

REQUEST FOR PROPOSALS

Mackenzie Bike Park

Issued: April 4th, 2022

Closing Location:

District of Mackenzie,
1 Mackenzie Blvd,
Mackenzie, BC,
V0J 2C0

Closing Date and Time:

15:00 pm (PDT), April 25th, 2022 Monday

Terry Gilmer, CRFP

Director of Recreation Services

PH: (250) 997 5283

Email: terry@districtofmackenzie.ca

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Definitions

- 1.1. "Contract" means the written agreement resulting from this Request for Proposal, if any, in accordance with this Request for Proposal.
- 1.2. "Proponent" means the person submitting a proposal.
- 1.3. "Proposal" means a submission in response to this request for proposals;
- 1.4. "RFP" means this request for proposals
- 1.5. "the District" means the District of Mackenzie
- 1.6. "must," "shall" or "mandatory" means a requirement that must be met in order for the proposal to receive consideration;
- 1.7. "should" or "desirable" means a requirement having a significant degree of importance to the objective of the request for proposals, but which the District would strongly prefer to be fulfilled, and which the District may in its sole discretion elect to treat the failure to fulfill as a grounds for rejection of a Proposal;

END OF SECTION

MACKENZIE BIKE PARK
CONTRACT:

The District of Mackenzie will receive bids for this project before 15:00 pm on April 25th, 2022
(unless modified by addendum) at:

District of Mackenzie
Terry Gilmer, CRFP
Director of Recreation Services
District of Mackenzie,
1 Mackenzie Blvd,
Mackenzie, BC,
V0J 2C0

The proposed work associated with the enclosed stipulated price contract consists of the supply and installation of all associated items for the installation of the bike track and landscape works including fencing, asphalt path, concrete slab, crushed granite path, planting, site furnishings and all required items to complete the work.

These are required to complete the proposed work at Mackenzie Bike Park located on Mackenzie Blvd.

1.1 BIDCALL

1. Bids will be received before 15:00 p.m. PDT local time on April 25th, 2022 (the "bid closing time") at:

District of Mackenzie
Attn: Terry Gilmer, CRFP, Director of Recreation Services
District of Mackenzie,
1 Mackenzie Blvd,
Mackenzie, BC,
V0J 2C0

2. The official bid closing time will be determined by the District of Mackenzie at the bid closing location.
3. Bids received after the specified bid closing time will be returned unopened.
4. The Owner reserves the right to extend the bid closing time or cancel the bid call by addendum.
5. Bids will be opened promptly after the bid closing time, at the specified bid closing location. Bidders are invited to attend the bid opening. The name of each Bidder and the bid price stated on the Bid Form will be read aloud.
6. Bid results will be disclosed promptly to all Bidders. Such disclosure will not imply that the bids received are compliant or that a contract will be awarded to the lowest or any Bidder.

1.2 BID DOCUMENT AVAILABILITY

1. Bid Documents are made available in electronic form only for the purpose of obtaining bids for this project. It does not confer a license to use the Bid Documents for any other purpose.

1.3 EXAMINATION OF BID DOCUMENTS

1. Bidders shall examine the Bid Documents and promptly notify the person designated to receive inquiries of any perceived errors, omissions, conflicts or discrepancies in the Bid Documents.

1.4 SITE EXAMINATION

1. Bidders may visit the site and familiarize themselves with conditions affecting the Work before submitting a bid.
2. Bidders visiting the Place of the Work shall provide their own personal protective equipment.
3. Refer to 00 31 00- Available Project Information which identifies available information pertaining to the Project.
4. By inference of the "Concealed or Unknown Conditions" GC in the General Conditions of the Contract, Bidders shall include in their bid price for non-concealed and known conditions that are either visible or can be reasonably inferred from a site examination at the Place of the Work before bid submission.

1.5 BID FORM SUPPLEMENTS

1. Submit the following Bid Form Supplements together with the Bid Form:
 - a. Bid security as specified below.
 - b. Section 00 43 23- Bid Form Supplement- Alternative Prices.
 - c. Section 00 43 36- Bid Form Supplement- List of Subcontractors.

2. The Owner may, after the bid closing time and before contract award, require any Bidder to submit additional supplementary information about any aspect of the Bidder's bid to verify compliance with the Bid Documents.

1.6 CONTRACT SECURITY

1. Refer to Section 00 73 63- Contract Security Requirements.

1.7 PREQUALIFIED SUBCONTRACTORS AND SUPPLIERS

1. Not Applicable

1.8 BID DEPOSITORY

2. Not Applicable

1.9 TAXES

1. Include in bid price all taxes and customs duties in effect at the time of the bid closing, except for Value Added Taxes as defined in the CCDC standard form of contract.

1.10 CONTRACT TIME

1. The Bidder, in submitting a bid, agrees to attain Substantial Performance of the Work by the date specified in the Bid Form, which will become the Contract Time under the Contract.

1.11 SUBSTITUTIONS

1. Where the Bid Documents specify particular Products by proprietary name, the Consultant will consider Bidder requests for approval of substitutions during the bid period, provided such requests are received, in writing, at least 7 days before the bid closing time and are in accordance with the requirements specified in Section 01 25 00 - Substitution Procedures. If the Consultant approves a substitution, the substitute Product will be named in an addendum. Otherwise Bidders shall consider the request for approval of the substitution to be rejected.

1.12 LIST OF SUBCONTRACTORS

1. All Vendors should fully disclose any proposed subcontracting of any of the required services. Vendors should be prepared to take overall responsibility for successful interconnection of the two product or service lines and this must be defined in the Proposal.
2. Sub-contracting to any firm or individual whose current or past corporate or other interests may, in the District's opinion give rise to a conflict of interest in connection with this project will not be permitted, and a Proposal may be rejected on this basis in the District's absolute and unfettered discretion. This includes, but is not limited to, any firm or individual involved in the preparation of this Request for Proposal.
3. Complete and submit Section 00 43 36 - Bid Form Supplement- List of Subcontractors, indicating those Subcontractors or Suppliers whose bids have been received by the Bidder, which names the Bidder would be prepared to accept for the performance of the work indicated.
4. The purpose of this requirement is to protect the interests of subcontract bidders and the integrity of the bidding process. Provided the List of Subcontractors has been properly completed and submitted, the information will not be used in evaluating the Bids to determine the lowest compliant bidder.

1.13 CONFLICT OF INTEREST

1. Any potential conflict of interest must be disclosed to the District. Proposals will not be evaluated if the Proponent's current or past corporate or other interests are, in the reasonable opinion of the District deemed or perceived to be a conflict of interest in connection with this RFP or the activities or mandate of the District.
2. All Proponents must make full disclosure of any of the following existing business relationships with any members of the District of Mackenzie Mayor and Council, District employees or immediate relatives of any members of the District's employees:
 1. If a private company, details of ownership of shares by any of the above;
 2. If a public company, details of ownership of shares, in excess of one percent (1%) to total shares by any of the above;
 3. If a partnership, details of any partnership arrangement of any of the above;
 4. Details of any direct or indirect pecuniary interest of any of the above in the supply of such goods and services.
3. Disclosure, if any, shall be made in writing at the time of submitting Proposals.
4. If the Proponent fails to disclose an interest and/or the interest is falsely or insufficiently reported, the District reserves the right to reject the Proposal in its absolute discretion.

1.14 BID FORM SIGNING

1. Complete the Bid Form as follows:
 1. Incorporated Company: Provide company name and name and signature of the duly authorized signing representative(s). Insert under each signature the representative's capacity to act on behalf of the company.
 2. Joint Venture: Each entity within the joint venture shall execute the Bid Form as specified.
 3. Partnership: Provide name of partnership and name and signature of duly authorized representatives of the partnership.
 4. Sole Proprietorship: Provide name of sole proprietorship and name and signature of sole proprietor in the presence of a witness who shall also sign.

1.15 BID SUBMISSION

1. Complete Bid Form, in its entirety, on the form provided and submit together with the required Bid Form Supplements, completed in their entirety, in a sealed opaque envelope, clearly identified on the outside with the following information:
 1. Name and address of Procurement Authority
 2. Bidder's name and address
 3. Project name or RFP/Contract Identification
2. Verbal, telephoned, fax, e-mail, or text message bids will not be accepted nor acknowledged.
3. It is the responsibility of Proponents to ensure compliance with all requirements and deadlines. It is the responsibility of Proponents to ensure delivery of all required response material. Proposals which are not in compliance with the RFP requirements may be rejected.

4. The District of Mackenzie assumes no responsibility for technological or logistical issues in delivering Proponent responses.
5. All costs of preparation and presentation associated with a response to this RFP will be the responsibility of the Proponent. Except as expressly and specifically permitted in this RFP, no Proponent shall have any claim for any compensation of any kind whatsoever as a result of participating in this RFP, and each Proponent, by submitting a Proposal, waives for itself, its successors and assigns, the right to sue the District for any loss, including economic loss, damage, cost or expense arising from or connected with any error, omission or misrepresentation occurring in the preparation of the Request for Proposals, the supply of oral or written information to Proponents, the review of Proposals, or the carrying out the District's responsibilities under this Request for Proposals, with the exception of fraud on the District's part.
6. Submission of a Proposal in response to this RFP indicates the Proponent's acceptance of the terms and conditions contained within the RFP. Proponents acknowledge that the District, in the preparation of the Request for Proposals, supply of oral or written information to Proponents, review of Proposals or the carrying out the District's responsibilities under this Request for Proposals, does not owe a duty of care to the Proponents.
7. Proponents who have obtained the Request for Proposal electronically must not alter any portion of the document, with the exception of adding the information requested. To do so will invalidate the Proposal.
8. The Proponent will not change the wording of their Proposal after closing and no words or comments will be added to the Proposal unless requested by The District of Mackenzie for purposes of clarification.

1.16 BID MODIFICATION AND WITHDRAWAL

1. A bid, including the Bid Form and Bid Form supplements, submitted in accordance with these bidding requirements may be modified or withdrawn, provided the modification or withdrawal request:
 1. is in the form of a letter received at the address specified in "Bid Call" article before the bid closing time, and
 2. states the project title, name of the Bidder, the nature of the modification or withdrawal request,
 3. and is signed by a duly authorized person.
3. For bid closing time purposes, the official time of receipt of faxed bid modifications or withdrawal requests will be the time of receipt automatically printed on the fax transmission by the receiving fax machine.
4. If a bid is withdrawn, a new bid may be submitted in accordance with the specified requirements, provided it is received before the bid closing time.
5. When submitting a modification directing a change in a bid price, do not reveal the original amount nor the revised amount:
 1. On stipulated price bids, state only the amount to be added to or deducted from the original bid price.
 2. On unit price bids, state only the amount to be added to or deducted from each original unit price or lump sum in the Schedule of Prices. The Owner will adjust extended amounts and the total bid price as required by the modification.

6. When submitting a second or more modifications related to a particular bid price, ensure that there is no ambiguity as to the intended bid price. The written modification shall clearly indicate whether:
 1. the bid price first submitted is being modified and any previous modifications are to be disregarded, or
 2. a revised bid price derived from a previous modification is being modified.
7. State all addendum numbers received, if different from what was indicated on originally submitted Bid Form.
8. The Owner will assume no responsibility or liability for modifications or withdrawals that are, for any reason, delayed, illegible, unclear as to intent, ambiguous, contrary to these instructions, or otherwise improperly received. The Owner may disregard improperly received modifications or withdrawals.

1.17 BIDDING IRREGULARITIES

1. Bids with Bid Forms or required Bid Form Supplements that are improperly prepared, signed or submitted contrary to these Instructions to Bidders, or that contain added conditions or other irregularities of any kind, may, at the Owner's discretion, be rejected as non-compliant.
2. The Owner may accept or waive a minor and inconsequential irregularity. The determination of what is, or is not, a minor and inconsequential irregularity, the determination of whether or not to accept or waive such an irregularity, and the final determination of whether the bid is compliant, will be at the Owner's sole discretion.
3. The following irregularities relate to what are considered mandatory bidding requirements. These will not be considered minor and inconsequential and will cause the bid to be rejected as non-compliant:
 1. Bid or Bid Form Supplement is received after the specified bid closing time.
 2. Required Bid Form or Bid Form Supplement is missing.
 3. Bid Form or Bid Form Supplement is not in the form provided or required.
 4. A bid price is illegible, ambiguous or unclear.
 5. One or more conditions are added to or submitted with the bid, the effect of which is a material modification of the Bid Documents.
 6. Failure to indicate in the Bid Form the addendum number(s) of all addenda received.
 7. Failure to comply with any other bidding requirement expressly characterized as mandatory in elsewhere in the Bid Documents.

1.18 BID ACCEPTANCE PERIOD

1. Bids shall remain open to acceptance by the Owner and shall be irrevocable until another Bidder enters into a contract with the Owner for performance of the Work or until expiry of the bid acceptance period stated in the Bid Form, whichever occurs first.
2. After bid closing and before expiry of the bid acceptance period stated in the Bid Form, the Owner may request all Bidders to agree to an extension of the originally specified bid acceptance period. In such case the bid acceptance period will be extended subject to the Bidder, who's bid the Owner wishes to accept, having agreed in writing to the extension.

1.19 EVALUATION

1. Evaluation of Proposals will be by a committee formed from The District of Mackenzie's Recreation Services Department, and may include members of the District's Finance and Corporate Departments and District contractors/consultants.
2. Awards will be based on the best value offered, and the best value will be determined by the District in its sole discretion. Evaluation criteria will be:

TITLE	
EVALUATION CRITERIA	WEIGHT
Corporate Experience, Personnel and Resources: <ul style="list-style-type: none"> • Experience and relevant projects referenced; • Experience on construction sites with multiple general contractors and trades; • Successful and satisfactory completion of projects of comparable size, scope and complexity that highlights the experience in working with Synthetic Turf companies; • Project related experience of all sub-contractors, including project names/client, years of experience, reasoning as to why the sub-contractor is/will be on your team. • Key Personnel; • Past experience and qualifications of assigned project team; and • Experience working with local municipalities. 	25
Schedule <ul style="list-style-type: none"> • Comprehensive proposed plan to complete the Work as early as possible and project schedule with phasing that would facilitate quality delivery of the Work in a way that would allow early site access to users. 	25
Financial <ul style="list-style-type: none"> • Total Price, Unit Prices, Optional Prices • Sustainable Benefits and Social Responsibility • Value Added Benefits 	50

3. While previous experience with the District is not required and does not in any way confer an advantage, the District's previous experience with the Proponent may also be taken into consideration in its evaluation of Proposals. The District reserves the right to rely upon its records, references, and recollection in this regard. The District may also obtain references other than those provided by the Proponent and may use these references in determining the best value.
4. By responding to this RFP, Proponents will be deemed to have agreed that the decision of the District will be final.

