



INVITATION TO TENDER
FOR
SALTAIR RAIL WITH TRAIL CONNECTOR—PHASE 1

Invitation to Tender No.: **R18-35**

Issued: **March 21, 2018**

Submission Deadline: **Wednesday, April 18, 2018—2:00 p.m. local time**

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PART 1—INVITATION AND SUBMISSION INSTRUCTIONS

1.1 Invitation to Bidders

This Invitation to Tender (the “ITT”) is an invitation by the Cowichan Valley Regional District (the “CVRD”) to prospective bidders to submit bids for **Saltair Rail With Trail Connector – Phase 1**, as further described in Section A of the ITT Particulars (Appendix D) (the “Deliverables”).

This ITT is for construction services to complete sections of the Cowichan Valley Trail along the E&N rail corridor between Cook Street and Old Victoria Road (approximately 2.5 km) in Chemainus, North Cowichan, BC.

1.2 ITT Contact

For the purposes of this procurement process, the “ITT Contact” will be:

Anthony Jeffery, Procurement Officer

Email: purchasing@cverd.bc.ca

Bidders and their representatives are not permitted to contact any employees, officers, agents, elected or appointed officials or other representatives of the CVRD, other than the ITT Contact, concerning matters regarding this ITT. Failure to adhere to this rule may result in the disqualification of the bidder and the rejection of the bidder's bid.

1.3 Type of Contract for Deliverables

The selected bidder will be required to enter into an agreement with the CVRD for the provision of the Deliverables in the form attached as Appendix A to the ITT (the “Agreement”). It is the CVRD's intention to enter into the Agreement with only one (1) legal entity.

1.4 ITT Timetable

Issue Date of ITT	March 21, 2018
Site Visit (not mandatory)	March 27, 2018—1:00 p.m. local time
Deadline for Questions	April 15, 2018—4:00 p.m. local time
Deadline for Issuing Addenda	April 16, 2018—4:00 p.m. local time
Submission Deadline	April 18, 2018—2:00 p.m. local time
Anticipated Execution Date for Agreement	April 25, 2018
Irrevocability Period	Ninety (90) days

The ITT timetable is tentative only, and may be changed by the CVRD at any time.

The non-mandatory Site Visit scheduled for Tuesday, March 27, 2018, at 1:00 p.m. will be held at the parking area located at the corner of Cook Street and Chemainus Road, in Chemainus, North Cowichan, BC.

1.5 Submission of Bids

1.5.1 Bids to be Submitted to Prescribed Location

Bids must be submitted to Anthony Jeffery, Procurement Officer at:

Email: purchasing@cvrld.bc.ca

1.5.2 Bids to be Submitted on Time

Bids must be submitted to the email address set out above on or before the Submission Deadline. Bids submitted after the Submission Deadline will be rejected. The CVRD does not accept any responsibility for bids delivered to any other email address or by any other means by the bidder. Bidders are advised to submit their bids well before the deadline. Bidders submitting bids near the deadline do so at their own risk. Bids will be deemed to be received when they enter into the CVRD system and the CVRD accepts no responsibility for bids sent prior to the deadline that fail for any reason to enter into the CVRD system by the deadline.

The determination of whether the bid is delivered by the Submission Deadline shall be based on the electronic time and date stamp generated by the CVRD's server, whether or not accurate.

1.5.3 Bids to be Submitted in Prescribed Format

Bidders must submit one electronic copy of their bid to the email address noted in 1.5.1. The email should indicate the ITT title and number (see ITT cover page) in the subject line and the full legal name of the bidder in the body of the email.

Bidders should note that the maximum acceptable email size is 8MB. If greater than 8MB, bidders should email bids in multiple emails. If sending in multiple emails, each email should indicate the total number of emails that are being sent. All emails must be received prior to the bid Submission Deadline.

1.5.4 Amendment of Bids

Bidders may amend their bids prior to the Submission Deadline by submitting the amendment by email in the same prescribed format as detailed in 1.5.3. Any amendment should clearly indicate which part of the bid the amendment is intended to amend or replace.

1.5.5 Withdrawal of Bids

Bidders may withdraw their bids prior to the Submission Deadline. To withdraw a bid, a notice of withdrawal must be emailed to the ITT Contact prior to the Submission Deadline in the same prescribed format as detailed in 1.5.3 and must be signed by an authorized representative of the bidder. The CVRD is under no obligation to return withdrawn bids.

1.5.6 Bids Irrevocable after Submission Deadline

Bids shall be irrevocable for a period of **Ninety (90)** days running from the moment that the Submission Deadline passes.

[End of Part 1]

PART 2—EVALUATION AND AWARD

2.1 Stages of Evaluation

The CVRD will conduct the evaluation of bids in the following stages:

2.2 Stage I—Mandatory Submission Requirements

Stage I will consist of a review to determine which bids comply with all of the mandatory submission requirements. Bids that do not comply with all of the mandatory submission requirements as of the Submission Deadline will, subject to the express and implied rights of the CVRD, be disqualified and not evaluated further. The mandatory submission requirements are listed in Section C of the ITT Particulars (Appendix D).

2.2.1 No Amendment to Forms

Other than inserting the information requested on the mandatory submission forms set out in the ITT, a bidder may not make any changes to any of the forms. Any bid containing any such changes, whether on the face of the form or elsewhere in the bid, may be disqualified.

2.3 Stage II—Mandatory Technical Requirements

Stage II will consist of a review to determine which bids comply with all of the mandatory technical requirements. Bids that do not comply with all of the mandatory technical requirements as of the Submission Deadline will, subject to the express and implied rights of the CVRD, be rejected. The mandatory technical requirements are listed in Section D of the ITT Particulars (Appendix D).

2.4 Stage III—Pricing

Stage III will consist of a scoring of the submitted pricing of each compliant bid in accordance with the evaluation method set out in Pricing (Appendix C). The evaluation of price will be undertaken after the evaluation of mandatory requirements has been completed.

2.5 Selection of Lowest Compliant Bidder

Subject to the CVRD's reserved rights, the compliant bidder with the lowest pricing will be selected to enter into the Agreement in accordance with the following section. In the event of a tie, the selected bidder will be determined by way of a coin toss.

2.6 Notice to Bidder and Execution of Agreement

Notice of selection by the CVRD to the selected bidder shall be in writing. The selected bidder shall execute the Agreement in the form attached as Appendix A to this ITT and satisfy any other applicable conditions of this ITT, including the pre-conditions of award listed in Section E of the ITT Particulars (Appendix D), within fifteen (15) days of notice of selection. This provision is solely for the benefit of the CVRD and may be waived by the CVRD.

2.7 Failure to Enter into Agreement

In addition to all other remedies available to the CVRD, if a selected bidder fails to execute the Agreement or satisfy any applicable conditions within fifteen (15) days of notice of selection, the CVRD may, without incurring any liability, withdraw the selection of that bidder and proceed with the selection of another bidder. [End of Part 2]

PART 3—TERMS AND CONDITIONS OF THE ITT PROCESS

3.1 General Information and Instructions

3.1.1 ITT Incorporated into Bid

All of the provisions of this ITT are deemed to be accepted by each bidder and incorporated into each bidder's bid. A bidder who submits conditions, options, variations or contingent statements to the terms as set out in this ITT, including the terms of the Agreement in Appendix A, either as part of its bid or after receiving notice of selection, may be disqualified. If a bidder is not disqualified despite such changes or qualifications, the provisions of this ITT, including the Agreement set out in Appendix A, will prevail over any such changes or qualifications in the bid.

3.1.2 Bidders to Follow Instructions

Bidders should structure their bids in accordance with the instructions in this ITT. Where information is requested in this ITT, any response made in a bid should reference the applicable section numbers of this ITT.

3.1.3 Bids in English

All bids are to be in English only.

3.1.4 No Incorporation by Reference

The entire content of the bidder's bid should be submitted in a fixed form, and the content of websites or other external documents referred to in the bidder's bid but not attached will not be considered to form part of its bid.

3.1.5 Past Performance

In the evaluation process, the CVRD may consider the bidder's past performance or conduct on previous contracts with the CVRD or other institutions.

3.1.6 Information in ITT Only an Estimate

The CVRD and its advisers make no representation, warranty or guarantee as to the accuracy of the information contained in this ITT or issued by way of addenda. Any quantities shown, or data contained in this ITT or provided by way of addenda, are estimates only, and are for the sole purpose of indicating to bidders the general scale and scope of the Deliverables. It is the bidder's responsibility to obtain all the information necessary to prepare a bid in response to this ITT.

3.1.7 Bidders to Bear Their Own Costs

The bidder will bear all costs associated with or incurred in the preparation and presentation of its bid, including, if applicable, costs incurred for interviews or demonstrations.

3.1.8 Bid to be Retained by the CVRD

The CVRD will not return the bid or any accompanying documentation submitted by a bidder.

3.1.9 No Guarantee of Volume of Work or Exclusivity of Contract

The CVRD makes no guarantee of the value or volume of work to be assigned to the successful bidder. The Agreement will not be an exclusive contract for the provision of the described Deliverables. The CVRD may contract with others for goods and services the same as or similar to the Deliverables or may obtain such goods and services internally.

3.2 Communication after Issuance of ITT

3.2.1 Bidders to Review ITT

Bidders shall promptly examine all of the documents comprising this ITT, and

- (a) shall report any errors, omissions or ambiguities; and
- (b) may direct questions or seek additional information

in writing by email to the ITT Contact on or before the Deadline for Questions. All questions or comments submitted by bidders by email to the ITT Contact shall be deemed to be received once the email has entered into the ITT Contact's email inbox. No such communications are to be directed to anyone other than the ITT Contact, and the CVRD shall not be responsible for any information provided by or obtained from any source other than the ITT Contact. The CVRD is under no obligation to provide additional information. It is the responsibility of the bidder to seek clarification from the ITT Contact on any matter it considers to be unclear. The CVRD shall not be responsible for any misunderstanding on the part of the bidder concerning this ITT or its process.

3.2.2 All New Information to Bidders by Way of Addenda

This ITT may be amended only by addendum in accordance with this section. If the CVRD, for any reason, determines that it is necessary to provide additional information relating to this ITT, such information will be communicated to all bidders by addenda. Each addendum forms an integral part of this ITT and may contain important information, including significant changes to this ITT. Bidders are responsible for obtaining all addenda issued by the CVRD. In the Submission Form (Appendix B), bidders should confirm their receipt of all addenda by setting out the number of each addendum in the space provided.

3.2.3 Post-Deadline Addenda and Extension of Submission Deadline

If the CVRD determines that it is necessary to issue an addendum after the Deadline for Issuing Addenda, the CVRD may extend the Submission Deadline for a reasonable period of time.

3.2.4 Verify, Clarify and Supplement

When evaluating bids, the CVRD may request further information from the bidder or third parties in order to verify, clarify or supplement the information provided in the bidder's bid. The response received by the CVRD shall, if accepted by the CVRD, form an integral part of the bidder's bid.

3.3 Notification and Debriefing

3.3.1 Notification to Other Bidders

Once the Agreement is executed by the CVRD and a bidder, the other bidders may be notified directly in writing and shall be notified by public posting in the same manner that this ITT was originally posted of the outcome of the procurement process.

3.3.2 Debriefing

Bidders may request a debriefing after receipt of a notification of the outcome of the procurement process. All requests must be in writing to the ITT Contact and must be made within sixty (60) days of such notification.

3.3.3 Procurement Protest Procedure

If a bidder wishes to challenge the ITT process, it should provide written notice to the ITT Contact in accordance with the CVRD's procurement protest procedures and any applicable trade agreement or other applicable bid protest procedures. The notice must provide a detailed explanation of the bidder's concerns with the procurement process or its outcome.

3.4 Conflict of Interest and Prohibited Conduct

3.4.1 Conflict of Interest

For the purposes of this ITT, the term "Conflict of Interest" includes, but is not limited to, any situation or circumstance where:

- (a) in relation to the ITT process, the bidder has an unfair advantage or engages in conduct, directly or indirectly, that may give it an unfair advantage, including but not limited to (i) having, or having access to, confidential information of the CVRD in the preparation of its bid that is not available to other bidders, (ii) communicating with any person with a view to influencing preferred treatment in the ITT process (including but not limited to the lobbying of decision makers involved in the ITT process), or (iii) engaging in conduct that compromises, or could be seen to compromise, the integrity of the open and competitive ITT process or render that process non-competitive or unfair; or
- (b) in relation to the performance of its contractual obligations contemplated under a contract for the Deliverables, the bidder's other commitments, relationships or financial interests (i) could, or could be seen to, exercise an improper influence over the objective, unbiased and impartial exercise of its independent judgement, or (ii) could, or could be seen to, compromise, impair or be incompatible with the effective performance of its contractual obligations.

3.4.2 Disqualification for Conflict of Interest

The CVRD may disqualify a bidder for any conduct, situation or circumstances, determined by the CVRD, in its sole and absolute discretion, to constitute a Conflict of Interest as defined above.

