mm. Cross cultivate those areas where equipment used for hauling and spreading has compacted soil.

Add 3.2.6

Grade transitions shall be smooth and even and shall blend into surrounding areas as determined by the *Contract Administrator* and the City.

Add 3.2.7

Provide erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.

3.3 Processing Growing Medium

Add 3.3.4

Growing Medium shall be imported and stockpiled on site in a location approved by the *Contract Administrator* and the City.

- .1 Carry out stock piling operation such that the *Growing Medium* structure is not compromised through compaction, vibration or other actions.
- .2 Stock piled *Growing Medium* shall be protected from rain, drying and contaminants.
- .3 *Growing Medium* shall be free of subsoil, pests, roots, wood, construction debris, undesirable grasses including crabgrass or couch grass, noxious or weeds and weed seeds or parts thereof foreign objects and toxic materials. Presence of these contaminants shall be grounds for rejection of *Growing Medium* and replacement at no cost to the *Owner*.

3.4 Placing Growing Medium

Delete 3.4.2 and replace with the following

Place *Growing Medium* to the required finished grades with adequate moisture, in uniform lifts of 100 mm to 150 mm compacted to 80 MPD during dry weather, over dry,

		unfrozen <i>Sub Grade</i> where planting is indicated free of any standing water.
	Delete 3.4.5 and replace with the following	Minimum depths after settlement and 80% compaction: .1 Trees pits: 900 mm .2 Shrub beds: 450 mm .3 Ground cover areas: 300 mm .4 Lawn areas: 300 mm .5 Blvd. areas: 150 mm
	Add 3.4.6	Increase sand content to 90% in the planting soil below lawns where heavy wear by pedestrians or maintenance equipment is anticipated. Increase sand content in a 1.5m wide strip at the bottom of swales, banks or other wet areas and as directed by the Landscape Architect. On steep south or west facing banks, reduce sand content in lawns and planting beds to 50 - 60% for better moisture retention.
3.5	Applying Fertilizers	Delete 3.5 and replace with the following .1 Addition of amendment components shall be at the rates indicated in the <i>Growing Medium</i> analysis recommendations via the following methods: .1 Lime: Applied with mechanical spreaders over entire planting areas and contained planters. .1 Do not apply by hand. .2 Mix thoroughly into the top 100 mm of <i>Growing Medium</i> . .3 Do not allow lime to come into direct contact with nitrogen - phosphate - potash fertilizers. .2 Fertilizer: Applied with mechanical spreaders over entire planting areas and contained planters. Do not apply by hand. Do not mix into <i>Growing Medium</i> .
3.6	Finish Grading	Delete 3.6.1 and replace with the following Manually fine grade <i>Growing Medium</i> installation to contours and elevations shown on drawings or as directed by <i>Contract Administrator</i> and the City. Eliminate rough spots and low areas to ensure positive drainage. Add 3.6.3 <i>Finish Grade</i> of <i>Growing Medium</i> shall be 25 mm from finished elevation of adjacent curb or planter wall unless otherwise noted on drawings.
3.9	Clean-up	Delete 3.9 and add the following .1 Ensure all paved areas, tops of planters, adjacent surfaces have been thoroughly cleaned. Ensure all discoloration of adjacent surfaces as a result of <i>Growing Medium</i> installation have been removed. .2 Dispose of materials not required and repair any damage to adjacent surfaces (as determined by the <i>Contract Administrator</i> and the City) off site at no additional cost to the <i>Owner</i> .

- 3.10 Weed Control** Add 3.10
- .1 Ensure all weeds and weed roots that have germinated during the course of work of this section have been eliminated from Growing Medium.
 - .2 Provide the City Representative and Consultant with a written outline of weed removal methodology seven (7) days prior to starting weed removal operations.

- 3.11 Structural Soil** Add 3.11
- .1 Refer to 2.9 in this specification and as shown on the Contract Drawings.

END OF SECTION

SODDING

1.0	GENERAL	Delete 1.0.2 and replace with the following	This section is based on the “British Columbia Landscape Standards and the B.C. Nursery Trades Association. This standard is intended to set a level of quality which is equaled or bettered in the construction documents.
1.4	Handling and Storage	Delete 1.4.3 and replace with the following	Schedule sod deliveries such that sod installation occurs within twenty-four (24) hours of being lifted from the source sod farm.
		Delete 1.4.4 and replace with the following	Sod shall be neatly stacked or rolled at the source sod farm, delivered and unloaded on sturdy pallets which are no more than 3 pallets high.
1.5	Drainage Control	Delete 1.5.1 and replace with the following	Provide for proper water management and drainage of site during work of this section. Water management shall include silt traps, erosion control measures, temporary water collection ditches, as well as their adequate maintenance to ensure that storm water which may become laden with soil, growing medium or hydraulic seed is detained and cleaned prior to discharge from <i>Place of Work</i> .
1.6	Samples	Add 1.6.2	Submit one (1) square meter of sod to the <i>Contract Administrator</i> and the City for review. Ensure sample is complete with name of sod farm, base soil type, seed mix percentage.
		Add 1.6.3	<i>Contract Administrator</i> and the City shall review sod sample for approval prior to installation. The sample accepted by the review will form the standard by which the project will be supplied.
		Add 1.6.4	Should the <i>Contractor</i> require the source of sod supply to change during the construction a written request must be provided to the <i>Contract Administrator</i> and the City 48 hours in advance. The request shall be followed up by submission of proposed sod substitution sample and include the name of sod farm, base soil type, seed mix percentage for <i>Contract Administrator</i> and the City review prior to the delivery.
1.8	Measurement and Payment	Delete 1.8.1 and replace with the following	Payment for nursery sod includes supply and placing of sod as shown on the Contract Drawings or as directed by the Contract Administrator and grass maintenance to meet Conditions of Total Performance. Payment includes protection from damage caused by any living creature.
			Payment for all work performed under this Section will be incidental to work described in other sections unless shown otherwise in the Schedule of Quantities and Prices.

2.0 PRODUCTS

2.1 Sod Delete 2.1.1 and replace with the following

Sod to be approved by the *Contract Administrator* and the City and to be nursery grown, true to type, conforming to standards of nursery Sod Growers' Association and their Nursery Sod Specifications. Sod to be quality, cultured turf grass grown from seed approved by Canada Department of Agriculture, free of disease, clovers, stones, pests and debris.

Add 2.1.1.1

Nursery sod:

- .1 Shall be No. 1 Premium grade and contain only species of grass indicated on the supplier's certificate.
- .2 Sod shall be 'non-netted'

Add 2.1.1.2

Table Guideline of Approved Sod Mix Ratios

Supreme Soil Base Sod	
(Elka II) Perennial Ryegrass	40%
(Shamrock) Kentucky Bluegrass	30%
(Cindy) Chewing Red Fescue	30%
Seed Rate:	
50g per square metre	

Add 2.1.8

All sod shall be completely free of invasive and/or noxious broadleaf weeds, grasses including but not limited to poa annua, disease, fungi, detrimental nematodes and detrimental insects.

2.2 Water Delete 2.2.1 and replace with the following

Potable, free of impurities that would inhibit seed germination. *Contractor* to ensure adequate water is available to maintain seeded areas during germination and in a vigorously growing, healthy state until *Total Performance* of work of this section.

2.3 Fertilizer Add 2.3.2

Fertilizer shall be complete synthetic slow release fertilizer. Type and application shall be as required by the growing medium analysis report.

2.4 Wooden Pegs Add 2.4

- .1 Wooden Pegs shall be 19 mm x 19 mm x 150 mm long No. 1 grade or better Hem/fir.

2.5 Binder Twine Add 2.5

- .1 Binder Twine shall be hemp based multiple strand string.

2.6 Flagging Tape Add 2.6

- .1 Flagging Tape shall be 30 mm wide, biodegradable ribbon tape made of non-woven cellulosic material, and red color, or an approved equivalent.

3.0 EXECUTION

3.1 Finish Grade Preparation

Delete 3.1.2 and replace with the following

Prior to the placement of sod *Contract Administrator* and the City to review and direct minor adjustments and refinements of finish grades prior to the *Contractor* proceeding. Review includes grades, growing medium depth and condition of finished surface. Subsequent to the *Contract Administrator* and the City review the *Contractor* shall re-grade, add growing medium and make adjustments as directed by *Contract Administrator* and the City.

Delete 3.1.5 and replace with the following

Fine grade growing medium to lines and levels shown on Contract Drawings. Ensure that all low spots, humps and irregularities are eliminated prior to review by *Contract Administrator* and the City.

3.2 Sodding

Delete 3.2 and replace with the following

- .1 Sod shall not be placed during hot dry summer periods, at freezing temperatures, or over frozen growing medium.
- .2 Allow sod to dry sufficiently during wet weather to prevent tearing during lifting and handling.
- .3 Handle sod carefully to minimize tearing and dropping of soil.
- .4 Placement of Sod:
 - .1 Lay sod in rows smooth and flush to adjoining grass areas and paving and top surfaces of curbs unless shown otherwise on *Contract Drawing*. Ensure there is a full roll width between the new sod and any adjoining surfaces. Small cut pieces from a full roll will not be accepted.
 - .2 Stagger joints and ensure that sod sections are butted closely together without overlapping or leaving gaps between sections.
 - .3 Cut out irregular or thin sections with a sharp knife.
 - .4 Cut sod to fit tight around landscape elements.
 - .5 Cut sod to create clean, smooth lines along all plant beds.
- .5 Placement of Sod on Slopes:
 - .1 Lay sod with the length of each sod section parallel to slope taking extra care to ensure that sod sections are butt tight and each sod section is set in a staggered formation.
 - .2 On slopes exceeding 3:1 gradient ensure sod is secured with wooden pegs at intervals of not more that 450 mm along the center of each

section. Ensure wooden pegs are driven flush with the sod.

- .3 Prior to acceptance of sod areas that have been secured with wooden pegs either remove the wooden pegs or drive each wooden peg at least 50 mm below finished grade.
- .4 Where required, place erosion control mesh or netting and secure with stakes or staples sunk firmly into ground to a minimum depth of 150 mm at maximum intervals of 4 meters along pitch of slope. Place stakes or staples horizontally across slope at intervals equal to width of mesh or netting minus 150 mm and drive flush with top of sod.
- .6 Use a light roller to ensure that there is full, close contact between sod and growing medium. Use of a heavy roller to correct irregularities in grade is not permitted.
- .7 Ensure all sodded areas are watered immediately after installation. Verify that water applied to has penetrated through sod into top 100 mm of growing medium. Continue watering operations as needed to ensure that adequate moisture content is maintain to encourage deep root growth and healthy, vigorous leaf growth.
- .8 Protect newly placed sod from heavy foot traffic during installation and until acceptance by the *Contract Administrator* and the City. Protection shall include but is not limited to placement of wood planks or plywood of sufficient thickness to bear the imposed weight and prevent damage to sod or displacement and/or compaction of sod/growing medium.
- .9 Sod that has been damaged by construction operation, construction / site personnel or construction traffic shall be replaced at no cost to the *Owner*. Replacement shall include removal of growing medium, regarding of sub grade, replacing growing medium and sod as required.
- .10 Water sod area immediately with sufficient amounts to saturate sod and upper 100 mm of growing medium. Do not allow the sod to dry out so that the joints become visible.

**3.4 Grass
Maintenance**

Delete 3.4 and
replace with the
following

- .1 Maintenance of sodded areas shall begin immediately after sodded operation and shall continue until all deficiencies noted in the *Substantial Performance* review have been rectified to the satisfaction of the

SODDING

Contract Administrator and the City and conditions for *Total Performance* have been achieved. The *Contractor* is to notify the *Contract Administrator* and the City in writing forty eight hours (48) prior to stopping maintenance operations.

- .2 Sod Cutting: After the 'first' cut of sodded lawn areas cutting operations shall be carried out on a weekly (seven day) basis until *Total Performance* by *Contract Administrator* and the City:
 - .1 First cut of sodded lawn areas shall occur when a uniform grass height of 75 mm has been attained. First cut shall be to a height of 65 mm.
 - .2 Continue regular weekly cutting at a height of 65 mm until *Total Performance*.
 - .3 Cutting operations shall be such that each cut is at right angles to the previous cut.
 - .4 *Contractor* to remove grass clippings after each cut and dispose of offsite.
 - .5 Roll when required to remove any minor depressions or irregularities.
 - .6 Immediately repair seeded areas that show deterioration or bare spots. Top-dress all areas showing shrinkage due to lack of watering and seed with seed mix that matches the original seed mix.
- .3 Fertilizer analysis shall conform to recommendations provided with growing medium analysis. Application of fertilizer shall follow manufacturers' recommendations noting that after October 1 lawn areas shall not be fertilized until April 15th of the following spring.
- .4 Sodded lawn areas shall be kept free of invasive and/or noxious broadleaf weeds, grasses including but not limited to poa annua, disease, fungi, detrimental nematodes and detrimental insects.
- .5 All maintenance equipment and practices are to conform to the BC Landscape Standard Level 2 'Groomed'.
- .6 Protect all sodded areas against trespassing and from damage at all times clearly marked, staked, string and flagging tape.
 - .1 Perimeter Protection: Where directed by the *Contract Administrator* and the City, sodded areas shall be surrounded by a 900 mm high barrier made up of the following components:

SODDING

- .1 Wood posts placed at 1.8 meters on centre.
- .2 Wood Posts to be driven to a depth of 300mm.
- .3 String two (2) strands of hemp based binder twine (or equal product) between posts. Insure one full wrap of twine around each post.
- .4 Tie 300 mm strands of 'red' flagging tape at 450 mm intervals along the entire length of both strands of twine.
- .5 Maintain perimeter protection until *Total Performance* issued. Upon acceptance by *Contract Administrator* and the City, remove perimeter fence and dispose of off site.

3.5 Condition for Total Performance Delete 3.5.1 and replace with the following

Conditions for *Total Performance* of Sodded areas:

- .1 Sodded areas exhibit fully established root systems.
- .2 No seams are visible between sod sections.
- .3 Sod areas are smooth and evenly graded. No depressions, foot marks or vehicle tracks.
- .4 Sod is free of bare and dead spots and does not have any broadleaf weeds, noxious grasses including but not limited to poa annua.
- .5 No surface growing medium is visible when grass has been cut to height of 65 mm.
- .6 Sodded areas have been cut a minimum of two (2) times, at seven (7) day intervals.
- .7 Sodded areas are a uniform green colour with no discoloured sections or patches.
- .8 Sodded areas exhibit a thick, dense, uniform and healthy appearance.

Add 3.5.2

Lawns sodded after September 30th will be not be reviewed for *Total Performance* until April 30th the next year.

3.6 Guarantee / Maintenance Delete 3.6.1 and replace with the following

The *Contractor* hereby guarantees that the sod will remain free of weeds and defects for a period of one (1) year from the date of *Substantial Performance*. The *Contractor* shall make all corrections, adjustments and replacements required as a result of failure of all products in this section. During the *Maintenance Period*, the *Contractor* will replace sodded areas, determined by *Contract Administrator* and the City, to be dead or failing at the end of the *Maintenance Period*. Replacements to be made at next appropriate season and, conditions of guarantee will apply to all replacement seeding for one full growing season.

SODDING

Delete 3.6.2 and
replace with the
following

The Owner reserves the right to extend the *Contractor's Maintenance Period* and responsibilities for one (1) additional year if, at end of the initial guarantee period, the development and growth of the sod is not sufficient to ensure future survival.

END OF SECTION

1.0 GENERAL

- | | | | |
|-------------------------|-----------|-----------------------------------|------------------|
| 1.1 Related Work | Add 1.1.6 | Hot Mix Asphalt Concrete Pavement | Section 32 12 16 |
| | Add 1.1.7 | Portland Cement Concrete Paving | Section 32 13 13 |

1.5 Measurement and Payment

Delete 1.5.3 and replace with the following

Adjustment and replacements of tops of existing units will be measured in units adjusted as defined below and paid for under their respective Items in the Schedule of Quantities.

No payment will be made for Monument Boxes, Lawn Drains, Cleanout, Inspection Chambers, Water Valves and Water Meter Boxes, these adjustments will be treated as incidental work.

.1 Manhole frames and lids replacement and adjustment will be defined as supplying and installing a new manhole frame and lid and setting to the finished grade. Replacements shall include jackhammering, removal and disposal of the existing frame and lid, replacement, removal or addition of concrete brick (maximum of 3 or minimum of 1) or precast concrete riser rings, cement mortar, supply and installation of new manhole frame and lid set to finish grade, temporary asphalt ramping or patching and all other incidental work.

.2 Adjustment ONLY will be defined as re-using the frames, lids, grates, or valve boxes to complete the Work as described above. Unit Price for adjustments to each manhole includes adjusting manholes to the asphalt base lift and then to the asphalt final lift (finish grade) – No additional payment will be made for adjusting manholes to the final lift.

2.0 PRODUCTS

2.1 Materials

Add 2.1.7.3

Any frame and cover assembly creating a point load on the concrete riser rings will not be permitted.

Delete 2.1.12 and replace with the following

Catchbasin lids manufactured to ASTM C478M.

Delete 2.1.16.2

Delete 2.1.17

3.0 EXECUTION

- 3.1 Excavation and Backfill** Add 3.1.2 For manholes, when base gravels are complete, excavate for grade rings and manhole frame assembly. Do not disturb the compacted road base beyond the excavation requirement.
- 3.3 Manhole Installation**
- Delete 3.3.12.2 and replace with the following Allowable products are precast concrete risers and cast-in-place form system. Individual riser heights shall be 50mm, 75mm, or 100mm.
- Delete 3.3.12.5 and replace with the following Proper layer of grout between the spacers, covering the entire surface of the rings, should be utilized.
- Delete 3.3.15 and replace with the following Install drop structures as shown on the contract drawings to Coquitlam Standard Detail Drawing COQ-S4 and Standard Detail Drawing S3. Maximum allowable inside ramp shall be 250 mm invert to invert.
- Delete 3.3.17 and replace with the following Ensure frames conform to design contour of pavement or existing surface. Manhole lids left raised in preparation for overlay paving shall have a rubberized protector ring or asphalt ramp. The use of riser rings for adjusting manhole frames will not be permitted.
- 3.5 Catchbasin Installation** Delete 3.5.1 and replace with the following Install catchbasins as shown on Coquitlam Standard Detail Drawings COQ-S11A, COQ-S11B and Standard Detail Drawing S11, to general standards and installation procedures described under 3.3 of this Section.

END OF SECTION

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

- 1.0 GENERAL**
- 1.1 Related Works .1 Traffic Regulation 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 (MOT) Traffic Control 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. 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 www.coquitlam.ca/closure.
.2 A Road and Sidewalk Closure Permit form application must be submitted to the City’s Traffic Operation Division 10 working days prior to start of work.
- 1.4 Measurement and Payment .1 For this Contract, payment for all work performed under this section, unless included in the Schedule of Quantities and Prices shall be treated as incidental work, including a Traffic Management Plan (TMP), Traffic Control Persons (TMP), traffic markings & all temporary traffic signs, devices as required for traffic & pedestrian safety; and all other items described in the Section 01 55 00S.
- 2.0 PRODUCTS**
- 2.1 Traffic Management Plan .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 shall give due notice to local police and fire departments prior to beginning construction and shall comply in all respects with their requirements.
- .7 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.
- .8 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.
- .9 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

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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. These delays shall be coordinated with available breaks in the traffic flow.
 - .4 The Contractor is responsible for ensuring that the flow of traffic is unimpeded by construction-related activities.

