



THE CITY OF WINNIPEG

BID OPPORTUNITY

BID OPPORTUNITY NO. 55-2014

PAT PHILLIPS PARK AND SHAUGHNESSY PARK FITNESS TRAILS

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PART B - BIDDING PROCEDURES

B1. CONTRACT TITLE

B1.1 PAT PHILLIPS PARK AND SHAUGHNESSY PARK FITNESS TRAILS

B2. SUBMISSION DEADLINE

B2.1 The Submission Deadline is 4:00 p.m. Winnipeg time, April 4, 2014.

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 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. CONFIDENTIALITY

B5.1 Information provided to a Bidder by the City or acquired by a Bidder by way of further enquiries or through investigation is confidential. Such information shall not be used or disclosed in any way without the prior written authorization of the Contract Administrator. The use and disclosure of the confidential information shall not apply to information which:

- (a) was known to the Bidder before receipt hereof; or
- (b) becomes publicly known other than through the Bidder; or
- (c) is disclosed pursuant to the requirements of a governmental authority or judicial order.

B5.2 The Bidder shall not make any statement of fact or opinion regarding any aspect of the Bid Opportunity to the media or any member of the public without the prior written authorization of the Contract Administrator.

B6. ADDENDA

- B6.1 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.
- B6.2 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.
- B6.2.1 Addenda will be available on the Bid Opportunities page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/>
- B6.2.2 The Bidder is responsible for ensuring that he/she has received all addenda and is advised to check the Materials Management Division website for addenda regularly and shortly before the Submission Deadline, as may be amended by addendum.
- B6.2.3 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.

B7. SUBSTITUTES

- B7.1 The Work is based on the Plants, Materials and methods specified in the Bid Opportunity.
- B7.2 Substitutions shall not be allowed unless application has been made to and prior approval has been granted by the Contract Administrator in writing.
- B7.3 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.
- B7.4 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.
- B7.5 The Contract Administrator, after assessing the request for approval of a substitute, may in his/her sole discretion grant approval for the use of a substitute as an “approved equal” or as an “approved alternative”, or may refuse to grant approval of the substitute.
- B7.6 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.

- B7.6.1 The Bidder requesting and obtaining the approval of a substitute shall be entirely responsible for disseminating information regarding the approval to any person or persons he/she wishes to inform.
- B7.7 If the Contract Administrator approves a substitute as an “approved equal”, any Bidder may use the approved equal in place of the specified item.
- B7.8 If the Contract Administrator approves a substitute as an “approved alternative”, any Bidder bidding that approved alternative may base his/her Total Bid Price upon the specified item but may also indicate an alternative price based upon the approved alternative. Such alternatives will be evaluated in accordance with B15.
- B7.9 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.
- B7.10 Notwithstanding B7.2 to B7.9, and in accordance with B8.7, deviations inconsistent with the Bid Opportunity document shall be evaluated in accordance with B15.1(a).

B8. BID COMPONENTS

- B8.1 The Bid shall consist of the following components:
- (a) Form A: Bid;
 - (b) Form B: Prices;
- B8.2 Further to B8.1, the Bidder should include the written correspondence from the Contract Administrator approving a substitute in accordance with B7.
- B8.3 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.
- B8.4 The Bid Submission may be submitted by mail, courier or personal delivery, or by facsimile transmission.
- B8.5 If the Bid Submission is submitted by mail, courier or personal delivery, it shall be enclosed and sealed in an envelope clearly marked with the Bid Opportunity number and the Bidder's name and address, and shall be submitted to:
- The City of Winnipeg
Corporate Finance Department
Materials Management Division
185 King Street, Main Floor
Winnipeg, MB R3B 1J1
- B8.5.1 Samples or other components of the Bid Submission which cannot reasonably be enclosed in the envelope may be packaged separately, but shall be clearly marked with the Bid Opportunity number, the Bidder's name and address, and an indication that the contents are part of the Bidder's Bid Submission.
- B8.6 Bidders are advised not to include any information/literature except as requested in accordance with B8.1.
- B8.7 Bidders are advised that inclusion of terms and conditions inconsistent with the Bid Opportunity document, including the General Conditions, will be evaluated in accordance with B15.1(a).
- B8.8 If the Bid Submission is submitted by facsimile transmission, it shall be submitted to 204 949-1178.
- B8.8.1 The Bidder is advised that the City cannot take responsibility for the availability of the facsimile machine at any time.

B8.8.2 Bids submitted by internet electronic mail (e-mail) will not be accepted.

B9. BID

B9.1 The Bidder shall complete Form A: Bid, making all required entries.

B9.2 Paragraph 2 of Form A: Bid shall be completed in accordance with the following requirements:

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

B9.2.1 If a Bid is submitted jointly by two or more persons, each and all such persons shall identify themselves in accordance with B9.2.

B9.3 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.

B9.4 Paragraph 10 of Form A: Bid shall be signed in accordance with the following requirements:

- (a) if the Bidder is a sole proprietor carrying on business in his/her own name, it shall be signed by the Bidder;
- (b) if the Bidder is a partnership, it shall be signed by the partner or partners who have authority to sign for the partnership;
- (c) if the Bidder is a corporation, it shall be signed by its duly authorized officer or officers;
- (d) if the Bidder is carrying on business under a name other than his/her own, it shall be signed by the registered owner of the business name or by the registered owner's authorized officials if the owner is a partnership or a corporation.

B9.4.1 The name and official capacity of all individuals signing Form A: Bid should be printed below such signatures.

B9.4.2 All signatures shall be original.

B9.5 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.

B10. PRICES

B10.1 The Bidder shall state a price in Canadian funds for each item of the Work identified on Form B: Prices.

B10.2 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.

B10.3 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.

B10.4 Payments to Non-Resident Contractors are subject to Non-Resident Withholding Tax pursuant to the Income Tax Act (Canada).

B11. QUALIFICATION

B11.1 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.

B11.2 The Bidder and any proposed Subcontractor (for the portion of the Work proposed to be subcontracted to them) shall:

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

B11.3 Further to B11.3(c), the Bidder shall, within five (5) Business Days of a request by the Contract Administrator, provide proof satisfactory to the Contract Administrator that the Bidder/Subcontractors has a workplace safety and health program meeting the requirements of The Workplace Safety and Health Act (Manitoba), by providing:

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

B11.4 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.

B11.5 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.

B12. OPENING OF BIDS AND RELEASE OF INFORMATION

B12.1 Bids will not be opened publicly.

B12.2 Following the submission deadline, the names of the Bidders and their Total Bid Prices (unevaluated, and pending review and verification of conformance with requirements) will be available on the Closed Bid Opportunities (or Public/Posted Opening & Award Results) page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/bidopp.asp>

B12.3 After award of Contract, the name(s) of the successful Bidder(s) and the Contract amount(s) will be available on the Closed Bid Opportunities (or Public/Posted Opening & Award Results) page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/>

B12.4 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.

B13. IRREVOCABLE BID

- B13.1 The Bid(s) submitted by the Bidder shall be irrevocable for the time period specified in Paragraph 9 of Form A: Bid.
- B13.2 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.

B14. WITHDRAWAL OF BIDS

- B14.1 A Bidder may withdraw his/her Bid without penalty by giving written notice to the Manager of Materials at any time prior to the Submission Deadline.
- B14.1.1 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.
- B14.1.2 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.
- B14.1.3 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 B14.1.3(b), declare the Bid withdrawn.
- B14.2 A Bidder who withdraws his/her Bid after the Submission Deadline but before his/her Bid has been released or has lapsed as provided for in B13.2 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.

B15. EVALUATION OF BIDS

- B15.1 Award of the Contract shall be based on the following bid evaluation criteria:
- (a) compliance by the Bidder with the requirements of the Bid Opportunity or acceptable deviation there from (pass/fail);
 - (b) qualifications of the Bidder and the Subcontractors, if any, pursuant to B11 (pass/fail);
 - (c) Total Bid Price;
 - (d) economic analysis of any approved alternative pursuant to B7.
- B15.2 Further to B15.1(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.
- B15.3 Further to B15.1(b), the Award Authority shall reject any Bid submitted by a Bidder who does not demonstrate, in his/her Bid or in other information required to be submitted, that he/she is responsible and qualified.
- B15.4 Further to B15.1(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.

B15.4.1 Further to B15.1(a), in the event that a unit price is not provided on Form B: Prices, the City will determine the unit price by dividing the Amount (extended price) by the approximate quantity, for the purposes of evaluation and payment.

B16. AWARD OF CONTRACT

B16.1 The City will give notice of the award of the Contract or will give notice that no award will be made.

B16.2 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.

B16.2.1 Without limiting the generality of B16.2, 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.

B16.3 Where an award of Contract is made by the City, the award shall be made to the responsible and qualified Bidder submitting the lowest evaluated responsive Bid, in accordance with B15.

B16.3.1 Following the award of contract, a Bidder will be provided with information related to the evaluation of his/her Bid upon written request to the Contract Administrator.

B16.4 Notwithstanding C4, the City may issue a Purchase Order to the successful Bidder in lieu of the execution of a Contract.

B16.5 The Contract, as defined in C1.1, in its entirety shall be deemed to be incorporated in and to form a part of the Purchase Order notwithstanding that it is not necessarily attached to or accompany said Purchase Order.

PART C - GENERAL CONDITIONS

C0. GENERAL CONDITIONS

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

PART D - SUPPLEMENTAL CONDITIONS

GENERAL

D1. GENERAL CONDITIONS

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

D2. SCOPE OF WORK

D2.1 The Work to be done under the Contract shall consist of site improvements to: Pat Phillips Park and Shaughnessy Park.