3.4.3 Disqualification for Prohibited Conduct

The CVRD may disqualify a bidder, rescind a notification of selection or terminate a contract subsequently entered into if the CVRD determines that the bidder has engaged in any conduct prohibited by this ITT.

3.4.4 Prohibited Bidder Communications

Bidders must not engage in any communications that could constitute a Conflict of Interest and should take note of the Conflict of Interest declaration set out in the Submission Form (Appendix B).

3.4.5 Bidder Not to Communicate with Media

Bidders must not at any time directly or indirectly communicate with the media in relation to this ITT or any agreement entered into pursuant to this ITT without first obtaining the written permission of the ITT Contact.

3.4.6 No Lobbying

Bidders must not, in relation to this ITT or the evaluation and selection process, engage directly or indirectly in any form of political or other lobbying whatsoever to influence the selection of the successful bidder(s).

3.4.7 Illegal or Unethical Conduct

Bidders must not engage in any illegal business practices, including activities such as bid-rigging, price-fixing, bribery, fraud, coercion or collusion. Bidders must not engage in any unethical conduct, including lobbying, as described above, or other inappropriate communications; offering gifts to any employees, officers, agents, elected or appointed officials or other representatives of the CVRD; deceitfulness; submitting bids containing misrepresentations or other misleading or inaccurate information; or any other conduct that compromises or may be seen to compromise the competitive process provided for in this ITT.

3.4.8 Past Performance or Past Conduct

The CVRD may prohibit a supplier from participating in a procurement process based on past performance or based on inappropriate conduct in a prior procurement process, including but not limited to the following:

- (a) illegal or unethical conduct as described above;
- (b) the refusal of the supplier to honour submitted pricing or other commitments; or
- (c) any conduct, situation or circumstance determined by the CVRD, in its sole and absolute discretion, to have constituted a Conflict of Interest.

3.5 Confidential Information

3.5.1 Confidential Information of the CVRD

All information provided by or obtained from the CVRD in any form in connection with this ITT either before or after the issuance of this ITT:

- (a) is the sole property of the CVRD and must be treated as confidential;
- (b) is not to be used for any purpose other than replying to this ITT and the performance of the Agreement;
- (c) must not be disclosed without prior written authorization from the CVRD; and
- (d) must be returned by the bidder to the CVRD immediately upon the request of the CVRD.

3.5.2 Confidential Information of Bidder

A bidder should identify any information in its bid or any accompanying documentation supplied in confidence for which confidentiality is to be maintained by the CVRD. The confidentiality of such information will be maintained by the CVRD, except as otherwise required by law or by order of a court or tribunal. Bidders are advised that their bids will, as necessary, be disclosed, on a confidential basis, to advisers retained by the CVRD to advise or assist with the ITT process, including the evaluation of bids. If a bidder has any questions about the collection and use of personal information pursuant to this ITT, questions are to be submitted to the ITT Contact.

3.6 Reserved Rights and Limitation of Liability

3.6.1 Reserved Rights of the CVRD

The CVRD reserves the right to

- (a) make public the names of any or all bidders;
- (b) make changes, including substantial changes, to this ITT provided that those changes are issued by way of addendum in the manner set out in this ITT;
- (c) request written clarification or the submission of supplementary written information in relation to the clarification request from any bidder and incorporate a bidder's response to that request for clarification into the bidder's bid;
- (d) assess a bidder's bid on the basis of: (i) a financial analysis determining the actual cost of the bid when considering factors including quality, service, price and transition costs arising from the replacement of existing goods, services, practices, methodologies and infrastructure (howsoever originally established); and (ii) in addition to any other evaluation criteria or considerations set out in this ITT, consider any other relevant information that arises during this ITT process;
- (e) waive formalities and accept bids that substantially comply with the requirements of this ITT;
- (f) verify with any bidder or with a third party any information set out in a bid;
- (g) check references other than those provided by any bidder;
- (h) disqualify a bidder, rescind a notice of selection or terminate a contract subsequently entered into if the bidder has engaged in any conduct that breaches the process rules or otherwise compromises or may be seen to compromise the competitive process;
- (i) select a bidder other than the bidder whose bid reflects the lowest cost to the CVRD;
- (j) cancel this ITT process at any stage;
- (k) cancel this ITT process at any stage and issue a new ITT for the same or similar deliverables;
- (l) accept any bid in whole or in part; or
- (m) reject any or all bids;

and these reserved rights are in addition to any other express rights or any other rights that may be implied in the circumstances.

3.6.2 Limitation of Liability

By submitting a bid, each bidder agrees that

- (a) neither the CVRD nor any of its employees, officers, agents, elected or appointed officials, advisors or representatives will be liable, under any circumstances, for any claim arising out of this ITT process including but not limited to costs of preparation of the bid, loss of profits, loss of opportunity or for any other claim; and
- (b) the bidder waives any right to or claim for any compensation of any kind whatsoever, including claims for costs of preparation of the bid, loss of profit or loss of opportunity by reason of the CVRD's decision not to accept the bid submitted by the bidder, to enter into an agreement with any other bidder or to cancel this bidding process, and the bidder shall be deemed to have agreed to waive such right or claim.

3.7 Governing Law and Interpretation

These Terms and Conditions of the ITT Process (Part 3)

- (a) are intended to be interpreted broadly and independently (with no particular provision intended to limit the scope of any other provision);
- (b) are non-exhaustive and shall not be construed as intending to limit the pre-existing rights of the CVRD; and
- (c) are to be governed by and construed in accordance with the laws of the province of British Columbia and the federal laws of Canada applicable therein.

[End of Part 3]

APPENDIX A – FORM OF AGREEMENT

AGREEMENT FOR SERVICES

THIS AGREEMENT dated for reference this _____ day of _____, 201_____

BETWEEN:

COWICHAN VALLEY REGIONAL DISTRICT
175 INGRAM STREET DUNCAN BC V9L 1N8
(the "**Regional District**")

OF THE FIRST PART

AND:

[NAME OF CONTRACTOR]

[address] [address]

(the "**Contractor**")

OF THE SECOND PART

W H E R E A S:

- A. The Regional District wishes to engage the Contractor to provide certain Services, and the Contractor has agreed to provide the Regional District with the Services described in this Agreement:

NOW THEREFORE the Regional District and the Contractor, in consideration of their mutual duties and responsibilities and in consideration of the payment to be made by the Regional District to the Contractor agree as follows

1.0 DEFINITIONS

1.1 In this Agreement:

- (a) "**Services**" means the services to be provided by the Contractor, as described in Schedule "A" to this Agreement.

2.0 TERM

2.1 The term of this Agreement is for the period commencing * and terminating on * (the "**Term**"), subject to earlier termination as provided in section 7 of this Agreement.

3.0 CONTRACTOR'S DUTIES AND RESPONSIBILITIES

3.1 The Contractor must:

- (a) provide the Regional District with the Services throughout the Term, in accordance with the specifications and requirements set out in Schedule "A" to this Agreement, and to the satisfaction of the Regional District;

- (b) supply all labour, equipment and material, and do all things necessary for the provision of the Services;
- (c) perform the Services for the Regional District with that degree of care, skill and diligence normally utilized by contractors having similar qualifications and performing duties similar to the Services;
- (d) charge only the fees which the Contractor is entitled to under this Agreement for the provision of the Services;
- (e) obtain and maintain in force throughout the Term the insurance required under Schedule "B" to this Agreement;
- (f) be registered as an employer with WorkSafe BC, and maintain workers' compensation coverage with WorkSafe BC for the Contractor and its employees;
- (g) provide satisfactory proof of the Contractor's WorkSafe BC coverage to the CVRD upon request;
- (h) not subcontract any of its obligations under this Agreement without the Regional District's prior written consent;
- (i) not commit or purport to commit the Regional District to the payment of any money to any person, firm or corporation, without the Regional District's prior written consent;
- (j) keep proper and accurate books of account and records of any and all monies received and disbursed in the provision of the Services and make the books of account and records available for inspection and audit by the Regional District or its authorized representatives upon request;
- (k) provide the Services in compliance with all applicable health and safety standards, rules, regulations, requirements and codes of practice prescribed under any federal, provincial or local government statute, regulation, bylaw or permit relating in any respect to the Contractor's provision of the Services; and
- (l) during the Term, not perform a service for or provide advice to any person, firm or corporation which gives rise to a conflict of interest with the duties and obligations of the Contractor to the Regional District under this Agreement.

4.0 CONTRACTOR REPRESENTATIONS AND WARRANTIES

4.1 The Contractor represents and warrants to the Regional District that:

- (a) if the Contractor is a corporation, it is duly organized, validly existing and legally entitled to carry on business in British Columbia and is in good standing with respect to filings of annual reports according to the records of the Registrar of Companies of British Columbia; and
- (b) the Contractor has sufficient trained staff, facilities, materials, and appropriate equipment in place and available to enable it to fully perform the Services.

5.0 FEES AND EXPENSES

- 5.1 In consideration for the provision of the Services, the Regional District shall pay to the Contractor the fee for all Services rendered under this Agreement according to the amounts and times of payment set out in Schedule "A" to this Agreement, plus any Goods and Services Tax applicable.
- 5.2 The Regional District shall pay the disbursements listed in Schedule "A" if incurred by the Contractor in providing the Services, provided the total disbursements payable shall not exceed the estimate set out in Schedule "A".

6.0 INDEMNIFICATION

- 6.1 The Contractor shall release, indemnify and keep indemnified the Regional District, its elected officials, officers, and employees of and from all claims, costs, losses, damages, actions, causes of action, expenses and costs arising from any error, omission or negligent act of the Contractor, or its officers, employees, agents or contractors, in the performance of the Services.

7.0 TERMINATION

- 7.1 If the Contractor is in default in the performance of any of its obligations under this Agreement, or if the Contractor becomes insolvent or is assigned into bankruptcy, then the Regional District may terminate this Agreement by written notice to the Contractor.
- 7.2 The Regional District may terminate this Agreement, without cause, at any time by giving not less than forty-five (45) days written notice to the Contractor.
- 7.3 In the event that this Agreement is terminated, the Contractor shall be paid by the Regional District for Services performed to the date of termination and remaining unpaid, less any amounts necessary to compensate the Regional District for damages or costs incurred by the Regional District or any person employed by or on behalf of the Regional District arising from the Contractor's default.

8.0 CONFIDENTIALITY

- 8.1 The Contractor shall not disclose any information, data or confidential information of the Regional District to any person, other than representatives of the Regional District duly designated for that purpose in writing by the Regional District, and shall not use for its own purposes or for any purpose other than for the purpose of providing the Services any such information, data or confidential information it may acquire as a result of its engagement under this Agreement.

9.0 NOTICE

9.1 Any notice required to be given under this Agreement will be deemed to be sufficiently given:

- (a) if delivered at the time of delivery;
- (b) if delivered by email or fax to the email or fax numbers set out below, upon acknowledgement of receipt by the recipient; and
- (c) if mailed from any government post office in the Province of British Columbia by prepaid registered mail addressed as follows:

if to the CVRD: 175 Ingram Street
Duncan, BC V9L 1N8
Attention:
Email:
Fax:

if to the Contractor: **[Insert the Contractor's address for delivery here as well as email and fax contact information]**

10.0 TIME

10.1 Time is of the essence of this Agreement.

11.0 BINDING EFFECT

11.1 This Agreement will inure to the benefit of and be binding upon the parties hereto and their respective heirs, administrators, executors, successors, and permitted assignees.

12.0 SURVIVAL OF CERTAIN COVENANTS

12.1 The covenants and agreements contained in sections 3.1(l), 6.1, and 8.1 shall survive the expiry or earlier termination of this Agreement and those sections are severable for that purpose.

13.0 RELATIONSHIP

13.1 The legal relationship between the Contractor and the Regional District is that of an independent contractor and purchaser of services, and, in particular and without limiting the generality of the foregoing, nothing in this Agreement shall be construed so as to render the relationship between the Contractor and the Regional District to be that of employee and employer.

14.0 NO ASSIGNMENT

14.1 The Contractor shall not assign its interest in this Agreement or any right, benefit or obligation conferred or imposed hereunder, in whole or in part, whether by operation of law or otherwise, except with the prior written consent of the CVRD, which may be withheld for any reason.

15.0 WAIVER

15.1 The waiver by a party of any failure on the part of the other party to perform in accordance with any of the terms or conditions of this Agreement is not to be construed as a waiver of any future or continuing failure, whether similar or dissimilar.

16.0 ENTIRE AGREEMENT

16.1 This Agreement constitutes the entire agreement between the parties with respect to the matters herein and may not be modified except by subsequent agreement in writing.

17.0 LAW APPLICABLE

17.1 This Agreement is to be construed in accordance with and governed by the laws applicable in the Province of British Columbia.

18.0 AMENDMENT

18.1 This Agreement may not be modified or amended except by the written agreement of the parties.

19.0 COUNTERPART

19.1 This Agreement may be executed in counterpart with the same effect as if both parties had signed the same document. Each counterpart shall be deemed to be an original. All counterparts shall be construed together and shall constitute one and the same Agreement.

