

INVITATION TO TENDER PS-24-07

PAVING PUBLIC SAFETY OPERATIONS BUILDING (PSOB) ACCESS ROUTE

CLOSING DATE: November 14, 2024

TIME: 2:00pm PST

MANDATORY SITE MEETING: October 18, 2024 1:00pm PST

> INQUIRES: Bonnie Seitz bseitz@rdffg.bc.ca

> > NOTE:

Late submissions will not be considered

Regional District of Fraser-Fort George 155 George Street, Prince George BC V2L 1P8 Telephone 250-960-4400 / Toll Free 1-800-667-1959 / Fax 250-562-8676 http://www.rdffg.ca

Tenderer's Initials		



TABLE OF CONTENTS

TABLE OF CONTENTS	PAGE 1
INVITATION TO TENDERERS	PAGE 1 TO 2
INSTRUCTIONS TO TENDERERS PART I	PAGES 1 TO 4
INSTRUCTIONS TO TENDERERS PART II	
FORM OF TENDER (POSTED SEPARATELY)	PAGES 1 TO 3
Appendix 1 – Schedule of Quantities and Prices	Pages 1 to 3
Appendix 2 – Preliminary Construction Schedule	Page 1
Appendix 3 – Experience of Superintendent	Page 1
Appendix 4 – Comparable Work Experience	Page 1
Appendix 5 – Subcontractors	Page 1
Appendix 6 – Conflict Of Interest Statement	Page 1
Appendix 7 – Acknowledgement Letter	Page 1
Appendix 8 – Goods And Services Tax Information	Page 1
Appendix 9 – Tender Checklist	Page 1
AGREEMENT	PAGES 1 TO 7
Schedule 1 – Schedule of Contract Documents	Page 6
Schedule 2 – Schedule of Contract Drawings	Page 7
General Conditions	(Not Reproduced)
Supplementary General Conditions	Pages 1 To 2
Specifications	(Not Reproduced)
Supplementary Specifications	
Supplementary Specifications	Pages 1 to 3
Section 01 10 00 SS – Measurement and Payment	Page 1 to 2
CONTRACT DRAWINGS (POSTED SEPARATELY)	C101, C301, E001, & E002
Reference Documents:	
Geotechnical Design Memo (SoilTech, Mar 21, 2024) Geotechnical Design Memo (SoilTech, Jan 21, 2024)	
GEOGEOHIICAL DESIGN MEHIO (SOILTECH, JAH Z.1, ZUZ4)	



Tenderer's Initials

INVITATION TO TENDER

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(TO BE READ WITH "INSTRUCTIONS TO TENDERERS - PART II" CONTAINED IN THE EDITION OF THE PUBLICATION "MASTER MUNICIPAL CONSTRUCTION DOCUMENTS" SPECIFIED IN ARTICLE 2.2 BELOW)

Owner: REGIONAL DISTRICT OF FRASER-FORT GEORGE (RDFFG)

Contract: PAVING PUBLIC SAFETY OPERATIONS BUILDING ACCESS ROUTE

Reference No. TENDER # PS-24-07

1.0 Introduction

These Instructions apply to and govern the preparation of tenders for this *Contract*. The *Contract* is generally for the following work:

Reconstruction of the pavement surface for the access lane to the

Public Safety Operations Building and install storm drainage system

Direct all inquiries regarding the Contract, to:

Bonnie Seitz, Project Manager

Address: Regional District of Fraser-Fort George

155 George Street

Prince George, BC, V2L 1P8

Email: bseitz@rdffg.bc.ca

2.0 Tender Documents

2.1 The tender documents which a Tenderer should review to prepare a tender consist of all the *Contract Documents* listed in Schedule 1 entitled "Schedule of Contract Documents". Schedule 1 is attached to the Agreement which is included as part of the tender package. The *Contract Documents* include the drawings listed in Schedule 2 to the Agreement, entitled "List of *Contract Drawings*".

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2.0 Tender Documents (cont'd)

- 2.2 A portion of the Contract Documents are included by reference. Copies of these documents have not been included with the tender package. These documents are the Instructions to Tenderers Part II, General Conditions, and Specifications. They are those contained in the publication entitled "Master Municipal Construction Documents General Conditions, Instruction to Tenderers Part II, and Standard Specifications". Refer to Schedule 1 to the Agreement or, if not specified in Schedule 1, then the applicable edition shall be the most recent edition as of the date of the Tender Closing Date. All sections of this publication are by reference included in the Contract Documents.
- 2.3 Any additional information made available to Tenderers prior to the Tender Closing Time by the Owner or representative of the Owner, such as geotechnical reports or as-built plans, which is not expressly included in Schedule 1 or Schedule 2 to the Agreement, is not included in the Contract Documents. Such additional information is made available only for the assistance of Tenderers who must make their own judgment about its reliability, accuracy, completeness, and relevance to the Contract, and neither the Owner nor any representative of the Owner gives any guarantee or representation that the additional information is reliable, accurate, complete, or relevant.

3.0 Submission of 3.1 Tenders

Tenders will be accepted up to 02:00 pm, PST, November 14, 2024. All tender submissions and accompanying documents must be received physically by the General Manager of Financial Services of the RDFFG, at 155 George Street, Prince George, BC **OR** electronically at purchasing@rdffg.bc.ca

3.2 Requested files:

Organize your Tender submission into the following (the file type for electronical submission must be pdf):

- Form of Tender including Appendices, 1 to 9.
- Financial Security, which should be in the form of a digitally certified Bid Bond. If a scan of a paper version of a bid bond is submitted, the original hard copy of the bid bond must be delivered to the district office at 155 George Street Prince George, BC, within 5 Days of the tender closing date.

If submitting via email, all emailed documents must be in PDF format and should be in one combined file. Tenderers should ensure that the files should not collectively exceed 35 MB. Zip the files to reduce the size or email separately, if needed. Submitting the files via Drop Box, FTP, or similar programs, is not acceptable.

If submitting a physical copy, include an electronic version of the documents on a USB drive. The electronic copy must be in PDF format and adhere to the same requirements as the email submission, except for the file size limitation.

The Regional District does not assume any risk or responsibility or liability, including in contract or tort (including negligence), whatsoever to any Tenderer.

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3.0 Submission of Tenders (cont'd)

- for ensuring that any electronic email system being operated by or for the Regional District is in good working order, able to receive transmissions, or not engaged in receiving other transmissions such that a Tenderer's electronic transmission, including the transmission of an electronic copy of its Tender, cannot be received;
- for errors, problems or technical difficulties with respect to a Tenderer's electronic transmission, including the transmission of an electronic copy of its Tender;
- that a Tenderer's electronic transmission, including the transmission of an electronic copy of its Tender, is received by the RDFFG in its entirety or within any time limit specified by this Tender.

4.0 Additional Instructions to Tenderers

4.1 Upon receipt of this Invitation to Tender, a potential Tenderer should complete and sign Appendix 7 "Acknowledgement Letter" and email the signed Acknowledgement Letter to Bonnie Seitz, Project Manager, at bseitz@rdffg.bc.ca

A Tenderer who signs and returns the Acknowledgement Letter is not obligated to submit a Tender. Any Tenderer who does not submit the Acknowledgement Letter will not be sent any Addenda, or answers to questions and may be disqualified.

- 4.2 IT 12 Amendment of Tenders: Clause 12.1 replace "delivered by hand, mail or fax" with "delivered by hand, mail or email". Delete Clause 12.5
- 4.3 **Questions:** All questions should be received before 4:00 pm PST on October 24, 2024. All questions received shall be answered before October 31, 2024.
- 4.4 **Information Meeting:** A mandatory site meeting will be held at 2259 Quinn Street South, Prince George BC at 01:00 pm PST on October 18, 2024.

The Project Manager or delegate will provide an overview of the contract expectations and be available for questions pertaining to this tender. The purpose of the site meeting is for Tenderers to satisfy themselves as to the nature of the work in general, to clarify their understanding of the scope of work, to view the sites, to determine specifications, and to have the opportunity to ask questions regarding the project and any other circumstances which may influence their Tender submission.

Oral questions will be allowed at the Tenderers' meeting. However, questions of a complex nature, or questions where the Tenderer requires anonymity, should be forwarded in writing, prior to the meeting, to the Project Manager.

The Regional District will not, under any circumstances, make accommodations for rescheduling, holding any additional site meetings, or providing individuals access to the sites

4.5 **Business Licence:** The successful Contractor must possess a valid Business Licence in B.C. and will be required to provide evidence of it.

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4.0 Additional Instructions to Tenderers (cont'd)

4.6 Conflict of Interest: The Tenderer warrants that they are not employed by the Owner, nor are they an employee of any of the Owner's arms-length departments, such as the Firefighter Department or Emergency Services Department. Furthermore, the Tenderer confirms that they are not an immediate relative of any such employee if the goods or services to be supplied under this Tender are intended for the department in which that employee works.

If the Tenderer is a company, the Tenderer warrants that none of its officers, directors, or employees with authority to bind the company are employees of the Owner or the Owner's arms-length Departments or immediate relatives of employees of the Owner, if the goods or services to be supplied under this Tender are intended to be supplied to the department in which such employee works.

In this section "Immediate Relative" means a spouse, parent, child, brother, sister, brother-in-law, or sister-in-law of a municipal employee.

When submitting a Tender, the Tenderer must complete, sign and include with their Tender Appendix 6 "Conflict of Interest Disclosure Statement."

- 4.7 **Solicitation:** If any director, officer, employee, agent or other representative of a Tenderer makes any representation or solicitation to any directors or board members, officer or employee of the Owner with respect to the Tender, whether before or after the submission of the tender, the Owner shall be entitled to reject or not accept the Tender.
- 4.8 **Freedom of Information ("FOI"):** All Bid Forms become the property of the Owner upon submission and will not be returned to the bidders. Bidders must be aware that the Owner is a public body subject to the provisions of the Freedom of Information and Protection of Privacy Act. Bid Forms will be held in confidence by the Owner, subject to the provisions of the Freedom of Information and Protection of Privacy Act, or unless otherwise required by law.
- 4.9 **The Owner may, in its absolute discretion reject a Tender** if the Tenderers past performance of similar work for the Owner has resulted in outstanding or ongoing legal liability or legal claims against the Owner. The Owner may take into regard, in exercising its discretion, previous experience of the Tenderer whether listed in the Form of Tender or not.
- 4.10 **Superintendent:** The Owner reserves the right to object to the Superintendent listed in the tender. If the Owner objects to the Superintendent, then the Owner will permit a tenderer to, within 5 days, propose a substitute Superintendent acceptable to the Owner provided that there is no resulting adjustment in the Tender Price or the completion date set out in Paragraph 2.2 of the Form of Tender. A tenderer will not be required to make such a substitution and, if the Owner objects to a listed Superintendent, the tenderer may, rather than propose a substitute Superintendent, consider its tender rejected by

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the Owner and by written notice withdraw its tender. The Owner shall, in that event, return the tenderer's bid security.

- 4.0 Additional Instructions to Tenderers (cont'd)
- 4.13 **The contract duration** shall be from the date of Notice to Proceed to the date of substantial completion.
- 4.15 Attached Excel File of Form of Tender Appendix 1, For Use in Preparing Tender Bid.

The owner has elected to provide an excel table for the prospective bidder' use in completing Appendix 1 to the form of tender. Specific columns have been locked for editing, to protect all parties. This file shall be returned as part of the bid package, converted to .PDF format as is outlined above.

END



APPENDIX 1 - SCHEDULE OF QUANTATIES AND PRICES

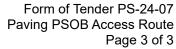
FOR USE

		M THE BASIS OF PAYMENT - TO BE USED ONLY WITH THE GENERAL CONDITIONS MENTS OF THE UNIT PRICE MASTER MUNICIPAL CONSTRUCTION DOCUMENTS.
Owner:		REGIONAL DISTRICT OF FRASER-FORT GEORGE
Contract:		PAVING PUBLIC SAFETY OPERATIONS BUILDING ACCESS ROUTE
Reference No.		TENDER # PS-24-07
To Owner:		
WE, THE UNDERSIGNED:	1.1	have received and carefully reviewed all of the <i>Contract Documents</i> , including the Instructions to Tenderers, the specified edition of the "Master Municipal Construction Documents - General Conditions, Specifications and Standard Detail Drawings" and the following Addenda:
	1.2	have full knowledge of the <i>Place of the Work</i> , and the <i>Work</i> required and
	1.3	have complied with the Instructions to Tenderers; and
ACCORDINGLY WE HEREBY OFFER:	2.1	to perform and complete all of the <i>Work</i> and to provide all the labour equipment and material all as set out in the <i>Contract Documents</i> , in stric compliance with the <i>Contract Documents</i> ; and
	2.2	to complete the <i>Work</i> within 45 calendar days from the start of construction and achieve Substantial Performance of the <i>Work</i> no later than Sep 30, 2025.
	2.3	to do the <i>Work</i> for the price, which is the sum of the products of the actual quantities incorporated into the <i>Work</i> and the appropriate uni prices set out in Appendix 1, the " <i>Schedule of Quantities and Prices</i> " plus any lump sums or specific prices and adjustment amounts as provided by the <i>Contract Documents</i> . For the purposes of tender comparison, our offer is to complete the <i>Work</i> for the " <i>Tender Price</i> " as set out on Appendix 1 of this Form of Tender. Our <i>Tender Price</i> is based on the estimated quantities listed in the <i>Schedule of Quantities and Prices</i> and excludes <i>GST</i> .



