



THE CITY OF WINNIPEG

BID OPPORTUNITY

BID OPPORTUNITY NO. 495-2012

ROSE HILL PARK & PLAYGROUND UPGRADES

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PART B - BIDDING PROCEDURES

B1. CONTRACT TITLE

B1.1 ROSE HILL PARK & PLAYGROUND UPGRADES

B2. SUBMISSION DEADLINE

B2.1 The Submission Deadline is 4:00 p.m. Winnipeg time, Wednesday, July 12th, 2012.

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 Division website at <http://www.winnipeg.ca/matmgt/>

B5.2.2 The Bidder is responsible for ensuring that he/she has received all addenda and is advised to check the Materials Management Division website 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/her 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/she 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/her 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.

B6.10 Notwithstanding B6.2 to B6.9, and in accordance with B7.7, deviations inconsistent with the Bid Opportunity document shall be evaluated in accordance with B14.1(a).

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 Submission may be submitted by mail, courier or personal delivery, or by facsimile transmission.

B7.5 If the Bid Submission is submitted by mail, courier or personal delivery, it shall be enclosed and sealed in an envelope clearly marked with the Bid Opportunity number and the Bidder's name and address, and shall be submitted to:

The City of Winnipeg
Corporate Finance Department
Materials Management Division
185 King Street, Main Floor
Winnipeg, MB R3B 1J1

B7.5.1 Samples or other components of the Bid Submission 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 Submission.

B7.6 Bidders are advised not to include any information/literature except as requested in accordance with B7.1.

B7.7 Bidders are advised that inclusion of terms and conditions inconsistent with the Bid Opportunity document, including the General Conditions, will be evaluated in accordance with B14.1(a).

B7.8 If the Bid Submission is submitted by facsimile transmission, it shall be submitted to 204 949-1178.

B7.8.1 The Bidder is advised that the City cannot take responsibility for the availability of the facsimile machine at any time.

B7.8.2 Bids submitted by internet electronic mail (e-mail) will not be accepted.

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/her own name, his/her 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/her 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/her 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/her 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 should be printed below such signatures.
- B8.4.2 All signatures shall be original.
- 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.
- B9.4 Payments to Non-Resident Contractors are subject to Non-Resident Withholding Tax pursuant to the Income Tax Act (Canada).

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 Division website at <http://www.winnipeg.ca/matmgt/debar.stm>
- 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 Further to B10.3(c), the Bidder shall, within five (5) Business Days of a request by the Contract Administrator, provide proof satisfactory to the Contract Administrator that the Bidder/Subcontractors has a workplace safety and health program meeting the requirements of The Workplace Safety and Health Act (Manitoba), by providing:

- (a) a valid COR certification number under the Certificate of Recognition (COR) Program administered by the Manitoba Construction Safety Association or by the Manitoba Heavy Construction Association's Safety, Health and Environment Program; or
- (b) a report or letter to that effect from an independent reviewer acceptable to the City. (A list of acceptable reviewers and the review template are available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/> .

B10.5 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.

B10.6 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 not be opened publicly.

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 Division website at <http://www.winnipeg.ca/matmgt/bidopp.asp>

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 Division website 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/her 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/her Bid after the Submission Deadline but before his/her 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 or acceptable deviation there from (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/her Bid or in other information required to be submitted, that he/she 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.
- B14.4.2 Further to B14.1(a), in the event that a unit price is not provided on Form B: Prices, the City will determine the unit price by dividing the Amount (extended price) by the approximate quantity, for the purposes of evaluation and payment.

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 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, in accordance with B14.
- B15.3.1 Following the award of contract, a Bidder will be provided with information related to the evaluation of his/her 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 Division website at http://www.winnipeg.ca/matmgt/gen_cond.stm
- 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 excavation, grading and installation of all materials required to construct new playground area, equipment, plantings and drainage.

D2.2 The major components of the Work are as follows:

- (a) Excavation and disposal;
- (b) Rough grading;
- (c) Supply and installation of asphalt area
- (d) Supply and installation of play equipment independents;
- (e) Relocation of play equipment;
- (f) Supply and installation of safety surfacing and timber edging;
- (g) Supply and installation of sod and trees;
- (h) Supply and installation of concrete approach and double gate;
- (i) Pick-up and installation of site furnishings;
- (j) Supply and installation of sub-drainage system.

D3. CONTRACT ADMINISTRATOR

D3.1 The Contract Administrator is Friesen Tokar Architects, represented by:

Ryan Epp
Landscape Architectural Intern
Friesen Tokar
Architects + Landscape + Interior Designers
Suite 200, 300 Waterfront Drive
Winnipeg, MB. R3B 0G5
Telephone No. (204) 885-9323
Facsimile No. (204) 837-7235

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.

D3.3 Bids Submissions must be submitted to the address in B7.5.

D4. CONTRACTOR'S SUPERVISOR

D4.1 At the pre-construction meeting, the Contractor shall identify his/her 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 facsimile number identified in D3.1.
- D5.3 Notwithstanding C21., all notices of appeal to the Chief Administrative Officer shall be sent to the attention of the Chief Financial Officer at the following facsimile number:
- The City of Winnipeg
Chief Financial Officer
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 facsimile number:
- The City of Winnipeg
Legal Services Department
Attn: Director of Legal Services
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 Division website at <http://www.winnipeg.ca/matmgt/Safety/default.stm>

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 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) if applicable, Automobile Liability Insurance covering all motor vehicles, owned and operated and used or to be used by the Contractor directly or indirectly in the performance of the Work. The Limit of Liability shall not be less than \$2,000,000 inclusive for loss or damage including personal injuries and death resulting from any one accident or occurrence;
- (c) all risks installation floater, carrying adequate limits to cover all machinery, equipment, supplies and/or materials intended to enter into and form part of any installation.

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 thirty (30) 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.

D11. DETAILED WORK SCHEDULE

D11.1 The Contractor shall provide the Contract Administrator with a detailed work schedule at least two (2) 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.

D11.2 The detailed work schedule shall consist of the following dates:

- a) Start date;

- b) Site excavation completion;
- c) Play equipment arrival to site;
- d) Installation of play equipment;
- e) Installation of timber edging;
- f) Installation of safety surface;
- g) Installation of asphalt surface;
- h) Installation of site furnishings;
- i) Installation of soil, trees, sod;
- j) Installation of concrete approach;
- k) Installation of sub-drainage system.

D11.3 Other milestone dates appropriate to this project should also be included to make the Contract Administrator aware of them.

SCHEDULE OF WORK

D12. COMMENCEMENT

D12.1 The Contractor shall not commence any Work until he/she is in receipt of a Purchase Order from the Award Authority authorizing the commencement of the Work.

D12.2 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;
 - (vii) the Detailed Work Schedule specified in D11.
- (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.

D12.3 The Contractor shall commence the Work on the Site within seven (7) Working Days of receipt of the Purchase Order.

D12.4 **The Contractor shall order the play equipment and submit this information to the Contract Administrator within seven (7) Working Days of receipt of the Purchase Order**

D12.5 The City intends to award this Contract by July 17th, 2012.

D12.5.1 If the actual date of award is later than the intended date, the dates specified for substantial Performance, and Total Performance will be adjusted by the difference between the aforementioned intended and actual dates.

D13. SUBSTANTIAL PERFORMANCE

D13.1 The Contractor shall achieve Substantial Performance by August 24th, 2012.

