



THE CITY OF WINNIPEG

BID OPPORTUNITY

BID OPPORTUNITY NO. 480-2005

PLAYGROUND REDEVELOPMENT AT VERBENA PARK AND PRIMROSE PARK

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PART B - BIDDING PROCEDURES

B1. PROJECT TITLE

B1.1 PLAYGROUND REDEVELOPMENT AT VERBENA PARK AND PRIMROSE PARK

B2. SUBMISSION DEADLINE

B2.1 The Submission Deadline is 12:00 noon Winnipeg time September 13, 2005.

B2.2 Bid Submissions 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 GC:3.1, the Bidder may view the Site without making an appointment.

B3.1 The Bidder is advised that all Sites are to be viewed prior to submitting a bid to familiarize the Bidder with the nature of the work area, and Site access restrictions. Bidder shall note that existing trees are to be protected and proximity of trees to the construction area may limit the type of construction equipment utilized. The Bidder is made aware the City Naturalist and Forestry Department will require financial compensation for trees or plant material damaged by the construction area.

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 shortly before submitting his Bid.
- B5.3 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 seven (7) 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 shall 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 SUBMISSION

B7.1 The Bid Submission consists of the following components:

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

B7.2 The Bid Submission shall be submitted enclosed and sealed in an envelope clearly marked with the Bid Opportunity number and the Bidder's name and address.

B7.2.1 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.

B7.3 Bid Submissions submitted by facsimile transmission (fax) or internet electronic mail (e-mail) will not be accepted.

B7.4 Bid Submissions 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 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 Submission and the Contract, when awarded, shall be both joint and several.

B9. PRICES

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

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

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

B10. QUALIFICATION

B10.1 The Bidder shall:

- (a) undertake to be in good standing under The Corporations Act (Manitoba), or properly registered under The Business Names Registration Act (Manitoba), or otherwise properly registered, licensed or permitted by law to carry on business in Manitoba;
- (b) be responsible and not be suspended, debarred or in default of any obligation to the City;
- (c) be financially capable of carrying out the terms of the Contract;
- (d) have all the necessary experience, capital, organization, and equipment to perform the Work in strict accordance with the terms and provisions of the Contract;
- (e) have successfully carried out work, similar in nature, scope and value to the Work;
- (f) employ only Subcontractors who:
 - (i) are responsible and not suspended, debarred or in default of any obligation 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>); and
 - (ii) have successfully carried out work similar in nature, scope and value to the portion of the Work proposed to be subcontracted to them, and are fully capable of performing the Work required to be done in accordance with the terms of the Contract;
- (g) have a written workplace safety and health program in accordance with The Workplace Safety and Health Act (Manitoba).

- B10.2 The Bidder shall be prepared to 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.
- B10.3 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 Bid Submissions 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 After the public opening, the names of the Bidders and their Total Bid Prices as read out (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 Submission 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 GC:23.3, 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 shall:
- (a) retain the Bid Submission until after the Submission Deadline has elapsed;

- (b) open the Bid Submission 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 Submission 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 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 Submission 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 and will be 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, then the deletions will be made to each Site
The following lists of the deductions
 - (i) Item 17 and 30- Tree maintenance for two years AND Item 16 Supply and Install American Basswood (65mm Cal.) AND Item 28 Supply and install deciduous trees AND Item 29 Supply and install coniferous trees.

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.

B14.5 This Contract may be awarded as a whole (Alternative1) or separately in sections (Alternative 2) as identified on Form B: Prices.

B14.5.1 Notwithstanding B7, the Bidder may, but is not required to bid on both alternatives, or on any one or more sections in Alternative 2.

B14.5.2 The City will have no obligation to award any section to the responsible Bidder submitting the lowest evaluated responsive Bid for that section and shall have the right to choose the

alternative which is in its best interests. If the Bidder has not bid on both alternatives or on all sections in Alternative 2, he shall have no claim against the City if his partial Bid is rejected in favour of an award of the Contract on the basis of an alternative or section upon which he has not bid.

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.
- B15.4 Notwithstanding GC:4, 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 GC:1.1, 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

C1. GENERAL CONDITIONS

C1.1 The *General Conditions for Construction Contracts* (Revision 2000 11 09) are applicable to the Work of the Contract.

C1.1.1 The *General Conditions for Construction Contracts* 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>.

PART D - SUPPLEMENTAL CONDITIONS

GENERAL

D1. GENERAL CONDITIONS

- D1.1 In addition to the *General Conditions for Construction Contracts*, these Supplemental Conditions are applicable to the Work of the Contract.
- D1.2 The General Conditions are amended by striking out “The City of Winnipeg Act” wherever it appears in the General Conditions and substituting “The City of Winnipeg Charter”.
- D1.3 The General Conditions are amended by striking out “Tender Package” wherever it appears in the General Conditions and substituting “Bid Opportunity”.
- D1.4 The General Conditions are amended by striking out “Tender Submission” wherever it appears in the General Conditions and substituting “Bid Submission”.
- D1.5 The General Conditions are amended by deleting GC:6.16 and GC:6.17. The City of Winnipeg is now within the jurisdiction of the Manitoba Ombudsman pursuant to The Ombudsman Act.

D2. SCOPE OF WORK

- D2.1 The Work to be done under the Contract shall consist of playground redevelopment and related landscape development at Verbena Park and Primrose Park.
- D2.2 The major components of the Work are as follows:
- (a) Primrose Park:
 - (i) Remove existing 1.8 M high swing set on South side and restore with sod;
 - (ii) Create new play area around existing snail climber to supply and install new play equipment, including excavation, concrete edging and safety stone;
 - (iii) Create new play area around existing North side swing set;
 - (iv) Remove existing concrete walk and add new gravel path as shown on the drawings;
 - (v) Supply and install trees;
 - (vi) Supply and install site furniture; and
 - (b) Verbena Park:
 - (i) Remove and dispose existing timber edging and sand;
 - (ii) Create new play area as per drawings to supply and install new play equipment; including excavation, concrete edging and safety stone;
 - (iii) Supply and install picnic table with gravel base;
 - (iv) Asphalt repairs as necessary;
 - (v) Supply and install trees (Deciduous + Coniferous).