- **WE CONFIRM:** 3.1 that we understand and agree that the quantities as listed in the *Schedule of Quantities and Prices* are estimated, and that the actual quantities will vary.
 - 4.1 that the following appendices are attached to and form a part of this tender:
 - 4.1.1 the appendices as required by paragraph 5.3 of the Instructions to Tenderers Part II; and
 - 4.1.2 the Bid Security as required by paragraph 5.2 of the Instructions to Tenderers Part II.
 - WE AGREE: 5.1 that this tender will be irrevocable and open for acceptance by the Owner for a period of 90 calendar days from the day following the Tender Closing Date and Time, even if the tender of another Tenderer is accepted by the Owner. If within this period, the Owner delivers a written notice ("Notice of Award") by which the Owner accepts our tender we will:
 - 5.1.1 within 15 Days of receipt of the written Notice of Award deliver to the Owner:
 - a) a Performance Bond in the amount of 10% of the Contract Price, covering the performance of the Work including the Contractor's obligations during the Maintenance Period, issued by a surety licensed to carry on the business of suretyship in the province of British Columbia, and in a form acceptable to the Owner.
 - b) a Baseline Construction Schedule, as provided by GC 4.6.1;
 - c) a copy of the WorkSafe BC Notice of Project;
 - d) a "clearance letter" indicating that the Tenderer is in WorkSafe BC compliance;
 - e) a copy of the insurance policies as specified in GC 24 indicating that all such insurance coverage is in place and;
 - 5.1.2 within 2 Days of receipt of written "Notice to Proceed", or such longer time as may be otherwise specified in the Notice to Proceed, commence the Work; and
 - 5.1.3 sign the Contract Documents as required by GC 2.1.2.
 - **WE AGREE:** 6.1 that, if we receive written Notice of Award of this Contract and, contrary to paragraph 5 of this Form of Tender, we:
 - 6.1.1 fail or refuse to deliver the documents as specified by paragraph 5.1.1 of this Form of Tender; or

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WE AGREE: (cont'd)	6.1.2	fail or refuse to commence the Work as required by the Notice to Proceed,
	into the Contra on acc or refu	uch failure or refusal will be deemed to be a refusal by us to enter e Contract and the Owner may, on written notice to us, award the act to another party. We further agree that, as full compensation count of damages suffered by the Owner because of such failure sal, the Bid Security shall be forfeited to the Owner, in an amount to the lesser of:
	6.1.3	the face value of the Bid Security; and
	6.1.4	the amount by which our Tender Price is less than the amount for which the Owner contracts with another party to perform the Work.
OUR ADDRESS IS AS FOLLOWS:		
	Ph	none:
	Е	mail:
	Atten	tion:
	This To	ender is executed this
		day of, 2024
	Contra	octor:
	(FULL	LEGAL NAME OF CORPORATION, PARTNERSHIP OR INDIVIDUAL)
	(4117114	
	(AUTH	ORIZED SIGNATORY)
	(AUTH	ORIZED SIGNATORY)
		END

FORM OF TENDER - APPENDIX 1

SCHEDULE OF QUANTITIES AND PRICES

(See paragraph 5.3.1 of the Instructions to Tenderers - Part II)

(All Prices and Quotations including the Contract Price shall include all Taxe s, but shall not include GST.)

Any work called for in these Contract Documents, shown on the plans, or which is necessary for the completion of the Work called for in these Contract Documents and which is not specifically listed as a separate payment item in this Appendix shall be deemed incidental to the performance of the Work and to the general purpose of the Contract; no separate payment will be made on account of any such Work, but the costs of any such incidental Work shall be included in the Unit and Lump Sum Prices.

Summary

Division 01:	General	\$	
Division 03:	Concrete	\$	
Division 31:	Earthworks	\$	
Division 32:	Roads and Site Improvements	\$	
Division 33:	Utilities	\$	
TOTAL TENI	DER PRICE	\$	_
GST (5%)	TOTAL TENDER PRICE GST (5%)		
TOTAL TENI	DER PRICE plus GST	\$	-

	OIV 01	GENERAL REQUIREMENTS					
Item	Section	Specification Title	Unit	Quantity	Unit Price	Amount	
No.	Section	specification ritte	Quantity		Omernee	Amount	
	01 10 00 SS	Supplementary Specification 01 10 00 SS					
1.01	1.2.3	Sign electrical conduit, wiring, & connections	Lump Sum	1		\$ -	
1.02	1.3.2	Telus Security	Lump Sum	1	\$ 20,000.00	\$ 20,000.00	
	01 52 01 S	Temporary Structures					
1.03	1.6.2 SS	Mobilization & Demobilization	Lump Sum	1		\$ -	
			Sub-	Total	\$	-	

	OIV 03	CONCRETE				
Item No.	Section	Specification Title	Unit	Quantity	Unit Price	Amount
	03 40 01	Precast Concrete				
2.01	1.4.4	Install Concrete Barrier	Each	2		\$ -
			Sub-	Total	\$	-

	IV 31	EARTHWORKS				
Item No.	Section	Specification Title	Unit	Quantity	Unit Price	Amount
	31 24 13	24 13 Roadway Excavation, Embankement and Compaction				
3.01	1.8.5 SS &	Removal and disposal of Existing Pavement	Square	765		\$ -
3.01	1.8.5.1 SS	nemoval and disposal of Existing Favernent	Metres			ъ -
3.02	1.8.5 SS &	Common Excavation	Cubic	830		ф
3.02	1.8.5.3 SS	Continuon excavation	Metre	030		\$ -
			Sub-	Total	\$	-

	OIV 32	ROADS AND SITE IMPROVEMENTS					
Item No.	Section	Specification Title	Unit	Quantity	Unit Price	Amount	
	32 12 16	Hot-Mix Asphalt Concrete Paving	Hot-Mix Asphalt Concrete Paving				
4.01	1.5 & 1.5.1 SS	Asphalt Pavement - 75mm thickness.	Square Metres	1480		\$ -	
	32 12 16.1	Grannular subbase					
4.02	1.4.3 SS	Supply, placement and compaction of granular subbase (300 mm depth)	Square Metres	1480		\$ -	
	32 11 23	Grannular Base					
4.03	1.4.2 SS	Supply, placement and compaction of granular base (225 mm depth)	Square Metres	1480		\$ -	
			Sub-	Total	\$	-	

	DIV 33	UTILITIES				
Item No.	Section	Specification Title	Unit	Quantity	Unit Price	Amount
	33 01 30.1	CCTV Inspection of Pipelines				
5.01	1.6.2 SS	CCTV Inspection of Pipelines	Lump Sum	1		\$ -
	33 40 01	Storm Sewers				
5.02	1.6.1, & 1.6.2. SS & 1.6.11 SS	Drainage Pipe PVC DR 35 – 200 mm	Lineal Metres	50		\$ -
	33 44 01	Manholes and Catchbasins				
5.03	1.5.1.1 SS & 1.5.7 SS	Recharge Chamber	Each	1		\$ -
5.04	1.5.2 SS	Supply and Install 600 mm dia. Catch Basin (standard 1.6m high chamber)	Each	1		\$ -
			Sub-	Total	\$	-



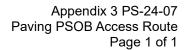
APPENDIX 2 – PRELIMINARY CONSTRUCTION SCHEDULE PAVING PUBLIC SAFETY OPERATIONS BUILDING ACCESS ROUTE

See paragraph 5.3.2 of the Instructions to Tenderers – Part II.

Indicate Schedule with bar chart with major item descriptions and time (use table below or attach separate bar chart with similar format).

MILESTONE DATES:	
STAGING REQUIREMENTS:	

	CONSTRUCTION SCHEDULE (MONTHS)					
Activity	1	2	3	4	5	6





APPENDIX 3 – EXPERIENCE OF SUPERINTENDENT

PAVING PUBLIC SAFETY OPERATIONS BUILDING ACCESS ROUTE

	See paragraph 5.3.3 of the Instructions to Tenderers – Part II.
Name: _	
Dates:	
Responsibility:	
-	
-	
References:	
-	
Dates:	
Project Name:	
Responsibility:	
-	
-	
Defenses	
References:	
-	
Project Name:	
Responsibility:	
-	
-	
References:	
ixeletelloes.	
-	
Responsibility:	
-	
-	
References:	
Tenderer's Initials	



APPENDIX 4 – COMPARABLE WORK EXPERIENCE PAVING PUBLIC SAFETY OPERATIONS BUILDING ACCESS ROUTE

See paragraph 5.3.4 of the Instructions to Tenderers – Part II.

PROJECT	OWNER / CONTACT NAME PHONE and FAX	WORK DESCRIPTION	VALUE (\$)
	Owner / Contract		
	Phone () Fax ()		
	Owner / Contract		
	Phone () Fax ()		
	Owner / Contract		
	Phone () Fax ()		
	Owner / Contract		
	Phone () Fax ()		
	Owner / Contract		
	Phone () Fax ()		
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	Owner / Contract		
	Phone () Fax ()		
	Owner / Contract		
	Phone () Fax ()		

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APPENDIX 5 - SUBCONTRACTORS

PAVING PUBLIC SAFETY OPERATIONS BUILDING ACCESS ROUTE

(TITLE OF CONTRACT)

See paragraph 5.3.5 of the Instructions to Tenderers – Part II.

TENDER ITEM	TRADE	SUBCONTRACTOR NAME	PHONE NUMBER

Tenderer's In	tials	



APPENDIX 6 - CONFLICT OF INTEREST STATEMENT

PROCUREMENT PROCESS PS-24-07 Paving PSOB Access Route

Tenderer Na	ame:
	er, including its officers, employees, and any person or other entity working on behalf of or in with, the Tenderer on this Procurement Process:
	is free of any conflict of interest that could be perceived to improperly influence the outcome of this procurement process.
	has not, and will not, participate in any improper procurement practices that can provide the Tenderer with an unfair competitive advantage including obtaining and using insider type information to prepare a solicitation offer or participating in big rigging.
	has an actual, perceived or potential conflict of interest regarding this procurement process as a result of:
State reaso	n(s) for Conflict of Interest:
By signing knowledge.	below, I certify that all statements made on this form are true and correct to the best of my
Print Name	of Person Signing Disclosure
Signature o	f Person Making Disclosure Date Signed
Tenderer's	: Initials



APPENDIX 7

ACKNOWLEDGEMENT LETTER

Authorized Signatory Signature	Name of Company
Name (Please print)	Address
Title	City, Province, Postal Code
Phone Number	Email
Date	
I/We presently intend □ to provide □ not to p	rovide a Tender.
□ Please send any amendments to this Invita	ation to Tender via email.
Please return immediately by email to: Project Manager <u>bseitz@rdffg.bc.ca</u>	
Tenderer's Initials	



Tenderer's Initials

APPENDIX 8

GOODS AND SERVICES TAX INFORMATION

Tenderer	·	
	Name	
	Address	
	City Province	
	Postal Code Phone Numb	er
Are you a	a GST Registrant? Yes No	
If YES, pl	lease indicate your registration number:	
If NO, ple	ease fill in the following (check appropriate bo	x)
	Supplier qualifies as a small supplier under s.	148 of the legislation
	Other: Specify	
Signature	e of Authorized Person	Name (Printed)
Title		Date



APPENDIX 9

TENDERER CHECKLIST

Before	submitting your tender, check the following points:
	Has the Tender Form been signed and witnessed?
	Is the Schedule of Prices completed?
	Are the following pages included?
	 Schedule of Prices – Tendered Price Preliminary Construction Schedule? Experience of Superintendent? Comparable Work Experience? Subcontractors? Conflict of Interest Disclosure Statement? Goods and Services Tax Information? Any Addenda?
	Are the documents complete?
	Are the documents enclosed in a sealed envelope, if submitting by mail, drop off, or courier?
Note:	Your tender may be disqualified if ANY of the applicable foregoing points have not been complied with.
	that the tender is returned in a sealed envelope clearly marked on the outside with the following, following the tender closing instructions in Part A of this ITT.
	Attention: General Manager of Financial Services Regional District of Fraser-Fort George 155 George Street Prince George, BC V2L 1P8
	Paving PSOB Access Route PS-24-07
	Responding Organization's Name and Address
OR	
	that the tender is submitted via email to purchasing@rdffg.bc.ca clearly following the tender closing tions in this ITT.
Tende	rer's Initials