D13.2 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.

D13.3 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.

D14. TOTAL PERFORMANCE

D14.1 The Contractor shall achieve Total Performance by August 31st, 2012.

D14.2 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.

D14.3 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.

D15. LIQUIDATED DAMAGES

D15.1 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) per Working Day for each and every Working Day following the day fixed herein for Total Performance during which such failure continues.

D15.2 The amount specified for liquidated damages in D15.1 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.

D15.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

D16. SCHEDULED MAINTENANCE

D16.1 The Contractor shall perform the following scheduled maintenance in the manner and within the time periods required by the Specifications:

- (a) Topsoil and Sod as specified in E16;
- (b) Trees, Shrubs and Ground Cover Plantings as specified in E17;

D16.2 Determination of Substantial Performance and Total Performance shall be exclusive of scheduled maintenance identified herein. All scheduled maintenance shall be completed prior to the expiration of the warranty period. Where the scheduled maintenance cannot be completed during the warranty period, the warranty period shall be extended for such period of time as it takes the Contractor to complete the scheduled maintenance.

CONTROL OF WORK

D17. JOB MEETINGS

D17.1 Regular bi-weekly job meetings, or as required, 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.

D17.2 The Contract Administrator reserves the right to cancel any job meeting or call additional job meetings whenever he/she deems it necessary.

D18. PRIME CONTRACTOR – THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA)

D18.1 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).

MEASUREMENT AND PAYMENT

D19. INVOICES

D19.1 Further to C12, the Contractor shall submit an invoice for each portion of Work performed to:

The City of Winnipeg
Corporate Finance - Accounts Payable
4th Floor, Administration Building, 510 Main Street
Winnipeg MB R3B 1B9
Facsimile No.: 204-949-0864
Email: CityWpgAP@winnipeg.ca

D19.2 Invoices must clearly indicate, as a minimum:

- (a) the City's purchase order number;
- (b) date of delivery;
- (c) delivery address;
- (d) type and quantity of work performed;
- (e) the amount payable with GST and MRST shown as separate amounts; and
- (f) the Contractor's GST registration number.

D19.3 The City will bear no responsibility for delays in approval of invoices which are improperly submitted.

D19.4 Bids Submissions must be submitted to the address in B7.5.

D20. PAYMENT

D20.1 Further to C12, the City may at its option pay the Contractor by direct deposit to the Contractor's banking institution.

WARRANTY

D21. WARRANTY

D21.1 Warranty is as stated in C13.

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 for

BID OPPORTUNITY NO. 495-2012

ROSE HILL PARK & PLAYGROUND UPGRADES

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 as to Principal if no seal)

(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
Legal Services Department
185 King Street, 3rd Floor
Winnipeg MB R3B 1J1

**RE: PERFORMANCE SECURITY - BID OPPORTUNITY NO. 495-2012
ROSE HILL PARK & PLAYGROUND UPGRADES**

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)

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 Division website at <http://www.winnipeg.ca/matmgt/Spec/Default.stm>
- 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>
	SURVEY DRAWING
L1.0	EXISTING SITE PLAN AND DEMOLITION
L2.0	PROPOSED SITE AND GRADING PLAN
SCD-119	WASTE RECEPTACLE METAL SLAT TYPE
SCD-121A	TACHE BENCH COMPOSITE WITH ARMS
SCD-122	TACHE STYLE METAL FRAME PICNIC TABLE
SCD-122A	TACHE STYLE WHEELCHAIR METAL FRAME PICNIC TABLE
SCD-247	SAND BOX WITH WOOD SEAT
SCD-153	ENGLISH PARK SIGN WITH ADDRESS
SCD-517	STANDARD DETAIL FOR TREE PLANTING
SCD-645	PARK PATH CRUSHED LIMESTONE
SCD-648	PARKWAY PATH ASPHALT
SCD-651	SINGLE TIMBER EDGING WITH CAP
SCD-651A	DOUBLE TIMBER EDGING WITH CAP
SCD-659	MULTI FLOW DRAINAGE
SD-232	PRIVATE APPROACH ON REGIONAL STREETS W BARRIER CURB

Above Drawings are available on request in AutoCad .dwg format from the Contract Administrator.

E2. EXISTING SERVICES AND UTILITIES

- E2.1 No responsibility will be assumed by the City for the correctness or completeness of the drawings, when provided, with respect to the existing utilities, pipes or other objects either underground or on the surface; the City shall not be liable for the incorrectness and inadequacy thereof. It shall be the responsibility of the Contractor to determine the location of all such utilities, pipes and other objects and to make good any damage done to them.

E3. ACCESS TO SITE

- E3.1 Access to the Site as required by the Contractor shall be provided and maintained by the Contractor at his own expense and approved by the Contract Administrator.
- E3.2 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.

E4. PERMITS, NOTICES, LICENSES, CERTIFICATES, LAWS AND RULES

- E4.1 Further to C6.12, 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.

- E4.2 The Contractor shall comply with all laws, ordinances, rules and regulations that would relate to the Work.
- E4.3 All notices, consents, approvals, statements, authorizations, documents or other communications to the City shall be submitted to the Contractor Administrator.
- E4.4 All Work shall be performed in compliance with the Manitoba Workplace Health and Safety Act.
- E4.5 All Work shall be performed in compliance with the Manitoba Workplace Health and Safety Fall Protection guidelines.
- E4.6 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.

E5. DAMAGE TO EXISTING STRUCTURES, TREES AND PROPERTY

- E5.1 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 in the performance of the Work (either directly or indirectly), the Contractor shall either replace and repair such damage, whichever may be deemed necessary in the opinion of, and acceptable to City of Winnipeg Contract Administrator, and the cost of which shall be borne entirely by the Contractor. 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.
- E5.2 The Contractor shall take the following precautionary steps to prevent damage from construction activities to existing park trees within the limits of the construction area:
 - (a) The Contractor shall not stockpile materials and soils or park vehicles and equipment within 2 metres of trees.
 - (b) Trees identified to be at risk by the Contract Administrator are to be strapped with 25x100x2400 wood planks, or suitable protection as approved by the Contract Administrator.
 - (c) Excavation shall be performed in a manner that minimizes damage to the existing root systems. Where possible, excavation shall be carried out such that the edge of the excavation shall be a minimum of 1.5 times the diameter (measured in inches), with the outcome read in feet, from the closest edge of the trunk. Where roots must be cut to facilitate excavation, they shall be pruned neatly at the face of excavation.
 - (d) Operation of equipment within the drip line of the trees shall be kept to a minimum required to perform the Work required. Equipment shall not be parked, repaired, refuelled; construction materials shall not be stored, and earth materials shall not be stockpiled within the drip lines of trees. The drop line of a tree shall be considered to be the ground surface directly beneath the tips of its outermost branches. The Contractor shall ensure that the operations do not cause flooding or sediment deposition on areas where trees are located.
- E5.3 All damage to existing trees caused by the Contractor's activities shall be repaired to the requirements and satisfaction of the Contract Administrator and the City Forester or his/her designate.
- E5.4 No separate measurement or payment will be made for the protection of trees.

E6. PEDESTRIAN SAFETY AND TRAFFIC MANAGEMENT

E6.1 Further to CW 1130-R1, the Contractor shall take such measures as are necessary to ensure safe and convenient pedestrian ingress and egress is maintained to prove properties while he is working near them. Any damage caused by the negligence of the Contractor or his Subcontractors to the adjacent Works or properties, shall be promptly repaired by him at his own expense, to the satisfaction of the Contract Administrator.