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3.0 EXECUTION

- 3.1 Traffic Control Plan
- .1 A copy of the approved current Traffic Plan 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 Road and Sidewalk Closure Permits
- .1 The Contractor must have, on-site, a copy of an approved Road and Sidewalk Closure Permit valid for the work being done. Failure to produce a valid Road and Sidewalk Closure Permit on-site will result in shut-down of the work. Failure to comply on what is stated on the approved permit will result in 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 a Road and Sidewalk Closure Permit before work can re-start on site. No claim will be accepted by the Owner for costs associated with this work shut-down.
- 3.3 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.
- 3.4 Signage
- .1 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

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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.

- 3.5 Detours .1 No detours are permitted.
- 3.6 Abrupt Changes in Surface Elevations .1 The Contractor shall minimize any abrupt changes in roadway elevation left exposed to traffic during both working and non-working hours.
- 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.
- 3.7 Cyclist and Pedestrian Access .1 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, **except for sites directly fronting businesses.**
- Note: Safe access to/from business must be provided and maintained at all times.**
- 3.8 Temporary Pavement Markings .1 The Contractor shall be responsible for the application and removal of all temporary pavement markings and reflective devices.
- All temporary markings must be removed after installation of permanent markings.

4.0 TRAFFIC RESTRICTIONS

- 4.1 Road and Sidewalk Closure Permits .1 A City of Coquitlam 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.
- A copy of the approved Road and Sidewalk Closure and Lane Closure Permit must be held on site by both the Site Superintendent and the person/company responsible for the traffic control implementation.
- .2 **Total Road Closure is Not Permitted**

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

- .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.

4.2 Lane Closure
Restrictions

- .1 **For each of the road sections affected:**
- Road and Sidewalk Closures will be reviewed for appropriateness during the allowable hours of work.
 - Access to properties to be maintained
 - Sufficient Traffic Control Persons are required for each Road and Sidewalk Closure (or any work activities), including side street intersections, to safely guide traffic through the work site.

5.0 HOURS OF WORK

- .1 **The hours of work shall be from 0700h to 1900h inclusive Monday to Friday and 0900h to 1800h inclusive Saturdays , unless noted otherwise.**
- .2 Line Marking work may be performed at night, (21:00 to 05:00).
No work is allowed on Sundays without specific written permission from Contract Administrator.

6.0 CONSTRUCTION
OPERATIONS

6.1 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 www.coquitlam.ca and can be found under Residents, Transit & Transportation, Trucking Routes.

6.2 Road Specific
Considerations

- .1 Ensure that Traffic Management Plan accommodates businesses and residences during construction activities.

LOCATION	ALLOWABLE TIME (includes set-up and take down)	COMMENTS
Johnson Street (Glen Drive to Barnet Highway) -	Monday to Saturday 9:00AM to 3:00PM ONLY	Minimum of one lane of southbound traffic must be maintained.

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

SOUTHBOUND LANES		Pedestrian traffic must be re-routed to use controlled road crossings. Adequate sidewalk closure signage must be provided.
Atlantic Avenue between Baldwin Street and Pacific Street	Monday to Saturday 7:00AM to 7:00PM	Single lane alternating traffic permitted. Pedestrian traffic must be re-routed to use controlled road crossings. Adequate sidewalk closure signage must be provided.
Atlantic Avenue at the High Street	Monday to Saturday 7:00AM to 7:00PM	Single lane alternating traffic permitted at the intersection. At least 4 TCP's will be required. Pedestrian and business access must be maintained at all times. Temporary detours for paving operations will be considered at the discretion of the Contract Administrator.

6.3 Work Stoppage Due to Traffic

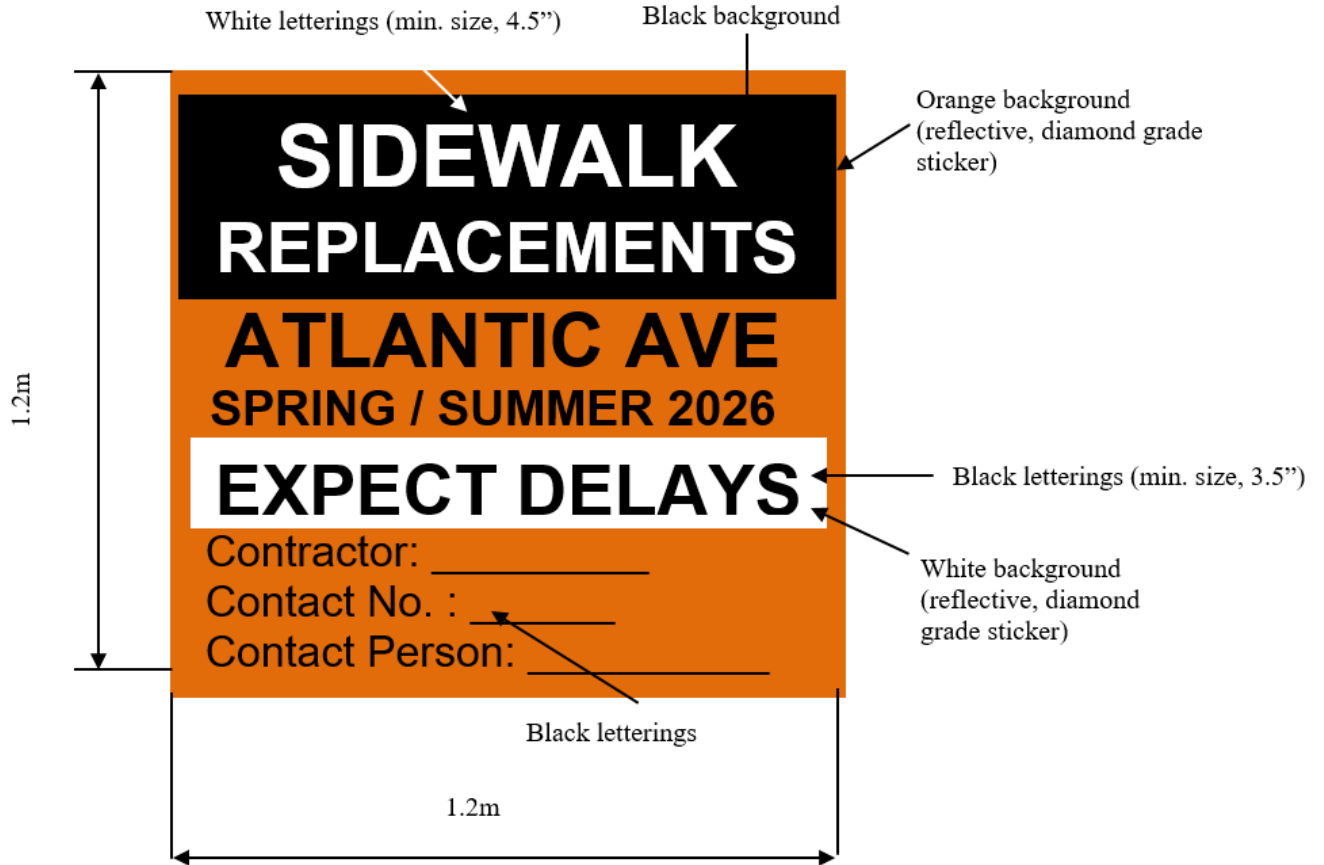
- .1 The City will not control or direct traffic control activities of the Contractor, but may require an immediate stop to any work where, in the sole opinion of the Contract Administrator, the provided traffic management plan is ineffective or creating unreasonable delays.

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

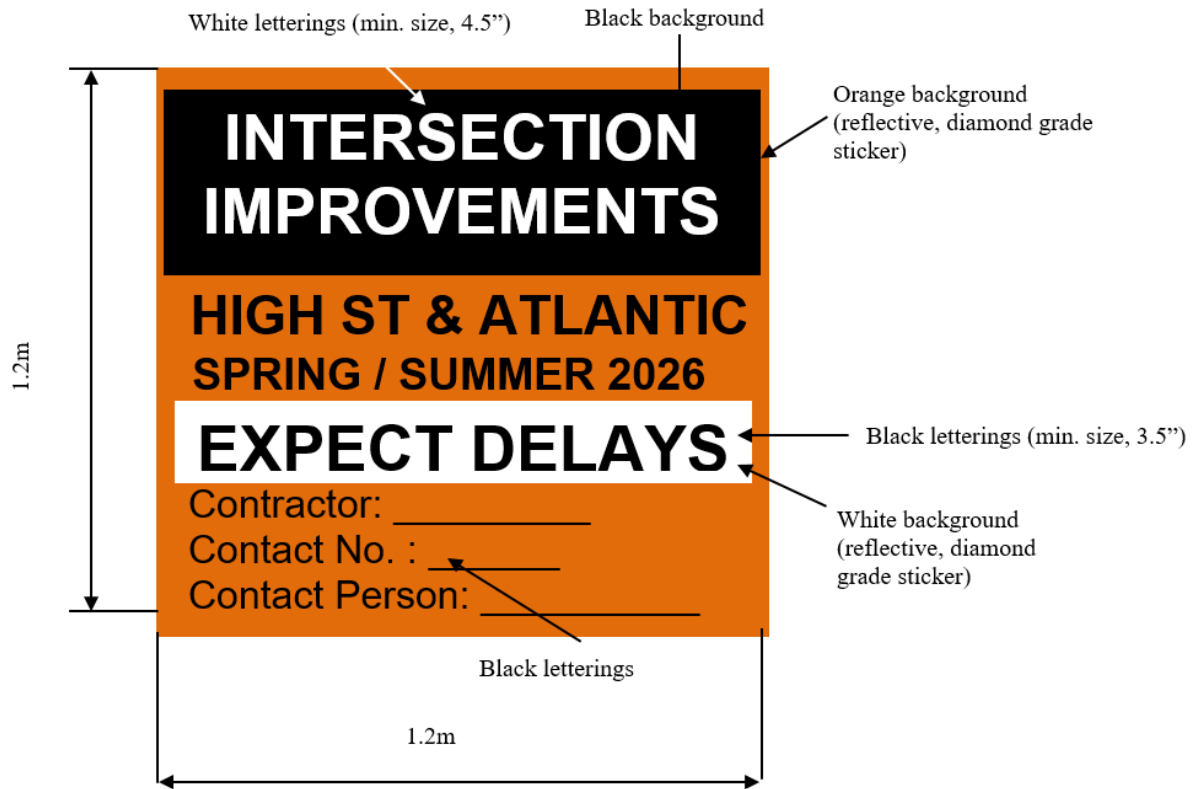
- 6.4 Construction Activity and Signage .1 The Contractor will be responsible to place other construction information signs as required to inform the public of construction activities, and ensure safe travel through the work site.
- 6.5 Changeable Message Sign (CMS) Board The following locations will require Changeable Message Signs (CMS) for the duration of the project:
1. Southbound on Johnson Street, north of Glen Drive
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.
- 6.6 Construction Zone Information Signs .1 The Contractor is required to provide, one week prior to start of work, stationary signs to inform traffic of existing and anticipated conditions at entry points of the lane to be worked on, locations for these signs will be provided by the Contract Administrator.
Exact locations to be determined on site by Contract Administrator.
Construction Zone Information Signs to follow specifications below.
- .2 The Contractor is required to provide business open signage along The High Street – 1.2m posted signs for northbound and southbound traffic, and A frame sandwich board signs to be placed outside of work zone within boulevard.
Note: Exact locations to be determined on site by Contract Administrator.

Construction Zone Information Signs to follow specifications below:

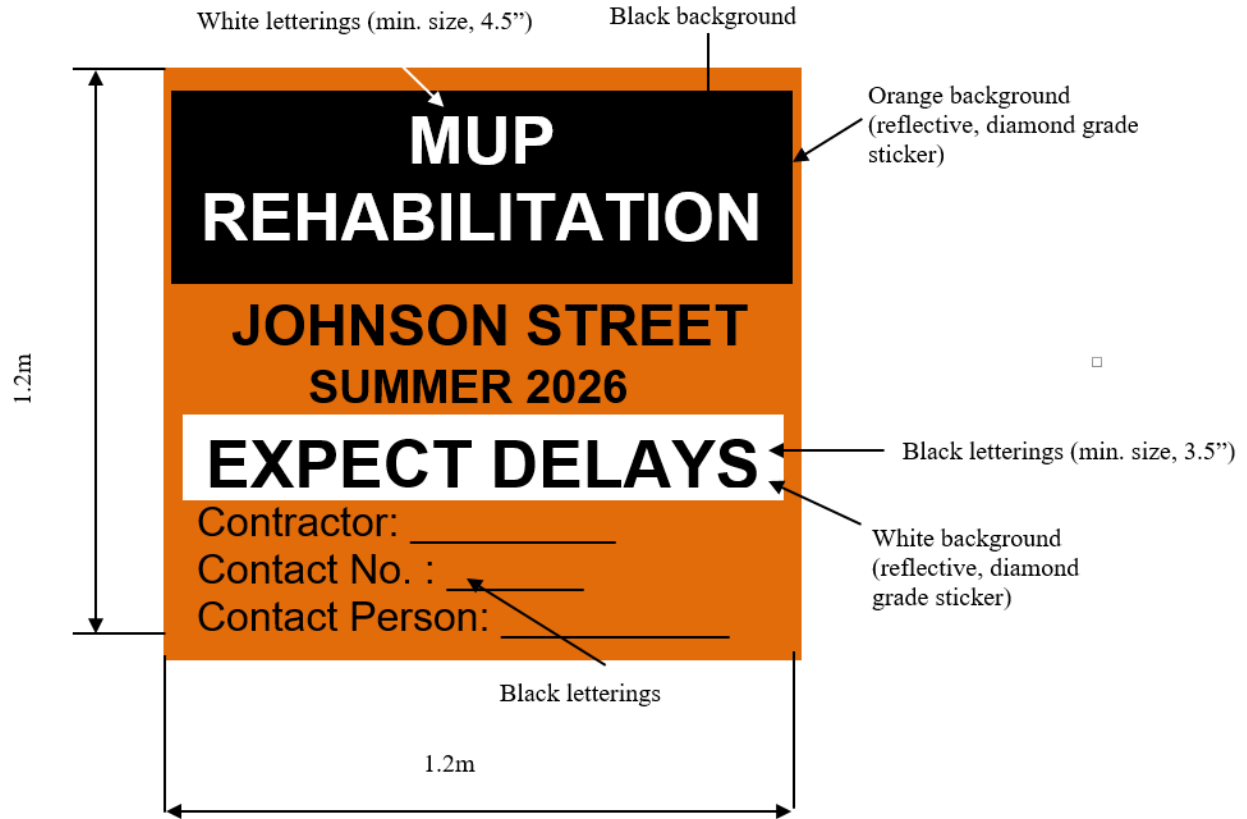
These supplementary Specifications must be read in conjunction with the Master Municipal Specifications contained in the Master Municipal Construction Documents (Platinum), Volume II, 2009.



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

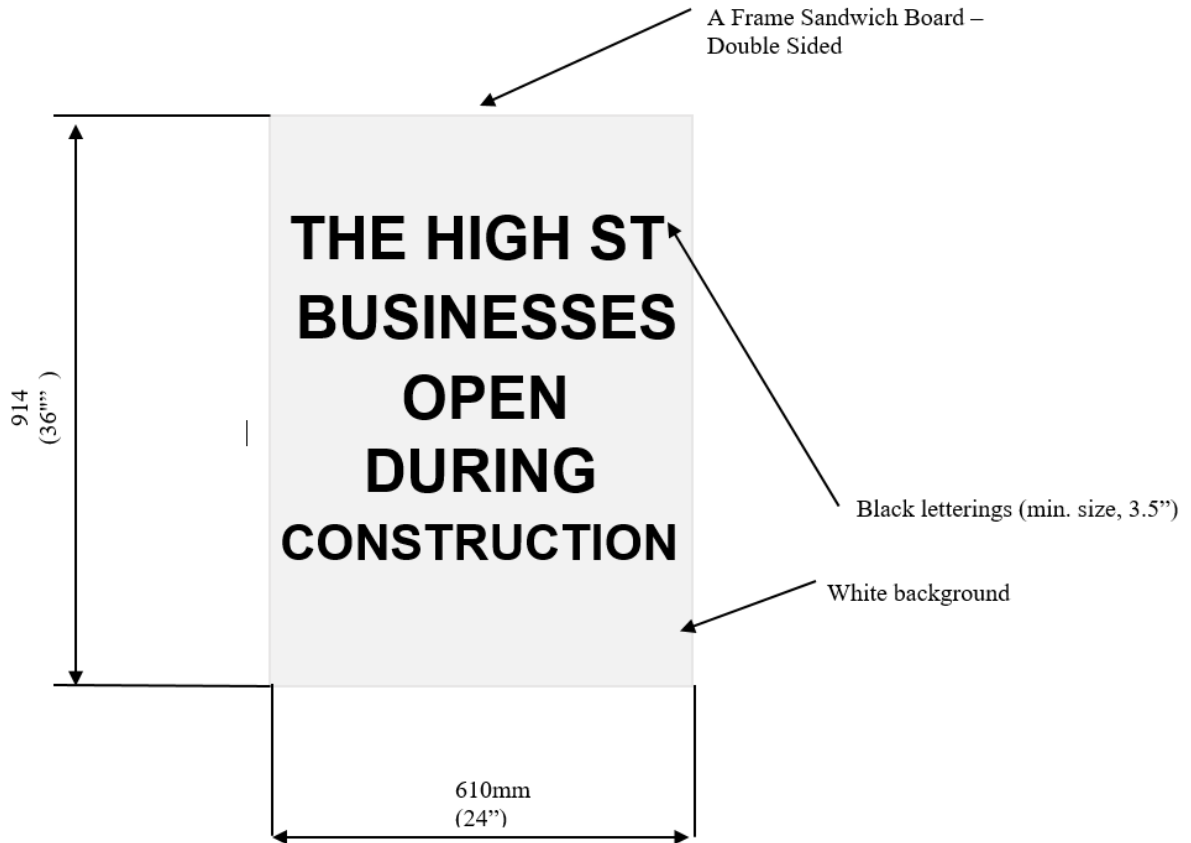


These supplementary Specifications must be read in conjunction with the Master Municipal Specifications contained in the Master Municipal Construction Documents (Platinum), Volume II, 2009.



Businesses Open Signage to follow specifications below:

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



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

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): 72497

- 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 _____

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

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.

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

***Appendix B -
Archaeological Chance Find
Procedures***

Archaeological Chance Find Procedures City of Coquitlam

DRAFT 2

November 2021 (version 2)



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Introduction

This document is presented as an accompaniment to Kwikwetlem Cultural Heritage and Archaeology Chance Find Procedures training provided by Brown & Oakes Archaeology to City of Coquitlam (or the “City”) staff and contractors.

The Chance Find Procedure (CFP) is intended to provide City planners and onsite project personnel guidelines for the appropriate response to an unanticipated discovery of known or suspected archaeological or cultural heritage materials during City operations. A CFP is NOT a substitute for professional archaeological assessment of project areas considered to hold archaeological potential. Thorough archaeological assessment will always reduce project risk of harms to protected archaeological sites and minimize the potential for encountering unanticipated material. This CFP training is intended to promote the preservation and proper management of heritage resources that are unexpectedly encountered during City activities.