D3. CONTRACT ADMINISTRATOR

- D3.1 The Contract Administrator is:
- Donna Beaton
Urban Designer
Planning, Property and Development Department
15-30 Fort Street Winnipeg, MB R3C 4X5
Telephone No. (204) 986 7436

Facsimile No. (204) 986 7524

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

D4. CONTRACTOR'S SUPERVISOR

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

D5. NOTICES

- D5.1 Except as provided for in GC:23.2.2, 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 attention of the Chief Financial Officer at the following address or facsimile number:

The City of Winnipeg
Chief Administrative Officer Secretariat
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
185 King Street, 3rd Floor
Winnipeg MB R3B 1J1
Facsimile No.: (204) 947-9155

SUBMISSIONS

D6. INSURANCE

- D6.1 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) all inclusive, with The City of Winnipeg being added as an additional insured, with a cross-liability clause, such liability policy to also contain a contractual liability, an unlicensed motor vehicle liability and a products and completed operations

endorsement to remain in place at all times during the performance of the Work and throughout the warranty period;

- (b) automobile liability insurance for owned and non-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;

D6.2 Deductibles shall be borne by the Contractor.

D6.3 The Contractor shall provide the City Solicitor with a certificate of insurance of each policy, in a form satisfactory to the City Solicitor, 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.

D6.4 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.

D7. SUBCONTRACTOR LIST

D7.1 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

D8. COMMENCEMENT

D8.1 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.

D8.2 The Contractor shall not commence any Work on the Site until:

- (a) the Contract Administrator has confirmed receipt and approval of:
 - (i) evidence that the Contractor is 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;
 - (ii) evidence of the workers compensation coverage specified in GC:6.14;
 - (iii) evidence of the insurance specified in D6;
 - (iv) the Subcontractor list specified in D7; and
- (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.

D8.3 The Contractor shall commence the Work on the Site within seven (7) Working Days of receipt of the Purchase Order.

D9. SUBSTANTIAL PERFORMANCE

D9.1 The Contractor shall achieve Substantial Performance within fifteen (15) consecutive Working Days of the commencement of the Work as specified in D8.

D9.2 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.

- D9.3 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.

D10. TOTAL PERFORMANCE

- D10.1 The Contractor shall achieve Total Performance within twenty (20) consecutive Working Days of the commencement of the Work as specified in D8. The exception can be made to accommodate supply and installation of play equipment only if the delivery of the play equipment cannot be achieved within the timeframe. Contractor has to get approval on proposed completion date for this item with Contract Administrator.
- D10.2 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.
- D10.3 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.

D11. LIQUIDATED DAMAGES

- D11.1 If the Contractor fails to achieve Substantial Performance in accordance with the Contract by the day fixed herein for Substantial 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 Substantial Performance during which such failure continues.
- D11.2 The amount specified for liquidated damages in D11.1 is based on a genuine pre-estimate of the City's losses in the event that the Contractor does not achieve Substantial Performance by the day fixed herein for same.
- D11.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

D12. SCHEDULED MAINTENANCE

- D12.1 The Contractor shall perform the following scheduled maintenance in the manner and within the time periods required by the Specifications:
- (a) Two year tree maintenance as specified in E19 .
- D12.2 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

D13. JOB MEETINGS

- D13.1 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.
- D13.2 The Contract Administrator reserves the right to cancel any job meeting or call additional job meetings whenever he deems it necessary.

D14. PRIME CONTRACTOR – THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA)

- D14.1 Further to GC:6.26, 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).

PART E - SPECIFICATIONS

GENERAL

E1. APPLICABLE SPECIFICATIONS, STANDARD DETAILS AND DRAWINGS

- E1.1 *The City of Winnipeg Standard Construction Specifications* in its entirety, whether or not specifically listed on Form B: Prices, shall apply to the Work.
- E1.1.1 *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>.
- E1.1.2 The version in effect three (3) Business Days before the Submission Deadline shall apply.
- E1.1.3 Further to GC:2.4(d), Specifications included in the Bid Opportunity shall govern over *The City of Winnipeg Standard Construction Specifications*.
- E1.2 The following Drawings are applicable to the Work:

<u>Drawing No.</u>	<u>Drawing Name/Title</u>
V-21.B	Verbena Park- Existing Conditions & Removals
V-21.C	Verbena Park- Proposed Development
V-21.D	Verbena Park- Layout Plan For Play Area
P-48.A	Primrose Park- Existing Conditions & Removals
P-48.B	Primrose Park- Proposed Development
P-48.C	Primrose Park- Layout Plan
Sk-1	Deciduous Balled & Burlapped Tree Planting
SCD-119	Waste Receptacle Metal Slat Type
SCD-121	Tache Backless Bench
SCD-130A	Wheelchair Tache Style Metal Frame Picnic Table
SCDP-2	Concrete Playsurface Edging Detail

E2. LAYOUT OF WORK

- E2.1 The Contractor shall set control lines and bench marks by means of stakes, buoys or marks and the Contractor shall make the completed Works conform to the lines and marks thus indicated. The Contractor shall furnish all other lines and levels required. The Contractor shall be responsible for the careful preservation of all stakes and marks so set whether relating to his own or to other Work. Care must be taken that the Contract Administrator be notified immediately of the disturbance of any such stakes or marks; the cost of correcting any errors arising out of neglect of the Contractor or his agent or his employees, to so notify the Contractor Administrator shall be borne entirely by the Contractor, as well as the cost of replacing any disturbed stakes or marks.
- E2.2 All layout Work shall be inspected and approved by the Contract Administrator prior to construction.
- E2.3 Before commencing Work the Contractor shall satisfy himself as to the meaning and correctness of all stakes and marks and no claims shall be entertained by the City of Winnipeg on account of any alleged inaccuracies. If any error is suspected in the plans, specifications or the directions of the Contract Administrator, Work shall be discontinued until the errors are rectified, but no claims shall be made on account of any delay occasioned thereby.
- E2.4 All shapes laid out by the Contractor must be within the area allowance for all items shown in on Form B: Prices.

