



THE CITY OF WINNIPEG

BID OPPORTUNITY

BID OPPORTUNITY NO. 425-2007

TOMLINSON AND SIDDEL WERRELL PARK PLAYGROUND RENOVATIONS

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Siddall Werrell Park

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PART B - BIDDING PROCEDURES

B1. CONTRACT TITLE

B1.1 TOMLINSON AND SIDDEL WERRELL PARK PLAYGROUND RENOVATIONS

B2. SUBMISSION DEADLINE

B2.1 The Submission Deadline is 12:00 noon Winnipeg time, June 20, 2007.

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

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

B3. SITE INVESTIGATION

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

B4. ENQUIRIES

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

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

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

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

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

B5. ADDENDA

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

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

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

- B5.2.2 The Bidder is responsible for ensuring that he has received all addenda and is advised to check the Materials Management Branch internet Site for addenda regularly and shortly before the Submission Deadline, as may be amended by addendum.
- B5.2.3 The Bidder shall acknowledge receipt of each addendum in Paragraph 8 of Form A: Bid. Failure to acknowledge receipt of an addendum may render a Bid non-responsive.

B6. SUBSTITUTES

- B6.1 The Work is based on the Plant, Materials and methods specified in the Bid Opportunity.
- B6.2 Substitutions shall not be allowed unless application has been made to and prior approval has been granted by the Contract Administrator in writing.
- B6.3 Requests for approval of a substitute will not be considered unless received in writing by the Contract Administrator at least five (5) Business Days prior to the Submission Deadline.
- B6.4 The Bidder shall ensure that any and all requests for approval of a substitute:
- (a) provide sufficient information and details to enable the Contract Administrator to determine the acceptability of the Plant, Material or method as either an approved equal or alternative;
 - (b) identify any and all changes required in the applicable Work, and all changes to any other Work, which would become necessary to accommodate the substitute;
 - (c) identify any anticipated cost or time savings that may be associated with the substitute;
 - (d) certify that, in the case of a request for approval as an approved equal, the substitute will fully perform the functions called for by the general design, be of equal or superior substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the proposed Work schedule and the dates specified in the Supplemental Conditions for Substantial Performance and Total Performance;
 - (e) certify that, in the case of a request for approval as an approved alternative, the substitute will adequately perform the functions called for by the general design, be similar in substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the proposed Work schedule and the dates specified in the Supplemental Conditions for Substantial Performance and Total Performance.
- B6.5 The Contract Administrator, after assessing the request for approval of a substitute, may in his sole discretion grant approval for the use of a substitute as an “approved equal” or as an “approved alternative”, or may refuse to grant approval of the substitute.
- B6.6 The Contract Administrator will provide a response in writing, at least two (2) Business Days prior to the Submission Deadline, only to the Bidder who requested approval of the substitute.
- B6.6.1 The Bidder requesting and obtaining the approval of a substitute shall be entirely responsible for disseminating information regarding the approval to any person or persons he wishes to inform.
- B6.7 If the Contract Administrator approves a substitute as an “approved equal”, any Bidder may use the approved equal in place of the specified item.
- B6.8 If the Contract Administrator approves a substitute as an “approved alternative”, any Bidder bidding that approved alternative may base his Total Bid Price upon the specified item but may also indicate an alternative price based upon the approved alternative. Such alternatives will be evaluated in accordance with B14.

B6.9 No later claim by the Contractor for an addition to the Total Bid Price because of any other changes in the Work necessitated by the use of an approved equal or an approved alternative will be considered.

B7. BID COMPONENTS

B7.1 The Bid shall consist of the following components:

- (a) Form A: Bid;
- (b) Form B: Prices.

B7.2 Further to B7.1, the Bidder should include the written correspondence from the Contract Administrator approving a substitute in accordance with B6.

B7.3 All components of the Bid shall be fully completed or provided, and submitted by the Bidder no later than the Submission Deadline, with all required entries made clearly and completely, to constitute a responsive Bid.

B7.4 The Bid shall be submitted enclosed and sealed in an envelope clearly marked with the Bid Opportunity number and the Bidder's name and address.

B7.4.1 Samples or other components of the Bid which cannot reasonably be enclosed in the envelope may be packaged separately, but shall be clearly marked with the Bid Opportunity number, the Bidder's name and address, and an indication that the contents are part of the Bidder's Bid.

B7.5 Bidders are advised not to include any information/literature except as requested in accordance with B7.1.

B7.6 Bidders are advised that inclusion of terms and conditions inconsistent with the Bid Opportunity document, including the General Conditions, may result in the Bid being determined to be non-responsive.

B7.7 Bids submitted by facsimile transmission (fax) or internet electronic mail (e-mail) will not be accepted.

B7.8 Bids shall be submitted to:

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

B8. BID

B8.1 The Bidder shall complete Form A: Bid, making all required entries.

B8.2 Paragraph 2 of Form A: Bid shall be completed in accordance with the following requirements:

- (a) if the Bidder is a sole proprietor carrying on business in his own name, his name shall be inserted;
- (b) if the Bidder is a partnership, the full name of the partnership shall be inserted;
- (c) if the Bidder is a corporation, the full name of the corporation shall be inserted;
- (d) if the Bidder is carrying on business under a name other than his own, the business name and the name of every partner or corporation who is the owner of such business name shall be inserted.

- B8.2.1 If a Bid is submitted jointly by two or more persons, each and all such persons shall identify themselves in accordance with B8.2.
- B8.3 In Paragraph 3 of Form A: Bid, the Bidder shall identify a contact person who is authorized to represent the Bidder for purposes of the Bid.
- B8.4 Paragraph 10 of Form A: Bid shall be signed in accordance with the following requirements:
- (a) if the Bidder is a sole proprietor carrying on business in his own name, it shall be signed by the Bidder;
 - (b) if the Bidder is a partnership, it shall be signed by the partner or partners who have authority to sign for the partnership;
 - (c) if the Bidder is a corporation, it shall be signed by its duly authorized officer or officers;
 - (d) if the Bidder is carrying on business under a name other than his own, it shall be signed by the registered owner of the business name, or by the registered owner's authorized officials if the owner is a partnership or a corporation.
- B8.4.1 The name and official capacity of all individuals signing Form A: Bid shall be printed below such signatures.
- B8.4.2 All signatures should be witnessed, except where a corporate seal has been affixed.
- B8.5 If a Bid is submitted jointly by two or more persons, the word "Bidder" shall mean each and all such persons, and the undertakings, covenants and obligations of such joint Bidders in the Bid and the Contract, when awarded, shall be both joint and several.

B9. PRICES

- B9.1 The Bidder shall state a price in Canadian funds for each item of the Work identified on Form B: Prices.
- B9.1.1 Notwithstanding C12.2.3(c), prices on Form B: Prices shall include the Manitoba Retail Sales Tax (MRST, also known as PST) but exclude GST.
- B9.2 The quantities listed on Form B: Prices are to be considered approximate only. The City will use said quantities for the purpose of comparing Bids.
- B9.3 The quantities for which payment will be made to the Contractor are to be determined by the Work actually performed and completed by the Contractor, to be measured as specified in the applicable Specifications.

B10. QUALIFICATION

- B10.1 The Bidder shall:
- (a) undertake to be in good standing under The Corporations Act (Manitoba), or properly registered under The Business Names Registration Act (Manitoba), or otherwise properly registered, licensed or permitted by law to carry on business in Manitoba; and
 - (b) be financially capable of carrying out the terms of the Contract; and
 - (c) have all the necessary experience, capital, organization, and equipment to perform the Work in strict accordance with the terms and provisions of the Contract.
- B10.2 The Bidder and any proposed Subcontractor (for the portion of the Work proposed to be subcontracted to them) shall:
- (a) be responsible and not be suspended, debarred or in default of any obligations to the City (a list of suspended or debarred individuals and companies is available on the Information

Connection page at The City of Winnipeg, Corporate Finance, Materials Management Branch internet Site at <http://www.winnipeg.ca/matmgt>).