E6.2 Ambulance/Emergency vehicle access must be maintained at all time.

E7. PROTECTION OF THE SURVEY INFRASTRUCTURE

E7.1 Notwithstanding clause 4 "Protection of Survey Bars" of the Standard Provisions; Current legislation, The Surveys Act, places the onus on those undertaking construction to protect the Survey Infrastructure from damage as a result of their activity.

E7.2 Further to C:6.26(g), at least 72 hours prior to the commencement of the On-Site work the Contractor shall contact the City of Winnipeg, Geomatics Services Branch at 918-1360 (8:00 am to 4:00 pm Monday to Friday excluding holidays) to obtain underground clearance. Geomatics Services will locate and mark all known outline survey monuments and geodetic control monuments and confirm the physical condition of those monuments upon completion of construction, at no cost to the Contractor.

E7.3 Where a survey post, bar or control monument lies in the line of the proposed Work and must be disturbed, the Contractor shall provide the Contract Administrator with 48 hours notice to permit referencing for future replacement, at no cost to the Contractor. Failure to provide the specified notice shall result in the Contractor paying for all costs associated with replacing or relocating the disturbed outline survey monuments and geodetic control monuments.

E7.4 Survey monuments and geodetic control monuments at or adjacent to the site, not in the line of the proposed construction that are damaged or disturbed by the Contractor shall be replaced or relocated by the City or its agent and all associated costs shall be paid for by the Contractor. An approximate estimate of the costs involved to restore a legal survey monument is \$1,000 per bar and \$3,000 per control monument. Contractors must ensure their landscaping and other Subcontractors are awesome of this clearance procedure and the potential restoration costs.

E7.5 Where possible, amounts owed to the City in accordance with the above will be deducted from any payments to be made by the City to the Contractor.

E8. SITE ENCLOSURES

E8.1 Temporary site enclosures, as determined necessary at the pre-construction meeting, shall be erected and maintained as required for the duration of the construction period.

E8.2 Site enclosures shall be considered incidental to the Contract Work.

SITE DEVELOPMENT

E9. REMOVALS

E9.1 General Description

E9.1.1 This specification shall cover the removal and legal disposal of existing site furnishings, and independent play equipment that is identified on drawing 1/L1.0, including their structural foundations. This specification shall also cover the removal and legal disposal of existing structural foundations of the swing set to be removed and relocated as identified on the drawings. All extraneous materials are to be removed from the Site and disposed of in a safe and legal manner. This specification shall amend and supplement City of Winnipeg Standard Construction Specifications CW 3110-R7. The Work to be done by the Contractor under this specification shall include all labour, equipment and material necessary for and incidental to the satisfactory performance and completion of the Work herein specified.

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E9.2 Materials

E9.2.1 Removals include the removal of items as indicated on the Drawings and as directed by the Contract Administrator. These items may be salvaged by the City, as per direction by the Contract Administrator. Do not disturb adjacent items designated to remain in place.

E9.3 Construction Methods

E9.3.1 Removals include the removal of all footing, backfilling holes with clean earth fill and compact to 98% SPD.

E9.3.2 The Contractor shall ensure that upon completion of the removal operations, the Site shall be left free of any hazardous depressions and in a neat condition.

E9.3.3 The Contractor shall dispose of all unsuitable and excess materials in accordance with City of Winnipeg specification. Disposal is incidental to the unit prices bid.

E9.4 Method of measurement and Basis of Payment

E9.4.1 Method of Measurement shall be as follows:

(a) Removal shall be measured on a lump sum basis for:

- (i) "Remove and relocate one swing set" and;
- (ii) "Remove and dispose of existing benches, waste receptacles, talk tubes and play panels as per drawing" on form B: Prices.

E9.4.2 Basis of Payment shall be as follows:

(a) Removals will be paid for at the Contract Unit Prices of Form B: Prices. The amount to be paid for shall be the total number of units, measures as specified herein, which price shall be for full payment for supplying all labour, equipment and materials, and performing all operations herein described and all other items incidental to the Work and as accepted by the Contract Administrator.

E10. EXCAVATION AND GRADING

E10.1 General Description

E10.1.1 This specification shall cover the excavation and legal disposal of sand safety surfacing from old play areas and earth and asphalt (including asphalt base course material) to accommodate new topsoil and sod, as well as excavation for new asphalt pathways and sitting areas. It shall amend and supplement CW 3110 and CW 3170. It shall also cover the provision of rough grading to ensure re-sodded areas at former asphalt pathways and play areas are installed at the appropriate levels, ensuring the newly sodded areas as well as new pathways will drain.

E10.1.2 The Contractor must ensure that the rough grading does not create tripping hazards and no areas of standing water remain. The mud grade of the play area must drain towards the subsurface drainable piping.

E10.1.3 All extraneous materials are to be removed from the Site and disposed of in a safe and legal manner. The Work to be done by the Contractor under this specification shall include all labour, equipment and material necessary for and incidental to the satisfactory performance and completion of the Work here in specified.

E10.1.4 Work shall include but not limited to the following:

(a) Excavate, add clean fill if necessary, and rough grade excess soil to the limits shown on Drawings to the depths necessary to achieve finish grade for:

- (i) Asphalt surface
- (ii) Sodded areas within location of former playground areas
- (iii) New play area.

(b) Grade site to the limits shown on Drawings and to the depths necessary to achieve finish grade for:

- (i) New play area.

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- E10.1.5 Grading to include the removal of the sod layer, the movement of earth to the specified grades as indicated in the Drawings, the import of fill if require, and the legal disposal of excess fill if necessary.
- E10.2 Construction Methods
- E10.2.1 Excavation includes the removal of items (i.e., sand, earth and asphalt) as indicated on the Drawings and as directed by the Contract Administrator. Work includes the satisfactory disposal of unsuitable Site material such as clays susceptible to frost-heaving, silts, rock, rubble, rubbish and any surplus suitable site material.
- E10.2.2 Do not disturb adjacent items designated to remain in place.
- E10.2.3 Disposal of material shall be understood to mean the hauling of all unsuitable material from the Site and the unloading in a legal manner acceptable to the Contract administrator.
- E10.2.4 Contractor must coordinate with the Contract Administrator to ensure all removals have occurred.
- E10.2.5 Excavation should be coordinated with the installation of play equipment and safety surfacing so as not to leave an open excavation area subject to ponding water.
- E10.2.6 Items such as grading or sodding may require additional clean fill, either used from excavated areas within the site or brought to the site. The cost of additional clean fill shall be incidental to the excavation and grading price of the item.
- E10.2.7 The depth of excavation in the play area depends on the selected type of engineered wood fibre, however, the minimum depth should be 305mm.
- E10.2.8 Excavating to the limits shown and as necessary to achieve finish grades as indicated on the Drawings:
- (a) Asphalt surface areas – 250mm depth, in accordance with SCD-648 and Drawings as per E11;
 - (b) Sod areas over former playground areas as per Drawing 1/L2.0, and per E17;
 - (c) Safety surfacing for new play area, in accordance with Drawings and as per E19, and;
 - (d) Granular Pad for sand box area, in accordance with SCD-645, and per E14.
- E10.2.9 Grade site to the limits shown on Drawings and to the depths necessary to achieve finish grade for:
- (a) Sod
 - (b) Play area
- E10.3 Method of Measurement and Basis of Payment
- E10.3.1 Method of Measurement shall be as follows:
- (a) Excavation shall be measured on a square metre basis for:
 - (i) “Excavate and dispose of existing sand safety surfacing and timber edging” and;
 - (ii) “Excavate and dispose of sod & earth, for new play area safety surfacing” on Form B: Prices.
 - (b) No measurement will be made for the Excavation and Disposal for the new asphalt path and seating area as these items are incidental to E11.
 - (c) Grading shall be measured on a square metre basis for:
 - (i) “Rough Grading” on Form B: Prices.
- E10.3.2 Basis of Payment shall be as follows:
- (a) Excavation and Grading will be paid for at the Contract Unit Prices of Form B: Prices. The amount to be paid for shall be the total number of units, measures as specified herein, which price shall be for full payment for supplying all labour, equipment and materials, and performing all operations herein described and all other items incidental to the Work and as accepted by the Contract Administrator.