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

		BETWEEN OWNER AND CONTRACTOR				
		This ag	This agreement made in duplicate this			
			day of, 2024.			
	Contract:	PAVING	G PUBLIC SAFETY OPERATIONS BUILDING ACCESS ROUTE			
	Reference No.	TENDE	ER # PS-24-07			
		BETWE	BETWEEN:			
		The	REGIONAL DISTRICT OF FRASER-FORT GEORGE			
			(the "Owner")			
		AND:				
		AND.				
			(NAME AND OFFICE ADDRESS OF CONTRACTOR)			
			(the "Contractor")			
The Owner	and the <i>Contr</i>	actor agı	,			
Article 1.0	The Work Start / Completion Dates	1.1	The <i>Contractor</i> will perform all <i>Work</i> and provide all labour, equipment and material and do all things strictly as required by the <i>Contract Documents</i> .			
		1.2	The Contractor will commence the <i>Work</i> in accordance with the <i>Notices to Proceed</i> . The <i>Contractor</i> will proceed with the <i>Work</i> diligently, will perform the <i>Work</i> generally in accordance with the construction schedules as required by the <i>Contract Documents</i> and will achieve <i>Substantial Performance</i> of the <i>Work</i> within 45 calendar days from the start of construction and before June 13, 2025, subject to the provisions of the <i>Contract Documents</i> for adjustments to the <i>Contract Time</i> .			
		1.3	Time shall be of the essence of the Contract.			
Tenderer's	Initials					



Article 2.0	Contract Documents	2.1	The "Contract Documents" consist of the documents listed or referred to in Schedule 1, entitled "Schedule of Contract Documents", which is attached and forms a part of this Agreement, and includes any and all additional and amending documents issued in accordance with the provisions of the Contract Documents. All of the Contract Documents shall constitute the entire Contract between the Owner and the Contractor.
		2.2	The <i>Contract</i> supersedes all prior negotiations, representations or agreements, whether written or oral, and the <i>Contract</i> may be amended only in strict accordance with the provisions of the <i>Contract Documents</i> .
Article 3.0	Contract Price	3.1	The price for the Work ("Contract Price") shall be the sum in Canadian dollars of the following
			3.1.1 the product of the actual quantities of the items of Work listed in the Schedule of Quantities and Prices which are incorporated into or made necessary by the Work and the unit prices listed in the Schedule of Quantities and Prices; plus
			3.1.2 all lump sums, if any, as listed in the Schedule of Quantities and Prices, for items relating to or incorporated into the Work; plus
			3.1.3 any adjustments, including any payments owing on account of <i>Changes</i> and agreed to <i>Extra Work</i> , approved in accordance with the provisions of the <i>Contract Documents</i> .
		3.2	The <i>Contract Price</i> shall be the entire compensation owing to the <i>Contractor</i> for the <i>Work</i> and this compensation shall cover and include all profit and all costs of supervision, labour, material, equipment, overhead, financing, and all other costs and expenses whatsoever incurred in performing the <i>Work</i> .
Article 4.0	Payment	4.1	Subject to applicable legislation and the provisions of the Contract Documents, the Owner shall make payments to the Contractor.
		4.2	If the <i>Owner</i> fails to make payments to the <i>Contractor</i> as they become due in accordance with the terms of the <i>Contract Documents</i> then interest calculated at 2% per annum over the prime commercial lending rate of the Royal Bank of Canada on such unpaid amounts shall also become due and payable until payment. Such interest shall be calculated and added to any unpaid amounts monthly.
Article 5.0	Rights and Remedies	5.1	The duties and obligations imposed by the <i>Contract Documents</i> and the rights and remedies available thereunder shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law.





		_			
Article 5.0	Rights and Remedies (cont'd)	5.2	action or fail Contractor s duties afford failure to act	pecifically set out in the Contract Documents, no ure to act by the Owner, Contract Administrator or shall constitute a waiver of any of the parties' rights or led under the Contract, nor shall any such action or aconstitute an approval of or acquiescence in any or the Contract.	
Article 6.0	Notices	6.1	Communications among the <i>Owner</i> , the <i>Contract Administrator</i> and the <i>Contractor</i> , including all written notices required by the <i>Contract Documents</i> , may be delivered by hand, or by email, or by pre-paid registered mail to the addresses as set out below:		
		The O	wner:		
			REGIONAL	. DISTRICT OF FRASER-FORT GEORGE	
			155 George	e Street	
			Prince Geo	rge, BC, V2L 1P8	
			Email:	bseitz@rdffg.bc.ca	
			Attention:	Bonnie Seitz, Project Manager	
		The Co	ontractor:		
			Email:		
			Attention:		
			The Contrac	t Administrator:	
			Jun Xiong I	MSc., P.Eng., CPESC.	
			Email: Jxic	ng@mcelhanney.com	

Tel: 778-693-2686

Tenderer's Initials		





Article 6.0	Notices (cont'd)	6.2	A communication or notice that is addressed as above shall be considered to have been received				
			6.2.1 immediately upon delivery, if delivered by hand; or				
			6.2.2 immediately upon being read if sent by email; or				
			6.2.3 after 5 <i>Days</i> from date of posting if sent by registered				
		6.3	The <i>Owner</i> or the <i>Contractor</i> may, at any time, change its address for notice by giving written notice to the other at the address the applicable. Similarly, if the <i>Contract Administrator</i> changes its address for notice then the <i>Owner</i> will give or cause to be given written notice to the <i>Contractor</i> .				
		6.4	The sender of a notice by email assumes all risk that the email is received.				
Article 7.0	General	7.1	This <i>Contract</i> shall be construed according to the laws of British Columbia.				
		7.2	The <i>Contractor</i> shall not, without the express written consent of the <i>Owner</i> , assign this <i>Contract</i> , or any portion of this <i>Contract</i> .				
		7.3	The headings included in the <i>Contract Documents</i> are for convenience only and do not form part of this <i>Contract</i> and will not be used to interpret, define or limit the scope or intent of this <i>Contract</i> or any of the provisions of the <i>Contract Documents</i> .				
		7.4	A word in the <i>Contract Documents</i> in the singular includes the plural and, in each case, vice versa.				
		7.5	This agreement shall endure to the benefit of and be binding upon the parties and their successors, executors, administrators and				

assigns.





Contractor:

Article 7.0 General (cont'd)

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

-	(FULL LEGAL NAME OF CORPORATION, PARTNERSHIP OR INDIVIDUAL)
-	(AUTHORIZED SIGNATORY)
-	
	(NAME AND TITLE OF PERSON SIGNING)
	(WITNESS)
Owner:	
_	REGIONAL DISTRICT OF FRASER-FORT GEORGE
	(FULL LEGAL NAME OF CORPORATION, PARTNERSHIP OR INDIVIDUAL)
-	(AUTHORIZED SIGNATORY)
	(Nothing National)
-	(NAME AND TITLE OF PERSONS SIGNING)
<u>-</u>	
	(AUTHORIZED SIGNATORY)
-	(NAME AND TITLE OF PERSON SIGNING)



Schedule 1 Schedule of Contract Documents

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

NOTE: The documents noted with "*" are contained in the "Master Municipal Construction Documents - General Conditions, Specifications and Standard Detail Drawings", edition dated 2019. All sections of this publication are included in the *Contract Documents*.

- Agreement, including all Schedules;
- Supplementary General Conditions;
- General Conditions*;
- Supplementary Specifications;
- Drawings listed in Schedule 2 to the Agreement;
- Standard Detail Drawings*;
- Executed Form of Tender; including all Appendices;
- Instructions To Tenderers: Part I and II*;
- MMCD Supplementary Updates:

2021-04-23

2022-04-07

All other attachments.



(COMPLETE LISTING OF ALL DRAWINGS, PLANS AND SKETCHES WHICH ARE TO FORM A PART OF THE CONTRACT, OTHER THAN STANDARD DETAIL DRAWINGS AND SUPPLEMENTARY STANDARD DETAIL DRAWINGS.)

Schedule 2 - List of Contract Drawings -update

DRAWING NO.	TITLE	DATE	REVISION NO.
C101	PLAN AND PROFILE	24/10/04	1
C301	NOTES AND DETAILS	24/10/04	1
E001	ELECTRICAL SITE PLAN	24/10/04	0
E002	ELECTRICAL DETAILS	24/10/04	0

End

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Modifications and Additions to the Master Municipal Construction Documents

The following conditions form part of the Contract and are supplementary to the MMCD General Conditions and Specifications. In the event of a direct conflict between the MMCD General Conditions and these Supplementary GC's the Supplementary GC's take precedence.

SECTION	SUB SECTION	SUPPLEMENTARY GENERAL CONDITIONS			
IT-PART II 5.0 TENDER REQUIREMENT	5.2	Amend 5.2 by deleting "in an amount equal to 10% of the Tender Price." and substituting "in an amount equal to \$15,000."			
		deleting 5.2.2			
	5.4	Amend 5.2 by deleting "and a Labour and Material Payment Bond"			
GC 1.0	1.79	Add 1.79 as follows:			
DEFINITIONS	Utilities	"Utilities" is used broadly and includes but is not limited to any and all lines, poles, structures, facilities, utilities for power, cable, TV, telephone, telecommunications, all sanitary and storm sewers, and all water, oil, gas and electric services, all steam pipes and services, all survey monuments, all street lights, traffic lights, traffic detector loops embedded in pavement, culverts, rail tracks, whether located above or below ground, whether visible or invisible, whether man-made or natural."			
	1.80	Add 1.80 as: "Engineer means the Contract Administrator."			
GC 2.0	Engineer 2.2.4	Replace Section (1) with the following:			
DOCUMENTS	Document Hierarchy	The Contract Documents shall govern and take precedence in the following order with the Agreement taking precedence over all other Contract Documents:			
		.1 Agreement			
		.2 Addenda			
		.3 Supplementary General Conditions			
		.4 MMCD Board Approved Supplementary General Conditions			
		.5 General Conditions (MMCD)			
		.6 Supplementary Specifications			
		.7 MMCD Board Approved Supplementary Specifications			
		.8 Specifications (MMCD)			
		.9 Drawings listed in Schedule 2 to the agreement			
		.10 Standard Detail Drawings			
		.11 Executed Form of Tender			
		.12 Instructions to Tenderers			
		.13 All other Contract Documents.			

Tenderer's Initials	



SECTION	SUB SECTION	SUPPLEMENTARY GENERAL CONDITIONS
GC 3.0 CONTRACT ADMINISTRATOR	3.3 Contract Administrator	Amend 3.3.5 by deleting "or control points at the place of work, sufficient to enable the <i>Contractor</i> " and substituting "or control points at the place of work, or digital files, sufficient to enable the <i>Contractor</i> "
GC 4.0 CONTRACTOR	4.3 Protection of Work, Property and the Public	Add 4.3.5.1 as follows: "The Contractor shall notify the Contract Administrator immediately if damage to any structures occurs."
	4.6 Construction Schedule	Amend 4.6.2 by deleting "monthly" and substituting "monthly or as required by the Contract Administrator.
	18.5 Payment	Amend 18.5.1 by deleting "15 th day" and substituting "30 th day".
GC 20.0	20.4	Add 20.4.2 as follows:
LAWS, NOTICES, PERMITS AND FEES	Environmental Laws	"The Contractor shall indemnify the Owner for any costs, fines, expenses and penalties that the Owner is required to pay on account of the Contractor performing Work in breach of any applicable Federal, or Provincial or Municipal environmental laws, regulations, or orders."

END

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	SUPPL	EMENTARY SPECIFICATIONS				
Add the following	Add the following Supplementary Specifications (attached at end):					
0-0-1011	SUB	SUPPLEMENTARY SPECIFICATION				
SECTION	SECTION	SUFFLEMENTARY SPECIFICATION				
01 10 00SS Measurement and Payment	All	Per attached separate specification sections				
Re	evise the following N SUB	laster Municipal Specifications 2019 Edition:				
SECTION	SECTION	SUPPLEMENTARY SPECIFICATION				
01 52 01 Temporary Structures	1.6 Measurement and Payment	Add Clause 1.6.2: "Payment for mobilization and demobilization shall include all the Contractor costs of mobilization at the beginning of the project and the cost of demobilization at the end of the project.				
		Included in the mobilization are such items as bonding, insurance, permits, moving personnel, equipment and materials to the site, setting up temporary facilities and all preparation for performing the <i>Work</i> .				
		Included in demobilization are contractor's red line record drawings, removal of all personnel, equipment and materials and cleanup of the <i>Site</i> and the <i>Work</i> .				
		Payment shall be made as follows, as approved by the Contract Administrator:				
		60% of the lump sum bid will be included in the first progress payment certificate.				
		40% of the lump sum bid will be included in the final progress payment certificate.				
		The Contract Administrator may at his discretion authorize partial payment if mobilization or demobilization is not complete.				
		The cost of other items specified under General Requirements shall be considered incidental to the work and separate payment will not be made for any other items in the General Requirements unless specifically noted in the <i>Schedule of Quantities and Prices</i> ."				