1.20 BID ACCEPTANCE

1. The lowest or any bid will not necessarily be accepted and the Owner may reject any and all bids. The District reserves the right in its sole unrestricted discretion to:
 1. accept any Proposal which the District deems most advantageous to itself;
 2. reject any and/or all irregularities in a Proposal submitted;

3. waive any defect or deficiency in a Proposal whether or not that defect or deficiency materially affects the Proposal and accept that Proposal;
 4. reject any and/or all Proposals for any reason, without discussion with the Proponent(s);
 5. accept a Proposal which is not the lowest Proposal; and
 6. cancel or reissue the RFP without any changes;
2. The District reserves the right to cancel this Request for Proposals at any time and for any reason, and will not be responsible for any loss, damage, cost, or expense incurred or suffered by any Proponent as a result of that cancellation. The receipt by the District of any information (including any submissions, ideas, plans, drawings, models, or other materials communicated or exhibited by any intended Proponent, or on its behalf) shall not impose any obligations on the District.
 3. The District reserves the right to enter into negotiations with one or more Proponents concerning the terms and conditions of the services to be provided, and expressly reserves the right through such negotiations to request changes, alterations, additions, or deletions from the terms of any Proposal received.
 4. The Contract will be established if and when the successful Bidder receives from the Owner a written notification accepting the bid without any conditions. If the Owner's written notification accepting the bid contains, or is subject to, any conditions, the Contract will be established if and when the Bidder accepts all such conditions in writing or when the parties execute the agreement.
 5. This Request for Proposal should not be construed as an agreement to purchase goods or services. The District is not bound to accept the lowest priced or any Proposal of those submitted. The District will be under no obligation to receive further information, whether written or oral, from any Proponent
 6. If the lowest compliant bid exceeds the Owner's budget, and the Owner is unwilling or unable to award a contract at the bid price, the Owner may:
 1. negotiate, with the lowest compliant Bidder only, changes to the Bid Documents and a reduced bid price acceptable to the Owner, or
 2. invite the three lowest compliant Bidders (only) to re-bid on modified Bid Documents under a new bid call.
 4. The bids will be evaluated base on the total base bid combined with the aggregate of the optional items.
 5. No act of the District, other than a notice in writing signed by the Chief Administrative Officer, shall constitute an acceptance of a Proposal. Note that any acceptance may be subject to Council approval.
 6. Neither acceptance of a Proposal nor execution of a Contract will constitute approval of any activity or development contemplated in any Proposal that requires any approval, permit or license pursuant to any federal, provincial, regional district or municipal statute, regulation, or bylaw.
 7. Proponents may be asked to make a presentation before the District if selected as a finalist.
 8. The District reserves the right to enter into a contract with a Proponent for all, part, or none of the service or products that are the subject of this Request for Proposals.

9. If the District chooses to enter into a contract with a Proponent as a result of this RFP, the successful Proponent may be required to enter into a written agreement with the District. Such agreement will be prepared by the Director of Operations and will embody the terms of the Proposal and any subsequent written amendments.

1.21 CONFIDENTIALITY

1. All Proponents and any other person who through this RFP process gains access to confidential financial information of the District are required to keep strictly confidential all information which in any way reveals confidential business, financial or investment details, programs, strategies, or plans, learned through this RFP process. Information pertaining to the District obtained by the Proponent as a result of participation in this process is confidential and must not be disclosed without written authorization from the District.
2. The Proposal should clearly identify any information that is considered to be confidential or proprietary information (the "Confidential Information"). However, the District of Mackenzie is subject to the Freedom of Information and Protection of Privacy Act. As a result, while the Act offers some protection for third party business interests, the District of Mackenzie cannot guarantee that any Confidential Information provided to the District of Mackenzie can be held in confidence if a request for access is made under the Freedom of Information and Protection of Privacy Act.

1.22 INTERPRETATION AND MODIFICATION OF BID DOCUMENTS

1. If an inquiry requires an interpretation or modification of the Bid Documents, the response to that inquiry will be issued in the form of a written Addendum only, to ensure that all Bidders base their bids on the same information.
2. Replies to inquiries or interpretations or modifications of the Bid Documents made by e-mail, verbally, or in any manner other than a written Addendum, will not form part of the Bid Documents and will not be binding.

1.23 ADDENDA

1. Addenda may be issued to modify the Bid Documents in response to Bidder inquiries or as may be considered necessary.
2. All addenda issued during the bid period will become part of the Bid Documents.
3. No addenda will be issued later than 2 working days before the bid closing time.
4. Each Bidder shall ascertain before bid submission that it has received all addenda issued during the bid period and shall indicate in the Bid Form the addendum number(s) of all addenda received.

1.24 INQUIRIES

1. Direct all inquiries in writing, via e-mail to:

David Jerke
VDZ+A
Email: davidj@vdz.ca
Phone: 604 546 0921

2. Submit inquiries as early as possible in the bid period and not less than 4 Working Days before the bid closing time. Inquiries received after this time may not receive a response.
3. Only David Jerke, working for VDZ+A (on behalf of the District of Mackenzie) is the District's representative authorized to communicate and otherwise deal with Proponents and all Proponents should communicate and otherwise deal with that person only.

Contact with any other District representative, including Members of Council, officers or employees of the District regarding this RFP or a Proponent's submission may result in that Proposal being removed from consideration for this RFP. As stated above, all communication should be presented via email to the address stated above.

4. All Proponents who have submitted a Proposal will be notified of the Board's decision after the final selection has been made. This notice of final selection may be the only communication between the District of Mackenzie and Proponents. Telephone or other inquiries concerning this Proposal after the Proposal deadline are discouraged.

1.25 NOT A TENDER

1. This Request for Proposal is not a tender call, and neither it nor the submission of any response to this RFP creates a tender process or a "Contract A".

1.26 MODIFICATION OF TERMS

1. The District reserves the right to modify the terms of the Request for Proposal at any time at its sole discretion.

1.27 USE OF REQUEST FOR PROPOSAL

1. This document, or any portion thereof, may not be used for any purpose other than the submission of Proposals.

1.28 ACCURACY OF INFORMATION

1. The District of Mackenzie makes no representation or warranty, either express or implied, with respect to the accuracy or completeness of any information contained or referred to in this RFP.
2. While the District has used considerable efforts to ensure an accurate representation of information in this Request for Proposal, the information contained in this Request for Proposal is supplied solely as a guideline for Proponents. The information is not guaranteed or warranted to be accurate by the District, nor is it necessarily comprehensive or exhaustive. Nothing in this Request for Proposal is intended to relieve Proponents from forming their own opinions and conclusions with respect to the matters addressed in this Request for Proposal.

END OF SECTION

1.1 STATUS OF AVAILABLE PROJECT INFORMATION

1. Available Project information means information of any type and in any form that is expressly identified as available project information in this Section.
2. No available Project information forms part of the Contract Documents unless copied or transcribed into Drawings or Specifications or is expressly listed in the agreement as a Contract Document.

1.2 USE AND RELIANCE UPON AVAILABLE PROJECT INFORMATION

1. Available Project information is made available to Bidders to fulfil the Owner's duty to disclose all relevant Project information to Bidders.
2. Bidders shall interpret and draw their own conclusions about available Project information, including consideration of the time when it was created. Available project information may be time sensitive. The Owner and Consultant assume no responsibility for such interpretations and conclusions.
3. Available Project information, or any part thereof, shall not be construed as contract requirements unless also reflected in Drawings or Specifications, and in case of conflict the Drawings or Specifications shall govern.
4. Bidders, acting reasonably, may rely on available Project information in preparing their bids, subject to any qualifications stated in such available Project information and unless expressly stated otherwise in this Section.

1.3 AVAILABLE PROJECT INFORMATION

1. Topographical survey entitled MACKENZIE BIKE PARK EXISTING CONDITIONS PLAN prepared by McElhanney Associates Land Surveying Ltd. , Project Number: 2341-06817-0. This report is included in the Bid Documents.
2. Geotechnical Report dated March 6, 2022 from Soil Tech Consulting Ltd.

END OF SECTION

Project/Contract: Mackenzie Bike Park

From (Bidder):

Legal Name of Bidder (please print)

Address of Bidder

Telephone Number of Bidder

Facsimile Number of Bidder

GST Registration Number

Signature

Date

Print Name and Title

To (Owner):

Terry Gilmer
District of Mackenzie
1, Mackenzie Blvd, Mackenzie, BC, V0J 2C0
P:250-997-5283
Email: terry@districtofmackenzie.ca

We, the undersigned, having examined the Bid Documents for the above named project/contract, including Addendum Number(s) _____, and having visited the Place of the Work, hereby offer to perform the Work in accordance with the Bid Documents, for the stipulated price of:

\$ _____ in Canadian dollars, excluding Value Added Taxes.
(amount in figures)

We, the undersigned, declare that:

1. we are qualified to perform the Work in accordance with the Bid Documents and our bid price covers all of our obligations and things necessary for the performance of the Work,
2. we agree to attain Substantial Performance of the Work by _____.
3. we have arrived at this bid without collusion with any competitor,
4. all bid form supplements called for by the Bid Documents form an integral part of this bid, and
5. this bid is open to acceptance by the Owner for a period of 45 calendar days from the bid closing time.

Schedule A – RFP Price Bid

Amounts shown shall match breakdown shown in Schedule C plus all work identified in Schedule B. Owner may delete any item from Schedule B at any time.

Row	Item	Price
1	Subtotal – Division 1 – Sched B – Base Bid	\$
2	Subtotal – Division 2 – Sched C – Optional Items	\$
3	SUBTOTAL PRICE (excluding GST) Sum of Row 1 + 2	\$
4	TOTAL PRICE (excluding GST) Sum of Row 3	\$
5	Goods and Services Tax (GST 5%) on Row 4	\$

Bidder Name (please print)

Initials / Date

Schedule B – (Base Bid)

All indicated line items shall be used and shall correspond to the descriptions in the Measurement and Payment Schedule. Pricing for items in this schedule are exclusive of GST. Additional line items may be added at the discretion of the Bidder. Items from Schedule B are separate and will be added to the Schedule of Values following award if they are not deleted by Owner prior to Notice-To-Proceed.

NOTE: The sum of line items in this Schedule C shall match exactly the sum of values in the Schedule A of RFP Form. In the event the sum values do not match, the value in Schedule A will be the basis of RFP Price.

ITEM NO.	DESCRIPTION	AMOUNT (including PST)
Part 1 – Basic Works		
Note: The contractor is responsible to complete work contract as outlined drawings and specifications.		
1	Mobilization & Site Preparation including installation and maintenance of sediment control, site access, silt fencing, construction safety fencing, tree protection fencing and all related works (complete).	
2	Excavation, Backfilling & Subgrade Preparation including excavation and offsite disposal of unsuitable and excess native material, subgrade reshaping, supply and all related works (complete).	
3	Site Grading including rough and finished grading as per grading plans and all related works. (complete)	
4	3.0m rail fence including all related works. (complete)	
5	Cast in place concrete path including all base aggregates, mesh reinforcement, control joints, dowels and all related works. (complete)	
6	Granular path including all base aggregates, compaction, weed barrier, anchoring spikes, perma deck edge, landscape fabric, rebar stakes and staples and all related works. (complete)	
7	Asphalt pump track including all base aggregates and asphalt material, compaction, weed barrier, tie in to existing and all related works. (complete)	
8	Return trails, sustainable wood lips and dirt landings including all base aggregates, trail topping, wood lips, and dirt landings compaction, weed barrier, tie in to existing and all related works. Base bid for bermed turns to be aggregate with trail topping. (complete)	
9	Infrastructure Works including all conduit, piping, rip rap, water service, and structures (complete)	
10	Planting and seed as per plant schedule including supply and install of all shrubs, trees, perennials, and hydroseeding of lawn and revegetation mix. Also includes mulch, stakes, and all landscape related items.(complete).	
11	Site Furnishings including supply and install of benches, Equiparc EP 2790, bike racks, repair station and all related works (complete).	
12	Testing including density testing of base materials and subgrade, strength test for concrete, CCTV testing for storm mains all testing not mentioned above as required by MMCD and project specifications and all related works (complete).	
13	Miscellaneous Works including supply and installation of all other works necessary to construct the improvements described in the Drawings and Specifications not included in any other payment items listed herein.	

Bidder Name (please print)

Initials / Date

Schedule C – Optional Bid Items

Owner may electively delete any of the following Optional Bid Items, where prices indicated and shall include all additional general requirements, overhead and profit, duties and BC Provincial Sales Tax (PST) but exclusive of Goods and Service Tax (GST).

Item	Description	Total Price (\$)
1	Asphalt berms for jump track as indicated on sheets B-03 detail BM-01.	
2	Wood trellis as shown on landscape sheet L-02A detail 2/LD-03	
3	Asphalt pedestrian pathway as indicated on plans L-02A and L-02B.	
4		
5		
	Sub Total Part 2 Forwarded to Summary Sheet	

Bidder Name (please print)

Initials / Date

Schedule D – (Unit Rates for additional work)

All indicated line items shall be used and shall correspond to the descriptions in the Measurement and Payment Schedule. Pricing for items in this schedule are exclusive of GST. Additional line items may be added at the discretion of the Bidder.

NOTE: The below unit rates will be applied to any additional items.

ITEM NO.	DESCRIPTION	UNIT	UNIT COST
Note: The following units include all labour and materials to install in place – complete. Materials breakdown shown for convenience, contractor to confirm or amend if construction process requires an alternate approach.			
1	3.0m rail fence	Metre	
2	65mm asphalt path	Metre Squared	
3	Cast in place concrete path	Metre Squared	
4	Granular path	Metre Squared	
5	Asphalt pump track	Metre Squared	
6	Return trails	Metre Squared	
9	Hydroseeding	Metre Squared	
11	Revegetation Mix	Metre Squared	
16	Excavation with Offsite Disposal	Metre Cubed	
17	19 minus Structural Fill Material	Metre Cubed	
18	75mm minus Structural Fill Material	Metre Cubed	
19	Construction Fencing	Metre	
20	Erosion and Sediment Control Fencing	Metre	

END OF SECTION

Project/Contract: MACKENZIE BIKE PARK

From (Bidder): _____
 (Bidder name)

We, the above named Bidder, offer the alternative prices stated below. The effect on our base bid price stated in the Bid Form and the effect on the Contract Time, if any, is entered for each alternative. All alternative prices exclude Value Added Taxes. If there is no change to the base bid price for an alternative or if there is no change to the Contract Time for an alternative, we have so indicated. It is understood that:

1. the Owner may accept any of the alternatives and corresponding alternative prices in any order or combination, including all or none, as specified in the Instructions to Bidders,
2. the alternative prices will be taken into account in determining the lowest compliant bidder,
3. the alternatives and alternative prices are open for acceptance by the Owner for the same period of time as the base bid price,
4. the work of the Contract, the Contract Price, and the Contract Time will reflect the alternatives and alternative prices, if any, accepted by the Owner at the time of contract award, and
5. where applicable, alternative prices include the cost of coordinating all related Work and modifying adjacent or affected Work as required to integrate the Work of each alternative.