- B10.3 The Bidder and/or any proposed Subcontractor (for the portion of the Work proposed to be subcontracted to them) shall:
- (a) have successfully carried out Work similar in nature, scope and value to the Work; and
 - (b) be fully capable of performing the Work required to be in strict accordance with the terms and provisions of the Contract; and
 - (c) have a written Workplace safety and health program if required pursuant to The Workplace Safety and Health Act (Manitoba);
- B10.4 The Bidder shall submit, within three (3) Business Days of a request by the Contract Administrator, proof satisfactory to the Contract Administrator of the qualifications of the Bidder and of any proposed SubContractor.
- B10.5 The Bidder shall provide, on the request of the Contract Administrator, full access to any of the Bidder's equipment and facilities to confirm, to the Contract Administrator's satisfaction, that the Bidder's equipment and facilities are adequate to perform the Work.

B11. OPENING OF BIDS AND RELEASE OF INFORMATION

- B11.1 Bids will be opened publicly, after the Submission Deadline has elapsed, in the office of the Corporate Finance Department, Materials Management Branch, or in such other office as may be designated by the Manager of Materials.
- B11.1.1 Bidders or their representatives may attend.
- B11.2 Following the submission deadline, the names of the Bidders and their Total Bid Prices (unevaluated, and pending review and verification of conformance with requirements) will be available on the Closed Bid Opportunities (or Public/Posted Opening & Award Results) page at The City of Winnipeg, Corporate Finance, Materials Management Branch internet Site at <http://www.winnipeg.ca/matmgt>.
- B11.3 After award of Contract, the name(s) of the successful Bidder(s) and the Contract Amount(s) will be available on the Closed Bid Opportunities (or Public/Posted Opening & Award Results) page at The City of Winnipeg, Corporate Finance, Materials Management Branch internet Site at <http://www.winnipeg.ca/matmgt>.
- B11.4 The Bidder is advised that any information contained in any Bid may be released if required by City policy or procedures, by The Freedom of Information and Protection of Privacy Act (Manitoba), by other authorities having jurisdiction, or by law.

B12. IRREVOCABLE BID

- B12.1 The Bid(s) submitted by the Bidder shall be irrevocable for the time period specified in Paragraph 9 of Form A: Bid.
- B12.2 The acceptance by the City of any Bid shall not release the Bids of the next two lowest evaluated responsive Bidders and these Bidders shall be bound by their Bids on such Work for the time period specified in Paragraph 9 of Form A: Bid.

B13. WITHDRAWAL OF BIDS

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

- B13.1.1 Notwithstanding C23.3, the time and date of receipt of any notice withdrawing a Bid shall be the time and date of receipt as determined by the Manager of Materials.
- B13.1.2 The City will assume that any one of the contact persons named in Paragraph 3 of Form A: Bid or the Bidder's authorized representatives named in Paragraph 10 of Form A: Bid, and only such person, has authority to give notice of withdrawal.
- B13.1.3 If a Bidder gives notice of withdrawal prior to the Submission Deadline, the Manager of Materials will:
- (a) retain the Bid until after the Submission Deadline has elapsed;
 - (b) open the Bid to identify the contact person named in Paragraph 3 of Form A: Bid and the Bidder's authorized representatives named in Paragraph 10 of Form A: Bid; and
 - (c) if the notice has been given by any one of the persons specified in B13.1.3(b), declare the Bid withdrawn.
- B13.2 A Bidder who withdraws his Bid after the Submission Deadline but before his Bid has been released or has lapsed as provided for in B12.2 shall be liable for such damages as are imposed upon the Bidder by law and subject to such sanctions as the Chief Administrative Officer considers appropriate in the circumstances. The City, in such event, shall be entitled to all rights and remedies available to it at law.

B14. EVALUATION OF BIDS

- B14.1 Award of the Contract shall be based on the following bid evaluation criteria:
- (a) compliance by the Bidder with the requirements of the Bid Opportunity (pass/fail);
 - (b) qualifications of the Bidder and the SubContractors, if any, pursuant to B10 (pass/fail);
 - (c) Total Bid Price;
 - (d) economic analysis of any approved alternative pursuant to B6.
- B14.2 Further to B14.1(a), the Award Authority may reject a Bid as being non-responsive if the Bid is incomplete, obscure or conditional, or contains additions, deletions, alterations or other irregularities. The Award Authority may reject all or any part of any Bid, or waive technical requirements or minor informalities or irregularities, if the interests of the City so require.
- B14.3 Further to B14.1(b), the Award Authority shall reject any Bid submitted by a Bidder who does not demonstrate, in his Bid or in other information required to be submitted, that he is responsible and qualified.
- B14.4 Further to B14.1(c), the Total Bid Price shall be the sum of the quantities multiplied by the unit prices for each item shown on Form B: Prices adjusted, if necessary, as follows:
- (a) if the lowest evaluated responsive Bid submitted by a responsible and qualified Bidder is within the budgetary provision for the Work, no adjustment will be made to the Total Bid Price; or
 - (b) if the lowest evaluated responsive Bid submitted by a responsible and qualified Bidder exceeds the budgetary provision for the Work, the Total Bid Prices of all responsive Bids submitted by responsible and qualified Bidders will be adjusted by progressively deducting item(s) 12, 25, 26 and 13 in the order listed, until a Total Bid Price within the budgetary provision is achieved.
- B14.4.1 If there is any discrepancy between the Total Bid Price written in figures, the Total Bid Price written in words and the sum of the quantities multiplied by the unit prices for each item, the sum of the quantities multiplied by the unit prices for each item shall take precedence.

B15. AWARD OF CONTRACT

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

PART C - GENERAL CONDITIONS

C0. GENERAL CONDITIONS

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

PART D - SUPPLEMENTAL CONDITIONS

GENERAL

D1. GENERAL CONDITIONS

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

D2. SCOPE OF WORK

D2.1 The Work to be done under the Contract shall consist of the supply and installation of equipment and Site Works at two playgrounds.

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

- (a) Removal of existing play equipment.
- (b) Refurbishment of existing play equipment to be retained.
- (c) Supply and installation of crusher fines pathway.
- (d) Supply and installation of play curb.
- (e) Supply and installation of playground equipment.
- (f) Supply and installation of safety surfacing.
- (g) Supply and installation of Site furniture.
- (h) Supply and installation of drainage products.

D3. CONTRACT ADMINISTRATOR

D3.1 The Contract Administrator is Dean Spearman Landscape Architect , represented by:

Dean Spearman
83 Lafayette Bay, Winnipeg, Manitoba R3T 3J9
Telephone No. (204) 261-4137
Facsimile No. (204) 261-4137

D3.2 At the pre-construction meeting, Dean Spearman will identify additional personnel representing the Contract Administrator and their respective roles and responsibilities for the Work.

D4. CONTRACTOR'S SUPERVISOR

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

D5. NOTICES

D5.1 Except as provided for in C23.2.2, all notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the Contractor shall be sent to the address or facsimile number identified by the Contractor in Paragraph 2 of Form A: Bid.

D5.2 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the City, except as expressly otherwise required in D5.3, D5.4 or elsewhere in the Contract, shall be sent to the attention of the Contract Administrator at the address or facsimile number identified in D3.1.

- D5.3 All notices of appeal to the Chief Administrative Officer shall be sent to the following address or facsimile number:

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

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

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

SUBMISSIONS

D6. AUTHORITY TO CARRY ON BUSINESS

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

D7. INSURANCE

- D7.1 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 and Dean Spearman Landscape Architect 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) automobile liability insurance for owned automobiles used for or in connection with the Work in the amount of at least two million dollars (\$2,000,000.00) at all times during the performance of the Work and until the date of Total Performance;
- D7.2 Deductibles shall be borne by the Contractor.
- D7.3 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.
- D7.4 The Contractor shall not cancel, materially alter, or cause each policy to lapse without providing at least fifteen (15) Calendar Days prior written notice to the Contract Administrator.