The document presents a summary of archaeology site protection legislation, steps to follow in the case of suspected or observed archaeological materials, a list of appropriate authorities to contact in the case of archaeological site encounters, and a guide to archaeological site and materials recognition. Information on Kwikwetlem culture history and connections to traditional lands is not presented in this document and this information is best shared via virtual or in-person presentations.

Purpose

The purpose of CFP documentation is to aid in the protection and proper management of archaeological materials encountered during City of Coquitlam activities. Many land-altering activities have the potential to expose and/or negatively impact undocumented archaeological materials.

The purpose of this document is to:

- Ensure project personnel are aware that undocumented archaeological sites are likely to be present in the City of Coquitlam.
- Promote awareness of activities that may lead to the exposure of archaeological materials, including excavations, vegetation clearing, field survey and inspections, and more.
- Provide personnel the appropriate steps to follow if suspected or observed archaeological resources are encountered during work or personal activities.
- Provide education and resources to assist recognition of archaeological site types and materials in the lower Fraser River region.

Archaeological Sites in British Columbia

Archaeological sites are places that exhibit physical evidence of past human activity. Archaeological sites in British Columbia are automatically protected under the *Heritage Conservation Act* (HCA) when located on provincial, crown, municipal, or private land¹. The vast majority of archaeological sites in BC include places and belongings of Indigenous peoples. Some post-1846 sites related to newcomer history may also be registered and protected under the HCA if of significance to a place, industry, or region, for example. HCA protection is extended to ship and plane wrecks more than 2 years old.

Many First Nations consider the widely accepted definition of an archaeological site as a place featuring only the material remains of human activity too restrictive and instead advocate for the recognition and protection of a wider range of “cultural heritage” site types, including places of spiritual significance, named locales, known travel routes, and other places of cultural value.

The majority of the City of Coquitlam has not been surveyed for archaeological sites and it is reasonable to expect that many archaeological sites are buried and/or undetected. These sites are collectively referred to as undocumented archaeological sites.

HCA Legislation and Policies

Archaeological sites are automatically protected under the terms of the *Heritage Conservation Act* whether known or undocumented. Sites are protected whether previously disturbed by historic activities or intact. The HCA prohibits the alteration or disturbance of archaeological sites in whole or in part, on provincial public and private lands, whether impacts are intentional or inadvertent, and irrespective of previous land disturbance.

The HCA provides substantial penalties for the destruction or unauthorized disturbance of archaeological sites including imprisonment for up to two years and fines of up to \$1,000,000.

Alterations to archaeological sites may proceed under appropriate HCA permits held by professional archaeologists following provincial assessment guidelines². Work plans and methodologies related to archaeological site investigations must meet provincial regulatory standards and are expected to conform to participating First Nation cultural heritage policies and best-practice standards.

Archaeological materials on federally managed lands may be protected by other legislation and policies. Many federal agencies will adhere to the requirements outlined in the *HCA* when managing archaeological sites.

¹ <http://www.for.gov.bc.ca/archaeology/index.htm>.

² The HCA is administered by the Archaeology Branch, Ministry of Forests, Lands, Natural Resources and Rural Development.

First Nation Cultural Heritage Management

Many BC First Nations maintain cultural heritage policies and/or heritage permitting systems to assert oversight over Indigenous cultural heritage management and to ensure a high standard of archaeological practice. Contact should be made with locally affected Nations prior to any heritage study or project work with the potential to encounter cultural heritage materials to ensure adherence to Nation-preferred heritage protections, permits, and policy.

Potential to Encounter Archaeological Sites

Any project involving ground alterations has the potential to expose undocumented archaeological sites. Common forms of ground disturbances that have led to site discoveries include land grading, vegetation clearing/grubbing, excavation, asphalt/concrete removal, geotechnical drilling, access road or trail building, foundation demolition, heavy equipment movement, habitat planting, stream and pond channeling or dredging.

Other kinds of work activities where teams may encounter undocumented archaeological sites include field teams working in proximity to natural, undeveloped or minimally disturbed terrain. Teams involved in field surveys, field inspections, or inventories of natural ground and waterways, riparian areas, municipal parks and trails, forested areas, cut bank or erosion area, and so on may encounter exposed archaeological materials.

City workers or contractors engaged in any activity that may result in archaeological materials identification should be made aware of HCA site protection legislation and field supervisors properly versed CFP procedures.

Types of Archaeological Sites

The following site types are well-known across the lower Fraser River region and may be encountered in the City of Coquitlam. The following site types may contain a range of artifact types and sediment signatures.

- **Stone tool sites** containing isolated artifacts or accumulations of stone tool working debris.
- **Habitation sites** show accumulations of food remains, tools, and evidence such as hearths indicating short term and seasonal camps and settlements used for travel and resource procurement as well as large and permanent villages.
- **Surface features** such as cultural depressions created by former habitations, earthen fortifications, burial mounds, and rock cairns.
- **Wet sites** contain preserved organic materials like woven basketry or wood tools in addition to other cultural material; these sites form under special preservation conditions typically anaerobic water saturated sediments along waterways and floodplains.
- **Culturally Modified Trees (CMTs)** include bark stripped trees, planks, and territory markers.
- **Rock art** including pictographs (painted rock images) and petroglyphs (images carved or pecked into rockfaces or boulders).

Archaeological Chance Find Procedure

In the event of found or suspected archaeological material, follow the procedures outlined below.

STEP 1: WATCH for potential archaeological materials

- ⇒ Know that undocumented archaeological sites are expected throughout Coquitlam.
- ⇒ Know that archaeological materials are protected by law and must be reported.
- ⇒ If you believe you may have encountered archaeological materials (either intact or disturbed) follow the steps outlined below.

STEP 2: STOP work in proximity to the material

- ⇒ If known or suspected archaeological materials are encountered, STOP work in the immediate vicinity.
- ⇒ Do not disturb, move, relocate, or collect the material.

STEP 3: REPORT observed materials

- ⇒ Alert the site supervisor that suspected archaeological materials have been observed.
- ⇒ The site supervisor will ensure appropriate contact is made with City managers who will in turn reach out to archaeological professionals.

STEP 4: CONTACT archaeological professionals

- ⇒ Seek immediate advice from an archaeological professional.
- ⇒ Teams may be advised to protect the area with flagging or cones until the area can be assessed by the appropriate representative.
- ⇒ Teams may be requested to provide locational details or photographs of the material.

STEP 5: AWAIT advisement

- ⇒ Wait for instructions from the appropriate representative; do not begin ground disturbing work until cleared to do so.
- ⇒ Prepare and submit an incident report to ensure compliance with appropriate regulators and interest groups.

Archaeological Chance Find Procedure - Suspected Ancestral (Human) Remains

In the event of found or suspected human remains, follow the procedures outlined below*.

STEP 1: STOP all activity at the job site immediately, including the removal of backfill. Do not rebury the remains.

STEP 2: REPORT to the City Project Manager. The Project Manager will contact an archaeological professional and determine the appropriate course of action. In most cases, the archaeology professional will visit the site to determine if the materials are reasonably expected to be human and archaeological. If warranted, the consultant will notify the Archaeology Branch and the RCMP, the Office of the Coroner, and affected First Nations. The Coroner will affirm whether the remains are archaeological and not of forensic concern. The archaeologist will inform the Archaeology Branch and First Nations will be consulted to determine culturally appropriate handling protocols and subsequent project management options.

STEP 3: PROTECT the affected location with flagging or cones to prevent additional disturbance and for privacy. Do not photograph the material.

STEP 4: TREAT the remains with dignity and respect. Do not allow bystanders to take photographs or video.

STEP 5: AWAIT advisement.

* If it is reasonable to think the human remains are not archaeological but forensic in nature, an immediate call to the RCMP is required.

Management Options

If determined that an archaeological or cultural heritage site (intact or disturbed) is present, an archaeologist will coordinate communications with the City, local affected First Nations, and the Archaeology Branch to evaluate management options. Archaeology Branch and First Nations approval and additional permitting may be required prior to the implementation of management options.

Examples of potential management options are provided below. Options will vary based on site characteristics, proponent needs, and Archaeology Branch and First Nation requirements.

Option A: Site avoidance through project redesign or relocation. Site avoidance is always preferred. Avoidance minimizes impacts to irreplaceable archaeological sites and reduces cost and schedule impacts.

Option B: Systematic data recovery through controlled archaeological excavation or other method. Data recovery is destructive to archaeological sites and will entail consideration of costs and schedule coordination.

Option C: Monitoring of construction activities by a professional archaeological team. Monitoring is appropriate where project impacts cannot be evaluated before construction (due to impenetrable surfaces or underground facilities, for example) or where potential to encounter archaeological materials is present following impact assessment or systematic data recovery.

Best Practices for CFP Implementation

- A Chance Find Procedure is best applied as an outcome stemming from archaeological assessment – as a last step verification that archaeological materials have not been overlooked in project area assessments, or where there is a professional assessment that documents a low expectation for encountering archaeological materials in a work area.
- A Chance Find Procedure is not an acceptable replacement for a professional archaeological overview (AOA) or archaeological impact assessment (AIA) or a well-designed and implemented archaeological construction monitoring plan for many areas. Engagement with professional archaeological teams, affected First Nations, or the Archaeology Branch will assist in appropriate heritage study approaches.
- Chance Find Procedure training must be delivered by professional archaeologists and local area First Nations who wish to contribute to CFP presentations.
- Chance Find Procedures should be summarized regularly as part of job or project requirements, and CFP training repeated by the archaeological and First Nation team for new employees, project teams, and subcontractors.
- Chance Find Procedures do not supersede any requirements or policies pertaining to cultural heritage management by First Nations with interests in the area. Proponents are encouraged to seek input from interested First Nations on area-specific CFPs as part of any project engagement process.

Contact List

Archaeology Branch

Paula Thorogood	Planning and Assessment Manager	250-953-3300	Paula.Thorogood@gov.bc.ca
Nathan Friesen	Planning and Assessment Supervisor	250-953-3306	Nathan.P.Friesen@gov.bc.ca

City of Coquitlam

Main Reception 604-927-3000

Police and Coroner

RCMP (Non-emergency)	Coquitlam	604-945-1550
BC Coroners Service	Lower Mainland Region	604-660-7708

Area First Nations

Kwikwetlem First Nation	604-540-0680
Katzie First Nation	604-465-8961
Kwantlen Nation	604-888-2488
Musqueam Indian Band	604-263-3261
Stó:lō Nation	604-824-2420
Tsleil Waututh Nation	604-929-3454

Archaeological Site and Materials Identification

The following archaeological sites and artifacts are common to the lower Fraser River region. This guide is to assist in the recognition and protection of archaeological materials found by chance. If you identify any archaeological material, stop work immediately and contact a professional archaeologist.

Artifacts

Artifacts are objects made or modified by humans and may be formed of stone, bone, antler or wood. Bone, antler and wood tools were produced in abundance, but stone artifacts are the most common artifacts found in the lower Fraser region because of the preservation durability of stone. Bone and antler were fashioned into a variety of items, including needles, knives, points, jewelry, awls and scrapers. Wood was used to make implements like spoons and bowls, handles, ceremonial objects, canoes, houses, and much more.



Photo Credit: RBCM, Archaeology Collection. Antler and wood tools (<https://learning.royalbcmuseum.bc.ca>)

Stone tools common to this region include projectile points, knives, adzes (axes), scrapers, mauls (hammers), net weights, beads, and more. Archaeologists distinguish chipped stone from ground stone artifacts, each distinguished by the mode of manufacture, either flaking scars or grinding and polishing marks. Stone flakes or 'debitage' is produced during the process of making stone tools. These flakes were sometimes used as tools themselves or were left behind at the stone tool working site. Culturally produced debitage shows features distinctive from naturally broken rock, gravel or crush, but these signatures can be difficult to identify to an untrained eye. Stone artifacts were produced from dacite, quartzite, slate and nephrite as well as obsidian, chert, and other materials. Stone was acquired locally or transported or traded over long distances; high-quality materials like obsidian has been traced to locations from Prince Rupert to Oregon and beyond.

Artifacts may be found as isolated finds or in association with other cultural materials.

Archaeological Chance Find Procedure



Photo Credit: B&OA, Chipped stone artifacts from Coquitlam Lake.



Photo Credit (left): B&OA, Nephrite ground stone adze from Port Coquitlam. Photo Credit (right): RBCM, Archaeology Collection. Ground stone hand mauls (<https://learning.royalbcmuseum.bc.ca>)



Photo Credit: B&OA, Stone tool debitage from BC Interior.

Beads

Beads were made from a variety of materials including stone, shell, bone and glass (in more recent times). Shell and stone disc beads were used in jewelry, regalia and in mortuary practices across the Northwest Coast. On the Lower Fraser it is most common to find stone beads at archaeological sites fashioned from mud or silt stone, slate, or other softer stone. At some burial sites, individuals of rank were laid to rest with thousands of stone and shell beads.



Photo Credit: B&OA, Ground stone beads from near Agassiz.

Indigenous Historical Artifacts

Indigenous use of European materials in the years following contact are often found in early historic sites. Ceramics, glass, and metal were valued for their strength, durability, ease of access, or aesthetic properties. Glass was worked using traditional stone tool techniques in the same way as obsidian (a natural volcanic glass). Clay pipes were adopted by Indigenous peoples who several centuries earlier had introduced the practice of tobacco smoking to European traders. Glass beads were used by European fur traders to trade with Indigenous peoples; trade beads were initially valued for their vibrant colour and the expectation of beads as a wealth item.

Photo Credit (left): B&OA, Worked glass and clay stone pipe, Coquitlam.



Photo Credit (middle): <https://www.canadashistory.ca/explore/fur-trade/tobacco-pipes>. Photo Credit: Oregon Museum of Natural and Cultural History, Glass trade beads (<https://mnch.uoregon.edu/index.php/collections-galleries>).

Hearths

Hearths are the remnants of fires identifiable by dense black charcoal, ash and heat oxidized sediments. While natural forest fires may also leave traces of burning, hearths tend to be more defined and frequently show concave bases, evidence of repeated use, and contain or are in proximity to burned bone, fire-altered rock, and artifacts.

Fire-Altered Rock

Fire-altered rock (FAR) is rock modified by repeated heating and cooling. Heating small, rounded river cobbles and immersing the hot stones in water filled baskets or boxes was a frequently used cooking technique called 'stone boiling'. Heated stones were also used to warm clothing and bedding. The repeated heating and cooling of FAR created distinctive fracture and colour patterns that are easily distinguished from naturally broken rock. FAR shows irregular breakage patterns, is frequently deeply pitted, is often deep rust or black in colour, and may be found mixed in charcoal and ash laden sediments. As FAR is often found in abundance around settlement areas or near cooking features and hearths, it is a frequent first indicator of the presence of archaeological sites. Often mixed in FAR deposits are boiling stones—small, rounded pebbles that have not yet been fractured by thermal processes



Photo Credit: B&OA, Fire altered rock, Coquitlam.



Shell and Non-Shell Midden

Midden deposits are generally indicative of camp or village sites. Middens accumulate through the repeated, ongoing use of an area where food remnants or the debris of daily living build up in layers at a site over time. In coastal areas, shellfish provided an abundant food source and, middens contain abundant fragmented or whole shell typically embedded in dark, greasy, sediments rich in charcoal, ash, fire cracked rock, burnt materials, and artifacts. Because shell neutralizes the acidity in soil, shell middens enhance preservation of organic food remains and tools, and fish and mammal bone, wood, antler, and botanical remains are often well-preserved in shell midden sites.

Non-shell middens are accumulations of living materials formed at camps and settlements away from marine waterways. Non-shell midden shows layered deposits of dark sediments, ash, and sometimes sand and clay in sediments with little to no shell. These deposits rarely contain bone, antler, or wood remains due to poorer preservation environments.

In Coquitlam, non-shell middens are the more common site type but there are a few examples of inland shell midden sites associated with camps or settlements where shellfish was transported to locations by travel or trade.



Photo Credit (left): B&OA, Non-shell stratified midden Port Coquitlam. Photo Credit (right): Shell midden, Vancouver Island (<https://learning.royalbcmuseum.bc.ca/pathways/can->)

Surface Features

Surface features are non-portable cultural formations visible on the landscape. Features may include pits or depressions, earthen mounds or rock cairns, petroforms (rock arrangements) or trails. Cultural depressions may indicate the location of semi-subterranean winter dwellings, plank houses where midden accumulated around the outside of structures, cache pits used for tool or food storage, or pits and trenches used for food cooking or processing. Cultural depressions are identifiable by their uniform shape (usually round or rectangular), a berm may be present around the edge of features, the presence of associated artifacts, or concentrations of charcoal, ash, and fire altered rock.

Cultural mounds or rock cairns are other familiar surface features. Earthen burial mounds and rock cairns are part of a mortuary tradition found throughout the lower Fraser region over the past 1,500 years. Cultural mounds and cairns range in size from around a meter in diameter to more than 12 meters across. Individual occurrences or clusters of well-formed oval or circular mounds of earth and rock should trigger archaeological assessment.



Photo Credit: SFU Museum, Winter pit house village, Lillooet.

Rock Shelters and Caves

Rock shelters were used, among other purposes, as camps, spiritual or burial locations, and storage caches. Shelters can be found associated with overhangs of large boulders, indentations in rock bluffs or in caves. Shelters often associate with artifacts, rock art, and hearth features.

Ancestral (Human) Remains

Human remains are especially sensitive and significant finds. Any potential human bone requires immediate implementation of the CFP. Ancestral remains are frequently present at archaeological locations and may be found articulated in a burial context or as scattered fragments.

Petroglyphs and Pictographs (Rock Art)

Northwest Coast rock art includes images depicted on boulders, rock overhangs, rock faces, or other exposed rock surfaces. Pictographs are drawings or designs painted on rock using pigments like ochre or charcoal mixed with grease. Petroglyphs are images incised or pecked into stone. Designs vary widely and often depict animals, humans, or an extensive variety of geometric shapes.



Photo Credit: B&OA, Portion of petroglyph panel at Petroglyph Provincial Park, Nanaimo.



Photo Credit: B&OA, Portion of pictograph panel at Pitt Lake.

Fish Weirs and Traps

Fish weirs are structures constructed to funnel and trap fish for harvesting. Traps were built in intertidal areas along marine and river shorelines and near stream mouths. Weirs vary in form and structure depending on water and shoreline conditions, fish species targeted for harvest, intended volume of harvest, and community preferences. Fish weir sites are identifiable by linear or patterned arrangements of wooden stakes protruding from beach or bank edges or boulder alignments along waterways.



Photo Credit: Washington State Archives, Yelm Jim Fish Trap 1885
<http://www.digitalarchives.wa.gov/Record/View/DAA73FC7A57E989D65B6DBEA419FC89E>

Wet Sites

Wet sites are special preservation environments that form in low oxygen water saturated environments along waterways, in bogs and on floodplains. These locations permit enhanced preservation of organic artifacts like wood, bark, and botanicals. Artifacts found in wet sites have included basketry, twine and rope, wooden tools and weapons, architectural structures, and ceremonial implements made of wood and bone.



Photo Credit (left): Mike Blake. Ground slate knife with wooden handle, Agassiz. Photo Credit (right): Katherine Bernick, Waterlogged and preserved basket, Coquitlam.