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31 24 13 Roadway Excavation, Embankment and Compaction	1.8 Measurement and Payment	Replace Clause 1.8.5 with: "Payment for common excavation is paid separately for removal and disposal of existing pavement (including saw cutting), and below pavement excavation (including existing gravel and soil to the design subgrade level)."
		Add para 1.8.5.1: measurement of existing pavement removal is based on neat line area in square meters as surveyed on Jan 8 th 2024 and shown in drawing sheet C301.
		Add para 1.8.5.2: Measurement of below-pavement excavation is based on the neat line volume in cubic meters, determined by comparing the existing surface surveyed on January 8th, 2024, with the design surface at the sub-grade level as shown on drawing sheet C301. The volume of the existing asphalt, which will be subtracted from this total, shall be determined by the Contract Administrator by multiplying the average thickness by the neat line area.
32 12 13.1 Asphalt Tack Coat	1.5 Measurement and Payment	Replace Clause 1.5.1 with: "Payment for asphalt tack coat is included in the unit price tendered under section 32 12 16 Hot Mix Asphalt Concrete Paving."
32 12 13.2 Asphalt Prime	1.5 Measurement and Payment	Replace Clause 1.5.1 with: "Payment for asphalt prime is included in the unit price tendered under section 32 12 16 Hot Mix Asphalt Concrete Paving."
32 12 16 Hot Mix Asphalt Concrete	1.5 Measurement and Payment	Clause 1.5.1 change: "based on weigh tickets provided to Contract Administrator as loads are delivered" to "based on area for each thickness specified in the Schedule of Quantities and Prices".
Paving		Add para 1.5.1.1 Paving unit price tendered shall include prior milling, disposal of milled asphalt, prime coating, tack coating, re-paving over the milled areas, and lap-joints.
32 12 16.1 Granular Subbase	1.4 Measurement and Payment	Clause 1.4.3 change: "for the actual area placed" to "neat line area in square meters measured from design drawing sheet C301"
32 11 23 Granular Base	1.4 Measurement and Payment	Clause 1.4.2 change: "for the actual area placed" to "neat line area in square meters measured from design drawing sheet C301"
33 01 30.1 CCTV Inspection of Pipelines	1.6 Measurement and Payment	Replace Clause 1.6.2 with: "CCTV pipeline inspection will be paid as a lump sum item."
33 40 01 Storm Sewers	1.6 Measurement and Payment	Clause 1.6.2 change: "Payment for storm sewer includes saw cutting pavement, trench excavation" to: "Payment for storm sewer includes trench excavation below pavement design subgrade level to the bottom of trench as required".

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33 44 01 Manholes and Catch basins	1.5 Measurement and Payment	Clause 1.5.1.1: Delete: "except riser". Replace with: "including riser".
		Delete Clause 1.5.1.2
		Clause 1.5.2 change: "Payment includes excavation" to "Payment includes excavation below pavement design subgrade level to the bottom of trench as required".
		Add Para 1.5.7: "payment for recharge chamber includes manhole base, risers, lid, slab, frame, cover, geo-textile and drain rock, as well as dewatering, base preparation, all in-situ concrete work"

END

Tenderer's Initials	



1.0 GENERAL

.1 **Section 01 10 00 SS** addresses additional measurement and payment clauses which do not apply to other specification sections.

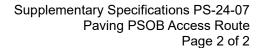
1.1 Quality Control Testing

- .1 The Owner has engaged SoilTech to perform all necessary quality management testing on material compaction, as indicated on the Drawings and specified in the attached Geotechnical Design Memos.
- .2 Contractor shall coordinate and provide necessary support, such as providing gravel samples for standard Proctor density tests or making a flat area for field densometer tests, to allow testing to be performed accordingly. No additional payment shall arise from the contractor's effort to ensure the complete satisfaction of all quality control requirements.
- .3 Give timely notice requesting testing or inspection if *Work* is designated for tests or inspections, or review by the Contract Administrator's instructions.
- .4 All submissions shall be prompt, to ensure that all necessary retesting and replacement of construction can proceed without delay.
- .5 Process and distribute all required copies of test reports and test information and related instructions to all the Contractor's Sub-Contractors and Suppliers, to ensure that any necessary retesting and replacement of construction can proceed without delay.
- .6 Provide the Owner with copies of all test results.
- .7 Submit samples and/or materials required for testing, as specifically requested in specifications or by the Contract Administrator.
- .8 Submit test results demonstrating/specifying that material requirements are being met.
- .9 Provide labour and facilities to obtain and handle samples and materials on-site.

1.2 Electrical conduit, wiring, equipment & connections

- .1 Provide all electrical materials, equipment, and labour as required to provide power to the new illuminated sign at the property entrance as indicated in the drawing package. Refer to the Electrical Specifications on sheet E002 for technical requirements.
- .2 Contractor shall coordinate with the sign supplier as required to ensure sign electrical requirements are met.
- .3 Provide all conduit, wiring, enclosures and installation labour as required to allow for installation of access control equipment as outlined in Section 1.3 for the motorized slide gate. Refer to the Electrical Specifications on sheet E002 for technical requirements.
- .4 Payment shall be a lump sum including all materials, equipment, and labour included in this section. Measurement will be made based on a percentage complete estimated by the contractor and agreed by Contract Administrator and will not exceed 80% of the total amount until testing and commissioning has been completed and inspected by the Engineer.

Tenderer's Initials		



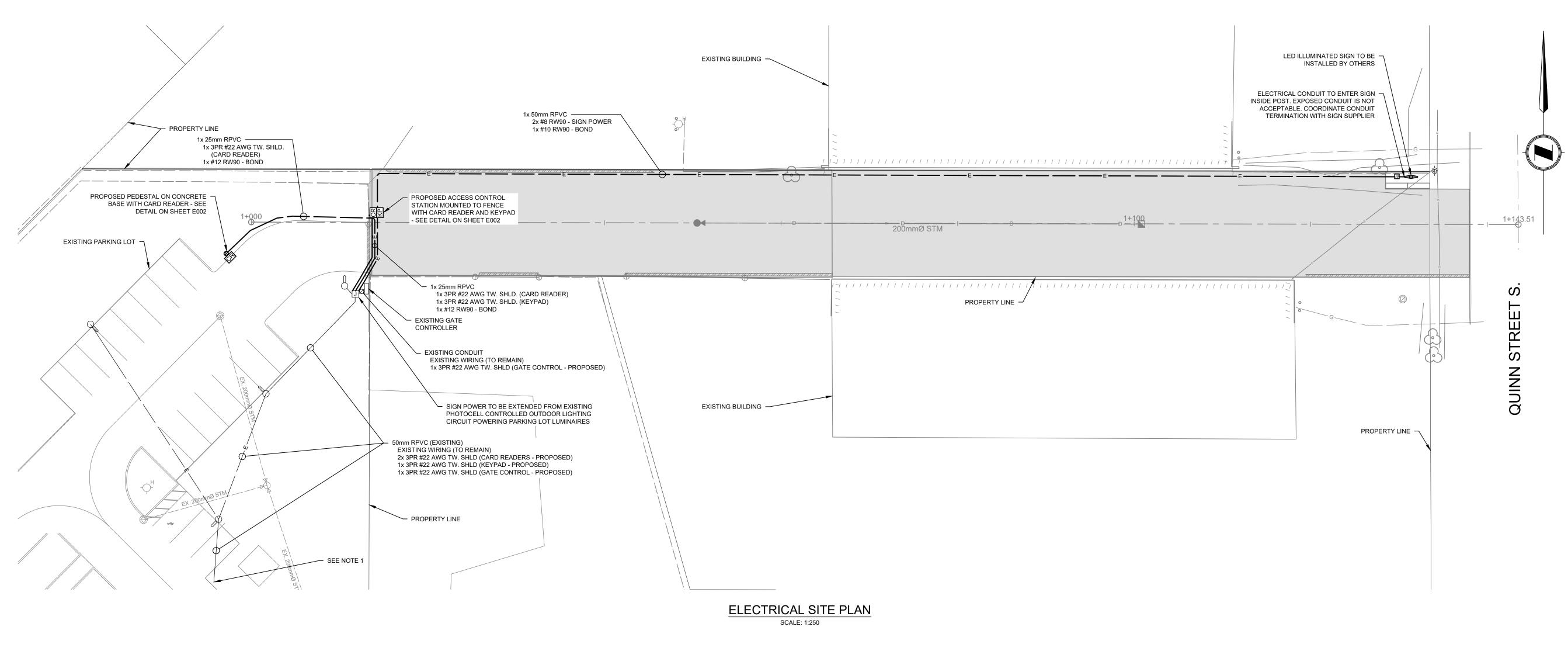


1.3
Access control
equipment, termination
& commissioning

- .1 Contractor shall coordinate with the District's security provider, Telus Security, for the supply and installation of the access control equipment including keypad, card readers, and access control module(s) in the building. Telus Security to terminate all security wiring and commission system.
- .2 Payment shall be a lump sum for all Telus Security costs plus a 15% markup for coordination and processing costs. Contractor shall provide a copy of Telus Security invoice to receive payment. A cost estimate is specified in Appendix 1 Schedule of Quantities and Prices and is subject to adjustment once the cost is confirmed with Telus.

END

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- 1. SECURITY CABLING TO BE RUN CONTINUOUS BACK TO BUILDING AND COILED WITH 3 m SLACK AT ACCESS CONTROL CABINET FOR TERMINATION BY SECURITY CONTRACTOR.
- SECURITY CABLING TO BE MINIMUM 300 V RATED FOR WET LOCATIONS.
 SECURITY CABLING IS NOT PERMITTED TO BE SPLICED.
 PROVIDE 2 m COILED CABLE IN JUNCTION BOX NEAR GATE CONTROLLER.
- 1.4. SECURITY CABLING TO BE RUN IN EMT CONDUIT INSIDE BUILDING FROM WHERE RPVC CONDUIT ENTERS BUILDING TO
- 2. ACCESS CONTROL EQUIPMENT INCLUDING CARD READERS, KEYPAD, AND CONTROL MODULES TO BE SUPPLIED, INSTALLED, AND COMMISSIONED BY RDFFG SECURITY CONTRACTOR.
- 2.1. GENERAL CONTRACTOR TO PROVIDE ALL CONDUIT, WIRING, BACKBOXES, ETC TO ALLOW FOR ACCESS CONTROL SYSTEM INSTALLATION.
- 2.2. GENERAL CONTRACTOR TO COORDINATE WITH SECURITY CONTRACTOR AS REQUIRED.
 2.3. SHOP DRAWINGS TO BE SUBMITTED TO ENGINEER FOR ALL ACCESS CONTROL EQUIPMENT PRIOR TO PROCUREMENT.

