



**THE CITY OF WINNIPEG**

# **BID OPPORTUNITY**

**BID OPPORTUNITY NO. 416-2012**

**MEMORIAL GARDEN SITE DEVELOPMENT: BROOKSIDE AND TRANSCONA  
CEMETERIES**

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## **PART B - BIDDING PROCEDURES**

### **B1. CONTRACT TITLE**

B1.1 MEMORIAL GARDEN SITE DEVELOPMENT: BROOKSIDE AND TRANSCONA CEMETERIES

### **B2. SUBMISSION DEADLINE**

B2.1 The Submission Deadline is 4:00 p.m. Winnipeg time, August 14, 2012.

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

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

### **B3. SITE INVESTIGATION**

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

B3.2 The Bidder is advised that the Bidder is responsible for determining:

- (a) the location of any utility which can be determined from the records or other information available at the offices of any public authority or person, including a municipal corporation and any board or commission thereof, having jurisdiction or control over the utility;
- (b) the nature of the surface and subsurface conditions at the Site;
- (c) the location, nature, quality or quantity of the materials to be removed or to be employed in the performance of the Work;
- (d) the nature, quality or quantity of the Plant needed to perform the Work;
- (e) all matters concerning access to the Site, power supplies, location of existing services, utilities or materials necessary for the completion of the Work; and,
- (f) all other matters which could in any way affect his Bid or the performance of the Work.

### **B4. ENQUIRIES**

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

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

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

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

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

## **B5. ADDENDA**

- B5.1 The Contract Administrator may, at any time prior to the Submission Deadline, issue addenda correcting errors, discrepancies or omissions in the Bid Opportunity, or clarifying the meaning or intent of any provision therein.
- B5.2 The Contract Administrator will issue each addendum at least two (2) Business Days prior to the Submission Deadline, or provide at least two (2) Business Days by extending the Submission Deadline.
- B5.2.1 Addenda will be available on the Bid Opportunities page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/>
- B5.2.2 The Bidder is responsible for ensuring that he/she has received all addenda and is advised to check the Materials Management Division website for addenda regularly and shortly before the Submission Deadline, as may be amended by addendum.
- B5.2.3 The Bidder shall acknowledge receipt of each addendum in Paragraph 8 of Form A: Bid. Failure to acknowledge receipt of an addendum may render a Bid non-responsive.

## **B6. SUBSTITUTES**

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

- B6.6.1 The Bidder requesting and obtaining the approval of a substitute shall be entirely responsible for disseminating information regarding the approval to any person or persons he/she wishes to inform.
- B6.7 If the Contract Administrator approves a substitute as an “approved equal”, any Bidder may use the approved equal in place of the specified item.
- B6.8 If the Contract Administrator approves a substitute as an “approved alternative”, any Bidder bidding that approved alternative may base his/her Total Bid Price upon the specified item but may also indicate an alternative price based upon the approved alternative. Such alternatives will be evaluated in accordance with B14.
- B6.9 No later claim by the Contractor for an addition to the Total Bid Price because of any other changes in the Work necessitated by the use of an approved equal or an approved alternative will be considered.
- B6.10 Notwithstanding B6.2 to B6.9, and in accordance with B7.7, deviations inconsistent with the Bid Opportunity document shall be evaluated in accordance with B14.1(a).