- (b) No Payment will be made for the Excavation and Disposal for the asphalt path as this item is incidental of E11

E11. ASPHALT PATH

E11.1 Description

E11.1.1 The specification shall supplement City of Winnipeg specification CW 3410 and CW 3110.

E11.1.2 The Work to be done by the Contractor under this Specification shall include the furnishings of all superintendence, overhead, labour, materials, equipment, tools, supplies and all other things necessary for and incidental to the satisfactory performance and completion of all Work as shown on the Drawings and as hereinafter specified, including, but not necessarily confined to the follow:

- (a) Construction of Asphalt surface, including excavation, supply and installation of base courses, and asphalt paving as shown on Drawing 1+2/L2.0 and SCD-647.

E11.2 Material

E11.2.1 Subbase as per CW 3110;

E11.2.2 Geotextile as per CW 3130

E11.2.3 Base course as per CW 3110;

E11.2.4 Asphalt as per CW 3410;

E11.3 Construction Methods

E11.3.1 Excavating shall be as per E10.

- (a) If any pavement exists at the limits of the designated area of removal, that shall be 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.
- (b) All excavated material shall be removed, hauled and disposed of off-site to the satisfaction of the Contract Administrator.

E11.3.2 Contractor shall construct a compacted gravel base for asphalt pavement to depths as shown on the Construction Drawings in accordance with City of Winnipeg Specification CW 3110. Additional gravel shall be supplied and installed if necessary to attain proper Subgrade elevations.

E11.3.3 Geotextile Fabric

- (a) Geotextile fabric to be installed in accordance with City of Winnipeg Specification CW 3130 and in accordance with SCD-647.

E11.3.4 Asphalt Surface

- (a) Compacted asphaltic concrete surface shall be constructed in accordance with City of Winnipeg Specification CW 3410 and the Construction Drawings.

E11.3.5 Acceptance

- (a) Any Work not satisfactory as specified herein and as determined by the Construct Administrator shall be rectified by the Contractor. The process of inspection and correction shall continue until the Contract Administrator is satisfied that the Work is 100% complete and as per the construction drawings and specifications.

E11.4 Method of Measurement and Basis of Payment

E11.4.1 Method of Measurement shall be as follows:

- (a) Asphalt surface shall be measured on a square metre basis for:
 - (i) "Supply and Install asphalt surface" on Form B: Prices.

E11.4.2 Basis of Payment shall be as follows:

- (a) Asphalt surface shall be paid for at the Contact Unit Prices. The amount to be paid for shall be the total number of units, as indicated on Form B: Prices. This price shall be full payment for excavation, subgrade compaction, supply and installation of base coarse and top coarse, supplying all labour, equipment and materials, and performing all operations herein described and all other items incidental to the Work and as accepted by the Contract Administrator.

E12. SITE FURNITURE

E12.1 Description

E12.1.1 This specification shall cover the pick-up and installation of two (2) galvanized metal slat waste receptacles, one (1) double side park sign, two (2) accessible picnic tables, four (4) picnic tables, two (2) benches, and pick-up and deliver to site two (2) sets of soccer goals.

E12.1.2 The Contractor shall furnish all labour, materials, equipment and services necessary to complete the Work as shown on Drawing 1/L2.0 and specified herein. Supply includes pick up and payment from source identified below.

E12.2 Materials

E12.2.1 All materials supplied under this specification shall be of a type approved by the Contract Administrator, and shall be subject to inspection and testing by the Contract Administrator.

E12.2.2 Site Furniture shall be

- (a) Waste Receptacle – Metal Slat Type, galvanized frame as per SCD-119, Product # 52501062GLV, or substitute approved in accordance with B6.
- (b) Park Sign – One (1) double sided, as per SCD-153, Product # 52501103 or substitute approved in accordance with B6, with the following park name and address: “Rosehill Park”, “186 Garton Avenue”.
- (c) Picnic Table: Tache Style Wheelchair Metal Frame Picnic Table, galvanized frame as per SCD-122a with wood slats and a cedar painted finish.
- (d) Benches: With Back: Tache Bench, 72” long, galvanized frame, cedar tone composite slats, with in-ground mounting, as per SCD-121, Product # 52501067GLV
- (e) Soccer Goals: Youth soccer net with anchors, 9’, powder coated, Product # 72722006

- (i) Contact for Waste Receptacles, Benches, Park Sign, and Soccer Goals:

Aaron Lennon
Supervisor of Central Repair/Manufacturing Facility
City of Winnipeg
Fleet Management Agency Division
Public Works Department
215 Tecumseh St.
Winnipeg. MB R3E 3S4
Email: ALennon@winnipeg.ca

- (ii) Contact for Picnic Tables:

Carl Woloshyn
Centralized Park Services
City of Winnipeg
825 Tache Ave.
Winnipeg MB R2H 2C1
Email: CWoloshyn@winnipeg.ca
Ph.: 794-8536

- (iii) Alternate contact:

Brian Mayer
Email: bmayer@winnipeg.ca
Ph.: 470-7747

E12.3 Construction Methods

- (a) All work is to be located and installed in accordance with the Drawings and SCD-119, SCD-121, SCD-122, SCD-122A and SCD-153, and following manufacturer's instructions, using approved non-rusting, vandal resistant fasteners to ensure solid, durable, finished work suitable for the purpose intended. Fasteners and assembly hardware shall be incidental to the Work;
- (b) All furnishings and fixtures to be installed plumb and true to correct elevations and location, as directed by the Contract Administrator. The Contractor shall confirm proposed locations of all site furnishings with Contract Administrator prior to installation;
- (c) All furnishings and fixtures to be carefully handled so that no parts will be bent, broken or otherwise damaged. Hammering is prohibited.
- (d) Install as per manufacturer's instructions and the attached drawings.

E12.4 Method of Measurement and Basis of Payment

E12.4.1 Method of Measurement shall be as follows:

- (a) Site Furniture will be measured on a per unit basis for the following items:
 - (i) "Pick up and Install metal slat waste receptacles";
 - (ii) "Pick up and Install double sided park sign";
 - (iii) "Pick up and Install picnic tables";
 - (iv) "Pick up and Install composite bench" and;
 - (v) "Pick up and Deliver to site soccer goals" on Form B: Prices.