D8. PERFORMANCE SECURITY

- D8.1 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.
- D8.1.1 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.
- D8.2 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.

D9. SUBCONTRACTOR LIST

- D9.1 The Contractor shall provide the Contract Administrator with a complete list of the Subcontractors whom the Contractor proposes to engage (Form J: Subcontractor List) at least two (2) Business Days prior to the commencement of any Work on the Site but in no event later than seven (7) Calendar Days from notification of the award of Contract.

SCHEDULE OF WORK

D10. COMMENCEMENT

- D10.1 The Contractor shall not commence any Work until he is in receipt of a Purchase Order from the Award Authority authorizing the commencement of the Work.
- D10.2 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) evidence of the insurance specified in D7;
 - (iv) the performance security specified in D8;
 - (v) the Subcontractor list specified in D9.
 - (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.
- D10.3 The Contractor shall commence the Work on the Site within seven (7) Working Days of receipt of the Purchase Order.

D11. SUBSTANTIAL PERFORMANCE

- D11.1 The Contractor shall achieve Substantial Performance within Thirty (30) consecutive Working Days of the commencement of the Work as specified in D10.
- D11.2 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.
- D11.3 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.

D12. TOTAL PERFORMANCE

- D12.1 The Contractor shall achieve Total Performance within Forty (40) consecutive Working Days of the commencement of the Work as specified in D10.
- D12.2 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.
- D12.3 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.

D13. LIQUIDATED DAMAGES

- D13.1 If the Contractor fails to achieve Total Performance in accordance with the Contract by the day fixed herein for Total Performance, the Contractor shall pay the City five hundred dollars (\$500.00) per Working Day for each and every Working Day following the day fixed herein for Total Performance during which such failure continues.
- D13.2 The amount specified for liquidated damages in D13.1 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.
- D13.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

D14. SCHEDULED MAINTENANCE

- D14.1 The Contractor shall perform the following scheduled maintenance in the manner and within the time periods required by the Specifications:
- (a) Thirty day sod maintenance as specified in CW 3510-R10 Sodding;
- D14.2 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

D15. JOB MEETINGS

- D15.1 Regular weekly job meetings will be held at the Site. These meetings shall be attended by a minimum of one representative of the Contract Administrator, one representative of the City and one representative of the Contractor. Each representative shall be a responsible person capable of expressing the position of the Contract Administrator, the City and the Contractor respectively on any matter discussed at the meeting including the Work schedule and the need to make any revisions to the Work schedule. The progress of the Work will be reviewed at each of these meetings.
- D15.2 The Contract Administrator reserves the right to cancel any job meeting or call additional job meetings whenever he deems it necessary.

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

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

MEASUREMENT AND PAYMENT

D17. PAYMENT

- D17.1 Further to C12, effective January 1, 2007 the City may at its option pay the Contractor by direct deposit to the Contractor's banking institution.

WARRANTY

D18. WARRANTY

- D18.1 Notwithstanding C13.2, the warranty period shall begin on the date of Total Performance and shall expire one (1) year thereafter, except where longer warranty periods are specified in the respective Specification sections, unless extended pursuant to C13.2.1 or C13.2.2, in which case it shall expire when provided for thereunder.
- D18.1.1 For the purpose of Performance Security, the warranty period shall be one (1) year.
- D18.2 Notwithstanding C13.2, the Contract Administrator may permit the warranty period for a portion or portions of the Work to begin prior to the date of Total Performance if a portion of the Work cannot be completed because of unseasonable weather or other conditions reasonably beyond the control of the Contractor but that portion does not prevent the balance of the Work from being put to its intended use.
- D18.2.1 In such case, the date specified by the Contract Administrator for the warranty period to begin shall be substituted for the date specified in C13.2 for the warranty period to begin.

FORM H1: PERFORMANCE BOND
(See D8)

KNOW ALL MEN BY THESE PRESENTS THAT

_____ ,
(hereinafter called the "Principal"), and

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

_____ dollars (\$_____)

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

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

_____ day of _____, 20____, for:

BID OPPORTUNITY NO. 425-2007

TOMLINSON AND SIDDEL WERRELL PARK PLAYGROUND RENOVATIONS

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

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

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

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

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

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

_____ day of _____, 20____.

SIGNED AND SEALED
in the presence of:

(Witness)

(Name of Principal)

Per: _____ (Seal)

Per: _____

(Name of Surety)

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

**FORM H2: IRREVOCABLE STANDBY LETTER OF CREDIT
(PERFORMANCE SECURITY)**
(See D8)

(Date)

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

RE: PERFORMANCE SECURITY - BID OPPORTUNITY NO. 425-2007

TOMLINSON AND SIDDEL WERRELL PARK PLAYGROUND RENOVATIONS

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 Branch internet Site at <http://www.winnipeg.ca/matmgt>.
- E1.2.2 The version in effect three (3) Business Days before the Submission Deadline shall apply.
- E1.2.3 Further to C2.4(d), Specifications included in the Bid Opportunity shall govern over *The City of Winnipeg Standard Construction Specifications*.
- E1.3 The following are applicable to the Work:

<u>Drawing No.</u>	<u>Drawing Name/Title</u>
L-1	Cover Sheet
L-2	Siddall Werrell Playground
L-3	Tomlinson Playground
L-4	Tomlinson Layout
L-5	Details

E2. PROTECTION OF THE SURVEY INFRASTRUCTURE

- E2.1 Notwithstanding CW 1130-R1 3.14 'Protection of Survey Infrastructure' of the Standard Construction Specifications, 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.
- E2.2 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 986-4826 (8:00 a.m. to 4:00 pm Monday to Friday excluding holidays) to obtain 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.
- E2.3 Where a survey post, bar, or control monument lies in the line of 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.
- E2.4 Outline survey monuments and geodetic control monuments at or adjacent to the Site, not in 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 \$1000 per bar and \$3000 per control monument. Contractors must ensure SubContractors are aware of this clearance procedure and the potential restoration costs.
- E2.5 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.

E3. DEMOLITION AND REMOVALS

- E3.1 This section shall cover the removal of existing play equipment and timber edging where scheduled for removal. It shall also cover any other demolition and removal necessary to construct the project which may be considered incidental to other items of Work.
- E3.2 The removal of existing play components shall not occur until after permission to proceed has been received by the Contract Administrator.
- E3.3 To the extent and limits shown on the Drawings, where the existing crusher fines paving or play surfacing is to be removed, the existing material is to be excavated to a depth sufficient to remove the existing granular material in its entirety.
- E3.4 Excavated granular material is to be removed from the Site and disposed of in a legally acceptable manner. Should the quality of existing granular material be acceptable and the contamination of the material with clay or soil be minimal and following inspection and approval of the granular material by the Contract Administrator, the granular material may be used in the base layer of the new crusher fines paving.
- E3.5 Grassed areas specified for removal shall have the grass surface and growing medium (soil) removed to the elevation of subsurface layer (clay). The excavated material shall be removed from the Site and disposed of or recycled in an environmentally responsible and legal manner.
- E3.6 The existing wooden play curb is to be removed from the Site and disposed of in a legal and environmentally responsible manner.
- E3.7 Where play equipment is scheduled for removal this equipment and its foundation is to be removed in its entirety.
- E3.8 Measurement and payment for this section shall be on the following basis;
- (a) Removal of surplus fill material shall be considered incidental to the portions of Work that generated the fill. There will be no separate measurement or payment for this portion of the Work.
 - (b) Removal of crusher fines paving and play surfacing and play curbing shall be considered incidental to the grading component and shall be paid for under the unit price for that item found on Form B : Prices.
 - (c) Removal/ Relocation of existing Site furniture and play equipment shall be a lump sum item and paid for at the lump sum amount found on Form B :Prices.
- E3.9 There will be no measurement or additional payment for removal of any material beyond that approved by the Contract Administrator prior to the commencement of excavation/demolition.

