



THE CITY OF WINNIPEG

BID OPPORTUNITY

272-2007 BID OPPORTUNITY

ST. VITAL SKATEBOARD PARK PHASE 2

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PART B - BIDDING PROCEDURES

B1. CONTRACT TITLE

B1.1 ST. VITAL SKATEBOARD PARK PHASE 2

B2. SUBMISSION DEADLINE

B2.1 The Submission Deadline is 12:00 noon Winnipeg time, Thursday, May 24, 2007.

B2.2 Bids determined by the Manager of Materials to have been received later than the Submission Deadline will not be accepted and will be returned upon request.

B2.3 The Contract Administrator or the Manager of Materials may extend the Submission Deadline by issuing an addendum at any time prior to the time and date specified in B2.1.

B3. SITE INVESTIGATION

B3.1 Further to C3.1, the Bidder may view the Site without making an appointment.

B4. ENQUIRIES

B4.1 All enquiries shall be directed to the Contract Administrator identified in D3.1.

B4.2 If the Bidder finds errors, discrepancies or omissions in the Bid Opportunity, or is unsure of the meaning or intent of any provision therein, the Bidder shall notify the Contract Administrator of the error, discrepancy or omission, or request a clarification as to the meaning or intent of the provision at least five (5) Business Days prior to the Submission Deadline.

B4.3 Responses to enquiries which, in the sole judgment of the Contract Administrator, require a correction to or a clarification of the Bid Opportunity will be provided by the Contract Administrator to all Bidders by issuing an addendum.

B4.4 Responses to enquiries which, in the sole judgment of the Contract Administrator, do not require a correction to or a clarification of the Bid Opportunity will be provided by the Contract Administrator only to the Bidder who made the enquiry.

B4.5 The Bidder shall not be entitled to rely on any response or interpretation received pursuant to B4 unless that response or interpretation is provided by the Contract Administrator in writing.

B5. ADDENDA

B5.1 The Contract Administrator may, at any time prior to the Submission Deadline, issue addenda correcting errors, discrepancies or omissions in the Bid Opportunity, or clarifying the meaning or intent of any provision therein.

B5.2 The Contract Administrator will issue each addendum at least two (2) Business Days prior to the Submission Deadline, or provide at least two (2) Business Days by extending the Submission Deadline.

B5.2.1 Addenda will be available on the Bid Opportunities page at The City of Winnipeg, Corporate Finance, Materials Management Branch internet site at <http://www.winnipeg.ca/matmgt>.

B5.2.2 The Bidder is responsible for ensuring that he has received all addenda and is advised to check the Materials Management Branch internet site for addenda regularly and shortly before the Submission Deadline, as may be amended by addendum.

B5.2.3 The Bidder shall acknowledge receipt of each addendum in Paragraph 8 of Form A: Bid. Failure to acknowledge receipt of an addendum may render a Bid non-responsive.

B6. SUBSTITUTES

- B6.1 The Work is based on the Plant, Materials and methods specified in the Bid Opportunity.
- B6.2 Substitutions shall not be allowed unless application has been made to and prior approval has been granted by the Contract Administrator in writing.
- B6.3 Requests for approval of a substitute will not be considered unless received in writing by the Contract Administrator at least five (5) Business Days prior to the Submission Deadline.
- B6.4 The Bidder shall ensure that any and all requests for approval of a substitute:
- (a) provide sufficient information and details to enable the Contract Administrator to determine the acceptability of the Plant, Material or method as either an approved equal or alternative;
 - (b) identify any and all changes required in the applicable Work, and all changes to any other Work, which would become necessary to accommodate the substitute;
 - (c) identify any anticipated cost or time savings that may be associated with the substitute;
 - (d) certify that, in the case of a request for approval as an approved equal, the substitute will fully perform the functions called for by the general design, be of equal or superior substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the proposed Work schedule and the dates specified in the Supplemental Conditions for Substantial Performance and Total Performance;
 - (e) certify that, in the case of a request for approval as an approved alternative, the substitute will adequately perform the functions called for by the general design, be similar in substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the proposed Work schedule and the dates specified in the Supplemental Conditions for Substantial Performance and Total Performance.
- B6.5 The Contract Administrator, after assessing the request for approval of a substitute, may in his sole discretion grant approval for the use of a substitute as an "approved equal" or as an "approved alternative", or may refuse to grant approval of the substitute.
- B6.6 The Contract Administrator will provide a response in writing, at least two (2) Business Days prior to the Submission Deadline, only to the Bidder who requested approval of the substitute.
- B6.6.1 The Bidder requesting and obtaining the approval of a substitute shall be entirely responsible for disseminating information regarding the approval to any person or persons he wishes to inform.
- B6.7 If the Contract Administrator approves a substitute as an "approved equal", any Bidder may use the approved equal in place of the specified item.
- B6.8 If the Contract Administrator approves a substitute as an "approved alternative", any Bidder bidding that approved alternative may base his Total Bid Price upon the specified item but may also indicate an alternative price based upon the approved alternative. Such alternatives will be evaluated in accordance with B14.
- B6.9 No later claim by the Contractor for an addition to the Total Bid Price because of any other changes in the Work necessitated by the use of an approved equal or an approved alternative will be considered.

B7. BID COMPONENTS

- B7.1 The Bid shall consist of the following components:
- (a) Form A: Bid;
 - (b) Form B: Prices

- B7.2 Further to B7.1, the Bidder should include the written correspondence from the Contract Administrator approving a substitute in accordance with B6.
- B7.3 All components of the Bid shall be fully completed or provided, and submitted by the Bidder no later than the Submission Deadline, with all required entries made clearly and completely, to constitute a responsive Bid.
- B7.4 The Bid shall be submitted enclosed and sealed in an envelope clearly marked with the Bid Opportunity number and the Bidder's name and address.
- B7.4.1 Samples or other components of the Bid which cannot reasonably be enclosed in the envelope may be packaged separately, but shall be clearly marked with the Bid Opportunity number, the Bidder's name and address, and an indication that the contents are part of the Bidder's Bid.
- B7.5 Bidders are advised not to include any information/literature except as requested in accordance with B7.1.
- B7.6 Bidders are advised that inclusion of terms and conditions inconsistent with the Bid Opportunity document, including the General Conditions, may result in the Bid being determined to be non-responsive.
- B7.7 Bids submitted by facsimile transmission (fax) or internet electronic mail (e-mail) will not be accepted.
- B7.8 Bids shall be submitted to:
The City of Winnipeg
Corporate Finance Department
Materials Management Branch
185 King Street, Main Floor
Winnipeg MB R3B 1J1

B8. BID

- B8.1 The Bidder shall complete Form A: Bid, making all required entries.
- B8.2 Paragraph 2 of Form A: Bid shall be completed in accordance with the following requirements:
- (a) if the Bidder is a sole proprietor carrying on business in his own name, his name shall be inserted;
 - (b) if the Bidder is a partnership, the full name of the partnership shall be inserted;
 - (c) if the Bidder is a corporation, the full name of the corporation shall be inserted;
 - (d) if the Bidder is carrying on business under a name other than his own, the business name and the name of every partner or corporation who is the owner of such business name shall be inserted.
- B8.2.1 If a Bid is submitted jointly by two or more persons, each and all such persons shall identify themselves in accordance with B8.2.
- B8.3 In Paragraph 3 of Form A: Bid, the Bidder shall identify a contact person who is authorized to represent the Bidder for purposes of the Bid.
- B8.4 Paragraph 10 of Form A: Bid shall be signed in accordance with the following requirements:
- (a) if the Bidder is a sole proprietor carrying on business in his own name, it shall be signed by the Bidder;
 - (b) if the Bidder is a partnership, it shall be signed by the partner or partners who have authority to sign for the partnership;
 - (c) if the Bidder is a corporation, it shall be signed by its duly authorized officer or officers;

- (d) if the Bidder is carrying on business under a name other than his own, it shall be signed by the registered owner of the business name, or by the registered owner's authorized officials if the owner is a partnership or a corporation.