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

- (a) Clearing and grubbing of sod
- (b) Protection of existing trees and their root systems
- (c) Demolition and removal of existing asphalt paths and courts
- (d) Demolition and removal of existing concrete "spray pad" and spray equipment
- (e) Supply and installation of a sub-surface drainage system
- (f) Installation of asphalt paths including sod repair
- (g) Installation of crushed limestone paths including sod repair
- (h) Supply and installation of concrete curbing/edging
- (i) Supply and installation of timber edging
- (j) Supply and installation of playground equipment
- (k) Installation of existing site boulders to a new location on Site
- (l) Supply and installation of site furniture including benches, waste receptacles, signage and fitness equipment
- (m) Supply and installation of sod and topsoil
- (n) Supply and installation of planting beds and plant materials
- (o) Landscape Maintenance

D3. CONTRACT ADMINISTRATOR

D3.1 The Contract Administrator is Lombard North Group (1984) Ltd., represented by:

Chris Nelson: Project Manager

Telephone Number: (204) 943-3896

Facsimile Number: (204) 947-5696

D3.2 At the pre-construction meeting, Chris Nelson 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/her designated supervisor and any additional personnel representing the Contractor and their respective roles and responsibilities for the Work.

D5. OWNERSHIP OF INFORMATION, CONFIDENTIALITY AND NON DISCLOSURE

- D5.1 The Contract, all deliverables produced or developed, and information provided to or acquired by the Contractor are the property of the City and shall not be appropriated for the Contractors own use, or for the use of any third party.
- D5.2 The Contractor shall not make any public announcements or press releases regarding the Contract, without the prior written authorization of the Contract Administrator.
- D5.3 The following shall be confidential and shall not be disclosed by the Contractor to the media or any member of the public without the prior written authorization of the Contract Administrator;
- (a) information provided to the Contractor by the City or acquired by the Contractor during the course of the Work;
 - (b) the Contract, all deliverables produced or developed; and
 - (c) any statement of fact or opinion regarding any aspect of the Contract.
- D5.4 A Contractor who violates any provision of D5 may be determined to be in breach of Contract.

D6. NOTICES

- D6.1 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.
- D6.2 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the City, except as expressly otherwise required in D6.3, D6.4 or elsewhere in the Contract, shall be sent to the attention of the Contract Administrator at the facsimile number identified in D3.1.
- D6.3 Notwithstanding C21., all notices of appeal to the Chief Administrative Officer shall be sent to the attention of the Chief Financial Officer at the following facsimile number:
- The City of Winnipeg
Chief Financial Officer
Facsimile No.: 204 949-1174
- D6.4 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications required to be submitted or returned to the City Solicitor shall be sent to the following facsimile number:
- The City of Winnipeg
Legal Services Department
Attn: Director of Legal Services
Facsimile No.: 204 947-9155

SUBMISSIONS

D7. AUTHORITY TO CARRY ON BUSINESS

- D7.1 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.

D8. SAFE WORK PLAN

- D8.1 The Contractor shall provide the Contract Administrator with a Safe Work Plan at least five (5) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract.
- D8.2 The Safe Work Plan should be prepared and submitted in the format shown in the City's template which is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/Safety/default.stm>

D9. INSURANCE

- D9.1 The Contractor shall provide and maintain the following insurance coverage:
- (a) commercial general liability insurance, in the amount of at least two million dollars (\$2,000,000.00) inclusive, with The City of Winnipeg added as an additional insured, with a cross-liability clause, such liability policy to also contain contractual liability, unlicensed motor vehicle liability, non-owned automobile liability and products and completed operations, to remain in place at all times during the performance of the Work and throughout the warranty period;
 - (b) if applicable, Automobile Liability Insurance covering all motor vehicles, owned and operated and used or to be used by the Contractor directly or indirectly in the performance of the Work. The Limit of Liability shall not be less than \$2,000,000 inclusive for loss or damage including personal injuries and death resulting from any one accident or occurrence;
 - (c) all risks installation floater, carrying adequate limits to cover all machinery, equipment, supplies and/or materials intended to enter into and form part of any installation.
- D9.2 Deductibles shall be borne by the Contractor.
- D9.3 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.
- D9.4 The Contractor shall not cancel, materially alter, or cause each policy to lapse without providing at least thirty (30) Calendar Days prior written notice to the Contract Administrator.

D10. PERFORMANCE SECURITY

- D10.1 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.
- D10.1.1 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.

D10.2 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.

D11. SUBCONTRACTOR LIST

D11.1 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.

D12. DETAILED WORK SCHEDULE

D12.1 The Contractor shall provide the Contract Administrator with a detailed work schedule at least two (2) business days prior to the commencement of any work on both sites but in no event later than the date specified in in C 4.1 for the return of the executed contract.

D12.2 The detailed work schedule shall consist of the following dates:

- (a) Start date;
- (b) Layout of pathway and fitness nodes;
- (c) Excavation;
- (d) Installation of clean fill;
- (e) Installation of all base, sub-base and granular aggregate courses;
- (f) Installation of concrete curb edging and timber edging;
- (g) Installation of all Trekfit and Norwell components;
- (h) Installation of all sub-surface drainage and engineered wood fiber surfacing;
- (i) Installation of asphalt and granular paving;
- (j) Installation of site furniture;
- (k) Installation of trees;
- (l) Installation of topsoil and sod;
- (m) Expected project completion date.

D12.3 The Contract Administrator should be made aware of all other milestone dates which are deemed to be important to the execution and completion of all works within this project schedule.

SCHEDULE OF WORK

D13. COMMENCEMENT

D13.1 The Contractor shall not commence any Work until he/she is in receipt of a Purchase Order from the Award Authority authorizing the commencement of the Work.

D13.2 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 D7;
 - (ii) evidence of the workers compensation coverage specified in C6.15;
 - (iii) the Safe Work Plan specified in D8;
 - (iv) evidence of the insurance specified in D9;
 - (v) the performance security specified in D10; and
 - (vi) the Subcontractor list specified in D11.

- (vii) The Detailed work Schedule specified in D12.
- (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.

D13.3 The Contractor shall order Trekfit and Norwell equipment and submit this information to the Contract Administrator within seven (7) calendar days of the receipt of the Purchase Order.

D13.4 The Contractor shall commence Work on the Site within forty-two (42) Calendar Days of receipt of the Purchase Order. The Substantial and Total Performance Working Day count will commence once the forty-two (42) days have lapsed, unless otherwise approved by the Contract Administrator.

D14. SUBSTANTIAL PERFORMANCE

D14.1 The Contractor shall achieve Substantial Performance within thirty (30) consecutive Working Days of the commencement of Work as specified in D13.

D14.2 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 re-inspected.

D14.3 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.

D15. TOTAL PERFORMANCE

D15.1 The Contractor shall achieve Total Performance within thirty-five (35) consecutive working days of the commencement of Work as specified in D13.

D15.2 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 re-inspected.

D15.3 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.

D16. LIQUIDATED DAMAGES

D16.1 If the Contractor fails to achieve Substantial Performance or Total Performance in accordance with the Contract by the days fixed herein for same, the Contractor shall pay the City the following amounts per Working Day for each and every Working Day following the days fixed herein for same during which such failure continues:

- (a) Substantial Performance – Five Hundred Dollars (\$500.00);
- (b) Total Performance – Five Hundred Dollars (\$500.00).

D16.2 The amounts specified for liquidated damages in D16.1 are based on a genuine pre-estimate of the City's losses in the event that the Contractor does not achieve Substantial Performance or Total Performance by the days fixed herein for same.

D16.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

D17. SCHEDULED MAINTENANCE

- D17.1 The Contractor shall perform the following scheduled maintenance in the manner and within the time periods required by the Specifications:
- (a) Maintenance of all plant materials as specified in E26– Landscape Maintenance;
- D17.2 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

D18. JOB MEETINGS

- D18.1 Regular weekly job meetings will be held at each one of the Sites. 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.
- D18.2 The Contract Administrator reserves the right to cancel any job meeting or call additional job meetings whenever he/she deems it necessary.

D19. PRIME CONTRACTOR – THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA)

- D19.1 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).

D20. THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA) – QUALIFICATIONS

- D20.1 Further to B11.4, the Contractor/Subcontractor must, throughout the term of the Contract, have a Workplace Safety and Health Program meeting the requirements of The Workplace Safety and Health Act (Manitoba). At any time during the term of the Contract, the City may, at its sole discretion and acting reasonably, require updated proof of compliance, as set out in B11.4.

MEASUREMENT AND PAYMENT

D21. PAYMENT

- D21.1 Further to C12, the City may at its option pay the Contractor by direct deposit to the Contractor's banking institution.

D22. WARRANTY

- D22.1 Notwithstanding C13.2, the warranty period shall begin on the date of Total Performance and shall expire two (2) years thereafter unless extended pursuant to C13.2.1 or C13.2.2, in which case it shall expire when provided for thereunder.
- D22.2 Notwithstanding C13.2 or D22.1, 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) 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.

D22.2.1 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 D10)

KNOW ALL MEN BY THESE PRESENTS THAT

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

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

_____ dollars (\$_____)

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

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

BID OPPORTUNITY NO. 55-2014

PAT PHILLIPS PARK AND SHAUGHNESSY PARK FITNESS TRAILS

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

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

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

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

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

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

_____ day of _____, 20_____.

SIGNED AND SEALED
in the presence of:

(Witness as to Principal if no seal)

(Name of Principal)

Per: _____ (Seal)

Per: _____

(Name of Surety)

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

**FORM H2: IRREVOCABLE STANDBY LETTER OF CREDIT
(PERFORMANCE SECURITY)**
(See D10)

(Date)

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

RE: PERFORMANCE SECURITY - BID OPPORTUNITY NO. 55-2014

PAT PHILLIPS PARK AND SHAUGHNESSY PARK FITNESS TRAILS

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 (2007 Revision), International Chamber of Commerce Publication Number 600.