Item	Description of Alternative	Effect on Base Bid Price		Effect on Contract Time (in calendar days)	
		Add	Deduct	Add	Deduct
1.					
2.					
3.					
4.					
5.					

END OF SECTION

BIDDER'S REFERENCES

Provide (3) references of previously completed pump tracks and jump tracks. Provide any certifications that may pertain to the work provided.

Project Name, Value, and Year Completed	Description	Reference (phone and email)

BIDDER'S SENIOR SUPERVISORY STAFF AND EXPERIENCE

Name of Prime Contractor

Name	Position	Qualifications and Experience
	Project Manager	
	Project Superintendent	
	Safety Supervisor	

NOTE: Qualifications and experience (resumes) should be provided in detail on separate sheets attached to this page. Back-up capability and personnel should be indicated of each category of staffing.

Project/Contract: MACKENZIE BIKE PARK

From (Bidder): _____
(Bidder name)

We, the above named Bidder, have received bids from the Subcontractors or Suppliers named below for the items of work requested, and are prepared to accept these names for the performance of these items of work.

Item	Item of Work	Name of Subcontractor or Supplier
1.		
2.		
3.		
4.		
5.		

1.1 FORM OF CONTRACT

1. The form of Contract, including the Agreement, Definitions, and General Conditions is CCDC 2 - Stipulated Price Contract, subject to the modifications specified in Section 00 73 00- Supplementary Conditions.

1.2 CONTRACT COPYRIGHT AND AVAILABILITY

1. The CCDC form of Contract is a copyrighted document published by the Canadian Construction Documents Committee (CCDC). It is incorporated into these Bid Documents by reference. It is available for purchase from any CCDC document outlet. Refer to ccdc.org.

1.3 CONTRACT PREPARATION FOR SIGNING

1. The Consultant will prepare 2 (two) copies of the form of Contract for signing by the Contractor and the Owner after notice of award. Each copy will be comprised of the CCDC form of Contract with a CCDC copyright seal affixed, with a completed Agreement form, and with other Contract Documents referenced or appended.

END OF SECTION

1.1 INTENT

1. These Supplementary Conditions amend the General Conditions of CCDC 2 – Stipulated Price Contract as indicated below. Provisions not amended remain in full force and effect.

1.2 AMENDMENTS TO GENERAL CONDITIONS

Add new GC [] No progress payment to exceed 95% in any one category until substantial completion has been achieved.

Add new GC [] The Contractor is responsible for providing and coordinating all required testing.

Add new GC [] A Geotechnical Report on existing soil conditions has been included; however it is the bidders responsibility to determine how the soil conditions might affect the quoted price. The site can be made available to the contractor to carry out any sub-surface investigations they deem necessary.

Add new GC [] Construction survey layout will be provided by the Contractor.

Add new GC [] Notice of Project must be submitted to WorkSafeBC at least 24hrs prior to the start of the project.

END OF SECTION

1.1 CERTIFIED CHEQUE OR BANK DRAFT

1. The Contractor may provide, in lieu of the specified Performance Bond, security for performance of the Contract in the form of a certified cheque or bank draft for 10% of the Contract Price.
2. The certified cheque or bank draft shall be in favour of RDN.
3. Submit certified cheque or bank draft to the Owner within 15 days after contract award. Alternatively, and subject to mutual agreement, the Owner may retain as contract security a certified cheque or bank draft provided as bid security.
4. The certified cheque or bank draft will be deposited and the monies will not be returned to the Contractor, in whole or in part, until satisfactory performance of all of the Contactor's obligations under the Contract.
5. Provided the Contractor has satisfactorily fulfilled all of its obligations under the Contract, the Owner will return to the Contractor the monies provided as contract security without interest, no later than 30 days after Substantial Performance of the Work.

1.2 IRREVOCABLE BANK LETTER OF CREDIT

1. The Contractor may provide, in lieu of the specified Performance Bond or the specified certified cheque or bank draft, security for performance of the Contract in the form of an irrevocable bank letter of credit for 10% of the Contract Price.
2. The letter of credit shall be in favour of the RDN.
3. Submit the letter of credit to the Owner within 15 days after contract award .
4. The letter of credit shall have an expiry date no earlier than 24 months from the date of the RFP close.
5. The letter of credit will not be returned to the Contractor until satisfactory performance of all of the Contactor's obligations under the Contract.
6. Provided the Contractor has satisfactorily fulfilled all of its obligations under the Contract, the Owner will return the letter of credit to the Contractor no later than 30 days after Substantial Performance of the Work.

END OF SECTION

1.1 LIST OF CONTRACT DRAWINGS

1. Refer to the following pages for the List of Contract Drawings.

LIST OF CONTRACT DRAWINGS

TITLE	Sheets or Pages.	REVISION NO.	REVISION DATE
COVER PAGE	L-01	3	2022-04-04
WEST SITE PLAN	L-02A	3	2022-04-04
EAST SITE PLAN	L-02B	3	2022-04-04
GRADING PLAN	CV-01	3	2022-04-04
SECTION	LS-01	3	2022-04-04
SECTION	LS-02	3	2022-04-04
DETAILS	LD-01	3	2022-04-04
DETAILS	LD-02	3	2022-04-04
DETAILS	LD-03	3	2022-04-04
LANDSCAPE NOTES	LN-01	3	2022-04-04
LANDSCAPE NOTES	LN-02	3	2022-04-04
BIKE PARK NOTES	B-01	1	2022-04-04
BIKE PARK FEATURE PLAN	B-02	1	2022-04-04
BIKE PARK MATERIALS PLAN	B-03	1	2022-04-04
BIKE PARK MARKING PLAN	B-04	1	2022-04-04
BIKE PARK LAYOUT PLAN	B-05	1	2022-04-04
BIKE PARK LAYOUT PLAN	B-06	1	2022-04-04
BIKE PARK LAYOUT PLAN	B-07	1	2022-04-04
BIKE PARK LAYOUT PLAN	B-08	1	2022-04-04
BIKE PARK LAYOUT PLAN	B-09	1	2022-04-04
BIKE PARK GRADING AND DRAINAGE	B-10	1	2022-04-04
BIKE PARK GRADING AND DRAINAGE	B-11	1	2022-04-04
BIKE PARK SECTIONS	B-12	1	2022-04-04
BIKE PARK SECTIONS	B-13	1	2022-04-04
BIKE PARK SECTIONS	B-14	1	2022-04-04
BIKE PARK SECTIONS	B-15	1	2022-04-04
BIKE PARK SECTIONS	B-16	1	2022-04-04
BIKE PARK DETAILS	B-17	1	2022-04-04
BIKE PARK DETAILS	B-18	1	2022-04-04

1.2 CONTRACT SPECIFICATIONS

1. Refer to the following pages for the list of contract specifications. This list does not include the MMCD specifications required for civil works. Refer to drawings and the MMCD (latest edition) for those works.

TITLE	DATE
032000 CONCRETE REINFORCING	2022-04-04
033053 CAST IN PLACE CONCRETE	2022-04-04
061533 WOOD	2022-04-04
311100 CLEARING AND GRUBBING	2022-04-04
312310 EXCAVATION AND BACKFILL	2022-04-04
321217 ASPHALT PAVING	2022-04-04
321540 CRUSHED GRANITE PAVING	2022-04-04
323700 EXTERIOR SITE FURNISHINGS	2022-04-04
329113 GROWING MEDIUM	2022-04-04
329221 HYDRAULIC SEEDING	2022-04-04
329310 PLANTS AND PLANTING	2022-04-04

1.1 PRELIMINARY CONSTRUCTION SCHEDULE

1. Refer to the following pages for the Preliminary Construction Schedule.

The bidder should provide below a Preliminary Construction Schedule in bar chart format with major item descriptions and time. (Adjust table if Construction Schedule is not 13 weeks.)

ACTIVITY	CONSTRUCTION SCHEDULE IN WEEKS												
	1	2	3	4	5	6	7	8	9	10	11	12	13

1.1 GEOTECHNICAL REPORT AND INFORMATION

1. Refer to the following pages for the Geotechnical Report and Information.

1.1 TOPOGRAPHIC SURVEY

1. Refer to the following pages for the topographic survey.

Geotechnical Assessment



SoilTech
Consulting Ltd

1215 Babine Road
Prince George, BC V2N 6E1
250-301-5024
hans@soiltech.ca

To: Mason Tierney, Van Der Zalm + Associates
From: Hans Jorgensen, P. Eng.
Date: March 6, 2022
Project No.: 21-H-099
Re: Recommendations for the Mackenzie Bike Park Development

1. Introduction

Zan der Zalm + Associates (VDZ) has retained SoilTech Consulting Ltd. (SoilTech), on behalf of the District of Mackenzie (The Client), to carry out a geotechnical assessment and provide recommendations for the proposed bike park located on a lot extending between Mackenzie Boulevard and Skeena Drive (PID 011-569-379).

We have completed an assessment for the site including:

- A review of existing public data relevant to the geology and water conditions at each site.
- A field assessment including a test pit investigation on site.

Based on the assessment we have provided geotechnical recommendations for the following:

- General site preparation and grading
- Pavement structures
- Aggregates
- Subgrade preparation
- Frost protection
- Temporary excavations

2. Project and Site Descriptions

The preliminary plans provided (Drawing # L02, VDZ Project # RR2021-03) indicate the development will consist of several pathways surfaced in either gravel, asphalt, or concrete. There will also be a pump track and jump track. The two tracks are yet to be designed and are anticipated to be asphalt and dirt surfaced, respectively. There is also an area designated for a future playground. The areas between the park features and surrounding the pathways will be landscaped with a combination of grass and shrubs. Small knolls and a large berm will be constructed in the landscaped areas between the pathways. The existing treed area in the northwest corner of the lot will be left as is.

The lot generally slopes down at a very gentle gradient to the south. The lot has been previously cleared. Most of the lot is relatively cleared except the northwest area of the property where immature trees are present. Surficial Geology Mapping¹ for the area indicates the site lies within a unit of Glacial Drift which can be described as mainly thin till, gravel, sand, and silt layer over bedrock.

¹ (1974) *Surficial Geology and Landforms, Williston Lake Area, Scale 1:250,000*, Geological Survey of Canada, Map 1383A



3. Field Assessment and Reconnaissance

The field assessment was carried out on December 13, 2021 and consisted of seven (7) test pits (Figure 1). The test pits were excavated using a John Deere 160 LC Excavator (Nortek Contracting) under the supervision of our field personnel. SoilTech personnel observed and recorded the subsurface conditions found at each test pit location. The observed soils were classified in accordance with the Modified Unified Soil Classification System of Soils (MUCSS). Soil samples were collected at select depths and the samples were submitted to our laboratory for index tests. The test pits were backfilled with loose soil from the excavations following our review and sample collection. The property was blanketed in approximately 0.5 m of snow at the time of our investigation.



Figure 1. Test Pit locations shown on Google Earth Imagery.

4. Subsurface Conditions

Table 1 details the natural soil types encountered in each test pit. A thin layer of grass was observed at each location over natural soil or fill/disturbed soil. Natural Till was observed in each of the test pits consisting of primarily sand and silt (Table 1). Figure 2 shows the test pit locations where fill/ disturbed soil was encountered and the depth at which natural soil was encountered below the existing ground surface. No sloughing or groundwater was observed in any test pits.

Table 1. Observed Natural Soil Types and Locations

Soil Unit	Description	Locations
Till	Sand, silty, trace gravel, trace clay, compact to dense, damp, non-plastic, light brown	TP21-01, TP21-02, TP21-03, TP21-04, TP21-05, TP21-06, and TP21-07

The observed natural soil conditions were consistent with the anticipated conditions described in the surficial geology mapping. The observed soil conditions, ground water conditions, sampling depths, field measurements and index test results are detailed in the test pit logs in Appendix A. Detailed laboratory reports for the index tests are in Appendix B.



Figure 2. Depth of fill/disturbed soil in test pits shown on Google Earth Imagery.

5. Discussion and Recommendations

The site is suitable for the proposed structures with the following considerations.

- The natural soil will provide adequate support for the proposed pavement structures with proper subgrade preparation.
- The natural till found at the site is suitable for reuse as subgrade fill below pavement structure and common fill in landscaped areas.
- The natural soil has low permeability.
- The natural soil at the site is frost susceptible. Structures sensitive to frost heave will require protection measures such as ground insulation to protect them from damage caused by frost heave.

The following sections cover the items above in further detail.

5.1. General Site Preparation

Topsoil, undocumented fill, disturbed soils, soft fine-grained wet soils, and deleterious materials (organics, wood, and construction debris, etc.) should be removed below pavement structures and any other areas sensitive to settlement. General site grading should include considerations to slope the areas immediately next to pavement structures away from the pathway surface at a minimum 2% grade. The natural soil

found at the site has low permeability and site grading should prevent ponding water near the proposed pathways. To achieve the desired site grades and elevations, areas may have to be raised with common or subgrade fill.

Common fill can be used in landscaped areas. The native soil at the site may be suitable for common fill if adequately moisture conditioned for compaction. Alternatively, approved imported soil can be used. To minimize settlement common fill should be placed in uniform layers and compacted to 95% Standard Proctor Density (SPD) under acceptable moisture conditions.

5.2. Pavement Structures

The proposed bike pathways are primarily intended to support loads pedestrian and bike traffic with occasional use from maintenance vehicles. The pavement structures will consist of a flexible asphalt pavement, concrete, or High Fines Surfacing Aggregate (HFSA), over a layer of Crushed Base Coarse (CBC), over a layer of Select Granular Subbase (SGSB) installed over a prepared subgrade (Section 5.2.3). It is anticipated the subgrade will consist of fine-grained soil and implementation of a geotextile layer to separate the pavement structure aggregates from the subgrade soil is recommended (refer to Section 5.2.4).