E12.4.2 Basis of Payment shall be as follows:

- (a) Site Furniture will be paid for at the Contract Unit Prices. The amount to be paid for shall be the total number of units, as indicated on Form B: Prices. This price shall be full payment for supplying all labour, equipment and materials, and performing all operations herein described and all other items incidental to the Work and as accepted by the Contract Administrator.

E13. WOODEN SANDBOX

E13.1 Description

- E13.1.1 This specification shall cover the supply and installation of the Wooden Sandbox as per SCD-247, as well as the supply and installation of five (5) cubic metres of play sand. The Contractor shall furnish all labour, materials, equipment and services necessary to complete the work as shown on the Drawings and specified herein.

E13.2 Materials

- E13.2.1 All materials supplied under this specification shall be of a type approved by the Contract Administrator, and shall be subject to inspection and testing by the Contract Administrator.
- E13.2.2 Timbers shall be as per section E20.
- E13.2.3 Colour of the sandbox to be cedar finish. Contract Administrator to determine colour scheme.
- E13.2.4 Play sand shall be natural washed sand of rounded particles, free of fines, clay, silt, stones or other debris and shall meet the following criteria:
 - (i) 100% passing 6.7mm sieve;

- (ii) 99.5% passing 4.75 mm sieve;
- (iii) 97-100% passing 2.35mm sieve;
- (iv) 70-90% passing 1.18mm sieve;
- (v) 25-60% passing 600um sieve;
- (vi) 5-25% passing 300um sieve;
- (vii) 0-3% passing 150um sieve;
- (viii) 0-1% passing 75um sieve.

E13.3 Method of Measurement and Basis of Payment

E13.3.1 Method of Measurement shall be as follows:

- (a) Wooden Sand Box shall be measured on a lump sum basis for the following items
 - (i) "Supply and install wooden sandbox and supply and install play sand" on Form B: Prices.

E13.3.2 Basis of Payment shall be as follows:

- (a) Sand box will be paid for at the Contract Unit Prices. The amount to be paid for shall be the total number of units, as indicated on Form B: Prices. This price shall be full payment for supplying all labour, equipment and materials, and performing all operations herein described and all other items incidental to the Work and as accepted by the Contract Administrator.
- (b) These prices shall be full payment for supplying all labour, equipment and materials, and performing all operations herein described and all other items incidental to the Work and as acceptable by the Contract Administrator.

E14. GRANULAR PAD

E14.1 Description

- E14.1.1 This Specification shall amend and supplement the City of Winnipeg Specification CW 3110. The Work to be done by the Contractor under this Specification shall cover all phases of supply and placement of crushed limestone surfacing materials necessary to install a Granular Path and Seating Areas as shown on Drawings.

E14.2 Materials

- E14.2.1 The materials of the Granular Pad should be as per Drawing SCD-645, "Park Path – Crushed Limestone."

E14.3 Construction Method

- E14.3.1 The Work included in the establishment of the Granular Path and Seating area shall include:
 - (a) The Contractor shall survey and stake out the proposed Granular Path and Seating Area(s) prior to the start of construction as shown on the construction drawings. Layout of expanded Seating Area shall be checked and confirmed with Contract Administrator prior to construction.
 - (b) Excavation of Granular Path and Seating Area shall be as per E10
 - (c) Subgrade to be compacted.
 - (d) All granular base course shall be placed and compacted to the finished thickness as specified on the drawings.
 - (e) Base Course and Top Coarse shall be compacted to a minimum of ninety five percent (95%) of Standard Proctor Density.

E14.4 Method of Measurement and Basis of Payment

E14.4.1 Method of Measurement shall be as follows:

- (a) Granular Path and Seating Area shall be measured on a square metre basis for: "Supply and Install granular pad for area around sand box" on Form B: Prices.

E14.4.2 Basis of Payment shall be as follows:

- (a) Granular Path and Seating Area shall be paid for at the Contract Unit Prices. The amount to be paid for shall be the total number of units, as indicated on Form B: Prices. This price shall be full payment for excavation, subgrade compaction supply and installation of base course and top course, supply all labour, equipment and materials, and performing all operations herein described and all.

E15. CONCRETE APPROACH

E15.1 Description

E15.1.1 This specification will cover supply and installation of all labour, materials, equipment and services necessary for the supply and installation of a concrete approach for Rose Hill Park, as shown on Drawing 1/L2.0.

E15.2 Materials:

- (a) As per the City of Winnipeg Specifications CW 3230, CW 3310, and 3325.

E15.3 Construction Methods:

- (a) As per the City of Winnipeg Specifications CW 3230, CW 3310, and 3325, and Drawing SD-232.

E15.4 Method of Measurement and Basis of Payment

E15.4.1 Method of Measurement shall be as follows:

- (a) Concrete approach shall be measured on a lump sum basis for "Supply and Install concrete approach" on Form B: Prices.

E15.4.2 Basis of Payment shall be as follows:

- (a) Concrete approach will be paid for at the Contract Unit Prices. The amount to be paid for shall be the total number of units, as indicated on Form B: Prices. This price shall be full payment for supplying all labour, equipment and materials, and performing all operations herein described and all other items incidental to the Work and as accepted by the Contract Administrator.

E16. CHAIN LINK FENCING AND GATE

E16.1 Description

E16.1.1 This Specification shall amend and supplement the City of Winnipeg Specifications CW 3550. The Contractor shall remove and replace chain link fences as indicated on drawings.

E16.1.2 Concrete Approach area: The Contractor shall install chain link fence and double gate to match height of existing fence.

E16.1.3 Damaged areas: A separate payment shall be made as reflected by the quantity on Form B: Prices, "Supply & Install Finish Grading, Sod, Seed & Site repairs & clean-up". No payment will be made for any damage above and beyond the total area listed unless agreed to by Contract Administrator.

E16.2 Method of Measurement and Basis of Payment

E16.2.1 Method of Measurement will be as follows:

- (a) Chain link fence will be measured on a lump sum basis for; "Supply & install double chain link gate" on Form B: Prices.

E16.2.2 Basis of Payment will be as follows:

- (a) Chain link fencing will be paid for at the Contract Unit Prices. The amount to be paid for shall be as indicated on Form B: Prices. This price shall be full payment for supplying all labour, equipment and materials. And performing all operations herein described and all other items incidental to the Work and as accepted by the Contract Administrator.

E17. SOIL AND SOD

E17.1 Description

- E17.1.1 This Specification shall amend and supplement the City of Winnipeg Specifications CW 3510, CW 3520 and CW 3540. The Contractor shall install mineral sod and a minimum 75mm compacted thickness of topsoil, as required.
- E17.1.2 Path and Play areas: The Contractor shall install topsoil and sod around the perimeter of newly constructed paths and sitting areas to clean up turf distributed by the Work, if necessary.
- E17.1.3 Former Playground Areas: The Contractor shall install topsoil and sod within former playground areas as indicated in drawings 1/L2.0. Former play area and asphalt areas may require additional clean fill, either used from excavated areas within the site or brought to the site. The cost of additional clean fill shall be incidental to the soil and sod price of the item.
- E17.1.4 Damaged areas: A separate payment shall be made as reflected by the quantity on Form B: Prices, "Supply & Install finish grading, sod, seed & site repairs & clean-up". No payment will be made for any damage above and beyond the total area listed unless agreed to by Contract Administrator. Restoration shall be achieved using topsoil and sod unless otherwise directed by the Contract Administrator.
- E17.1.5 Thirty (30) day maintenance period on sod will commence at Total Performance and acceptance.