B8.4.1 The name and official capacity of all individuals signing Form A: Bid shall be printed below such signatures.

B8.4.2 All signatures should be witnessed, except where a corporate seal has been affixed.

B8.5 If a Bid is submitted jointly by two or more persons, the word "Bidder" shall mean each and all such persons, and the undertakings, covenants and obligations of such joint Bidders in the Bid and the Contract, when awarded, shall be both joint and several.

B9. PRICES

B9.1 The Bidder shall state a price in Canadian funds for each item of the Work identified on Form B: Prices.

B9.2 The quantities listed on Form B: Prices are to be considered approximate only. The City will use said quantities for the purpose of comparing Bids.

B9.3 The quantities for which payment will be made to the Contractor are to be determined by the Work actually performed and completed by the Contractor, to be measured as specified in the applicable Specifications.

B10. QUALIFICATION

B10.1 The Bidder shall:

- (a) undertake to be in good standing under The Corporations Act (Manitoba), or properly registered under The Business Names Registration Act (Manitoba), or otherwise properly registered, licensed or permitted by law to carry on business in Manitoba; and
- (b) be financially capable of carrying out the terms of the Contract; and
- (c) have all the necessary experience, capital, organization, and equipment to perform the Work in strict accordance with the terms and provisions of the Contract.

B10.2 The Bidder and any proposed Subcontractor (for the portion of the Work proposed to be subcontracted to them) shall:

- (a) be responsible and not be suspended, debarred or in default of any obligations to the City (a list of suspended or debarred individuals and companies is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Branch internet site at <http://www.winnipeg.ca/matmgt>).

B10.3 The Bidder and/or any proposed Subcontractor (for the portion of the Work proposed to be subcontracted to them) shall:

- (a) have successfully carried out Work similar in nature, scope and value to the Work; and
- (b) be fully capable of performing the Work required to be in strict accordance with the terms and provisions of the Contract; and
- (c) have a written workplace safety and health program if required pursuant to The Workplace Safety and Health Act (Manitoba).

B10.4 The Bidder shall submit, within three (3) Business Days of a request by the Contract Administrator, proof satisfactory to the Contract Administrator of the qualifications of the Bidder and of any proposed Subcontractor.

B10.5 The Bidder shall provide, on the request of the Contract Administrator, full access to any of the Bidder's equipment and facilities to confirm, to the Contract Administrator's satisfaction, that the Bidder's equipment and facilities are adequate to perform the Work.

B11. OPENING OF BIDS AND RELEASE OF INFORMATION

B11.1 Bids will be opened publicly, after the Submission Deadline has elapsed, in the office of the Corporate Finance Department, Materials Management Branch, or in such other office as may be designated by the Manager of Materials.

B11.1.1 Bidders or their representatives may attend.

B11.2 Following the submission deadline, the names of the Bidders and their Total Bid Prices (unevaluated, and pending review and verification of conformance with requirements) will be available on the Closed Bid Opportunities (or Public/Posted Opening & Award Results) page at The City of Winnipeg, Corporate Finance, Materials Management Branch internet site at <http://www.winnipeg.ca/matmgt>.

B11.3 After award of Contract, the name(s) of the successful Bidder(s) and the Contract Amount(s) will be available on the Closed Bid Opportunities (or Public/Posted Opening & Award Results) page at The City of Winnipeg, Corporate Finance, Materials Management Branch internet site at <http://www.winnipeg.ca/matmgt>.

B11.4 The Bidder is advised that any information contained in any Bid may be released if required by City policy or procedures, by The Freedom of Information and Protection of Privacy Act (Manitoba), by other authorities having jurisdiction, or by law.

B12. IRREVOCABLE BID

B12.1 The Bid(s) submitted by the Bidder shall be irrevocable for the time period specified in Paragraph 9 of Form A: Bid.

B12.2 The acceptance by the City of any Bid shall not release the Bids of the next two lowest evaluated responsive Bidders and these Bidders shall be bound by their Bids on such Work for the time period specified in Paragraph 9 of Form A: Bid.

B13. WITHDRAWAL OF BIDS

B13.1 A Bidder may withdraw his Bid without penalty by giving written notice to the Manager of Materials at any time prior to the Submission Deadline.

B13.1.1 Notwithstanding C23.3, the time and date of receipt of any notice withdrawing a Bid shall be the time and date of receipt as determined by the Manager of Materials.

B13.1.2 The City will assume that any one of the contact persons named in Paragraph 3 of Form A: Bid or the Bidder's authorized representatives named in Paragraph 10 of Form A: Bid, and only such person, has authority to give notice of withdrawal.

B13.1.3 If a Bidder gives notice of withdrawal prior to the Submission Deadline, the Manager of Materials will:

- (a) retain the Bid until after the Submission Deadline has elapsed;
- (b) open the Bid to identify the contact person named in Paragraph 3 of Form A: Bid and the Bidder's authorized representatives named in Paragraph 10 of Form A: Bid; and
- (c) if the notice has been given by any one of the persons specified in B13.1.3(b), declare the Bid withdrawn.

B13.2 A Bidder who withdraws his Bid after the Submission Deadline but before his Bid has been released or has lapsed as provided for in B12.2 shall be liable for such damages as are imposed upon the Bidder by law and subject to such sanctions as the Chief Administrative Officer considers appropriate in the circumstances. The City, in such event, shall be entitled to all rights and remedies available to it at law.

B14. EVALUATION OF BIDS

- B14.1 Award of the Contract shall be based on the following bid evaluation criteria:
- (a) compliance by the Bidder with the requirements of the Bid Opportunity (pass/fail);
 - (b) qualifications of the Bidder and the Subcontractors, if any, pursuant to B10 (pass/fail);
 - (c) Total Bid Price;
 - (d) economic analysis of any approved alternative pursuant to B6.
- B14.2 Further to B14.1(a), the Award Authority may reject a Bid as being non-responsive if the Bid is incomplete, obscure or conditional, or contains additions, deletions, alterations or other irregularities. The Award Authority may reject all or any part of any Bid, or waive technical requirements or minor informalities or irregularities, if the interests of the City so require.
- B14.3 Further to B14.1(b), the Award Authority shall reject any Bid submitted by a Bidder who does not demonstrate, in his Bid or in other information required to be submitted, that he is responsible and qualified.
- B14.4 Further to B14.1(c), the Total Bid Price shall be the sum of the quantities multiplied by the unit prices for each item shown on Form B: Prices.
- B14.4.1 If there is any discrepancy between the Total Bid Price written in figures, the Total Bid Price written in words and the sum of the quantities multiplied by the unit prices for each item, the sum of the quantities multiplied by the unit prices for each item shall take precedence.

B15. AWARD OF CONTRACT

- B15.1 The City will give notice of the award of the Contract or will give notice that no award will be made.
- B15.2 The City will have no obligation to award a Contract to a Bidder, even though one or all of the Bidders are determined to be responsible and qualified, and the Bids are determined to be responsive.
- B15.2.1 Without limiting the generality of B15.2, the City will have no obligation to award a Contract where:
- (a) the prices exceed the available City funds for the Work;
 - (b) the prices are materially in excess of the prices received for similar Work in the past;
 - (c) the prices are materially in excess of the City's cost to perform the Work, or a significant portion thereof, with its own forces;
 - (d) only one Bid is received; or
 - (e) in the judgment of the Award Authority, the interests of the City would best be served by not awarding a Contract.
- B15.3 Subject to B15.2, where an award of Contract is made by the City, the award shall be made to the responsible and qualified Bidder submitting the lowest evaluated responsive Bid.
- B15.3.1 Following the award of contract, a Bidder will be provided with information related to the evaluation of his Bid upon written request to the Contract Administrator.
- B15.4 Notwithstanding C4, the City will issue a Purchase Order to the successful Bidder in lieu of the execution of a Contract.
- B15.5 The Contract, as defined in C1.1, in its entirety shall be deemed to be incorporated in and to form a part of the Purchase Order notwithstanding that it is not necessarily attached to or accompany said Purchase Order.