The recommended pavement structures for the bike paths are detailed in Table 2. Use aggregates meeting the requirements detailed in Section 5.2.1 and asphalt meeting the specifications detailed in the current MoTI Standard Specifications for Highway Construction.

Table 2. Recommended Pavement Structures

Pavement Component	Asphalt Paths	Concrete Paths	Gravel Surfaced Paths
Mix C Hot Mix Asphalt	65 mm		
Cast in Place Concrete		100 mm	
High Fines Surfacing Aggregate			150 mm
Crushed Base Coarse (CBC)	150 mm	100 mm	
Select Granular Subbase (SGSB)	300 mm	300 mm	400 mm
Geotextile	Yes	Yes	Yes
Total	515 mm	500 mm	550 mm

Some of natural subgrade soils and fills with soil of similar consistency are frost susceptible and may heave. Typical frost for the area will penetrate deeper than the thickness of the proposed pavement structures. Providing good drainage combined with a uniform pavement structure and subgrade can help reduce the amount of differential frost heaving. Additionally, providing a thicker granular structure or use of insulation will help reduce the effects of frost heaving. On-going maintenance such as repairing transverse cracking can extend the life of the pavement.

5.2.1. Aggregates

Aggregates should be clean, tough, durable, and free of clay lumps and excessive flat and elongated pieces. Aggregates should withstand the deleterious effects of exposure to freeze-thaw, water, and general construction such as 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 and HFSA 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 3.

Table 3. Aggregate Gradations

Particle Size (mm)	Percent Passing		
	CBC ¹	SGSB	HFSA ¹
100	–	–	–
75	–	95 – 100	–
25	100	–	100
19	80 – 100	35 – 100	85 – 100
9.5	50 – 85	–	60 – 85
4.75	35 – 70	15 – 60	40 – 70
2.36	25 – 50	–	–
1.18	15 – 35	–	20 – 40
0.300	5 – 20	3 – 15	10 – 25
0.075	0 – 5	0 – 5	7 – 12

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

5.2.2. Pavement Structure Construction

Apply the following recommendations and specifications to the construction of the pavement structures:

- Place SGSB, CBC, and HFSA in a maximum 300 mm thick layers and compact to 100% SPD. Bring the soil to near optimum moisture content for compaction where required.
- 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 95% when comparing the in-situ density to the measured maximum 75 blow Marshall briquette density.

The pavement structures should be installed over an adequately prepared subgrades as detailed in the following section.

5.2.3. Subgrade Preparation

The prepared subgrade should consist of undisturbed natural soil or adequately constructed fill. The natural soil if properly moisture conditioned and compacted is suitable for subgrade fill. We recommend the following to prepare the subgrade:

- Remove any undocumented fill, organic soil, deleterious materials, soft wet fine-grained soil, and disturbed soil from below the proposed paved area. Extend the excavation beyond the edges of the pavement equal to the depth of the fill required below the pavement.
- Raise the grade of low areas to the design subgrade elevation with compacted soil that has 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.
- Compact the initial layers to 97% SPD and the final 300 mm of subgrade fill to 100% SPD. Bring the soil to near the optimum moisture content for compaction where required.
- Crown the subgrade at a minimum 2% slope away from the trail centerline.
- Proof-roll the subgrade and repair any soft areas prior to installing the pavement structure.
- Place a non-woven geotextile over the prepared surface if applicable (Section 5.2.4).

5.2.4. Geotextile

Implementing a non-woven geotextile over the subgrade if it consists of fine-grained soils will help improve the long-term performance of the pavement structure by separating the fine-grained subgrade from the granular material within the pavement structure. Separating the dissimilar materials prolongs the longevity, integrity, and function of the overall pavement structure. We recommend a medium non-woven geotextile that meet specified Minimum Average Roll Values (MARV) presented in Table 7. Refer to manufacturers' recommendation for installation and proper overlap lengths.

Table 7. Recommended Minimum Average Roll Values (MARV) for Nonwoven Geotextile

Property	ASTM Standard	MARV
Puncture Strength¹	D6241	>1375 N
Apparent Opening Size	D4751	0.60 mm max avg roll value
Tear Strength	D4533	>250 N
Elongation	D4632	>50%
Grab Tensile Strength	D4632	>700 N
Permittivity	D4491	0.05 sec ⁻¹
¹ Refer to AASHTO M288 Tables 1 & 3		

A non-woven geotextile is not required if placing the pavement structure over a subgrade consisting of sand or gravel with trace fines. If fine-grained soil (silt or clay) is encountered at the subgrade surface a non-woven geotextile should be installed to separate it from the pavement structure.

5.3. Frost Protection

Frost penetration depth is based on the air-freezing index and mean annual temperature for the site. For the Mackenzie, BC area the air freezing index is 1280 Degree-Days °C, the mean annual temperature is 2.1 °C. The frost penetration depth for the area is 2.4 m. Methods to protect elements sensitive to frost heave include:

- Removing the frost susceptible soil from below the element to 2.4 m depth (below final grade) and replacing it with non-frost susceptible soil such as SGSB or CBC.
- Using ground insulation.

Ground insulation requirements will vary by the structure and the grade preparation below it. We can provide a ground insulation detail by request if needed for either of the track elements or other elements that may require it.

5.4. Temporary Excavations

Temporary excavations may be required for construction of various elements of the development. We recommend using slopes of 1 Horizontal to 1 Vertical (1H:1V) or shallower for excavations in the natural soil. Measures should be taken to prevent erosion of side excavation slopes. Groundwater or surface water encountered during construction should be directed away from excavations. Prevent water ponding in excavations. Flatter excavation slopes may be required if very loose sandy, soft soil, fill, seepage, etc. is encountered in excavations or if unfavourable weather conditions are encountered. Consult a qualified engineer if such conditions are encountered or if excavation deeper than 5 m is required.

Care should be taken when excavating near all types of existing structures and foundations. Maintain a 2H:1V slope from the base of the structure to the base of excavations. If excavations are required to be closer to an existing structure a qualified engineer should be consulted as temporary construction support may be required.

6. Review and Quality Assurance

This assessment and our recommendations are based on preliminary plans provided for the development. 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 and are appropriate for the development. The field assessment was limited to the test pit locations. The observed conditions may not be representative of the entire site. If the conditions (i.e., soil, groundwater, etc.) encountered during construction differ from those in our assessment they should be reviewed, as alternate or additional recommendations may be required.

The subgrade preparation and pavement structure construction should be reviewed by a qualified engineer or technician. Testing should be completed on the subgrade and pavement structure fill to confirm adequate compaction has been achieved. The pavement structure aggregates should be tested to confirm the supplied aggregates meet the required gradation.

7. Closure

The information discussed in this report is based on SoilTech's interpretation and understanding of current site conditions and the referenced documents. This report has been completed for the exclusive use of the Client and their agents. We do not take responsibility 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.

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

Sincerely,

Reviewed by,



Mike Warner, G. I. T.

Hans Jorgensen, P. Eng.

Appendix A:

Test Pit Logs



ID Number

TP21-01



Client	District of Mackenzie	Contractor	Nortek Contracting
Project Number	21-H-099	Method	Excavation
Project Name	District of Mackenzie Bike Park	Equipment	Excavator
Project Location	Empty Lot, Mackenzie Boulevard, Mackenzie	Date Started	December 13, 2021
Logged By	M. Warner	Date Finished	December 13, 2021
BH/TP Location	See Figure 1 of Geotechnical Report	Ground Elevation	Existing Grade
Comments			

Depth (m)	Graphic Log	Stratigraphic Description	Sample Type	% Recovery	Blow Counts (N Value)	Pocket Pen (kPa)	Moisture Content (%)	Atterberg Limits		
								Plastic Limit	Liquid Limit	Plasticity Index
		OM: Organics and topsoil.								
0.5		SM: Sand, silty, trace gravel, trace clay, compact to dense (inferred), damp, moderate to strong platy structure, brown. (Till) Particle size analysis: Gravel 8.4%, Sand 47.3%, Silt/Clay 44.3%.	<input checked="" type="checkbox"/>				13			
1		Particle size analysis: Gravel 8.1%, Sand 51.2%, Silt/Clay 40.7%.	<input checked="" type="checkbox"/>				9			
1.5										
2		- Gravelly Particle size analysis: Gravel 27.8%, Sand 32.0%, Silt/Clay 40.2%	<input checked="" type="checkbox"/>				11			

- End of test pit at 2.1 m.
- No groundwater encountered.
- Test pit backfilled with excavated material.

Standard Penetration Slit Spoon Sampler (SPT)

Bulk/ Bag Sample



Stabilized Ground water



Groundwater At time of Drilling

ID Number **TP21-01**



Client	District of Mackenzie	Contractor	Nortek Contracting
Project Number	21-H-099	Method	Excavation
Project Name	District of Mackenzie Bike Park	Equipment	Excavator
Project Location	Empty Lot, Mackenzie Boulevard, Mackenzie	Date Started	December 13, 2021
Logged By	M. Warner	Date Finished	December 13, 2021
BH/TP Location	See Figure 1 of Geotechnical Report	Ground Elevation	Existing Grade
Comments			

Depth (m)	Graphic Log	Stratigraphic Description	Sample Type	% Recovery	Blow Counts (N Value)	Pocket Pen (kPa)	Moisture Content (%)	Atterberg Limits		
								Plastic Limit	Liquid Limit	Plasticity Index
		OM: Organics and topsoil.								
0.5		SM: Sand, silty, trace gravel, trace clay, compact to dense (inferred), damp, moderate to strong platy structure, brown. (Till)	☒				14			
1			☒				12			
1.5			☒				11			
2										

- End of test pit at 2.10 m.
- No groundwater encountered.
- Backfilled with excavated material.

☑ Standard Penetration Slit Spoon Sampler (SPT)

☒ Bulk/ Bag Sample



Stabilized Ground water



Groundwater At time of Drilling

ID Number

TP21-01



Client	District of Mackenzie	Contractor	Nortek Contracting
Project Number	21-H-099	Method	Excavation
Project Name	District of Mackenzie Bike Park	Equipment	Excavator
Project Location	Empty Lot, Mackenzie Boulevard, Mackenzie	Date Started	December 13, 2021
Logged By	M. Warner	Date Finished	December 13, 2021
BH/TP Location	See Figure 1 of Geotechnical Report	Ground Elevation	Existing Grade
Comments			

Depth (m)	Graphic Log	Stratigraphic Description	Sample Type	% Recovery	Blow Counts (N Value)	Pocket Pen (kPa)	Moisture Content (%)	Atterberg Limits		
								Plastic Limit	Liquid Limit	Plasticity Index
		OM: Organics and topsoil.								
0.5		Fill: Sand and silt, trace gravel, moist, inferred loose, high amount of disturbed organics.								
1		SM: Sand, silty, trace gravel, trace clay, compact to dense (inferred), damp, moderate to strong platy structure, brown. (Till) - minor seepage along bottom of fill/roots at 0.6 m.	<input checked="" type="checkbox"/>			1.3	25			
1.5			<input checked="" type="checkbox"/>			2.3	14			
2			<input checked="" type="checkbox"/>				15			

- End of test pit at 2.2 m.
- Minor seepage encountered at 0.6 m.
- Test pit backfilled with excavated material.

Standard Penetration Slit Spoon Sampler (SPT)

Bulk/ Bag Sample



Stabilized Ground water



Groundwater At time of Drilling

ID Number

TP21-04



Client	District of Mackenzie	Contractor	Nortek Contracting
Project Number	21-H-099	Method	Excavation
Project Name	District of Mackenzie Bike Park	Equipment	Excavator
Project Location	Empty Lot, Mackenzie Boulevard, Mackenzie	Date Started	December 13, 2021
Logged By	M. Warner	Date Finished	December 13, 2021
BH/TP Location	See Figure 1 of Geotechnical Report	Ground Elevation	Existing Grade
Comments			

Depth (m)	Graphic Log	Stratigraphic Description	Sample Type	% Recovery	Blow Counts (N Value)	Pocket Pen (kPa)	Moisture Content (%)	Atterberg Limits		
								Plastic Limit	Liquid Limit	Plasticity Index
0.0 - 0.1		OM: Organics and topsoil.								
0.1 - 0.5		Fill: Sand and silt, trace gravel, moist, inferred loose, high amount of disturbed organics.								
0.5 - 1.0		SM: Sand, silty, trace gravel, trace clay, compact to dense (inferred), damp, moderate to strong platy structure, brown. (Till)	<input checked="" type="checkbox"/>				12			
1.0 - 2.2			<input checked="" type="checkbox"/>				14			

- End of test pit at 2.2 m.
- No groundwater encountered.
- Test pit backfilled with excavated material.

Standard Penetration Slit Spoon Sampler (SPT)

Bulk/ Bag Sample



Stabilized Ground water



Groundwater At time of Drilling

ID Number

TP21-05



Client	District of Mackenzie	Contractor	Nortek Contracting
Project Number	21-H-099	Method	Excavation
Project Name	District of Mackenzie Bike Park	Equipment	Excavator
Project Location	Empty Lot, Mackenzie Boulevard, Mackenzie	Date Started	December 13, 2021
Logged By	M. Warner	Date Finished	December 13, 2021
BH/TP Location	See Figure 1 of Geotechnical Report	Ground Elevation	Existing Grade
Comments			

Depth (m)	Graphic Log	Stratigraphic Description	Sample Type	% Recovery	Blow Counts (N Value)	Pocket Pen (kPa)	Moisture Content (%)	Atterberg Limits		
								Plastic Limit	Liquid Limit	Plasticity Index
0.0 - 0.2		OM: Organics and topsoil.								
0.2 - 0.5		SM: Sand, silty, trace gravel, trace clay, compact to dense (inferred), damp, moderate to strong platy structure, brown. (Till)	<input checked="" type="checkbox"/>				11			
0.5 - 1.5			<input checked="" type="checkbox"/>				12			
1.5 - 2.2			<input checked="" type="checkbox"/>				12			

- End of test pit at 2.2 m.
- No groundwater encountered in test pit.
- Test pit backfilled with excavated material.