APPENDIX B—SUBMISSION FORM

1. Bidder Information

Please fill out the following form, naming one person to be the bidder's contact for the ITT process and for any clarifications or communication that might be necessary.	
Full Legal Name of Bidder:	
Any Other Relevant Name under which Bidder Carries on Business:	
Street Address:	
City, Province/State:	
Postal Code:	
Phone Number:	
Fax Number:	
Company Website (if any):	
Bidder Contact Name and Title:	
Bidder Contact Phone:	
Bidder Contact Fax:	
Bidder Contact Email:	

2. Offer

The bidder has carefully examined the ITT documents and has a clear and comprehensive knowledge of the Deliverables required under the ITT. By submitting a bid, the bidder agrees and consents to the terms, conditions and provisions of the ITT, including the Form of Agreement, and offers to provide the Deliverables in accordance therewith at the rates set out in its bid, and hereby offers to fully perform the Work no later than 14 weeks after a Notice to Proceed has been issued.

3. Rates

The bidder has submitted its rates in accordance with the instructions in the ITT and in Pricing (Appendix C) in particular. The bidder confirms that it has factored all of the provisions of Appendix A, including insurance and indemnity requirements, into its pricing assumptions and calculations.

4. Addenda

The bidder is deemed to have read and accepted all addenda issued by the CVRD prior to the Deadline for Issuing Addenda. The onus is on bidders to make any necessary amendments to their bids based on the addenda. The bidder is requested to confirm that it has received all addenda by listing the addenda numbers, or if no addenda were issued by writing the word "None", on the following line: _____. Bidders who fail to complete this section will be deemed to have received all posted addenda.

5. No Prohibited Conduct

The bidder declares that it has not engaged in any conduct prohibited by this ITT.

6. Conflict of Interest

Bidders must declare all potential Conflicts of Interest, as defined in section 3.4.1 of the ITT. This includes disclosing the names and all pertinent details of all individuals (employees, advisers, or individuals acting in any other capacity) who (a) participated in the preparation of the bid; **AND** (b) were employees of the CVRD within twelve (12) months prior to the Submission Deadline.

If the box below is left blank, the bidder will be deemed to declare that (a) there was no Conflict of Interest in preparing its bid; and (b) there is no foreseeable Conflict of Interest in performing the contractual obligations contemplated in the ITT.

Otherwise, if the statement below applies, check the box.

- ☐ The bidder declares that there is an actual or potential Conflict of Interest relating to the preparation of its bid, and/or the bidder foresees an actual or potential Conflict of Interest in performing the contractual obligations contemplated in the ITT.

If the bidder declares an actual or potential Conflict of Interest by marking the box above, the bidder must set out below details of the actual or potential Conflict of Interest:

7. Disclosure of Information

The bidder hereby agrees that any information provided in this bid, even if it is identified as being supplied in confidence, may be disclosed where required by law or by order of a court or tribunal. The bidder hereby consents to the disclosure, on a confidential basis, of this bid by the CVRD to the advisers retained by the CVRD to advise or assist with the ITT process, including with respect to the evaluation this bid.

8. Bid Irrevocable

The bidder agrees that its tender shall be irrevocable for a period of Ninety (90) days following the Submission Deadline.
--

9. Execution of Agreement

The bidder agrees that in the event its bid is selected by the CVRD, in whole or in part, it will finalize and execute the Agreement in the form set out in Appendix A to this ITT in accordance with the terms of this ITT.

Signature of Bidder Representative

Name of Bidder Representative

Title of Bidder Representative

Date

I have the authority to bind the bidder.

APPENDIX C—PRICING

1. Instructions on How to Provide Pricing

- (a) Bidders should provide the information requested under section 3 below (“Required Pricing Information”) by reproducing and completing the table below in their bids, or, if there is no table below, by completing the attached form and including it in their bids.
- (b) Rates must be provided in Canadian funds, inclusive of all applicable duties and taxes except for GST and PST, which should be itemized separately.
- (c) Rates quoted by the bidder must be all-inclusive and must include all labour and material costs, all travel and carriage costs, all insurance costs, all costs of delivery to the CVRD, all costs of installation and set-up, including any pre-delivery inspection charges, and all other overhead, including any fees or other charges required by law.
- (d) It is the Bidder’s responsibility to ensure that the Total Tender Sum submitted with its Tender is sufficient to complete all of the Works based upon the whole of the Contract Documents including Drawings, Specifications and all other documents as issued by the CVRD directly or by reference, without reservation.
- (e) All sums set out in the Schedule of Unit Prices and Approximate Quantities, as listed in Appendix C, which are stated to be provisional or for contingencies, shall be used only on the written instruction and at the sole discretion of the CVRD. All or any of the unused portions of these sums shall revert to the CVRD and shall be deducted from the Contract Price before final payment is made to the Contractor.

2. Evaluation of Pricing

Pricing will be by the unit prices multiplied by estimated volumes to obtain a total price (The Total Tender Sum) for the purposes of evaluation.

3. Required Pricing Information

(Schedule of Prices and Approximate Quantities follows on next page)

SCHEDULE OF PRICES AND APPROXIMATE QUANTITIES**TRAIL CONSTRUCTION**

ITEM NO.	DESCRIPTION OF PARKING LOT WORKS	UNIT	AMOUNT (\$)
	PART A—STIPULATED LUMP SUM Sta. 1+000 to 3+468		
1.	ALL WORKS & APPURTENANCES ASSOCIATED ON COWICHAN ENGINEERING SERVICES LTD., INCLUDING TITLE SHEET AND DRAWINGS 1194-C-01 to 1194-C-07, BUT NOT LIMITED TO CLEARING & GRUBBING, STRIPPING AND SUBGRADE PREPARATION TO CONSTRUCTION EXTENTS AND TO THE REQUIRED SUBGRADE ELEVATIONS. WASTE & SURPLUS MATERIALS TO BE DISPOSED OF OFF-SITE, EXCEPT SOILS THAT MAY BE SUITABLE FOR FINISH GRADING. Refer to MMCD SECTIONS 31 11 01 and 31 24 13.	L.S.	
TOTAL PART A			

ITEM NO.	DESCRIPTION OF PARKING LOT WORKS	UNIT	APPROX QTY	UNIT PRICE (\$)	AMOUNT (\$)
	PART B—UNIT PRICES Sta. 1+000 to 3+468				
1.	200mm COMPACTED THICKNESS OF 75mm minus CRUSHED GRANULAR SUB-BASE INSTALLED TO LINES AND GRADES SHOWN ON THE DRAWINGS. COMPACTION TO MINIMUM 95% MODIFIED PROCTOR DENSITY. Refer to MMCD SECTIONS 31 05 17 and 32 11 16.1.	Sq. m	9375		
2.	100mm COMPACTED THICKNESS OF 19mm minus CRUSHED GRANULAR BASE INSTALLED TO LINES AND GRADES SHOWN ON THE DRAWINGS. COMPACTION TO MINIMUM 95% MODIFIED PROCTOR DENSITY. Refer to MMCD SECTIONS 31 05 17 and 32 11 23.	Sq. m	8250		
3.	50mm COMPACTED THICKNESS OF 15mm minus CART PATH MATERIAL INSTALLED TO LINES AND GRADES SHOWN ON THE DRAWINGS. COMPACTION TO MINIMUM 95% MODIFIED PROCTOR DENSITY. Refer to MMCD SECTION 32 11 23.	Sq. m	7700		

ITEM NO.	DESCRIPTION OF PARKING LOT WORKS	UNIT	APPROX QTY	UNIT PRICE (\$)	AMOUNT (\$)
4.	300mm minus CRUSHED QUARRY ROCK INSTALLED TO LINES AND GRADES SHOWN ON THE DRAWINGS. COMPACTION TO MINIMUM 95% MODIFIED PROCTOR DENSITY. Refer to MMCD SECTIONS 31 05 17 and 32 11 16.1.	Cu. m	2900		
5.	STACKED BOULDER WALL	Sq. m FACE	110		
6.	SUPPLY & PLACE 600mm DIAMETER RIPRAP ARMOURING. Refer to MMCD SECTION 31 37 10.	Tonne	20		
7.	TRAIL HEAD: INSTALL OWNER SUPPLIED REMOVABLE BOLLARD COMPLETE WITH CONTRACTOR-SUPPLIED BOULDERS IN LOCATIONS AND AS DETAILED ON THE DRAWINGS.	EA	1		
8.	SUPPLY & INSTALL 250mm DIAMETER RIBBED PVC STORM DRAIN EXTENSION. Refer to MMCD SECTION 33 40 01.	Lin. M	7		
9.	SUPPLY & INSTALL 300mm HDPE CULVERT. Refer to MMCD SECTION 33 42 13.	Lin. m	174		
10.	SUPPLY & INSTALL 450mm HDPE CULVERT. Refer to MMCD SECTION 33 42 13.	Lin. m	8		
11.	SUPPLY & INSTALL 600mm HDPE CULVERT. Refer to MMCD SECTION 33 42 13.	Lin. m	24		
12.	SUPPLY & INSTALL SAND/CEMENT BAG HEADWALLS IN LOCATIONS AND AS DETAILED ON DRAWINGS	EA	72		
13.	CONSTRUCT DITCHING IN LOCATIONS AND AS DETAILED ON DRAWINGS	Lin. m	2500		
14.	SUPPLY & INSTALL 1200mm CONCRETE MANHOLE COMPLETE WITH BASE, LID AND FRAME. Refer to MMCD SECTION 33 44 01.	L.S.	1		
15.	CONSTRUCT 3.0m x 5.0m x 100mm THICK CONCRETE APPROACH PAD	L.S.			
16.	SUPPLY & INSTALL TRAFFIC SIGNS IN LOCATIONS AND AS DETAILED ON DRAWINGS.	L.S.			
17.	INSTALL PAINTED CROSSWALKS IN LOCATIONS AND AS DETAILED ON DRAWINGS. Refer to MMCD Section 32 17 23.	L.S.			
18.	SUPPLY & INSTALL CHAINLINK FENCING IN LOCATIONS AND AS DETAILED ON DRAWINGS. Refer to MMCD Section 32 31 13.	Lin. m	400		
TOTAL PART B					

ITEM NO.	DESCRIPTION OF PARKING LOT WORKS	UNIT	APPROX QTY	UNIT PRICE (\$)	AMOUNT (\$)
	PART C—PROVISIONAL				
1.	OVER-EXCAVATION AND IMPORT 300mm MINUS CRUSHED QUARRY ROCK	Cu. m	300		
TOTAL PART C					

TOTAL TENDERED AMOUNT (Excl. GST): \$ _____ |
 (Sum of Parts A, B and C)

TOTAL TENDERED AMOUNT (Incl. GST): \$ _____

FORCE ACCOUNT RATES

PERSONNEL		
List by Trade/Occupation	Regular Hourly Rate	Overtime Hourly Rate

EQUIPMENT HOURLY RATE			
Description	With Operator	Less Operator	Model & Size

NOTE:

1. Imported Structural Material can be pit-run, gravel or aggregate to a maximum size of 150mm minus. Any imported material is subject to a site survey certification as with all other imported materials.
2. Charges for 'premium' portion only of overtime hourly rate for Operators is applicable when equipment is being used on overtime.
3. Standby Time, whereby approved by the Owner, will be paid at an hourly rate of 50% of the "Less Operator" hourly rate.

APPENDIX D–ITT PARTICULARS

A. THE DELIVERABLES

The Bidder shall, before submitting its Tender, thoroughly examine the Tender Documents and the Site and satisfy itself as to the nature and location of the Work, local conditions, soil structure and topography of the Site, the character of the equipment and facilities needed prior to and during construction of the Work, the means of access to the Site; and all laws, regulations, ordinances, codes, licensing and permit requirements, availability of all services required for the Work, including without limitation, electricity, water supply, sewer and telephone, labour market, parking and other circumstances which may affect its Tender for the Work. The submission of its Tender shall constitute an acknowledgement by the Tenderer that it has complied with these instructions.

The unit price or lump sum price bid for each item shall be full compensation for all labour, equipment and materials incidental and necessary to complete the supply, installation and construction of each item as specified herein and as indicated on the Drawings and other Contract Documents, either directly or by implication, and shall include survey and construction layout, and any and all other incidental items.

The descriptions of work to be done under the Schedule of Prices and Approximate Quantities as listed under Appendix C – Pricing, are general descriptions of the work only in order to break down and assess the Total Tender Sum. These descriptions are not intended to include all details of all requirements and responsibilities of the Contractor to complete the Works in accordance with the Contract. It is the Tenderer's responsibility to ensure that the Total Tender Sum submitted with its Tender is sufficient to complete all of the Works based upon the whole of the Contract Documents, without reservation.

B. MATERIAL DISCLOSURES

Except where otherwise specified, the Contractor shall give all necessary notices, shall apply for all permits, licences and inspections, and shall pay all fees relating thereto required to complete the Work. The Owner will be responsible for obtaining any Permits to Construct from the Ministry of Transportation & Infrastructure for works on the right of way of a Provincial public highway.