PART C - GENERAL CONDITIONS

C0. GENERAL CONDITIONS

- C0.1 The *General Conditions for Construction* (Revision 2006 12 15) are applicable to the Work of the Contract.
- C0.1.1 The *General Conditions for Construction* are available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Branch internet site at <http://www.winnipeg.ca/matmgt>.
- C0.2 A reference in the Bid Opportunity to a section, clause or subclause with the prefix “**C**” designates a section, clause or subclause in the *General Conditions for Construction*.

PART D - SUPPLEMENTAL CONDITIONS

GENERAL

D1. GENERAL CONDITIONS

- D1.1 In addition to the *General Conditions for Construction*, these Supplemental Conditions are applicable to the Work of the Contract.

D2. SCOPE OF WORK

- D2.1 The Work to be done under the Contract shall consist of site redevelopment and modifications at the St. Vital Skateboard Park. St. Vital Park is located at the southeast intersection of Meadowood Drive and St. Anne's Road as shown on the drawings.
- D2.2 The major components of the Work are as follows:
- (a) Excavation, earthwork and grading
 - (b) Construction of an asphalt concrete pavement skateboard pathway
 - (c) Asphalt Patching
 - (d) Supply and installation of catch basin and land drainage sewers

D3. CONTRACT ADMINISTRATOR

- D3.1 The Contract Administrator is:
- Mr. Stefan Fediuk
Urban Designer / Landscape Architect
15 – 30 Fort Street
Winnipeg, Manitoba, R3C – 4X5
Telephone No. (204) 986 - 5597
Facsimile No. (204) 986 - 7524
- D3.2 At the pre-construction meeting, the Contract Administrator will identify additional personnel representing the Contract Administrator and their respective roles and responsibilities for the Work.

D4. CONTRACTOR'S SUPERVISOR

- D4.1 At the pre-construction meeting, the Contractor shall identify his designated supervisor and any additional personnel representing the Contractor and their respective roles and responsibilities for the Work.

D5. NOTICES

- D5.1 Except as provided for in C23.2.2, all notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the Contractor shall be sent to the address or facsimile number identified by the Contractor in Paragraph 2 of Form A: Bid.
- D5.2 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the City, except as expressly otherwise required in D5.3, D5.4 or elsewhere in the Contract, shall be sent to the attention of the Contract Administrator at the address or facsimile number identified in D3.1.
- D5.3 All notices of appeal to the Chief Administrative Officer shall be sent to the following address or facsimile number:

The City of Winnipeg
Chief Administrative Officer Secretariat
Attn: Chief Administrative Officer
Administration Building, 3rd Floor
510 Main Street
Winnipeg MB R3B 1B9
Facsimile No.: (204) 949-1174

- D5.4 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications required to be submitted or returned to the City Solicitor shall be sent to the following address or facsimile number:

The City of Winnipeg
Corporate Services Department
Legal Services Division
Attn: City Solicitor
185 King Street, 3rd Floor
Winnipeg MB R3B 1J1
Facsimile No.: (204) 947-9155

SUBMISSIONS

D6. AUTHORITY TO CARRY ON BUSINESS

- D6.1 The Contractor shall be in good standing under The Corporations Act (Manitoba), or properly registered under The Business Names Registration Act (Manitoba), or otherwise properly registered, licensed or permitted by law to carry on business in Manitoba, or if the Contractor does not carry on business in Manitoba, in the jurisdiction where the Contractor does carry on business, throughout the term of the Contract, and shall provide the Contract Administrator with evidence thereof upon request.

D7. SAFE WORK PLAN

- D7.1 The Contractor shall provide the Contract Administrator with a Safe Work Plan at least five (5) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract.
- D7.2 The Safe Work Plan should be prepared and submitted in the format shown in the City's template which is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Branch internet site at <http://www.winnipeg.ca/matmgt>.

D8. INSURANCE

- D8.1 The Contractor shall provide and maintain the following insurance coverage:
- (a) commercial general liability insurance, in the amount of at least two million dollars (\$2,000,000.00) inclusive, with The City of Winnipeg added as an additional insured, with a cross-liability clause, such liability policy to also contain a contractual liability, unlicensed motor vehicle liability, non-owned automobile liability and products and completed operations, to remain in place at all times during the performance of the Work and throughout the warranty period;
 - (b) automobile liability insurance for owned automobiles used for or in connection with the Work in the amount of at least two million dollars (\$2,000,000.00) at all times during the performance of the Work and until the date of Total Performance;
- D8.2 Deductibles shall be borne by the Contractor.

D8.3 The Contractor shall provide the Contract Administrator with a certificate(s) of insurance, in a form satisfactory to the City Solicitor, at least two (2) Business Days prior to the commencement of any Work but in no event later than seven (7) Calendar Days from notification of the award of Contract by Purchase Order.

D8.4 The Contractor shall not cancel, materially alter, or cause each policy to lapse without providing at least fifteen (15) Calendar Days prior written notice to the Contract Administrator.

D9. PERFORMANCE SECURITY

D9.1 If the Contract Price exceeds twenty-five thousand dollars (\$25,000.00), the Contractor shall provide and maintain performance security until the expiration of the warranty period in the form of:

- (a) a performance bond of a company registered to conduct the business of a surety in Manitoba, in the form attached to these Supplemental Conditions (Form H1: Performance Bond), in the amount of fifty percent (50%) of the Contract Price; or
- (b) an irrevocable standby letter of credit issued by a bank or other financial institution registered to conduct business in Manitoba and drawn on a branch located in Winnipeg, in the form attached to these Supplemental Conditions (Form H2: Irrevocable Standby Letter of Credit), in the amount of fifty percent (50%) of the Contract Price; or
- (c) a certified cheque or draft payable to "The City of Winnipeg", drawn on a bank or other financial institution registered to conduct business in Manitoba, in the amount of fifty percent (50%) of the Contract Price.

D9.1.1 Where the performance security is in the form of a certified cheque or draft, it will be deposited by the City. The City will not pay any interest on certified cheques or drafts furnished as performance security.

D9.2 The Contractor shall provide the City Solicitor with the required performance security within seven (7) Calendar Days of notification of the award of the Contract by way of Purchase Order and prior to the commencement of any Work on the Site.

D10. SUBCONTRACTOR LIST

D10.1 The Contractor shall provide the Contract Administrator with a complete list of the Subcontractors whom the Contractor proposes to engage (Form J: Subcontractor List) at least two (2) Business Days prior to the commencement of any Work on the Site but in no event later than seven (7) Calendar Days from notification of the award of Contract.

SCHEDULE OF WORK

D11. COMMENCEMENT

D11.1 The Contractor shall not commence any Work until he is in receipt of a Purchase Order from the Award Authority authorizing the commencement of the Work.

D11.2 The Contractor shall not commence any Work on the Site until:

- (a) the Contract Administrator has confirmed receipt and approval of:
 - (i) evidence of authority to carry on business specified in D6;
 - (ii) evidence of the workers compensation coverage specified in C6.15;
 - (iii) the Safe Work Plan specified in D7;
 - (iv) evidence of the insurance specified in D8;
 - (v) the performance security specified in D9;
 - (vi) the Subcontractor list specified in D10.

- (b) the Contractor has attended a pre-construction meeting with the Contract Administrator, or the Contract Administrator has waived the requirement for a pre-construction meeting.

D11.3 The City intends to award this Contract by May 31, 2007

D11.3.1 If the actual date of award is later than the intended date, the dates specified for Critical Stages, Substantial Performance, and Total Performance will be adjusted by the difference between the aforementioned intended and actual dates.

D12. SUBSTANTIAL PERFORMANCE

D12.1 The Contractor shall achieve Substantial Performance by July 13, 2007.

D12.2 When the Contractor considers the Work to be substantially performed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Substantial Performance. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be reinspected.

D12.3 The date on which the Work has been certified by the Contract Administrator as being substantially performed to the requirements of the Contract through the issue of a certificate of Substantial Performance is the date on which Substantial Performance has been achieved.