E4. EARTHWORK AND GRADING

- E4.1 This specification shall cover all clearing and grubbing, stockpiling of topsoil, removal or supply and placement of materials necessary to achieve the grades and drainage patterns documented in the Drawings.
- E4.2 This specification is supplemental to CW 3010 , CW 3110 and CW 3170. Materials and installation are to conform to these standard Specifications.
- E4.3 Clearing and grubbing operations are to be completed to the satisfaction of the Contract Administrator prior to the beginning of EarthWork and Grading.
- E4.4 EarthWork and Grading shall be paid for at the unit price for 'Grading" as is appropriate based upon a measure of the actual area graded in accordance with the plans and Specifications.

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E4.5 There will be no separate measurement or payment for stockpiling of topsoil, clearing and grubbing operations, excavation, or supply or removal of fill material as these shall be considered incidental to the EarthWork and Grading operations.

E5. SUB-SURFACE DRAINAGE

E5.1 This Work shall consist of providing and placing a geocomposite prefabricated drain system as described in the drawings. The drainage system shall be installed in accordance with these Specifications and in reasonably close conformity with the locations and dimensions as shown on the drawings or specified by the Contract Administrator. The quantities of drain as shown on the drawings may be increased or decreased at the direction of the Contract Administrator based on actual Site conditions that occur during construction of the project. Such variations in quantity will not be considered as alterations in the details of construction or a change in the character of the Work.

E5.2 The drain conduit shall be of flexible, prefabricated, rounded rectangular shaped, composite product. The drain conduit shall be wrapped with a non-woven geotextile and shall be a non-woven needle-punched construction and consist of long-chain polymeric fibers composed of polypropylene, polyethylene or polyamide. The fibers shall 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 shall be free of any chemical treatment or coating, which reduces permeability and shall be inert to chemicals commonly found in soil. The geotextile shall conform to the following minimum average roll values.

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

E5.3 The drainage core shall be made of a high-density polyethylene. The core shall be constructed using interconnected corrugated pipes that define and provide the flow channels and structural integrity of the drain. The geotextile shall function only as a filter. The core of the edge drain shall conform to the following physical property requirements.

Thickness, inches	ASTM D-1777	1.0
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Flow Rate, gpm/ft***	ASTM D-4716	30
Compressive Strength, psf	STM D-1621 (modified sand method)	6000
Pipe Stiffness, pii	ASTM D-2412	100

*** At gradient = 0.01, pressure = 10 psi for 100 hours.

- E5.4 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.
- E5.5 Drainage pipe shall be Multi-Flow or approved substitute in accordance with B6. Size shall be 150 mm. All fittings shall be sized to fit approved for use with Multi-Flow or approved substitute in accordance with B6. Cleanouts shall be provided as indicated on the drawing.
- E5.6 Where specified the emitter shall be NDS #620 or approved substitute in accordance with B6.
- E5.7 Pipe for edge drain outlet laterals shall be either PVC pipe meeting the requirements of ASTM D-2729 or ASTM F-949, or high-density polyethylene pipe meeting the requirements of AASHTO M252. 2.4 A rodent screen made of 7.6 mm by 7.6 mm square opening size, 1.6 mm 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 required.
- E5.8 Backfill shall be course sand whose particle size is defined as less than 5% retained on a #10 screen, and less than 5% passing through a # 30 screen. (US Std Sieve) In no case shall more than 1% pass a #60 screen.
- E5.9 The layout of the subdrain is to be marked on Site and approved by the Contract Administrator prior to trenching.
- E5.10 Trenches are to be excavated with a trenching machine or by hand. Locations where the trench has to cross existing utilities, existing irrigation pipes and all other subsurface pipes or fixtures are to be excavated by hand. The amount of trench excavated at any time shall not exceed the amount of drain that can be set and backfilled completely prior to the end of that Working Day. Trench shall be of the width specified on the Drawings.
- E5.11 The bottom surface of the trench is to be free of loose particles and is to have the slope shown on the Drawings. Over excavation in the bottom of the excavation shall be backfilled to the proper grade with excavated material or sand prior to the placement of the drain. Where sand or excavated material is used to fill the trench to the proper elevation that material shall be compacted to 95% of standard proctor density using appropriate means. Where the trench is to pass through an area of existing sod the excavated material is not to remain on the grassed surface for a period longer than 24 hours. Excavated material if not required as fill elsewhere on Site shall be removed from Site and disposed of legally.
- E5.12 Multi-Flow drain pipe is to be placed in trench using Multi-Flow centering device. Trench is to be backfilled with coarse sand to the surface. Backfill shall be placed in maximum of 45 cm loose lifts. Backfill is to be lightly tamped into place and watered. In the case of trenches extending into existing grassed areas course sand backfill is to be seeded with grass seed.
- E5.13 Contractor is to maintain top surface of the backfilled sand even with the surrounding grade during the grow in phase.
- E5.14 Fittings for the drain shall be installed in accordance with the manufacturer's recommendations.
- E5.15 Any damaged edge drain or outlet lateral shall be replaced or repaired by splicing in an undamaged section of drain at the Contractor's expense.

- E5.16 The Contractor shall be responsible for restoration of any surfaces damaged during the Work under this section. There shall be no separate measurement or payment for restoration Work required as a result of this Work.
- E5.17 Measurement and payment shall be on a per linear meter basis for the actual length of pipe installed. All trenching, backfill, fittings, cleanouts, are to be considered incidental to the supply and installation of the pipe.

E6. SODDING

- E6.1 This specification covers the supply and installation of topsoil and sod, the topdressing and seeding of seam, edges and areas of minor Site restoration.
- E6.2 Areas to be Sodded are to be laid out on Site and approved by Contract Administrator before commencing Work. Work outside the limits approved by the Contract Administrator will not be measured and will not be paid for under this section but considered incidental to the Work. Incidental Site restoration shall conform to the same Specifications.
- E6.3 Topsoil and sod are to be supplied and installed as per CW 3510-R8 and CW 3540-R3.
- E6.4 The compacted depth of topsoil shall be 10 cm.
- E6.5 Measurement and Payment will be at the contract unit price per square meter for "Topsoil(10 cm compacted Depth)", "Topsoil (7.5 cm Compacted Depth)", and "Sod" as is appropriate. Measurement shall be of the actual area sodded. Price shall be payment in full for supplying materials and for performing all operations listed below:
- (a) Supply and installation of topsoil.
 - (b) Supply and placement of sod.
 - (c) maintenance of sod.

E7. GRANULAR PAVING

- E7.1 This specification covers the supply and installation of granular paving including all excavation, compaction, geotextile, sub-base and base construction as well as gravel surfacing, and repair of existing sod to ensure a smooth transition to the paving. Other items necessary to complete this portion of the Work and not noted elsewhere are considered incidental to this Work.
- E7.2 This specification is supplemental to CW 3110, CW 3130 and CW 3170. Materials and installation are to conform to these standard Specifications.
- E7.3 Sub-base, base materials and depths are as noted on drawing.
- E7.4 Where the granular paving is to pass through an existing grassed surface the Contractor is to cut the sod using a sod cutter at the edges of the new patio prior to excavation.
- E7.5 Except as specifically noted on the drawing areas of granular paving are to be constructed so as to function with existing drainage patterns and are to have a minimum cross slope of 2% and a maximum cross slope of 5%.
- E7.6 Granular paving is to meet existing landscaping, concrete paving and roads in a neat and precise manner.
- E7.7 Measurement and Payment will be at the contract unit price per square meter for 'Crusher Fines Paving'. Measurement shall be of the actual area covered by granular paving within the limits shown on the Drawings. Price shall be payment in full for supplying materials and for performing all operations listed below:
- (a) Stripping existing topsoil.

- (b) Excavate in-situ material to accommodate the pavement structure including base and subbase.
- (c) Supply and installation of Geotextile.
- (d) Supply and placement of Crushed limestone base course.
- (e) Supply and placement of Crushed surfacing.
- (f) Compaction
- (g) Repair of grass (tie-in) at edge of newly constructed paving.