Standard Penetration Slit Spoon Sampler (SPT)

Bulk/ Bag Sample



Stabilized Ground water



Groundwater At time of Drilling

ID Number

TP21-01



Client	District of Mackenzie	Contractor	Nortek Contracting
Project Number	21-H-099	Method	Excavation
Project Name	District of Mackenzie Bike Park	Equipment	Excavator
Project Location	Empty Lot, Mackenzie Boulevard, Mackenzie	Date Started	December 13, 2021
Logged By	M. Warner	Date Finished	December 13, 2021
BH/TP Location	See Figure 1 of Geotechnical Report	Ground Elevation	Existing Grade
Comments			

Depth (m)	Graphic Log	Stratigraphic Description	Sample Type	% Recovery	Blow Counts (N Value)	Pocket Pen (kPa)	Moisture Content (%)	Atterberg Limits		
								Plastic Limit	Liquid Limit	Plasticity Index
		OM: Organics and topsoil.								
0.5		Fill: Sand and silt, trace gravel, moist, inferred loose, high amount of organics at 0.9 m.	☒				8			
1		SM: Sand, silty, trace gravel, trace clay, compact to dense (inferred), damp, moderate to strong platy structure, brown. (Till)	☒			1	10			
1.5						2.5				
2			☒				11			

- End of test pit at 2.4 m.
- No groundwater encountered.
- Test pit backfilled with excavated material.

☑ Standard Penetration Slit Spoon Sampler (SPT)

☒ Bulk/ Bag Sample



Stabilized Ground water



Groundwater At time of Drilling

ID Number **TP21-07**



Client	District of Mackenzie	Contractor	Nortek Contracting
Project Number	21-H-099	Method	Excavation
Project Name	District of Mackenzie Bike Park	Equipment	Excavator
Project Location	Empty Lot, Mackenzie Boulevard, Mackenzie	Date Started	December 13, 2021
Logged By	M. Warner	Date Finished	December 13, 2021
BH/TP Location	See Figure 1 of Geotechnical Report	Ground Elevation	Existing Grade
Comments			

Depth (m)	Graphic Log	Stratigraphic Description	Sample Type	% Recovery	Blow Counts (N Value)	Pocket Pen (kPa)	Moisture Content (%)	Atterberg Limits		
								Plastic Limit	Liquid Limit	Plasticity Index
0.0 - 0.5		OM: Organics and topsoil.								
0.5 - 0.7		Fill: Sand and silt, trace gravel, moist, inferred loose, high amount of organics at 0.7 m.								
0.7 - 1.0		SM: Sand, silty, trace gravel, trace clay, compact to dense (inferred), damp, moderate to strong platy structure, brown, some mottling. (Till)	<input checked="" type="checkbox"/>			2.7	12			
1.0 - 1.5			<input checked="" type="checkbox"/>			2.5	15			
1.5 - 2.5			<input checked="" type="checkbox"/>				10			

- End of test pit at 2.5 m.
- No groundwater encountered.
- Test pit backfilled with excavated material.

Standard Penetration Slit Spoon Sampler (SPT)

Bulk/ Bag Sample



Stabilized Ground water



Groundwater At time of Drilling

Appendix B:

Laboratory Soil Test Reports



Sieve Analysis

Reference ASTM C117 and C136

Project Details

Client District of Mackenzie c/o VDZ+A
Project Mackenzie Bike Park

Project No. 21-H-099
Sieve Report No. 1

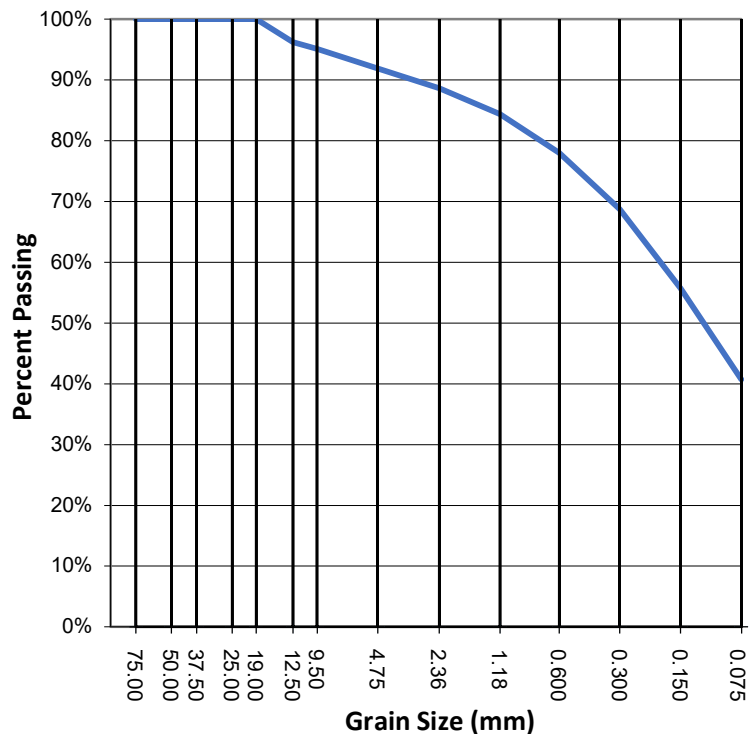
Sample Details

Supplier Existing
Source TP21-01
Location 1.2 m depth
Description Brown Silty Sand
Specification

Sampling Date December 13, 2021
Date Received December 14, 2021
Date Tested December 14, 2021
Sampled By MW
Tested By MW

Sieve Size (mm)	Percent Passing	Specifications	
		Min	Max
75.0	100.0%		
50.0	100.0%		
37.5	100.0%		
25.0	100.0%		
19.0	100.0%		
12.5	96.2%		
9.5	95.1%		
4.75	91.9%		
2.36	88.7%		
1.18	84.4%		
0.600	78.0%		
0.300	68.8%		
0.150	55.7%		
0.075	40.7%		

Moisture Content 10.0%



Comments

Sieve Analysis

Reference ASTM C117 and C136

Project Details

Client District of Mackenzie c/o VDZ+A
Project Mackenzie Bike Park

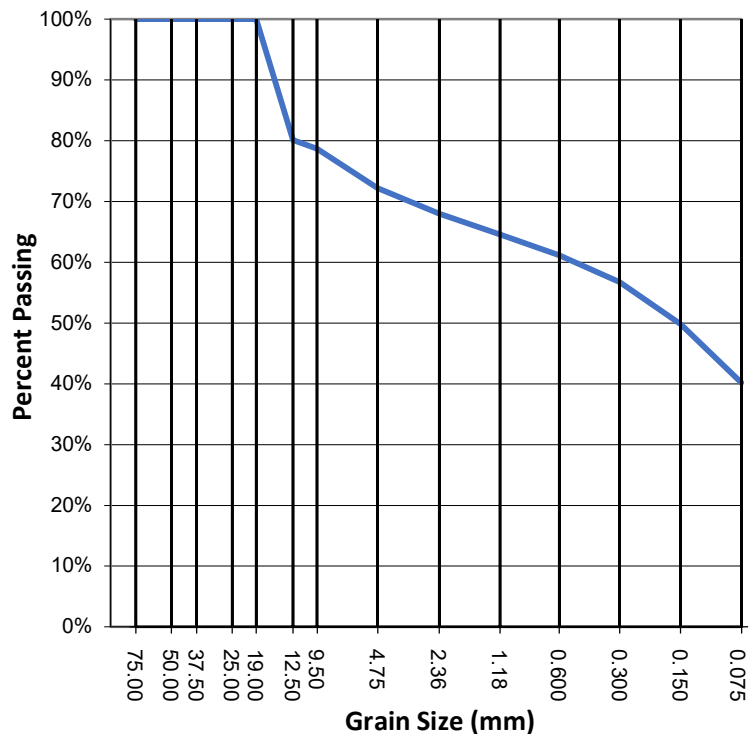
Project No. 21-H-099
Sieve Report No. 2

Sample Details

Supplier Existing
Source TP21-01
Location 2.1 m depth
Description Brown Silty Sand
Specification

Sampling Date December 13, 2021
Date Received December 14, 2021
Date Tested December 14, 2021
Sampled By MW
Tested By MW

Sieve Size (mm)	Percent Passing	Specifications	
		Min	Max
75.0	100.0%		
50.0	100.0%		
37.5	100.0%		
25.0	100.0%		
19.0	100.0%		
12.5	80.1%		
9.5	78.7%		
4.75	72.2%		
2.36	68.0%		
1.18	64.6%		
0.600	61.2%		
0.300	56.7%		
0.150	49.8%		
0.075	40.2%		



Moisture Content 9.4%

Comments

Sieve Analysis

Reference ASTM C117 and C136

Project Details

Client District of Mackenzie c/o VDZ+A
Project Mackenzie Bike Park

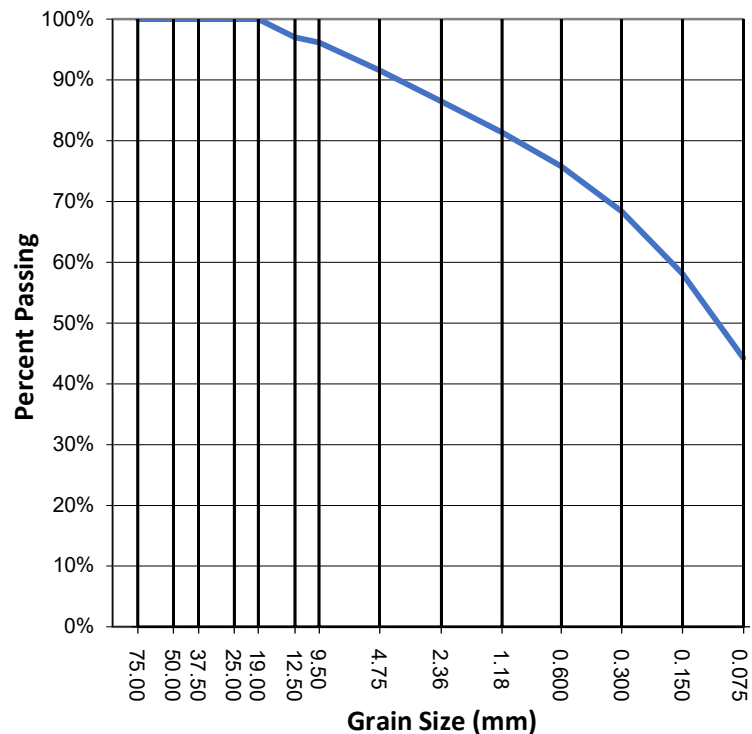
Project No. 21-H-099
Sieve Report No. 3

Sample Details

Supplier Existing
Source TP21-01
Location 0.6 m depth
Description Brown Silty Sand
Specification

Sampling Date December 13, 2021
Date Received December 14, 2021
Date Tested December 14, 2021
Sampled By MW
Tested By MW

Sieve Size (mm)	Percent Passing	Specifications	
		Min	Max
75.0	100.0%		
50.0	100.0%		
37.5	100.0%		
25.0	100.0%		
19.0	100.0%		
12.5	97.1%		
9.5	96.1%		
4.75	91.6%		
2.36	86.5%		
1.18	81.4%		
0.600	75.8%		
0.300	68.4%		
0.150	58.1%		
0.075	44.3%		



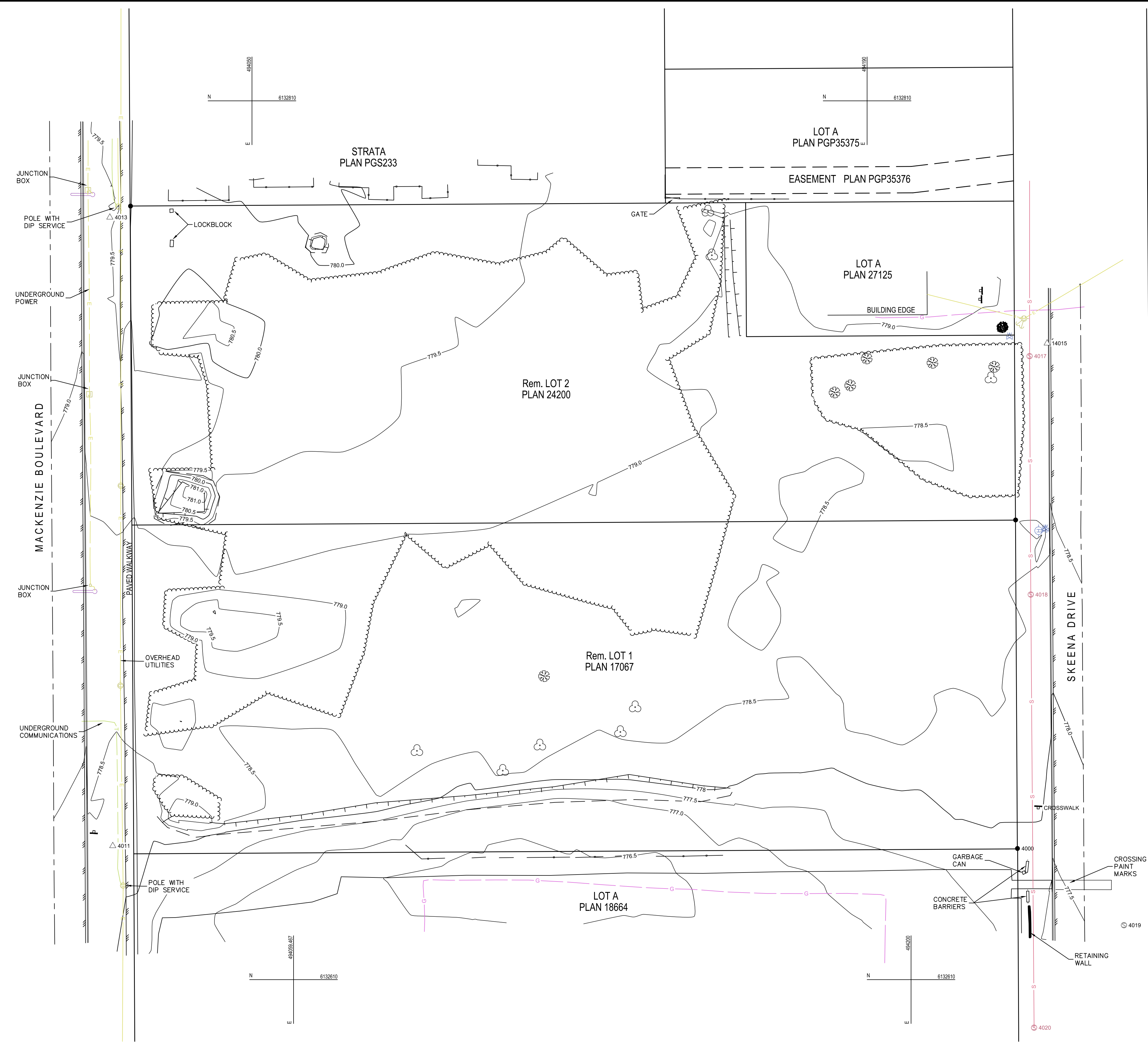
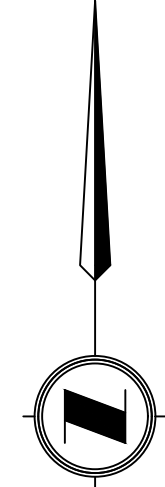
Moisture Content 14.9%