LEGEND

EX. AREA LIGHT POLE	\bigcirc
EX. ELECTRICAL CONDUIT	
PROP. ELECTRICAL CONDUIT	E
EX. JUNCTION BOX	JB
PROP. JUNCTION BOX	JB
PROP. CARD READER	KP
PROP. KEYPAD	CR
PROP. COMMERCIAL SIGN	

					THIS DRAWING AND DESIGN IS THE PROPERTY OF McELHANNEY AND SHALL NOT BE USED, REUSED OR REPRODUCED WITHOUT THE CONSENT OF McELHANNEY. McELHANNEY WILL NOT BE HELD RESPONSIBLE FOR THE IMPROPER OR UNAUTHORIZED USE OF THIS DRAWING AND DESIGN. THIS DRAWING AND DESIGN HAS BEEN PREPARED FOR THE CLIENT IDENTIFIED, TO MEET THE STANDARDS AND REQUIREMENTS OF THE APPLICABLE PUBLIC AGENCIES AT THE TIME OF PREPARATION. McELHANNEY, ITS EMPLOYEES, SUBCONSULTANTS AND AGENTS WILL NOT BE LIABLE FOR ANY LOSSES OR OTHER CONSEQUENCES RESULTING FROM THE USE OR RELIANCE UPON. OR ANY CHANGES MADE TO. THIS DRAWING. BY ANY THIRD PARTY. INCLUDING	
					CONTRACTORS, SUPPLIERS, CONSULTANTS AND STAKEHOLDERS, OR THEIR EMPLOYEES OR AGENTS, WITHOUT McELHANNEY'S PRIOR WRITTEN CONSENT.	
2024-10-04	ISSUED FOR TENDER	MA	EH	1 Y	INFORMATION ON EXISTING UNDERGROUND FACILITIES MAY NOT BE COMPLETE OR ACCURATE. McELHANNEY, ITS EMPLOYEES AND DIRECTORS ARE NOT RESPONSIBLE NOR LIABLE FOR THE	
2024-09-05	ISSUED FOR REVIEW	EH	EH	TY	LOCATION OF ANY UNDERGROUND CONDUITS, PIPES, CABLES OR OTHER FACILITIES WHETHER SHOWN OR OMITTED FROM THIS PLAN. PRIOR TO CONSTRUCTION CONTRACTOR SHALL EXPOSE	
Date	Description	Drawn	Design	App'd	LOCATIONS OF ALL EXISTING FACILITIES BY HAND DIGGING OR HYDROVAC AND ADVISE THE ENGINEER OF POTENTIAL CONFLICTS	ORIGINA

	M
0 1:250 10	12 - 556 North Necha Prince George BC V Tel. 250 561 2229
ORIGINAL DWG SIZE: ANSI D (22" x 34")	

	McElhanney
12 - 556 Nort	h Nechako Road,
Prince Georg	je BC V2K 1A1

PERMIT TO PRACTICE	COP TO
McElhanney Ltd.	NOT RUCK
PERMIT NUMBER: 1003299	CONS
Engineers and Geoscientists of British Columbia	Approved Sealed

OP 110P	RE
NOT PUC.	PS

EGIONAL DISTRICT OF FRASER - FORT GEORGE 155 GEORGE STREET PRINCE GEORGE BC V2L 1P8

E001 SOB ACCESS LANE RE-SURFACING ELECTRICAL SITE PLAN

Project Number 2341-21215-12

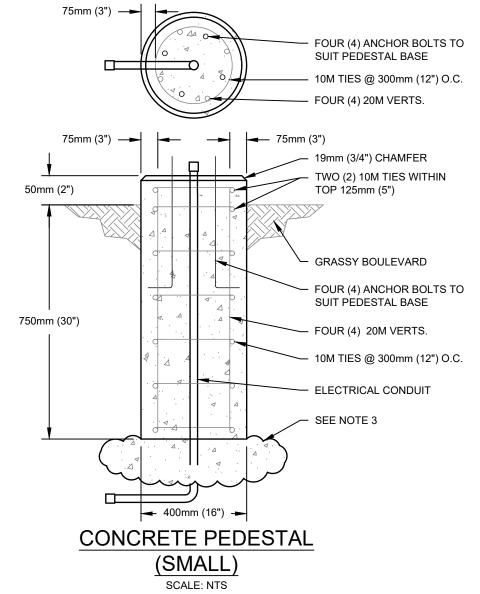
Drawing No.

PEDESTAL ELEVATION DETAIL SCALE: NTS

PEDESTAL DETAIL NOTES:

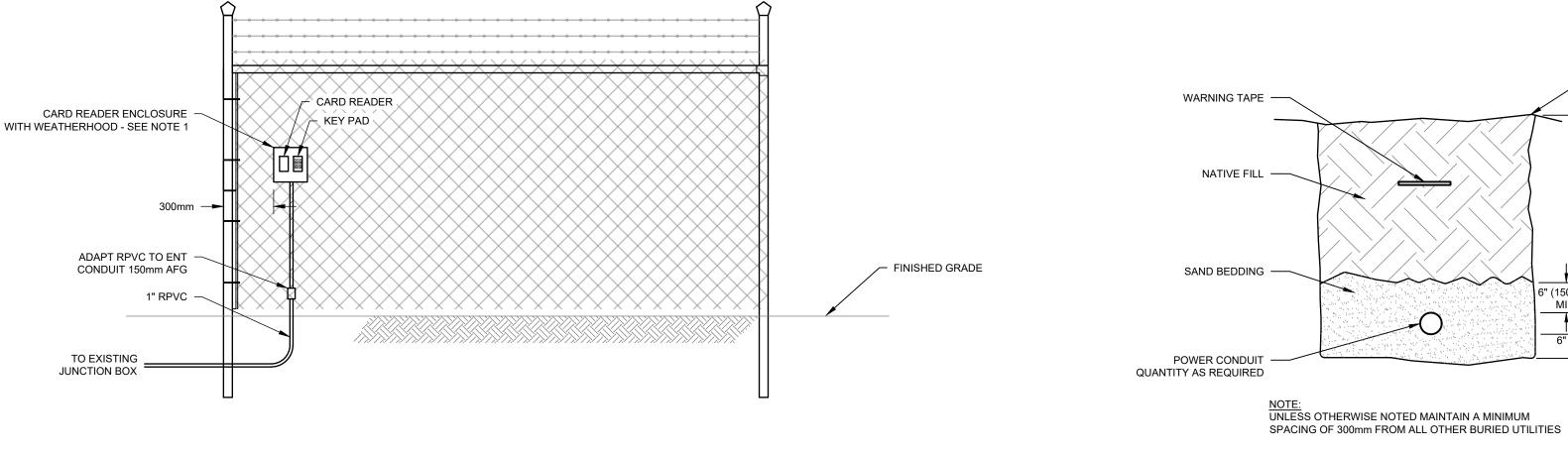
1. CARD READER ENCLOSURE TO BE PEDESTAL PRO MC-CS-08-E OR ENGINEER APPROVED EQUAL.

- PEDESTAL TO BE PEDESTAL PRO 48-9C OR ENGINEER APPROVED
- 3. SUBMIT SHOP DRAWINGS PRIOR TO ORDERING.
- CONFIRM CARD READER DIMENSIONS WITH SECURITY CONTRACTOR PRIOR TO CONSTRUCTION.



PEDESTAL BASE NOTES:

- CONCRETE TO BE 35MPA, MAX W/C RATIO 0.40, 5-8% AIR, 19mm (3/4") MAX. AGGREGATE
- PROVIDE 19mm (3/4") CHAMFER ON ALL EXPOSED CONCRETE EDGES ALLOW CONCRETE TO POOL OUT BELOW BOTTOM OF SONOTUBE TO REDUCE
- POSSIBILITY OF FROST HEAVING.



AWING AND DESIGN IS THE PROPERTY OF McELHANNEY AND SHALL NOT BE USED. REU

REPRODUCED WITHOUT THE CONSENT OF McELHANNEY. McELHANNEY WILL NOT BE HELD SPONSIBLE FOR THE IMPROPER OR UNAUTHORIZED USE OF THIS DRAWING AND DESIGN.

S DRAWING AND DESIGN HAS BEEN PREPARED FOR THE CLIENT IDENTIFIED, TO MEET THE

ANDARDS AND REQUIREMENTS OF THE APPLICABLE PUBLIC AGENCIES AT THE TIME OF

EXTERIOR ACCESS CONTROL STATION DETAIL

PUBLIC SIDE PERSPECTIVE

SCALE: NTS

EXTERIOR ACCESS CONTROL STATION NOTES:

1. CARD READER ENCLOSURE TO BE PEDESTAL PRO MC-CS-08-E OR

ENGINEER APPROVED EQUAL. 2. SUBMIT SHOP DRAWINGS PRIOR TO ORDERING.

3. CONFIRM CARD READER DIMENSIONS WITH SECURITY CONTRACTOR PRIOR TO CONSTRUCTION.

3' (900mm) MIN COVER UNLESS OTHERWISE NOTED MAINTAIN A MINIMUM

TYPICAL TRENCH DETAIL - SINGLE

ELECTRICAL SPECIFICATIONS:

1.1. PROVIDE ALL NECESSARY LABOUR, MATERIAL, TOOLS, TRANSPORTATION, SERVICES AND FACILITIES REQUIRED FOR THE COMPLETE ELECTRICAL INSTALLATION AS SHOWN ON THE DRAWINGS AND AS SPECIFIED.

1.2. PROVIDE ALL NECESSARY LABOUR, MATERIALS, EQUIPMENT, DEVICES AND APPARATUS NOT MENTIONED IN THE SPECIFICATIONS, OR SHOWN ON THE DRAWINGS AS REQUIRED FOR THE COMPLETE ELECTRICAL INSTALLATION.

2. CODE, RULES AND REGULATIONS

2.1. ELECTRICAL INSTALLATION SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE CANADIAN ELECTRICAL CODE.

2.2. PROVIDE ALL NECESSARY MATERIAL AND LABOUR REQUIRED TO MEET THE REQUIREMENTS OF THESE CODES, RULES AND REGULATIONS EVEN THOUGH THE WORK MAY NOT BE SHOWN ON THE DRAWINGS OR MENTIONED IN THE SPECIFICATIONS.

3. PERMITS AND FEES

3.1. OBTAIN ALL PERMITS AND PAY ALL FEES REQUIRED FOR THE ELECTRICAL INSTALLATION.

4. CO-OPERATION WITH OTHER TRADES

4.1. CHECK WITH OTHER TRADES TO AVOID DELAYS.

APPROVAL OF MATERIALS

5.1. ELECTRICAL EQUIPMENT SHALL BE NEW AND OF THE TYPE AND QUALITY

5.2. SHOP DRAWINGS FOR ELECTRICAL EQUIPMENT AS REQUIRED BY THESE SPECIFICATIONS SHALL BE SUBMITTED AND ACCEPTED BY THE ENGINEER.

6. <u>INSPECTION</u>

6.1. OBTAIN A CERTIFICATE OF INSPECTION AND APPROVAL FROM THE ELECTRICAL INSPECTION DEPARTMENT HAVING JURISDICTION OVER THE WORK. CERTIFICATE OF INSPECTION SHALL BE SUBMITTED TO THE ENGINEER ON COMPLETION OF THE WORK.

6.2. PROJECT HOLD POINTS FOR ENGINEER INSPECTION:

6.2.1. PRIOR TO COVERING ANY UNDERGROUND WORKS. 6.2.2. PRIOR TO ENERGIZATION.

6.3. CONTRACTOR SHALL GIVE MINIMUM TEN (10) BUSINESS DAYS NOTICE TO ENGINEER FOR ALL INSPECTION HOLD POINTS LISTED ABOVE.

7.1. REMOVE ALL DEBRIS FROM THE SITE AS IT OCCURS, AND DO NOT ALLOW TO ACCUMULATE.

7.2. TOUCH UP WITH MATCHING PAINT ANY EQUIPMENT THAT HAS BEEN

DAMAGED DURING CONSTRUCTION.

8.1. THE SATISFACTORY OPERATION OF ALL WORK AND APPARATUS INCLUDED AND INSTALLED UNDER THIS SECTION OF THE SPECIFICATION SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR UNLESS NOTED OTHERWISE

8.2. REPLACE FORTHWITH, AT NO ADDITIONAL COST TO THE OWNER, ANY PART WHICH MAY PROVE TO BE DEFECTIVE WITHIN A PERIOD OF TWELVE MONTHS AFTER THE FINAL ACCEPTANCE OF THE COMPLETE BUILDING, PROVIDED THAT SUCH FAILURE IS NOT DUE TO ANY IMPROPER USAGE OR ORDINARY WEAR AND TEAR.

8.3. NO CERTIFICATE GIVEN, PAYMENT MADE, PARTIAL OR ENTIRE USE OF THE EQUIPMENT BY THE OWNER, SHALL BE CONSTRUED AS ACCEPTANCE OF DEFECTIVE WORK.

9. CONDUIT AND RACEWAY

9.1. CONDUIT IN DIRECT CONTACT WITH EARTH TO BE RIGID PVC TYPE.

9.2. CONDUIT SYSTEMS SHALL BE ELECTRICALLY CONTINUOUS THROUGHOUT. INSTALL CODE SIZED, INSULATED, COPPER, GREEN GROUNDING CONDUCTOR IN ALL CONDUIT RUNS PULLED WITH PHASE AND/OR NEUTRAL

CONDUCTORS. 9.3. LOCATIONS OF CONDUIT RUNS SHALL BE PLANNED IN ADVANCE OF THE INSTALLATION AND COORDINATED WITH THE OTHER INFRASTRUCTURE IN THE SAME AREAS AND SHALL NOT UNNECESSARILY CROSS OTHER CONDUITS OR PIPE.

9.4. RACEWAYS SHALL BE JOINED USING SPECIFIED COUPLING OR TRANSITION COUPLINGS WHERE DISSIMILAR RACEWAY SYSTEMS ARE JOINED.