## **B7. BID COMPONENTS**

- B7.1 The Bid shall consist of the following components:
- (a) Form A: Bid;
  - (b) Form B: Prices.
- B7.2 Further to B7.1, the Bidder should include the written correspondence from the Contract Administrator approving a substitute in accordance with B6.
- B7.3 All components of the Bid shall be fully completed or provided, and submitted by the Bidder no later than the Submission Deadline, with all required entries made clearly and completely, to constitute a responsive Bid.
- B7.4 The Bid Submission may be submitted by mail, courier or personal delivery, or by facsimile transmission.
- B7.5 If the Bid Submission is submitted by mail, courier or personal delivery, it shall be enclosed and sealed in an envelope clearly marked with the Bid Opportunity number and the Bidder's name and address, and shall be submitted to:
- The City of Winnipeg  
Corporate Finance Department  
Materials Management Division  
185 King Street, Main Floor  
Winnipeg, MB R3B 1J1
- B7.5.1 Samples or other components of the Bid Submission which cannot reasonably be enclosed in the envelope may be packaged separately, but shall be clearly marked with the Bid Opportunity number, the Bidder's name and address, and an indication that the contents are part of the Bidder's Bid Submission.
- B7.6 Bidders are advised not to include any information/literature except as requested in accordance with B7.1.
- B7.7 Bidders are advised that inclusion of terms and conditions inconsistent with the Bid Opportunity document, including the General Conditions, will be evaluated in accordance with B14.1(a).
- B7.8 If the Bid Submission is submitted by facsimile transmission, it shall be submitted to 204 949-1178.
- B7.8.1 The Bidder is advised that the City cannot take responsibility for the availability of the facsimile machine at any time.

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

**B8. BID**

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

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

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

B8.2.1 If a Bid is submitted jointly by two or more persons, each and all such persons shall identify themselves in accordance with B8.2.

B8.3 In Paragraph 3 of Form A: Bid, the Bidder shall identify a contact person who is authorized to represent the Bidder for purposes of the Bid.

B8.4 Paragraph 10 of Form A: Bid shall be signed in accordance with the following requirements:

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

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

B8.4.2 All signatures shall be original.

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

**B9. PRICES**

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

B9.1.1 Notwithstanding C12.2.3(c), prices on Form B: Prices shall include the Manitoba Retail Sales Tax (MRST, also known as PST).

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

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

B9.4 Payments to Non-Resident Contractors are subject to Non-Resident Withholding Tax pursuant to the Income Tax Act (Canada).

## **B10. QUALIFICATION**

### **B10.1 The Bidder shall:**

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

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

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

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

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

### **B10.4 Further to B10.3(c), the Bidder shall, within five (5) Business Days of a request by the Contract Administrator, provide proof satisfactory to the Contract Administrator that the Bidder/Subcontractors has a workplace safety and health program meeting the requirements of The Workplace Safety and Health Act (Manitoba), by providing:**

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

### **B10.5 The Bidder shall submit, within three (3) Business Days of a request by the Contract Administrator, proof satisfactory to the Contract Administrator of the qualifications of the Bidder and of any proposed Subcontractor.**

### **B10.6 The Bidder shall provide, on the request of the Contract Administrator, full access to any of the Bidder's equipment and facilities to confirm, to the Contract Administrator's satisfaction, that the Bidder's equipment and facilities are adequate to perform the Work.**

## **B11. OPENING OF BIDS AND RELEASE OF INFORMATION**

### **B11.1 Bids will not be opened publicly.**

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



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

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

## **B12. IRREVOCABLE BID**

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

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

## **B13. WITHDRAWAL OF BIDS**

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

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

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

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

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

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

## **B14. EVALUATION OF BIDS**

B14.1 Award of the Contract shall be based on the following bid evaluation criteria:

- (a) compliance by the Bidder with the requirements of the Bid Opportunity or acceptable deviation there from (pass/fail);
- (b) qualifications of the Bidder and the Subcontractors, if any, pursuant to B10 (pass/fail);
- (c) Total Bid Price;
- (d) economic analysis of any approved alternative pursuant to B6.

B14.2 Further to B14.1(a), the Award Authority may reject a Bid as being non-responsive if the Bid is incomplete, obscure or conditional, or contains additions, deletions, alterations or other irregularities. The Award Authority may reject all or any part of any Bid, or waive technical requirements or minor informalities or irregularities, if the interests of the City so require.