Culturally Modified Trees (CMTs)

Culturally Modified Trees are trees that have been utilized by Indigenous Peoples for a broad range of cultural uses. Wood was used to build houses, canoes, tools, and weapons. Branches, boughs, and leaves were used to fashion tools, for medicine and in cultural ceremony. Harvesting cedar bark and roots was undertaken regularly to make clothing, cordage, basketry, and sleeping mats, ceremonial regalia, and much more.

Triangular bark stripped cedars are the most common form of CMT; a long, linear triangular bark scar will show where bark was removed from the trunk of a living tree. The exposed scar will heal over time creating a seam on the outer tree bark. This form of sustainable harvesting allowed the same tree to be used multiple times for bark harvesting. CMTs can also show evidence of wood removal where wedges were used to pry rectangular planks of wood from standing, living trees.

Logging and clearing throughout much of Coquitlam municipality reduces the chance that archaeological CMTs remain in most forested areas today, but more recent CMTs where bark or wood was harvested from second-growth forest by Kwikwetlem for cultural uses may be present.

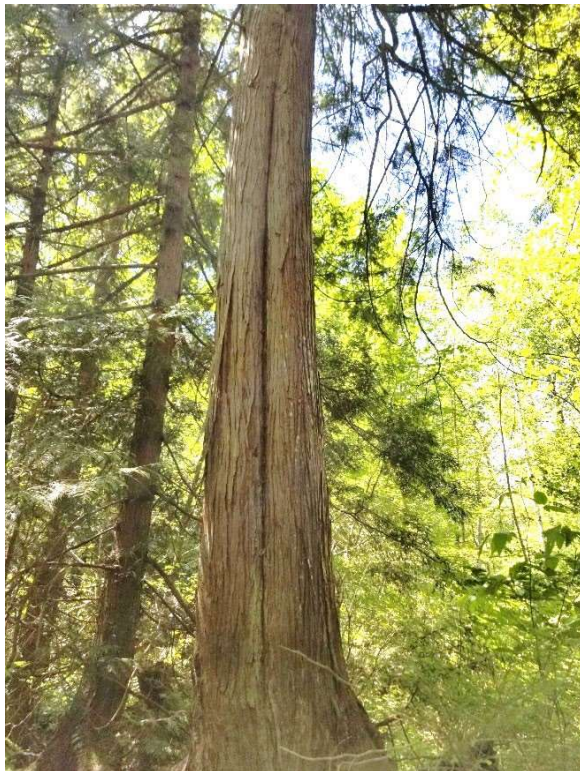


Photo Credit: B&OA, Bark stripped cedars, Coquitlam.

Additional Resources

Learning Portal, Royal BC Museum - <https://learning.royalbcmuseum.bc.ca>

SFU Museum of Archaeology & Ethnology - <https://www.sfu.ca/archaeology/museum.html>

References Cited

Archaeology Branch (1999). Found Human Remains. On file with the Archaeology Branch, Victoria, BC. From http://www.tca.gov.bc.ca/archaeology/policies/found_human_remains.htm

Archaeology Branch (2010). Heritage Conservation Act (RSBC 1996). On file with the Ministry of Tourism, Culture, and the Arts, Victoria, BC. From

***Appendix C -
Arborist Report***



Koome Urban Forestry Ltd. Arborist Report

City of Coquitlam – Sidewalk Improvements

Johnson Street From Barnet Hwy to Glen Drive

Atlantic Avenue/Pacific Street

Intersection of Atlantic Avenue and The High Street

Submitted to:

City of Coquitlam

Internal Project Code: KUF-COCQ_Johnson Street

Original Submission: March 4, 2026

Submitted by:

KOOME
URBAN FORESTRY LTD

305-1163 The High Street
Coquitlam, BC
V3B 7W2
604 900-8262

This report's content was performed and managed by:



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ISA Tree Risk Assessment Qualified



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ISA Certified Arborist, PN-9372A
ISA Tree Risk Assessment Qualified

Any questions or concerns as to the contents of this report please direct them to the following:

Email: kelly.koome@koomeurbanforestry.ca
Email: connor.gritter@koomeurbanforestry.ca
Website: www.koomeurbanforestry.ca



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1.0 Introduction

1.1 Background

Koome Urban Forestry Ltd. (KUF) was contracted by City of Coquitlam to prepare an ISA Certified Arborist Tree Report for the property at

Johnson Street From Barnet Hwy to Glen Drive
Atlantic Avenue/Pacific Street
Intersection of Atlantic Avenue and The High Street

1.2 Assignment

KUF has been retained by the client to assess the health and condition of the tree(s) in accordance with The City of Coquitlam Tree Protection and Management Bylaw No 4091, 2010.

As part of this assessment, the KUF Ltd. has performed a site review entailing identification and visual assessment of the tree(s) on site. The report also includes city trees which may be impacted by development based on the tree survey provided by the client or representative(s). The Project Arborist will provide recommendations for the retention or removal of tree(s) on this site based on the existing site conditions and the proposed use of the site.

1.3 Limits of the Assignment

KUF's observations were limited to one site visit on February 17, 2026. No tissue or soil samples were sent to a lab for identification or analysis. KUF located the trees using the survey provided by the client.

During winter deciduous trees are in winter dormancy and this is a limitation for assessing tree health at that time.

1.4 Testing & Analysis

KUF used visual tree assessment and mallet sounding to test the trees' health, condition and risk level.

The International Society of Arboriculture Best Management Practices (for Managing Trees During Construction, Second Edition) and ANSI A300 Standards (Part 5: Tree, Shrub and Other Woody Plant Maintenance—Standard Practices [Management of Trees and Shrubs During Site Planning, Site Development, and Construction]) were used to prepare this report.

1.5 Purpose & Use of Report

The purpose of this report is to assist the property owner in compliance with The City of Coquitlam Tree Protection and Management Bylaw No 4091, 2010.



2.0 Site Description

2.1 Site Review

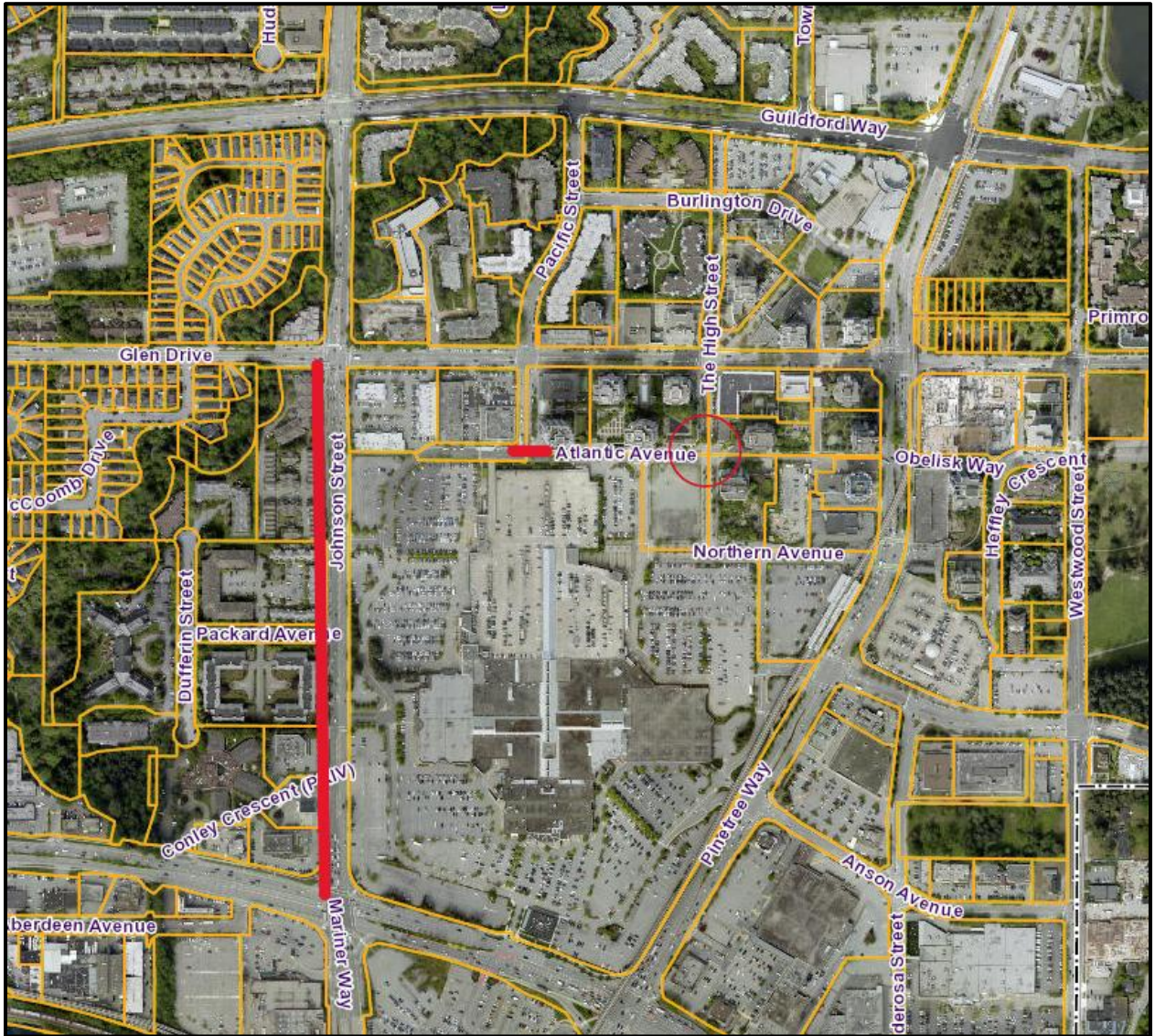


Fig. 1 – QtheMap – Overview of Three Sites for Sidewalk Improvement



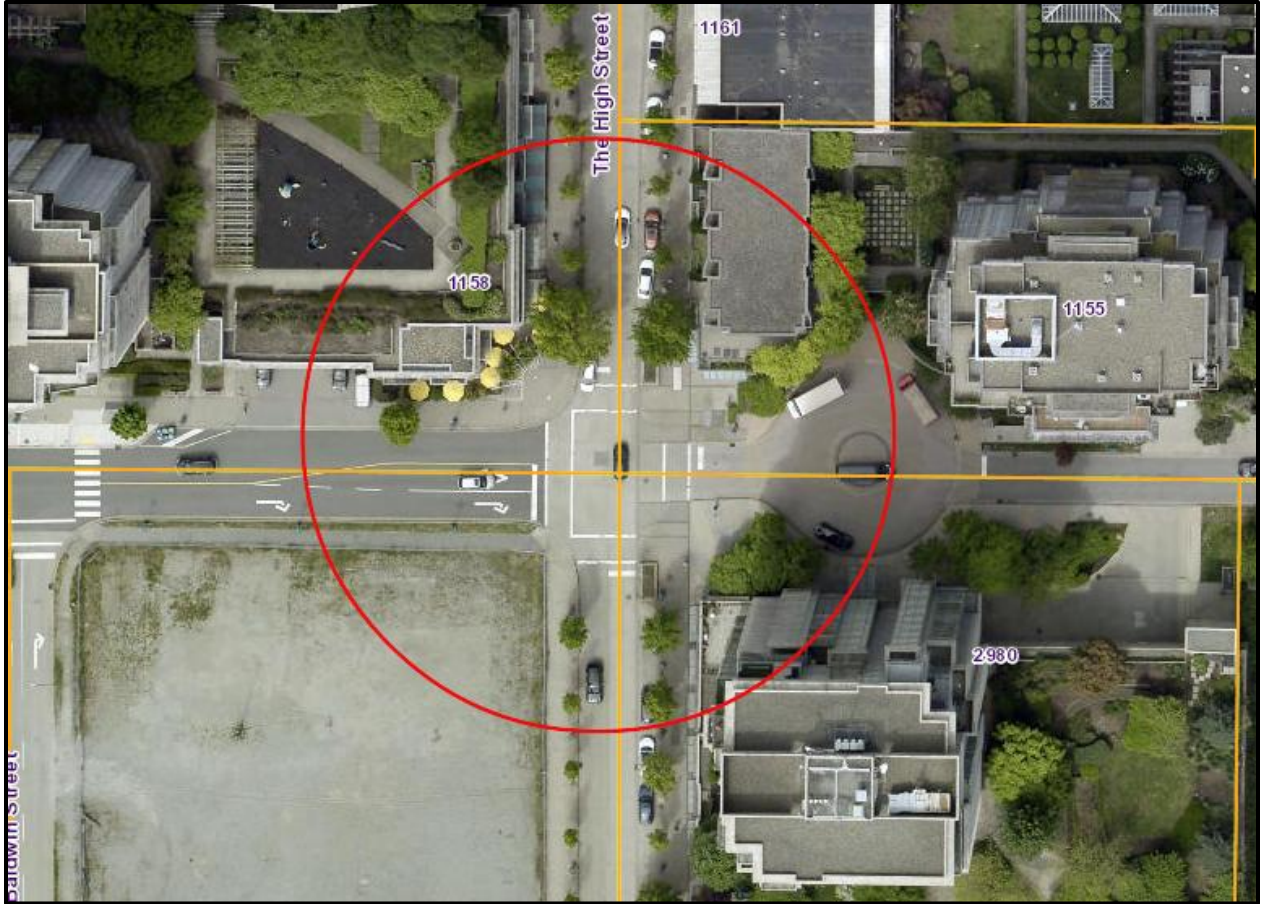


Fig. 2 – QtheMap – Intersection of The High Street/Atlantic Avenue



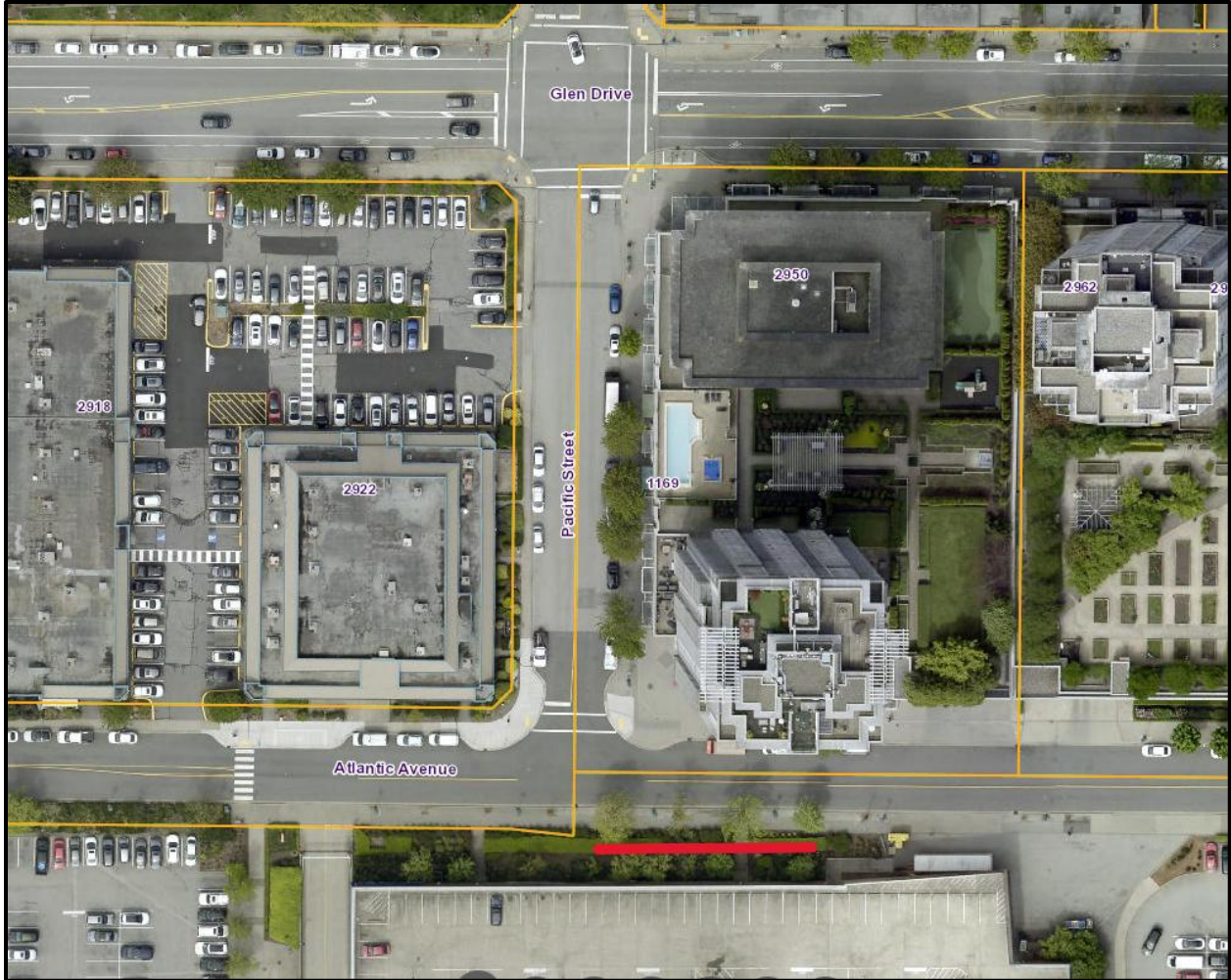


Fig. 3 – QtheMap – Intersection of Pacific Street/Atlantic Avenue





Fig. 4 – QtheMap – Along Johnson Street



2.2 Proposed Civil Upgrade

The preliminary design includes improvements at three separate locations along Johnson Street and Atlantic Avenue. The proposed works consist of sidewalk improvements including replacement of existing concrete sidewalks, localized asphalt repairs, and enhancements to the surrounding boulevard areas with grassed surfaces. The design also includes the installation of driveway letdowns where required to improve accessibility and site functionality.

Additional improvements are proposed along High Street, which include modifications to existing concrete barrier curbs, regrading of curbs to improve drainage and accessibility, and the installation of ramp letdowns to provide improved pedestrian access.

2.3 Environmental Description

The Johnson Street project areas are primarily located within a residential setting consisting of multi-family apartment buildings and residential housing. The streetscape generally includes grassy boulevards, landscaped front yards, and intermittent street trees adjacent to existing sidewalks.

In contrast, the intersections of Atlantic Avenue with Pacific Street and High Street are situated within a more commercial environment. These areas are characterized by concrete sidewalks, commercial buildings, and designated boulevard spaces that accommodate street tree plantings.

There is no evidence of raptors nests, osprey nests or heron colonies on the site. Removal of trees however between March 15 – August 15 (date subject to change depending on seasonal nesting behavior and therefore must be confirmed with the City) will require a bird nesting survey. This is as prescribed by the federal Migratory Birds Convention Act (MBCA), 1994 and Section 34 of the BC Wildlife Act. It is the responsibility of the owner/developer to ensure they are in compliance with the city's regulations governing nesting birds on sites where development is occurring.

Municipal Trees – There are City of Coquitlam trees associated with this project.

Trees Straddling the Property Line – There are trees straddling the property line



2.4 Tree Preservation Summary

The long-term success of the proposed civil upgrades depends on minimizing site impacts during pre-construction, construction, and post-construction activities. Best efforts must be made to ensure the Tree Protection Zone remains undisturbed.

Ongoing monitoring of retained trees through the development process and implementation of mitigating works (watering, mulching, etc.) is essential for success.