(Name of bank or financial institution)

Per: _____
(Authorized Signing Officer)

Per: _____
(Authorized Signing Officer)

PART E - SPECIFICATIONS

GENERAL

E1. APPLICABLE SPECIFICATIONS AND DRAWINGS

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

<u>Drawing No.</u>	<u>Drawing Name/Title</u>
L0.0	Title Sheet / Location Plans
L1.0	Pat Phillips Park – Site Plan
L1.1	Pat Phillips Park – Existing Conditions
L1.2	Pat Phillips Park – Demolition Plan
L1.3	Pat Phillips Park – Layout Plan
L1.4	Pat Phillips Park – Grading & Drainage
L1.5	Pat Phillips Park – Planting & Materials Plan
L1.6	Pat Phillips Park – Fitness Nodes 1 to 4 and Fitness Bench
L1.7	Pat Phillips Park – Bench Nodes 1 to 3
L1.8	Pat Phillips Park – Junior Play Areas & Accessible Picnic Table Node
L1.9	Pat Phillips Park – Details
L2.0	Shaughnessy Park – Site Plan
L2.1	Shaughnessy Park – Demolition & Existing Conditions
L2.2	Shaughnessy Park – Layout Plan
L2.3	Shaughnessy Park – Planting and Materials Plan
L2.4	Shaughnessy Park – Fitness Nodes 1 and 2
L2.5	Shaughnessy Park – Fitness Nodes 3 and 4
L2.6	Shaughnessy Park – Fitness Node 5 and Bench Nodes 1 and 2
L2.7	Shaughnessy Park – Details

E2. LOCATION OF WORK

- E2.1 work is located at the following two (2) sites:
- (a) Pat Phillips Park located at 115 Quail Ridge Road
 - (b) Shaughnessy Park located at 74 Tyndall Avenue

E3. EXISTING SERVICES AND UTILITIES

- E3.1 No responsibility will be assumed by Lombard North Group for the correctness of completeness of the Drawings, when provided, with respect to the existing utilities, pipes and other objects, either underground or on the surface; and 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 the damage done to them.

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

E4.1 Further to C6.12, the Contractor shall give all necessary notices, obtain all necessary permits and pay all fees in order that the Work may be carried out. The Contractor shall submit all plans required by an 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

E5. LAYOUT OF WORK

E5.1 Further to CW 1130, Paragraph 3.15 –Stakes and Marks, the Contractor shall set all necessary control lines, bench marks, survey elevation stakes and layout in consultation with the Contract Administrator, as required.

E5.2 The Contractor shall layout all work using a GPS system. The layout drawings will be available in DWG and/or DXF format.

E6. PEDESTRIAN AND TRAFFIC CONTROL

E6.1 General Description

E6.1.1 This specification shall supplement Specification CW 1130-R1 clauses 3.6 and 3.7 and shall cover the supply, installation, maintenance and removal of temporary traffic and pedestrian control.

E6.1.2 The work to be done by the Contractor under the Specification shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools, supplies, and all things necessary for and incidental to the satisfactory performance and completion of all Work as hereinafter specified.

E6.2 Materials

E6.2.1 General

(a) All barricades, flashers, signs, and other equipment shall be in accordance with the "Manual of Temporary Control in Work Areas on City Streets".

E6.2.2 Snow Fence

(a) Plastic Netting: UV stabilized, high-density polyethylene, international orange colour 1.22 m. height, complete with steel stakes.

E6.3 Construction Methods

E6.3.1 General

(a) Traffic control shall be provided and staged in accordance with the "Manual of Temporary Traffic Control and Work Areas on City Streets and this specification. No more than two (2) blocks are to be under construction at one time, unless otherwise approved by the Contract Administrator.

(b) The Contractor shall maintain safe pedestrian access to buildings within the area under construction at all times.

(c) The Contractor shall be responsible for the placement of all required signing and barricades, for traffic control in the construction area.

E6.3.2 Snow Fencing

(a) Erect snow fencing surrounding the areas under construction and any excavations deeper than 500 mm.

- (b) Snow fencing shall be placed so as not to present a hazard to vehicles or pedestrians and shall be kept securely fastened, and neat in appearance at all times.

E6.4 Quality Control

E6.4.1 All workmanship and all materials furnished and supplied under this Specification are subject to the close, systematic inspection and testing by the Contract Administrator including all operations from the selection of materials through to final acceptance of the Work. The Contractor shall be wholly responsible for the control of all operations thereto, notwithstanding any inspection or approval that may have previously been given. The Contract Administrator reserves the right to reject any materials or works which are not in accordance with this Specification.

E6.4.2 If, in the opinion of the Contract Administrator, traffic control is not in accordance with this Specification, the Work in the affected area shall be stopped and shall not resume until such time that the traffic control deficiencies are corrected to the satisfaction of the Contract Administrator. No contract extensions will be granted as a result of lost time due to work stoppages because of inadequate traffic control by the Contractor.

E6.5 Measurement and Payment

E6.5.1 The supply, erection, and maintenance of all traffic control, including ramps, snow fencing and signs shall be included in the cost of the Work. No measurement or payment will be made for this Work.

E7. WATER USED BY CONTRACTOR

E7.1 Further to clause 3.7 of CW 1120, latest edition, the Contractor shall pay for all costs associated with obtaining water in accordance with the Waterworks By-Law. Sewer charges will not be assessed for water obtained from a hydrant.

E8. VERIFICATION OF WEIGHT

E8.1 All material which is paid for on a weight basis shall be weighed on a scale certified by Consumer and Corporate Affairs, Canada.

E8.2 All weight tickets shall have the gross weight and the time and date of the weighing printed by an approved electro/mechanical printer coupled to the scale.

E8.3 The tare weight and the net weight may either be hand written or machine printed. All weights, scales and procedures shall be subject to inspection and verification by the Contract Administrator. Such inspection and verification may include, but shall not be limited to:

- (a) Checking contractors scales for Consumer & Corporate Affairs certification seals;
- (b) Observing weight procedures;
- (c) Random checking of either gross or tare weights by having such trucks or truck/trailer(s) combinations as the Contract Administrator shall select weighted at the nearest available certified scale;
- (d) Checking tare weights shown on delivery tickets against a current tare.

E8.4 The contractor shall ensure that each truck or truck/trailer(s) combination delivering material which is paid for on a weight basis carries a tare not more than one (1) month old.

E8.5 The tare shall obtain by weighing the truck/trailer(s) combination on a certified scale as shown:

- (a) Upon which scale the truck or truck/trailer combination was weighted;
- (b) The mechanically printed tare weight;
- (c) The license number(s) of the truck trailer(s);
- (d) The time and date of weighing.

E9. TRUCK WEIGHT LIMITS

- E9.1 The City shall not pay for any portion of material which results in the vehicle exceeding the maximum gross vehicle weight allowed under *The City of Winnipeg Traffic By-Law*, unless such vehicle is operating under special permit.

E10. SITE ENCLOSURES

- E10.1 Temporary site enclosures, as determined to be necessary at the pre-construction meeting, shall be erected and maintained as required during the duration of the construction period.
- E10.2 Site enclosures shall be considered incidental to the Work.

E11. SITEWORK DEMOLITION AND REMOVALS

E11.1 General Description

- E11.1.1 This Specification shall supplement CW 3010, CW3110, CW 2130, and CW 3235 and shall cover the requirement for demolition, salvage, removal and disposal wholly or in part of various items designated to be removed or partially removed and for backfilling resulting trenches, holes and pits.
- E11.1.2 The Work to be done by the Contractor under this Specification shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools, supplies, and all things necessary for and incidental to the satisfactory performance and completion of all Work as hereinafter specified.

E11.2 References

- E11.2.1 The City of Winnipeg Standard Construction Specifications
- (a) CW 3010 – Clearing and Grubbing
 - (b) CW 2030 – Excavation, Bedding and Backfill
 - (c) CW 2130 – Gravity Sewers
 - (d) CW 3235 – Renewal of Miscellaneous Concrete Slabs

E11.3 Equipment

- E11.3.1 All equipment shall be of a type approved by the Contract Administrator and shall be kept in good working order.
- E11.3.2 The size, weight, and destructive capabilities of the equipment shall be matched to the type of removal done.

E11.4 Construction Methods

E11.4.1 Scope of Work

- (a) The Work under this Specification shall include the following items as shown within the Limit of Work on the Drawings or otherwise directed by the Contract Administrator:
- (a) Removal and disposal of asphalt, including base material;
 - (b) Removal and disposal of concrete, including base material;
 - (c) Clearing and grubbing;
 - (d) Removal and disposal of catch basin.

E11.4.2 Fees and Permits

- (a) The Contractor shall obtain and pay for all licenses and permits necessary for the demolition work.

- (b) The Contractor shall comply with all Municipal, Provincial, Federal Government regulations relating to the demolition of structures.

E11.4.3 Safety Precautions

- (a) The Contractor shall provide flagmen, barricades, railings, and whenever necessary, warning signs at excavation holes, plywood access ramps and/or other construction necessary to secure the safety of workers, the public, and personnel alike and shall comply with all Provincial Statutes applicable to the Work of this nature. The Contractor shall provide all other protective measures as may be required by any law in force in Manitoba.

E11.4.4 Protection of Existing Items

- (a) Protect existing items designated to remain. In event of damage to such items, immediately replace or make repairs to approval of the City and at no cost to the City.