- B14.3 Further to B14.1(b), the Award Authority shall reject any Bid submitted by a Bidder who does not demonstrate, in his/her Bid or in other information required to be submitted, that he/she is responsible and qualified.
- B14.4 Further to B14.1(c), the Total Bid Price shall be the sum of the quantities multiplied by the unit prices for each item shown on Form B: Prices.
- B14.4.1 If there is any discrepancy between the Total Bid Price written in figures, the Total Bid Price written in words and the sum of the quantities multiplied by the unit prices for each item, the sum of the quantities multiplied by the unit prices for each item shall take precedence.
- B14.4.2 Further to B14.1(a), in the event that a unit price is not provided on Form B: Prices, the City will determine the unit price by dividing the Amount (extended price) by the approximate quantity, for the purposes of evaluation and payment.

## **B15. AWARD OF CONTRACT**

- B15.1 The City will give notice of the award of the Contract or will give notice that no award will be made.
- B15.2 The City will have no obligation to award a Contract to a Bidder, even though one or all of the Bidders are determined to be responsible and qualified, and the Bids are determined to be responsive.
- B15.2.1 Without limiting the generality of B15.2, the City will have no obligation to award a Contract where:
- (a) the prices exceed the available City funds for the Work;
  - (b) the prices are materially in excess of the prices received for similar work in the past;
  - (c) the prices are materially in excess of the City's cost to perform the Work, or a significant portion thereof, with its own forces;
  - (d) only one Bid is received; or
  - (e) in the judgment of the Award Authority, the interests of the City would best be served by not awarding a Contract.
- B15.3 Where an award of Contract is made by the City, the award shall be made to the responsible and qualified Bidder submitting the lowest evaluated responsive Bid, in accordance with B14.
- B15.3.1 Following the award of contract, a Bidder will be provided with information related to the evaluation of his/her Bid upon written request to the Contract Administrator.
- B15.4 Notwithstanding C4, the City will issue a Purchase Order to the successful Bidder in lieu of the execution of a Contract.
- B15.5 The Contract, as defined in C1.1, in its entirety shall be deemed to be incorporated in and to form a part of the Purchase Order notwithstanding that it is not necessarily attached to or accompany said Purchase Order.

## **PART C - GENERAL CONDITIONS**

### **C0. GENERAL CONDITIONS**

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

## **PART D - SUPPLEMENTAL CONDITIONS**

### **GENERAL**

#### **D1. GENERAL CONDITIONS**

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

#### **D2. SCOPE OF WORK**

D2.1 The Work to be done under the Contract shall consist of site development Works at the Memorial Gardens in Brookside and Transcona Cemeteries.

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

- (a) Earthworks including stripping of turf and topsoil, importing clean fill, rough and fine grading;
- (b) Supply and installation of subsurface drainage systems;
- (c) Supply and installation of precast concrete retaining walls, pillars and steps;
- (d) Construction of poured-in-place patterned concrete pathways and
- (e) Construction of concrete memorial foundations, including excavation, base preparation, concrete piles and concrete forming and placing;
- (f) Supply and installation of memory stones;
- (g) Supply and installation of planting beds; and
- (h) Supply and installation of topsoil and sod.

#### **D3. CONTRACT ADMINISTRATOR**

D3.1 The Contract Administrator is David Wagner Associates Inc, represented by:

David Wagner  
Landscape Architect  
4-430 River Avenue  
Winnipeg, Manitoba  
  
Telephone No. (204) 452-2426  
E-Mail Address: dwagner@dwla.ca

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

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

#### **D4. CONTRACTOR'S SUPERVISOR**

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

#### **D5. NOTICES**

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

- D5.2 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the City, except as expressly otherwise required in D5.3, D5.4 or elsewhere in the Contract, shall be sent to the attention of the Contract Administrator at the e-mail address identified in D3.1.
- D5.3 Notwithstanding C21., all notices of appeal to the Chief Administrative Officer shall be sent to the attention of the Chief Financial Officer at the following facsimile number:  
The City of Winnipeg  
Chief Financial Officer  
Facsimile No.: 204 949-1174
- D5.4 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications required to be submitted or returned to the City Solicitor shall be sent to the following facsimile number:  
The City of Winnipeg  
Legal Services Department  
Attn: Director of Legal Services  
Facsimile No.: 204 947-9155