3.0 Findings

3.1 Summary of Findings

- The site consists primarily of City boulevard trees, including European beech (*Fagus sylvatica*), purple leaf plum (*Prunus cerasifera*), tulip tree (*Liriodendron tulipifera*), and red maple (*Acer rubrum*), ranging from fair–poor to good condition. Several trees along Johnson Street show signs of drought stress and would benefit from improved irrigation and site conditions.
- The site comprises three separate locations, consolidated into one seamless report with distinct labels for clarity and ease of reference. Each location contains varying tree species, conditions, and site characteristics.

Tree protection fencing and arborist monitoring:

- Tree protection fencing to be built to the outermost dripline of retained trees. If work is required in the fenced area, an arborist must be present. Once work is completed with arborist supervision, the tree protection fencing may be minimized. Contact arborist for supervision prior to grading to assist with tree protection, document any impacts, and reassess tree retention.
- Arborist presence required during construction around protected trees (i.e., 1.5-2 meters away from the tree barriers or within the tree barriers).

Summary of tree removals:

- 12 living trees + 1 dead tree located on City of Coquitlam property and straddling the property line are proposed for removal.



3.2 Tree Inventory Assessment

Table 1: Tree Inventory Assessment

Tree #	Tag #	Common Name/ Botanical Name	DBH (cm.)	C-RAD (m.)	LCR (%)	Comments	Recommendation & Rationale
Johnson Street From Barnet Hwy to Glen Drive							
J1	-	Dawyck Purple Beech (<i>Fagus sylvatica</i> 'Dawyck Purple')	9	1	50	Fair Condition Drought Damaged Symmetrical crown Compaction around roots City Boulevard tree	Remove – Proposed sidewalk changes and grading towards the roadway directly within CRZ of tree
J2	-	Dawyck Purple Beech (<i>Fagus sylvatica</i> 'Dawyck Purple')	11	1.5	65	Fair Condition Lean to the west with Correction Drought Damaged Symmetrical crown Compaction around roots City Boulevard tree	Remove – Proposed sidewalk changes and grading towards the roadway directly within CRZ of tree
J3	-	Dawyck Purple Beech (<i>Fagus sylvatica</i> 'Dawyck Purple')	12	1.5	75	Fair-Poor Condition Drought stressed Brittle branches Cavity in stem City Boulevard trees	Remove – Proposed sidewalk changes and grading towards the roadway directly within CRZ of tree
J4	-	Dawyck Purple Beech (<i>Fagus sylvatica</i> 'Dawyck Purple')	10	1.5	75	Fair-Poor Condition Drought stressed Brittle branches Cavity in stem City Boulevard trees	Retain – Individual TPZ fencing required on all sides



Tree #	Tag #	Common Name/ Botanical Name	DBH (cm.)	C-RAD (m.)	LCR (%)	Comments	Recommendation & Rationale
J5	-	Dawyck Purple Beech (<i>Fagus sylvatica</i> 'Dawyck Purple')	9	1	50	Fair-Poor Condition Drought stressed Brittle branches Cavity in stem City Boulevard trees	Retain – Individual TPZ fencing required on all sides
J6	-	Dawyck Purple Beech (<i>Fagus sylvatica</i> 'Dawyck Purple')	14	1.4	65	Good Condition City Boulevard tree Winter dormant Healthy bud growth	Remove – Proposed sidewalk changes and grading towards the roadway directly within CRZ of tree
J7	-	Flowering Cherry (<i>Prunus serrulata</i>)	38	4.8	40	Good Condition Symmetrical Crown Minor exposed roots Well, Maintained	Retain – Group TPZ Fencing with tree J8 on south, east, and north side of tree
J8	-	Flowering Cherry (<i>Prunus serrulata</i>)	44	4.4	50	Good Condition Symmetrical Crown Well, Maintained	Retain – Group TPZ Fencing with tree J7 on south, east, and north side of tree
J9	-	Flowering Cherry (<i>Prunus serrulata</i>)	53	5.2	55	Good Condition Symmetrical Crown Well, Maintained	Retain – Individual TPZ fencing required on south, north and east side of tree
J10	-	Dawyck Purple Beech (<i>Fagus sylvatica</i> 'Dawyck Purple')	19	2.5	70	Good Condition City Boulevard tree Winter dormant Healthy bud growth	Remove – Proposed sidewalk changes and grading towards the roadway directly within CRZ of tree
J11	-	Dawyck Purple Beech (<i>Fagus sylvatica</i> 'Dawyck Purple')	14	2	70	Good Condition City Boulevard tree	Remove – Proposed sidewalk changes and grading towards the roadway directly within CRZ of tree



Tree #	Tag #	Common Name/ Botanical Name	DBH (cm.)	C-RAD (m.)	LCR (%)	Comments	Recommendation & Rationale
						Winter dormant Healthy bud growth	
J12	-	Flowering Cherry (<i>Prunus serrulata</i>)	61	5.6	60	Good Condition Symmetrical Crown Well, Maintained	Retain – Individual TPZ fencing required on south, north and east side of tree
J13	-	Purple Leaf Plum (<i>Prunus cerasifera</i>)	10	1.5	60	Fair Condition Drought Stressed City Boulevard tree Brittle branches	Remove – Proposed sidewalk changes and grading towards the roadway directly within CRZ of tree
J14	-	Dawyck Purple Beech (<i>Fagus sylvatica</i> 'Dawyck Purple')	11	1.5	65	Fair-Good Condition Drought Stressed City Boulevard tree	Remove – Proposed sidewalk changes and grading towards the roadway directly within CRZ of tree
J15	-	Dawyck Purple Beech (<i>Fagus sylvatica</i> 'Dawyck Purple')	9	1.5	45	Fair-Good Condition Drought Stressed City Boulevard tree Brittle Branches Lean away from road with correction	Remove – Proposed sidewalk changes and grading towards the roadway directly within CRZ of tree
J16	-	Dawyck Purple Beech (<i>Fagus sylvatica</i> 'Dawyck Purple')	9	1.2	90	Fair Condition Drought Stressed City Boulevard tree Brittle branches	Remove – Proposed sidewalk changes and grading towards the roadway directly within CRZ of tree
J17	-	Dawyck Purple Beech (<i>Fagus sylvatica</i> 'Dawyck Purple')	8	1.2	70	Fair Condition Drought Stressed City Boulevard tree	Remove – Proposed sidewalk changes and grading towards the roadway directly within CRZ of tree



Tree #	Tag #	Common Name/ Botanical Name	DBH (cm.)	C-RAD (m.)	LCR (%)	Comments	Recommendation & Rationale
						Brittle branches	
J18	-	European Beech (<i>Fagus sylvatica</i>)	7	1	65	Fair Condition Drought Stressed City Boulevard tree Brittle branches	Retain – Individual TPZ fencing required on all sides
J19	-	European Beech (<i>Fagus sylvatica</i>)	7	1	60	Fair Condition Drought Stressed City Boulevard tree Brittle branches	Remove – Proposed sidewalk changes and grading towards the roadway directly within CRZ of tree
J20	-	Dawyck Purple Beech (<i>Fagus sylvatica</i> 'Dawyck Purple')	8	-	-	Dead Standing Tree	Remove – Proposed sidewalk changes and grading towards the roadway directly within CRZ of tree Dead Standing Tree
J21	-	Dawyck Purple Beech (<i>Fagus sylvatica</i> 'Dawyck Purple')	13	1.5	95	Fair- Good Condition Drought Stressed City Boulevard tree Brittle branches	Retain – Individual TPZ fencing required on all sides
J22	-	Tulip (<i>Liriodendron spp.</i>)	48	5.2	70	Good Condition Symmetrical Crown Surrounded by sidewalk 4.5 m from MUP	Retain – Notify the project arborist immediately if any significant structural roots are exposed during the removal or modification of the sidewalk.
J23	-	Tulip (<i>Liriodendron spp.</i>)	63	5.3	75	Good Condition Symmetrical Crown Surrounded by sidewalk	Retain – Arborist supervision is required during sidewalk removal and excavation along the east side of the tree.



Tree #	Tag #	Common Name/ Botanical Name	DBH (cm.)	C-RAD (m.)	LCR (%)	Comments	Recommendation & Rationale
						4.5 m from MUP	
Atlantic Avenue/Pacific Street							
P1	-	Tulip (<i>Liriodendron spp.</i>)	36	3.3	65	Good Condition Symmetrical Crown Winter dominant City Boulevard tree	Retain – Individual TPZ fencing required on all sides
P2	-	Tulip (<i>Liriodendron spp.</i>)	30	2.6	50	Good Condition Symmetrical Crown Winter dominant City Boulevard tree	Retain – Individual TPZ fencing required on all sides
P3	-	Tulip (<i>Liriodendron spp.</i>)	38	3.8	65	Good Condition Asymmetrical away from the road Winter dormant City Boulevard tree	Retain – Individual TPZ fencing required on all sides
P4	-	Tulip (<i>Liriodendron spp.</i>)	22	2.8	50	Good Condition Symmetrical Crown Winter dominant City Boulevard tree	Retain – Individual TPZ fencing required on all sides
Intersection of Atlantic Avenue and The High Street							
H1	-	Red Maple (<i>Acer rubrum</i> 'Armstrong')	26	2.5	70	Good Condition Well, Maintained Symmetrical Crown	Retain – Individual TPZ fencing required on all sides



Tree #	Tag #	Common Name/ Botanical Name	DBH (cm.)	C-RAD (m.)	LCR (%)	Comments	Recommendation & Rationale
						Winter dominant City Boulevard tree	
H2	-	Red Maple (<i>Acer rubrum</i> 'Armstrong')	23	2.2	60	Good Condition Well, Maintained Symmetrical Crown Winter dominant City Boulevard tree	Retain – Individual TPZ fencing required on all sides
H3	-	Red Maple (<i>Acer rubrum</i> 'Armstrong')	21	2.6	65	Good Condition Well, Maintained Symmetrical Crown Winter dominant City Boulevard tree	Retain – No TPZ Fencing, sufficiently far enough away from proposed work
H4	-	Red Maple (<i>Acer rubrum</i> 'Armstrong')	47	4.2	80	Good Condition Well, Maintained Symmetrical Crown Winter dominant City Boulevard tree	Retain – Individual TPZ fencing required on all sides
H5	-	Red Maple (<i>Acer rubrum</i> 'Armstrong')	43	4.4	85	Good Condition Well, Maintained Symmetrical Crown Winter dormant City Boulevard tree	Retain – Individual TPZ fencing required on all sides



3.3 Replacement Tree Requirements

Table 2: Total recommended tree replacements

	On-site and Straddling	Off-Site Trees	City Trees
Protected Trees to be Removed	0	0	12
Replacement Trees Required	0	0	24

Replacement of Trees

Our community benefits when damaged or removed trees are replaced with new ones. Trees provide canopy cover, natural functions and other values to the community. Choosing the right tree to plant is important, and this guide will help you choose the one that will work best for the location and environment.

Tree Replacement Requirements

Under Coquitlam’s Tree Management Bylaw, in many instances trees being removed under a tree cutting permit must be replaced. Replacement trees may be selected from the plant lists provided in this guide. Large-growing species from the Class A list are preferred because they will provide a greater amount of value to the community than smaller trees. Class B and C feature smaller-growing species.

The number of replacement trees required on your lot depends on your lot size and how many protected trees remain on the lot after your proposed tree removal. Use the table and examples on the facing page to determine your replacement tree requirements. The City Arborist can be contacted at 604-927-3482 to help you determine your lot size and replacement tree requirements.

Residents who propose to replace trees with species that are not listed in this guide book, should provide a clear rationale for selecting the alternative species.

Tree Species Selection for Natural Areas

In areas where there are many trees and natural area restoration is identified as a priority, the City Arborist may work with the owners or their consultant to develop an appropriate selection of native trees and shrubs to be planted, instead of the replacement tree standards described above.

Planting and Maintenance Guidelines

- To ensure the survival of replanted trees, all replacement trees should be planted and maintained according to the illustration in Figure 1 (Page 6).
- Prospective planting sites should be protected from soil compaction, prior to and after planting.
- Where practical, replacement trees should be located at least 2.5 metres from any property line, tree, building, fence, roadway or other built element.
- All replacement trees planted on building sites undergoing construction or landscaping should be protected by well-constructed temporary fencing. Fencing should be off-set 1.5 metres from the stem of the tree or 0.5 metres from the edge of the canopy, whichever is greater. Fencing should be 1.2 metres in height (2 metres in areas where deer are often seen) and be constructed from two-by-four posts and rails (top and bottom) with plastic snow fencing panels.

Securities for Replacement Tree Planting

As per Bylaw No. 4091, 2010, Part 4, section 11, a security deposit will be required for permits where replacement trees are required. Currently, the security is \$300 per replacement tree, based on the number of Class A trees.

Inspections and Release of Security Deposit

On sites where replacement trees are to be planted, two inspections will be required by the City Arborist. Deposits will be released as follows:

Inspection 1: After planting (90% of security released if no deficiencies)

Inspection 2: One year after planting (residual 10% of original security released)

Excerpt from City of Coquitlam Tree Protection and Management Bylaw No 4091, 2010



Appendix A – Glossary of Key Terms

Abutment: A structure built to support the lateral pressure of an arch or span, e.g., at the ends of a bridge.

Adapted Trunk Diameter Method: This method uses the trees age and tolerance to construction damage to determine the factor that will be multiplied by the diameter to provide a sufficient tree protection zone given these factors.

Age: The relative age (young, intermediate, mature) within the particular stand of trees or forest.

Algae: Is a simple, nonflowering plant (includes seaweeds and many single-celled forms). They do contain chlorophyll (but lack true stems, roots, and vascular tissue)

ALR: The Agricultural Land Reserve in which agriculture is recognized as the priority.

Bole: The stem or trunk of a tree.

Chlorotic: Yellowing of plant tissues caused by nutrient deficiency &/or pathogen.

Co-dominant Leaders: Forked dominant stems nearly the same size in diameter, arising from a common junction.

Co-dominant Within Stand: Individual tree whose height is generally equal to trees (regardless of species) within the same stand.

Compaction: Compression of the soil that breaks down soil aggregates and reduces soil volume and total pore space, especially macropore space.

Conk: A fungal fruiting structure typically found on trunks and indicating internal decay.

Dead Standing: A tree that has died but is still standing erect.

DBH: The Diameter of the tree at 1.40 meters above the ground.

Dominant Within Stand: Individual tree whose height is significantly greater than adjacent trees (regardless of species) within the same stand.

C-rad: Crown radius, is the dripline measured from the edge of the trunk to the outermost branches of the crown.

CRZ: Critical Root Zone - The area between the trunk and to the end of the Drip Line.

Fair: Healthy but has some defects such as co-dominant trunk, dead branches.

Feeder Roots: The smaller roots responsible for water and nutrient absorption and gas exchange. These roots can extend far beyond the Drip Line (or outer canopy) of the tree.

Fungus (singular) / Fungi (plural): Unicellular, multicellular or syncytial spore-producing organisms that feed on organic matter (including molds, yeast, mushrooms and toadstools)

Girdling Root: Root that encircles all or part of the trunk of a tree or other roots and constricts the vascular tissue and inhibits secondary growth and the movement of water.

Good: Good form and structure, healthy with no defects.

Hazardous: Significant hazard exists with a high risk of immediate failure; which could result in serious damage to property or person(s).

Height: Height of tree is approximate.

LCR: Live Crown Ratio – The ratio of crown length to total tree length.



Level 1 Limited Visual Assessment: Limited visual assessment looking for obvious defects such as, but not limited to dead trees, large cavity openings, large dead or broken branches, fungal fruiting structures, large cracks, and severe leans.

Level 2 Basic Visual Assessment: Detailed visual inspection (aboveground roots, trunk, canopy) of tree(s) may include the use of simple tools to perform assessment (i.e. sounding mallet, trowel, measuring tape, binoculars). The assessment does not include advanced resistance drilling of trunk.

Level 3 Advanced Assessment: To provide detailed information about specific tree parts, defects, targets, or side conditions. May include aerial inspection, resistance drilling of tree parts, laboratory diagnosis of fungal or plant tissue.

Mildew: Is a minute powdery or web-like fungi (of different colours) that is found on diseased or decaying substances.

Moss: A small, green, seedless plant that grows on stones, trees or ground.

No Disturbance Zone: The area adjacent to the tree that is restricted from all construction activity.

Poor: multiple defects, disease, poor structure and or form, root and or canopy damage.

Phloem: Plant vascular tissue that transports sugar and growth regulators. Situated on the inside of the bark, just outside the cambium. Is bidirectional (transports up and down). Contrast with xylem.

Phototropic: Growth toward light source or stimulant.

RAR: Riparian Areas Regulation.

Retain & Monitor: Monitor health and condition of tree every 12 months for signs of deterioration.

Root Crown: Also, called the root collar, it includes the flare at the base of the trunk and the initial roots that develop below the trunk. These roots generally taper and subdivide rapidly to form the root system of the tree.

SPEA: Streamside Protection and Enhancement Area

Spiral Decline: The health and condition of the tree is deteriorating.

Sub-dominant Within Stand: Individual tree whose height is significantly less than adjacent trees (regardless of species) within the same stand.

Suppressed: Individual tree whose growth, health and condition is negatively impacted by adjacent tree(s).

TPB: Tree Protection Barrier

TPZ: Tree Protection Zone - The area between the trunk and the Tree Protection Barrier.

Wildlife Tree: A tree or a group of trees that are identified to be retained to provide future wildlife habitat. Wildlife habitat can exist in tree risks (cavities, dead snags, broken tops). Often times the tree risk to potential targets (people & property) is reduced by removing that part of the tree posing the risk of failure, but the tree (or portion of) is retained to provide future habitat.

Witches Broom: A dense mass of shoots growing from a single point, with the resulting structure resembling a broom or a bird's nest.

Xylem: Thin overlapping cells that helps provide support and that conducts water and nutrients upward from the roots all the way to the leaves.