E2.5 All proposed tree planting locations shall be staked with minimum 610 mm height vertical markers, and be approved by the Contract Administrator prior to excavating tree pit.

E2.6 The Contractor shall locate and protect all underground utilities prior to commencing construction.

E3. SITE ACCESS

E3.1 Access to the each Site will be determined at the pre-construction meeting. This access area shall be provided and maintained by the Contractor at his own expense and approved by the Contract Administrator.

E3.2 The Contractor shall be restricted to the Site access location and route only so that there is a minimum of disturbance to the existing ground surface. Damage to areas beyond the marked route shall be repaired by and at the expense of the Contractor to the satisfaction of the Contract Administrator.

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

E4.1 Further to GC:6.12, the Contractor shall give all necessary notices, obtain all necessary permits and pay all fees in order that the Work may be carried out. The Contractor shall submit all plans required by any inspection authority and obtain approval of same before proceeding with the Work, and pay any cost attached to the inspection of such plans.

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 Contract 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 Sub-contractors 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 AND PROPERTY AND SERVICES AND UTILITIES

E5.1 Further to GC: 17, all necessary precautions shall be exercised by the Contractor so as not to remove, disturb, or damage any existing trees, shrubs, sod, pavements, streets, roads, boulevards, poles, hydrants, water pipes, gas pipes, electrical wires, cables, conduits, sewers or other existing facilities and equipment at the Site of the Work. For all damage incurred thereto in the performance of the Work, the Contractor shall upon instructions from and to the satisfaction of the Contract Administrator and the owners thereof, either replace and repair such damage, whichever may be deemed necessary in the opinion of, and acceptable to, the Contract Administrator and the owners thereof. 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's operations shall be limited to the minimum area necessary for undertaking the Work and he shall be responsible for all damage resulting from his Work on private property. The Contractor shall take such measures as are necessary to ensure safe and convenient pedestrian ingress and egress is maintained to private properties while he is working near them.

Any damage caused by the negligence of the Contractor or his Sub-contractors to the adjacent Works or properties, shall be promptly repaired by him at his own expense, to the satisfaction of the Contract administrator.

E5.3 Existing Services and Utilities

No responsibility will be assumed by the Owner for 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 Owner 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.

E6. PROTECTION OF EXISTING TREES

E6.1 The Contractor shall take the following precautionary steps to prevent damage from construction activities to existing trees within the limits of the construction area:

- (a) Trees greater than 100 mm diameter or trees identified to be at risk by the Contract Administrator are to be strapped with 25 x 100 x 2440 mm wood planks, or suitable protected as approved by the Contract Administrator. Do not use nails or other fasteners that penetrate the tree trunk. The width and length of strapping may be reduced to suit the tree being protected as approved by the Contract Administrator;
- (b) 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, where 1 inch diameter equals 1 foot measured from the outside edge of the trunk of the tree at 6 inches above grade. Where roots must be cut to facilitate excavation, they shall be pruned neatly at the face of excavation by a certified (in Manitoba) arborist;
- (c) 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 drip 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;
- (d) Repair, replace and maintain tree protection materials during construction until such time no equipment will be working in the area;
- (e) Remove safety fencing and strapping material without harming the trees as soon as the construction and restoration Work is complete.

E6.2 Obtain approval from the Contract Administrator to excavate within 2.0 metres of a tree.

E6.3 Excavate in a manner to minimize damage to the tree root systems. Keep exposed roots in excavations and trenches moist or shaded. If stockpiling of excavated soil material is required, stockpile in areas away from the tree roots if possible.

E6.4 Prune exposed roots with equipment such as trencher, chain saws, root cutters or other methods acceptable to the Contract Administrator in a manner that will leave a neat, clean root end.

E6.5 Take precautions to ensure tree limbs overhanging the Work area are not damaged by construction equipment. Contact the Forestry Branch for consultation or pruning of overhanging or damaged limbs and branches and other unanticipated problems with trees during the construction of the Works.

- E6.6 The City of Winnipeg Naturalist Branch, also has authority for Natural stands of forested/brush/native grass areas, and may also instruct the Contractor on protective measures to protect the riverbank vegetation.
- E6.7 Further to the Naturalist requirements the Contractor must set up a temporary orange safety fence to define the agreed upon Work area to ensure that additional damage does not occur to adjacent vegetation. Damage to vegetation and established trees beyond the defined Work will result in additional charges based on the Forestry Branch assessment of the tree valuation.
- E6.8 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 Forestry Branch. Damages must be repaired by an Individual with a Manitoba Arborist Licence or by the Forestry Branch.
- E6.9 Protection of existing trees, repair of trees and pruning of damaged limbs will not be measured for payment and is to be included with the Underground or Surface Works. Removal and replacement of existing trees by the Forestry Branch deemed to have died or that are dying due to damage from carelessness during construction, will be at the Contractor's cost. The Contractor will be invoiced for the cost, or have the cost deducted from any payments owing.

E7. TEMPORARY UTILITIES

- E7.1 Further to GC:6.12, the Contractor shall make his own arrangements in connection with the temporary use of lighting, power, gas, sewer, water or other utilities, and pay all costs in connection therewith.
- E7.2 All necessary permits, fees and other like expenses as well as the cost of temporary connections to existing facilities shall be arranged and paid for by the Contractor.