## **SUBMISSIONS**

### **D6. AUTHORITY TO CARRY ON BUSINESS**

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

### **D7. SAFE WORK PLAN**

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

### **D8. INSURANCE**

- D8.1 The Contractor shall provide and maintain the following insurance coverage:
- (a) commercial general liability insurance, in the amount of at least two million dollars (\$2,000,000.00) inclusive, with The City of Winnipeg and David Wagner Associates Inc. added as an additional insured, with a cross-liability clause, such liability policy to also contain contractual liability, unlicensed motor vehicle liability, non-owned automobile liability and products and completed operations, to remain in place at all times during the performance of the Work and throughout the warranty period;
  - (b) if applicable, Automobile Liability Insurance covering all motor vehicles, owned and operated and used or to be used by the Contractor directly or indirectly in the performance of the Work. The Limit of Liability shall not be less than \$2,000,000 inclusive for loss or damage including personal injuries and death resulting from any one accident or occurrence;

- (c) all risks installation floater, carrying adequate limits to cover all machinery, equipment, supplies and/or materials intended to enter into and form part of any installation.

D8.2 Deductibles shall be borne by the Contractor.

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

D8.4 The Contractor shall not cancel, materially alter, or cause each policy to lapse without providing at least thirty (30) Calendar Days prior written notice to the Contract Administrator.

## **D9. PERFORMANCE SECURITY**

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

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

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

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

## **D10. SUBCONTRACTOR LIST**

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

## **SCHEDULE OF WORK**

### **D11. COMMENCEMENT**

D11.1 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.

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

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

- (v) the performance security specified in D9; and
  - (vi) the Subcontractor list specified in D10.
- (b) the Contractor has attended a pre-construction meeting with the Contract Administrator, or the Contract Administrator has waived the requirement for a pre-construction meeting.

D11.3 The Contractor shall commence the Work on the Site within seven (7) Working Days of receipt of the Purchase Order.

D11.4 The City intends to award this Contract by August 31, 2012.

## **D12. SUBSTANTIAL PERFORMANCE**

D12.1 The Contractor shall achieve Substantial Performance within twenty-five (25) consecutive Working Days of the commencement of the Work as specified in D11.

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

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

## **D13. TOTAL PERFORMANCE**

D13.1 The Contractor shall achieve Total Performance within thirty (30) consecutive Working Days of the commencement of the Work as specified in D11.

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

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

## **D14. LIQUIDATED DAMAGES**

D14.1 If the Contractor fails to achieve Total Performance in accordance with the Contract by the day fixed herein for Total Performance, the Contractor shall pay the City five hundred dollars (\$500) per Working Day for each and every Working Day following the day fixed herein for Total Performance during which such failure continues.

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

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

## **D15. SCHEDULED MAINTENANCE**

D15.1 The Contractor shall perform the following scheduled maintenance in the manner and within the time periods required by the Specifications:

(a) Sodding as specified in E21;

D15.2 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**

### **D16. JOB MEETINGS**

D16.1 Regular weekly job meetings will be held at the Site. These meetings shall be attended by a minimum of one representative of the Contract Administrator, one representative of the City and one representative of the Contractor. Each representative shall be a responsible person capable of expressing the position of the Contract Administrator, the City and the Contractor respectively on any matter discussed at the meeting including the Work schedule and the need to make any revisions to the Work schedule. The progress of the Work will be reviewed at each of these meetings.

D16.2 The Contract Administrator reserves the right to cancel any job meeting or call additional job meetings whenever he/she deems it necessary.

### **D17. PRIME CONTRACTOR – THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA)**

D17.1 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).