The Contractor shall notify the Owner before any application for licence or permit is made in order that the Owner may be represented if they so elect when such application is made.

C. MANDATORY SUBMISSION REQUIREMENTS

1. Submission Form (Appendix B)

Each bid must include a Submission Form (Appendix B) completed and signed by an authorized representative of the bidder.

2. Pricing (Appendix C)

Each bid must include pricing information that complies with the instructions contained in Pricing (Appendix C).

3. Bid Security

Submissions must be accompanied by a bid bond using a letter of credit or an equivalent form acceptable to the Owner. The Bid Bond must be in the amount of 10% of the Total Tender Sum and must be payable to the Owner.

4. Other Mandatory Submission Requirements

Tenders shall be accompanied by the form letter “Undertaking of Surety – Performance Bond” indicating the willingness of the Guarantee Company in question to give such a bond in the amount of 50% of the total tender sum.

Tenders shall be accompanied by the form letter “Undertaking of Surety – Labour and Materials Payment Bond” indicating the willingness of the Guarantee Company in question to give such a bond in the amount of 50% of the total tender sum.

D. MANDATORY TECHNICAL REQUIREMENTS

N/A

E. PRE-CONDITIONS OF AWARD

The Bidder shall provide a construction schedule outlining its proposed program and sequence of work in order to meet the completion requirements of the Contract in accordance with the Tender Form, including timing requirements and milestone dates specified elsewhere in the Tender Documents.

The Contractor must be registered with the Workers' Compensation Board of British Columbia (WorkSafe BC). Execution of the Tender Form shall constitute a warranty that the Contractor's assessments are not in arrears.

The Contractor shall provide to the Owner documentation satisfactory to the Owner that the Contractor is registered with the Workers' Compensation Board and has satisfied its assessment remittance requirements to date.

The Contractor shall be considered by the Owner to be the Prime Contractor on this project, and shall be required to sign and return to the Owner a Prime Contractor Designation form prior to commencing work at the site.

Policy for Protection of Work Over, Under or Around the Railway

- a. Railway flag protection must be provided for all work involving materials, equipment, and/or personnel at all times when located within 30 feet of any track centerline. Railway flag protection must be provided by a qualified railway flag person and track inspector. The railway flag person must be an employee of the operating railway or a qualified person approved by the railway. The railway flag person is required to provide for the safety of the railway, public, and persons performing work on, under, and/or around the railway. Track protection includes obtaining the crews, coordinating the work with rail traffic on the line, and looking out for the general interest of the railway relating to safety. The safety procedure is a regulatory requirement of the provincial government, represented by the C.V. Safety Authority. Notification of work to be performed within 30 feet of any track centerline must be made to the railway 48 hours in advance of the work or by means of communication on site for work that is ongoing in progress. Notification can be made by contacting SVI Roadmaster, Al Kutaj at 250-755-5604. The SVI General Office phone number is 250-754-9222.
- b. Depending on the extent of the work, additional personnel could be required. As a general rule one flag person can fulfill these requirements for work activity that does not extend beyond a specific geographic area (e.g. 1–2 miles).

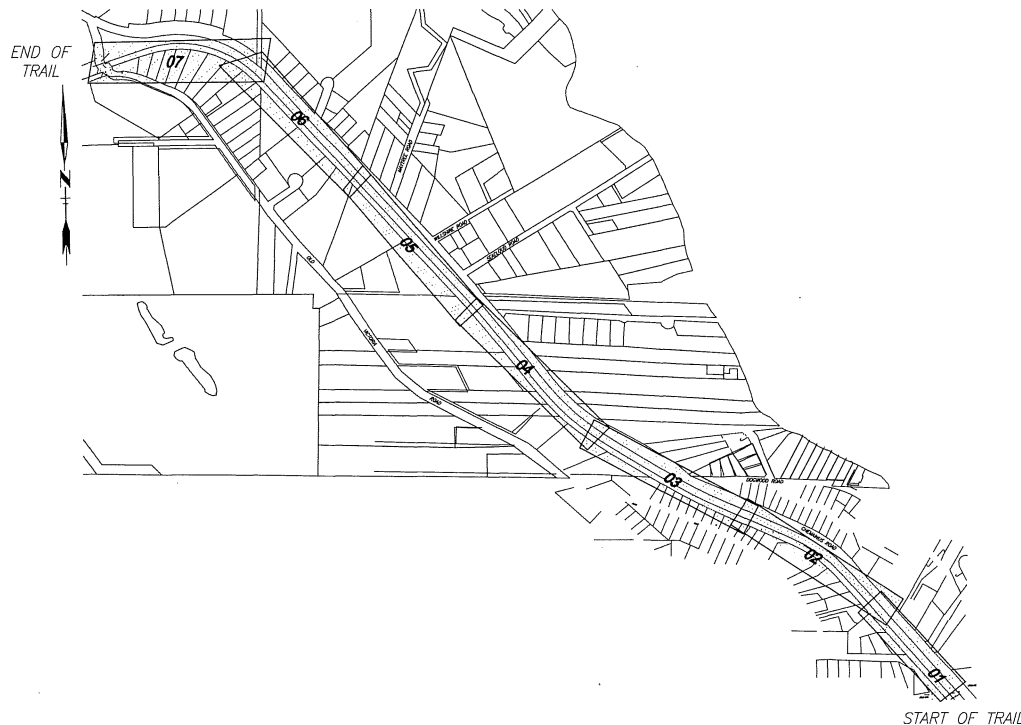
- c. For work required on the rail right-of-way where all materials, equipment, and personnel are at no time located within a distance of 30 feet of any track centerline, flag protection may not be required however the railway must be notified of the details of the work and the schedule using the notification procedure and contact numbers above.

APPENDIX E—DRAWINGS (attached)

COWICHAN VALLEY REGIONAL DISTRICT

CHEMAINUS SOUTH - RAILS WITH TRAILS

TABLE OF CONTENTS	
SHEET	SECTION
1194-C-01	1+000 - 1+300
1194-C-02	1+300 - 1+700
1194-C-03	1+700 - 2+100
1194-C-04	2+100 - 2+500
1194-C-05	2+500 - 2+900
1194-C-06	2+900 - 3+200
1194-C-07	3+200-3+468/DETAILS



1:5000

GENERAL NOTES:

1. REFER TO LEGAL SURVEY PLAN FOR TRUE LOT DIMENSIONS AND AREAS.
2. ALL DIMENSIONS AND ELEVATIONS ARE IN METRIC.
3. CONSTRUCT ALL WORKS IN ACCORDANCE WITH THE RELEVANT COWICHAN VALLEY REGIONAL DISTRICT SPECIFICATIONS AND STANDARD DRAWINGS, EXCEPT AS MAY BE INDICATED ON THE DRAWINGS.
4. CONTACT UTILITY COMPANIES FOR LOCATIONS OF ALL UNDERGROUND SERVICES IN AND AROUND THE WORK SITE.
5. CONDUCT THE CONSULTANT AT LEAST 24 HOURS IN ADVANCE OF TESTS.
6. TO THE SATISFACTION OF THE CIRD, REPLACE ALL UTILITIES AND INFRASTRUCTURE DAMAGED DURING CONSTRUCTION.
7. MAINTAIN AN ACCURATE SET OF "RED-LINED" AS CONSTRUCTED DRAWINGS TO PROVIDE TO THE CONSULTANT PRIOR TO FINAL COMPLETION OF THE WORK. NOTE THE LOCATION OF ANY UNDERGROUND UTILITIES ENCOUNTERED.
8. BE REGISTERED AND IN GOOD STANDING WITH THE WORKER'S COMPENSATION BOARD.
9. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING BC ONE CALL AND ANY OTHER UTILITIES FOR LOCATES PRIOR TO CONSTRUCTION.
10. EXISTING GRASS IN CONSTRUCTION ZONE OF TRAIL TO BE STRIPPED OF ALL ORGANIC MATERIAL PRIOR TO PLACING SUB-BASE MATERIAL.
11. SIDE SLOPES, TRANSITION AREAS, CONSTRUCTION TRAFFIC AREAS ARE TO BE BAIKED SUITABLY AND SEEDED WITH GRASS MIXTURE UPON COMPLETION AND WHEN MINIMUM TEMPERATURES EXCEED 10°C.
12. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL. THE CONTRACTOR WILL NOT BE PERMITTED TO CLOSE ROAD TO TRAFFIC. ANY FULL ROAD CLOSURES PROPOSED MUST BE DISCUSSED WITH THE B.C. SUBMISSION, AND SUCH CLOSURES SHALL BE MANAGED AND BE PERMITTED ONLY WITHIN THE CLOSURE OF THE CONSULTANT. AN APPROVED TRAFFIC CONTROL PLAN SHALL BE IN PLACE PRIOR TO COMMENCEMENT OF CONSTRUCTION.

EROSION AND SEDIMENTATION NOTES:

1. DURING CONSTRUCTION AT THE TOE OF THE TRAIL CUT SLOPE PLACE STORM OR DEDICATED GROUND COMPLETE WITH DOWNSTREAM SALT FENCING.
2. ANY RUN-OFF CREATED FROM CONSTRUCTION TO BE DIRECTED TOWARDS THE STORMWATER FENCED AREA.
3. PRIOR TO CONSTRUCTION IN FILL AREAS INSTALL SALT FENCING ALONG THE PROPOSED TOE OF THE TRAIL.
4. SALT FENCING TO BE PROPERLY INSTALLED WITH THE BOTTOM OF THE FENCING BEING EMBEDDED TOWARD THE GROUND.
5. EROSION AND SEDIMENTATION MEASURES TO STAY IN PLACE UNTIL CONSTRUCTION IS SOLE COMPLETE AND ALL TRAIL SURFACES HAVE BEEN GRAVELLED.
6. EROSION AND SEDIMENTATION MEASURES ARE TO BE REMOVED FROM THE CONSTRUCTION SITE WITHIN 30 DAYS OF SUBSTANTIAL COMPLETION, UNLESS DIRECTED BY THE CIRD OR THE CONSULTANT.

SOUTHERN VANCOUVER ISLAND RAILWAY NOTES:

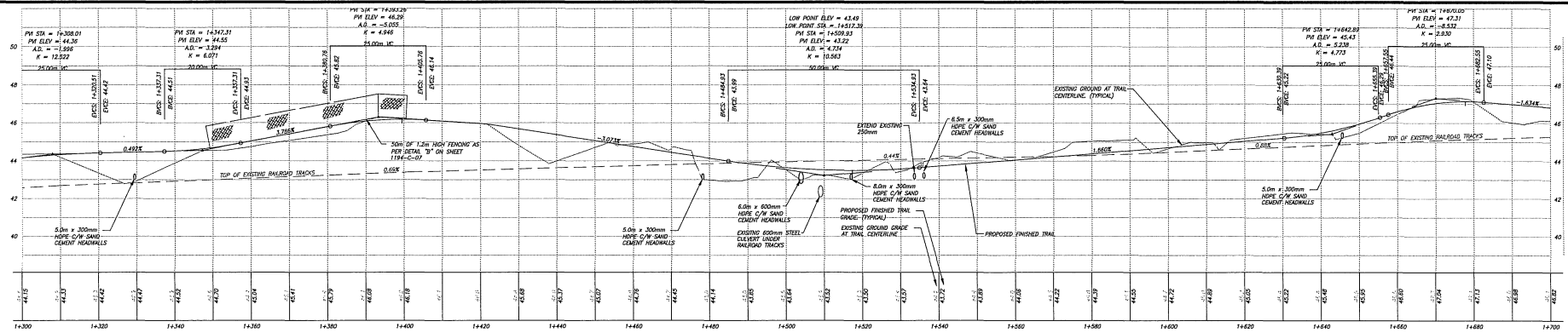
1. RAILWAY FLAG PROTECTION MUST BE PROVIDED FOR ALL WORK INVOLVING MATERIALS, EQUIPMENT, AND/OR PERSONNEL AT ALL TIMES WHEN LOCATED WITHIN 30 FEET OF ANY TRACK CENTERLINE. RAILWAY FLAG PROTECTION MUST BE PROVIDED BY A QUALIFIED RAILWAY FLAG PERSON AND TRAFFIC INSPECTOR. THE RAILWAY FLAG PERSON MUST BE AN EMPLOYEE OF THE OPERATING RAILWAY OR A QUALIFIED PERSON APPROVED BY THE RAILWAY. THE RAILWAY FLAG PERSON IS REQUIRED TO PROVIDE FOR THE SAFETY OF THE RAILWAY, PUBLIC, AND PERSONS PERFORMING WORK ON, UNDER, AND/OR AROUND THE RAILWAY. FLAG PROTECTION INCLUDES OBTAINING THE CREDITS, COORDINATING THE WORK WITH RAIL TRAFFIC ON THE LINE AND LOOKING OUT FOR THE GENERAL INTEREST OF THE RAILWAY RELATING TO SAFETY. THE SAFETY PROCEDURE IS A REGULATORY REQUIREMENT OF THE PROVISIONAL GOVERNMENT, REPRESENTED BY THE C.V. SAFETY AUTHORITY.
2. DEPENDING ON THE EXTENT OF THE WORK, ADDITIONAL PERSONNEL COULD BE REQUIRED. AS A GENERAL RULE, ONE FLAG PERSON CAN FULFILL THESE REQUIREMENTS FOR WORK ACTIVITY THAT DOES NOT EXTEND BEYOND A SPECIFIC GEOGRAPHIC AREA (E.G. 1-2 MILES).
3. NOTIFICATION OF THE WORK TO BE PERFORMED WITHIN 30 FEET OF ANY TRACK CENTERLINE MUST BE MADE TO THE RAILWAY 48 HOURS IN ADVANCE OF THE WORK OR BY MEANS OF COMMUNICATION ON SITE FOR WORK THAT IS ONGOING IN PROGRESS. NOTIFICATION CAN BE MADE BY CONTACTING SH ROADMASTER, AL KUTAJ AT 250-755-5604, OR BYRON REED AT 250-755-8455. THE SH GENERAL OFFICE PHONE NUMBER IS 250-754-9222.
4. FOR WORK REQUIRED ON THE RAIL RIGHT-OF-WAY WHERE ALL MATERIALS, EQUIPMENT, AND PERSONNEL ARE AT NO TIME LOCATED WITHIN A DISTANCE OF 30 FEET OF ANY TRACK CENTERLINE, FLAG PROTECTION MAY NOT BE REQUIRED. HOWEVER, THE RAILWAY MUST BE NOTIFIED OF THE DETAILS OF THE WORK AND THE SCHEDULE USING THE NOTIFICATION PROCEDURE AND CONTACT NUMBERS ABOVE.