E11.4.5 Preparation of Site

- (a) Inspect Site and verify with Contract Administrator items designated for removal, disposal, and items to remain.
- (b) Locate and protect all utility lines. Preserve in operating condition active utilities traversing the Site.
- (c) **Notify utility companies before starting demolition. Utilities to provide clearance before any excavation is done.**
- (d) **Notify Geomatics Service Branch at 986-1360 (8am – 4pm Mon Fri) to obtain clearance and mark survey infrastructure a minimum of 72 hours before any excavation.**

E11.4.6 Removals

- (a) Remove items as indicated on the Drawings and as directed by the Contract Administrator. Do not disturb adjacent items designated to remain in place.
- (b) Removal of asphalt and concrete including base material in accordance with CW 2030 and CW 3235.
- (c) Clearing and grubbing in accordance with CW 3010.
- (d) Removal of catch basin in accordance with CW 2130.

E11.4.7 Disposal of Materials

- (a) The Contractor shall promptly dispose of materials not designated for salvage or re-use in Work, off-site.
- (b) Trim disposal areas to approval of Contract Administrator.

E11.4.8 Backfill

- (a) Backfill in areas as indicated in accordance with Excavation Bedding and Backfill – CW 2030.

E11.4.9 Restoration

- (a) Restore areas and existing works outside areas of demolition to match condition of adjacent undisturbed areas.

E11.4.10 Site Clean-Up

- (a) Upon completion of Work, remove debris, trim surfaces and leave Work Site clean.

E11.5 Measurement and Payment

E11.5.1 Removal and disposal of asphalt shall be paid on a square metre basis. Price shall be payment in full for supplying materials and for performing the Work.

E11.5.2 Removal and disposal of concrete shall be paid on a square metre basis. Price shall be payment in full for supplying materials and for performing the Work.

E11.5.3 The Clearing and Grubbing of material within the limit of work shall be measured on a square metre basis. Price shall be payment in full for supplying materials and for performing the Work.

E12. EARTH AND BASE WORKS

E12.1 Description

E12.1.1 This specification shall cover all labour, materials, methods, equipment and accessories for the supply and installation of crushed limestone sub-base, base course material, non-woven geotextile fabric, sub-grade compaction and drainage pipe.

E12.2 References

E12.2.1 The City of Winnipeg Standard Construction Specifications

- (a) CW 3110 – Sub-Grade, Sub-Base and Base Course Construction
- (b) CW 3120 – Installation of Sub-drains
- (c) CW 3130 – Supply and Install of Geotextile Fabrics
- (d) CW 3170 – Earthwork and Grading

E12.3 Materials

E12.3.1 All materials shall conform to CW 3110, CW 3120, CW 3130, and CW 3170.

E12.4 Equipment

E12.4.1 All equipment shall conform to CW 3110, CW 3120, CW3130, and CW3170.

E12.5 Construction Method

E12.5.1 All construction methods shall conform to CW 3110, CW 3120, CW 3130 and CW 3170.

E12.6 Measure and Payment

E12.6.1 Sub-grade compaction will be paid for on a square metre basis. Price shall be payment in full for supplying materials and for performing the Work.

E12.6.2 Geotextile fabric will be paid for on a lump sum basis. Price shall be payment in full for supplying materials and for performing the Work.

E12.6.3 Crushed limestone base course material will be paid for on a cubic metre basis. Price shall be payment in full for supplying materials and for performing the Work.

E12.6.4 Crushed limestone sub-base course material will be paid for on a cubic metre basis. Price shall be payment in full for supplying materials and for performing the Work.

E12.6.5 Rough grading will be paid for on a square metre basis. Price shall be payment in full for supplying materials and for performing the Work.

E13. TREE PROTECTION

E13.1 The Contractor shall take the following precautionary steps to prevent damage from the construction activities to existing boulevard trees within the limits of the construction area. If you require further information on these specifications, please contact the City of Winnipeg Forestry Branch at 204-986-2004:

- (a) For trees greater than 100 mm in diameter, attach wood strapping material having a minimum thickness of 25 millimetres and minimum length of 2440 millimetres around tree trunks in a manner that will not harm the trees. Do not use nails or other fasteners that penetrate into trees. The width of strapping should suit the size of the tree being protected. Length of strapping may be reduced to suit the tree being protected as approved by the Contract Administrator.

- (b) For trees less than 100mm in diameter, install snow fencing around the tree to a 2.0 metre radius complete with installation hardware. The 2.0 metre radius of the snow fencing may be reduced to suit the tree being protected as approved by the Contract Administrator.
- (c) Operation equipment within the dripline of the trees shall be kept to a minimum required to perform the work. Equipment shall not be parked, repaired, refueled; construction materials shall not be stored, and earth material shall not be stockpiled within the driplines of the trees. The dripline of the 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 the tree protection materials during construction of the Work.
- (e) Remove snow fencing and strapping materials without harming trees as soon as the construction and restoration work is completed.

- E13.2 Obtain approval from the Contract Administrator to excavate within 2.0 metres of a tree.
- E13.3 Excavate in a manner to minimize damage to root systems. Keep exposed roots in excavations and trenches moist or shaded.
- E13.4 Prune exposed roots with equipment such as trenchers, chain saws, root cutters or other methods acceptable to the Contract Administrator in a manner that will leave a neat, clean root end.
- E13.5 Take precautions to ensure tree limbs overhanging the Site are not damaged by construction equipment. Contact the Forestry Branch for consultation on pruning of overhanging or damaged limbs and branches and other unanticipated problems with trees during construction of the Works.
- E13.6 American elm trees are not to be pruned between April 1st and August 1st and Siberian Elm trees between April 1st and July 1st of any year under provisions of the Dutch Elm Disease Act.
- E13.7 All damages to existing trees caused by the Contractor's activities shall be repaired to the requirements and satisfactions 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.
- E13.8 The Forestry branch will remove and replace any trees deemed to have died or that are dying due to damage from carelessness during construction. Removal and replacement costs will be determined by size, market price of the largest transplantable tree of same or different species and may include appraised value of existing tree as determined by current International Society of Arboriculture evaluation procedure presently used by Forestry branch in conjunction with City Claims Branch. Estimated replacement cost of a 250 to 600 millimetre diameter American elm on a boulevard based on an appraised value is approximately \$4,700.00 and \$27,000.00 respectively.
- E13.9 Measurement and Payment
- E13.9.1 Protection of existing trees, repair of trees and pruning of damaged limbs will not be measured for payment and will be included with 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 own costs and will be invoiced for, or deducted from any payments owing.

E14. SUB-SURFACE DRAINAGE SYSTEM

- E14.1 General Description
- E14.1.1 Further to CW 3110, CW 3120, CW 3130 CW 3170 and SD 659, this Work shall include the installation of a sub-surface drainage system, including:

- (a) Supply and installation of a geo-composite prefabricated Multi-Flow drainage system as shown on the Drawings. The sub-surface drainage system shall be in accordance with these Specifications and in reasonably close conformity with the locations and dimensions shown on the plans or as specified by the Contract Administrator. The quantities of drainage system materials as shown may be increased or decreased at the discretion of the Contract Administrator, based on actual site conditions that occur during construction. These variations in quantity shall not be considered alterations to the details of construction, or to the character of the Work.
- (b) Connection of the Multi-Flow drainage system to the existing PVC drainage pipe within the Park.

E14.2 Materials

E14.2.1 Multi-Flow Drain System

- (a) Drainage pipe shall be Multi-Flow or approved substitute in accordance with B7. Its size shall be 150 mm. as shown the Drawings. All fittings shall be sized to fit and approved for use with Multi-Flow or a substitute approved by the manufacturer.
- (b) The drain conduit shall be a flexible, prefabricated, rounded, rectangular-shaped composite product, wrapped in a non-woven needle-punched geotextile fabric consisting of long-chain polypropylene, polyethylene, or polyamide fibers. The fibers shall be oriented into a multi-directional stable network, whereby they retain their positions relative to each other, yet allow passage of water as specified. The fabric shall be free of chemical treatments or coatings which might reduce its permeability; and shall be inert to chemicals found within the soil.

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-4991	100-140
Permittivity, 1/sec.	ASTM D-4491	1.3-2.0
Apparent Opening Size	ASTM D-4751	60/70 Max. U,s< Std. Sieve Opening
Seam Strength, lb./ft.	ASTM D-4595	100
Fungus	ASTM G-21	No Growth

- (c) The drainage core shall be manufactured from high-density polyethylene. The core shall be constructed of interconnected corrugated pipes that define and provide the flow channels and structural integrity of the system. The core of the conduit shall conform to the following physical property requirements:

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

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

- E14.2.2 Multi-Flow Fittings
- (a) The fittings used with the sub-surface drainage system shall be of a “snap-together” design. No other fittings shall be substituted.
 - (b) Inspection ports or “clean-outs” shall be installed at all connection locations and at the initial starting points of the system as shown on the Drawings.
- E14.2.3 Granular Backfill
- (a) Backfill for the trenches shall be 6 mm. clean, washed pea gravel.
 - (b) Sand for the top of the trenches shall be coarse sand whose particle size is defined as less than 5% retained on a #10 screen, and less than 5% passing through a #30 screen (U.S. Standard Sieve). In no case shall more than 1% pass a #60 screen.
- E14.2.4 Geotextile Fabric
- (a) As per CW 3130
- E14.3 Construction Method
- E14.3.1 The layout of the sub-surface drainage system is to be carefully marked out on site and reviewed by the Contract Administrator.
- E14.3.2 All trenches are to be excavated with a trenching machine or by hand. Trenches are to be inspected by the Contract Administrator prior to backfilling. In locations where the trench crosses or intersects existing utilities, underground services, pipes or fixtures, excavation must be done by hand. The amount of trench excavated should not exceed the amount of drainage pipe that can be laid and backfilled completely prior to the end of work each day. Width and depth of the trench shall be as shown on the Drawings.
- E14.3.3 The bottom of the trench shall be free of loose soil particles and shall have the slope shown on the Drawings. Over excavation of the trench shall be backfilled to the correct grade with excavated material or granular prior to the placement of the non-woven geotextile beneath the Multi-Flow pipe. The backfilled material shall be compacted to 95% of Standard Proctor Density. Excavated material shall not remain on sodded areas for more than 24 hours. All excavated material shall be removed from the Site daily.
- E14.3.4 Initial excavation of the trench shall begin at the lowest point of the sub-surface drainage system, which is the connection between the existing drainage pipe and the Multi-Flow pipe, working back towards the high points of the sub-surface drainage system at a minimum slope of 0.5%.
- E14.3.5 The grades of the bottom of the excavated trench are to be reviewed by the Contract Administrator prior to installation of the pipe.
- E14.3.6 Multi-Flow drainage pipe shall be placed in the trenches using a Multi-Flow centering device.
- E14.3.7 The trenches shall be backfilled in accordance with the Drawings. Backfill shall be placed in 300 mm. lifts, and shall be lightly tamped into place to eliminate voids.
- E14.3.8 All fittings for the drainage pipes shall be installed according to the manufacturer's recommendations.
- E14.3.9 Damage to the sub-surface drainage system shall be repaired by splicing into an undamaged section of pipe. All repairs are to be made at the expense of the Contractor. Connection of the Multi-Flow system to existing drainage pipe is to be made at the expense of the Contractor.
- E14.3.10 The Multi-Flow pipes are to be connected to existing solid drainage pipes in accordance with the Manufacturer's recommendations.
- E14.3.11 All trenches are to be covered with geotextile fabric and sand as shown in the Drawings. The sand layer shall be tamped and watered prior to the installation of sod.

E14.3.12 The Contractor shall be responsible for the restoration of any damages caused during the Work under this section.

E14.4 Measurement and Payment

E14.4.1 The supply and installation of the sub-surface drainage system shall be paid for on a lineal meter basis.

E15. SAFETY SURFACING

E15.1 Description

E15.1.1 Provide all Labour, materials, methods, equipment and accessories for the supply and installation of wood fiber safety surfacing.

E15.2 Materials

E15.2.1 Wood Fiber product shall be either Zeager Woodcarpet or Fibar FibarSystem 200 or 300 products

E15.2.2 Wood Fiber surfacing shall be supplied by an authorized distributor. Delivery slips, and/or a warranty certificate from an authorized supplier shall be submitted to the Contract Administrator prior to installation.

(a) The contact for Zeager Woodcarpet is:

Zeager Bros. Inc.
400 East Harrisburg Pike
Middletown PA 17057
USA
Ph: 1 (888) 346-8524 or (717) 944-7481
Fax: (717) 9447681
sales@zeager.com

(b) The Contact for FibarSystem 200 or 300 is:

The Fibar Group LLC
80 Business Park Drive, Suite 300
Armonk, NY 10504-1705
USA
info@FibarPlaygrounds.com

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

E15.3 Construction Methods

E15.3.1 Wood fiber shall be installed within the play areas defined by the concrete edging and asphalt path to a minimum depth of 100 mm. after compaction. Where proposed play equipment includes a fall height greater than 2.44 meters, the depth of material shall correspond directly to the maximum fall height of play equipment in accordance with the manufacturer's specifications.

E15.3.2 Ensure that geotextile filter fabric is cut and fit around playground equipment footings and that all seams are overlapped by 300 mm.

E15.3.3 The Wood Fiber shall be installed immediately after the playground equipment has been installed.

- E15.3.4 The installation of all materials shall be in accordance with SCD-650, and the manufacturer's specifications.
- E15.3.5 Ensure that installation is done with equipment sized to suit the Work being done, and that the Wood Fiber is spread by hand where mechanical installation might damage play equipment.

E15.4 Measurement and Payment

- E15.4.1 The supply and installation of the Wood Fiber Safety Surfacing shall be paid on a square meter basis as shown on Form B: Prices.
- E15.4.2 The price shall be payment in full for supplying all labour, equipment, and materials, and the performance of all operations described herein; inclusive of all items deemed to be incidental to the Work, and as accepted by the Contract Administrator.

E16. ASPHALT PAVING

E16.1 Description

- E16.1.1 Provide all labour, materials, methods, equipment and accessories for the supply and installation of asphalt parkway paths. The price shall be payment in full for the supply of all materials and for performing the Work.

E16.2 References

- E16.2.1 The City of Winnipeg Standard Construction Specifications
- (a) SC-647 – Park Path Asphalt
 - (b) CW 3410 – Asphalt Concrete Pavement Works
 - (c) CW 3110 – Sub-Grade, Sub-Base & Base Course Construction
 - (d) CW 3130 – Supply and Installation of Geotextile Fabrics
 - (e) CW 3510 – Sodding
 - (f) CW 3540 – Topsoil & Finishing Grading for Established Turf Areas

E16.3 Materials

- E16.3.1 All materials shall conform to SC-647, CW 3410, CW 3110, CW 3130, CW 3510, and CW 3540.

E16.4 Construction Method

- E16.4.1 All construction methods shall conform to SC-647, CW 3410, CW 3110, CW 3130, CW 3510, and CW 3540.

E16.5 Measurement and Payment

- E16.5.1 The supply and installation of asphalt paving shall be paid for on a square metre basis as shown on Form B: Prices.
- E16.5.2 The price shall be payment in full for supplying all labour, equipment, and materials, and the performance of all operations described herein; inclusive of all items deemed to be incidental to the Work, and as accepted by the Contract Administrator.

E17. GRANULAR PAVING

E17.1 Description

- E17.1.1 Provide all labour, materials, methods, equipment and accessories for the supply and installation of park path crushed limestone.

E17.2 References

- E17.2.1 The City of Winnipeg Standard Construction Specifications
- (a) SCD-645 – Park Path Crushed Limestone
 - (b) CW 3110 – Sub-Grade, Sub-Base & Base Course Construction
 - (c) CW 3130 – Supply and Installation of Geotextile Fabrics
 - (d) CW 3510 – Sodding
 - (e) CW 3540 – Topsoil & Finishing Grading for Establishment of Turf Areas
- E17.3 Materials
- E17.3.1 All materials shall conform to SC-645, CW 3110, CW 3130, CW 3510 and CW 3540.
- E17.4 Construction Method
- E17.4.1 All construction methods shall conform to SC-645, CW 3110, CW 3130, CW 3510 and CW 3540.
- E17.5 Measurement and Payment
- E17.5.1 The supply and installation of crushed limestone surfacing shall be paid for on a square metre basis as shown on Form B: Prices.
- E17.5.2 The price shall be payment in full for supplying all labour, equipment, and materials, and the performance of all operations described herein; inclusive of all items deemed to be incidental to the Work, and as accepted by the Contract Administrator.

E18. SITE BOULDERS

- E18.1 Description
- E18.1.1 Provide all labour, materials, methods, equipment and accessories for the supply and installation of concrete edging.
- E18.2 Products
- E18.2.1 Existing Site Boulders
- E18.3 Sub-Grade Inspection
- E18.3.1 Verify grades and compaction of sub-grade (to 95% SPD), and adjacent features, for conformity with existing grades before placing boulder.
- E18.3.2 Remove and dispose of existing unsuitable sub-grade material as directed by the Contract Administrator.
- E18.4 Placement and Compaction of Boulders
- E18.4.1 Install Boulders onto granular base as part of construction of granular surfacing, as per SCD-645.
- E18.4.2 Place boulders in locations as instructed by the Contract Administrator.
- E18.5 Measurement and Payment
- E18.5.1 The relocation and installation of Site Boulders shall be paid for on a lump sum basis as shown on Form B: Prices.
- E18.5.2 The price shall be payment in full for supplying all labour, equipment, and materials, and the performance of all operations described herein; inclusive of all items deemed to be incidental to the Work, and as accepted by the Contract Administrator.

E19. CONCRETE WORKS

E19.1 Description

E19.1.1 Provide all labour, materials, methods, equipment and accessories for the supply and installation of concrete edging.

E19.2 References

E19.2.1 The City of Winnipeg Standard Construction Specifications

- (a) CW 3110 – Sub-Grade, Sub-Base and Base Course Construction
- (b) CW 3310 – Portland Cement Concrete Pavement Works
- (c) SCD-643 Concrete Play Surface Edging Detail

E19.3 Materials

E19.3.1 All materials shall conform to CW 3110, CW 3130, CW 3310 and SCD-643.

E19.4 Construction Method

E19.4.1 All construction methods shall conform to CW 3110, CW 3130, CW 3310 and SCD-643.

E19.5 Measurement and Payment

E19.5.1 The supply and installation of concrete edging shall be paid for on a lineal metre basis as shown on Form B: Prices.

E19.5.2 The price shall be payment in full for supplying all labour, equipment, and materials, and the performance of all operations described herein; inclusive of all items deemed to be incidental to the Work, and as accepted by the Contract Administrator.

E20. CARPENTRY

E20.1 Description

E20.1.1 Provide all labour, materials, methods, equipment and accessories for the supply and installation of single timber edging.

E20.2 References

E20.2.1 The City of Winnipeg Standard Construction Specifications

- (a) SCD-651 Single Timber Edging

E20.2.2 Canadian Standards Association (CSA International)

- (a) CSA B111, Wire nails, Spikes and Staples
- (b) CSA O141 Softwood Lumber
- (c) CSA O80, Wood Preservation
- (d) CAN/CSA-G40.20/G40.21, General requirements for Rolled or Welded Structural Quality Steel.
- (e) CAN/CSA-G40.20/G40.21S
- (f) CAN/CSA-G164, Hot Dip Galvanizing of Irregularly Shaped Articles
- (g) CAN/CSA-S16.1, Limit States Design of Steel Structures

E20.2.3 American Wood Preservers Association (AWPA)

- (a) AWPA M2, Standard for Inspection of Treated Wood Products.
- (b) AWPA M4, Standard for the Care of Preservative-Treated Wood Products.