E8. DEMOLITION, REMOVAL AND DISPOSAL

- E8.1 In general terms the scope of Work under and demolition/legal disposal and salvage phase of Work is as listed below for each Site:
- (a) Primrose Park-Remove and legally dispose of existing concrete pathway as shown on Drawing No. P-48.B. Remove existing 1.8 M high swing set. Remove and dispose existing rubber mat below snail climber;
 - (b) Verbena Park- Excavate (200 mm) and remove and legally dispose of existing play sand and existing timber edging.
- E8.2 Demolition, removal and salvage shall be paid for the Contract Unit Price per unit as listed in Form B: Prices, "Items of Work" listed below, measured as specified herein, which price shall be payment in full for supplying all materials and performing all operation herein described and all other items incidental to the work included in this specification:
- Items of Work:
- (a) Item No. 4: Remove and dispose existing swing set and existing safety surfacing below snail climber;
 - (b) Item No. 9: Remove and dispose existing concrete path;
 - (c) Item No.19: Remove and dispose of existing sand (200mm depth);
 - (d) Item No 20: Remove and dispose of existing timber edging.

E9. SITE EXCAVATION

- E9.1 Site Excavation shall be done in accordance with City of Winnipeg's Standard Construction Specification CW 3110 – R6 Sub-Grade, Sub-Base and Base Course Construction and CW 3170-R3 Earthwork and Grading.

- E9.2 The Contractor shall excavate for new play area to depth of 100 mm.
- E9.3 All unsuitable or surplus material as deemed by the Contract Administrator will be removed, hauled off Site and legally disposed of to the satisfaction of the Contract Administrator.
- E9.4 Basis of Payment
- (a) Excavation will be measured on a volume basis and paid at the Contract Unit Price per cubic metre for "Site Excavation." The volume to be paid for will be the total number of cubic metres of excavation in accordance with this specification, accepted and measured by the Contract Administrator.

E10. GRAVEL PATHWAY

- E10.1 Description
- (a) This Specification shall amend and supplement the City of Winnipeg Specification CW 3110-R7. 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 Gravel Pathway at Primrose Park.
- E10.2 Materials
- (a) New Limestone Pathways shall consist of a 100 mm base coarse depth of 19 mm diameter crushed limestone down, with a 50 mm depth of 6 mm diameter limestone capping.
- E10.3 Construction Method
- (a) The Contractor shall survey and stake out pathway prior to the start of construction as shown on the construction drawings. Layout and grades of pathway shall be checked and confirmed with Contract Administrator prior to construction;
- (b) All granular base coarse shall be placed and compacted to the finished thickness as specified on the Drawings;
- (c) Base Coarse and Capping Course shall be compacted to a minimum of Hundred (100%) of Standard Proctor Density.
- E10.4 Method and Measurement of Payment
- (a) Gravel Pathway will be paid for on a square metre basis Price shall be payment in full for supplying materials and for performing the Work.

E11. ASPHALT REPAIRS

- E11.1 Asphalt repairs shall be done in accordance with City of Winnipeg's Standard Construction Specification CW3410-R6 Asphaltic Concrete Pavement Works.
- E11.2 The amount to be paid for shall be the total number of units, approved by Contract Administrator prior to Work, as indicated by the Bidder 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.

E12. CONCRETE EDGING

- E12.1 General Description
- (a) The Contractor shall furnish all labour, materials, equipment and services necessary to complete the Work according to the drawings and specifications;
- (b) This specification shall cover the supply and installation of Concrete Edging to contain the safety surfacing (play stone) for the playground area.

E12.2 Materials and Method

- (a) Cement Type 50:
 - (i) Maximum Course Aggregate: 20 mm;
 - (ii) Minimum Compression Strength at 28 days: +35 Mpa;
 - (iii) Minimum Cement Content: 310 kg/cu. M.;
 - (iv) Maximum Water Cement Ratio: 0.45;
 - (v) Class of Exposure: C-2;
 - (vi) Maximum Slump: 90 mm +/- 20 mm;
 - (vii) Air Entrainment: 5 to 8%;
 - (viii) Flyash Content: Max. 15% of Cementitious Material; and
- (b) Fine aggregate shall consist of natural sand or manufactured sand and shall conform to all requirements of CAN3.A23.1;
- (c) Course aggregate shall consist of hard, strong, uncoated durable particles of crushed stone, gravel or approved combination thereof and shall be free from an excess of thin, elongated or soft pieces, frozen lumps, organic matter or other deleterious matter, and shall conform with all the requirements of CAN3.A23.1. Maximum size of aggregate shall be 20 mm.;
- (d) Water for concrete shall be clean and free from injurious amounts of oil, acid, alkali, salts, silt, organic matter or other deleterious matter. The quality of the water shall be equal to or better than that of potable water;
- (e) A non-detergent type of air-entraining admixture, supplied in liquid form, shall be metered into the mix. The total air in the placed concrete shall be 5% - 8%;
- (f) Reinforcing steel shall be grade 300 deformed bars or as noted on the drawings. Detailing of reinforcing steel shall be in accordance with ACI 315. All bars which require bending shall be bent in shops;
- (g) All reinforcing steel shall be straight, clean and free from paint, oil, mill scale, excess rust and any injurious defects which may affect its strength or bond;
- (h) Ends of reinforcing steel intended for bonding that are to be left exposed for some time shall be protected from injury, oils or moisture;
- (i) Curing compound shall be Sternson Ritcure or approved equal;
- (j) Bonding agent shall be Sternson ST 431 Epoxy Bonding Agent;
- (k) Form coating shall be Sternson's Formseal or approved equal;
- (l) The City of Winnipeg may engage a fully qualified Inspecting Engineer and Testing Laboratory to:
 - (i) Inspect the pile excavations to determine that they have been augured to the specified depth, are of the specified size, are clean and level, and meet the design criteria;
 - (ii) Take test cylinders during concrete placing and carry out compression tests to determine whether concrete produced complies with these Specifications;
 - (iii) Take compaction tests of compacted granular sub-base and sub-grade material;
 - (iv) Submit reports to the Contract Administrator of all materials, concrete, and caisson tests and inspections;
 - (v) Three concrete test cylinders to be taken for pile cast. One cylinder from each group shall be tested at 7 days, one at 14 days, and the remainder at 28 days. Sampling and testing procedures shall be according to CAN3-A23.1 latest edition;
- (m) Concrete shall be installed as per Drawing W39-B;

- (n) Finished elevations shall ensure that all concrete is smooth and level. Turf shall be repaired as required around edging in accordance with City of Winnipeg Standard Specifications for Topsoil and Seeding;
- (o) The layout of the concrete edging shall be coordinated with the installation of the play equipment to ensure that the proper safety zones are created around the equipment; and
- (p) The Contractor shall set the elevation of the top of the concrete edge which shall be inspected and approved by the Contract Administrator prior to concrete installation.