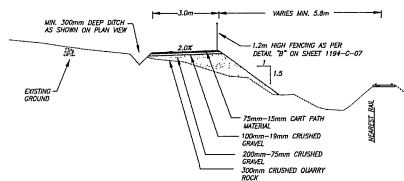
COWICHAN ENGINEERING SERVICES
6468 NORCROSS RD
DUNCAN, BC
V8L 6C5

APPROVED BY:	NAME	SIGNED	DATE
AUTHORITY			
COWICHAN VALLEY REGIONAL DISTRICT			
COWICHAN ENGINEERING SERVICES			
ISLAND CORRIDOR FOUNDATION			
SOUTHERN RAILWAY OF VANCOUVER ISLAND			

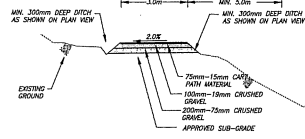
ANY PERSON AND/OR EQUIPMENT WORKING WITHIN 9.1m OF EXISTING RAILWAY TRACKS MUST BE UNDER THE DIRECT ON-SITE SUPERVISION OF THE SOUTHERN RAILWAY OF VANCOUVER ISLAND (SVI) REPRESENTATIVE. IT IS THE CONTRACTORS RESPONSIBILITY TO CONTACT AL KUTAJ OF SVI AT 250-755-5604 OR 250-754-9222 24 HOURS IN ADVANCE OF ANY CONSTRUCTION ACTIVITIES WITHIN THIS ZONE.



CVRD TRAILS 1+300 - 1+700
PROFILE 1:500 (Hz) 1:100 (Vt)



TYPICAL TRAIL SECTION 1+348-1+400
1:100

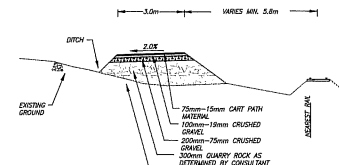


TYPICAL TRAIL SECTION 1+300-1+345
1:100

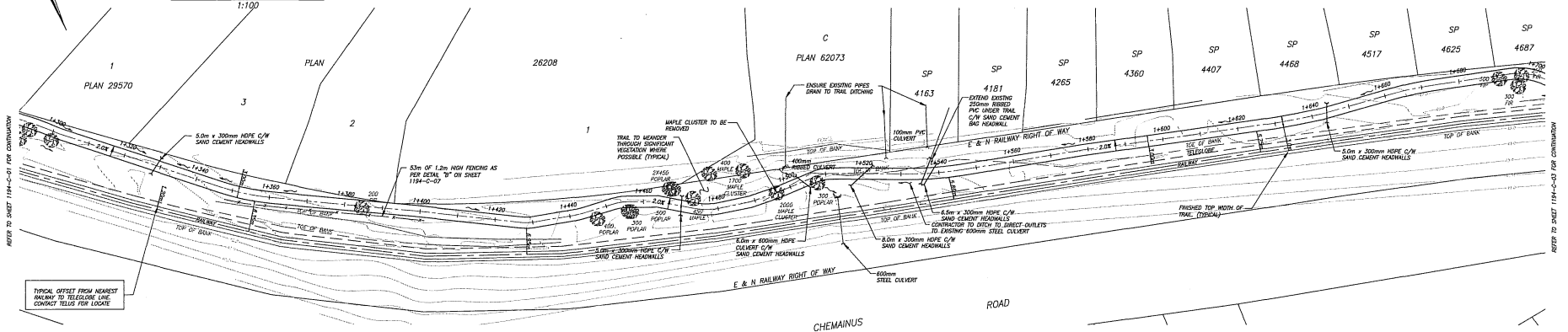
PROPOSED TRAIL GRADE TO FOLLOW EXISTING GROUND USING SUB-GRADE CUT/FILLS TO ENSURE PROPER DRAINAGE.

CONTRACTOR RESPONSIBLE FOR CLEARING/LIMBING A 5.0m X 5.0m CLEAR CORRIDOR FROM THE PROPOSED CENTERLINE OF TRAIL UNLESS OTHERWISE INSTRUCTED BY THE CONSULTANT.

TREES TO BE CUT FLUSH WITH GROUND WITH FILL PLACED OVER THE STUMPS. WORKS TO BE COMPLETED BY A CERTIFIED ASSISTANT.



TYPICAL TRAIL SECTION 1+401-1+570
1:100



CVRD TRAILS 1+300 - 1+700
PLAN 1:500 (Hz)

ANY PERSON AND/OR EQUIPMENT WORKING WITHIN 9.1m OF EXISTING RAILWAY TRACKS MUST BE UNDER THE DIRECT ON-SITE SUPERVISION OF THE SOUTHERN RAILWAY OF VANCOUVER ISLAND (SVI) REPRESENTATIVE. IT IS THE CONTRACTORS RESPONSIBILITY TO CONTACT AL KUTAJ OF SVI AT 250-755-5604 OR 250-754-9222 24 HOURS IN ADVANCE OF ANY CONSTRUCTION ACTIVITIES WITHIN THIS ZONE.

ALL REGULATORY AND SAFETY SIGNAGE CONFORMS TO THE TRANSPORTATION ASSOCIATION OF CANADA'S BIKEWAY TRAFFIC CONTROL GUIDELINES FOR CANADA

ALL SIGNAGE AND PAVEMENT MARKINGS CONFORM TO THE PRINCIPLES OUTLINED IN THE MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES OF CANADA

ADDITIONAL DRAWING MEETS OR EXCEEDS MIN-10 ROADWAY GRADE CROSSING TECHNICAL STANDARDS AND REQUIREMENTS, TESTING AND MAINTENANCE REQUIREMENTS

ENGINEER TO REVIEW AND APPROVE LOCATION, ELEVATION & SIZE OF CULVERTS SINCE TRAIL ALIGNMENT HAS BEEN CHANGED DURING A STREPPED

2018 COWICHAN ENGINEERING ALL RIGHTS RESERVED

THIS DOCUMENT IS PROTECTED BY COPYRIGHT LAW AND MAY NOT BE REPRODUCED IN ANY MANNER, OR FOR ANY PURPOSE, EXCEPT BY WRITTEN PERMISSION OF COWICHAN ENGINEERING.

LEGEND:	PROPOSED	EXISTING
WATERMAIN	PIPE	UTILITY POLE
SANITARY SEWER	MANHOLE	WATER VALVE
STORM DRAIN	CULVERT	HYDRANT
UTILITY	CATCHBASIN	FLUSHOUT
1/2" UTILITY	ANCHOR	AIR VALVE
EDGE OF PAVEMENT	ANCHOR	WATER METER
	LIGHT	HYDRO
		TEL
		CABLE

REVISION DESCRIPTION	DATE	BY
REVISED TO ICF'S COMMENTS/ISSUED FOR TENDER	MAR 20, 2018	C.W.
ISSUED FOR APPROVAL	MAR 15, 2017	C.W.
REVISION DESCRIPTION	DATE	BY

DESIGN: C.W.	LEGAL DESCRIPTION:
DRAWN: S.B.	
CHECKED: H.C.	
APPROVED:	
DATE: MARCH 20, 2018	
SCALE: 1:500 (H) 1:100 (V)	

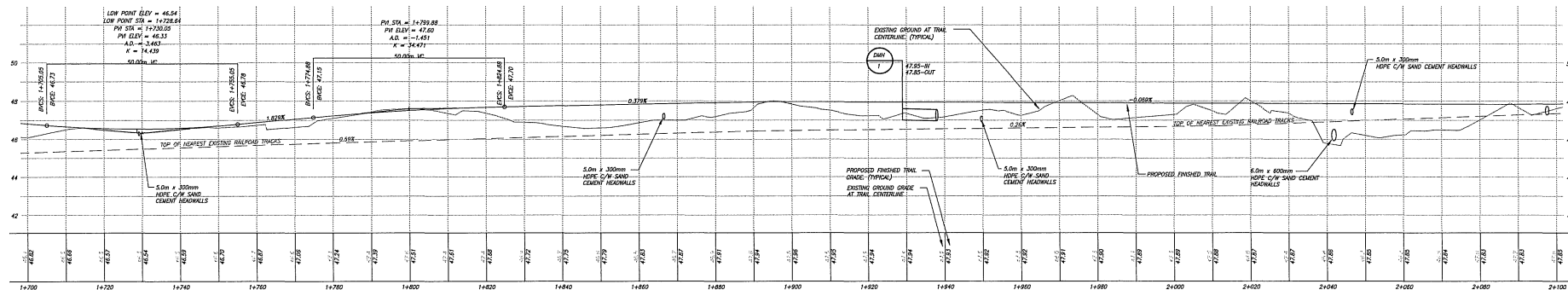


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4488 NORCROSS RD
DUNCAN, BC
V9L 6C4

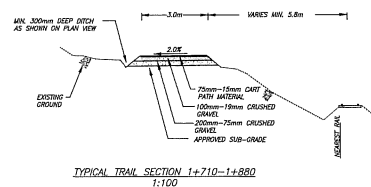
COWICHAN VALLEY REGIONAL DISTRICT

CLIENT: CVRD
PROJECT: CHEMINUS SOUTH
1+300-1+700
PLAN/PROFILE/DRAINAGE

SHEET 2 OF 7
REVISION: A
DRAWING: 1194-C-02
FILE: 1194-SOUTH



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PROFILE 1:500 (Hz) 1:100 (Vt)

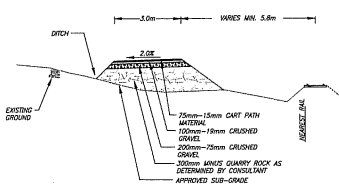


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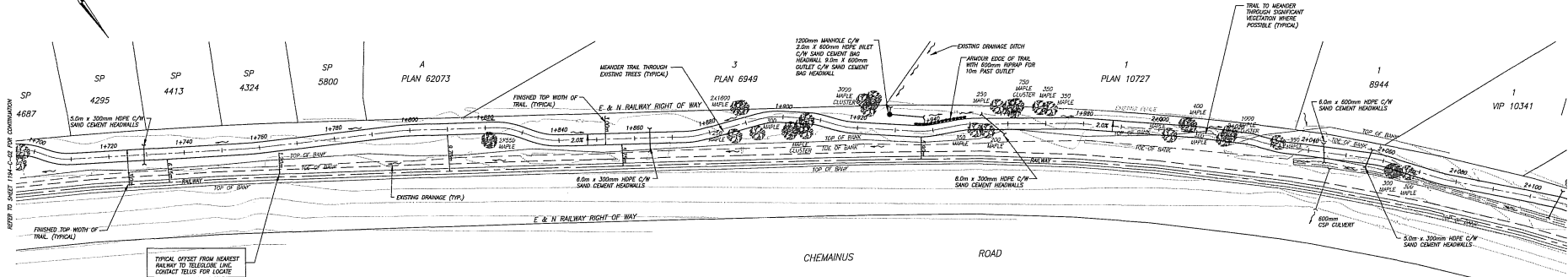
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SUB-GRADE CUT/FILLS TO ENSURE PROPER DRAINAGE

CONTRACTOR RESPONSIBLE FOR CLEARING/LIMBING A 5.0m x
5.0m CLEAR CORRIDOR FROM THE PROPOSED CENTERLINE OF
TRAIL UNLESS OTHERWISE INSTRUCTED BY THE CONSULTANT.