E8. SITE FURNITURE

- E8.1 This specification will cover the supply and installation of new Site furniture as well as the relocation and refurbishment of existing Site furniture.
- E8.2 The following park furniture shall be obtained by contacting Fleet Management Agency, City of Winnipeg, Central Manufacturing/Repair Facility, 215 Tecumseh Street, attn Bill Dowbyhuz or Murray Burton (Telephone 204-986-5505).
- (a) Tache park bench (with Back) . Finish shall be Tache Green. Length shall be 8'
 - (b) Tache park bench (Backless) . Finish shall be Tache Green. Length shall be 6' 8".
 - (c) Metal slat waste receptacle. Finish shall be black
- E8.3 Benches and waste receptacles shall be installed into concrete filled holes, minimum 400 mm diameter by 600 mm depth. Top of the concrete shall be minimum 100 mm below the finish surface of the granular paving. Top of concrete shall be sloped to drain away from the post.
- E8.4 Measurement and payment shall be for each as per Form B: Prices. Said price shall include all Work necessary to supply and/or remove and refurbish and install each item of Site furniture.

E9. POURED IN PLACE CONCRETE CURB AND EDGING

- E9.1 This section shall cover the supply and installation of the poured in place concrete curb for the Site entries as well as the poured in place concrete edging for the playground.
- E9.2 Concrete shall be Type 1 as per City of Winnipeg Standard Construction Specifications section 3310.
- E9.3 Granular base shall be 20 mm diameter crushed limestone.
- E9.4 Reinforcing steel shall be 12m. with 10 m ties at 600 mm O.C.
- E9.5 Concrete is to be trowel finish. All exposed edges are to be bullnose as shown on the Drawings.
- E9.6 Concrete edging and curb shall have saw cut control joints at 1500 mm O.C. and at all corners.
- E9.7 Layout is to be established on Site, after grading operations and reviewed by Contract Administrator prior to formwork being completed
- (a) General Contractor is to confirm and warrant that play equipment complete with required safety surfacing zones will fit within curbs as laid out on Site.
- E9.8 Granular base, formwork and reinforcing are to be reviewed on Site by the Contract Administrator prior to pouring of concrete.
- E9.9 Curbs and edging are to be measured per linear meter actually installed on the Site and shall be paid for at the Unit Price as per Form B: Prices. This payment shall be understood to include all concrete, excavation, base, reinforcing, compaction, placement and finishing.

E10. PLAY STRUCTURE

- E10.1 This section shall cover the supply and installation of the play structures shown on the Drawings.
- E10.2 Play structure shall be Landscape Structures Inc. as shown on Drawings and available from Playgrounds-R-U's, Telephone (204) 632-7000 or approved substitute in accordance with B6.
- E10.3 All products and installation are to conform to the Canadian Standards Association Guidelines as presented in the latest edition of the 'National Standards of Canada, CAN/CSA-Z614-03.
- E10.4 Material: All materials shall be structurally sound and suitable for safe play. Durability shall be ensured on all steel parts by the use of time-tested coatings such as zinc plating, zinc-nickel plating, powdercoating, TenderTuff coating, etc. Colors shall be specified.
- E10.5 Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/Specifications). All primary fasteners shall include a locking patch type material that will meet the minimum torque requirements of IFI-125. Contractor to provide special tools for pinned tamperproof fasteners.
- E10.6 TenderTuff Coating: All metal components to be TenderTuff-coated shall be thoroughly cleaned in a hot phosphatizing pressure washer, then primed with a water-based thermosetting solution. Primed parts shall be preheated prior to dipping in U.V. stabilized, liquid polyvinyl chloride (PVC), then salt cured at approximately 400 degrees. The finished coating shall be approximately .080" +/- .020" thick at an 85 durometer hardness and have a matte finish. Four standard colors are available.
- E10.7 Polyester Powdercoating: All metal components to be powdercoated shall be free of excess weld and spatter. Parts shall be thoroughly cleaned via a 5-Stage Pretreatment process. Parts are then thoroughly dried and proceed through a set of automatic sprayers that apply electrostatic powdercoat. Parts are oven cured at 400 degrees F. The average powdercoat thickness is .0025".
- E10.8 Super Durable TGIC polyester powder shall be specially formulated for optimum Ultra Violet (U.V.) stability and gloss retention. It shall meet or exceed ASTM Standards for: Hardness (D-3363) Impact (D-2794) Salt Spray resistance (B-117 and D-1654) U.V. Exposure (G-154) Adhesion (D-3359, Method B) The Paint Line shall employ a "checkered" adhesion test daily. Seventeen standard colors are available.
- E10.9 Decks: All Tenderdecks shall be of modular design and have 5/16" diameter holes on the standing surface. There shall be a minimum of four (4) slots in each face to accommodate face mounting of components. Tenderdecks shall be manufactured from a single piece of low carbon 12 GA (.105") sheet steel conforming to ASTM specification A-569. The sheet shall be perforated then flanged formed and reinforced as necessary to ensure structural integrity. The unit shall then be TenderTuff-coated brown only. Tenderdecks shall be designed so that all sides are flush with the outside edge of the supporting posts.
- E10.10 Rotationally Molded Poly Parts: These parts shall be molded using prime compounded linear low-density polyethylene with a tensile strength of 2500 psi per ASTM D638 and with color and UV-stabilizing additives. Wall thickness varies by product from .187" (3/16") to .312" (5/16"). Four standard colors are available.
- E10.11 Permalene Parts: These parts shall be manufactured from 3/4" thick high-density polyethylene that has been specially formulated for optimum U.V. stability and color retention. Products shall meet or exceed density of .960 G/cc per ASTM D1505, tensile strength of 2400 PSI per ASTM D638. Five standard solid colors are available. Some Permalene parts are available in a two-color product with (2) .070" thick exterior layers over a .610" interior core of a contrasting color. Eight standard two-color options are available.

- E10.12 Footings: Unless otherwise specified, the bury on all footings shall be 34" below Finished Grade (FG) on all in-ground play events/posts. Other types of anchoring are available upon request.
- E10.13 Posts: Post length shall vary depending upon the intended use and shall be a minimum of 42" above the deck height. All posts shall be powdercoated to specified color. All posts shall have a "finished grade marker" positioned on the post identifying the 34" bury line required for correct installation and the top of the loose fill protective surfacing. Top caps for posts shall be aluminum die cast from 369.1 alloy and powdercoated to match the post color. All caps shall be factory installed and secured in place with three (3) self sealing rivets. A molded low-density polyethylene cap, with drain holes, shall be pressed onto the bottom end of the post to increase the footing area.
- E10.14 Aluminum Posts: All aluminum PlayBooster posts are manufactured from 6005-T5 extruded tubing conforming to ASTM B-221. Posts shall have a 5" outside diameter with a .125" wall thickness. Aluminum Post Mechanical Properties: Yield Strength (min): 35,000 PSI Tensile Strength (min): 38,000 PSI % Elongation in 2 inches: 10 Modulus of Elasticity: 10 x 10⁶ PSI
- E10.15 Clamps: All clamps, unless otherwise noted, shall be die cast using a 369.1 aluminum alloy and have the following mechanical properties: Ultimate Tensile: 47,000 PSI Yield Strength: 28,000 PSI Elongation: 7% in 2 inches Shear Strength: 29,000 PSI Endurance Limit: 20,000 PSI Each functional clamp assembly shall have an appropriate number of half clamps and shall be fastened to mating parts with two (2) 3/8" x 1 1/8" pinned button head cap screws (SST) and two (2) stainless steel (SST) recessed "T" nuts. A 1/4" aluminum drive rivet w/stainless steel pin is used to ensure a secure fit to the post.
- E10.16 PlayBooster clamps have three functional applications and shall be named as follows:
- (a) Offset hanger clamp assembly.
 - (b) Deck hanger clamp assembly.
 - (c) Hanger clamp assembly.
- E10.17 Playstructure materials are to conform to the following;
- (a) Transfer Modules;
 - (i) Brown Deck Only To 48" Deck, Curved, Right or Left Step Deck: Flange formed from 12 GA (.105") sheet steel conforming to ASTM A569. Standing surface is perforated with 5/16" diameter holes and measures 29" per two (2) sides. Finish: TenderTuff, brown in color.
 - (b) Step Sections/Top Step Section:
 - (i) Formed from 12 GA (.105") sheet steel conforming to ASTM A569. Standing surface is 24 3/8" wide x 14" deep and is perforated with 5/16" diameter holes. Finish: TenderTuff, brown in color.
 - (c) Spacer Tube:
 - (i) Made from 6061-T6 aluminum 7/8" O.D. x 1 11/16". Finish: Powdercoat, color specified.
 - (d) Panels:
 - (i) Solid color Permalene, color specified.
 - (e) Deck Support:
 - (i) Weldment comprised of 3 1/2" O.D. RS-20 (.125") galvanized steel tubing and 3/8" O.D. x 5" long CRS rod. Finish: Powdercoat, brown in color.
 - (f) Step Support:
 - (i) Weldment comprised of 1.660" O.D. RS-20 (.080" - .095") and 1 3/4" x 1 3/4" x 1/8" HR angle. Finish: Powdercoat, brown in color.
 - (g) Clamps:
 - (i) Cast aluminum. Finish: Powdercoat, color specified.