E12.3 Method and Measurement of Payment

- (a) Concrete Edging will be measured on a unit price basis per linear metre; and
- (b) Concrete Edging will be paid for at the Unit Prices for Supply and Install new Concrete Edging. The amount to be paid for shall be the total number of units used by the Contractor to complete the Work in accordance with B9.3. 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. PLAY STONE

E13.1 Description

- (a) This specification shall cover the supply and installation of Play Stone within the play structure/swing areas.

E13.2 Materials

- (a) Play Stone shall be 6.0mm Playground Stone, composition shall be Typical Birds Hill glacial till material, 100% clean river-washed granite with the following gradation:
 - (i) 100% passing the 10 mm Sieve;
 - (ii) 15% passing 5 mm Sieve;
 - (iii) 10% passing the 2.5 mm Sieve;
 - (iv) 4% passing the 1.25 mm Sieve; and
 - (v) 1% passing the 0.8 mm Sieve.

E13.3 Construction Method

- (a) Play Stone shall be installed within all the play areas, as defined by the concrete edging, to a minimum depth of 250 mm;
- (b) The installation of the Play Stone shall be done immediately after the playstructure has been installed;
- (c) Installation shall be done by equipment sized to suit the Work being done and the Stone shall be spread by hand as necessary in the immediate vicinity of the playstructures so as not to damage same. The playstructures shall be swept clean to the satisfaction of the Contract Administrator after installation of the Stone.

E13.4 Method and Measurement of Payment

- (a) Play Stone surfacing will be measured on a unit price basis per cubic metre; and
- (b) Play Stone surfacing will be paid for at the Unit Prices to Supply and Install 250 mm depth Play stone. The amount to be paid for shall be the total number of units used by the Contractor to complete the Work in accordance with B9.3. 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.

E14. RESTORE THE EXISTING SAND BOX AND ADD SAND

- E14.1 This specification shall cover supply and installation of play sand necessary to top up the existing sandbox, removing the spilled over sand and Topsoil and sodding or seeding. The Contractor shall furnish all, labour, materials, equipment and services necessary to complete the Work.
- E14.2 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. The sand should be 'Playbox' or Fine sand. Supply and install Topsoil and sod as necessary, approved by the Contract Administrator.
- E14.3 The amount to be paid for shall be the lump sum, indicated by the Bidder on Form B: Prices for restoring the existing sand box and adding the sand. 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.

E15. SUPPLY AND INSTALLATION OF SITE FURNITURE

- E15.1 This Specification will cover the supply and installation of benches, picnic table and associated granular bases and anchors and waste receptacle as indicated on the Drawings. The Bidder is made aware the quantity and type of Site furnishing may vary depending on budgetary constraints.
- E15.2 Materials.
- (a) Benches, Picnic Tables and Waste Receptacles to be supplied by the City:
Contact:
Aaron Lennon
Supervisor of Central repair/Manufacturing Facility
City of Winnipeg
Telephone No.: (204) 986-5505
- (i) Benches:Tache style wood bench without a back, Drawing No. SCD-121, Product No. 52501084 (6');
(ii) Picnic Table: Tache style metal frame picnic table, wheel chair accessible, Drawing No. SCD-130A, Product No. 52501108;
(iii) Waste Receptacle: Metal slat type Waste Receptacle, Drawing No. SCD-119, Product No. 52501062;
- (b) Anchors for picnic tables shall be Duckbill Anchor Model 68-ATI as manufactured by Foresight Products, LLC;
- (c) Granular pad for picnic table shall be 6 mm diameter crushed limestone over compacted 19 mm diameter crushed limestone over compacted sub base in accordance with E10.
- E15.3 Construction Methods
- (a) All work is to be located and installed in accordance with the Drawings 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 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;

- (e) Picnic tables shall be installed on gravel pad to the shape shown on the Drawing. . Provide 150 mm depth granular base composed of 100 mm of well-compacted 19 mm diameter crushed limestone with 50 mm of 6 mm diameter crushed limestone on the top. Top of granular paving to be flush with the top of the root mass of the sod;
- (f) Secure picnic table to grade with two duckbill anchors (on opposite legs) per picnic table.

E15.4 Quality Control

- (a) All workmanship and all materials furnished and supplied under this Specification are subject to close and systematic inspection and testing by the Contract Administrator including all operations, from the selection and production of materials, through to final acceptance of the work. The Contractor shall be wholly responsible for the control of all operations incidental thereto notwithstanding any inspection of approval that may have been previously given. The Contract Administrator reserves the right to reject any materials or works that are not in accordance with the requirements of these Specifications.

E15.5 Method of Measurement

- (a) The supply and installation of all site furnishings shall be measured on a unit basis. The number of site furnishings to be paid for shall be the total number of furnishings that are installed in accordance with this Specification and accepted by the Contract Administrator.

E15.6 Basis of Payment

- (a) The supply and installation of all site furnishings shall be paid for at the Contract Unit Price per unit measured as specified herein, which price shall be payment in full for supplying all materials and performing all operation herein described including granular base for picnic table and all other items incidental to the Work included in this Specification.

E16. TOPSOIL AND SODDING

- E16.1 Topsoil and finish grading and Sodding shall be done in accordance with City of Winnipeg's Standard Construction Specification CW3540-R4 Topsoil and Finish Grading for establishment of Turf areas and 3510 –R8 Sodding.