TREES TO BE CUT FLUSH WITH GROUND WITH
FILL PLACED OVER THE STUMPS. WORKS TO
BE COMPLETED BY A CERTIFIED ARBORIST



TYPICAL TRAIL SECTION 1+880-2+100
1:100



ANY PERSON AND/OR EQUIPMENT WORKING WITHIN 9.1m OF
EXISTING RAILWAY TRACKS MUST BE UNDER THE DIRECT ON-SITE
SUPERVISION OF THE SOUTHERN RAILWAY OF VANCOUVER ISLAND
(SVI) REPRESENTATIVE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO
CONTACT AL KUTAI OF SVI AT 250-755-5604 OR 250-754-9222
24 HOURS IN ADVANCE OF ANY CONSTRUCTION ACTIVITIES WITHIN
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BIKEWAY TRAFFIC CONTROL
GUIDELINES FOR CANADA

ALL SIGNAGE AND PAVEMENT
MARKINGS CONFORM TO THE
PRINCIPLES OUTLINED IN THE
MANUAL FOR UNIFORM TRAFFIC
CONTROL DEVICES OF CANADA

DESIGN DRAWING MEETS OR EXCEEDS RED-10
ROADWAY GRADING CHOOSING TECHNICAL
STANDARDS AND INSPECTION, TESTING AND
MAINTENANCE REQUIREMENTS

CVRD TRAILS 1+700 - 2+100
PLAN 1:500 (Hz)

ENGINEER TO REVIEW AND APPROVE LOCATION, ELEVATION & SIZE OF
CULVERTS SINCE TRAIL ALIGNMENT HAS BEEN CLEARED, CRUSHED & STRIPPED

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LEGEND:	PROPOSED	EXISTING	
WATERMAIN	MANHOLE	UTILITY POLE	
SANITARY SEWER	CLEANOUT	WATER VALVE	
STORM DRAIN	CULVERT	HYDRANT	
UTILITY	CUTBACK	FLUSHOUT	
U/G UTILITY	DITCH	AIR VALVE	
C	ANCHOR	WATER METER	
	LIGHT	HYDRO	
		TEL	
		CABLE	

REVISION DESCRIPTION

DATE

BY

SCALE

DESIGN: C.W.
DRAWN: S.B.
CHECKED: M.A.
APPROVED: MARCH 20, 2018
SCALE: 1:500(Hz) 1:100(Vt)



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V9L 6C5

LEGAL DESCRIPTION:

COWICHAN VALLEY REGIONAL DISTRICT

CLIENT: CVRD

PROJECT: CHEMAINUS SOUTH

1+700-2+100

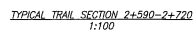
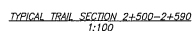
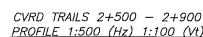
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SHEET 3 OF 7

REVISION: A

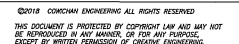
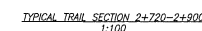
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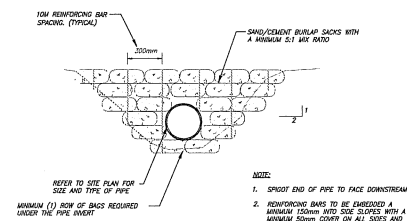
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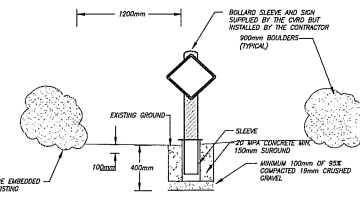
PROPOSED TRAIL GRADE TO FOLLOW EXISTING GROUND USING
SUB-GRADE CUT/FILLS TO ENSURE PROPER DRAINAGE

TREES TO BE CUT FLUSH WITH GROUND WITH
FILL PLACED OVER THE STUMPS. WORKS TO
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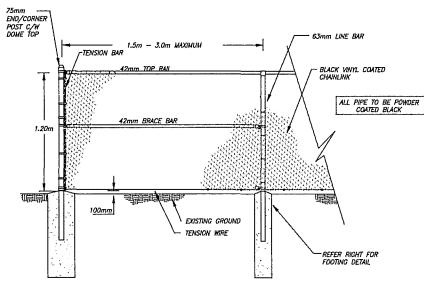
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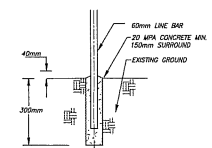
SAND / CEMENT BAG HEADWALL DETAILS
SCALE: 1:20(HZ)



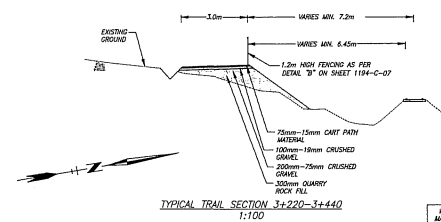
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SCALE: 1:20



CHAINLINK FENCE (B) GENERAL ARRANGEMENT
SCALE: 1/30



FOOTING DETAIL
1:10



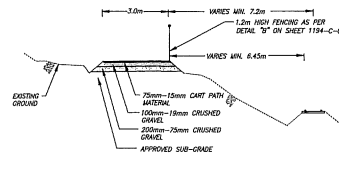
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CVRD TRAILS 3+200 - 3+468.11
PROFILE 1:500 (Hz) 1:100 (Vt)

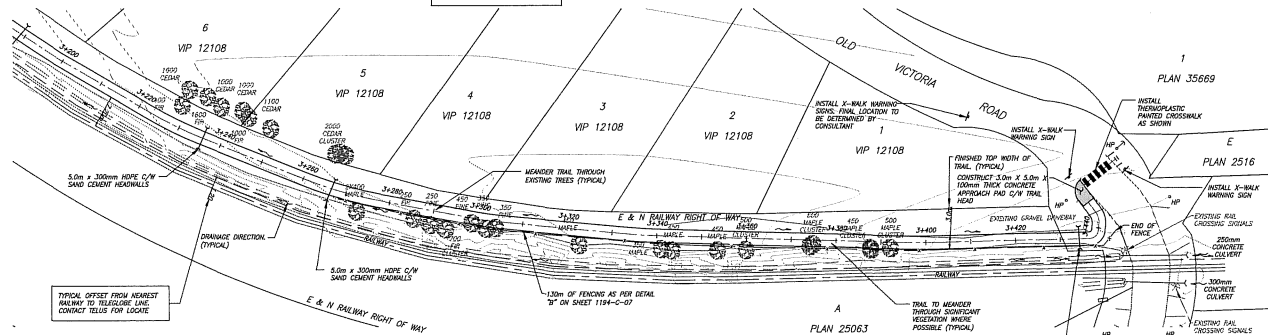
CONTRACTOR RESPONSIBLE FOR CLEARING/LIMBING A 5.0m X 5.0m CLEAR CORRIDOR FROM THE PROPOSED CENTERLINE OF TRAIL UNLESS OTHERWISE INSTRUCTED BY THE CONSULTANT.

PROPOSED TRAIL GRADE TO FOLLOW EXISTING GROUND USING
SUB-GRADE CUT/FILLS TO ENSURE PROPER DRAINAGE

WEST RAILWAY BOUNDARY TO BE
MARKED OUT BY B.C.L.S. PRIOR TO
CONSTRUCTION FROM 3+240 - 3+430



TYPICAL TRAIL SECTION 3+220-3+405
1:100



CVRD TRAILS 3+200 - 3+468.11
PLAN 1:500 (Hz)

ANY PERSON AND/OR EQUIPMENT WORKING WITHIN 9.1m OF EXISTING RAILWAY TRACKS MUST BE UNDER THE DIRECT ON-SITE SUPERVISION OF THE SOUTHERN RAILWAY OF VANCOUVER ISLAND (SVI) REPRESENTATIVE. IT IS THE CONTRACTORS RESPONSIBILITY TO CONTACT AL KUTAJ AT SVI AT 250-755-5604 OR 250-754-9222 24 HOURS IN ADVANCE OF ANY CONSTRUCTION ACTIVITIES WITHIN THIS ZONE.

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GUIDELINES FOR CANADA

ALL SIGNAGE AND PAVEMENT MARKINGS CONFORM TO THE PRINCIPLES OUTLINED IN THE MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES OF CANADA

DESIGN DRAWING MEETS OR EXCEEDS RTD-10 ROAD/RAILWAY GRADE CROSSING TECHNICAL STANDARDS AND INSPECTION, TESTING AND MAINTENANCE REQUIREMENTS

DESIGN:	C.W.
DRAWN:	S.B.
CHECKED:	M.A.
APPROVED:	
DATE:	MARCH 20, 2018
SCALE:	1:500(HZ) 1:100(V)



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8468 NORCROSS RD
DUNCAN, BC
V9L 8C5

LEGAL DESCRIPTION:

COWICHAN VALLEY REGIONAL DISTRICT

CLIENT: CVRD
PROJECT: CHEMAINUS SOUTH
3+200-3+468.11
PLAN/PROFILE/DRAINAGE

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SHEET 7 OF 7

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DRAWING: 1194-C-07

FILE: 1194--SOUTH

APPENDIX F—ENVIRONMENTAL MANAGEMENT PLAN (attached)



ENVIRONMENTAL MANAGEMENT PLAN

Trans-Canada Trail – Cook Street to Old Victoria Road, Chemainus, BC

FOR:

**Ryan Dias – Parks Superintendent
Cowichan Valley Regional District
175 Ingram Street
Duncan, BC, V9L 1N8**

BY:

Justin Lange, B.Sc., R.P.Bio.

Madrone Environmental Services Ltd.

March 16, 2018

MADRONE ENVIRONMENTAL SERVICES LTD.

1081 CANADA AVENUE • DUNCAN • BC • V9L 1V2

TEL 250.746.5545 • FAX 250.746.5850 • WWW.MADRONE.CA

DOSSIER: 18.0079

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ENVIRONMENTAL MANAGEMENT PLAN

Trans-Canada Trail – Cook Street to Old Victoria Road, Chemainus, BC

1 Background

The Trans-Canada Trail is a significant historical feature and the proposed extension involves considerable amalgamation of interested parties. The Cowichan Valley Regional District (CVRD) has been working to finalize plans for initiating construction of the trail extension that will connect Chemainus and Ladysmith, BC. This section of trail will begin at Cook Street in Chemainus and link up with the existing trail that extends south from Ladysmith and currently ends north of Stocking Creek. Incentives for extending this section of the Trans-Canada Trail (Cook Street to Old Victoria Road) include benefits to tourism and increasing function of the trail by connecting to existing sections.

2 Introduction

Construction of the trail extension will occur in two phases. Phase 1 includes the section between Cook Street and Old Victoria Road and Phase 2 the portion between Old Victoria Road and Stocking Creek. Madrone Environmental Services Ltd. (Madrone) was retained by the CVRD to assess the plans for constructing the section of the Trans-Canada Trail between Cook Street and Old Victoria Road (Phase 1). As part of the assessment the CVRD requested that Madrone produce an Environmental Management Plan (EMP) to mitigate potential environmental impacts as a result of construction.

As part of Phase 1 there will be several drainage crossings that will require “instream” works, which in this case involves upgrading existing culverts. Typically this type of work triggers the Section 11 Notification process under the British Columbia Water

Sustainability Act (WSA) for works in and about a stream. This process is used as a conduit to convey required information to appropriate regulatory agencies such as the Ministry of Forests, Lands and Natural Resource Operations and Rural Development (MFLNRORD). However, for the Section 11 process to apply to the subject drainages they must meet the definition of a stream under the WSA, which states:

- (a) A natural watercourse, including a natural glacier course, or a natural body of water, whether or not the stream channel has been modified, or*
- (b) A natural source of water supply,*

Including, without limitation, a lake, pond, river, creek, spring, ravine, gulch, wetland or glacier, whether or not usually containing water, including ice, but does not include an aquifer.

Based on the above noted definition, the subject drainages within Phase 1 of the project are not considered streams and therefore not subject to the Section 11 process. Furthermore, the subject drainages are not considered fish-bearing and they flow into stormwater ditch networks adjacent to the assessment area that drain into the ocean.

Development of the EMP has taken place through liaison with Michael Miller (Capital Projects Specialist – Parks and Trail Division) of the CVRD and Cam Williams of Cowichan Engineering Services Ltd. By conducting relevant discussions, an understanding of the general scope of work was gained, which has allowed for development of site-specific mitigation measures. This EMP is focused on management of deleterious substances as they have the highest potential to negatively impact ecological features. In addition, the EMP will address vegetation removal activities as the work is likely to occur during the songbird breeding season.

3 Assessment Area

The assessment area for Phase 1 of the Trans-Canada Trail extension begins at Cook Street, approximately 1.2 km northwest of the Town of Chemainus. From Cook Street the trail corridor follows the western edge of the Southern Railway of Vancouver Island (SRVI) for approximately 2.2 km and ceases at Old Victoria Road (Figure 1).

4 Purpose of the Environmental Management Plan

The purpose of this EMP is to identify elements of the project that could present a risk to the environment, and to describe how those risks can be mitigated or managed through proper project planning and execution.