D13. TOTAL PERFORMANCE

D13.1 The Contractor shall achieve Total Performance by July 20, 2007.

D13.2 When the Contractor or the Contract Administrator considers the Work to be totally performed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Total Performance. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be reinspected.

D13.3 The date on which the Work has been certified by the Contract Administrator as being totally performed to the requirements of the Contract through the issue of a certificate of Total Performance is the date on which Total Performance has been achieved.

D14. LIQUIDATED DAMAGES

D14.1 If the Contractor fails to achieve Total Performance in accordance with the Contract by the day fixed herein for Total Performance, the Contractor shall pay the City five hundred dollars (\$500.00) per Working Day for each and every Working Day following the day fixed herein for Total Performance during which such failure continues.

D14.2 The amount specified for liquidated damages in D14.1 is based on a genuine pre-estimate of the City's damages in the event that the Contractor does not achieve Total Performance by the day fixed herein for same.

D14.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

CONTROL OF WORK

D15. JOB MEETINGS

D15.1 Regular weekly job meetings will be held at the Site. These meetings shall be attended by a minimum of one representative of the Contract Administrator, one representative of the City and one representative of the Contractor. Each representative shall be a responsible person capable of expressing the position of the Contract Administrator, the City and the Contractor respectively on any matter discussed at the meeting including the Work schedule and the need

to make any revisions to the Work schedule. The progress of the Work will be reviewed at each of these meetings.

D15.2 The Contract Administrator reserves the right to cancel any job meeting or call additional job meetings whenever he deems it necessary.

D16. PRIME CONTRACTOR – THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA)

D16.1 Further to C6.24, the Contractor shall be the Prime Contractor and shall serve as, and have the duties of the Prime Contractor in accordance with The Workplace Safety and Health Act (Manitoba).

FORM H1: PERFORMANCE BOND
(See D9)

KNOW ALL MEN BY THESE PRESENTS THAT

(hereinafter called the "Principal"), and

_____,
(hereinafter called the "Surety"), are held and firmly bound unto **THE CITY OF WINNIPEG** (hereinafter called the "Obligee"), in the sum of

_____ dollars (\$_____)

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

WHEREAS the Principal has entered into a written contract with the Obligee dated the

_____ day of _____, 20____, for:

BID OPPORTUNITY NO. 272-2007

ST. VITAL SKATEBOARD PARK PHASE 2

which is by reference made part hereof and is hereinafter referred to as the "Contract".

NOW THEREFORE the condition of the above obligation is such that if the Principal shall:

- (a) carry out and perform the Contract and every part thereof in the manner and within the times set forth in the Contract and in accordance with the terms and conditions specified in the Contract;
- (b) perform the Work in a good, proper, workmanlike manner;
- (c) make all the payments whether to the Obligee or to others as therein provided;
- (d) in every other respect comply with the conditions and perform the covenants contained in the Contract; and
- (e) indemnify and save harmless the Obligee against and from all loss, costs, damages, claims, and demands of every description as set forth in the Contract, and from all penalties, assessments, claims, actions for loss, damages or compensation whether arising under "The Workers Compensation Act", or any other Act or otherwise arising out of or in any way connected with the performance or non-performance of the Contract or any part thereof during the term of the Contract and the warranty period provided for therein;

THEN THIS OBLIGATION SHALL BE VOID, but otherwise shall remain in full force and effect. The Surety shall not, however, be liable for a greater sum than the sum specified above.

AND IT IS HEREBY DECLARED AND AGREED that the Surety shall be liable as Principal, and that nothing of any kind or matter whatsoever that will not discharge the Principal shall operate as a discharge or release of liability of the Surety, any law or usage relating to the liability of Sureties to the contrary notwithstanding.

IN WITNESS WHEREOF the Principal and Surety have signed and sealed this bond the

_____ day of _____, 20____.

SIGNED AND SEALED
in the presence of:

(Witness)

(Name of Principal)

Per: _____ (Seal)

Per: _____

(Name of Surety)

By: _____ (Seal)
(Attorney-in-Fact)

**FORM H2: IRREVOCABLE STANDBY LETTER OF CREDIT
(PERFORMANCE SECURITY)
(See D9)**

(Date)

The City of Winnipeg
Corporate Services Department
Legal Services Division
185 King Street, 3rd Floor
Winnipeg MB R3B 1J1

RE: PERFORMANCE SECURITY - BID OPPORTUNITY NO. 272-2007

ST. VITAL SKATEBOARD PARK PHASE 2

Pursuant to the request of and for the account of our customer,

(Name of Contractor)

(Address of Contractor)

WE HEREBY ESTABLISH in your favour our irrevocable Standby Letter of Credit for a sum not exceeding in the aggregate

_____. Canadian dollars.

This Standby Letter of Credit may be drawn on by you at any time and from time to time upon written demand for payment made upon us by you. It is understood that we are obligated under this Standby Letter of Credit for the payment of monies only and we hereby agree that we shall honour your demand for payment without inquiring whether you have a right as between yourself and our customer to make such demand and without recognizing any claim of our customer or objection by the customer to payment by us.

The amount of this Standby Letter of Credit may be reduced from time to time only by amounts drawn upon it by you or by formal notice in writing given to us by you if you desire such reduction or are willing that it be made.

Partial drawings are permitted.

We engage with you that all demands for payment made within the terms and currency of this Standby Letter of Credit will be duly honoured if presented to us at:

(Address)

and we confirm and hereby undertake to ensure that all demands for payment will be duly honoured by us.

All demands for payment shall specifically state that they are drawn under this Standby Letter of Credit.

Subject to the condition hereinafter set forth, this Standby Letter of Credit will expire on

(Date)

It is a condition of this Standby Letter of Credit that it shall be deemed to be automatically extended from year to year without amendment from the present or any future expiry date, unless at least 30 days prior to the present or any future expiry date, we notify you in writing that we elect not to consider this Standby Letter of Credit to be renewable for any additional period.

This Standby Letter of Credit may not be revoked or amended without your prior written approval.

This credit is subject to the Uniform Customs and Practice for Documentary Credit (1993 Revision), International Chamber of Commerce Publication Number 500.

(Name of bank or financial institution)

Per: _____
(Authorized Signing Officer)

Per: _____
(Authorized Signing Officer)

(See D10)

ST. VITAL SKATEBOARD PARK PHASE 2

[illegible]

PART E - SPECIFICATIONS

GENERAL

E1. APPLICABLE SPECIFICATIONS AND DRAWINGS

- E1.1 These Specifications shall apply to the Work.
- E1.2 *The City of Winnipeg Standard Construction Specifications* in its entirety, whether or not specifically listed on Form B: Prices, shall apply to the Work.
- E1.2.1 *The City of Winnipeg Standard Construction Specifications* is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Branch internet site at <http://www.winnipeg.ca/matmgt>.
- E1.2.2 The version in effect three (3) Business Days before the Submission Deadline shall apply.
- E1.2.3 Further to C2.4(d), Specifications included in the Bid Opportunity shall govern over *The City of Winnipeg Standard Construction Specifications*.
- E1.3 The following are applicable to the Work:

<u>Drawing No.</u>	<u>Drawing Name/Title</u>
S.82-C1	St. Vital Skateboard Park Phase II – Existing Conditions & Removals
S.82-C2	St. Vital Skateboard Park Phase II – Proposed Additions

E2. LOCATION OF WORK

- E2.1 The location of the Work is located at the southeast corner of the intersection of Meadowood Drive and St. Anne's Road.