9.5. CONDUITS SHALL BE SECURELY FASTENED TO CABINETS, BOXES, AND GUTTERS USING TWO LOCKNUTS AND AN INSULATING BUSHING OR SPECIFIED INSULATING CONNECTORS. INSTALL GROUNDING BUSHINGS OR BONDING JUMPERS ON ALL CONDUITS TERMINATING AT CONCENTRIC

9.6. CONDUIT TERMINATIONS EXPOSED AT WEATHERPROOF ENCLOSURES AND CAST OUTLET BOXES SHALL BE MADE WATERTIGHT USING SPECIFIED CONNECTORS AND HUBS.

10. CABLE AND WIRE

10.1.CONDUCTORS SHALL NOT BE INSTALLED IN CONDUIT UNTIL ALL WORK OF ANY NATURE THAT MAY CAUSE DAMAGE IS COMPLETED. CARE SHALL BE TAKEN IN PULLING CONDUCTORS THAT INSULATION IS NOT DAMAGED. U.L. AND C.S.A. APPROVED NON-PETROLEUM BASE AND INSULATING TYPE PULLING COMPOUND SHALL BE USED AS NEEDED.

10.2.ALL CABLES SHALL BE INSTALLED AND TESTED IN ACCORDANCE WITH MANUFACTURERS REQUIREMENTS AND WARRANTY.

10.3.ALL ASPECTS OF SPLICING AND TERMINATING SHALL BE IN ACCORDANCE WITH CABLE MANUFACTURERS PUBLISHED PROCEDURES.

10.4.MAKE UP ALL SPLICES IN OUTLET BOXES WITH CONNECTORS AS SPECIFIED HEREIN WITH SEPARATE TAILS OF CORRECT COLOR TO BE MADE UP TO SPLICE. PROVIDE AT LEAST 6" (150mm) OF TAILS PACKED IN BOX AFTER SPLICE IS MADE UP.

10.5.ALL WIRE AND CABLE IN PANELS, TERMINAL CABINETS AND EQUIPMENT ENCLOSURES SHALL BE BUNDLED AND CLAMPED.

10.6.ALL WIRE AND CABLE INSTALLED UNDERGROUND SHALL BE MINIMUM WET LOCATION RATED.

11. RECORD DRAWING

11.1.ELECTRICAL CONTRACTOR TO PROVIDE AS-BUILT MARKUPS TO ENGINEER FOR RECORD DRAWINGS.

11.2.AS-BUILT MARKUPS ARE TO INDICATE THE FOLLOWING ITEMS:

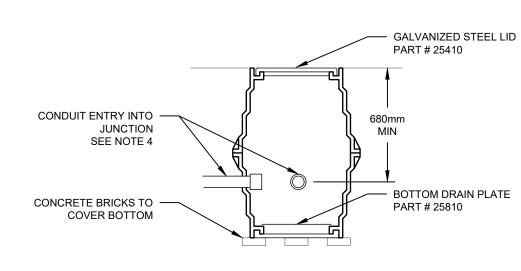
11.2.1. ALL REVISIONS TO DRAWINGS FROM SITE INSTRUCTIONS AND CHANGE ORDERS ARE TO BE INDICATED.

11.2.2. DEVICE LOCATION AND CIRCUITING WHERE DIFFERS FROM ORIGINAL DRAWINGS.

11.2.3. LUMINAIRE TYPE, LOCATION, CIRCUITING AND CONTROL WHERE

DIFFERS FROM ORIGINAL DRAWINGS.

11.2.4. ALL ABANDONED JUNCTION BOXES AND CONDUITS.



TWO SMALL ROUND JUNCTION BOXES INSTALLED WITH ONE INVERTED UNDER THE OTHER. PROVIDE BONDING FOR STEEL LID.

JUNCTION BOX IS TO BE WEST COAST ENGINEERING 25020 OR APPROVED EQUAL. 4. CONDUIT IS TO BE RUN AT A DEPTH OF 900mm AND HAVE A GENTLE RISE UP FOR ENTRY INTO JUNCTION BOX.

JUNCTION BOX DETAIL

REGIONAL DISTRICT OF FRASER - FORT GEORGE

155 GEORGE STREET PRINCE GEORGE BC V2L 1P8

PSOB ACCESS LANE RE-SURFACING **ELECTRICAL DETAILS**

E002

Project Number

Orawing No.

2341-21215-12

EPARATION. McELHANNEY, ITS EMPLOYEES, SUBCONSULTANTS AND AGENTS WILL NOT BE ABLE FOR ANY LOSSES OR OTHER CONSEQUENCES RESULTING FROM THE USE OR RELIANCE ON, OR ANY CHANGES MADE TO, THIS DRAWING, BY ANY THIRD PARTY, INCLUDING ONTRACTORS, SUPPLIERS, CONSULTANTS AND STAKEHOLDERS, OR THEIR EMPLOYEES OR AGENTS, WITHOUT McELHANNEY'S PRIOR WRITTEN CONSENT. 0 |2024-10-04| ISSUED FOR TENDER ICELHANNEY, ITS EMPLOYEES AND DIRECTORS ARE NOT RESPONSIBLE NOR LIABLE FOR THE LOCATION OF ANY UNDERGROUND CONDUITS, PIPES, CABLES OR OTHER FACILITIES WHETHER PA 2024-09-05 ISSUED FOR REVIEW OWN OR OMITTED FROM THIS PLAN. PRIOR TO CONSTRUCTION CONTRACTOR SHALL EXPOS OCATIONS OF ALL EXISTING FACILITIES BY HAND DIGGING OR HYDROVAC AND ADVISE THE

Date

RIGINAL DWG SIZE: ANSI D (22" x 34")

McElhanney

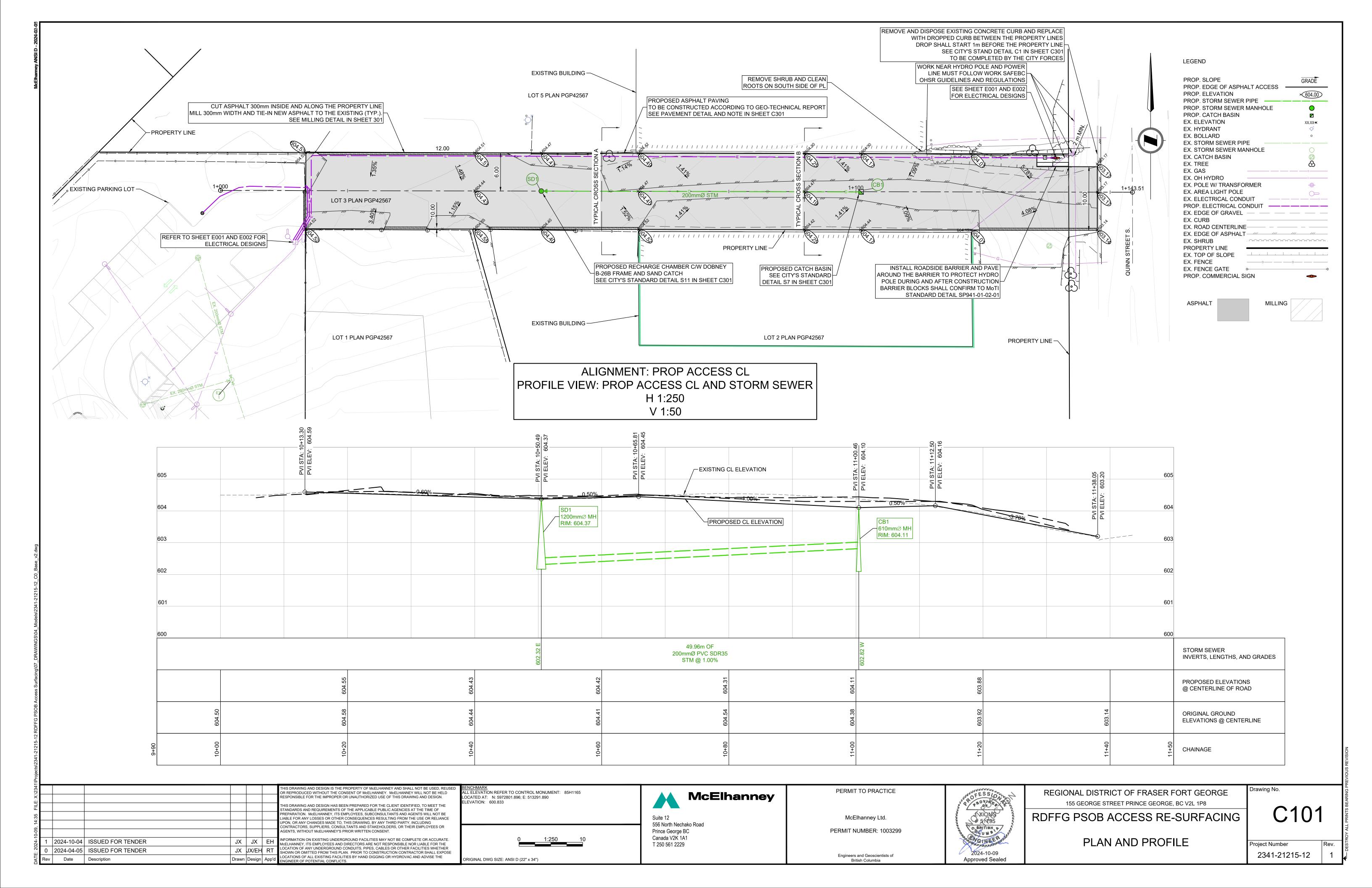
12 - 556 North Nechako Road, Prince George BC V2K 1A1 Tel. 250 561 2229

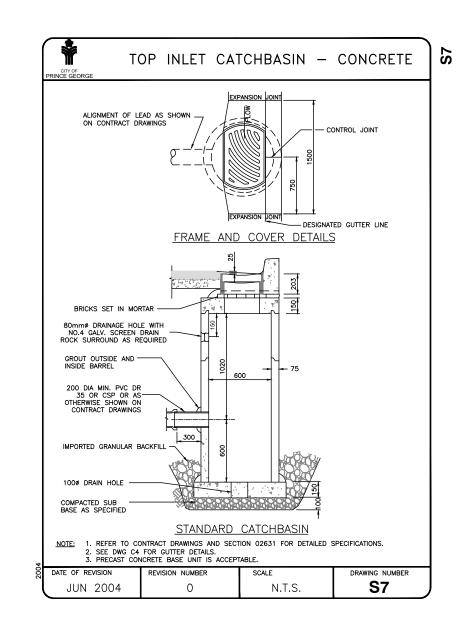
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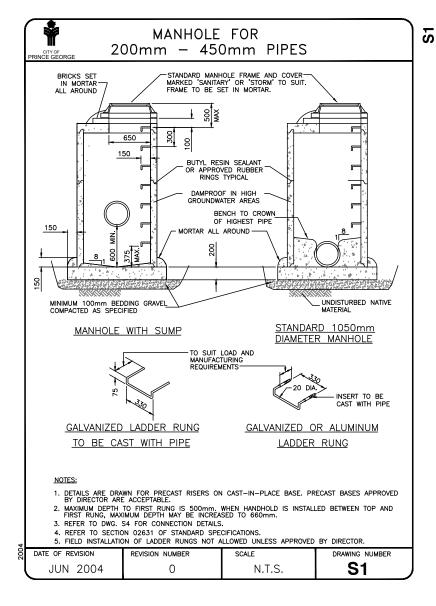
PERMIT TO PRACTICE

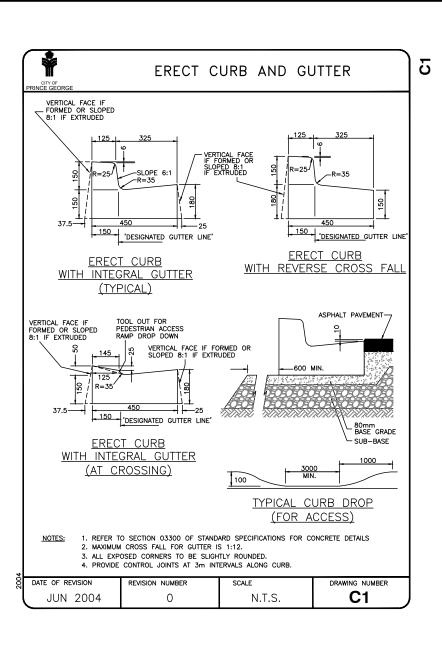
McElhanney Ltd.