Appendix B – Photos



Fig. 1 – Refer to Comments





Fig. 2 – Refer to Comments





Fig. 2 – Refer to Comments





Fig. 3 – Refer to Comments





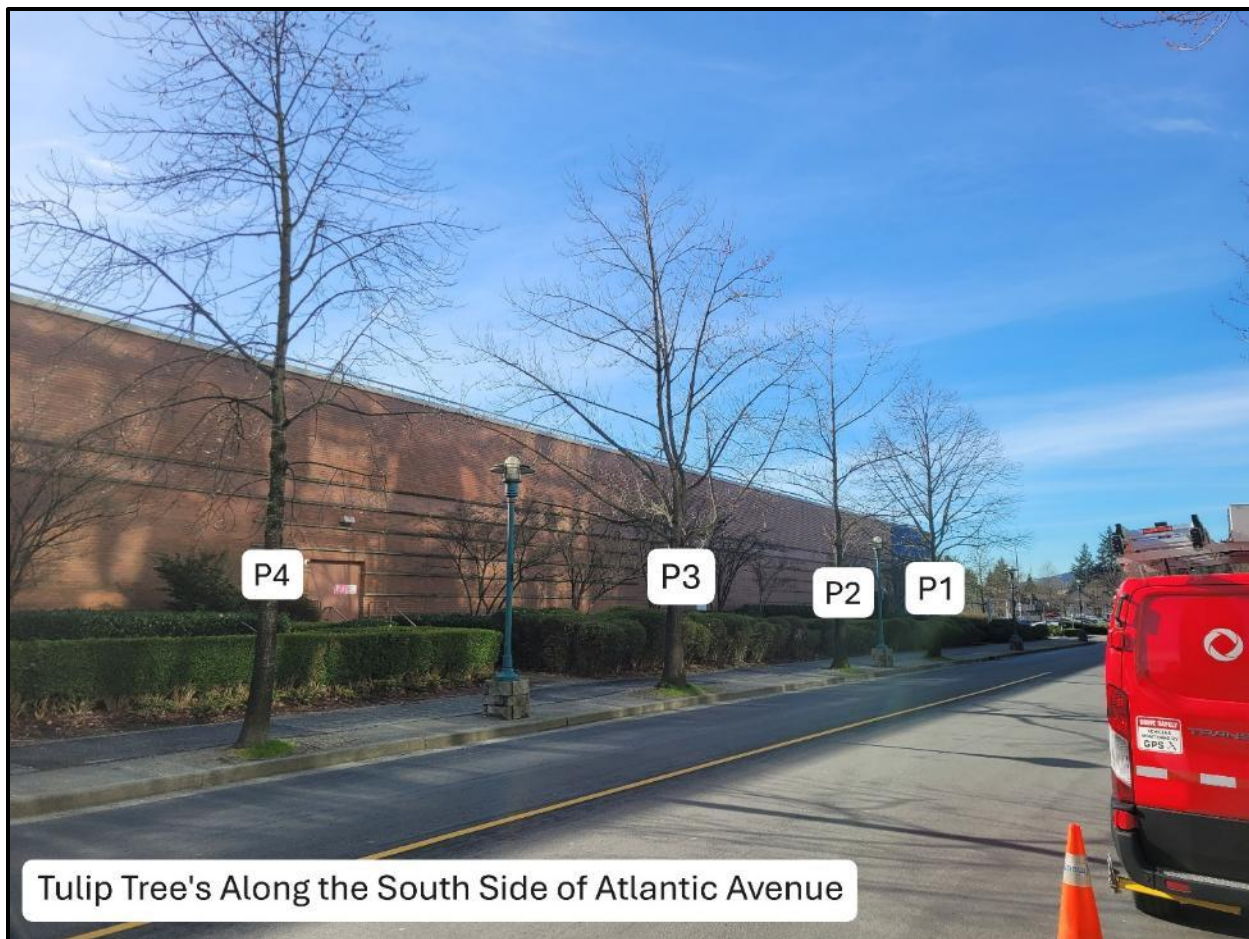
Fig. 4 – Refer to Comments





Fig. 5 – Refer to Comments





Tulip Tree's Along the South Side of Atlantic Avenue

Fig. 6 – Refer to Comments





Fig. 7 – Refer to Comments





Fig. 8 – Refer to Comments





Fig. 9 – Refer to Comment

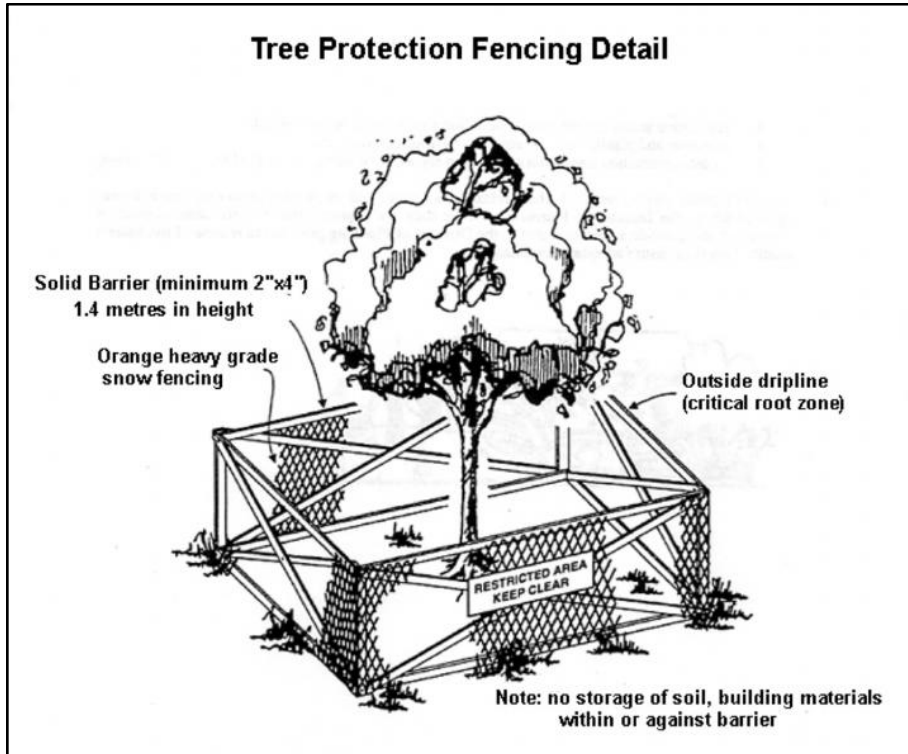


Appendix C – Construction Activity Around Tree Protection Zone

Tree Protection Fencing

TREES THAT REQUIRE TREE PROTECTION BARRIERS:

- All Bylaw Protected Trees that are being retained on your property.
- All Bylaw Protected Trees on adjacent property within 4m of the property line.
- All trees located on the City Boulevard, Parkland or City land within 4m of the property line



Tree Protection Barrier imagery taken from City of Surrey tree bylaws

Materials:

- 2x4's for framing (vertical posts, top and bottom rails, and cross-bracing)
- Plastic mesh screening (also known as snow fencing).

Dimensions:

- Panels must be 1.2m in height
- Maximum 3.7 m spacing between vertical posts (see Tree Management Plan for spacing recommended for each retained tree – based on the crown radius/dripline measurement).

Maintaining your tree protection barriers:

Tree protection barriers must be installed and maintained throughout the entire construction process. Barriers that are in disrepair must be fixed immediately to prevent possible fines, "Stop Work" orders, and/or permit delays.



General Requirements and Limitations for Operations Within the Tree Protection Zone

- The Contractor shall not engage in any construction activity within the Tree Protection Barrier without the approval and presence of the Project Arborist. These activities include, but are not limited to, excavation, operating machinery, moving, or storing equipment, and/or storing supplies or materials. Permitted activity, if any, within the Tree Protection Barrier and/or dripline is indicated on the Tree Management Plan.
- If construction activity is unavoidable within the tree protection, notify the Project Arborist and submit a detailed written or oral plan of action for approval. The plan shall include the reason for the activity, why other areas are not suited, a description of the proposed activity, the timeline for the activity, and remedial actions that will reduce the impact from the activity.
- When encountered, exposed roots, 1 inch and larger in diameter shall be worked around in a manner that does not break the outer layer of the root surface (bark). Roots one inch and larger in diameter shall not be cut without the approval of the Project Arborist. The Project Arborist should cleanly prune structural roots, if necessary, and recommend the appropriate treatment for any structural roots encountered. Excavation shall be tunnelled under these roots, without cutting, if possible.
- Tree branches that interfere with the construction may be tied back or pruned to clear only to the point necessary to complete the work. Tying back or trimming of branches shall be in accordance with accepted arboriculture practices (ANSI A300, part 8) and be performed under supervision of the Project Arborist.
- Do not permit foot traffic, scaffolding or the storage of materials within the Tree Protection Barriers.
- Notify the Project Arborist of any spills, soil compaction or tree damage and take corrective action immediately using methods approved by the Project Arborist.



Appendix D – Watering & Mulching for Retained & Replacement Trees

WATERING

Watering during summer months (June-September) is essential for replacement tree establishment and survival for construction-stressed trees.

Size of nursery stock	Watering schedule for	
	Vigor	Survival
Less than 2-inch (5-cm) caliper	Daily: 2 weeks Every other day: 2 months Weekly: until established	Twice weekly for 2 to 3 months
2- to 4-inch (5- to 10-cm) caliper	Daily: 1 month Every other day: 3 months Weekly: until established	Twice weekly for 3 to 4 months
Greater than 4-inch (10-cm) caliper	Daily: 6 weeks Every other day: 5 months Weekly: until established	Twice weekly for 4 to 5 months

Excerpt from: Koeser, Hauer, & Miesbauer. (2021). International Society of Arboriculture. *Boldly Planting for the Next Generation*.

Municipalities generally require replacement trees 4-6 inches in caliper – these trees need to be watered twice week for 4-5 months after planting during summer months. Retained trees must also be watered with this regimen.

MULCHING

A 3–6-inch layer of mulch around the base of a tree can provide nutrients, help conserve moisture, and cool the soil to aid root growth. The mulch must be applied in an even layer, piling mulch around the base can suffocate the tree.

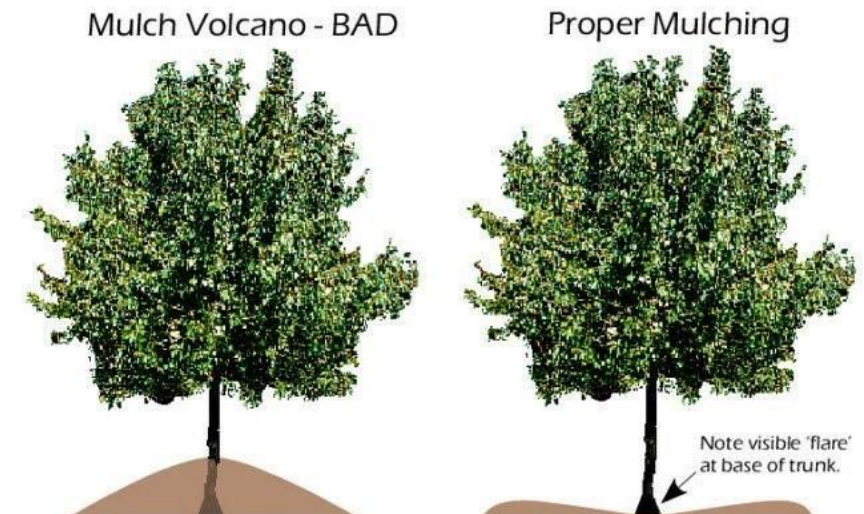
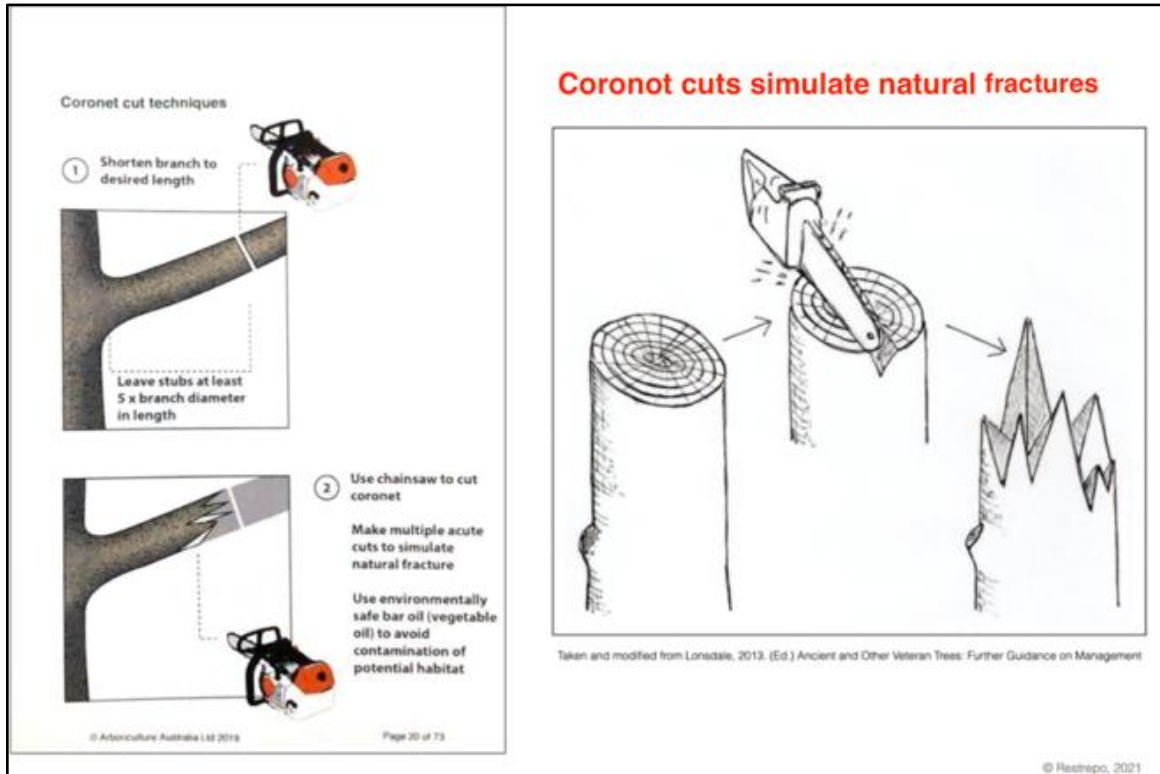


Photo: Green Pal Blog



Appendix E – Wildlife Tree Examples with Coronet Cuts

Artificial fractures, coronet cuts, are an ideal way to secure potential snags. These cuts allow leaving a snag with a natural aspect wildlife are more prone to use.



Example of a coronet cut done with an axe.

A tree before & after coronet cutting.

Diagrams taken from *Environmental Arboriculture: Maintaining and Promoting the Ecological Role and Value of Trees* (Australian Arboriculture, 2020), *Ancient and Other Veteran Trees: Further Guidance on Management* (Lonsdale, 2013)



Appendix F – Assumptions and Limiting Conditions of This Report /Assessment

It is the policy of Koome Urban Forestry Ltd. (KUF) to attach the following clauses regarding limitations. We do this to ensure that developers, owners, and approving officers are clearly aware of what is technically and professionally realistic in retaining trees.

This Assessment is based on the circumstances and observations as they existed at the time of the site inspection of the Client's Property and the tree(s) situate thereon by Koome Urban Forestry Ltd. and upon information provided by the Client to KUF. The opinions in this Assessment are given based on observations made and using generally accepted professional judgment, however, because trees and plants are living organisms and subject to change, damage and disease, the results, observations, recommendations, and analysis as set out in this Assessment are valid only as at the date any such testing, observations and analysis took place and no guarantee, warranty, representation or opinion is offered or made by KUF as to the length of the validity of the results, observations, recommendations and analysis contained within this Assessment.

As a result, the Client shall not rely upon this Assessment, save and except for representing the circumstances and observations, analysis and recommendations that were made as at the date of such inspections. It is recommended that the trees discussed in this Assessment should be re-assessed periodically. Only the subject tree(s) was inspected and no others.

Restriction of Assessment

Notwithstanding the recommendations and conclusions made in this Assessment, it must be realized that trees are living organisms, and their health and vigour constantly changes over time. They are not immune to changes in site conditions, or seasonal variations in the weather. The tendency of trees or parts of trees to fall due to environmental conditions and internal problems are unpredictable. Defects are often hidden within the tree or underground.

The Assessment carried out was restricted to the Property. No Assessment of any other trees or plants has been undertaken by KUF. Koome Urban Forestry Ltd. is not legally liable for any other trees or plants on the Property except those expressly discussed herein. The conclusions of this Assessment do not apply to any areas, trees, plants or any other property not covered or referenced in this Report. The conclusions of this Assessment does not imply or in any way infer that other trees on this site or near this site are sound and healthy.

While reasonable efforts have been made to ensure that the tree(s) recommended for retention are healthy, no guarantees are offered, or implied, that these trees, or all parts of them, will remain standing. It is both professionally and practically impossible to predict with absolute certainty the behaviour of any single tree -- or group of trees --, or all their component parts, in all given circumstances. Inevitably, a standing tree will always pose some risk. Most trees have the potential for failure in the event of adverse weather conditions, and this risk can only be eliminated if the tree is removed.

Although every effort has been made to ensure that this assessment is reasonably accurate, the tree(s) should be re-assessed periodically. In accordance with standard practice, the Assessment presented in this Report is valid at the time it was undertaken. It is not a guarantee of safety. It is the owner's responsibility to maintain the tree(s) and inspect the tree(s) to reasonable standards and to carry out recommendations for mitigation suggested in this Report.



Professional Responsibility

In carrying out this Assessment, Koome Urban Forestry Ltd. and any Assessor appointed for and on behalf of KUF to perform and carry out the Assessment has exercised a reasonable standard of care, skill and diligence as would be customarily and normally provided in carrying out this Assessment.

The Assessment of the tree(s) presented in this Report has been made using accepted arboricultural techniques. These include a visual examination of each tree for structural defects, scars, external indications of decay such as fungal fruiting bodies, evidence of insect attack, discoloured foliage, the condition of any visible root structures, the degree and direction of lean (if any), the general condition of the tree(s) and the surrounding site, and the current or planned proximity of property and people. Except where specifically noted in the Report, none of the trees examined were dissected, cored, probed, or climbed, and detailed root crown examinations involving excavation were not undertaken.

Without limiting the foregoing, no liability is assumed by Koome Urban Forestry Ltd. or its directors, officers, employees, contractors, agents or Assessors for:

- a) any legal description provided with respect to the Property;
- b) issues of title and or ownership respect to the Property;
- c) the accuracy of the Property line locations or boundaries with respect to the Property; and
- d) the accuracy of any other information provided to KUF by the Client or third parties;
- e) any consequential loss, injury or damages suffered by the Client or any third parties, including but not limited to replacement costs, loss of use, earnings and business interruption; and
- f) the unauthorized distribution of the Report.

The total monetary amount of all claims or causes of action the Client may have as against KUF, including but not limited to claims for negligence, negligent misrepresentation and breach of contract, shall be strictly limited solely to the total amount of fees paid by the Client to KUF.

Further, under no circumstance may any claims be initiated or commenced by the Client against Koome Urban Forestry Ltd. or any of its directors, officers, employees, contractors, agents or Assessors, in contract or in tort, more than 12 months after the date of this Assessment.

Assumptions

The Client is hereby notified and does hereby acknowledge and agree that where any of the facts and information set out and referenced in this Assessment are based on assumptions, facts or information provided to KUF by the Client and/or third parties and unless otherwise set out within this Assessment, KUF will in no way be responsible for the veracity or accuracy of any such information.

Further, the Client acknowledges and agrees that KUF has, for the purposes of preparing their Report, assumed that the Property, which is the subject of this Assessment is in full compliance with all applicable federal, provincial, municipal and local statutes, regulations, by-laws, guidelines and other related laws. KUF explicitly denies any legal liability for any and all issues with respect to non-compliance with any of the above-referenced statutes, regulations, bylaws, guidelines and laws as it may pertain to or affect the Property to which this Assessment applies.

Third Party Liability

This Report was prepared by Koome Urban Forestry Ltd. exclusively for the Client. The contents reflect KUF's best Assessment of the tree(s) and plant(s) situate on the Property in light of the information available to it at the time of preparation of this Assessment. Any use which a third party makes of this Assessment, or any reliance on or decisions made based upon this Assessment, are made at the sole risk of any such third parties. KUF accepts no responsibility for any damages or loss suffered by any third party or by the Client as a result of decisions made or actions based upon the use or reliance of this Assessment by any such party.