E3. CONSTRUCTION FACILITIES AND STAGING

- E3.1 The Contactor shall be responsible for providing his own storage area for storage and handling of all his construction operations. The use of public right-of-ways will not be allowed.
- E3.2 Due to the nature of the Work and the requirement for the skateboard park to remain open during construction, asphalt Work, granular sub-base, excavation, and grading will have to be scheduled to coincide with the installation of the Skateboard components and occur in phases.
- E3.3 In addition to clause E3.2 above, temporary chain link fencing will be required to be erected around the construction zone for the duration of the Contract.
- E3.4 Barkman Concrete will be the Contractor responsible to supply and install skateboard components.
- E3.5 Construction of the Skateboard Park will have to be staged around the parameters listed:
- (a) Phase 1 (as identified on drawing)
 - (i) Removal of asphalt path, granular base for Skateboard Components
 - (ii) Installation and moving of Skateboard Components
 - (iii) Regrade berm enclosing Skateboard Components
 - (iv) Granular base course, asphaltting, patching, and sod repairs
 - (v) Installation of landscape rock
 - (b) Phase 2 (as identified on drawing)
 - (i) Initial grading, earthwork, granular base for asphalt and Skateboard Components

- (ii) Installation of Skateboard Components
 - (iii) Asphaltting, patching, and sod repairs (sodding)
- (c) Phase 3 (as identified on drawing)
 - (i) Moving of Skateboard Components
 - (ii) Asphaltting, patching, and sod repairs

E4. TRUCK WEIGHT LIMITS

- E4.1 The City shall not pay for any portion of Material which results in the vehicle exceeding the maximum gross vehicle weight allowed under *The City of Winnipeg Traffic By-Law*, unless such vehicle is operating under special permit.

E5. SITE ACCESS

- E5.1 Access to the Site will be determined at the pre-construction meeting. This access area shall be provided and maintained by the Contractor at his own expense and approved by the Contract Administrator.
- E5.2 The Contractor shall be restricted to the Site access location and route only so that there is a minimum of disturbance to the existing ground surface. Damage to areas beyond the marked route shall be repaired by and at the expense of the Contractor to the satisfaction of the Contract Administrator.
- E5.3 In accordance with E9, if the Contractor is required to access the Site crossing the City of Winnipeg boulevards, the Contractor will be required to obtain a "Crossing Permit" from the City of Winnipeg Public Works Department.

E6. TRAFFIC CONTROL AND MANAGEMENT

- E6.1 Further to clauses 3.6 and 3.7 of CW 1130-R1 "Site Requirements":
- (a) In accordance with the Manual of Temporary Traffic Control, the Contractor ("Agency" in the manual) shall make arrangements with the Traffic Services Section of the City of Winnipeg to place all temporary regulatory. The Contractor shall bear all costs associated with the placement of temporary traffic control devices by the Traffic Services Section of the City of Winnipeg in connection with the Works undertaken by the Contractor.
- E6.2 Should the Contractor be unable to maintain an existing access to a residence or business, he shall review the planned disruption with the business or residence and the Contract Administrator, and take reasonable measures to minimize the impact. The Contractor shall provide a minimum of 24 hours notification to the affected residence or business and the Contract Administrator, prior to disruption of access.

E7. TEMPORARY SECURITY FENCING

- E7.1 The Contractor shall be responsible to erect temporary fencing around skateboard Site and construction zones once Work starts.
- E7.2 Temporary fencing shall be chain link fencing 2.4 m in height or greater.
- E7.3 Fencing shall remain until Skateboard Components are installed and all final asphaltting is complete.
- E7.4 No separate measurement or payment will be made for Temporary Fencing. It shall be considered incidental to the Contract Work.

E8. SITE CONDITIONS

- E8.1 The Contractor will examine the Site and make themselves familiar with the existing conditions (both above and below grade) and nature of Work to be done.
- E8.2 Surface and sub-surface conditions shown on the drawings and included herein are provided for general information and variations there from will not affect the terms of the Contract.
- E8.3 The Contractor is responsible to determine the location of all underground utilities and obtain clearances prior to construction. Underground structures as shown on the drawings are based on the best information available but no guarantee is given that all existing utilities are shown or that given locations are exact.

E9. PERMITS, NOTICES, LICENSES, CERTIFICATES, LAWS AND RULES

- E9.1 Further to GC:6.12, the Contractor shall give all necessary notices, obtain all necessary permits and pay all fees in order that the Work may be carried out. The Contractor shall submit all plans required by any inspection authority and obtain approval of same before proceeding with the Work, and pay any cost attached to the inspection of such plans.
- E9.2 The Contractor shall comply with all laws, ordinances, rules and regulations that would relate to the Work.
- E9.3 All notices, consents, approvals, statements, authorizations, documents or other communications to the City shall be submitted to the Contract Administrator.
- E9.4 All Work shall be performed in compliance with the Manitoba Workplace Health and Safety Act.
- E9.5 All Work shall be performed in compliance with the Manitoba Workplace Health and Safety Fall Protection guidelines.
- E9.6 The Contractor and Subcontractors must be fully aware of all Work involving hazardous materials. All Work must be performed in compliance with the Manitoba Department of Labour Workplace Health and Safety Guidelines and all other applicable codes. The Contractor is responsible for the immediate notification to the Contract Administrator of his/her encountering of suspected hazardous material during their course of Work.

E10. DAMAGE TO EXISTING STRUCTURES AND PROPERTY

- E10.1 Further to GC: 17, all necessary precautions shall be exercised by the Contractor so as not to remove, disturb, or damage any existing trees, shrubs, sod, pavements, streets, roads, boulevards, poles, hydrants, water pipes, gas pipes, electrical wires, cables, conduits, sewers or other existing facilities and equipment at the Site of the Work. For all damage incurred thereto in the performance of the Work, the Contractor shall upon instructions from and to the satisfaction of the Contract Administrator, either replace and repair such damage, whichever may be deemed necessary in the opinion of, and acceptable to, the Contract Administrator. The cost of which shall be borne entirely by the Contractor.
- E10.2 The Contractor shall also indemnify and save harmless the City from all claims made directly or indirectly against it in respect to any such damage.
- E10.3 The Contractor's operations shall be limited to the minimum area necessary for undertaking the Work and he shall be responsible for all damage resulting from his Work on private property. The Contractor shall take such measures as are necessary to ensure safe and convenient pedestrian ingress and egress is maintained to private properties while he is working near them.
- E10.4 Any damage caused by the negligence of the Contractor or his Sub-Contractors to the adjacent works or properties, shall be promptly repaired by him at his own expense, to the satisfaction of the Contract Administrator.

E11. PROTECTION OF TREES

- E11.1 The Contractor shall take the following precautionary steps to avoid damage from his construction activities to existing Boulevard trees within the limits of the construction area:
- (a) The Contractor shall not stockpile materials and soil or park vehicles and equipment on boulevards within 2 metres of trees
 - (b) Contract Administrator shall identify the mature tree trunks that shall be strapped with 25 x 150 x 2400 (1" x 6" x 8') wood planks. Smaller trees shall be similarly protected using appropriately sized wood planks.
 - (c) Excavations shall be carried out in such a manner so as to minimize damage to existing tree branches. Where roots must be cut to facilitate an excavation they shall be neatly pruned at the face of the excavation and coated with an appropriate wound dressing to prevent infection.
 - (d) Work on Site shall be carried out in such a manner so as to minimize damage to existing tree branches. Where damage to tree branches does occur, the Contractor shall neatly prune the damaged branches and coat them with an appropriate wound dressing to prevent infection.
 - (e) Operation of equipment within the drip-line of the trees or shrubs shall be kept to a minimum to perform Work. Equipment shall not be parked, repaired or refuelled; construction materials shall not be stored, and earth materials shall not be stockpiled within the drip-lines of the trees. The drip-line of the tree shall be considered to be the ground surface directly beneath the tips of the outermost branches. The Contractor shall ensure that the operations do not cause flooding or sediment deposition on areas where trees are located.
- E11.2 All damage to existing trees caused by the Contractor's construction activities shall be repaired to the requirements and satisfaction of the City of Winnipeg, Parks and Recreation Department, Forestry Branch.
- E11.3 Any tree pruning required by the Contractor to successfully complete the Work will be done at his own expense and to the guidelines set forth by the City of Winnipeg Forestry Department.
- E11.4 No separate measurement or payment will be made for protection of trees. It shall be considered incidental to the Contract Work.
- E11.5 Elm trees cannot be trimmed between April 1 and July 31, inclusive.