Comments

1.1 TOPOGRAPHIC SURVEY

1. Refer to the following pages for the topographic survey.

DATE: 2021-09-16, 12:41 FILE: J:\PROJECTS\2341\Mack_S\0000 - 68992617 Van Der Zalm & Assoc - Mackenzie Bike Park\03.0 Drawing\105 Strata\210915 - 6817 SITE PLAN.dwg
 McElhanney ANS/D - 2016-05-22



SURVEY CONTROL TABLE UTM NAD83(CSRS) ZONE 10				
POINT NAME	NORTHING	EASTING	ELEVATION	DESCRIPTION
3665	6132577.052	494228.380	776.985	BASE
4000	6132639.841	494224.225	777.771	FIP BS
4005	6132904.474	493990.101	778.919	MON_9882
4007	6132884.282	493752.235	775.995	MON
4011	6132640.434	494018.312	778.151	RP
4013	6132783.484	494017.651	779.452	RP
14015	6132754.822	494230.968	778.949	RP

- NOTES:
- DISTANCES ARE IN METRES UNLESS OTHERWISE NOTED
 - THE GRID COORDINATES ARE UTM ZONE 10, NAD83 (CSRS) AND ARE DERIVED FROM NATURAL RESOURCE CANADA'S PRECISE POINT POSITIONING SERVICE.
 - THIS PLAN SHOWS GRID MEASURED DISTANCES. TO COMPUTE GROUND LEVEL DISTANCES, DIVIDE GRID DISTANCES BY A COMBINED FACTOR OF 0.9994806.
 - ELEVATIONS ARE IN METRES AND ARE REFERRED TO GEODETIC DATUM CVD28 (HTZ.0) USING MONUMENT 245860, ELEVATION=778.92 METRES.
 - THIS PLAN REPRESENTS FIELD SURVEY CONDUCTED ON SEPTEMBER 7, 2021.
 - CONTOUR INTERVAL IS 0.5m.

LEGEND

- STANDARD IRON POST
- SURVEY CONTROL
- UTILITY POLE
- GUY ANCHOR
- JUNCTION BOX
- STREET LAMP DAVIT ON POLE
- HYDRANT
- WATER VALVE
- SANITARY MANHOLE
- POST MOUNTED SIGN
- TREE - CONIFEROUS
- TREE - DECIDUOUS
- TREE - ORNAMENTAL
- SHRUB

SANITARY MAIN

OVER HEAD WIRE

BURIED CABLE

BURIED PHONE SERVICE

UNDER GROUND GAS

FENCE

TREELINE

EDGE OF PAVEMENT

TOP OF BANK

BOTTOM OF BANK

MANHOLE AND CATCH BASIN DIAGRAM	
CB & MH NUMBER	MANHOLE AND CATCH BASIN SKETCH
4020	SANITARY MH LID ELEVATION 777.36 300mm Ø CONC PIPE INVERT ELEV=773.65
4018	SANITARY MH LID ELEVATION 778.40 300mm Ø CONC PIPE INVERT ELEV=774.45
4017	SANITARY MH LID ELEVATION 778.83 300mm Ø CONC PIPE INVERT ELEV=774.71
4019	STORM MH LID ELEVATION 777.42 400mm Ø CONC PIPE INVERT ELEV=774.32

Rev	Date	Description	Drawn	Design	App'd
A	2021-09-15	ISSUED FOR REVIEW	DMW	-	TD

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



McElhanney
McElhanney Associates Land Surveying Ltd.

Suite 12
556 North Nechako Road
Prince George BC
Canada V2K 1A1
T 250 561 2229

**PRELIMINARY
NOT FOR
CONSTRUCTION**

THIS DRAWING HAS NOT BEEN APPROVED
AND MAY CONTAIN ERRORS AND OMISSIONS

VAN DER ZALM & ASSOCIATES
102 - 355 KINGSWAY, VANCOUVER, BC V5T 3J7

**MACKENZIE BIKE PARK
EXISTING CONDITIONS
PLAN**

Drawing No. **VF-01**

Project Number 2341-06817-0 Rev. **A**

COPY ALL PRINTS BEARING PREVIOUS REVISION

Specifications – Table of Contents

To be read in conjunction with Master Municipal Construction Document
Volume II (2009, Platinum Edition, Vol. II) for Standard Specifications & Standard Detail Drawings
referenced but not listed below.

SECTION 01 11 00 SUMMARY OF WORK
SECTION 01 25 00 SUBSTITUTION PROCEDURES
SECTION 01 31 13 PROJECT COORDINATION
SECTION 01 32 16 CONSTRUCTION SCHEDULES
SECTION 01 33 00 SUBMITTAL PROCEDURES
SECTION 01 33 23 SHOP DRAWINGS
SECTION 01 35 29 WORK SITE SAFETY
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SECTION 01 41 00 REGULATORY REQUIREMENTS
SECTION 01 45 00 QUALITY CONTROL
SECTION 01 77 00 CLOSEOUT PROCEDURES
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SECTION 03 20 00 CONCRETE REINFORCING
SECTION 03 30 53 CAST IN PLACE CONCRETE
SECTION 06 15 33 WOOD
SECTION 31 11 00 CLEARING AND GRUBBING
SECTION 31 23 10 EXCAVATION AND BACKFILLING
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SECTION 32 91 13 GROWING MEDIUM
SECTION 32 92 21 HYDROSEEDING
SECTION 32 93 10 PLANTS AND PLANTING

PART 1 GENERAL

1.1 DESCRIPTION OF WORK

- .1 The Work shall include all labor, materials and equipment necessary for the construction of an asphalt pump track, dirt landings, granular paths, concrete paths, softscape and all required furnishings at Mackenzie BC.
- .2 The Work will include the above but is not limited to the preceding list and is more fully described in the tender documents (Drawings, Specification, Schedule of Prices) and listed below:
- .3 The Contractor shall ensure that they are qualified and experienced and have the necessary resources for the successful completion of the Work including any amendments as they may occur during the execution of the Work.

1.2 GUARANTEE

- .1 All workmanship and material is to be guaranteed for a period of 1 year from the date of substantial completion.
- .2 All work must be performed to the satisfaction of the Owner within the guarantee periods.

1.3 COORDINATION OF THE WORK

- .1 The Contractor shall be responsible for the coordination of the various portions of the Work in order that the combined Work will produce the desired result without delay.

1.4 SETTING OUT THE WORK

- .1 The Contractor shall be responsible for all setting out and leveling required for the project.
- .2 In setting out, include the preparation of grade sheets, installation of stakes, offsets, site rails and similar operations.
- .3 Is responsible for the correctness of the position, levels, dimensions and alignment of the work, and for the provision of necessary instruments and labor in connection therewith. Checking of the setting out of line or level by the Owner does not relieve the Contractor of his responsibility for the correctness thereof.
- .4 Carefully protect and preserve stakes, lot pins, marks and reference points, and replace if destroyed or removed.
- .5 Wherever necessary suspend Work temporarily to permit the Consultant and/or Owner to inspect and check the line and grade of any portion of the work.

1.5 PROTECTION

- .1 The Contractor will be responsible for protecting the work in each area, until work in that area has been completed, fully cured, and set; also for protecting other surfaces during

execution of work in accordance with the General Specifications.

- .2 Should the Work be closed down for any cause whatsoever, the Contractor shall assume all responsibility for its proper protection during such a period. He shall make suitable arrangements for protection of any of the Work liable to damage.

1.6 MAINTAIN TRAFFIC AND ACCESS

- .1 The Contractor or his subcontractors shall not close or obstruct access to public and shall not place or store materials or park vehicles or equipment on public roads without appropriate permits and/or a traffic management plan.

1.7 USE OF PREMISES

- .1 The Contractor shall confine apparatus, the storage of materials and the operations of workers to limits indicated by laws, ordinances, permits or by direction of the Owner, and shall not unreasonably encumber the site with his materials. The Contractor shall not load or permit to be loaded any part of the work with a weight that will endanger its safety. *The Contractor shall enforce instructions regarding signs, advertisements and prevention of fires, spills for hazardous materials etc.*
- .2 Confine activities relevant to the work to immediate areas. No fires, explosions or similar dangerous activities shall be permitted on Owner's property without Owner's permission.

1.8 STOLEN, LOST DAMAGED OR DESTROYED WORK

- .1 Unless otherwise agreed no security will be provided or compensation paid by the Owner for reasonable value material or work stolen, lost, damaged or destroyed until substantial completion.

1.9 EXISTING CONDITIONS AND SERVICES

- .1 It is the responsibility of the contractors to satisfy themselves by examination of the site of the work and existing conditions and materials which may be encountered on the site. It is the responsibility of the successful contractor to notify all agencies regarding the installation of any services in this contract and to obtain stakeouts and permits for the services.

1.10 DELIVERY AND STORAGE

- .1 Materials shall be handled and stored on the job in such a manner that no damage shall be done to the material. An area of the site shall be allocated by the Contractor for the storage of materials brought to the job by all Sub-contractors except materials to be stored under cover. The storage area shall be kept tidy at all times and no other part of the property shall be used.

- .2 Materials shall be protected from damage during handling, storage and installation.

1.11 OTHER CONTRACTS

- .1 Contracts arranged for the Owner, for other types of work may be in progress by more than one Contractor.
- .2 The Contractor must make early arrangements and be prepared with persons and materials to fully cooperate with the Contractor(s) of adjoining work.

1.12 PERMITS

- .1 The Contractor shall be responsible for obtaining and paying for any permits required for the performance of the work.
- .2 The Contractor shall obtain and pay for all permits and licenses, but not permanent easements, and shall give all notices, pay all fees, and comply with all laws, ordinances, rules and regulations bearing on the work. If the Contractor observes that drawings and specifications are at variance therewith, he shall promptly notify the Consultant and Owner in writing. If the Contractor performs any work knowing it to be contrary to such laws, ordinances, rules or regulations, and without such notice to the Owner and Consultant, he shall bear all costs arising from same.

1.13 HOUSEKEEPING

- .1 The Contractor shall be responsible for maintaining the work in a neat, clean and workmanlike manner at all times and for regular clean-up of the work to the satisfaction of the Owner.
- .2 Keep public streets, internal roads and other construction areas clean and free from mud. If it is necessary to haul wet material, use suitable watertight trucks. Clean up any internal or public roads as required and or when directed by the Owner.
- .3 Control dust by the use of water.

1.14 STARTUP MEETING

- .1 After the tender has been awarded, a meeting will be arranged between the Contractor and the Consultant to review construction methods and schedules. This meeting may be waived at the discretion of the consultant or Owner.

1.15 CLEANUP

- .1 The Contractor shall dispose of all rubbish and surplus materials and leave the site in a

neat and presentable condition, prior to Substantial Performance.

1.16 REINSTATEMENT

- .1 The Contractor shall be responsible for the reinstatement and repair of all items damaged as a result of the work. These include, but are not limited to, curbs, municipal sidewalks, and boulevards. Such repairs must be completed prior to Substantial Performance.

1.17 FINAL INSPECTION

- .1 Notify the Consultant when in the Contractor's opinion, the work has been substantially performed.
- .2 The Consultant will arrange a final inspection of the site between the Contractor and the City.

END OF SECTION

1.1 DEFINITION

- .1 In this Section "Substitution" means a *Product*, a manufacturer, or both, not originally specified in *Contract Documents* by proprietary name but proposed for use by *Contractor* in place of a *Product*, a manufacturer, or both, specified by proprietary name.

1.2 SUBSTITUTION PROCEDURES

- .1 *Contractor* may propose a Substitution wherever a *Product* or manufacturer is specified by proprietary name(s), unless there is accompanying language indicating that Substitutions will not be considered.
- .2 *Contractor* may propose a Substitution wherever a *Product* or manufacturer is specified by proprietary name(s) and accompanied by language such as "or equal", "or approved equal", or other similar words. Do not construe such language as an invitation to unilaterally provide a Substitution without *Consultant's* prior acceptance in writing. Do not order or install any Substitution without a *Supplemental Instruction* or *Change Order*.
- .3 Provided a proposed Substitution submission includes all of the information specified in this Section under Submission Requirements For Proposed Substitutions, *Consultant* will promptly review and accept or reject the proposed Substitution.
- .4 *Consultant* may accept a Substitution if satisfied that:
 - .1 the proposed substitute *Product* is the same type as, is capable of performing the same functions as, interfaces with adjacent work the same as, and meets or exceeds the standard of quality, performance and, if applicable, appearance and maintenance considerations, of the specified *Product*,
 - .2 the proposed substitute manufacturer has capabilities comparable to the specified manufacturer, and
 - .3 the Substitution provides a benefit to *Owner*.
- .5 If *Contractor* fails to order a specified *Product* or order a *Product* by a specified manufacturer in adequate time to meet *Contractor's* construction schedule, *Consultant* will not consider that a valid reason to accept a Substitution.
- .6 If *Consultant* accepts a Substitution and subject to *Owner's* agreement, the change in the *Work* will be documented in the form of either a *Supplemental Instruction* or *Change Order* as specified in Section 01 26 00 – Contract Modification Procedures.
- .7 If a Substitution is accepted in the form of a *Supplemental Instruction* or *Change Order*, *Contractor* shall not revert to an originally specified *Product* or manufacturer without *Consultant's* prior written acceptance.

1.3 SUBMISSION REQUIREMENTS FOR PROPOSED SUBSTITUTIONS

- .1 Include with each proposed Substitution the following information:
 - .1 Identification of the Substitution, including product name and manufacturer's name, address, telephone numbers, and web site.
 - .2 Reason(s) for proposing the Substitution.