E20.2.4 American Society for Testing and Materials International, (ASTM)

- (a) ASTM A53/A53M, Specifications for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated Welded and Seamless.
- (b) ASTM A269, Specification for Seamless and Welded Austenitic Stainless Steel Tubing for General Service.
- (c) ASTM A307, Specification for Carbon Steel Bolts and Studs, 60,000 PSI Tensile Strength.

E20.3 Submittals

- E20.3.1 Submit product data and / or samples for pressure treated lumber.

E20.4 Quality Assurance

- E20.4.1 Lumber identification: by grade stamp of an agency certified by Canadian Lumber Standards Accreditation Board.
- E20.4.2 For products treated with preservative by pressure impregnation, submit the following information certified by authorized signing officer of treatment plant:
- E20.4.3 Information listed in AWWA.M2 and revisions specified in CAN/CSA-080 Series, Supplementary Requirement to AWWA Standard M2 applicable to specified treatment.
- E20.4.4 Moisture content after drying following treatment with water-borne preservative.
- E20.4.5 All wood shall be free of defects. Any warped, checked or bent materials will be rejected.

E20.5 Pressure Treated Wood Lumber

- E20.5.1 Material: to be pressure treated, no.1 grade, colour: green, moisture content 19% or less in accordance with following standards: CAN/CSA-O141; NLGA Standard Grading Rules for Canadian Lumber; Forest Stewardship Council (FSC) certified.
- E20.5.2 Preservative for above ground use: to CSA-O80 Series, ACQ-C treatment, clear finish. Minimum net retention: 4.0 kg/m³.
- E20.5.3 Preservative for below ground contact: to CSA-O80 Series, ACQ-C treatment, clear finish. Minimum net retention: 6.4 kg/m³.

E20.6 Hardware

- E20.6.1 Nails and spikes: to CAS B111, galvanized, for exterior works and for treated lumber. Use spiral thread nails.
- E20.6.2 Bolt nuts, washers, lag screws to be hot dipped galvanized, sizes to suit application.
- E20.6.3 Lag screws: hot-dipped, galvanized, sizes to suit application.

E20.7 Installation

- E20.7.1 Construct all work as indicated on the Drawings using adequate fastening methods to ensure solid durable finished work suitable for the purpose intended.
- E20.7.2 Do all nailing and fastening neatly, evenly and thoroughly.
- E20.7.3 Apply preservative to all end cuts.
- E20.7.4 Frame, anchor, fasten, tie and brace members to provide necessary strength and rigidity. Install all members true to line, levels and elevations.
- E20.7.5 Set plumb and space uniformly. Countersink bolts where necessary to provide clearance for other work.

E20.8 Measurement and Payment

- E20.8.1 The supply and installation of single timber edging shall be paid for on a lineal metre basis as shown on Form B: Prices.

E20.8.2 The price shall be payment in full for supplying all labour, equipment, and materials, and the performance of all operations described herein; inclusive of all items deemed to be incidental to the Work, and as accepted by the Contract Administrator.

E21. PLANTING MEDIUM

E21.1 Description

E21.1.1 This specification shall cover the supply and install of planting medium in planting beds and deciduous tree planting.

E21.2 References

E21.2.1 Agriculture and Agri-Food Canada

- (a) The Canadian Systems of Soil Classification, Third Edition, 1998.
- (b) Canadian Council of Ministers of the Environment (CCME) Guidelines.

E21.2.2 The City Winnipeg Standard Construction Specifications

- (a) CW 1130 – Site Requirements
- (b) CW 3540 – Topsoil and Finish Grading for Establishment of Turf Areas

E21.3 Submittals

E21.3.1 Submit 0.5kg sample of topsoil to National Testing Laboratory, or approved alternate, and indicate present use and intended use. Prepare and ship sample in accordance with Provincial regulations and testing laboratory requirements.

E21.3.2 Submit two (2) copies of soil analysis and recommendations for corrections to Contract Administrator.

E21.4 Quality Assurance

E21.4.1 Inform Contract Administrator of proposed source of materials to be supplied and provide a sample for review by Contract Administrator prior to installation.

E21.4.2 Testing of growing medium to be carried out and paid for by the Contractor. Prepare and ship planting medium samples to approved laboratory in accordance with Provincial regulations and laboratory requirements, indicating intended use on each sample.

E21.4.3 Test planting medium for nutrients N, P, K, micronutrients, soluble salt content, pH value and OM (organic matter).

E21.4.4 Acceptance of growing medium is subject to an inspection of material and confirmation of test results. Do not commence soft landscaping work until Contract Administrator has accepted growing medium.

E21.5 Delivery, Storage and Handling

E21.5.1 Store materials in a dry area, protected from freezing, sedimentation and contamination.

E21.5.2 Deliver and store fertilizer in waterproof bags labeled with weight, analysis and name of manufacturer.

E21.6 Waste Management and Disposal

E21.6.1 Separate metal, plastic, wood and corrugated cardboard packing and place in designated areas for disposal or recycling.

E21.7 Materials

E21.7.1 Planting Medium: In accordance with CW 3540 for topsoil except organic matter to be in the range of 5-10%.

E21.7.2 Peat moss: deliver from partially decomposed fibrous or cellular stems and leaves of species of sphagnum mosses. Elastic and homogenous, brown in colour. Free of wood and deleterious material that could prohibit growth. Shredded particle minimum size: 5 mm.

E21.7.3 Sand: hard fine silica sand, well washed and free of impurities, chemical or organic matter. Coarse texture, and to the following gradation:

Particle Size (mm)	% Passing through Screen
2.0	100%
1.0	95% to 100%
0.5	80 to 100%
0.25	0 to 30%
0.15	0 to 8%
0.0075	0 to 1%

E21.7.4 Fertilizer: Synthetic start-up slow release fertilizer with N-P-K analysis of 12-36-15 ratio at a rate of 4 kg per 100 m² which is 8 pounds per 100 sq. ft.

E21.8 Excavation

E21.8.1 Excavate planting beds by hand unless otherwise directed by Contract Administrator. Dispose of all rock, clay soils, and other deleterious materials off Site.

E21.8.2 Protect bottom of excavation against freezing.

E21.8.3 Remove water that enters excavations and planters prior to planting. Ensure course of water is not groundwater.

E21.8.4 Scarify bottom and sides of tree planting pits to depth of 150mm and as per the Drawings.

E21.8.5 Cover bottom of each tree pit with bone meal fertilizer.

E21.8.6 Verify and obtain approval by Contract Administrator of planting beds complete filter fabric prior to compacted soil mound and growing medium placement.

E21.9 Planting Medium Placement

E21.9.1 Place planting medium in uniform layers over approved, unfrozen sub-grade, to the depth indicated on the Drawings.

E21.9.2 Eliminate rough spots and low areas. Prepare a loose, friable bed, boot firm and level.

E21.10 Soil Amendments

E21.10.1 Apply lime, sulphur, or other soil amendment at a rate determined and recommended from planting medium sample test.

E21.10.2 Mix soil amendment well into full depth topsoil prior to application of fertilizer.

E21.11 Finish Grading

E21.11.1 As per CW 3540

E21.11.2 Fine grade entire soil area to elevations as indicated on the Drawings. Eliminate rough spots and low areas. Leave surface smooth, uniform and firm against foot printing with a fine loose texture.

E21.12 Surplus Material

E21.12.1 Dispose of unused growing medium off Site in accordance with CW 1130.

E21.13 Cleaning

E21.13.1 Perform cleaning to remove accumulated environmental dirt from all paved surfaces. Remove surplus materials, rubbish, tools and equipment barriers from the Site.

E21.14 Measurement and Payment

E21.14.1 The supply and installation of planting medium shall be paid for on a cubic meter basis as shown on Form B: Prices.

E21.14.2 The price shall be payment in full for supplying all labour, equipment, and materials, and the performance of all operations described herein; inclusive of all items deemed to be incidental to the Work, and as accepted by the Contract Administrator.

E22. TOPSOIL AND FINISHED GRADING

E22.1 Description

E22.1.1 Further to CW 3540, this specification shall cover the supply and installation of topsoil for the establishment of sod.

E22.2 Materials

E22.2.1 Topsoil: As per CW 3540

E22.3 Methods

E22.3.1 The topsoil and finished grading shall be installed as per CW 3540 or as directed by the Contract Administrator.

E22.3.2 Following the inspection of rough grading and compaction, the work area shall be fine graded to provide a maximum deviation of 25 mm. in 30 meters from the designed grade with no imperfectly drained areas or water holding pockets. The finished surface shall be floated to create a smooth, uniformly graded surface, where no loose soil particles greater than 25 mm. in diameter shall remain.

E22.4 Measurement and Payment

E22.4.1 Payment for work under this section shall not be measured separately, but shall be included in the price for Topsoil and Sodding.

E23. SODDING

E23.1 Description

E23.1.1 Further to CW 3510, this specification shall cover the supply and installation of sod.

E23.2 References

E23.2.1 The City of Winnipeg Standard Construction Specifications

(a) CW 3510 – Sodding

(b) CW 3540 – Topsoil and Finish Grading for Establishment of Turf Areas

(c) SD 243 – Sodding Details

E23.3 Materials

E23.3.1 All materials shall conform to CW 3510, CW 3540, and SD 243.

E23.3.2 Where the sod meets existing turf, the sod shall be cut with a turf cutter to create neat, even edges in a level manner once rolling is completed. All seams shall be topdressed and seeded.