E12. TEMPORARY UTILITIES

- E12.1 Further to GC:6.12, the Contractor shall make his own arrangements in connection with the temporary use of lighting, power, gas, sewer, water or other utilities, and pay all costs in connection therewith.
- E12.2 All necessary permits, fees and other like expenses as well as the cost of temporary connections to existing facilities shall be arranged and paid for by the Contractor.

E13. LAYOUT OF WORK

- E13.1 The Contractor will set control lines and bench marks by means of stakes, buoys or marks and the Contractor shall make the completed works conform to the lines and marks thus indicated. The Contractor shall furnish all other lines and levels required. The Contractor shall be responsible for the careful preservation of all stakes and marks so set whether relating to his own or to other Work. Care must be taken that the Contract Administrator be notified immediately of the disturbance of any such stakes or marks; the cost of correcting any errors arising out of neglect of the Contractor or his agent or his employees, to so notify the Contractor Administrator shall be borne entirely by the Contractor, as well as the cost of replacing any disturbed stakes or marks.

E13.2 All layout Work shall be inspected and approved by the Contract Administrator prior to construction.

E13.3 Before commencing Work the Contractor shall satisfy himself as to the meaning and correctness of all stakes and marks and no claims shall be entertained by the City of Winnipeg on account of any alleged inaccuracies. If any error is suspected in the plans, specifications or the directions of the Contract Administrator, Work shall be discontinued until the errors are rectified, but no claims shall be made on account of any delay occasioned thereby.

E14. SITE RESTORATION

E14.1 Total Performance of the Work shall not be attained until the Contractor has cleaned up the Site and has removed all plant, tools, equipment, waste, debris and surplus foundation earth to the satisfaction of the Contract Administrator. Unless otherwise specified, the Contractor shall restore all areas of the Site beyond the established limit of Work, which have been disturbed by the Contractor's operations to as good as or better than the original condition to the satisfaction of the Contract Administrator. The Contractor shall pay all costs associated with this Work.

E15. EXCAVATION FOR NEW SKATEBOARD PATHWAY AND EXISTING SKATEBOARD PARK MODIFICATIONS

E15.1 Description

- (a) Excavation will be done in accordance the City of Winnipeg's Standard Construction Specification CW 3110-R10 – "Sub-Grade, Sub-Base and Base Course Construction".
- (b) Excavation will be understood to include removal of all existing insitu material to a depth of 375 mm (15") below finished design grade for the new skateboard pathway and any additional skateboard components pads as shown on the drawings.
- (c) Excavation will also be understood to include removal of existing berm as shown on the drawings. Excavate down to match new skateboard pathway grade.
- (d) Excavation will also be understood to include the saw cutting and removal of existing asphalt as well as insitu material for the areas to be modified and resurfaced on the existing skateboard park.

E15.2 Construction Methods

- (a) Excavation will be performed as outlined in CW 3110 – item 3.2 – "Excavation".
- (b) All excavated material will be removed, hauled and disposed of off-site to the satisfaction of the Contract Administrator.
- (c) Any existing pavement that will be required to be removed will be first saw cut for the full depth of the pavement prior to the demolition and removal operations. All costs in connection with saw cutting are incidental and shall be included in the unit price bid for excavation.

E15.3 Measurement and Payment

- (a) Measurement and Payment for excavation will be on a volume basis paid at the Contract Unit Price per cubic metre for "Excavation and Grading (insitu material and existing asphalt)".

E16. SUB-GRADE COMPACTION

E16.1 Description

- (a) Sub grade compaction will be done in accordance with City of Winnipeg's Standard Construction Specification CW 3110-R10 - "Sub-Grade, Sub-Base and Base Course Construction".

E16.2 Construction Methods

- (a) Sub-grade compaction will be performed as outlined in CW 3110 - item 3.3 – “Preparation of Sub-Grade and Placement of Sub-Base material.
- (b) Sub-grade shall be free of any fibrous organic, softened and disturbed soil. The prepared sub-grade shall be proof rolled with a heavy sheep’s foot roller (min 25 passes) and inspected by the Contract Administrator to detect for any soft spots prior to the placement of overlying granular fills.

E16.3 Measurement and Payment

- (a) Measurement and Payment for sub-grade compaction will be on an area basis paid for at the Contract Unit Price per square metre for “Sub-Grade Compaction”.

E17. CRUSHED LIMESTONE SUB-BASE COURSE MATERIAL

E17.1 Description

- (a) Crushed limestone sub-base material will be supplied and installed in accordance with City of Winnipeg’s Standard Construction Specification CW 3110-R10 - “Sub-Grade, Sub-Base and Base Course Construction”.
- (b) The Contractor will supply the Contract Administrator with the Standard Proctor Density for crushed limestone sub-base material one week prior to the start of construction. The Standard Proctor Density will be as outlined in CW 3110 –R9 – item 3.9 “Quality of Sub grade, Sub-base and Base Coarse Layers.”

E17.2 Materials

- (a) Crushed Limestone sub-base material will be 50 mm (2”) as specified and to the depth of 150 mm (6”) as shown on the drawings.

E17.3 Construction Methods

- (a) Crushed limestone sub-base material will be supplied and installed as outlined in CW 3110 - item 3.4 “Placement of Sub-Base Material with Geotextile Fabric”.
- (b) All limestone sub-base material will be placed and compacted as specified to a finished thickness as shown on the drawings.

E17.4 Measurement and Payment

- (a) Measurement and Payment for crushed limestone sub base material will be on a weight basis paid for at the Contract Unit Price per tonne for “Crushed Limestone Sub – Base Material (50 mm – 150 mm depth)”.

E18. CRUSHED LIMESTONE BASE COURSE MATERIAL

E18.1 Description

- (a) Crushed limestone base material will be supplied and installed in accordance with City of Winnipeg’s Standard Construction Specification CW 3110-R10 - “Sub-Grade, Sub-Base and Base Course Construction”.
- (b) The Contractor will supply the Contract Administrator with the Proctor Density for crushed limestone base coarse material one week prior to the start of construction. The Standard Proctor Density will be as outlined in CW 3110 –R9 – item 3.9 “Quality of Sub grade, Sub-base and Base Coarse Layers.”

E18.2 Materials

- (a) Crushed Limestone base coarse material will be 20 mm (3/4”) as specified and to the depth of 150 mm (6”) as shown on the drawings.

E18.3 Construction Methods

- (a) Crushed limestone base coarse material will be supplied and installed as outlined in CW 3110 – item 3.5 “Placement of Base Course Material “.
- (b) All limestone base coarse will be placed and compacted as specified to a finished thickness as shown on the drawings.

E18.4 Measurement and Payment

- (a) Measurement and Payment for crushed limestone base coarse material will be on a volume basis paid for at the Contract Unit Price per cubic metre for “Crushed Limestone Base Material (20mm – 150 mm depth)”.

E19. ASPHALTIC CONCRETE PAVEMENT WORKS

E19.1 Description

- (a) Asphaltic Concrete will be supplied and installed in accordance with City of Winnipeg Standard Construction Specification CW 3410-R7 – “Asphaltic Concrete Pavement Works”.
- (b) The Contractor will have the option of either installing:
 - (i) 75 mm (3”) of Type II asphalt concrete pavement or
 - (ii) 50 mm (2”) of Type IA (Bottom Course) & 25 mm (1”) of Type II (Top Course) asphalt concrete pavement
- (c) The Contractor will supply the Contract Administrator with the mix design statement for asphaltic pavement one week prior to the start of construction.

E19.2 Materials

- (a) Asphaltic concrete pavement will be Type II as specified and to a thickness of 75 mm as shown on the drawings or
- (b) Asphaltic concrete pavement will be Type IA and Type II as specified and to a combined thickness of 75 mm as shown on the drawings.