E17.2 Method of Measurement and Basis of Payment

- E17.2.1 Method of Measurement shall be as follows:
 - (a) Sodding will be measured on a square metre basis for:
 - (i) "Supply & Install finish grading, sod, seed & site repairs & clean-up" on Form B: Prices.
- E17.2.2 Basis of Payment shall be as follows:
 - (a) Sodding will be paid for at the Contract Unit Prices. The amount to be paid for shall be the total number of units, as indicated on Form B: Prices. This price shall be full payment for supplying all labour, equipment and materials. And performing all operations herein described and all other items incidental to the Work and as accepted by the Contract Administrator.

E18. TREES, SHRUBS AND GROUNDCOVER PLANTING

E18.1 General Description

- E18.1.1 This specification shall cover the supply and installation of trees and shrubs, including planting beds as shown on the Drawings.
- E18.1.2 The Contractor shall furnish all labor, materials, equipment and services necessary, including all things necessary for and incidental to the satisfactory performance and completion of the Work as specified herein.

E18.2 Source Quality Control

- E18.2.1 Obtain approval from the Contract Administrator of plant material at source prior to digging.

E18.3 Protection

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E18.3.1 Coordinate shipping of nursery stock and excavation of holes to ensure minimum time laps between digging and planting. Tie branches of nursery stock securely, and protect plants against abrasion, exposure and extreme temperature change during transit. Avoid binding of plants with rope or wire, which would damage bark, break branches or destroy natural shape of plant. Give full support to root ball of nursery stock during lifting. Cover plant foliage with tarpaulin, and protect bare roots by means of dampened straw, peat moss, saw dust or other acceptable material to prevent loss of moisture during transit and storage. Remove broken and damaged roots with sharp pruning shears. Make clean cuts, and cover cuts over 10 mm diameter with a tree wound dressing.

E18.4 Products

E18.4.1 Soil

(a) Soil shall be as specified in Section E17 – Soil and Sod.

E18.4.2 Plant Material

- (a) Plant material shall be as specified on the Plant Specification List on the Landscape Plan. All sizes shown are minimum. Plant form, habit, etc. shall be in accordance with the most recent Canadian Nursery Landscape Association (CNLA) publications.
- (b) Quality and source are to comply with the Canadian Standards for Nursery Stock, Seventh Edition of CNLA referring to size and development of plant material and root ball. Measure trees when branches are in their natural position. Height and spread dimensions refer to main body of trees and not from branch top to branch top. Use trees of No. 1 grade. Unless specified as multi-stem, trees are to have only one, sturdy, reasonably straight and vertical trunk, and a well-balanced crown with fully developed leader. Evergreens are to be full and bushy to grade with single leader only. Height to be measured to previous year's growth.
- (c) Trees and shrubs are to be free of disease, insect infestation, rodent damage, sun scald, frost cracks, abrasions, unhealed scars, scars exceeding 5cm in diameter, major forks or crooks in the trunk, broken branches, or angled leaders. Bare root is not acceptable. Plants having the above defects will not be accepted by the Contract Administrator.
- (d) Nursery stock is to be grown in nurseries under proper cultural practices as recommended by the Canadian Nursery Trades Association. Only nursery stock grown for at least the last four (4) years in nurseries located in an Agriculture Canada Plant Hardiness Zone of 2 (a or b) or 3 (a or b) will be accepted. Nursery stock that has grown in plant hardiness zones 1 and 4 or greater will be rejected.

E18.4.3 Water

(a) Water is to be potable and free of minerals, which may be detrimental to plant growth.

E18.4.4 Fertilizer

(a) Fertilizer is to be a slow release formulation of low nitrogen and high phosphorus e.g. 10-50-12. Apply quantities at rates stated by product manufacturer.

E18.4.5 Stakes

- (a) T-bar, steel, 40 x 40 x 5 x 2440mm.
- (b) Peeled wood stake, pointed at one end, 50 x 100 x 915mm.

E18.4.6 Guying wire

(a) Type 1: steel, 3 mm wire.

E18.4.7 GUYING COLLAR

- (a) Tube: plastic or rubber, 13mm diameter, nylon reinforced.
- (b) Collars in contact with tree bark must be at least 25mm wide and be made of materials that will stay soft and pliable in all weather conditions.
- (c) Collars to be adjusted so that they permit a reasonable degree of movement with wind without detrimental effects.

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- E18.4.8 Flagging tape
 (a) Fluorescent, orange colour.
- E18.4.9 Trunk protection
 (a) Corrugated Plastic Weeping Tile as specified on Drawing.
- E18.4.10 Mulch
 (a) Wood Chip Mulch: Local shredded wood chip mulch, natural color.
 (b) Samples must be supplied for approval prior to installation. No debris permitted.
- E18.5 Construction Methods
- E18.5.1 Trees and shrubs are to be planted and installed according to the Drawings and SCD-517.
- E18.5.2 Location of nursery stock will be staked out or painted on Site by the Contractor in consultation with the Contract Administrator.
- E18.5.3 The Contractor shall coordinate operations, keep the Site clean and the planting holes drained. The Contractor shall immediately remove soil or debris spilled onto street pavement, grass or sidewalk.
- E18.5.4 Installation shall be done during periods of suitable weather conditions and in accordance with locally accepted practice. Trees are to be planted within forty-eight (48) hours of excavation from the nursery. No tree pit is to be left open at the end of the Contractor's Work day. The planting program is to be planned to ensure that trees delivered to the Site at designated planting locations are installed and thoroughly watered the same day as delivery.
- E18.5.5 Plant trees and shrubs vertically. Orient plants to give best appearance in relation to structures, roads and sidewalks. Place nursery stock to depth equal to depth they were originally growing in nursery. With balled and burlapped root balls and root balls in wire baskets, loosen burlap and cut away the top 1/3 without disturbing root ball. Do not pull burlap or rope from under root ball. Non-biodegradable wrapping must be removed. Tamp planting soil around root system in layers of 150 mm eliminating air voids. Frozen or saturated planting soil is unacceptable. When 2/3 of planting soil has been placed, fill hole with water. After water has completely penetrated into soil, complete backfilling.
- E18.5.6 Each tree is to have an earth saucer at its base having a diameter as large as the excavation with a 100 mm lip formed at the perimeter of the saucer to retain water. When planting is completed, give surface of planting saucer dressing of fertilizer and mix fertilizer thoroughly with top layer of planting soil and water in well.
- E18.6 Maintenance Period
- E18.6.1 The Contractor shall maintain the plant material for one (1) year after the completion of the installation.
- E18.6.2 Water plantings sufficiently and regularly to maintain optimum growth and health of plants without causing erosion. For evergreen plant material, water thoroughly in late fall prior to freeze-up to saturate soil around root system.
- E18.6.3 Remove weeds using control methods acceptable to Contract Administrator.
- E18.6.4 Replace or re-spread damaged, missing or disturbed mulch. Maintain proper mulch depths.
- E18.7 Warranty Period
- E18.7.1 The Warranty/Maintenance Period of one (1) year shall commence at Total Performance. Plant material shall be replaced as instructed by the Contract Administrator. All plant material that is replaced during the maintenance period shall be of the same size, caliper and species as the original plant material unless otherwise agreed to, in writing, by the Contract Administrator. Plant material that is replaced will receive an additional 1 year Warranty/Maintenance, which will commence on the date of replacement.