The EMP will:

- Identify components of the project which could present a risk to the environment;
- Identify specific environmental protection measures to be implemented in order to avoid or minimize potential impacts to the environment;
- Define responsibilities for development, communication, implementation and monitoring of EMP and regulatory requirements;
- Provide emergency response procedures to mitigate potential impacts related to spills, leaks, or any other uncontrolled release of a hazardous substance into the environment.
- The EMP does not supersede or replace the need for provincial and/or federal environmental approvals, authorizations or permits. Compliance with applicable provisions within the EMP is mandatory unless otherwise authorized by the EM in liaison with the appropriate regulatory authority.

5 Background Research

Prior to conducting the site visit, the British Columbia Conservation Data Centre (BC CDC, 2018) Species and Ecosystems Explorer was reviewed. By accessing this information, it was possible to determine if any rare (provincially red- and blue-listed and federally-listed species at risk) plants, animals or ecosystems might occur within the study area. The Wildlife Tree Stewardship Atlas (WiTS, 2018) was also checked to determine the potential presence of existing raptor nests in the area. In addition, the Habitat Wizard Website (<http://maps.gov.bc.ca/ess/sv/habwiz/>) was reviewed to gain an understanding of hydrological flow regimes and determine potential distribution of fish in and adjacent to the study area.



PROJECT: Environmental Management Plan Cowichan Valley Trail	LOCATION: Saltair, BC	CLIENT: Cowichan Valley Regional District	DOSSIER NO: 18.0079	
ASSESSED BY: Justin Lange, B.Sc., R.P.Bio.	MAP SCALE: 1:11,000	MAPPING DATE: March 14, 2018	MAPPING BY: Jessica Yellowlees	

FIGURE 1: Overview



6 General Site Conditions

Phase 1 of the trail is located within the Coastal Douglas-fir moist maritime (CDFmm) Biogeoclimatic Zone. Warm, dry summer and mild, wet winters characterize the CDFmm as it lies in the rainshadow of Vancouver Island and the Olympic Mountains. The CDFmm is restricted to low elevations that range from sea level to approximately 150 m.

Only a small proportion of the land mass of BC lies within the CDFmm, however these are the most densely populated areas of the province. Conditions are such that residential, agricultural, commercial and industrial developers are attracted to the region. The ecosystem and climatic conditions that characterize the CDFmm extend from southeast Vancouver Island and continue south through Puget Sound.

The extent and condition of naturally-occurring ecosystems and wildlife have been directly impacted by anthropogenic disturbances such as logging, agriculture, invasive species, land alienation, resource extraction, altered drainage patterns, urban sprawl, and fire suppression. The continuing disturbance, combined with the restricted distribution of the subzone and its ecosystems, has resulted in mounting interest for comprehensive conservation planning. Numerous ecosystems in the CDFmm are provincially red-listed (*e.g.*, Garry Oak meadows and old (>250 years old) Douglas-fir forests) due to the historical land use pressures that have resulted in the loss of these sites.

This section of trail (Cook Street to Old Victoria Road) will be constructed between the SRVI and residential properties. During the assessment it was noted that the entire length of trail between Cook Street and Old Victoria Road has been consistently subjected to anthropogenic influences. Routine maintenance of the rail line involves brushing and trimming vegetation. Several residents have formed trail networks throughout the area to provide access to Chemainus Road and vegetation has been removed for the purpose of planting lawn. In some cases lawn extends right to the edge of the rail line.

Over the assessed length of the trail corridor it was noted that the topography is subdued, with the gradient ranging between 1% and 6%. Several near vertical banks also exist with heights of 1-3 m.

Along the trail corridor it was noted that ditches run parallel to rail line and multiple drainages convey water flow under the tracks into the ditch adjacent to Chemainus Road. The following section describes each of the drainages observed at the time of the

assessment. It is important to note that small seasonal drainages may have been missed due to areas being overgrown with invasive plants.

7 Drainage Descriptions

7.1 Drainage #1 (1+500)

Drainage #1 is located at a position along the trail approximately 500 m from Cook Street (1+500 – distances coincide with the Engineered Drawings provided in the tender). This drainage is part of a stormwater management system that originates southwest of the trail corridor. The flow of water appears to be conveyed under residential properties by a 400 mm culvert and into the ditch system adjacent to the SRVI. The flow of water is then conveyed under the tracks through a second 400 mm culvert and down into the ditch network adjacent to Chemainus Road. From its confluence with Chemainus Road, the flow of water continues in a southeast direction.

Upslope of the rail line, the drainage flows among Himalayan blackberry at a gradient of 12-15%. The substrate is composed of a mix of alluvium and organic material (*i.e.*, decomposing leaves and woody debris). Downslope of the culvert the gradient lessens to approximately 8-10%. The bankfull width over the assessed length is approximately 2.0 m. This drainage has a seasonal flow regime and does not provide habitat for fish.

7.2 Drainage #2 (1+920)

Drainage #2 flows through a residential property at about the 1+920 point along the trail. This drainage flows at a gradient of 20-25% and the bankfull width is about 0.5 m. The drainage has a seasonal flow regime and the bed is composed entirely of cobble and gravel. At the time of the assessment the flow of water disappears to ground at the rail line. It appears the drainage shifts to a subsurface pattern of flow. Overall this drainage has low quality habitat and does not support fish. There is no potential for fish to enter the system based on a lack of continuous surface flow.

7.3 Drainage #3 (2+060)

This drainage is a system of connected ditches. A well-defined channel upslope of the rail line is lacking but there is a depression that would contain water flow. In this case the flow of water is likely on an ephemeral basis. A 400 mm closed metal pipe conveys water under the rail line and down into the ditch adjacent to Chemainus road. This drainage does not provide habitat for fish and there is no potential for fish to move up into this ditch.

7.4 Drainage #4 (2+200)

This drainage is a good example of a non-classified drainage. This feature has not seen water for a prolonged period of time as evident by the accumulation of leaves and woody debris in the cement culvert and upslope of the culvert. It is likely that this particular drainage only flows during heavy rain events. There is no evidence of a defined channel and based on observations will not support fish or contribute to downstream fish habitat. Any water that may flow through this area will be directed into the road ditch adjacent to Chemainus Road.

7.5 Drainage #5 (3+160)

Drainage #5 flows through a dense patch of Himalayan blackberry and under the rail line through a 600 mm culvert. The flow of water continues down the slope towards the ditch network adjacent to Chemainus Road. The bed of the drainage is composed mainly of organic material and the bankfull width is less than 1.0 m. The gradient of the drainage is less than 10%. This drainage does not support fish and the likelihood of fish entering the system is very low as the drainage has a seasonal flow regime and fish must navigate a series of impassable ditch networks.

The list of vegetation noted below (Table 1) represents a species list of native vegetation that was noted during the assessment of the entire trail corridor.

Table 1. Trans-Canada Trail Corridor (Phase 1) Vegetation Species List

COMMON NAME	LATIN NAME
Trees	
Douglas-fir	<i>Pseudotsuga menziesii</i>
Arbutus	<i>Arbutus menziesii</i>
Western redcedar	<i>Thuja plicata</i>
Red alder	<i>Alnus rubra</i>
Bigleaf maple	<i>Acer macrophyllum</i>
Shrubs	
Salal	<i>Gaultheria shallon</i>
Red huckleberry	<i>Vaccinium parvifolium</i>
Oceanspray	<i>Holodiscus discolor</i>
Salmonberry	<i>Rubus spectabilis</i>
Baldhip rose	<i>Rosa gymnocarpa</i>
Dull Oregon-grape	<i>Mahonia nervosa</i>
Herbaceous	
Sword fern	<i>Polystichum munitum</i>
Bracken fern	<i>Pteridium aquilinum</i>
Common horsetail	<i>Equisetum arvense</i>

Due to consistent exposure to anthropogenic influences, the trail corridor contains abundant invasive plant growth including Himalayan blackberry (*Rubus discolor*), Scotch broom (*Cytisus scoparius*), Daphne (*Daphne laureola*), English ivy (*Hedera helix*) and reed canary grass (*Phalaris arundinacea*).

8 Construction Methodology and Timing

Construction of the section of trail between Cook Street and Old Victoria is scheduled to begin in April 2018. Construction will begin at Cook Street and proceed towards Old Victoria Road. A crew will remove vegetation along the trail corridor and excavate soil to achieve the required grade and elevation. Once grading is completed crushed gravel will be imported to the site and deposited over the trail footprint to form the top layer of the trail. This process will continue along the entire length of trail.

At the drainage crossings the construction plan involves installing short sections of pipe to join with existing infrastructure (i.e., existing culverts). Currently, the plan involves installing lengths of high density polyethylene (HDPE) pipe that is between 4.0 m and 8.0 m to join with existing infrastructure. The length of pipe installed will be based on site characteristics. The diameter of each HDPE culvert will be either 200 or 300 mm. To install a culvert at each site it will be necessary to excavate to achieve the appropriate

elevation and grade for placement of the pipe. Once the pipe is installed it will be buried with soil and crushed rock to form the base of the trail.

9 Potential Construction Impacts

9.1 Deleterious Substances

Due to the fact heavy machinery will be working along the entire length of the trail corridor and immediately adjacent to several drainages, there is potential for sources of deleterious substances to enter waterways. Hydrocarbon leakage and spills from machinery (*i.e.*, from fuel or hydraulic fluid) are potential occurrences that may result in the introduction of pollutants to aquatic habitat downstream if proper precautions are not taken.

Site preparation activities (*i.e.*, excavations for culverts) and removal of vegetation may provide sediment sources, which could become mobilized and transported into the drainages if adequate mitigation measures are not developed.

9.2 Changes to Vegetation Cover

During construction of the trail, vegetation removal will be limited and localized to the trail corridor and construction footprints of each drainage crossing. The loss of riparian vegetation at each drainage crossing will be confined to the trail corridor. It is not necessary to compensate for the vegetation that is being removed as invasive plant species dominate.

10 Mitigation

10.1 Erosion and Sediment Control

Modifications to the land as a result of construction activities leads to the loss of vegetation, which naturally limits the erosion of soil from agents such as running water. Increased erosion from active construction sites can lead to undesirable impacts to the site and also potential impacts to environmental resources (*i.e.*, water-courses). The best method to control sediment is to manage potential sediment sources. If potential erosion sources are managed properly, sediment cannot be mobilized. Generally, the impact of rain drops upon an exposed (*i.e.*, un-vegetated) surface provides sufficient energy to detach soil particles (depending upon particle size), which then become entrained in surface flowing water. Best Management Practices (BMPs) that are focused on protecting recently exposed soils should be referred to in these situations.

It should be noted that BMPs such as sediment fencing must not be relied upon as the only Erosion and Sediment Control (ESC) measure in this case. As noted above, if erosion is controlled at the source, there should be no need for a sediment fence. Sediment fencing can be an effective tool in ESC, but should be viewed as a secondary control measure, with erosion control being the primary focus. Other misconceptions regarding ESC should also be considered; hay bales, for example, are very ineffective at “filtering” turbid water, based on the size of sediment particles, and their ability to pass through the bale without being trapped.

An ESC plan is an essential component of the EMP for building the trail. In particular, ESC measures need to be implemented as activities will occur adjacent to each drainage. The subject drainages do not support fish, but they do contribute water to downstream aquatic habitat. The federal Fisheries Act considers sediment to be a deleterious substance and its release into fish habitat is a reportable federal offence. To ensure effectiveness of the BMPs, implementation of any BMPs should be supervised by an independent environmental monitor.

Although the topography in the area is relatively subdued, the hazard for soil erosion and transport is considered to be high based on the fact that construction activities will be occurring in close proximity to aquatic habitat. The excavations associated with culvert installations will lead to the highest levels of localized soil disturbance; therefore, ESC measures should focus on these activities.

Prior to initiating excavations at any of the work zones, it may be determined that it would be best to isolate sites by installing sediment fencing. By isolating the construction footprint in this way, it is unlikely any fine sediment will be transported into any receiving environment. The sediment fence must be properly installed to be effective at blocking sediment flow – the lower edge of the fabric must be dug into the ground and back-filled to prevent turbid water from potentially flowing underneath the fence. The fence must also be securely fixed to strong wooden stakes (Figure 2).