- (h) Fasteners:
 - (i) Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated by manufacturer.
- (i) Railings:
 - (i) Weldment comprised of 1.125" O.D. x 11 GA. (.120") steel tubing with 203 or 303 stainless steel 3/8" threaded inserts. Finish: TenderTuff, color specified.
- (j) Kick Plate
 - (i) 8" Rise Kick Plate: Fabricated from 11 GA (.120") HR flat steel. Finish: TenderTuff, brown in color.
- (k) Decks
 - (i) Square Tenderdeck, Brown Only Square Deck: Flange formed from 12 GA (.105") sheet steel conforming to ASTM A569. Standing surface is perforated with 5/16" diameter holes. Deck face has four (4) slotted holes for face mounting components. The finished size measures 2 5/8" x 47" x 47". Finish: TenderTuff, brown in color.
 - (ii) Triangular Tenderdeck, Brown Only Triangular Deck: Flange formed from 12 GA (.105") sheet steel conforming to ASTM A569. Standing surface is perforated with 5/16" diameter holes. Deck face has four(4) slotted holes for face mounting components. The finished size measures 2 5/8" x 37 3/4". Finish: TenderTuff, brown in color.
 - (iii) Decks Transfer Step, Brown Only Step: Formed from 12 GA (.105") sheet steel conforming to ASTM A569. Finish: TenderTuff, brown in color. Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated
- (l) Deck Hanger Clamp Assembly:
 - (i) Cast aluminum. Finish: Powdercoat, color specified.
- (m) Driver Panel
 - (i) Permalene Panel: Two color panel measures 35 5/8" wide x 41" high, color specified.
 - (ii) Hub: Solid color Permalene, color specified. Wheel: 12" diameter cast 319.1 aluminum alloy. Shaft-303 stainless steel. Finish: TenderTuff, color specified.
 - (iii) Wheel Bracket: Weldment comprised of formed 3/16" plate and 5/8" O.D. shaft. Finish: Powdercoat, color specified.
 - (iv) Angled Panel Bracket: Weldment comprised of .190" thick 5052 aluminum formed angle with two (2) 6061-T6 aluminum threaded tubes 1 1/8" O.D. x 1 1/2" long. Finish: Powdercoat, color specified.
 - (v) Spacer Tube: Made from 6061-T6aluminum 7/8" O.D. x 1 11/16". Finish: Powdercoat, color specified.
 - (vi) Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/Specifications).
 - (vii) Offset Hanger Clamp Assembly: Cast aluminum. Finish: Powdercoat, color specified.
- (n) Storefront Panel,
 - (i) Store Panel: Permalene solid color. Panel measures 35 1/2" wide x 37" high, color specified.
 - (ii) Bracket: Formed 11 GA (.120") 5052 aluminum angle. Finish: Powdercoat, color matched to panel.
 - (iii) Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/Specifications).
 - (iv) Offset Hanger Clamp Assembly: Cast aluminum. Finish: Powdercoat, color specified.

- (o) House Panel (2-Color Permalene)
 - (i) Permalene Panel: Two color panel measures 35 5/8" wide x 41" high, color specified.
 - (ii) Angled Panel Bracket: Weldment comprised of .190" thick 5052 aluminum formed angle with two (2) 6061-T6 aluminum threaded tubes 1 1/8" O.D. x 1 1/2" long. Finish: Powdercoat, color specified.
 - (iii) Spacer Tube: Made from 6061-T6 aluminum 7/8" O.D. x 1 11/16". Finish: Powdercoat, color specified.
 - (iv) Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated
- (p) Reach Panels Navigator
 - (i) Permalene Panel: Two color panel measures 34" wide x 13" high, color specified. Hub: Solid color Permalene, color specified.
 - (ii) Angle: Fabricated from formed 11 GA (.120") HRPO sheet steel. Finish: Powdercoat, color specified.
 - (iii) Wheel: 12" diameter cast 319.1 aluminum alloy. Shaft-303 stainless steel. Finish: TenderTuff, color specified.
 - (iv) Wheel Bracket: Weldment comprised of formed 3/16" plate and 5/8" O.D. shaft. Finish: Powdercoat, color specified.
 - (v) Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/Specifications).
 - (vi) Access Clamp: Weldment comprised of 1/4" flat steel and 1/4" x 1 3/4" wide steel clamp. Finish: Powdercoat, color specified.
 - (vii) Half Clamp: Cast aluminum. Finish: Powdercoat, color specified.
- (q) Stainless Steel Slide
 - (i) 64" - 72" Deck Slide Bedway: Formed from 16 GA (.060") 304 stainless steel with 2B finish and 1" O.D. stainless steel top rail turned down and capped at both ends.
 - (ii) 32" - 40" Deck Slide Bedway: Formed from 16 GA (.060") 304 stainless steel with 2B finish and 1" O.D. stainless steel top rail turned down and capped at both ends
 - (iii) Hood: Rotationally molded from U.V. stabilized linear low density polyethylene, color specified.
 - (iv) Rail: 1 1/8" O.D. 6061-T6 aluminum extrusion with 5/16" walls. Finish: Powdercoat, color specified. Spacer Plate: Fabricated from 3/16" HRS flat steel. Finish: Powdercoat, brown in color.
 - (v) Spacer Plate: Fabricated from 3/16" HRS flat steel. Finish: Powdercoat, brown in color
 - (vi) Bolt Caps: Made from injection molded polypropylene, U.V. stabilized, white in color. Footer: Fabricated from 1.660 O.D. RS-20 (.085" - .095") galvanized steel tubing. Finish: Powdercoat, color specified.
 - (vii) Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/Specifications).
 - (viii) Offset Hanger Clamp Assembly: Cast aluminum. Finish: Powdercoat, color specified.
- (r) Double Poly Slides Double Swirl Slide,
 - (i) 48" - 56" Deck Slide: Rotationally molded from U.V. stabilized linear low density polyethylene, color specified.
 - (ii) Hood: Rotationally molded from U.V. stabilized linear low density polyethylene, color specified.
 - (iii) Rail: Extruded from 1.125" O.D. x .312" W. 6061-T6 aluminum. Finish: Powdercoat, color specified.