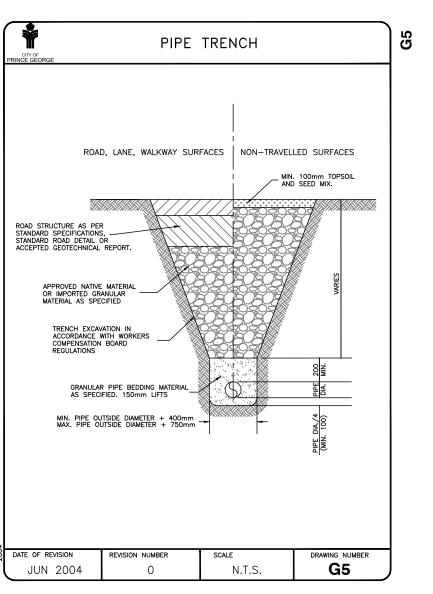
Engineers and Geoscientists of

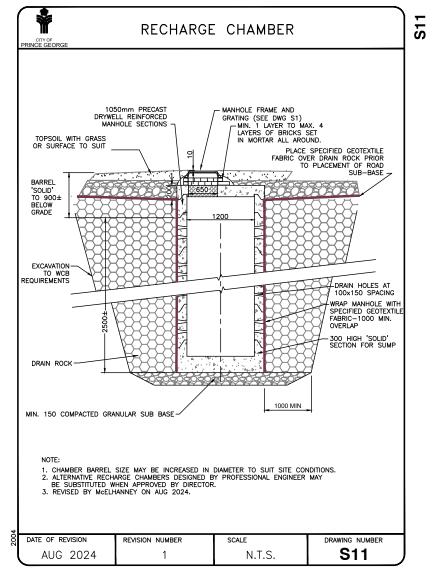


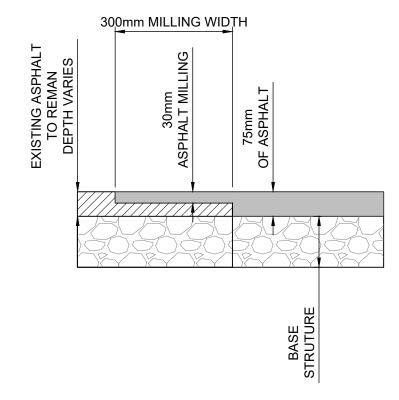












ROAD MILLING SECTION

2024-10-04 ISSUED FOR TENDER

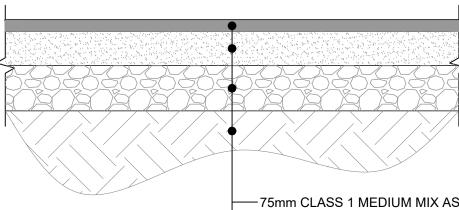
0 | 2024-04-05 | ISSUED FOR TENDER

Description

Date

 AGGREGATE GRADATION SPECIFICATION TO FOLLOW **GEO-TECH REPORT SECTION 4.1**

2. PAVEMENT STRUCTURE CONSTRUCTION TO FOLLOW SPECIFICATIONS IN THE GEO-TECH REPORT SECTION 4

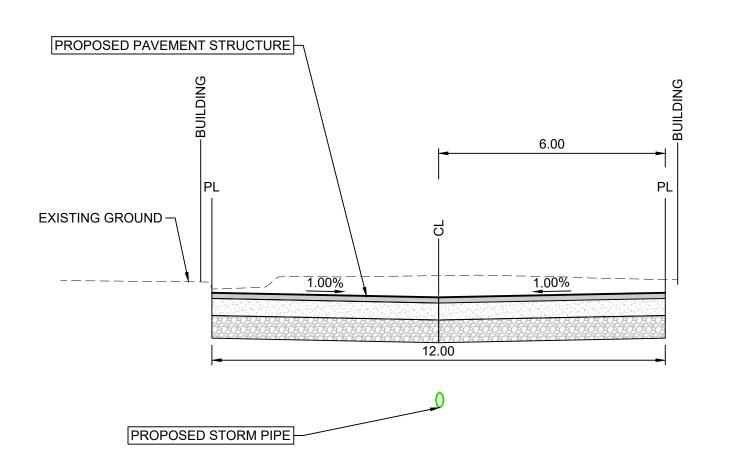


-75mm CLASS 1 MEDIUM MIX ASPHALT COMPACTED TO 97% OF 75 BLOW MARSHALL BRIQUETTE DENSITY -225mm CBC COMPACTED TO 100% STANDARD PROCTOR DENSITY -300mm SGSB COMPACTED TO 100% STANDARD PROCTOR DENSITY -COMPACTED SUBGRADE TO BE PROOF ROLLED PRIOR TO SUBBASE PLACEMENT

PAVEMENT STRUCTURE DETAIL

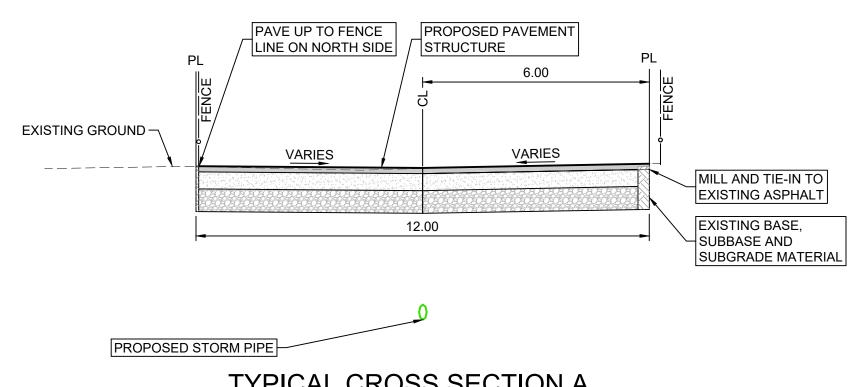
SCALE 1:25

JX JX/EH RT



TYPICAL CROSS SECTION B

SCALE V: 1:50



TYPICAL CROSS SECTION A

SCALE H: 1:100 SCALE V: 1:50

SURVEY NOTES:

- 1. FIELD SURVEY PERFORMED JANUARY 8TH, 2024 BY McELHANNEY LTD., J. GAYOWSKI AND L. PATENAUDE.
- 2. COORDINATES ARE UTM NAD 83, ZONE 10 GRID VALUES. ELEVATIONS ARE GEODETIC AND ARE DERIVED FROM CITY OF PRINCE GEORGE CONTROL MONUMENT 85H1165. N: 5972801.896

E: 513291.890 ELEV: 600.833

- 3. CONTOUR INTERVAL: MAJOR 0.5m MINOR 0.1m
- 4. ALL DIMENSIONS ARE IN METERS, UNLESS OTHERWISE NOTED.
- 5. LOCATIONS OF UNDER GROUND UTILITIES SHOWN ON PLAN ARE APPROXIMATE ONLY, INFORMATION MAY NOT BE COMPLETE OR ACCURATE. CONTRACTOR SHALL EXPOSE LOCATIONS OF ALL EXISTING UTILITIES AND ADVISE THE ENGINEER OF POTENTIAL CONFLICTS.
- 6. LOCATE ALL GAS LINES WITHIN THE LIMIT OF CONSTRUCTION PRIOR TO EXCAVATION. IF THE GAS LINE IS WITHIN THE DITCHED AREA. MAINTAIN MINIMUM COVER (600mm FOR 100mm Ø AND 750mm FOR 150mm Ø) AND POSITIVE DRAINAGE. NOTIFY ENGINEER IF THERE IS A CONFLICT BETWEEN THE DRAINAGE AND MINIMUM COVER.

GENERAL NOTES

- 1. CHECK AND VERIFY ALL DIMENSIONS BEFORE COMMENCING ANY WORK. NOTIFY THE DESIGNER OF ANY ERRORS OR OMISSIONS.
- 2. THE CONTRACTOR SHALL COMPARE ALL RELATED DRAWINGS PRIOR TO BEGINNING CONSTRUCTION. ENGINEER SHALL BE NOTIFIED IMMEDIATELY IF ANY DISCREPANCIES OR INCONSISTENCIES ARE FOUND ON DESIGN DRAWINGS.
- 3. ALWAYS READ WRITTEN DIMENSIONS. DO NOT SCALE OFF THE DRAWINGS OR CAD FILES.
- 4. CONDUIT ROUTING SHOWN IS FOR INTENT ONLY, FINAL CONDUIT
- ROUTING MAY BE ADJUSTED TO SUIT SITE CONDITIONS. ONLY BUILD FROM ISSUED FOR CONSTRUCTION DRAWINGS.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH THE CORRECTION OF DEFICIENCIES, AS DIRECTED BY THE ENGINEER.
- 7. REVIEW OF WORK, OR ANY PORTION OF WORK, BY THE ENGINEER SHALL NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY AND OBLIGATION TO COMPLY WITH CONTRACT DRAWINGS AND SPECIFICATIONS.
- 8. ALL WORKS SHALL MEET OR EXCEED THE REQUIREMENTS OUTLINED IN SCHEDULE C, INFRASTRUCTURE SPECIFICATIONS, AND SCHEDULE D, STANDARD INFRASTRUCTURE DRAWINGS OF THE CITY OF PRINCE GEORGE SUBDIVISION AND DEVELOPMENT SERVICING BYLAW 8618,
- 9. ALL WORKS SHALL BE PERFORMED IN ACCORDANCE WITH ALL CITY OF PRINCE GEORGE BYLAWS FOR NOISE, HOURS OF WORK AND SOIL **REMOVAL**
- 10. ALL WORK SHALL BE CONDUCTED FOLLOWING WORKSAFE BC OHSR
- 11. PAVEMENT STRUCTURE TO BE CONSTRUCTED ACCORDING TO
- GEO-TECHNICAL REPORT PROVIDED BY SOILTECH REV1 ON JAN 26, 2024 12. ASPHALT MATERIAL, BASE MATERIAL AND SUBBASE MATERIAL TO
- CONFIRM TO THE SPECIFICATIONS IN THE GEO-TECHNICAL REPORT 13. USE SAND CATCH IN NEW AND EXISTING STORM MANHOLES, CATCH BASIN AND RECHARGE CHAMBER TO PREVENT SEDIMENT ENTERING
- 14. CLEAN AND REMOVE ANY SEDIMENT OR DEBRIS FROM MANHOLES, CATCH BASIN, AND EXISTING RECHARGE CHAMBER AFTER CONSTRUCTION

ENVIRONMENTAL

THE STORM SYSTEM

- 1. THE CONTRACTOR IS RESPONSIBLE FOR SUPPLYING, INSTALLING AND
- MAINTAINING ALL EROSION AND SEDIMENT CONTROL MEASURES. 2. ALL WORK SHALL BE DONE IN A MANNER THAT WILL NOT RESULT IN DEPOSITION OF DEBRIS, SOIL, OR OTHER MATERIAL DELETERIOUS TO
- FISH, IN ANY WATERCOURSE. 3. RECONSTRUCT AND RE-VEGETATE DISTURBED SURFACES WITH LOCAL
- WEED FREE SEED MIX TO THEIR ORIGINAL CONDITION AS SOON AS 4. LEAVE SILT FENCE AND OTHER EROSION CONTROL MEASURES IN
- PLACE, AS APPROPRIATE, UPON COMPLETION OF CONSTRUCTION. EROSION CONTROL INSTALLATIONS ARE NOT TO BE REMOVED UNTIL VEGETATION HAS HAD A CHANCE TO BECOME RE-ESTABLISHED.

BACKFILL AND COMPACTION

- 1. THE OWNER HAS ENGAGED SOILTECH TO MONITOR TRENCH BACKFILL COMPACTION AND PAVEMENT CONSTRUCTION. SOILTECH WILL CONDUCT COMPACTION TESTS IN ACCORDANCE WITH THE SPECIFICATIONS OUTLINED IN THE GEOTECHNICAL DESIGN MEMO DATED MARCH 21, 2024, ENSURING THAT THE MATERIAL AND COMPACTION ADHERE TO THE REQUIREMENTS SET FORTH IN THE GEOTECHNICAL DESIGN MEMO DATED JANUARY 26, 2024.
- 2. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH SOILTECH IN ADVANCE AND PROVIDING SUFFICIENT NOTICE BEFORE THE MATERIAL IS READY FOR TESTING. IT IS ANTICIPATED THAT BOTH THE SIEVE ANALYSIS TEST AND PROCTOR DENSITY TEST WILL NECESSITATE A MINIMUM OF 4 BUSINESS DAYS. MATERIAL SHOULD NOT BE UTILIZED UNLESS IT MEETS THE SPECIFIED REQUIREMENTS. A MINIMUM OF 48 HOURS' NOTICE MUST BE GIVEN TO SOILTECH FOR FIELD COMPACTION TESTS.NO PAYMENT CLAIMS WILL BE ACCEPTED FOR FAILED MATERIALS OR ANY REQUIRED RE-WORK OF COMPACTION. ADDITIONALLY, NO ADDITIONAL CONSTRUCTION TIME WILL BE GRANTED FOR ANY DELAY ARISING FROM MATERIAL TESTING, COMPACTION TESTS, OR REQUIRED RE-WORK OF COMPACTION.