E16.1.1 **Clause 9.8 - Maintenance of sodded area is changed from 30 days to 60 days.**

E17. TOPSOIL AND SEEDING

- E17.1 Topsoil and finish grading and Seeding shall be done in accordance with City of Winnipeg's Standard Construction Specification CW3520-R6 Seeding and CW3540-R4 Topsoil and Finish Grading for establishment of Turf areas.

E18. TREES

- E18.1 Description: This specification shall cover only the supply and installation of nursery grown trees and shrubs. Please refer to E19 for tree maintenance. The City reserves the right to reduce the quantity of trees, shrubs and shrub beds installed in order to meet the budgetary constraints.

E18.2 Materials

E18.2.1 General

- (a) Trees shall be the size and variety noted on the Plant List attached to the end of this specification section. Trees, which do not have the specified root ball diameter as mentioned in plant list, will be rejected;
- (b) All trees supplied shall be Canadian prairie nursery grown, of the species and sizes indicated on the drawings. Quality shall be in accordance with the latest "Guide Specification for Nursery Stock of the Canadian Nursery Trades Association";

- (c) Trees dug from native stands, wood lots, orchards or neglected nurseries and which have not received proper cultural maintenance as advocated by the Canadian Nursery Trades Association, shall be designated as "collected plants". The use of "collected plants" will not be permitted unless approved by the Contract Administrator;
- (d) The Contract Administrator reserves the right to inspect the plant material at their original source, and to instruct the supplier on root and branch pruning requirements;
- (e) Nomenclature of specified trees shall conform to the International Code of Nomenclature for Cultivated Plants and is to be in accordance with the approved scientific names given in the latest edition of the Standardized Plant Names;
- (f) Trees larger than specified may be used if approved by the Contract Administrator. The use of such plants shall not increase the Contract price;
- (g) Where trees are measured by calliper (cal.), reference is made to the diameter of the trunk measured 300 mm above ground as the tree stands in the nursery;
- (h) All trees shall have one only, sturdy, reasonably straight and vertical trunk and a well balanced crown with fully developed leader. All evergreens shall be symmetrically grown and branched from ground level up, and must be balled and burlapped unless noted otherwise on the plant list. Root ball burlap shall be 150 grams Hessian burlap, biodegradable;
- (i) Trees shall be free of disease, insect infestation, rodent damage, sun scald, frost cracks, abrasions, unhealed scars, scars exceeding 5 cm in diameter, major forks or crooks in the trunk, broken branches, or angled leaders. Trees having the above defects will not be accepted by the Contract Administrator.

E18.2.2 Protection of Stock

- (a) All trees shall be well protected from damage and drying out from the time of digging until the time of planting on Site. All roots shall be cleanly cut; split roots are not acceptable;
- (b) Trees shall be transplanted with care to prevent damage. Branches shall be carefully tied in such a manner so as not to break or damage trunks. Points of contact with equipment shall be padded. All trees, which cannot be planted immediately upon arrival at the Site, shall be well protected to prevent drying out and shall be kept moist until commencement of planting.

E18.2.3 Topsoil Backfill Mix

- (a) Backfill mix shall consist of black top soil, a fertile friable natural loam containing by volume not less than 4% and no more than 25% of organic matter for clay loams, and not less than 2% and no more than 25% for sandy loams, with an acidity value ranging from pH 6.0 to 8.0 and capable of sustaining vigorous plant growth. Top soil is to be free of any mixture of subsoil, clay lumps and free of stones and other extraneous matter. It shall not contain couch or crab grass rhizomes.

E18.2.4 Stakes

- (a) T-rail iron stakes 40 x 40 x 5 x 1540 mm long, primed with 1 brush coat of black zinc rich plant paint to CGSB 1-GP-181B. Paint section of stake above ground with 1 coat of green enamel paint.

E18.2.5 Wood Chip Mulch

- (a) Mulch shall be a clean bark or wood chip mulch with chips not less than 15 mm nor larger than 75 mm in size and not less than 75 mm thick. Mulch shall be free of leaves, branches and other extraneous matter.

E18.2.6 Fertilizer

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

E18.3 Construction Methods

E18.3.1 General

- (a) Tree pits shall be excavated as per detail on Drawing No. Sk-1. The excavated tree pits shall be refilled with backfill mix (E18.2.3). Hand dig pits where required to protect underground utilities.

E18.3.2 Installation

- (a) Upon excavation of the tree pits, and protection of any underground utility lines, the holes shall be backfilled with a topsoil mixture to a depth to permit adequate installation and stabilization of the plant material;
- (b) Each balled specimen shall be handled with great care, to ensure that the root balls will not be broken. Burlap shall be folded back only at the top and sides. Broken roots of deciduous stock shall be pruned back prior to planting;
- (c) After inserting the tree and filling the planting hole with topsoil, water shall be poured in until the pit is thoroughly soaked. Water shall be potable and free of minerals which may be detrimental to plant growth. Filling of the hole shall then be completed and the fill-in soil shall be packed firmly around the roots, leaving a concave surface for convenient watering 75 mm below rounding and grade elevation. After filling, the planting shall be watered at frequent intervals;
- (d) Planting shall be done during periods suitable to weather conditions and locally accepted practice. All trees shall be set plumb in the centre of pits and at levels as shown on the planting detail drawing after settlement has taken place;
- (e) Nursery stock shall be faced to give the best appearance or relationship to adjacent structures and to the approval of the Contract Administrator;
- (f) Wood chip mulch shall be installed over the tree root ball as shown on the Drawing No. Sk-1.

E18.3.3 Pruning

- (a) All deciduous trees shall be pruned immediately after planting. The amount of pruning shall be limited to the minimum necessary to remove dead or injured branches and to compensate for the loss of roots as a result of transplanting operations. Pruning shall be done in such a manner as to preserve the natural character of the plants. Leaders shall not be removed. Only clean, sharp tools shall be used. All cuts shall be clean and flush, leaving no stubs. Cuts, bruises or scars on the bark shall be traced back to living tissue and removed. The affected areas shall be shaped so as not to retain water and all cuts of more than 25 mm in diameter shall be painted with approved tree paint.