- (iv) Rail Spacer: Fabricated from 1.3125" O.D. x 16 GA (.065") steel tubing. Finish: Powdercoat, color specified.
 - (v) Mid-Support: Weldment comprised of 1.660" O.D. RS-20 (.085" - .095") galvanized steel tubing and 1/4" x 3" mounting plate. Finish: Powdercoat, color specified.
 - (vi) Support: Weldment comprised of 2.375" O.D. RS-20 (.095" - .105") galvanized steel tubing and 1/4" x 3" mounting plate. Finish: Powdercoat, color specified.
 - (vii) Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/Specifications).
 - (viii) Offset Hanger Clamp Assembly: Cast aluminum. Finish: Powdercoat, color specified.
- (s) Sidewinder 2 Slide,
- (i) 40" Deck Slide: Rotationally molded from U.V. stabilized linear low density polyethylene, color specified.
 - (ii) Hood: Rotationally molded from U.V. stabilized linear low density polyethylene, color specified.
 - (iii) Rail: Extruded from 1.125" O.D. x .312" W. 6061-T6 aluminum. Finish: Powdercoat, color specified.
 - (iv) Rail Spacer: Fabricated from 1.3125" O.D. x 16 GA (.065") steel tubing. Finish: Powdercoat, color specified.
 - (v) Mid-Support: Weldment comprised of 1.660" O.D. RS-20 (.085" - .095") galvanized steel tubing and 1/4" x 3" mounting plate. Finish: Powdercoat, color specified.
 - (vi) Support: Weldment comprised of 2.375" O.D. RS-20 (.095" - .105") galvanized steel tubing and 1/4" x 3" mounting plate. Finish: Powdercoat, color specified.
 - (vii) Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/Specifications).
 - (viii) Offset Hanger Clamp Assembly: Cast aluminum. Finish: Powdercoat, color specified.
- (t) Centipede Climber
- (i) 48"-56" Deck Climber: Weldment comprised of 2.375" O.D. RS-40 (.130" - .140") galvanized steel tubing, 1.315" O.D. RS-20 (.080" - .090") galvanized steel tubing and 1/4" flat steel. Finish: Powdercoat, color specified.
 - (ii) Support: Formed from 2.375" O.D. RS-40 (.130" - .140") galvanized steel tubing. Finish: Powdercoat, color specified.
 - (iii) Handhold Panel: Solid color Permalene, color specified.
 - (iv) Spacer Tube: Made from 6061-T6 aluminum 7/8" O.D. x 1 11/16". Finish: Powdercoat, color specified.
 - (v) Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/Specifications).
 - (vi) Offset Hanger Clamp Assembly: Cast aluminum. Finish: Powdercoat, color specified.
- (u) Sky Rail Climber,
- (i) Sky Rail: Weldment comprised of 1.900" O.D. RS-20 (.090" - .100") galvanized steel tubing per ASTM A500, 1.315" O.D. RS-20 (.080" - .090") galvanized steel tubing per ASTM A500, 1.029" O.D. RS-20 (.070" - .080") galvanized steel tubing per ASTM A500, 3/16" x 1 1/4" x 2" angle and 1/4" x 2 1/2" HR flat steel. Finish: Powdercoat, color specified.
 - (ii) Footer: Fabricated from 1.900" O.D. RS-20 (.090" - .100") galvanized steel tubing. Finish: Powdercoat, color specified.

- (iii) Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/Specifications).
- (v) Vertical Ascent Climber
 - (i) 56" Deck Panels: Solid color Permalene, color specified.
 - (ii) Spacer Tube: Made from 6061-T6 aluminum 7/8" O.D. Finish: Powdercoat, color specified.
 - (iii) Clamps: Cast aluminum. Finish: Powdercoat, color specified. Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/Specifications).
 - (iv) Made from Polyester Resin. Handholds measure approx. 5 3/4" long x 2 1/4" wide x 1 3/4" high.
- (w) Step Ladders,
 - (i) Brown Steps Only 32" Deck Step
 - (ii) Ladder: Fabricated and formed from 14 GA (.075") HRPO sheet steel with 5/16" perforated holes for steps and welded 12 GA (.105") HRPO sheet steel for sides. Finish: TenderTuff, brown in color.
 - (iii) Handhold Panel: Solid color Permalene, color specified.
 - (iv) Handrail: Formed from 1.125" O.D. x 11 GA (.120") galvanized steel tubing. Finish: TenderTuff, color specified.
 - (v) Footer: Weldment comprised of 1.660" O.D. RS-20 (.085" - .095") galvanized steel tubing and 1/4" x 2" zinc plated steel strap. Finish: Powdercoat, brown in color.
 - (vi) Spacer Tube: Made from 6061-T6 aluminum 7/8" O.D. x 1 11/16". Finish: Powdercoat, color specified.
 - (vii) Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/Specifications).
 - (viii) Offset Hanger Clamp Assembly: Cast aluminum. Finish: Powdercoat, color specified.
- (x) Wiggle Ladders
 - (i) 32" Deck Chain: 4/0 Chain zinc plated. Finish: TenderTuff, color specified.
 - (ii) Rail: Fabricated from 13/16" diameter x 27 15/16" long CRS solid bar stock with both ends tapped 3/8". Finish: TenderTuff, color specified.
 - (iii) Support: Fabricated from 1.315" O.D. RS-20 (.080" - .090") galvanized steel tubing. Handhold Panel: Solid color Permalene, color specified.
 - (iv) Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/Specifications).
 - (v) Spacer Tube: Made from 6061-T6 aluminum 7/8" O.D. x 1 11/16". Finish: Powdercoat, color specified.
 - (vi) Offset Hanger Clamp Assembly: Cast aluminum. Finish: Powdercoat,
- (y) Grab Bar,
 - (i) TenderTuff-coated Brown Fasteners:
 - (ii) Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/Specifications).
 - (iii) Grab Bar: Weldment comprised of formed 7/8" O.D. x 11 GA (.120") and 1/4" x 1 3/4" stainless steel half clamps. Finish: TenderTuff, brown in color.
 - (iv) Half Clamp: Cast aluminum. Finish: Powdercoat, color specified.
- (z) Handloop

- (i) Assembly Handloop: Weldment comprised of 1.125" O.D. x 11 GA (.120") steel tubing with 203 or 303 stainless steel inserts, with 5/8" internal thread. Finish: TenderTuff, color specified.
- (ii) Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/Specifications).
- (iii) Offset Hanger Clamp Assembly: Cast aluminum. Finish: Powdercoat, color specified.

(aa) Posts

- (i) 111404B Posts For Decks 140"/64" Deck Post.
- (ii) 111404C Posts For Decks 132"/56" Deck Post.
- (iii) 111404D Posts For Decks 124"/48" Deck Post.
- (iv) 111404E Posts For Decks 116"/40" Deck Post.
- (v) 111404F Posts For Decks 108"/32" Deck Post.
- (vi) 111404G Posts For Decks 100"/24" Deck Post.
- (vii) 111404H Posts For Decks 92"/16" Deck Post.
- (viii) 111404J Posts For Decks 76"/Ground Level Post.

E10.18 Playstructure Colours

- (a) Tan ; barriers, Clamps, Permaline (green is to be secondary colour on permaline)
- (b) Green; Posts, Over Heads, Climbers , Slide hoods
- (c) Tender Tuff: Brown

E10.19 Complete Play Structure

- (a) Notwithstanding the items listed above the play structure is to be a complete structure including all miscellaneous fittings, handholds, grab bars, etc required to be a complete structure in accordance with CAN/CSA – Z614-98.

E10.20 Installation

- (a) Playstructure shall be installed in accordance with manufactures Specifications.
- (b) All products and installation are to conform to the Canadian Standards Association Guidelines as presented in the latest edition of the 'National Standards of Canada, CAN/CSA-Z614-03.
- (c) All decks shall be level.
- (d) All posts shall be vertical.
- (e) Installation of play structure shall be by factory certified installers only and all installation is to conform to manufacturers specification.
- (f) Installation will be coordinated with other Work on Site. Play structure shall be secured and rendered unusable until safety surfacing is in place.
- (g) Playstructure shall be ordered immediately upon award of Contract and the installation dates confirmed.