- .3 A statement verifying that the Substitution will not affect the *Contract Price* and *Contract Time* or, if applicable, the amount and extent of a proposed increase or decrease in *Contract Price* and *Contract Time* on account of the Substitution.
- .4 A statement verifying that the Substitution will not affect the performance [or warranty] of other parts of the *Work*.
- .5 Manufacturer's *Product* literature for the Substitution, including material descriptions, compliance with applicable codes and reference standards, performance and test data, compatibility with contiguous materials and systems, and environmental considerations.
- .6 Product samples as applicable.
- .7 A summarized comparison of the physical properties and performance characteristics of the specified *Product* and the Substitution, with any significant variations clearly highlighted.
- .8 Availability of maintenance services and sources of replacement materials and parts for the Substitution, as applicable, including associated costs and time frames.
- .9 If applicable, estimated life cycle cost savings resulting from the Substitution.
- .10 Details of other projects and applications where the Substitution has been used.
- .11 Identification of any consequential changes in the *Work* to accommodate the Substitution and any consequential effects on the performance of the *Work* as a whole. A later claim for an increase to the *Contract Price* or *Contract Time* for other changes in the *Work* attributable to the Substitution will not be considered.

END OF SECTION

1. GENERAL COORDINATION

- .1 Coordinate all construction activities as required to ensure efficient and orderly installation of each part of the Work.
- .2 Where installation of one part of the Work is dependent on installation of other components, either before or after its own installation, schedule and coordinate construction activities in the sequence required to obtain the best results.
- .3 Where availability of space is limited, coordinate installation of different components to assure maximum accessibility for required maintenance, service and repair.
- .4 Make adequate provisions to accommodate items scheduled for later installation under separate contract or by the District of Mackenzie's own forces.

2. ADMINISTRATIVE PROCEDURES

- .1 Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and ensure orderly progress of the Work. Such administrative activities shall include, but not be limited to, the following:
 - .1 Preparation of schedules.
 - .2 Installation and removal of temporary facilities.
 - .3 Delivery and processing of submittals.
 - .4 Progress meetings.
 - .5 Contract acceptance procedures.

3. LEED COORDINATION

- .1 Not Applicable

4. GENERAL INSTALLATION PROVISIONS

- .1 Require the installer of each major component to inspect both the substrate and conditions under which Work is to be performed. Do not proceed until unsatisfactory conditions have been corrected in an acceptable manner.
- .2 Comply with manufacturer's installation instructions and recommendations, to the extent that those instructions and recommendations are more explicit or stringent than requirements contained in Contract Documents.
- .3 Inspect Materials immediately upon delivery and again prior to installation. Reject damaged and defective items.
- .4 Provide attachment and connection devices and methods necessary for securing Work. Secure Work true to line and level. Allow for expansion and building movement.
- .5 Provide uniform joint widths in exposed Work. Arrange joints in exposed Work to obtain the best visual effect. Refer questionable choices to the District of Mackenzie for final decision.
- .6 Install each component during weather conditions and project status that will ensure the best possible results. Isolate each part of the completed construction from incompatible material as necessary to prevent deterioration.
- .7 Coordinate temporary enclosures with required inspections and tests, to minimize the necessity of uncovering completed construction for that purpose.

- .8 Where mounting heights are not indicated, install individual components at standard mounting heights recognized within the industry for the particular application indicated. Refer questionable mounting height decisions to the District of Mackenzie for final decision.
- .9 Supervise construction activities to ensure that no part of the Work, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

5. CUTTING AND REMEDIAL WORK

- .1 Do the cutting and remedial work required to make the several parts of the Work come together properly.
- .2 Coordinate the Work to ensure that this requirement is kept to a minimum.
- .3 Cutting and remedial work shall be performed by specialists familiar with Materials affected and shall be performed in a manner to neither damage nor endanger the Work.

END OF SECTION

1. RELATED SECTIONS

- | | | |
|----|---|-------------------|
| .1 | Contract Time: | Section 01 11 05. |
| .2 | Work sequence: | Section 01 11 00. |
| .3 | Products supplied by District of Mackenzie: | Section 01 11 00. |
| .4 | Shop Drawings, Product Data and Samples: | Section 01 33 23. |

2. CONSTRUCTION PROGRESS SCHEDULE

- .1 Form of Schedule:
 - .1 Horizontal bar chart of sufficient size to clearly indicate all required information.
 - .2 Divide time into months, weeks and days. Identify first work day of each week.
 - .3 Allow space for revisions.
- .2 Content of Schedule:
 - .1 List and provide a separate bar for each activity.
 - .2 Indicate start and completion dates for each activity.
 - .3 Indicate projected percentage of completion for each activity as of first day of each month.
- .3 Progress Revisions:
 - .1 Keep schedule on site and up-to-date for duration of Contract.
 - .2 Indicate actual progress of work.
 - .3 Indicate major changes in scope.
 - .4 Revise projections of progress and completion as required.
- .4 Submissions:
 - .1 Within 15 Days after date of commencement of Contract, submit a copy of an initial construction schedule for the District of Mackenzie's review and acceptance at the pre-construction meeting.
 - .2 Revise and resubmit schedule as required by the District of Mackenzie.
 - .3 Submit copy of updated schedule when requested by the District of Mackenzie.

3. SUBSCHEDULES

- .1 Not Applicable

4. SUBMITTALS SCHEDULE

- .1 Prepare a schedule of shop drawings, product data and samples which are proposed to be submitted during the course of the Contract.
- .2 Submit Submittals Schedule for the District of Mackenzie's review within 30 days after date of commencement of Contract.
- .3 Not Applicable
- .4 After review, the District of Mackenzie may require submission of additional information or request that some proposed submittals not be submitted. Submittals not requested may not be processed or reviewed by the District of Mackenzie.
- .5 Submittals Schedule may be part of Construction Progress Schedule.

END OF SECTION

1. RELATED SECTIONS

.2	Construction Schedules	Section 01 32 16
.3	Shop Drawings, Product Data and Samples	Section 01 33 23
.4	Contractor Start-Up Report Forms	Section 01 33 35
.5	Product List	Section 01 62 35
.6	Closeout Procedure	Section 01 77 00
.7	Contract Acceptance Procedures	Section 01 77 20
.8	Operation and Maintenance Data and Manuals	Section 01 78 23

2. WORKERS' COMPENSATION BOARD CERTIFICATE

- .1 Before commencement of activities at the Place of the Work, obtain and submit to the District of Mackenzie a certificate of an account with the Workers' Compensation Board.

3. CASH FLOW FORECAST

- .1 Before submission of first application for payment, submit to the District of Mackenzie for approval, a forecast of approximate monthly progress payments for the duration of the Contract.
- .2 Submit revised cash flow forecasts as required as the work progresses or when requested by the District of Mackenzie.

4. PHOTOGRAPHS

- .1 Provide progress photographs taken every two weeks.
- .3 Take progress photos from two separate viewpoints determined by the District of Mackenzie;
- .4 In addition, illustrate any special operation, phase of construction or special detail of unusual interest for record purposes.
- .5 Take photos of primary entrance at substantial completion.
- .6 Forward one clear [200 mm x 250 mm colour print] [digital photographs in .jpg format, 150 dpi resolution minimum, 3 MB maximum] of each photograph along with monthly progress estimates. Provide the following information on each photograph:
- Date:
Name of Contractor:
Name of Project:
Set Number:
- .7 On completion of building, provide a photograph of the completed project, taken from the best possible viewpoint to show the completed project to its best advantage. Provide two 200 mm x 250 mm colour prints of the photograph.

- .8 All photographs will become the District of Mackenzie's property, to be used for whatever purposes the District of Mackenzie may desire.

5. CONCRETE MIX DESIGNS

- .1 The Contractor is to supply mix designs from their selected concrete plan to the Consultant for review of compliance with 03 30 00 Cast in Place Concrete. Mix designs must be submitted 2 weeks prior to the first pour.

6. SHOP DRAWINGS

- .1 Shop Drawings means technical data specially prepared for work of this Contract including drawings, diagrams, performance curves, data sheets, schedules, templates, patterns, reports, calculations, instructions, measurements and similar information not in standard printed form.
- .2 Submit shop drawings presented in a clear and thorough manner to appropriately illustrate the work.

7. PRODUCT DATA

- .1 Product Data means standard printed information describing materials, products, equipment and systems; not specially prepared for work of this Contract, other than the designation of selections.
- .2 Product data consisting of manufacturers' standard schematic drawings, catalogue sheets, diagrams, schedules, performance charts, illustrations and descriptive data will be accepted in lieu of shop drawings provided that:
 - .1 information not applicable to the work of this Contract is deleted, and
 - .2 standard information is supplemented with information specifically applicable to the work of this Contract.

8. SAMPLES

- .1 Samples means cuts or containers of materials or partial sections of manufactured or fabricated components which are physically identical to products proposed for use.

9. SUBMISSION OF SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

- .1 Review, date and sign, shop drawings, product data and samples, prior to submission.
- .2 Contractor is to submit Shop Drawings of all steel coping and rails per 05 50 00 Metal Fabrications.
- .3 Notify the District of Mackenzie, in writing, on the submission and at the time of submission, of deviations from requirements of Contract Documents.
- .5 Make corrections or changes to rejected submittals and resubmit, as specified for initial submittal.

- .6 The District of Mackenzie's review of submittals does not relieve Contractor from responsibility for errors and omissions, nor deviations from requirements of the Contract Documents.

10. TEST REPORTS

- .1 The contractor is to supply copies of all test reports, per 01 43 00 Quality Assurance, to the Consultant for materials as required by the specifications to be used in the construction of the Work, indicating that the materials comply with the Specifications. Have an approved testing laboratory make such tests at no expense to the Owner.
- .2 Submit test reports to the Consultant within ten (10) days of test completion.

11. AS-BUILT RECORD DRAWINGS

- .1 The Contractor must provide a set of white prints for RECORD drawing purposes.
- .2 Maintain record drawings and record accurately significant changes from Contract documents caused by site conditions, changes ordered by the Owner, and any other causes.
- .3 Mark all record drawing changes, on the white prints, in red ink.
- .4 Record the following information:
 - .1 Horizontal and vertical location of underground utilities or drainage structures and referenced to permanent surface improvement.
 - .2 Field changes of dimension and detail.
 - .3 Changes made by Change Order or Field Order.
 - .4 Any other changes
- .5 At completion of project and prior to final inspection submit completed As Built "record" drawings in digital format and three sets of white prints of said drawings to the Consultant.
- .6 Additional Information required:
 - .1 Names address and phone number of all sub-contractors and suppliers as requested.

12. SPECIAL TOOLS AND KEYS

- .1 On completion of the project and prior to Total Performance, submit to the Owner all special tools and keys required to operate, adjust, and maintain the equipment, locks, etc.

13. WARRANTIES

- .1 All manufacturer's warranties for supplementary equipment and site furnishings shall be submitted to the Owner upon substantial completion of the work.

END OF SECTION

1. INTENT

- .1 Submit to the DISTRICT OF MACKENZIE, for review, shop drawings, product data and samples called for by the Contract Documents and for such other items as the DISTRICT OF MACKENZIE may reasonably request.
- .2 Until submittal is reviewed, do not proceed with work involving the relevant product.

2. RELATED SECTIONS

- .1 Submittals Schedule: Section 01 32 16

3. SHOP DRAWINGS

- .1 Shop drawings means technical data specially prepared for work of this Contract; including drawings, diagrams, performance curves, data sheets, schedules, templates, patterns, reports, calculations, instructions, measurements and similar information not in standard printed form.
- .2 Present shop drawings in a clear and thorough manner to appropriately illustrate the work.
- .3 Identify field dimensions on drawings.
- .4 Identify shop drawings by appropriate references to sheet, detail, schedule or room numbers.
- .5 Maximum drawing size: 860 x 1120 mm.
- .6 Leave a clear space of 100 mm x 75 mm on each sheet of shop drawings for placement of the DISTRICT OF MACKENZIE's review stamp.
- .7 Submit one set of mylars for each required shop drawing.
- .8 At the time of providing Shop Drawings, the Contractor shall expressly advise the Consultant in writing of any deviations in a Shop Drawing from the requirements of the Contract Documents. The Consultant shall indicate the acceptance or rejection of such deviation expressly in writing.

4. PRODUCT DATA

- .1 Product data means standard printed information describing materials, products, equipment and systems; not specially prepared for work of this Contract, other than the designation of selections.
- .2 Clearly mark product data to identify products.
- .3 Manufacturer's standard schematic drawings, catalogue sheets, diagrams, schedules, performance charts, illustrations and descriptive data will be accepted in lieu of shop drawings provided that:
 - .1 information not applicable to work of this Contract is deleted, and
 - .2 standard information is supplemented with information specifically applicable to the work of this Contract.
- .4 Submit clear reproducible information as follows:
 - .1 One copy when product data is submitted as:
 - .1 Data sheets larger than 216 mm x 355 mm. Submit mylars.

- .2 Unbound data sheets 216 mm x 355 mm or smaller. Submit printed or photocopied sheets.
- .2 Two copies when product data is submitted as follows:
 - .1 Information which can not be duplicated using a photocopier with an automatic document feeder, such as bound or multi-fold information.
 - .2 Information containing photographs or other information that does not reproduce well on a commercial photocopier.

5. SAMPLES

- .1 Samples means cuts or containers of materials or partial sections of manufactured or fabricated components which are physically identical to products proposed for use and which establish minimum standards by which the work will be judged.
- .2 Label samples as to origin and intended use in the Work.

6. SUBMITTAL PREPARATION

- .1 Review, date and sign, shop drawings, product data and samples, prior to submission.
- .2 Determine and verify:
 - .1 Field measurements.
 - .2 Field construction criteria.
 - .3 Catalogue numbers and similar data.
 - .4 Conformance with Contract Documents.
- .3 Coordinate each submittal with requirements of work and Contract documents. Individual drawings will not be reviewed until all related shop drawing and product data are available.
- .4 Notify the DISTRICT OF MACKENZIE, in writing, on the submittal and at the time of submission, of deviations from requirements of Contract Documents.

7. SUBMISSION REQUIREMENTS

- .1 Make submittals sufficiently in advance of date that reviewed submittals will be required and in such sequence as to cause no delay in the Work.
- .2 Accompany submittals with transmittal letter, containing:
 - .1 Date.
 - .2 Project title and number.
 - .3 Contractor's name and address.
 - .4 Number of each shop drawing, product data and sample submitted.
 - .5 Other pertinent data.

- .3 Submittals shall include:
 - .1 Date and revision dates.
 - .2 Project title and number.
 - .3 Name of:
 - .1 Contractor.
 - .2 Subcontractor.
 - .3 Supplier.
 - .4 Manufacturer.
 - .5 Name of detailer when details not prepared by Contractor, sub-contractor, or supplier.
 - .4 Contractor's stamp, initialed or signed, certifying review of submittal, verification of field measurements, and compliance with Contract Documents.
- .4 Make corrections or changes to rejected submittals and resubmit, as specified for initial submission.