E23.3.3 Only mineral base, small roll sod, measuring 610 cm. x 1524 cm. shall be used in the repair of the interface between the paths and the existing turf; and in the restoration of turf.

E23.3.4 All areas to be sodded are shown on the Drawings. Site restoration outside of the Limit of Work shall remain the responsibility of the Contractor.

E23.4 Maintenance Period

E23.4.1 The Contractor shall maintain the sod for a period of thirty (30) Calendar Days after the completion of sod installation, or until such time that the sod is established in accordance with CW 3510.

E23.5 Measurement and Payment

E23.5.1 The supply and installation of planting medium shall be paid for on a square meter basis as shown on Form B: Prices.

E23.5.2 The price shall be payment in full for supplying all labour, equipment, and materials, and the performance of all operations described herein; inclusive of all items deemed to be incidental to the Work, and as accepted by the Contract Administrator.

E23.5.3 Items of Work

- (a) Topsoil and Sod

E24. TREE PLANTING

E24.1 Description

E24.1.1 This specification shall cover the supply and installation of trees and all associated accessories.

E24.2 References

E24.2.1 Agriculture and Agri-Food Canada (AAFC)

- (a) Plant Hardiness Zones in Canada-2000

E24.2.2 Canadian Nursery Landscape Association (CNLA)

- (a) Plant Canadian Standards for Nursery Stock-2001.

E24.2.3 Department of Justice Canada (JUS)

- (a) Plant Canadian Environmental Protection Act (CEPA), 1999, c. 33.
- (b) Transport of Dangerous Goods Act (TDGA), 1992, c. 34.

E24.2.4 Health Canada / Workplace Hazardous Materials Information System (WHMIS)

- (a) Materials Safety Data Sheets (MSDS).

E24.3 Submittals

E24.3.1 Submit product data for :

- (a) Fertilizer.
- (b) Wood chip mulch.

E24.3.2 Submit samples for:

- (a) Wood chip mulch.

E24.4 Source Quality Control

E24.4.1 Obtain approval from Contract Administrator of plant material at source.

E24.4.2 Notify Contract Administrator of source material at least seven (7) days in advance of shipment. No work under this Section is to proceed without approval.

- E24.4.3 Acceptance of plant material at source does not prevent rejection on Site prior to or after planting operations.
- E24.4.4 Plant material imported from other nations will not be accepted.
- E24.4.5 Bare root plant material will not be accepted.
- E24.5 Storage and Protection
- E24.5.1 Coordinate the shipping of plants and excavation of holes to ensure minimum time laps between digging and planting.
- E24.5.2 Protect plant material from frost, excessive heat, wind and sun during delivery.
- E24.5.3 Protect plant materials from damage during transportation:
- (a) When delivery distance is less than 30 km and vehicle travels at speed under 80 km/h, tie tarpaulins around plants or over vehicle box.
 - (b) When delivery distances exceeds 30 km or vehicle travels at speeds over 80 km/h, use enclosed vehicle where practical.
 - (c) Protect foliage and root balls using anti-desiccants and tarpaulins, where use of enclosed vehicle is impractical due to size and weight of plant material.
- E24.5.4 Protect stored plant material from frost, wind and sun as follows:
- (a) For pots and containers, maintain moisture level in containers.
 - (b) For balled and burlap, wire basket root balls, place to protect branches from damage. Maintain moisture levels in root zone.
- E24.5.5 Remove broken and damaged roots with sharp pruning shears. Make clean cut and cover cuts over 20mm (3/4") diameter with wound dressing.
- E24.5.6 Keep roots moist and protect from sun and wind. Heel-in trees that cannot be planted immediately in shaded areas and water well.
- E24.6 Scheduling
- E24.6.1 Order plant material as soon as possible after award of contract to ensure plant availability. Request substitutes as required.
- E24.6.2 Provide Contract Administrator a written schedule fourteen (14) days in advance of shipment of plant materials. Schedule to include: quantity and type of plant material, shipping dates, arrival dates on Site, and planting dates.
- E24.7 Warranty of Nursery Stock
- E24.7.1 For all plant material an eighteen (18) month warranty period is required.
- E24.7.2 During the warranty period, upon written notification from the Contract Administrator, the Contractor warrants to replace and replant any nursery stock found dead and/or in poor condition as soon as possible thereafter, without cost to the City. "Poor Condition" shall be interpreted as meaning nursery stock on which branches are dead or dying, or have not shown satisfactory growth in leaves. Exempted is nursery stock damaged by accidental causes or vandalism, which stock shall be replaced at the cost of the City,
- E24.7.3 End-of-Warranty inspection will be conducted by Contract Administrator.
- E24.7.4 Contract Administrator reserves the right to extend Contractor's warranty responsibilities for an additional one (1) year if, at end of initial warranty period, leaf development and growth is not sufficient to ensure future survival.
- E24.8 Replacements
- E24.8.1 During warranty period, remove from Site any plant material that has died or failed to grow satisfactorily as determined by the Contract Administrator.

- E24.8.2 Extend warranty on replacement plant materials for a period equal to the original warranty period.
- E24.8.3 All required replacements shall be by plants of at least the same size and species as specified, and shall be supplied and planted in accordance with the original Drawings and Specifications.
- E24.8.4 Should the replaced plant material not survive, the Contractor will be responsible to replace it a third time and guarantee it for a period equal to the original warranty period unless it is determined that unique Site conditions or inadequate maintenance causes the death of the plants.
- E24.9 Waste Management and Disposal
- E24.9.1 Separate metal, plastic, wood and corrugated cardboard packing and place in designated areas for disposal or recycling.
- E24.10 Plant Material
- E24.10.1 Type of root preparation, sizing, grading and quality: comply with Canadian Standards for Nursery Stock.
- E24.10.2 Source of plant material: grown in Zone 2 or 3 only in accordance with Plant Hardiness Zones in Canada.
- E24.10.3 Plant material must be planted in zone indicated as appropriate for its species.
- E24.10.4 Plant material free of disease, insects, defects or injuries and structurally wound with strong fibrous root system.
- E24.10.5 Substitutions to plant material as indicated on planting plan are not permitted unless written approval has been obtained as to type, variety and size. Plant substitutions must be of similar species and of equal value as those originally specified.
- E24.10.6 Refer to Plant Specifications List on the Drawings for species, quantities, size and quality of plant materials.
- E24.11 Water
- E24.11.1 Water free of impurities that would hinder plant growth. The Contractor shall provide water, so that all costs to provide water for the watering operations and all associated costs shall be borne by the Contractor. These costs may include a hydrant permit and meter rental fees.
- E24.11.2 Further to clause 3.7 of CW 1120, the Contractor shall pay for all costs associated with obtaining water in accordance with the Waterworks By-law. Sewer charges will not be assessed for water obtained from a hydrant.
- E24.12 Planting Medium
- E24.12.1 Backfill with planting medium as specified in Section E17 – Planting Medium.
- E24.13 Wood Chip Mulch
- E24.13.1 Wood chip mulch varying in size from 50 mm to 75 mm and 5 to 20mm thick, free of bark. Wood chip shall be mulched locally within 80 km of the Site.
- E24.14 Fertilizer
- E24.14.1 Synthetic start-up slow release fertilizer with an N-P-K analysis of 12-36-15 ratio at a rate of 4 kg per 100 m² which is 8 pounds per 100 sq. ft.
- E24.15 Pre-Planting Preparation
- E24.15.1 Obtain approval from Contract Administrator of finish grading, and growing medium installation prior to commencing work in this section.

- E24.15.2 Ensure plant material is acceptable to the Contract Administrator.
- E24.15.3 Remove damaged roots and branches from plant material with sharp clean equipment treating wounds as necessary to maintain plant health.
- E24.15.4 Apply anti-desiccant to deciduous trees in leaf in accordance with manufacturer's instructions.

- E24.16 Plant Material Layout
 - E24.16.1 Prepare planting beds as per Section E17 – Planting Medium.

- E24.17 Planting
 - E24.17.1 Tree pit shall be at least two (2) times the diameter of the root ball.
 - E24.17.2 Cover bottom of each excavation with bone meal in amount recommended by manufacturer.
 - E24.17.3 Plant vertically in locations as indicated. Orient plant material to give best appearance in relation to structure, roads and walks.
 - E24.17.4 For trees: backfill soil in 150mm (6") lifts. Tamp each lift to eliminate air pockets. When two thirds of depth of planting pit has been backfilled, fill remaining space with water. After water has penetrated into soil, backfill to finish grade. Form water saucer as indicated on the Drawings. Stake on one of two sides and guying strap (where required).
 - E24.17.5 Trunk Protection: 100 mm diameter x 600 mm length "Big O" flexible corrugated pipe sliced lengthwise and wrapped around tree trunk from its base towards the branches.
 - E24.17.6 Water plant materials thoroughly. Report extreme ponding in planters indicative of malfunctioning drains to the Contract Administrator immediately.
 - E24.17.7 After soil settlement has occurred, fill with soil to finish grade.
 - E24.17.8 Dispose of plant containers and all associated material off Site.

- E24.18 Pruning
 - E24.18.1 Undertake corrective pruning after planting to eliminate torn and broken branches. Do not damage lead branches or remove smaller twigs along main branches. Do not prune to compensate for root loss.

- E24.19 Mulching
 - E24.19.1 Obtain approval of planting placement from Contract Administrator before mulching material is applied.
 - E24.19.2 Ensure soil settlement has been corrected prior to mulching.
 - E24.19.3 Spread wood chip mulch as indicated on all planting beds. Spread mulch to minimum thickness of 75mm. ensuring that mulch does not come into contact with the tree trunk to prevent rot.