E19.3 Construction Methods

- (a) Asphaltic concrete pavement will be supplied and installed in accordance with the lines, grades and thickness shown on the drawings and to CW 3410.
- (b) If the Contractor decides to use option (i) in E19.1 (b)
 - (i) Asphalt shall be placed in one lift
- (c) If the Contractor decides to use option (ii) in E19.1 (b)
 - (i) Asphalt will have to be placed in two lifts
- (d) Areas on the existing asphalt skateboard park that require patching or an overlay will be Type II asphalt and will be done in accordance with CW 3410.

E19.4 Measurement And Payment

- (a) Measurement and Payment for asphaltic pavement will be measured and paid for at the Contract Unit Price per square metre for “Asphalt Concrete Pavement Works”. Price will be payment in full for supplying materials and for performing all operations listed herein.

E20. LANDSCAPE ROCK

E20.1 Description

- (a) This Specification will cover the supply and installation of all labour, materials, equipment and services necessary for the supply and installation of landscape rock as described herein.

E20.2 Materials

- (a) Limestone and or granite rock to be from a Manitoba quarry, colour to be approved by Contract Administrator. Size range to be 300mm to 600mm O.D.
- (b) The separation/reinforcement geotextile fabric shall conform to the Products Approved as listed in City of Winnipeg Specification for Approved Products for Surface Works.

E20.3 Construction Methods

- (a) Remove and dispose of unsuitable sub base material as directed by Contract Administrator.
- (b) Verify grades of compacted sub grade (to 95% SPD) and adjacent features for conformity with existing grades before placing landscape rock.
- (c) Separation/Reinforcement geotextile fabric will be installed as outlined in CW 3110 - item 3.4 "Placement of Sub – Base Material with Geotextile Fabric".
- (d) Landscape rock to be installed as shown on the drawings.

E20.4 Measurement and Payment

- (a) Measurement and Payment of landscape rock will be on a square metre basis paid for at the Contract Unit Price per square metre for supply and installation of "Landscape Rock". Supply and installation of Geotextile is incidental to the Work in this section. Price will be payment in full for supplying all materials and performing all operations herein described and all other items incidental to the Work included in this Specification.

E21. CATCH BASIN, FRAME, COVER AND APPURTENANCES

E21.1 Description

- (a) Catch Basin and all related appurtenances will be supplied and installed in accordance with City of Winnipeg Standard Construction Specification CW 2130-R11 – "Gravity Sewers".

E21.2 Materials

- (a) Catch Basin will be the Standard City of Winnipeg catch basin as shown on Standard Detail (SD) SD-025. Catch Basin to come complete with, 900 mm x 1.22 m barrel, 900/750 mm x 0.15 m reducer and hood (SD-110). Also included will be the catch basin frame and cover as shown on SD-104 AND SD-106 respectively.

E21.3 Construction Methods

- (a) Catch basin will be supplied and installed in accordance with CW 2130.
- (b) Catch basin will be installed in the location and to the design elevations as shown on the drawings.

E21.4 Measurement And Payment

- (a) Measurement and Payment for catch basin installation will be on a lump sum paid for at the Contract Unit Price for "Catch Basin, Frame, Cover and Appurtenances". Price will be payment in full for supplying all materials and performing all operations herein described and all other items incidental to the Work included in this Specification.

E22. 250 MM P.V.C. LAND DRAINAGE SEWER

E22.1 Description

- (a) 250 mm (10") P.V.C. land drainage sewer will be supplied and installed in accordance with City of Winnipeg Standard Construction Specification CW 2130-R11 – "Gravity Sewers".

E22.2 Materials

- (a) 250 (10") mm P.V.C. land drainage sewer will be a gasketed bell and spigot PVC pipe in accordance with CAN/CSA B182.2 and ASTM D 3034, SDR 35.

E22.3 Construction Methods

- (a) 250 mm (10") P.V.C. land drainage sewer will be supplied and installed in accordance with CW 2130.
- (b) 250 mm (10") P.V.C land drainage sewer will be installed using trenchless method as outlined in CW 2130 – item 3.4 – “Installation Using Trench less Methods”.
- (c) Pipe Bedding and Backfill will be Class B Bedding and Class 3 Backfill respectively.
- (d) 250 mm (10") P.V.C land drainage sewer will be installed in the location and to the design elevation, lines and slopes as shown on the drawings.

E22.4 Measurement and Payment

- (a) Measurement and Payment for 250 mm P.V.C. land drainage sewer will be on a length basis paid for at the Contract Unit Price per lineal metre of “250 mm P.V.C. Land Drainage Sewer”. Price will be payment in full for supplying all materials and performing all operations herein described and all other items incidental to the Work included in this Specification.

E23. CONNECTING TO EXISTING LAND DRAINAGE SYSTEM

E23.1 Description

- (a) Connection of 250 mm (10") P.V.C. land drainage sewer will be done in accordance with City of Winnipeg Standard Construction Specification CW 2130-R11– “Gravity Sewers”.

E23.2 Construction Methods

- (a) Connecting to existing catch basin will be done as outlined in CW 2130 – item 3.15 – “Connecting New Sewers an Catch Basin Leads to Existing Manholes, Catch Basins and Catch Pits”.
- (b) Pipe Bedding and Backfill will be Class B Bedding and Class 1 Backfill respectively.

E23.3 Measurement and Payment

- (a) Measurement and Payment for connecting to existing catch basin will be on a lump sum basis paid for at the Contract Unit Price for “Connecting to Existing L.D.S.”. Price will be payment in full for supplying all materials and performing all operations herein described and all other items incidental to the Work included in this Specification.

E24. SUB-SURFACE DRAINAGE SYSTEM

E24.1 Description

- (a) This Work shall consist of providing and placing a geocomposite prefabricated drain system as described in the plans. The drainage system shall be installed in accordance with these specifications and in close conformity with the locations and dimensions as shown on the plans or specified by the Contract Administrator. The quantities of drain as shown on the plans may be increased or decreased at the direction of the Contract Administrator based on actual Site conditions that occur during construction of the project. Such variations in quantity will not be considered as alterations in the details of construction or a change in the character of the Work.

E24.2 Material

- (a) Drainage pipe will be Multi-Flow or approved substitute in accordance with B6. Drainage pipe will 150 mm (6"). The manufacturer will size and approve all fittings for use with Multi-Flow or approved substitute drainage pipe.
- (b) Pipe for drain outlet laterals will be either 75 mm (3") PVC pipe meeting the requirements of ASTM D-2729 or ASTM F-949, or high-density polyethylene pipe meeting the requirements of AASHTO M252.

- (c) The drain conduit shall be of flexible, prefabricated, rounded rectangular shaped, composite product. The drain conduit will be wrapped with a non-woven geotextile and will be a non-woven needle-punched construction and consist of long-chain polymeric fibres composed of polypropylene, polyethylene or polyamide. The fibres will be oriented into a multi-directional stable network whereby they retain their positions relative with each other and allow the passage of water as specified. The fabric will be free of any chemical treatment or coating, which reduces permeability and will be inert to chemical commonly found in soil. The geotextile will conform to the following minimum average roll values.

Weight	ASTM D-3776	3.0 - 4.0
Tensile Strength	ASTM D-4632	100 - 130
Elongation %	ASTM D-4632	50 - 70
Puncture, lb	ASTM D-751	35 - 60
Mullen Burst, psi	ASTM D-3786	110 - 215
Trapezoidal Tear, lb	ASTM D-4533	40 - 42
Coefficient of Permeability	ASTM D-4491	.2 - .4 cm/sec
Flow Rate, gpm/ft ²	ASTM D-4491	100 - 140
Permittivity, 1/sec	ASTM D-4491	1.3 - 2.0
Apparent Opening Size	ASTM D-4751	60/70 Max. US Std Sieve Opening
Seam Strength, lb/ft	ASTM D-4595	100
Fungus	ASTM G-21	No Growth

- (d) The drainage core shall be made of a high-density polyethylene. The core shall be constructed using interconnected corrugated pipes that define and provide the flow channels and structural integrity of the drain. The geotextile shall function only as a filter. The core of the edge drain shall conform to the following physical property requirements.