E19. PROTECTIVE SURFACING

E19.1 General Description

E19.2 This specification shall cover the supply and install of wood fibre safety surfacing and associated sub-surface drainage.

E19.3 Wood fiber Surfacing

E19.3.1 Description

(a) This specification shall cover the supply and installation of Wood Fiber Surfacing within the Play Equipment Area.

E19.3.2 Materials

(a) Wood Fiber product shall be either Zeager Woodcarpet or Fiber FibarSystem 200 or 300 products or substitute in accordance with B6.

(b) Wood Fiber surfacing shall be supplied by and authorized distributor and delivery slips and/or a warranty certificate from an authorized supplier are to be submitted to the Contract Administrator prior to installation.

(i) Contact for Woodcarpet

- ◆ Zeagar Bros. Inc.
- ◆ 4000 East Harrisburg Pike
- ◆ Middletown, PA 17057
- ◆ USA
- ◆ Ph: (1-888) 346-8524 or (717) 944-7481
- ◆ Fax (717) 944-7681
- ◆ sales@seager.com

(ii) Contact for FiberSystem 200 or 300:

- ◆ The Fibar Group LLC
- ◆ 80 Business Park Drive, Suite 300
- ◆ Armonk, NY 10504-1705
- ◆ USA
- ◆ Ph: (800) 342-2721
- ◆ FaxL (914) 273-8659
- ◆ Info@FibarPlaygrounds.com

(c) If substitute to Zeagar Woodcarpet or Fibar FibarSystem 200 or 300 is proposed, it must meet the following conditions:

- (i) Materials must be IPEMA certified Engineered Wood Fiber
- (ii) Material must consist of random-sized, clean, engineered hardwood chips. Standard wood chips or bark mulch are not acceptable.
- (iii) Materials must meet or exceed ASTM F1292 standards for impact attenuation
- (iv) Materials must be certified by the CSA and approved for playground use
- (v) Materials must comply with ASTM F1951 for accessibility under the Canadians with Disabilities Act
- (vi) Materials must be covered by \$10,000,000.00 product liability insurance as well as provide a minimum 10 year warranty against loss of resiliency.

(d) Wood Fiber surfacing shall include wood fibre, geotextile fabric, subsurface drainage system and mats under swings and ends of slides.

(e) Mats are to be installed directly on top of the geotextile fabric and secure in place with two (2) duckbill anchors per mat.

E19.3.3 Construction Methods

- (a) Wood Fibre shall be installed within the play areas, as defined by the timber edging to a minimum depth of 200mm (after compaction). In the case where proposed play equipment includes a maximum fall height greater than 2.4m (8'), depth of material to directly correspond to maximum fall height of play equipment in accordance with manufacturer's specifications.
- (b) The installation of the Wood Fibre shall be done immediately after the play equipment has been installed.
- (c) Installation of entire system, including fiber, geotextile fabric, subsurface drainage and mats under swings and slide ends shall be done according to manufacturer's instruction. Adequate drainage within play equipment area must be ensured as per same.
- (d) Mud grade of play area shall be graded to drain to one edge of the play area, and area cleared of any debris which inhibits proper drainage or installation of products.
- (e) Geotextile fabric must be cut and fit around playground equipment footings and overlap seams by 300mm.
- (f) Installation shall be done by equipment sized to suit the Work being done and the Wood Fibre shall be spread by hand as necessary in the immediate vicinity of the play equipment so as not to damage same. The play equipment shall be swept clean to the satisfaction of the Contract Administrator after installation of Wood Fibre.

E19.4 Method of Measurement and Basis of Payment

E19.4.1 Method of measurement shall be as follows:

- (a) Protective Surfacing will be measured on a square metre basis for:
 - (i) "Supply and Install engineered wood fibre safety surfacing" on Form B: Prices.
- (b) Protective Surfacing will be measured on a per unit basis for:
 - (i) "Supply and install Wear Mats" on Form B: Prices.

E19.4.2 Basis of Payment shall be as follows:

- (a) Protective Surfacing will be paid for at the Contract Unit Prices. The amount to be paid for shall be the total number of units (SM), as indicated on Form B: Prices. This price shall be full payment for supplying all labour, equipment and materials, and performing all operations herein described and all other items incidental to the Work and as accepted by the Contract Administrator.

E20. TIMBER CURB

E20.1 General Description

- E20.1.1 The Contractor shall furnish all labour, materials, equipment and services necessary to complete the Work according to the drawings and specifications.
- E20.1.2 This specification shall cover the supply and installation of timber edging to contain the safety surfacing for the New Play Area.

E20.2 Materials

- E20.2.1 All granular base material shall conform to CW 3110-R10 and CW3130-R1. All material supplied under this Specification shall be of a type approved by the Contract Administrator, and shall be subject to inspection and testing by the Contract Administrator.
- E20.2.2 All bottom timbers to be ACQ pressure treated (P.T.) pine, No.2 or better, no wane, bark, checking or splitting permitted. Wood shall be smooth and free of rough areas. All bottom Timber to be 150mm x 150mm to be longest lengths possible with a minimum length of 1200mm.
- E20.2.3 Screws shall be stainless steel or ceramic coated and certified for use with ACQ pressure treated wood.

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E20.2.4 All capping wood to be 32mm x 150mm Trex coloured or approved equal in accordance with B6.

E20.3 Construction Methods

E20.3.1 Installation shall be as per SCD-651, SCD-651A. Layout shall be established on site as per the drawings provided. Contractor is to ensure that layout is established in such a way as to ensure that minimum safety zones for the proposed play equipment in accordance with on the most recent CSA safety zone requirements, can be established wholly within the curbing as laid out on site.

E20.3.2 Timbers shall not be installed until after all rough grading is complete and both the rough grading and the layout and has been reviewed and approved as consistent with the general intent of the design drawings by the Contract Administrator.

E20.3.3 Granular base shall be installed as per detail provided and compacted to a minimum of 95 percent Standard Proctor Density.

E20.3.4 Timbers shall be installed as per Details provided. Base course timbers shall be pinned with a minimum of two (2) 19mm diameter by 500mm rebar at maximum 1200mm O.C. Contractor is advised that some portions of the play curb may require more than two layers. Third and subsequent layers are to be installed in a manner consistent with SCD-651A.

E20.3.5 All timbers shall be cut neatly for a proper fit with no spaces or gaps between, unless specified for drainage. All cuts shall be treated with end cut as per manufacturers recommendation before being secured. Finished elevations shall ensure that all timbers are smooth, level, set plumb and spaced uniformly. Cuts treated with end cut preservative after being joined will not be accepted.

E20.3.6 Trex cap joints to be offset from bottom timber joints by a minimum of 450mm. Trex caps shall be pre-drilled, set with grain of wood curved down, and fastened to base course with screws treated for ACQ use and sized to suit. Trex capping above base course shall be secured with double row of screws offset at 225mm and installed at 600mm O.C. Minimum length of Trex pieces shall be 1200mm.

E20.3.7 Trex cap shall be applied to existing play curb and attached consistent with provided details.

E20.3.8 Turf shall be repaired as required around edging in accordance with the CW 3510.

E20.4 Measurement and Payment

E20.4.1 Method of Measurement shall be as follows:

- (a) Timber Curb will be measured on a linear meter basis. This will be deemed to include the Trex cap, all lower layers, excavation, base, compaction, and joiners.