E10.21 Measurement and payment for the play structure shall be the Unit Price as per Form B: Prices. Measurement shall be on a lump sum basis for the completed structure. Said price shall be deemed to include all costs for the supply and installation of all components of the play structure and accessory items.

E11. SWINGS

- E11.1 This section shall cover the supply and installation of new swings and also the renovation of existing swings.
- E11.2 Existing swings shall be renovated as follows;
- (a) Existing cross bar shall be removed sandblasted and repainted to match existing. Paint shall be non-toxic and suitable for use on Play structures.
 - (b) Existing swing hangers are to be reattached to cross beam with sufficient number to allow a maximum of two swings per bay. Swing hangers are to be spaced in a manner consistent with CSA guidelines. Nuts are to face down.
 - (c) Swings are to be reinstalled after safety surfacing is in place.
 - (d) The two surplus infant seats are to be delivered to City personnel.
- E11.3 New Swings shall be Sportsplay #581-440 swing set: 8' high, two bay, 4 place w 90 mm (3.5") O.D. 7 gauge top beam and 60mm (2 3/8") 10 gauge legs all RS 40-galvanized with powdercoated red end fittings and two slash proof rubber enclosed infant seats, and two belt slash proof belt seats c.w. heavy duty 4/1 straight link galvanized steel chain, double clevis and bolt links or approved substitute in accordance with B6.
- E11.4 All fabrication cuts, drill holes, and weld joints shall be sprayed with a corrosion resistant coating and the bottom end of the posts shall be sealed with a moisture barrier.
- E11.5 Yoke clamps shall be either one piece construction and fabricated from 8 gauge RS40 Galvanized steel or two piece, compression clamping cast aluminum or galvanized metal with baked on polyester powdercoating. They shall be complete with tamper proof hardware.
- E11.6 Enclosed infant seats shall be moulded of U.V. stabilized, high quality rubber with a tempered stainless steel reinforcement plate insert moulded inside, rendering the seats slashproof. Infant seats shall be fully enclosed to prevent slipping out and provide extra lower back support.
- E11.7 Belt seats shall be slash proof c.w. shackle.
- E11.8 Swings shall be installed in a manner consistent and in accordance with the Canadian Standards Association Guidelines.
- E11.9 Swings shall be secured and rendered unusable until safety surfacing is in place.
- E11.10 Measurement and payment shall be lump sum as per Form B: Prices. This lump sum shall include all items of Work necessary and incidental to supplying and installing complete and operating swings in accordance with Canadian Standards Association guidelines.

E12. SEESAW

- E12.1 This specification shall cover the supply and installation of the See Saw
- E12.2 The See Saw shall be a Landscape Structures Model #148637A or approved substitute in accordance with B6.
- E12.3 Colour shall be Green/Tan.
- E12.4 SeeSaw shall be installed in accordance with Manufacturers instructions and in a manner consistent with and compliant to the Canadian Standards Association Guidelines.
- E12.5 Measurement and payment shall be lump sum at the price identified in Form B: Prices.

E13. INDEPENDENT PLAY COMPONENTS

- E13.1 This specification shall cover the supply and installation of the Independent play components

E13.2 The See Saw shall be a Landscape Structures or approved substitute in accordance with B6.

- (a) Rino Dino Spring Toy
- (b) T-Rex Spring Toy
- (c) Saddle Spinner
- (d) Independent Cyclor

E13.3 Colour shall be Green/Tan.

E13.4 Independent Play Components shall be installed in accordance with Manufacturers instructions and in a manner consistent with and compliant to the Canadian Standards Association Guidelines.

E13.5 Measurement and payment shall be for each at the price identified in Form B: Prices.

E14. FOUNDATIONS

E14.1 All playground equipment posts, bases and anchors are to be set in concrete footings or piles sufficient to ensure stability and prevent frost heaving. Concrete shall conform to the Standard Construction Specification of the City of Winnipeg, CW 2160 (revision in effect 3 days before Bid Opportunity close).

E14.2 The concrete shall "type B" 32 mpa concrete.

E14.3 Contractor shall notify the Contract Administrator at least 48 hours prior to the installation of the concrete. The Contractor must obtain approval from the Contract Administrator for the size and depth of the auger holes and the temporary location of the play structure prior to the installation of the concrete.

E14.4 Playstructure posts shall have a minimum 350 mm diameter (14") concrete footing and shall be centered in the concrete footing.

E14.5 Independent components and See Saw shall have a minimum 18" diameter concrete footing and shall be centered in the concrete footing.

E14.6 Depth of the footing shall be sufficient to ensure stability and prevent frost heaving.

E14.7 Footings shall meet or exceed manufacturers recommendations and National Standard of Canada Can/CSA-Z614-03.

E15. MAINTENANCE KITS

E15.1 All play equipment shall include the supply of maintenance kits. Maintenance kits shall include maintenance manuals, complete manufacturer's parts 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.

E16. PLAY SURFACING

E16.1 This specification shall cover the supply and installation of protective surfacing in the playground area.

E16.2 Play Gravel Safety Surfacing

- (a) Safety stone shall be 6-10 mm Playground Stone, composition shall be 6 to 10 mm river washed granite only. Stone shall be rounded and not angular. The stone shall be washed and screened. All stone shall pass a 8mm screen and no stone shall pass a 4 mm screen.
- (b) Playground stone shall not be installed until after the rough grading and the subsurface drainage have been inspected and approved by the Contract Administrator.

- (c) Playground stone shall be installed within all play areas, as defined by concrete edging, to a minimum depth of 30 cm.
- (d) The play stone shall be installed immediately after the play structure has been installed and prior to the play structure being rendered usable.
- (e) Installation shall be done by equipment sized to suit the Work being done and the Playground Stone shall be spread by hand as necessary in the immediate vicinity of the playstructures so as not to damage same. Contractor is cautioned that equipment is not to drive over subsurface drains without suitable protection being provided for drains prior to Work being done. The playstructures shall be swept clean to the satisfaction of the Contract Administrator after the installation of the Playground Stone.

E16.3 Engineered Wood Fiber Safety Surfacing

- (a) Engineered wood fiber safety surfacing shall be Fibar system 300 or approved substitute in accordance with B6.
- (b) Surfacing shall be IPEMA-Certified Engineered Wood Fiber. Standard wood chips or bark mulch will not be acceptable.
- (c) Supplier must provide test results for Engineered Wood Fiber and Fibar Mats for impact attenuation in accordance with ASTM F 1292. Results must be provided for new and for 12 year old Engineered Wood Fiber Material.
- (d) Tests for Engineered Wood fiber Surfacing and Fibar Mats must show results that meet or exceed minimum CSA requirements for G-max and HIC values with a 30 cm surfacing depth and a 12' fall height
- (e) Fibar Drain, Fibar Mat, and Fibar material is to be installed on graded and compacted sub grade in accordance with Manufacturers instructions.
- (f) Avoid contamination of the fibar material with sand, gravel, mud and native soil.
- (g) Fibar Drain strips are to be installed in a manner consistent with the Drawings, on a maximum 1.8 m center, in the direction of the grade.
- (h) Cover sub-grade with FibarFelt material. Overlap all seams a minimum of 150 cm. Ensure that the trench and Fibar Drain are covered. If fibar felt is cut to accommodate playground equipment steps are to be taken to ensure that overlaps occur.
- (i) Fibar wood fiber is to be spread in a manner that ensures the fibar felt or fibar drains are not damaged. Installed depth should allow for maintenance of minimum depth after compaction.
- (j) After installation fibar is to be hand raked after installation and again after two weeks of use.
- (k) Installer is to certify that the installation has been done in a manner consistent with manufacturers recommendations.
- (l) Supplier is to provide The City with instructions for Maintaining Fibar surface.

E16.4 Measurement and payment shall be for the actual area covered by the safety surfacing as called for on the Drawings and actually covered on the Site. Measurement shall be per square meter covered and payment shall be at the unit price identified in Form B: Prices.