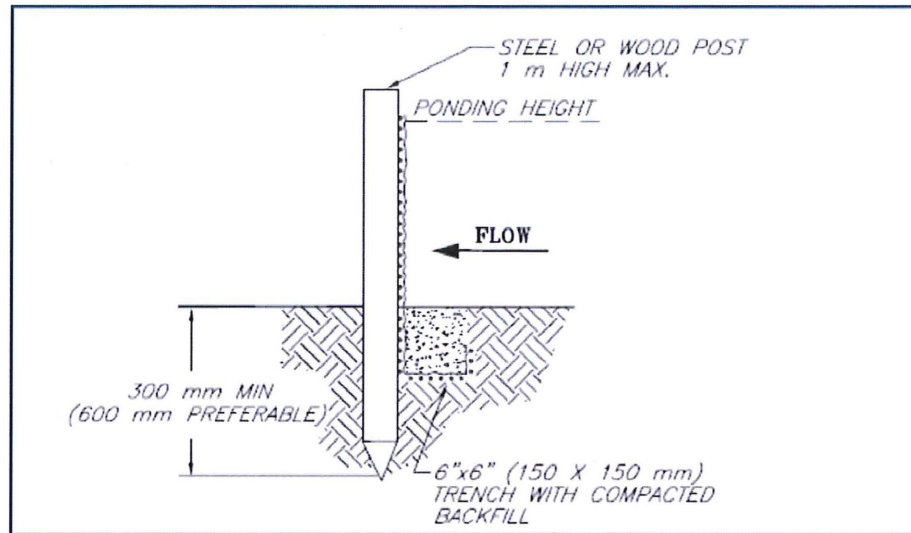


Figure 2: Sediment fence installation procedure.

As noted, sediment fencing should not be relied upon as the only sediment control option. General measures that must also be implemented include: ceasing work during any adverse weather conditions, particularly in the event of unseasonably wet weather (*i.e.*, during heavy rainstorms). If crews are caught off guard and surface water flow becomes an issue, all surface water should be re-directed into vegetated areas wherever possible. Another general measure that should be employed is to stagger vegetation removal (where applicable) to minimize the amount of exposed soil.

Measures that address erosion control are extremely important. Any exposed soil should be covered using geotextile fabric or mulch. By covering exposed soil with fabric or mulch, sediment will be contained so that it is not transported beyond the disturbed area. Organic mulches (*i.e.*, straw) are relatively cheap, but provide effective temporary erosion control. Hay must not be used as mulch, as it often contains seeds of undesirable plant species. In addition, hay can attract wildlife (*i.e.*, deer). As areas are exposed, straw should be applied (where applicable) by hand. In order to obtain adequate coverage to avoid erosion, one straw bale will effectively cover approximately 20 – 25 m². Straw should be placed evenly at a thickness of 2.5 cm – 5.0 cm, and should cover between 80% and 90% of the surface.

To protect any stockpiles of fill or soil, temporary polyethylene sheeting should be used. Covering the material will prevent it from being displaced by rain drops and/or surface

flowing water. This is a short-term erosion control BMP, and would be used in cases where stockpiles of material are to be moved.

In order to inhibit erosion of exposed areas, surfaces should be left in a roughened state (not smoothed/ contoured), and compaction avoided. Compaction generally leads to decreased infiltration, and increased surface erosion, resulting from surface-flowing water. Compacted areas are prone to the formation of rills and gullies, which have the ability to detach and entrain sediment. Surface roughness and loose soils not only encourage infiltration and the prevention of surface erosion, but also provide preferred growing conditions for vegetation. Compacted, smoothed surfaces are generally unsuitable for vegetation establishment.

BMP should be installed prior to works being conducted. Madrone understands that due to the unique setting and logistics of the project, an adaptive management strategy will be taken toward incorporating ESC measures at the site.

The general contractor is to be engaged and aware of ESC BMPs on site and is responsible for informing all personnel working on-site under their direction about the ESC measures. In the event that ESC measures are not effectively mitigating erosion and that further construction will likely induce a release of sediment, the contractor will immediately inform the environmental monitor who will if necessary, stop work in the area of concern until conditions have improved..

10.2 Fuel Handling and Spill Containment

Heavy machinery will be used along the entire length of the trail corridor and in close proximity to the HWMs of the drainages. Due to the close proximity of aquatic habitat, it is recommended, wherever possible, to use a biodegradable form of hydraulic oil. In the event of a hydraulic leak, biodegradable hydraulic fluids will pose less of a threat to the aquatic environment. If biodegradable hydraulic fluid is not an option, heavy machinery must be routinely inspected in order to prevent potential hydraulic leaks.

All re-fuelling of heavy machinery must occur at least 30 m from the HWM of any aquatic habitat (*i.e.*, stream or wetland). Other than the areas adjacent to each drainage, re-fuelling can occur at any point along the trail corridor or at the road intersection of Cook Street or Old Victoria Road.

In addition to being clean (*i.e.*, free from leaks and excessive grease/oil on the body) and in good working order, each piece of heavy equipment working on site must contain a

small, storable emergency spill containment kit with at least a 30 litre sorbent capacity. In addition, it is recommended that a larger “first response spill kit”, with a sorbent capacity of at least 80 litres (approximately half the size of a garbage can) must be located at a spot that is easily accessible and in close proximity to the work site. Work crews must make themselves familiar with the contents of the spill kits and must know how to deploy the contents to effectively control spills.

The smaller (30 litre sorbent capacity) spill kits must contain the following:

- 20 absorbent pads (for oil, gas and diesel);
- 2 x 3”x 4’ absorbent socks;
- 2 disposal bags; and
- 1 pair of Nitrile gloves.

The “first response” spill kits (80 litre sorbent capacity) must contain the following:

- 30 absorbent pads (for oil, gas and diesel);
- 15 universal absorbent pads;
- 2 x 18” x 18” oil absorbent pillows;
- 3 x 3” x 4’ absorbent socks (for oil, gas and diesel);
- 6 disposal bags;
- 2 pairs of Nitrile gloves;
- 1 spill instruction sheet; and
- 1 laminated list of contents.

Smaller machines on site (*i.e.*, chainsaws or generators) must be sited on catchment trays and all refueling must occur over the catchment trays, regardless of their location in relation to the drainages. Chain-oil spray from saws cannot be contained, and all saws must, therefore, run on biodegradable chain oil.

10.3 Protection of Breeding Birds

Migratory birds have been protected in Canada since 1917 with the Migratory Birds Convention Act (MBCA). This act was updated and amended in 1994. The Act was designed to protect birds (including eggs and embryos), their nests and habitat, and it applies to the activities of all organizations, industries, and individuals, in order to avoid disturbing and destroying migratory birds. Under the Act, no disturbance to nests or

nesting birds is permitted during the breeding and nesting period, except under authority of a permit (subsection 5(9), Migratory Bird Regulation). Development activities taking place during the breeding season have the potential of stressing or harming birds and their nests, which is in contravention of the MBCA.

Furthermore, birds and their eggs are protected year round (both directly and indirectly) by provincial legislation. Section 34 of the provincial Wildlife Act states:

A person commits an offence if the person, except as provided by regulation, possesses, takes, injures, molests, or destroys:

(a) A bird or its egg.

(b) The nest of an eagle, peregrine falcon, gyrfalcon, osprey, heron, or burrowing owl.

(c) The nest of a bird not referred to in paragraph (b) when the nest is occupied by a bird or its egg.

In this regard, “nest” is defined as “a structure, or part of a structure, prepared by or used by an animal of the class Aves to hold its eggs or offspring”.

From the perspective of minimizing possible impacts to breeding birds, vegetation clearing windows are short. To avoid impacts to nesting birds and to be in compliance with applicable legislation, mitigation associated with seasonal vegetation removal restrictions should be considered. Generally, the breeding and nesting period in coastal British Columbia extends from March 15th to August 15th, depending on species and seasonal weather variations.

Due to the fact that vegetation clearing activities are to take place during the breeding bird season (March 15th to August 15th), song bird nest surveys (SBNSs) must be conducted prior to removing vegetation. By completing SBNSs, contravention of the *Wildlife Act* and the *Migratory Bird Convention Act* which protects migratory birds, their eggs, active nests and nest trees will be avoided. In areas where the trail corridor coincides with existing road right-of-ways and residential properties (*i.e.*, areas lacking vegetation) there will not be a need to conduct SBNSs. Standardized SBNS methods have been developed by the Canadian Wildlife Service (CWS) as part of the approved Environmental Assessment standards and best management practices established for industry. Based on the fact that vegetation removal will be confined to the trail corridor, nest surveys would be limited in spatial and temporal extent.

11 Environmental Monitoring

The proponent will commit to retaining the services of an environmental monitor (EM). Initial monitoring will focus on ensuring that the sediment and erosion control measures are correctly implemented (i.e., adjacent to drainages) prior to the commencement of construction. This includes site preparation activities such as vegetation removal.

Site visits will be made by an EM regularly throughout the project, especially prior to forecasted wet weather events and during wet weather to ensure that the sediment and erosion control measures are operating effectively. It is expected that the management of sediment and erosion will take a flexible, adaptive approach that will require modifications and adjustments throughout the project.

Initial monitoring, prior to activities occurring, will also focus on ensuring that all the recommended fuel management techniques are in place (*i.e.* ensuring that the required spill kits are installed in appropriate locations).

In addition to periodic checks of the ESC and fuel management measures, monitoring also will be required as part of vegetation removal work. An on-site monitor will be present during these activities to ensure that mitigation measures are being followed. Monitoring visits will also occur on an impromptu basis to ensure that all measures are being followed throughout the project.

The key roles of the environmental monitor will be to monitor, recommend, and report on all aspects of the EMP. The responsibilities of the EM are:

- liaison with regulatory government agencies as required, and communicating any events which contravene approvals and permits;
- delivering environmental awareness information to construction staff;
- providing technical assistance on environmental matters to construction staff and government habitat protection officers;
- documenting construction activities through field notes and photographs, particularly in sensitive areas;
- ensuring the proper use of the spill kits in the event of a spill; and
- preparing reports to summarize the activities and actions taken.

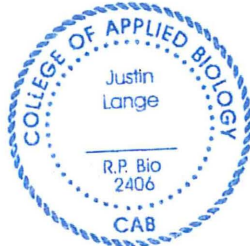
The EM will act independently from construction management and will have the authority to suspend construction activities where impacts to biological resources could occur. This will prevent further environmental degradation until an appropriate solution can be established, and will minimize the potential for subsequent liability.

When Phase 1 of the Trans-Canada Trail extension has been constructed, a post-construction monitoring report will be produced. The report will contain a description of activities in chronological order. Site photographs will also be taken during the project for inclusion in the report. The post construction report will be submitted to regulatory agencies following the completion of the project.

If you have any questions regarding the EMP or environmental monitoring of this project, please feel free to contact the undersigned.

Prepared by:

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APPENDIX 1

Site Photos



Looking northwest at the area adjacent to Cook Street. This particular area represents the southern terminus of the section of trail between Old Victoria Road and Cook Street. The red lines show the approximate location of the trail corridor.



A representative photo of the dense shrub growth that occurs in several areas along the Cook Street to Old Victoria Road section of the trail corridor. At the time of the field visit these areas were active with song bird nesting .



Looking south along the section of the trail corridor, approximately 550 m from Cook Street.



A representative photo of an area along the trail corridor dominated by native tree and shrubs.



Looking southeast along the section of the trail corridor, approximately 1400 m from Cook Street. In this section shrubby vegetation is lacking and manicured lawn extends to the toe of the rail grade.



Looking northeast at the trail corridor near Old Victoria Road. Ditches such as the one in this photo become inundated with water in the rainy season.



Looking southwest from Old Victoria Road. This spot is the cessation point of the Cook Street – Old Victoria Road section of trail. Phase 2 of the project (Old Victoria Road to Stocking Creek) will begin immediately southwest of Old Victoria Road (start point marked with red arrow).



Drainage #1 where it flows through the trail corridor. This drainage is a collects stormwater runoff, which is then conveyed under residential properties through a CMP. The red arrow marks the outlet of the CMP.



A photo of the area where Drainage #1 is conveyed under the railway tracks. The red arrow demarcates the wing-walls of the inlet of the cement culvert.



Looking down at the area where Drainage #1 flows into the ditch-line that runs parallel to Chemainus Road.



Looking upstream at Drainage #2 as it flows through a residential property. This photo was taken from the trail corridor.



Drainage #2 as it flows through the trail corridor. Note the lack of channel definition.



Looking southeast along the trail corridor, and at the area where the flow of water through Drainage #2 goes to ground.



The inlet of the CMP that directs the flow of water in Drainage #3 under the railway tracks. As can be seen in the photo, water has not flowed through this CMP for a long time.



The start point of Drainage #3. This particular point collects runoff as it is a low-lying area and it connects to adjacent ditch networks.



Looking down from the rail tracks at the confluence (marked with blue arrow) of Drainage #3 and the ditch along Chemainus Road.



The inlet of the cement culvert that conveys Drainage #4 under the railway tracks. Note that the culvert is plugged and the composition of debris indicates that water has not flowed through the culvert recently.



Looking upslope at the area where water would flow down through Drainage #4 and under the railway tracks. As can be seen there is no defined channel.



The outlet of the culvert (marked with a red arrow) that conveys water flow under the railway tracks. Note the outlet is entirely buried with debris.



Looking downslope towards Chemainus Road from the outlet of the culvert.



Looking upstream (northwest) at the area that encompasses Drainage #5. As can be seen in the photo, the entire area is overgrown with Himalayan blackberry.



A photo depicting the approximate width of Drainage #5. This photo is of the point where the flow of water is conveyed under the railway tracks.



Looking downstream from the railway tracks towards Chemainus Road. The blue line delineates the approximate location of Drainage #5.