Further Services

Notwithstanding the recommendations made in this Assessment, Koome Urban Forestry Ltd. accept no responsibility for the implementation of all or any part of this plan, unless we have specifically been requested to examine said implementation activities. Approval and implementation of this plan in no way implies any inspection or supervisory role on the part of Koome Urban Forestry Ltd. In the event that inspection or supervision of all or part of the implementation of the plan is requested, said request shall be in writing and the details agreed to in writing by both parties. Any on site inspection or supervisory work undertaken by Koome Urban Forestry Ltd. shall be recorded in written form and submitted to the client as a matter of record.

Koome Urban Forestry Ltd. nor any of its representatives shall be required to give testimony, or to act as an expert witness or to attend court by reason of this Report unless the Client has first made specific arrangements with respect to such further services, including, without limitation, providing the payment of Koome Urban Forestry Ltd.'s regular hourly billing fees.

Koome Urban Forestry Ltd. nor any of its representatives shall be required to provide any further consultation or services to the Client, save and except as already carried out in the preparation of this Report unless the Client has first made specific arrangements with respect to such further services, including, without limitation, providing the payment of Koome Urban Forestry Ltd.'s regular hourly billing fees.

General

Any plans and/or illustrations in this Assessment are included only to help the Client visualize the issues in this Assessment and shall not be relied upon for any other purpose.

KUF shall not be held responsible for the manner of use of the interpretations that other parties may attach to the report. This report is not to be re-printed, copied, published or distributed without prior approval by Koome Urban Forestry Ltd.

The Report shall be considered a whole, no sections are severable, and the Report shall be considered incomplete if any pages are missing.

This Report is best viewed in colour. Any copies printed in black and white may make some details difficult to properly understand. Koome Urban Forestry Ltd. accepts no liability for misunderstandings due to a black and white copy of the Report.

Sketches, drawings and photographs in this Report, being intended as visual aids, are not necessarily to scale and should not be construed as engineering or architectural Report of surveys unless expressed otherwise. The reproduction of any information generated by architects, engineers, or other consultants on any sketches, drawings, or photographs is for the express purpose of co-ordination and ease of reference only. Inclusion of said information on any drawings or other documents does not constitute a representation by Koome Urban Forestry Ltd. as to the sufficiency or accuracy of said information.

Publication

The Client acknowledges and agrees that all intellectual property rights and title, including without limitation, all copyright in this Report shall remain solely with Koome Urban Forestry Ltd. Possession of this Report, or a copy thereof, does not entitle the Client or any third party to the right of publication or reproduction of the Report for any purpose save and except where KUF has given its prior written consent. This Report may not be used for any other project or any other purpose without the prior written consent of Koome Urban Forestry Ltd.



Unless required by law otherwise, possession of this Report or a copy thereof does not imply right of publication or use for any purpose by any other than the person, parties or agencies to whom it is addressed, without the prior expressed written consent of Koome Urban Forestry Ltd.

Neither all nor any part of the contents of this Report shall be disseminated to the public through advertising, public relations, news, sales, the Internet or other media (including, without limitation, television, radio, print or electronic media) without the prior written consent of Koome Urban Forestry Ltd.

Appendix G – References

- Bond, Jerry & Buchanan, Beth (2006) Best Management Practices: Tree Inventories, International Society of Arboriculture, Champaign, IL.
- Dunster, Dr. Julian (2003) *Preliminary Species Profiles for Tree Failure Assessment*. ISA Pacific Northwest Chapter, Silverton, OR, USA
- Dunster, Dr. Julian & Edmonds, Dr. R. (2014) Common Fungi Affecting Pacific Northwest Trees, ISA Pacific Northwest Chapter, Silverton, OR, USA
- Fite, Kelby & Smiley, E. Thomas (2016) Best Management Practices: Managing Trees During Construction, International Society of Arboriculture, Champaign, IL.
- Sibley, David Allen (2009) *The Sibley Guide to Trees*. Alfred A. Knopf, New York, NY
- Smiley, E.T., Matheny, N., Lilly, S. (2011) Best Management Practises: Tree Risk Assessment. International Society of Arboriculture, Champaign, IL.



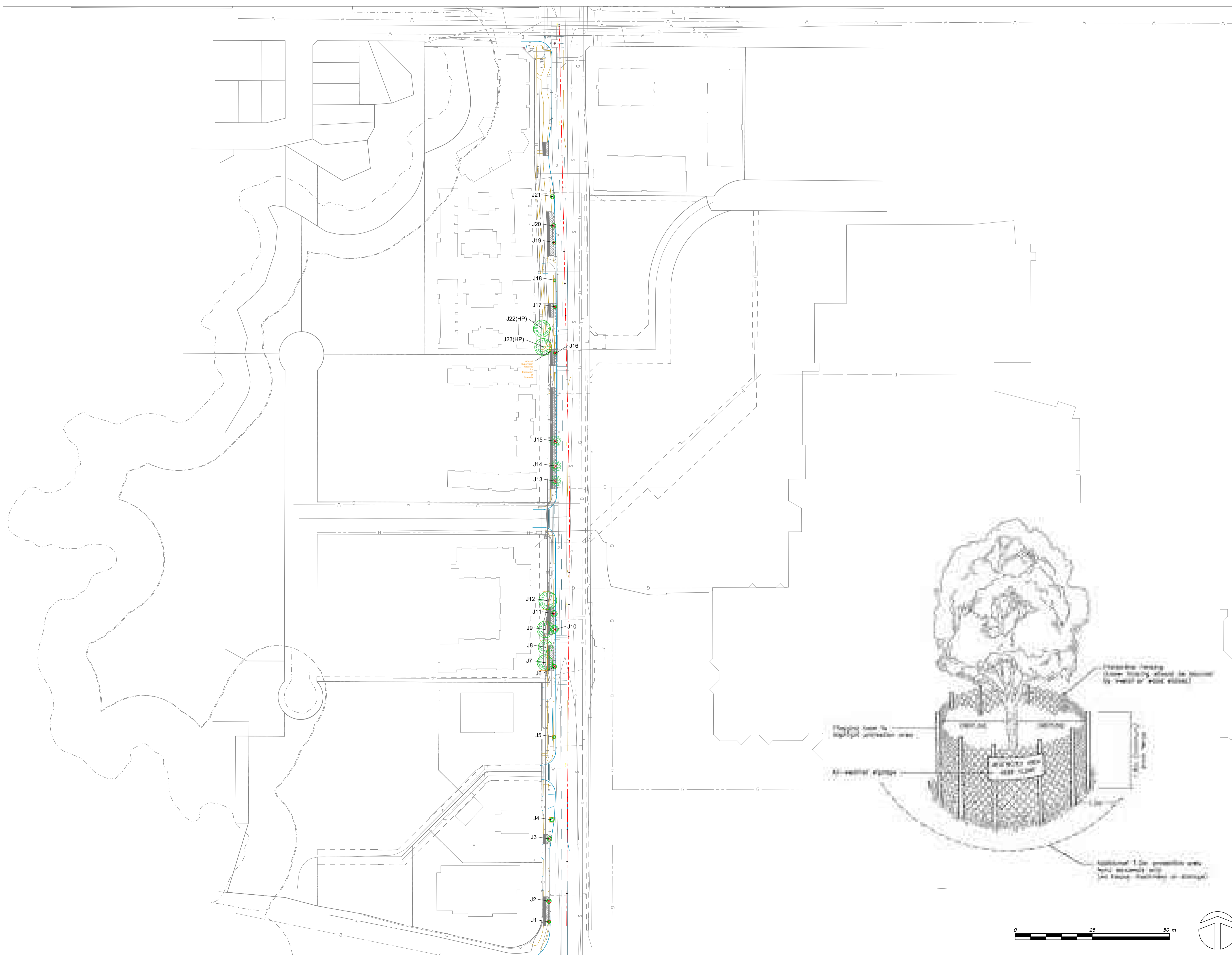
Appendix H – Tree Management Plan

See attached

Original size: 24" x 36"



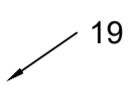




Print as 11" x 17" for foldout





**305 - 1163 The High Street
Coquitlam, BC V3B 7W2**

LEGEND

-  EXISTING TREE WITH ARBORIST MONITORING
-  EXISTING TREE TO BE REMOVED
-  TREE TAG/NO.
-  PROPERTY/LOT LINE
-  TREE PROTECTION FENCING
-  STORM LINE
-  WATER LINE

NOTE:

1. CONTACT PROJECT ARBORIST (KELLY KOOME, 778.885.6777, kelly.koome@koomeurbanforestry.ca) FOR INSPECTION 72 HOURS PRIOR TO ANY GRUBBING, GRUBBING OR EXCAVATION WITHIN THE TREE PROTECTION ZONE.
2. READ THIS PLAN TOGETHER WITH THE ARBORIST REPORT PREPARED BY KOOME URBAN FORESTRY LTD (KUF).
3. IF STUMP GRINDING IS TO OCCUR IN CLOSE PROXIMITY TO TREES WHICH ARE TO BE RETAINED THEN IT IS REQUESTED STUMPS TO BE REMOVED UNDER ARBORIST SUPERVISION.
4. IT IS THE RESPONSIBILITY OF THE CLIENT OR HIS/HER REPRESENTATIVE TO CONTACT THE PROJECT ARBORIST FOR THE PURPOSE OF:
 - *LOCATING TPZ FENCING
 - *LOCATING WORK ZONE AND MACHINE ACCESS

- CORRIDORS WHERE REQUIRED
- *REVIEWING THE REPORT WITH THE PROJECT FOREMAN OR SITE SUPERVISOR

- 2. 0/00/00 XX, REVIEWED BY XX
- 1. 03/03/2026 CG, REVIEWED BY KK
(DD/MM/YY) NAME

REVISIONS

PROJECT TITLE

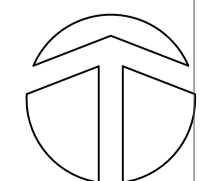
KUF-COCQ_Johnson Street

PROJECT ADDRESS

Johnson Street From Barnet Hwy to Glen Drive

DRAWING TITLE



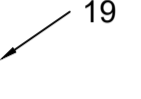



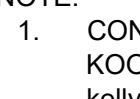
TREE MANAGEMENT PLAN



T1

305 - 1163 The High Street
Coquitlam, BC V3B 7W2

LEGEND

-  EXISTING TREE WITH ARBORIST MONITORING
-  EXISTING TREE TO BE REMOVED
-  TREE TAG/NO.
-  PROPERTY/LOT LINE
-  TREE PROTECTION FENCING
-  STORM LINE
-  WATER LINE

NOTE:

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 - *LOCATING TPZ FENCING
 - *LOCATING WORK ZONE AND MACHINE ACCESS CORRIDORS WHERE REQUIRED
 - *REVIEWING THE REPORT WITH THE PROJECT FOREMAN OR SITE SUPERVISOR

2. 0/00/00 XX, REVIEWED BY XX

1. 03/04/2026 CG, REVIEWED BY KK
(DD/MM/YY) NAME

REVISIONS

PROJECT TITLE

KUF-COCQ_Atlantic Avenue

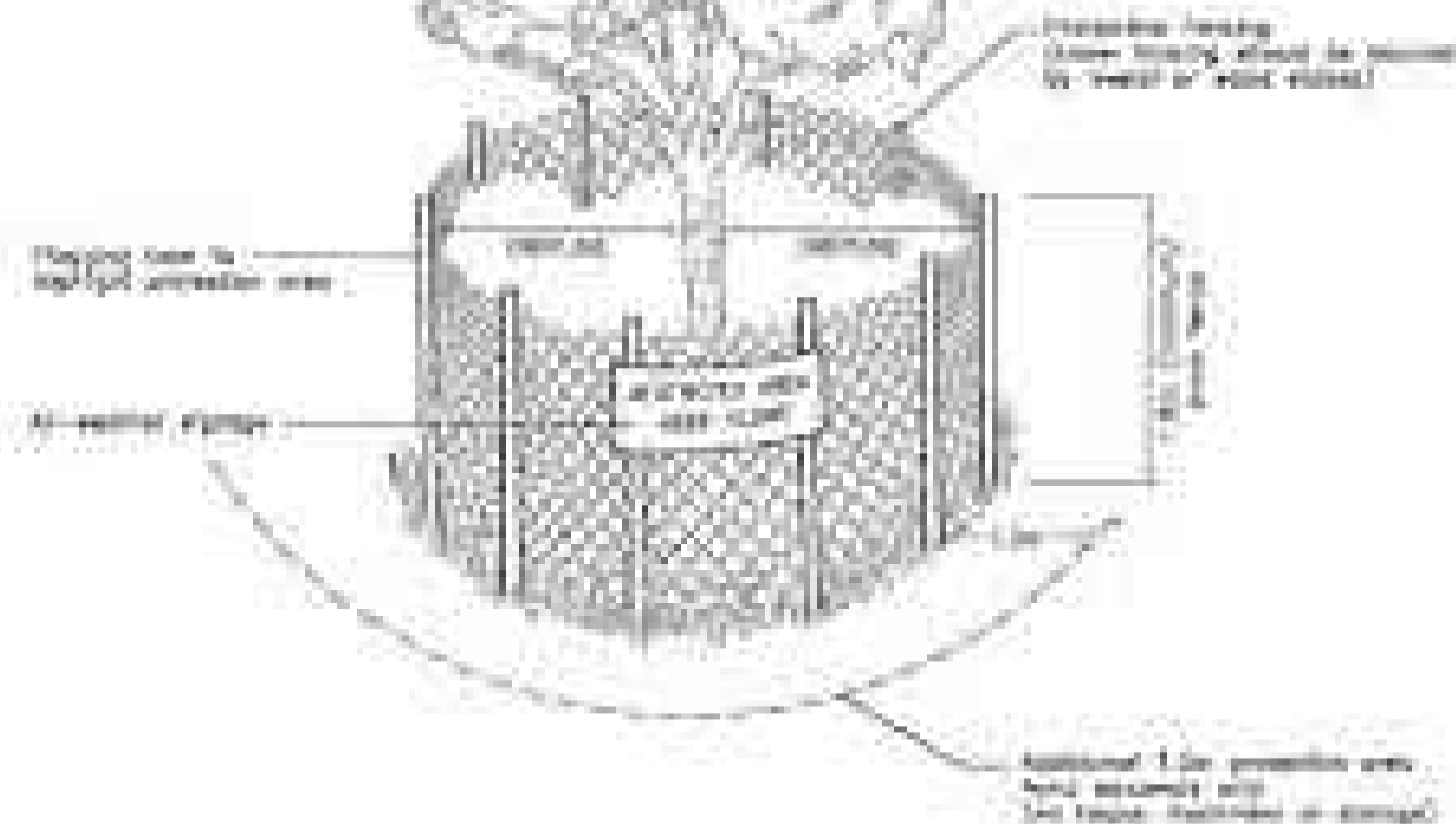
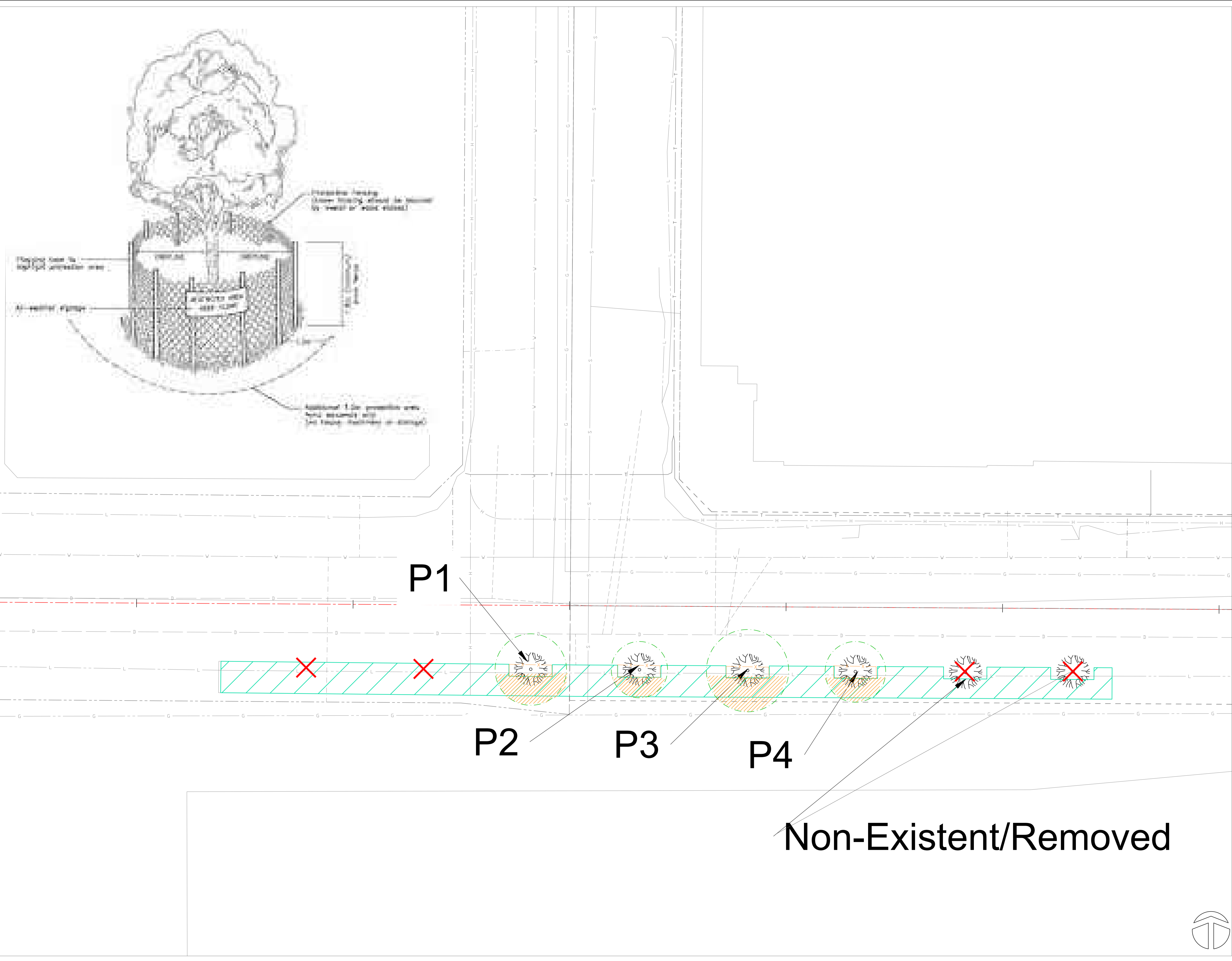
PROJECT ADDRESS

Atlantic Avenue/Pacific Street
Intersection of Atlantic Avenue and The High Street

DRAWING TITLE

TREE MANAGEMENT PLAN

T1



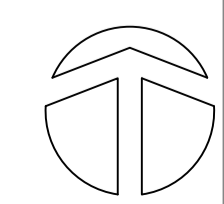
P1

P2

P3

P4

Non-Existent/Removed



H3

H4



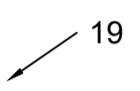




H5

H2

H1

305 - 1163 The High Street
Coquitlam, BC V3B 7W2

LEGEND

-  EXISTING TREE WITH ARBORIST MONITORING
-  EXISTING TREE TO BE REMOVED
-  TREE TAG/NO. 19
-  PROPERTY/LOT LINE
-  TREE PROTECTION FENCING
-  STORM LINE
-  WATER LINE

NOTE:

1. CONTACT PROJECT ARBORIST (KELLY KOOME, 778.885.6777, kelly.koome@koomeurbanforestry.ca) FOR INSPECTION 72 HOURS PRIOR TO ANY GRADING, GRUBBING OR EXCAVATION WITHIN THE TREE PROTECTION ZONE.
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2. 0/00/00 XX, REVIEWED BY XX

1. 03/04/2026 CG, REVIEWED BY KK
(DD/MM/YY) NAME

REVISIONS

PROJECT TITLE

KUF-COCQ_Atlantic Avenue

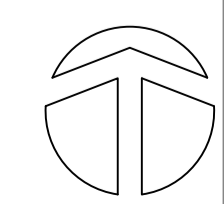
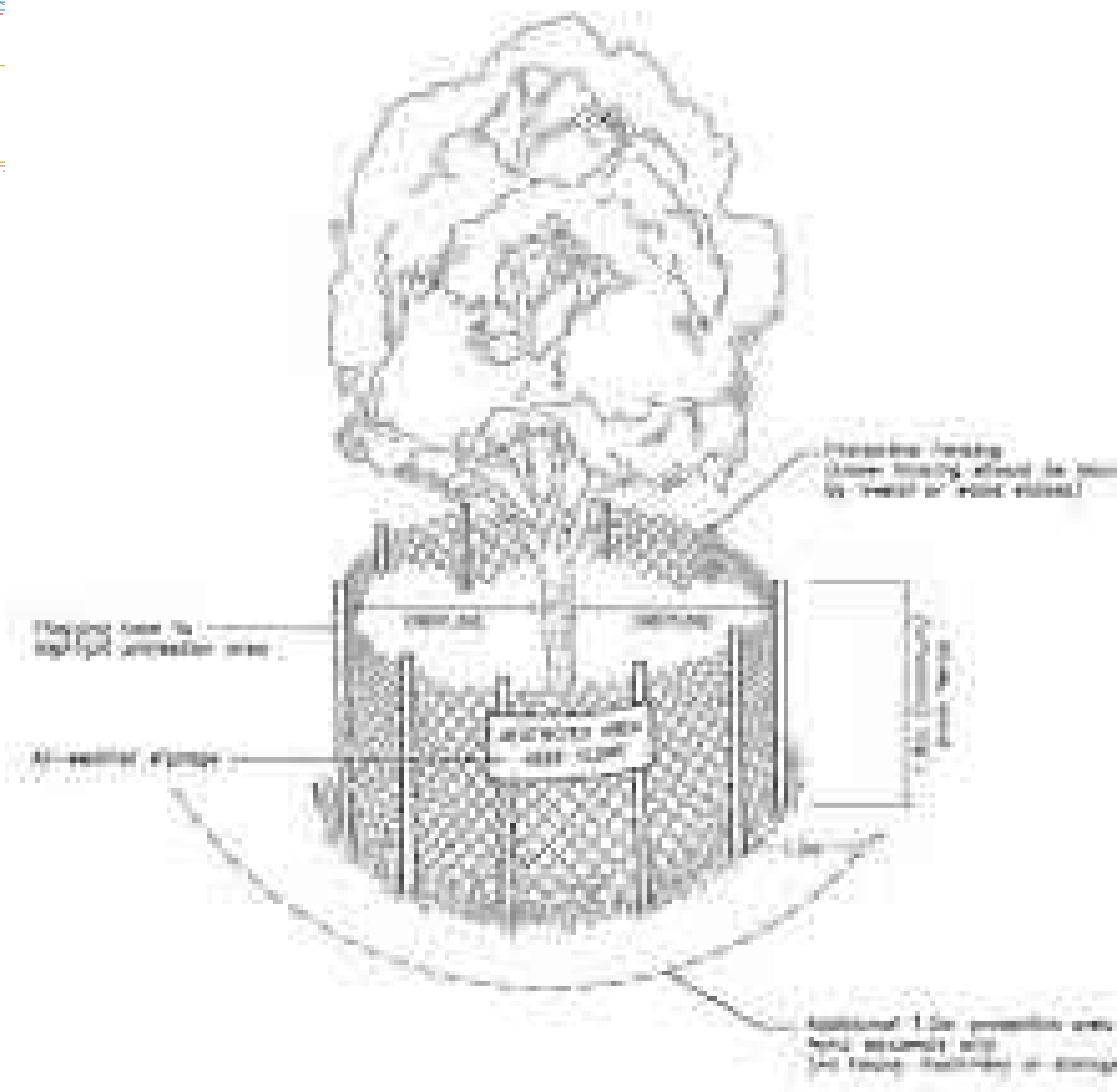
PROJECT ADDRESS

Atlantic Avenue/Pacific Street
Intersection of Atlantic Avenue and The High Street

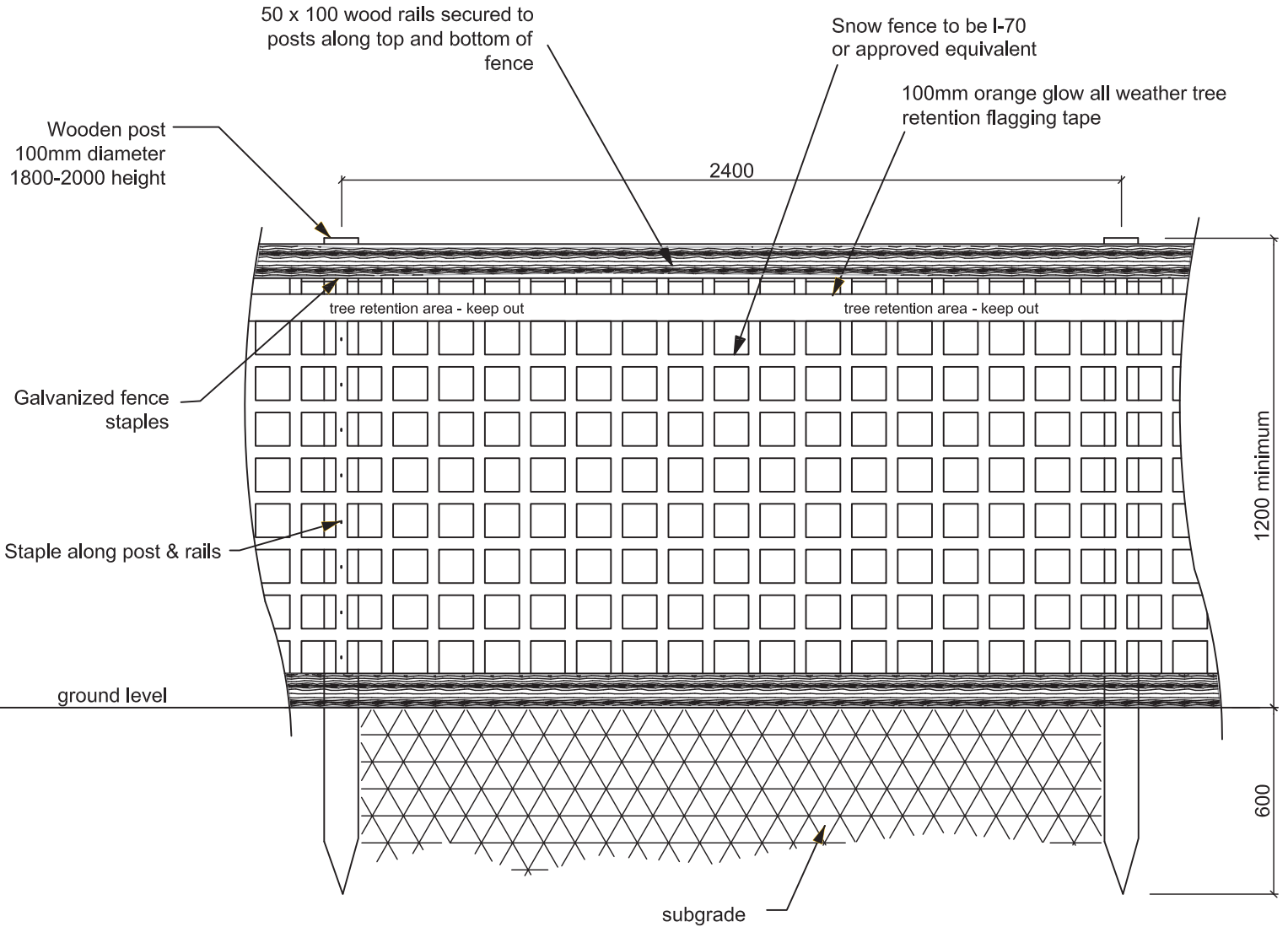
DRAWING TITLE

TREE MANAGEMENT PLAN

T2



***Appendix D -
Standard Detail Drawings***



Protection fence to be located at crown dripline or adjacent to hard surface, which ever is greater.

Manually excavate and cut tree roots within 1.0m of tree protection fence.

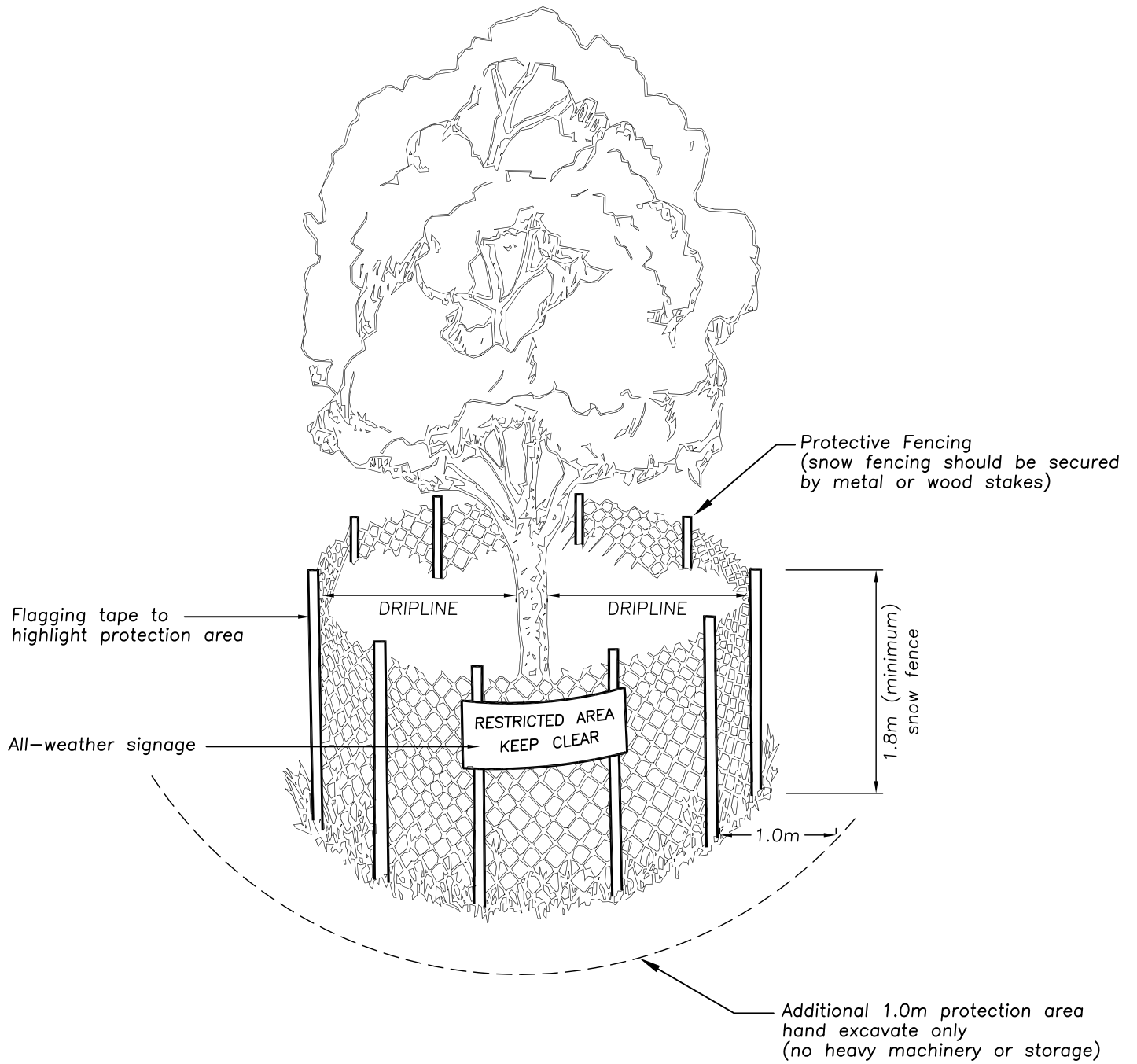
Machinery and storage is not permitted within 1.0m of tree protection area.

PLOTTED: 22-Feb-16

TREE PROTECTION FENCE

DATE: NOV/2014
 DRAWN: AJM
 SCALE: N.T.S.

DRAWING NUMBER:
COQ-R26



PLOTTED: 18-Feb-16

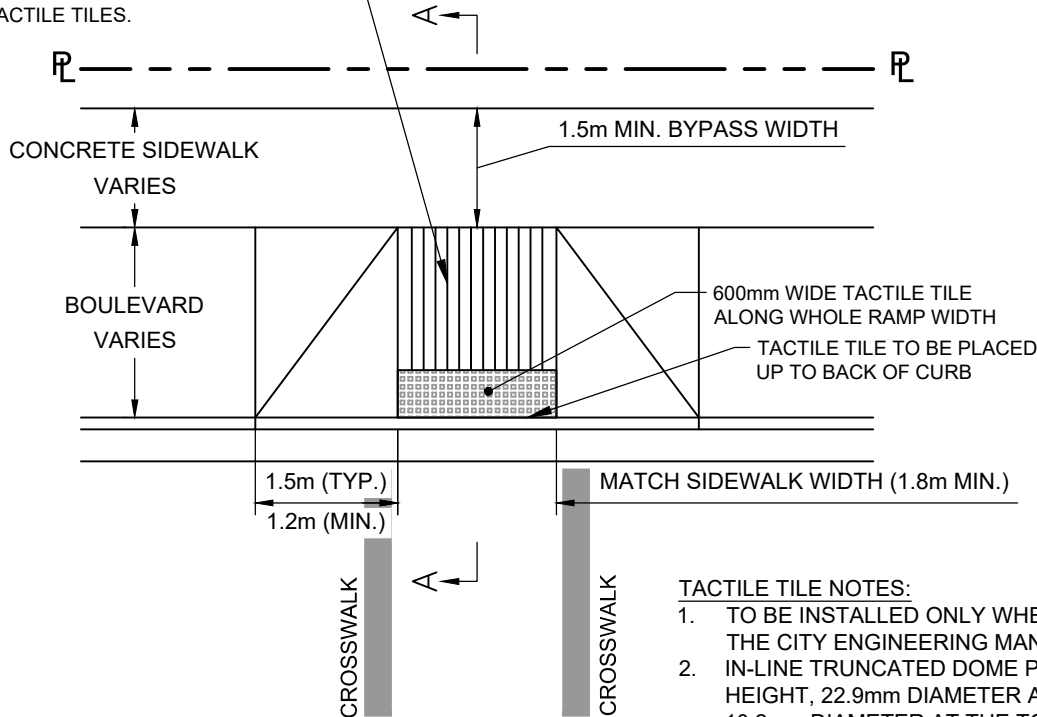
TREE RETENTION GUIDELINE

DATE: FEB/2016
DRAWN: REY
SCALE: N.T.S.

DRAWING NUMBER:
COQ-R27

SCORE LINES MUST LINE UP IN DIRECTION OF TRAVEL AND BE PARALLEL WITH THE CROSSING OR MARKED CROSSWALK.
SCORE LINES 150mm APART TO FILL RAMP.
USE 9.5mm TROWEL. SCORING TO EXTEND FULL LENGTH OF RAMP IN LOCATIONS WITHOUT TACTILE TILES.

NOTE: STANDARD RAMP LENGTH: 2.4m AT CENTRE OF RAMP. RECOMMENDED RAMP SLOPE: 7.6% (±). MAX. SLOPE 8.3% (1:12) WHERE TOPOGRAPHY PERMITS. WHEN SITE CONDITIONS DO NOT PERMIT TYPICAL LAYOUT DESIGN TO BE APPROVED BY THE CITY ENGINEERING MANAGER.



SINGLE RAMP

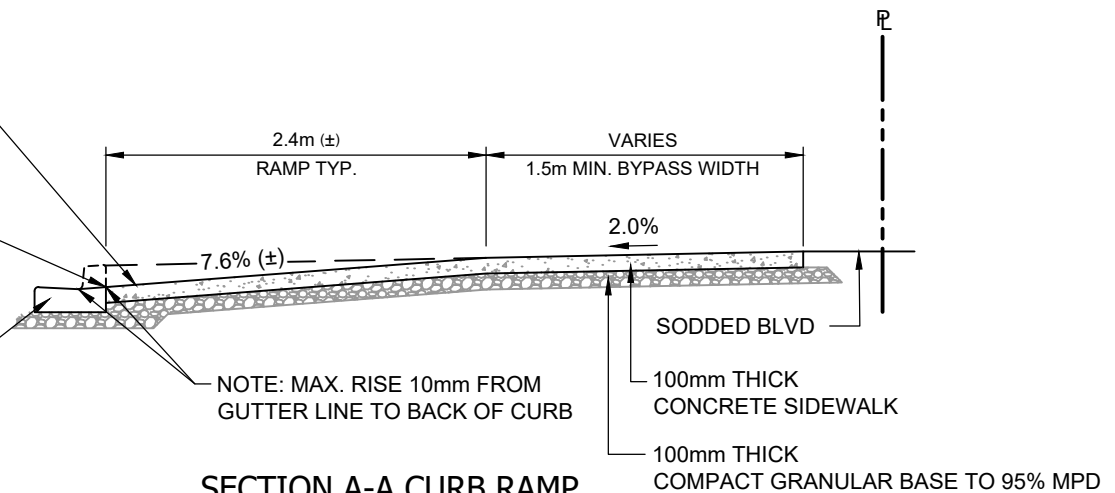
TACTILE TILE NOTES:

1. TO BE INSTALLED ONLY WHEN PRESCRIBED BY THE CITY ENGINEERING MANAGER.
2. IN-LINE TRUNCATED DOME PATTERN 5.1mm IN HEIGHT, 22.9mm DIAMETER AT THE BASE AND 10.2mm DIAMETER AT THE TOP OF DOME SPACED 59.7mm NOMINAL DIAGONALLY AND 43.2mm NOMINAL SIDE BY SIDE EXCEPT FOR RADIUS TILE.
3. COLOUR: FEDERAL YELLOW PER U.S. FEDERAL STANDARD 595B, TABLE IV, COLOR NO.335.
4. WIDTH = 600mm, LENGTH = RAMP WIDTH
5. REFER TO COQUITLAM APPROVED PRODUCTS LIST FOR ACCEPTABLE SUPPLIERS.

RAMP SHALL BE UNIFORM THICKNESS OF 100mm FROM TOP OF LIP TO TOP OF SIDEWALK

TRANSITION FROM CURB TO RAMP SHALL BE FLUSH

CONCRETE BARRIER CURB & GUTTER



SECTION A-A CURB RAMP

NOTE: MAX. RISE 10mm FROM GUTTER LINE TO BACK OF CURB

PLOTTED: 19-NOV-20

SINGLE CURB RAMP LETDOWN

DATE: NOV/2020

DRAWN: GA

SCALE: N.T.S.

DRAWING NUMBER:

COQ-C9C