R REPRODUCED WITHOUT THE CONSENT OF McELHANNEY. McELHANNEY WILL NOT BE HELD SPONSIBLE FOR THE IMPROPER OR UNAUTHORIZED USE OF THIS DRAWING AND DESIGN. IS DRAWING AND DESIGN HAS BEEN PREPARED FOR THE CLIENT IDENTIFIED, TO MEET THE FANDARDS AND REQUIREMENTS OF THE APPLICABLE PUBLIC AGENCIES AT THE TIME OF EPARATION. McELHANNEY, ITS EMPLOYEES, SUBCONSULTANTS AND AGENTS WILL NOT BE IABLE FOR ANY LOSSES OR OTHER CONSEQUENCES RESULTING FROM THE USE OR RELIANCE ONTRACTORS, SUPPLIERS, CONSULTANTS AND STAKEHOLDERS, OR THEIR EMPLOYEES OR

HOWN OR OMITTED FROM THIS PLAN. PRIOR TO CONSTRUCTION CONTRACTOR SHALL EXPOS

OCATIONS OF ALL EXISTING FACILITIES BY HAND DIGGING OR HYDROVAC AND ADVISE THE

AGENTS, WITHOUT McELHANNEY'S PRIOR WRITTEN CONSENT.

EVATION: 600.833 AS NOTED McELHANNEY, ITS EMPLOYEES AND DIRECTORS ARE NOT RESPONSIBLE NOR LIABLE FOR THE LOCATION OF ANY UNDERGROUND CONDUITS, PIPES, CABLES OR OTHER FACILITIES WHETHER

L ELEVATION REFER TO CONTROL MONUMENT: 85H1165

LOCATED AT: N: 5972801.896; E: 513291.890

RIGINAL DWG SIZE: ANSI D (22" x 34")

McElhanney

556 North Nechako Road Prince George BC Canada V2K 1A1 T 250 561 2229

PERMIT TO PRACTICE

McElhanney Ltd.

Engineers and Geoscientists of

PERMIT NUMBER: 1003299



REGIONAL DISTRICT OF FRASER FORT GEORGE

155 GEORGE STREET PRINCE GEORGE, BC V2L 1P8

RDFFG PSOB ACCESS RE-SURFACING

C301

Drawing No.

NOTES AND DETAILS

Project Number 2341-21215-12

Geotechnical Design Memo



1215 Babine Road

Prince George, BC V2N 6E1

250-301-5024 hans@soiltech.ca

To: Ethan Hoffman, AScT, BCME, McElhanney From: Hans Jorgensen, P. Eng.

Date: March 21, 2024

Memo No. GD02 Project No.: 20-H-015

Project: Regional District of Fraser-Fort George Public Service Building
Re: Access Road Construction Review Requirements and Frequencies

In our previous design memo, GD01, we provided geotechnical recommendations for the new access road. The recommendations included several items for geotechnical review and quality assurance during construction. We were asked to identify the key inspection items requiring review and/or testing by SoilTech, at what point the review or test is required, and the minimum frequencies.

Itom	Daview/Testing Periored and Francisco
Item	Review/Testing Reqiured and Frequency
Storm Service	Visual review of the completed excavation
Installation and	 Sample of backfill soil for review and standard proctor test during excavation
Trench Backfill	stage
	Compaction testing for subgrade backfill:
	 At least 1 compaction test every 20 linear meters per lift
	 Testing may be reduced at SoilTech's discretion if an acceptable standard
	procedure for compaction is established
Subgrade	 Visual review of the subgrade cut surface prior to any fill placement or
Preparation	compaction
	 Proof roll of the subgrade surface
	 Visual review of any required subgrade sub-excavation
	 Compaction testing on subgrade fill if sub-excavation is required:
	 At least 2 compaction tests every 20 linear meters
	 Sample of backfill soil for review and standard proctor test if different than soil
	from the storm service backfill
Subbase	
	Sample of SGSB material for sieve analysis for approval prior to installation
Preparation	Standard proctor test on approved material
	Compaction tests at the top of subbase:
	 At least 2 compaction tests every 20 linear meters
Base	 Sample of CBC material for sieve analysis for approval prior to installation
Preparation	Standard proctor test on approved material
	Compaction tests at the top of subbase:
	 At least 2 compaction tests every 20 linear meters
Asphalt	 Sample of asphalt during paving operation for Marshall analyses
Installation	 Coring of the completed asphalt to collect samples for density and thickness: at
	least 1 core per 50 linear meters

This memornadum has been completed for the exclusive use of the recipient. We take not responsibly for any damages suffered from any use or reliance of information contained within this report by third parties or for use other than the intended purpose for the project described above.

If there are any questions or if additional information is required, please contact the undersigned.

Sincerely,

Hans Jorgensen, P.Eng.



Geotechnical Design Memo

SoilTech Consulting Ltd

1215 Babine Road Prince George, BC V2N 6E1

250-301-5024 hans@soiltech.ca

To: Ethan Hoffman, AScT, BCME, McElhanney

From: Hans Jorgensen, P. Eng.

Date: January 26, 2024 Memo No. GD01

Project No.: 20-H-015

Project: Regional District of Fraser-Fort George Public Service Building

Re: Pavement Structure for Access Road

1. Introduction

SoilTech was asked to review subsurface conditions in the proposed Quinn Street access road area to the building's parking area. McElhanney provided a geotechnical assessment for the building development. We reviewed the associated geotechnical technical memorandumⁱ (McElhanney Memo) which contains a preliminary pavement design and details the natural subsurface conditions. We also reviewed the current site conditions and existing development in the area. Based in our findings we have confirmed the pavement structure design provided by McElhanney is adequate for proposed access road and have provided additional recommendations the road design and construction.

2. Background and Subsurface Conditions

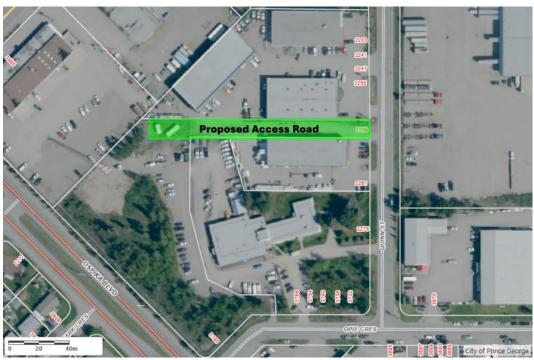


Figure 1. Proposed access road and nearby existing developments shown on PGMap 2020 ortho imagery

Figure 1 details the area for the access road and the existing infrastructure surrounding it. The Access Road is located between 2261 and 2255 Quinn Street and has been a gravel surface roadway since at least 1993 (from a review of PGMap ortho imagery). Buildings border sections of north and south property lines. There is no record of buried utilities in the access road area.

The expected natural soil conditions generally consist of loose to compact gravel and sand of varying concentrations with trace amounts of fines (silt and clay). We suspect undocumented fill from past earthworks to be present in near the surface in areas. The fill likely consists of soil from the area and imported gravel used to construct the existing gravel surfaced roadway. The gravel exposed at the surface has a higher fines content than we recommend for pavement structure aggregates.

3. Discussion and Recommendations

Based on our findings, the consider the following items for the design and construction of the access road:

- The expected natural soil below the access road is gravel and sand with trace fines which will provide good support and subgrade drainage for the pavement structure.
- There is undocumented fill in areas which is expected to extend to a shallow depth. The existing gravel fill is expected to be unsuitable for pavement structure fill.
- The subgrade should be cut to the design elevation. The existing fill may extend below the design subgrade elevation but may be suitable to be left in place if it is free from deleterious material and adequately compacted. The subgrade should be evaluated by SoilTech to confirm the in situ soil will provide adequate support.
- The pavement structure recommend in the McElhanney Memo is adequate for the proposed road.
- The pavement structure should be constructed from aggregates and asphalt meeting our recommended specifications and be installed using best practices.

4. Pavement Structures

The site-specific traffic volumes are unknown, but we estimate the roadway will see up to 100 vehicles per day with at least half of the vehicles being heavy truck traffic. The heavy truck traffic will mostly be from delivery vehicles from the construction supply company that will share the access road. We evaluated the structure provided by McElhaney using the design methods and guidelines from the AASHTO 1993 Pavement Design Method and Ministry of Transportation and Infrastructure (MoTI) design guidelines Technical Circular T-01/15. The recommended pavement structures for the access road detailed in Table 1.

Table 1. Recommended Pavement Structures

Pavement Component	Layer Thickness
Class 1 Medium Mix Asphalt	75 mm
Crushed Base Coarse (CBC)	225 mm
Select Granular Subbase (SGSB)	300 mm
Total	600 mm

The pavement structure's design relies on good subgrade support. Section 4.3 outlines best practices for preparing the subgrade to obtain the necessary support. Use aggregates meeting the requirements detailed in Section 4.1 and asphalt meeting the specifications detailed in the current MoTI Standard Specifications for Highway Construction. We recommend extending the pavement structures below any curbs and sidewalks.



4.1. Aggregates

Table 2. Aggregate Gradation Specifications

	Percent Passing		
Particle Size (mm)	CBC ¹	SGSB	
75	_	95 – 100	
37.5	_	_	
25	100	_	
19	80 – 100	35 – 100	
9.5	50 – 85	_	
4.75	35 – 70	15 – 60	
2.36	25 – 50	_	
1.18	15 – 35	_	
0.300	5 – 20	3 – 15	
0.075	0 – 5	0 – 5	

¹ CBC to have minimum 60% one-face fracture by mass

Aggregates should be of sufficient quality to withstand the destructive effects of exposure to freeze-thaw, water, and general construction (i.e. handling, placing, grading, packing, etc.). Use aggregates that meet the Aggregate Quality specifications detailed in Section 202.04 of the current MoTI Standard Specifications for Highway Construction. For CBC use a crushed material with a minimum 60% one-face fracture by mass on particles larger than 4.75 mm. The SGSB can be a processed or pit run gravel. Gradation specifications for the aggregates can be found in Table 2.

4.2. Pavement Structure Construction

We recommend the following best practices and specifications for construction of the pavement structure:

- Install the pavement structure over the prepared subgrade.
- Place SGSB and CBC in a maximum 300 mm thick layers.
- Moisture condition (i.e. add water or dry) the soil where needed to bring it to the optimum moisture content for compaction.
- Compact each layer to 100% SPD.
- Proof roll the CBC layer and repair any soft areas before placing any concrete or asphalt.
- Place the asphalt surface as per the supplier's recommended procedures and compact it to a minimum average degree of compaction of 97% when comparing the in situ density to the measured 75 Blow Marshall briquette density for the mix with no single measured location less than 95%.

4.3. Subgrade Preparation

The prepared subgrade should consist of component natural soil or adequately compacted fill of a similar consistency. We recommend the following best practices and specifications to prepare the subgrade:

- Remove any loose fill, organic soil, soft wet fine-grained soil, and soil mixed with deleterious materials from the subgrade area. Extend the excavation beyond the edges of the pavement equal to the depth of the fill required below the pavement.
- Proof roll the subgrade excavation and repair any soft areas prior to placing subgrade fill.



- Raise the grade of low areas to the design subgrade elevation with compacted fill consisting of soil with similar properties and gradations to the surrounding subgrade soils.
- Place the fill material in uniform layers not exceeding 200 mm for fine-grained soil and 300 mm for granular soil.
- Moisture condition (i.e. add water or dry) the soil where needed to bring it to the optimum moisture content for compaction.
- Compact fill layers to 97% SPD and the final 300 mm of subgrade fill to 100% SPD.
- Crown the subgrade at a minimum 2% slope away from the road centerline.
- Proof roll the prepared subgrade surface and repair any soft areas prior to installing the pavement structure.

5. Review and Quality Assurance

This assessment and our recommendations are based on preliminary plans and conversations with the McElhanney. The final design drawings should be reviewed by SoilTech to confirm the intentions of the geotechnical design recommendations included in this report have been incorporated. Subsurface conditions should be confirmed during construction. If the conditions (i.e., soil, groundwater, etc.) encountered during construction differ from those in the assessment they should be reviewed as alternate or additional recommendations may be required.

During the subgrade preparation and construction of the pavement structure have SoilTech review subgrade excavations, proof rolls, fill materials, fill placement and compaction. Depending on weather and site conditions, materials may need to be placed in smaller lift thicknesses, dried, or have water added to achieve recommended degree of compaction. Testing should be completed on subgrade fill, pavement structure layers and the materials used to confirm specifications are met.

6. Closure

Hans Jorgensen, P.Eng.

This report has been completed for the exclusive use of the recipient. We take not responsibly for any damages suffered from any use or reliance of information contained within this report by third parties or for use other than the intended purpose for the project described above. If there are any questions or if additional information is required, please contact the undersigned.

Sincerely,			
•			

¹ (August 8, 2019) Preliminary Geotechnical Assessment, Opie Crescent Building (OP1), McElhanney, File No. 2341-02750-03