Thickness, inches	ASTM D-1777	1.0
Flow Rate, gpm/ft*	ASTM D-4716	29
Compressive Strength, psf	ASTM D-1621 (modified sand method)	6000
Pipe Stiffness, pii	ASTM D-2412	100

* At gradient = 0.1, pressure = 10 psi for 100 hours.

(e) Fittings

- (i) The fittings used with the edge drain shall be of a snap together design. In no case shall any drainage product be joined without the use of the manufacturers connector designed specifically for the purpose. Cleanouts will be provided as indicated on the drawing.

(f) Pipe

- (i) Pipe for drain outlet laterals will be either 75 mm (3") PVC pipe meeting the requirements of ASTM D-2729 or ASTM F-949, or high-density polyethylene pipe meeting the requirements of AASHTO M252.
- (ii) A rodent screen made of 0.3 inch by 0.3-inch square opening size, 0.063-inch gauge, stainless steel or galvanized, welded wire mesh shall be installed in each outlet lateral line. When using galvanized welded wire mesh, the rodent screen shall be galvanized after it has been formed to the shape and dimensions shown on the plans or specified by the Contract Administrator.

(g) Backfill for Trenches

- (i) Backfill will be coarse sand whose particle size is defined as less than 5% retained on a # 10 screen and less than 5% passing through a # 30 (US Std Sieve) In no case will more than 1% pass a # 60 screen.
- (ii) Seed will be as per City of Winnipeg Specification CW 3520 – R7 – “Seeding”.

E24.3 Methods

- (a) Sub drain pipe will be installed in the location and to the design grades, lines and slopes as shown on the drawings
- (b) The layout of the sub – drain is to be marked on Site and approved by the Contract Administrator prior to trenching.
- (c) Trenches are to be excavated with a trenching machine or by hand. Locations where the trench has to cross-existing utilities are to be excavated by hand. The amount of trench excavated at any time will not exceed the amount of drain that can be set and backfilled completely prior to the end of that Working Day. Trench will be the width as specified on the drawings.
- (d) The bottom surface of the trench is to be free of loose particles and is to have the slope shown on the drawings. Over excavation in the bottom of the excavation will be backfilled to the proper grade with excavated material or sand prior to the placement of the drain. Where sand or excavated material is used to fill the trench to the proper elevation that material will be compacted to 95% of standard proctor density using appropriate means.
- (e) Multi-Flow drainpipe is to be placed in the trench using a Multi-Flow centering device. Trench is to be backfilled with coarse sand to the surface. Backfill will be placed in maximum of 45 cm loose lifts. Backfill is to be lightly tamped into place and watered. In the case of trenches extending into existing grassed areas coarse sand backfill is to be seeded with grass seed.
- (f) Contractor is to maintain top surface of the backfilled sand even with the surrounding grade during the seed grow in phase.
- (g) Fittings for the drain will be installed in accordance with the manufacturer's recommendations and Specification.
- (h) Any damaged edge drain or outlet lateral will be replaced or repaired by splicing in an undamaged section of drain at the Contractor's expense. The repair must be in accordance with the manufacturers specification and to the satisfaction of the Contract Administrator.
- (i) The Contractor will be responsible for restoration of any surfaces damaged during the Work under this section. This restoration will be in accordance to City of Winnipeg Specifications and also to the satisfaction of the Contract Administrator. There will be no separate measurement or payment for restoration Work required as a result of this Work.
- (j) 75 mm (3") P.V.C. land drainage sewer will be supplied and installed in accordance with City of Winnipeg Standard Construction Specification CW 2130-R10 – “Gravity Sewers”. Connecting to existing catch basin will be done as outlined in CW 2130 – item 3.15 – “Connecting New Sewers and Catch Basin Leads to Existing Manholes, Catch Basins and Catch Pits”.
- (k) Maintenance of Seeded areas will be as per City of Winnipeg Specification CW – 3520 – R7.

E24.4 Measurement and Payment

- (a) Measurement and Payment of sub surface drainage will be on a length basis paid for at the Contract Unit Price per lineal metre for “Sub Surface Drainage System”. Prices will be for the following item:
 - (i) Multi Drain Flow pipe – 150 mm
- (b) Price will include all trenching, backfill, fittings, cleanouts, connecting to catch basin, topsoil and seeding, and items incidental to the Work included in the Specification.

E25. TOPSOIL AND SEED

E25.1 Description

- (a) Topsoil & seed will be done in accordance with City of Winnipeg Standard Construction Specification CW 3540 – R5– “Topsoil and Finish Grading for Establishment of Turf Areas” and CW 3520-R7 – “Seeding ” respectively.

E25.2 Materials

- (a) Topsoil will confirm to the materials as outlined in CW 3540- item 5.2 “Topsoil”.
- (b) Seed will conform to the materials as outlined in CW 3520 – item 5.0 “Materials”.

E25.3 Construction Methods

- (a) Topsoil and Sod will be supplied and installed in accordance with City of Winnipeg Standard Construction Specification CW 3540 and CW 3520 respectively.
- (b) The Contractor shall supply topsoil & seed to a compacted depth of 100 mm below finished grade along the perimeter of the pathways. Topsoil shall be level with the existing sod, as directed by the Contract Administrator. Topsoil and seed will be placed around the perimeter at a width of 600 mm on both sides.

E25.4 Measurement and Payment

- (a) Measurement and Payment for topsoil and seed will be on an area basis paid for at the Contract Unit Price per square metre for “ Topsoil and Seeding”.

E26. TOPSOIL AND SOD

E26.1 Description

- (a) Topsoil & sod will be done in accordance with City of Winnipeg Standard Construction Specification CW 3540 – R5– “Topsoil and Finish Grading for Establishment of Turf Areas” and CW 3510-R9 – “Sodding ” respectively.

E26.2 Material

- (a) Topsoil will confirm to the materials as outlined in CW 3540- item 5.2 “Topsoil”.
- (b) Sod will conform to the materials as outlined in CW 3510 – item 5.0 “Materials”.

E26.3 Construction Methods

- (a) Topsoil and Sod will be supplied and installed in accordance with City of Winnipeg Standard Construction Specification CW 3540 and CW 3510 respectively.

E26.4 Measurement and Payment

- (a) Measurement and Payment for topsoil and sod will be on an area basis paid for at the Contract Unit Price per square metre for “ Topsoil and Sod”.

E27. SITE CLEANUP

E27.1 All pathways, streets, approaches, driveways and properties near the Work Site shall be kept clean at all times by the Contractor.

E27.2 Upon completion of the project, the Contractor shall immediately remove all excess materials and debris from the Work Site.

E28. SAFETY

E28.1 Safety and Health Regulations

E28.1.1 The Contractor shall comply with the following:

- a) The City of Winnipeg's Safety in the Workplace Policy for Alcohol or any Mood or Mind Altering Drug in the Workplace;
- b) The City of Winnipeg Safety Manual;
- c) The Public Works Department's Safety Regulations;
- d) The Province of Manitoba Workplace, Safety and Health Act.

E28.1.2 The Contract Administrator and the City of Winnipeg, Public Works Department's Safety Officer has the authority to enforce all the above listed safety and/or health regulations.

E28.1.3 The Contractor is advised that these safety regulations are available for viewing by contacting the Contract Administrator.

E29. SITE SAFETY PROCEDURES

E29.1 The Contractor shall be solely responsible for construction and public safety at the Site and for securing the Site at all times to prevent public access.

E29.2 The Contractor shall, at his own expense, do whatever is necessary to ensure that when Work is stopped and the Contractor leaves the Site for whatever reason, the Site and Work is made safe, including but not limited to:

- a) The removal and/or safe storage of all construction equipment and materials;
- b) The equipment installed and/or in the process of installation be completed or secured to ensure that no public hazards exist;
- c) That all open excavations be filled; and
- d) That all construction debris and surplus excavation material be removed from the Site.