8. RESPONSIBILITY FOR ERRORS, OMISSIONS AND DEVIATIONS

- .1 The DISTRICT OF MACKENZIE's review of submittals does not relieve Contractor from responsibility for errors and omissions, nor deviations from requirements of the Contract Documents.

9. REPRODUCTION OF SUBMITTALS

- .1 After final review, the DISTRICT OF MACKENZIE will reproduce at his expense, the number of copies he requires, and return reviewed reproducible documents. Contractor shall reproduce at his expense the number of copies required for performance of the Work.

END OF SECTION

1. WORK SITE SAFETY - THIS CONTRACTOR IS "PRIME CONTRACTOR"

- .1 The Contractor shall, for the purposes of the *Occupational Health and Safety Act* (British Columbia), and for the duration of the Work of this Contract:
 - .1 be the "prime contractor" for the "work site", and
 - .2 do everything that is reasonably practicable to establish and maintain a system or process that will ensure compliance with the Act and its regulations, as required to ensure the health and safety of all persons at the "work site".
- .2 The Contractor shall direct all Subcontractors, Sub-subcontractors, Other Contractors, employers, workers and any other persons at the "work site" on safety related matters, to the extent required to fulfill its "prime contractor" responsibilities pursuant to the Act, regardless of:
 - .1 whether or not any contractual relationship exists between the Contractor and any of these entities, and
 - .2 whether or not such entities have been specifically identified in this Contract.

2. SAFETY PLAN / CERTIFICATE OF RECOGNITION (COR)

- .1 The Contractor shall maintain a valid safety plan OR a standard COR, COREL, or TLC for the duration of the Work of this Contract.

3. SUBMITTALS

- .1 Contractor to submit 2 copies of their Safety Plan to the District of Mackenzie within 15 days of Contract Acceptance.

4. SAFETY REQUIREMENTS

- .1 All safety-related incidents must be reported to the District of Mackenzie within 24 hours of occurrence.

END OF SECTION

PART 1 GENERAL

1.1 REFERENCES

- .1 Management and Disposal of Waste – provincial standard.

1.2 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00 – Submittal Procedures.

1.3 FIRES

- .1 Fires and burning of rubbish on site not permitted.

1.4 DISPOSAL OF WASTES

- .1 All waste must be disposed of in accordance with applicable municipal, provincial and federal standards.
- .2 Do not dispose of waste or volatile materials, such as mineral spirits, oil or paint thinner into waterways, storm or sanitary sewers.

1.5 DRAINAGE

- .1 Provide a temporary Erosion and Sediment Control Plan identifying type and location of erosion and sediment controls provided. Ensure plan includes monitoring and reporting requirements to ensure that control measures are in compliance with the Erosion and Sediment Control Plan, Federal, Provincial, and Municipal laws and regulations.
- .2 Provide temporary drainage and pumping required to keep excavations and site free from water.
- .3 Ensure pumped water into waterways, sewer or drainage systems is free of suspended materials.
- .4 Control disposal or runoff of water containing suspended materials or other harmful substances in accordance with local authority requirements.

1.6 SITE CLEARING AND PLANT PROTECTION

- .1 Protect trees on site and adjacent properties where indicated on tree protection plan or as per municipal bylaw.
- .2 Wrap trees adjacent to construction work and storage areas in burlap, and encase with protective framework as indicated on tree preservation plan or as per municipal bylaw.
- .3 Protect roots of designated trees to remain to dripline during excavation and site grading

to prevent disturbance or damage. Avoid unnecessary traffic, dumping, and storage of materials over root zones.

1.7 POLLUTION CONTROL

- .1 Take precautions as required by the Owner, the Ministry of the Environment, or other jurisdictional agency, with respect to filling or grading, planting and other silt causing, and around the existing storm sewer systems. Erect and maintain approved sediment control systems to the approval of above agencies and as per the erosion and sediment control plan, where indicated to protect sediment from being deposited into storm sewer systems.
- .2 Maintain temporary erosion and pollution control features installed under this Contract.
- .3 Control emissions from equipment to local authorities' emission requirements.
- .4 Prevent sandblasting and other extraneous materials from contaminating air and waterways beyond application area.
- .5 Cover or wet down dry materials and rubbish to prevent blowing dust and debris. Provide dust control for dust-generating activities including, but not limited to:
 - .1 Saw-cutting.
 - .2 Sandblasting.
 - .3 Topsoil placement.
- .6 Maintain sediment control systems during construction and remove accumulated deposits until completion of the Contract. Flush and clean any contamination to storm sewer systems to the approval of the Consultant prior to completion of the contract.
- .7 Remove sediment control systems by the completion of the contract.

1.8 NOTIFICATION

- .1 Owner or Consultant will notify Contractor in writing of observed noncompliance with Federal, Provincial or Municipal environmental laws or regulations, permits, and other elements of Contractor's Environmental Protection plan.
- .2 Contractor: after receipt of such notice, inform Consultant of proposed corrective action and take such action for approval by Consultant.
- .3 Do not take action until after receipt of written approval by Consultant.
- .4 Consultant will issue stop order of work until satisfactory corrective action has been taken.
- .5 No time extensions granted or equitable adjustments allowed to Contractor for such

suspensions.

Part 2 PRODUCTS

2.1 NOT USED

- .1 Not Used.

Part 3 EXECUTION

3.1 CLEANING

- .1 Waste Management: separate waste materials for reuse and recycling as available.
- .2 Ensure public waterways, storm and sanitary sewers remain free of waste and volatile materials disposal.

END OF SECTION

1. DEFINITIONS

- .1 Regulatory requirements means laws, by-laws, ordinances, rules, regulations, codes, orders of authorities having jurisdiction, and other legally enforceable requirements applicable to the Work and which are or become in force during the performance of the Work.

2. GENERAL

- .1 Comply with regulatory requirements.
- .2 Except as otherwise specified, apply for, obtain, and pay all fees associated with, permits, licenses, certificates, and approvals required by regulatory requirements and the Contract Documents, based on:
 - .1 regulatory requirements and fees in force on date of tender submission, and
 - .2 any change in regulatory requirements or fees scheduled to become effective after date of tender submission and of which public notice has been given prior to date of tender submission.
- .3 The District of Mackenzie will obtain permanent easements and rights of servitude which may be required for performance of the work.
- .4 Contractor shall give all notices required by regulatory requirements.

3. CONTRACT DOCUMENTS

- .1 Contractor shall not be responsible for verifying that Contract Documents comply with regulatory requirements. If Contract Documents are at variance therewith, or changes which require modification to Contract Documents are made to regulatory requirements, by authorities having jurisdiction, subsequent to date of tender closing, Contractor shall notify The District of Mackenzie in writing, requesting direction, immediately such variance or change becomes known to him. The District of Mackenzie may make changes required to Contract Documents, and any resulting change in Contract Price or Contract Time will be made in accordance with the General Conditions of Contract.
- .2 If Contractor fails to notify the District of Mackenzie in writing and obtain the District of Mackenzie's direction as required in paragraph 3.1 and performs work knowing it to be contrary to regulatory requirements, Contractor shall be responsible for and shall correct violations thereof and shall bear costs, expenses and damages attributable to his failure to comply with provisions of such regulatory requirements.

4. BUILDING CODE

- .1 Conform to and perform work in accordance with the respective Building Code, except as otherwise indicated in Contract Documents.

5. PERMITS

- .1 Development Permit: The District of Mackenzie will apply for, obtain, and pay for development permit if required.
- .2 Building Permit:
 - .1 Contractor shall apply for, obtain and pay for building permit and other permits required for the Work and its various parts.
 - .2 Contractor shall display the building permit and such other permits in a conspicuous location at the Place of the Work.

.3 Occupancy Permits:

- .1 Where required by authority having jurisdiction, Contractor shall apply for, obtain, and pay for occupancy permits, including partial occupancy permits.
- .2 Where Contract Document deficiencies are required to be corrected in order to obtain occupancy permits, including partial occupancy permits, the District of Mackenzie will issue appropriate instructions to correct the Work.
- .3 Turn occupancy permits over to the District of Mackenzie.

6. LOCAL CONDITIONS

- .1 Local conditions (such as fire bans) may have a bearing on the contractors work, completion dates may be extended with approval of the contract manager.

END OF SECTION

1. GENERAL

- .1 Testing and inspections will be required of all materials and works as called for in the specification sections.
- .2 The Contractor shall pay for all tests and inspections called for in the specifications, including but not limited to, concrete testing, compaction of backfill and soil testing.
- .3 The Owner may request and undertake additional testing of materials and construction for quality control. The Contractor shall ensure that the Owner's representative and testing agency shall have free right of access for purposes of inspection or sampling to any site, including plants or mills, where work is in progress producing materials for use in this project to permit the taking of samples and conducting tests.
- .4 The Owner shall pay for any tests additional to what is called for in the specifications.
- .5 Minimum testing requirements on this project include the following in addition to all tests identified above and in the individual specification sections.
 - .1 Concrete tests including:
 - a. At minimum one set of concrete tests taken from pours used in the completion of flatwork / walls / stairs / ledge work. Provide one additional set of concrete tests for every 50m³ of flatwork / wall, stair and ledge quantities. Concrete testing for flatworks, walls, stairs and ledges to consist of three concrete cylinders tested for compressive strength at 7, 14 and 28 days as well as tests for slump and air content.
 - b. Shotcrete will be tested by coring three core samples from a separate test panel created outside of the finished work. Test panel to be minimum 350mm x 350mm x 140mm thick. At minimum one test panel is to be built and three core samples are to be taken. One additional test panel and three additional core samples are to be completed for every 50m³ of shotcrete. Shotcrete testing to consist of three concrete cores tested for compressive strength at 7, 14 and 28 days.
 - .2 Concrete cylinder samples and shotcrete test panels to remain on site and be protected, in a manner and for duration as directed by the approved testing agency, during the course of the work to ensure identical environmental conditions of temperature and humidity while curing.
 - .3 Concrete cylinder samples to be labeled along with a reference plan in order to accurately trace the date of the pour and the project location for which they represent.
 - .4 Compaction tests including:
 - a. Subgrade shall be inspected and approved by a geotechnical engineer prior to placing any sub base or granular base material.
 - b. Sub base compaction test location points completed for every 100m².
 - c. Granular base compaction test location points completed for every 80m².
 - d. Compaction tests to be accompanied by a reference design layout plan.
 - .5 Provide original test results to the consultant within 10 days of test completion per 01 33 00 Submittal Procedures.
 - .6 Inspection panels for concrete work will be required prior to authorization for general concrete work within the skatepark. The Contractor and the contract administrator/Owner/Consultant shall agree to prepare one bank panel or one transition panel for review of shape and finish, or the Consultant may waive this requirement.

- .1 The Contractor may choose to construct the inspection panel within the contract area but may be required to
- .2 The consulting team may utilize a 'true' dimensional straight edge to check for consistent shape over the entire panel. A radius template may be used to check the shape of the transition panel. No discrepancy greater than 6mm over 2.4m will be acceptable.
- .3 Written approval from the consultant is required prior to additional concrete pours. Additional concrete poured without written approval of the inspection panels are done so at the risk of rejection.
- .4 The approved inspection panels will become the quality assurance standard for the remainder of the work.

2. REFERENCE STANDARDS

- .1 Within the text of these specifications, reference may be made to the following standards:
 - .1 ANSI - American National Standards Institute
 - .2 ASTM - American Society for Testing and Materials
 - .3 CGSB - Canadian General Standards Board
 - .4 CSA - Canadian Standards Association
 - .5 CAN - National Standard of Canada (published by CGSB)
 - .6 FM - Factory Mutual Engineering Corporation
 - .7 ULC - Underwriters Laboratories of Canada
- .2 The referenced standard and any amendments in force on the day of receipt of bids shall be applicable to the work during the duration of the Contract.

END OF SECTION

Part 1 General

1.1 DISPOSAL OF WASTE MATERIAL

- .1 Upon completion, remove all rubbish and waste from site an approved off site waste disposal facility. Coordinate the removal with all subtrades and/or suppliers. Leave site in clean condition.

1.2. SUBMITTALS

- .1 Certificates: Upon completion, obtain and submit to Owner all "Certificates of Approval" as issued by plumbing, electrical, or by any other inspection authority having jurisdiction over the site.
- .2 As Built Record Drawings: Upon completion, submit to Consultant and Owner completed as built record drawings, each bearing the Contractor's stamp of "approved correct", in accordance with 01 33 00 Submittal Procedures.
- .3 Adjusting Tools and Spare Parts: Provide necessary adjusting tools, wrenches, spares and the like as specified or required at no additional cost to Owner, in accordance with Section 01 33 00.

END OF SECTION 01 77 00

1. DESIGNATION OF PROJECT RECORD DOCUMENTS

- .1 Request from the District of Mackenzie at commencement of the Work the following documents to be designated and retained as project record documents:
 - .1 One copy of specifications manual(s):
 - .2 Two complete sets of Drawings.
 - .3 One set of all Addenda issued.

2. MAINTENANCE OF PROJECT RECORD DOCUMENTS

- .1 Store record documents in site office apart from documents used for construction.
- .2 Label each document "PROJECT RECORD" in neat, large printed letters.
- .3 Maintain record documents in a clean, dry and legible condition. Do not use record documents for construction purposes.
- .4 Keep record documents available for inspection by the District of Mackenzie.

3. RECORDING INFORMATION ON PROJECT RECORD DRAWINGS

- .1 Record information on cad drawings.
- .2 Use coloured erasable pencils to record information.
- .3 Use different colours to record information pertaining to each major system.
- .4 Record changes and variations from Contract Drawings concurrently with construction process. Do not conceal any work until required information is recorded.
- .5 Legibly mark project record drawings to record actual construction, including:
 - .1 Measured depths of foundation elements in relation to finished first floor datum.
 - .2 Measured horizontal and vertical locations of underground utilities and appurtenances. Reference locations to permanent surface improvements.
 - .3 Measured locations of internal utilities and appurtenances concealed in construction. Reference to visible and accessible features of construction.
 - .4 Field changes of dimension and detail.
 - .5 Changes to equipment layout and services.

4. SUBMISSION OF PROJECT RECORD DOCUMENTS

- .1 Prior to placing concrete slab, submit one set of project record drawings showing locations of:
 - .1 Site services.
 - .2 Underslab services, equipment and materials.
- .2 Submit balance of completed project record documents before or with application for Interim Acceptance of the Work.

- .3 Submit with each submission a covering letter including:
 - .1 Date of Submission.
 - .2 Project Title, Plan No. and Centre Code.
 - .3 Contractor's name, address and telephone number.

END OF SECTION