E18.3.4 Staking (If required)

- (a) If required trees shall be staked using metal T-BAR stakes. Refer to Drawing No. Sk-1. The tree trunk shall be completely encircled and protected with two rubber tree rings and secured to each tree stake. Top of each tree stake shall be at the same elevation above finished grade, approximately 1200 – 1500 mm height. At the end of the Two year maintenance period the Contractor is to remove and legally dispose of the tree stakes and associated fasteners.

E18.3.5 Guarantee of Trees

- (a) The Contractor shall agree and guarantee to replace and replant any tree found dead and/or in poor condition within two years from the date of the Certificate of Total

Performance, at his cost. "Poor condition" shall be interpreted as meaning trees on which branches are dying, or have not shown satisfactory growth of leaves. All replacements trees shall be installed within 20 days from the date of notification from the City, unless the City extends the time period, as a result of seasonal or climatic considerations.

- (b) Exempted are the trees damaged by accidental causes or vandalism, which stock shall be replaced at the cost indicated in the original Bid, which will be paid by the City.
- (c) All required replacements shall be by trees of at least the same size and species as specified, and shall be supplied and planted in accordance with the original drawings and Specifications, and the replaced material shall carry an additional two-year guarantee and maintenance period. All trees must be in a healthy conditional for a full two years before the warranty on the year will be considered fulfilled.

E18.4 Basis of Payment

- (a) The supply and installation of trees itemized under "Supply and Install Plants" will be paid for at the Contract unit price for each tree measured as specified herein, which price shall be payment in full including all costs for the tree, tree pit and topsoil backfill, tree stakes, pruning, and all other items incidental to the Work included in this Specification.

E18.5 Plant List

Quantity	Common Name/botanical name	Size / Remarks
10	American Basswood / <i>Tilia americana</i>	Min. 65 mm caliper, 3000 mm height. Single straight trunk. Specimen quality. Well branched head above 1830 mm height. Minimum 800 mm dia. rootball. Two stakes per tree.
2	Amur Chokecherry / <i>Prunus mackii</i>	Min. 65 mm caliper, 3000 mm height. Single straight trunk. Specimen quality. Low branched. Minimum 800 mm dia. rootball. Two stakes per tree.
3	Colorado Spruce / <i>Picea pungens</i>	1500 mm height. Specimen quality. Minimum 600 mm dia. root ball. Two stakes per tree.

E19. PLAY EQUIPMENT

E19.1 Swing Standard

E19.1.1 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 one (1) complete swing standard as specified herein:
 - (i) Three Leg Heavy Duty Swing Frame, 2.1-2.4 m (7 ft. – 8 ft.) high, 2-Bay, complete with two (2) slash-proof rubber, enclosed infant seats, and two (2) slash-proof rubber belt seat, heavy-duty chain, swing hangers and hammer locks / bolt links.

E19.1.2 Materials

- (a) Topbeam
 - (i) All topbeams shall be fabricated from 3 1/2" O.D. 7 gauge, RS40 galvanized steel pipe. All fabrication cuts, drill holes and weld joints shall be sprayed with a corrosion resistant coating;

- (b) Legs
 - (i) All legs shall be fabricated from 2 3/8" O.D. 10 gauge, RS40 galvanized steel pipe. All fabrication cuts, drill holes and weld joints shall be sprayed with a corrosion resistant coating. The bottom end of the posts is to be sealed with a moisture barrier;
- (c) Yoke Clamps
 - (i) All yoke clamps shall be either one piece construction and fabricated from 8 gauge, RS40 galvanized steel pipe or two piece, compression clamping cast aluminum or galvanized metal complete with tamper-proof hardware;
- (d) Swing Hangers
 - (i) All swing hangers shall be fabricated from galvanized malleable iron and have oil impregnated bearings pressed in;
- (e) Swing Chain
 - (i) All swing chain shall be 4/0 straight link, galvanized steel;
- (f) Enclosed Infant (Bucket) Seats
 - (i) All 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;
- (g) Belt Seats
 - (i) All belt 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. The perimeter shall be moulded to form a blunt, impact absorbing edge;
- (h) Hardware
 - (i) All fasteners shall be tamper proof in design, requiring special tools. The fasteners shall be either carbon steel plated with zinc/nickel and iridescent chromate finish or stainless steel.

E19.2 Independent Components

E19.2.1 General Description

- (a) This specification shall cover the supply and installation of Independent Components as specified herein. or approved equal;
- (b) The Contractor shall furnish all labour, materials, equipment and services necessary to complete the Work according to the specifications;
- (c) Independent Components shall be installed as shown on Drawings. The Components and their safety zones must fit into the proposed play area;
- (d) The approved equal will be evaluated based on Efficiency and good use of space.

E19.2.2 Materials

- (a) All materials shall be structurally sound and suitable for safe play. Durability shall be ensured on all parts and materials:
 - (i) Kompan Elements Navigator ELE 400007 Red colour with concrete anchoring. Supplier: David Parker, KOMPAN Inc.
 - (ii) Kompan Elements Stinger ELE 400020 Red colour with in-ground anchoring. Supplier: David Parker, KOMPAN Inc.
 - (iii) Kompan Moments Zaggy M 134P Red –yellow colour with in-ground posts. Supplier: David Parker, KOMPAN Inc.

- (iv) Slide
 - A) An independent 1.5 m tall stainless steel slide with support posts minimum 5"O.D. Tube (enclosed) slides and plastic spiral slides will not be accepted. The Contractor should get approval from Contract Administrator before ordering the slide;
- (v) Fasteners
 - A) All hardware shall be tamper-proof in design and requiring 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;
- (vi) Finishes
 - A) 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.

E19.3 Maintenance Kits

- (a) 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.