- E24.20 Maintenance
 - E24.20.1 Maintain plant material from date of planting to the end of the warranty period. Refer to Section E21 – Landscape Maintenance.

- E24.21 Measurement and Payment
 - E24.21.1 Trees shall be paid for on a unit (each) basis. Price shall be payment in full for supplying materials and for performing the Work.
 - E24.21.2 Wood chip mulch shall be paid for on a square metre basis. Price shall be payment in full for supplying materials and for performing the Work.

E25. SITE FURNITURE

E25.1 Description

E25.1.1 This specification shall cover the supply and installation of fitness equipment as per manufacturer's specifications and the pick-up and installation of waste receptacles, Taché benches and Taché picnic table

E25.2 References

E25.2.1 The City of Winnipeg Standard Construction Details

- (a) SCD-119 – Waste Receptacle Side Opening metal Slat Type - Galvanized
- (b) SCD-121A – Taché Bench with Composite Arms – Galvanized
- (c) SCD-122 – Taché Style Metal Frame Picnic Table – Galvanized

E25.3 Fitness Equipment

E25.3.1 Norwell NW101 Chest.

E25.3.2 Norwell NW102 Back.

E25.3.3 Norwell NW103 Sit-up.

E25.3.4 Norwell NW104 Pull-up.

E25.3.5 Norwell NW105 Bar.

E25.3.6 Norwell NW201 Air Walker.

E25.3.7 Norwell NW202 Cross Trainer.

E25.3.8 Norwell NW204 Hip Flex.

E25.3.9 Norwell NW501 Bench

E25.3.10 Norwell NW401 Stretch

E25.3.11 Norwell NW503 Sign – Combined.

E25.3.12 TrekFit Pull-up bars (triple).

E25.3.13 TrekFit Balance beam.

E25.3.14 TrekFit Push-up bars.

E25.3.15 TrekFit Hurdle set (6).

E25.3.16 TrekFit Parallel Bars.

E25.3.17 TrekFit Information panels (6).

E25.3.18 TrekFit Vault Bars (3).

E25.3.19 TrekFit Long Bench.

E25.3.20 TrekFit Dip Station.

E25.3.21 TrekFit Step Bench 8"

E25.3.22 TrekFit Step Bench 14"

E25.3.23 TrekFit Step Bench 20"

E25.3.24 All Norwell and TrekFit fitness equipment to be in-ground mounted as per manufacturers' specifications. Available from PlayWorks, ph.204-414-2990. Contact: Jeff Kuby.

E25.4 Playground Equipment

E25.4.1 Kompan Swings Model No.KSW910-2B-2I

E25.4.2 Kompan ELE400209 "Flow One" Play Structure with Plastic Slide

E25.5 Materials

E25.5.1 All materials supplied under this specification shall be of a type approved by the Contract Administrator, and shall be subject to the inspection and testing by the Contract Administrator.

E25.5.2 Site Furnishing shall be:

(a) Picnic Tables

Taché style metal frame picnic table per SCD-122. Wood slats: vertical grain Sitka spruce. Metal leg: galvanized.

(b) Taché Benches

Taché benches wood with arms per SCD-121A. Composite boards, cedar tone finish. Metal: Galvanized. Product #52501085GLV.

(c) Waste Receptacles

Waste receptacle side opening metal slate type per SCD-119. Metal Slat WR: Galvanized: product #52501063GLV. Wire basket: Galvanized: product #52501058GLV.

Contact for Waste Receptacles, Benches:

Aaron Lennon @ 986-5505
Supervisor of Central Repair/Manufacturing Facility
City of Winnipeg
Fleet Management Agency Division
Public Works Department
215 Tecumseh St.
Winnipeg, MB R3E 3S4
Email: ALennon@winnipeg.ca

Contact for Picnic Tables

Bryan Mayer @ 470-7747 or Todd Hendry @ 470-4834
Centralized Park Services
City of Winnipeg
825 Taché Avenue
Winnipeg, MB R2H 2C1
Email: BMayer@winnipeg.ca
Email: THendry@winnipeg.ca

E25.6 Construction Methods

E25.6.1 All work is to be located and installed in accordance with the Drawings, manufacturers' specifications, City of Winnipeg Standard details, and field instructions from the Contract Administrator 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.

E25.6.2 All furnishings are to be installed plumb and true to the correct elevations and location, as directed by the Contract Administrator. The Contractor shall confirm proposed locations of all site furnishings and their associated foundations with the Contract Administrator prior to installation.

E25.6.3 All furnishings to be carefully handled so that no parts will be bent, broken or otherwise damaged. Hammering is prohibited. The Contractor is responsible for replacing any damaged furnishings, prior to installation, at no cost to the City.

E25.6.4 Install as per manufacturer's instructions and the attached Drawings.

E25.7 Measurement and Payment

E25.7.1 The supply and installation of fitness equipment shall be paid for on a unit basis, as shown on Form B; Prices.

E25.7.2 The following Site Furniture will be measured on a per unit basis:

- (a) "Pick up and Install Waste receptacle side opening metal slate type- galvanized";
- (b) "Pick-up and Install Taché bench - composite"; and
- (c) "Pick-up and Install Taché style metal frame picnic table – galvanized".

E25.7.3 Site Furniture will be paid for at the Contract Unit Price. The price shall be payment in full for supplying all labour, equipment, and materials, and the performance of all operations described herein; inclusive of all items deemed to be incidental to the Work, and as accepted by the Contract Administrator.

E26. LANDSCAPE MAINTENANCE

E26.1 Description

E26.1.1 This Specification shall cover the maintenance of trees following the acceptance of the plant material initiating the warranty period.

E26.1.2 In general, the Work shall include:

- (a) Fertilizing
- (b) Watering
- (c) Weed Control
- (d) Pest and Disease Control
- (e) Mulching
- (f) Winter Preparation

E26.1.3 Maintenance shall be performed on an as required basis.

E26.2 Maintenance and Warranty Period

E26.2.1 Maintenance shall occur between the date of installation and up to a period of two (2) years from the date that landscaped areas are accepted to start warranty. The warranty period for plant materials shall start at acceptance, will be coincidental to the maintenance period.

E26.2.2 Thirty (30) days after the planting installation has been completed, the Contract Administrator shall perform an inspection of plant material to determine if the plant material is acceptable to start warranty.

E26.3 Materials and Equipment

E26.3.1 Materials shall conform to the requirements of related Specifications sections.

E26.3.2 Provide all equipment to properly execute the Work. Maintain such equipment in a safe, workable condition for the duration of the two (2) year Maintenance period required during this project.

E26.3.3 The Contract Administrator shall review equipment to be used to execute Work prior to its execution.

E26.4 Method

E26.4.1 General

- (a) Provide watering services within twenty-four (24) hours and weeding services within forty-eight (48) hours of the request by the Contract Administrator. Monitor the Site and advise the Contract Administrator of conditions that might void the Contractor's warranty responsibilities.
- (b) The Contractor shall maintain a log noting times, dates, equipment used, and quantity of materials used and areas treated for each maintenance application. Forms shall be provided by Contract Administrator. Submit log to Contract Administrator upon request. Contractor shall notify Contract Administrator of the exact time Contractor proposes to commence each application.
- (c) Schedule operations in accordance with growth, health, weather conditions, and use of Site.
- (d) Perform each operation continuously and completely within a reasonable time period.
- (e) Store equipment and materials off Site.
- (f) Collect and dispose of debris or excess material on the day the maintenance is undertaken.

E26.4.2 Maintenance of Trees:

- (a) Fertilizing: Apply fertilizer only at the frequency, ratio and rates recommended by manufacturer. Water immediately after fertilizing. Apply fertilizer no later than May 31st of each maintenance year.
- (b) Watering: Apply water as required to supplement rainfall and to maintain optimum growing conditions. In general, water once a week to achieve the indicated irrigation rates. Allow soil to adequately dry between watering to prevent over saturation without creating water stress. Subject to the above-noted requirements, the Contractor must water at least once a week between May 1st and October 15th inclusive. A complete record is to be kept of each series of waterings for all planted trees noting the location and date of watering. This record is to be given to the Contract Administrator when requested. Apply 40 litres of water per 25mm calliper per application using a deep root feeder or low pressure open flow nozzle and hose. The water stream must not gouge the soil and mulch.
- (c) Weed Control: Inspect and undertake weed control weekly during the first year of maintenance and monthly during the second year. By hand, remove all weeds with their roots from tree pits and tree beds and dispose of off Site. When weeding operation is complete, replace and rake displaced mulch to its original condition.
- (d) Pests and Diseases: Obtain written approval of Contract Administrator prior to using any pesticide. Control pests and disease through pruning or application of pesticides. Use only pesticides of low mammalian toxicity. Strictly follow manufacturer's written instructions.
- (e) Pruning: The Contractor shall provide a person with a Manitoba Arborists' Certificate for each work crew or Work Site. Prune as required to remove dead, broken or damaged limbs. Prune back to healthy growth while maintaining balanced crown shape. Employ clean sharp tools. Make cuts smooth and slope to prevent accumulation of water on cut. Do not leave small stumps ("horns") on trunks or main branches. Prune according to accepted horticultural practices as outlined in "The Pruning Manual", Publication No. 1505-1977 by Agriculture Canada.

(f) Mulching: add mulch as required to maintain original thickness. Contractor is to provide replacement mulch material.

(g) Winter Preparation: Ensure adequate moisture in tree root zones prior to freeze-up.

E26.5 Measurement and Payment

E26.5.1 Landscape maintenance shall be paid for on a lump sum basis for the items of work listed below. Price shall be payment in full for supplying all material and performing all operations herein described and all other items incidental to the Work included in this Specification.

Items of Work:

- (i) Landscape Maintenance Year 1
- (ii) Landscape Maintenance Year 2