E20.4.2 Basis of Payment shall be as follows:

- (a) Play Curb will be paid for at the linear meter price for item 9 on Form B:Prices. This price shall be full payment for supplying all labour, equipment and materials, and performing all operations herein described and all other items incidental to the Work and as accepted by the Contract Administrator.

E21. SUB-SURFACE DRAINAGE

E21.1 Description

E21.1.1 This work shall consist of providing and placing a geocomposite prefabricated drain system as described in the plans as per SCD-659. 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 Work.

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E21.2 Material

E21.2.1 Drainage pipe will be Multi-Flow or approved substitute in accordance with B6. Drainage pipe will be 150mm (6"). The manufacturer will size and approve all fittings for use with Multi-Flow or approved substitute drainage pipe.

E21.2.2 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 reduced permeability and will be inert to chemical commonly found in soil. The geotextile will conform to the following minimum average role 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/ft2	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

E21.2.3 The drainage core shall be made of high-density polyethylene. The core shall be constructed using interconnected corrugate pipers 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

E21.2.4 Fittings

(a) 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 drawings.

E21.2.5 Pipe

- (a) Pipe for drain outlet laterals will be either 100 mm (4") PVC pipe meeting the requirements of ASTM D-2729 or ASTM F-949, or high-density polyethylene pipe meeting the requirements of AASHTO M252.
- (b) A rodent screen made of 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.

E21.3 Backfill for Trenches

- (a) As per SCD-659

E21.4 Methods

- E21.4.1 The layout of the subdrain is to be marked on Site and approved by the Contract Administrator prior to trenching.
- E21.4.2 Contractor is to protect subdrain from excessive weight during the duration of construction and to repair and make good any pipe collapsed prior to acceptance.
- E21.4.3 Fittings for the drain will be installed in accordance with the manufacturer's recommendations and Specifications.
- E21.4.4 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 manufacturer's specification and to the satisfaction of the Contract Administrator.
- E21.4.5 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"/

E21.5 Measurement and Payment

E21.5.1 Method of Measurement shall be as follows:

- (a) Subsurface drainage that is to be located within the sports field shall be measured on a linear meter basis for:
 - (i) "Supply and Install Subsurface drainage" on Form B: Prices

E21.5.2 Basis of Payment Shall be as follows:

- (a) Subsurface Drainage will be paid for at the Contract Unit Prices. The amount to be paid for shall be the total number of units, as indicated on Form B: Prices. This price shall be full payment for supplying all labour, equipment and materials, and performing all operations herein described and all other items incidental to the work and as accepted by the Contract Administrator.
- (b) This payment shall be understood to include all trenching, backfill, fittings, emitters, topsoil, and seeding/sodding, and items incidental to the work included in the Specification.

E22. PLAY EQUIPMENT

E22.1 Independent Components

E22.1.1 General Description

- (a) The Contractor shall furnish all labour, materials, equipment and services necessary to complete the Work according to the specifications.
- (b) This specification shall cover the supply and installation of independent Components as specified herein.
- (c) Independent Components shall be installed in the available areas as shown on Drawing 1/L2.0. The Components and their zones must fit into the proposed play area.

E22.1.2 Materials

- (a) All materials shall be structurally sound and suitable for safe play. Durability shall be ensured on all parts and materials.
- (b) There shall be a minimum (or no) amount of hollow plastic components. Solid plastic is acceptable.
- (c) There shall be a minimum amount of solid elements which limit visibility through the Site.
- (d) Fasteners
 - (i) All hardware shall be tamper-proof in design and require special tools. It shall be either carbon steel plated with zinc/nickel and iridescent chromate finish or stainless steel. All necessary hardware and tools shall be provided.
- (e) Finishes
 - (i) Finishes shall meet or exceed ASTM standards for hardness, adhesion, impact and salt spray resistance. All fabrication cuts, drill holes and weld joints shall be sprayed with a corrosion resistant coating.
- (f) Foundations
 - (i) Shall be as per "E23 FOUNDATIONS".

E22.2 Products

E22.2.1 Play panels shall be:

- (a) For Middle Panel: Landscape Structures – Navigator Reach Panel, Product No. 127439A, Colour: Green (recycled), steering wheel colour: Grey, or approved equal in accordance with B6.
- (b) For West Panel: Landscape Structures – Accessible Stationary Cycler, Product No. 160054D, Colour: Green, or approved equal in accordance with B6.
- (c) For East Panel: Landscape Structures – Bongo Reach Panel, Product No. 164094A, Colour: Green (recycled), or approved equal in accordance with B6.

E22.2.2 Independent play equipment shall be:

- (a) Landscape Structures – Saddle Spinners, Product No. 152179A, Colour: Green, or approved equal in accordance with B6.
- (b) Landscape Structures – Bobble Rider (Double), Product No. 164075A, Colour: Green, or approved equal in accordance with B6.

E22.3 Method of Measurement and Basis of Payment

E22.3.1 Method of Measurement shall be as follows:

- (a) Play Equipment shall be measured on a lump sum basis for:
 - (i) "Supply & install new play equipment panels & independents", on Form B: Prices

E22.3.2 Basis of Payment shall be as follows:

- (a) Play Equipment will be paid for at the Contract Unit Prices. The amount to be paid for shall be the total number of units, as indicated on Form B: Prices. This price shall be full payment for supplying all labour, equipment and materials, and performing all operations herein described and all other items incidental to the Work and as accepted by the Contract Administrator.

E23. FOUNDATIONS

E23.1 General Description

- E23.1.1 All playground equipment posts, bases and anchors are to be set in concrete footings or piles to ensure stability and prevent frost heaving. An alternative to concrete footings or piles that may be approved includes a welded and secured rail mounting system. The current Standard Construction Specifications of the City of Winnipeg, CW 2160 – latest

revision – Concrete to be used in Underground Works, is to be utilized in the installation of the concrete works for all below ground components.

E23.2 Materials

E23.2.1 The specific concrete requirements shall be:

- (a) Sulfate resistant, Type 50 Cement;
- (b) 28 day compressive strength of 30 Mpa;
- (c) Maximum aggregate size of 20mm, nominal;
- (d) Slump 80 +/- 20mm;
- (e) Maximum water/cement ration 0.49

E23.3 Installation

E23.3.1 All posts and supports shall be centred in the concrete footing such that there is a complete collar of concrete around each post and support. Where posts are not perfectly centred there should be a minimum of 2" concrete at any point around the post.

E23.3.2 All concrete footings for play equipment shall be a minimum of 3' depth, or in accordance with Manufacturer's specifications, whichever is greater.

E23.4 Method of Measurement and Basis of Payment

E23.4.1 Method of Measurement shall be as follows:

- (a) Foundations shall be incidental to the measurement of Play Equipment listed above and as shown on Form B: Prices.

E23.4.2 Basis of Payment shall be as follows:

- (a) No separate payment shall be made for play equipment foundations.

E24. MAINTENANCE KITS

E24.1 All play equipment shall include the supply of maintenance kits. Maintenance kits shall include maintenance manuals, complete manufacturer's parks lists, touch-up paint, PVC repair paint, 10% extra of each bolt, washer and any other hardware utilized on the play equipment, and all special tools necessary for assembly and maintenance.

E24.2 There shall be no payment for the maintenance kits.