E19.4 Foundations

E19.4.1 General Description

- (a) All playground equipment posts, bases and anchors are to be set in concrete footings or piles to ensure stability and prevent frost heaving. The current Standard Construction Specifications of the City of Winnipeg, CW 2160-R4 - Concrete to be used in Underground Works, is to be utilized in the installation of the concrete works for all below ground components;
- (b) 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;
- (c) All concrete footings for playstructures shall be a minimum of 3' depth, or in accordance with Manufacturer's specifications, whichever is greater;
- (d) The specific concrete requirements shall be:
 - (i) Sulfate resistant, Type 50 Cement;
 - (ii) 28 day compressive strength of 30 Mpa;
 - (iii) maximum aggregate size of 20 mm, nominal;
 - (iv) slump 80 +/- 20 mm;
 - (v) maximum water/cement ratio 0.49.

E20. TREE MAINTENANCE

E20.1 Description

- (a) This specification shall cover the landscape maintenance requirements for all trees and associated tree pits.

E20.2 Related Work

- (a) Plant material and tree pits are specified elsewhere in this Specification and form an integral part to all Work described herein.

E20.3 Maintenance Period

- (a) Undertake maintenance from the date of installation for a period of two years past the date of Total Performance.

E20.4 Description of Work

- (a) Maintain trees shown on the drawings, to the satisfaction of the Contract Administrator;
- (b) Work includes:
 - (i) Fertilizing;
 - (ii) Watering;
 - (iii) Weed Control of tree pits, wood chip mulch areas;
 - (iv) Pest and disease control;
 - (v) Pruning;
 - (vi) Mulching;
 - (vii) Tree support and tie adjustment;
 - (viii) Winter protection.

E20.5 Protection

- (a) Prevent damage to fencing, other trees, landscaping, bench marks, building, pavement, surface and underground utility facilities.

E20.6 Materials

- (a) Materials are to conform to the requirements of related specifications. Refer to E18.2.

E20.7 Maintenance Requirements

- (a) Condition of Equipment
 - (i) Prior to the commencement of tree, the Contractor will be required to arrange to have the equipment to be supplied under this Contract inspected by the Contract Administrator to verify that the equipment is in good operating condition and meets the requirements of the Specifications.
- (b) Replacement Equipment
 - (i) The supply of replacement equipment of equal or larger size, if regular units are under repair, will be the responsibility of the Contractor.
- (c) General Workmanship
 - (i) Program timing of operations to growth, weather conditions and use of Site;
 - (ii) Do each operation continuously and complete within reasonable time period;
 - (iii) Store equipment and materials off-Site;
 - (iv) Collect and dispose of debris or excess material on daily basis.

E20.8 Fertilizing

- (a) Apply fertilizer no later than May 30th of each maintenance year.

E20.9 Watering

- (a) Apply water as required to supplement rainfall and to maintain optimum growing conditions. In general, water once a week to achieve rates as indicated below. Allow soil to dry adequately between watering to prevent over-saturation without creating water stress;
- (b) Subject to the requirements above, the Contractor must water at least once a week inclusive between May 1st and October 30th. A complete record is to be kept of each

series of waterings for all planted and transplanted trees, noting: 1) location, and 2) date of watering. This record is to be given to the Contract Administrator when requested;

- (c) Apply 40 litres of water per 25mm caliper, per application using deep root feeder or low pressure open flow nozzle and hose. The water stream must not gouge out a hole in the soil and mulch.

E20.10 Weed Control

- (a) Maintain surface of tree pit, shrub bed and mulched areas, free of weeds. Do not allow weeds to establish for a period longer than one (1) week;
- (b) Do not use dicamba and picloram solutions near trees.

E20.11 Pests and Diseases

- (a) Obtain written approval of Contract Administrator prior to using any pesticide;
- (b) Control pests and disease through pruning or application of pesticides. Use species specific pesticides where possible. Use only pesticides of low mammalian toxicity. Strictly follow manufacturer's written instructions.

E20.12 Pruning

- (a) The Contractor shall provide a person with a valid Manitoba tree Pruner's License for each Work crew or Work Site;
- (b) Prune trees as required to remove dead, broken or damaged limbs. Prune back to healthy growth while maintaining balanced crown shape;
- (c) Employ clean sharp tools. Make cuts coincident with the branch collar near the main stem or branch. Cuts must be smooth and sloping to prevent accumulation of water on cut. Do not leave little stumps ("horns") on trunks or main branches;
- (d) Prune trees according to accepted horticultural practices as outlined in the Pruning Manual, Publication No. 1505 by Agriculture Canada.

E20.13 Mulching

- (a) Add mulch as required to maintain 75 mm thickness.

E20.14 Tree Supports and Tie Adjustments

- (a) Maintain tree supports and ties in proper repair;
- (b) Remove supports and ties at end of two year maintenance period or earlier if directed by City;
- (c) Straighten any tree, which is leaning.

E20.15 Winter Protection

- (a) Ensure adequate moisture in tree zones prior to freeze-up;
- (b) Apply anti-desiccant to evergreen trees susceptible to winter desiccation as directed by Contract Administrator.

E20.16 Maintenance Period and Schedule

- (a) The Contractor shall provide a complete written maintenance schedule to the Contract Administrator prior to the commencement of the two year maintenance period, and must provide weekly reports of all maintenance to the City of Winnipeg, Forestry Department, within one week of the maintenance being provided.

E20.17 Basis of Payment

- (a) The cost of tree and plant maintenance shall be paid for the Contract Unit Price per unit for the Work mentioned above including all other items incidental to the Work.

E21. SITE RESTORATION

- E21.1 Total Performance of the Work shall not be attained until the Contractor has cleaned up the Site and has removed all plant, tools, equipment, waste, debris and surplus foundation earth to the satisfaction of the Contract Administrator. Unless otherwise specified, the Contractor shall restore all areas of the Site beyond the established limit of Work, which have been disturbed by the Contractor's operations to as good as or better than the original condition to the satisfaction of the Contract Administrator. The Contractor shall pay all costs associated with this Work.