### **D18. DRAWINGS AND SPECIFICATIONS**

D18.1 The Contractor shall maintain one full size set of Drawings and Specifications on Site at all times during construction.

D18.2 The Contractor shall maintain a set of record drawings on Site marking all Changes in Work to be submitted to the Contract Administrator at Total Performance.

## **MEASUREMENT AND PAYMENT**

### **D19. PAYMENT**

D19.1 Further to C12, the City may at its option pay the Contractor by direct deposit to the Contractor's banking institution.

## **WARRANTY**

### **D20. WARRANTY**

D20.1 Warranty is as stated in C13.



**FORM H1: PERFORMANCE BOND**  
(See D9)

KNOW ALL MEN BY THESE PRESENTS THAT

\_\_\_\_\_ ,  
(hereinafter called the "Principal"), and

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

\_\_\_\_\_ dollars (\$\_\_\_\_\_)

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

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

BID OPPORTUNITY NO. 416-2012

MEMORIAL GARDEN SITE DEVELOPMENT: BROOKSIDE AND TRANSCONA CEMETERIES

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

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

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

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

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

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

\_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_ .

SIGNED AND SEALED  
in the presence of:

\_\_\_\_\_  
(Witness as to Principal if no seal)

\_\_\_\_\_  
(Name of Principal)

Per: \_\_\_\_\_ (Seal)

Per: \_\_\_\_\_

\_\_\_\_\_  
(Name of Surety)

By: \_\_\_\_\_ (Seal)  
(Attorney-in-Fact)

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

\_\_\_\_\_  
(Date)

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

RE: PERFORMANCE SECURITY - BID OPPORTUNITY NO. 416-2012

MEMORIAL GARDEN SITE DEVELOPMENT: BROOKSIDE AND TRANSCONA CEMETERIES

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

\_\_\_\_\_  
(Name of Contractor)

\_\_\_\_\_  
(Address of Contractor)

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

\_\_\_\_\_ Canadian dollars.

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

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

Partial drawings are permitted.

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

\_\_\_\_\_  
(Address)

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

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

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

\_\_\_\_\_  
(Date)

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

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

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

\_\_\_\_\_  
(Name of bank or financial institution)

Per: \_\_\_\_\_  
(Authorized Signing Officer)

Per: \_\_\_\_\_  
(Authorized Signing Officer)



## PART E - SPECIFICATIONS

### GENERAL

#### E1. APPLICABLE SPECIFICATIONS AND DRAWINGS

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

<u>Drawing No.</u>	<u>Drawing Name/Title</u>
B-L1	Brookside Existing Conditions and Site Survey
B-L2	Brookside Development Plan
B-L3	Brookside Layout Plan
B-L4	Brookside Grading Schematic Plan
T-L1	Transcona Existing Conditions and Site Survey
T-L2	Transcona Development Plan
T-L3	Transcona Layout Plan
T-L4	Transcona Grading Schematic Plan
D1	Site Details
D2	Foundation Details

#### E2. SOILS INVESTIGATION REPORT

- E2.1 Further to C3.1, the "Geotechnical Investigation and Foundation Engineering Report for Transcona Cemetery Columbaria" is available upon request from the Contract Administrator.
- E2.2 Further to C3.1, a geotechnical investigation report for Brookside Cemetery is available upon request from the Contract Administrator.

#### E3. EMPLOYEE BEHAVIOR AND SUPERVISION

- E3.1 The Contractor shall provide adequate supervision of its employees and shall ensure that all such employees behave at all times in a manner appropriate to persons in a City facility or vehicles. The Contractor shall, without limitation, ensure that employees:
- Behave in a courteous and polite manner to City staff and other persons in the facility;
  - Drive all vehicles in accordance to the Highway Traffic Act;
  - Do not smoke within the facility; and,
  - Obey all posted safety rules.
- E3.2 The Contractor's staff must always be aware that visitations / funeral services do occur within the Cemetery and appropriate respect must be granted such visitors. Noisy construction activity may, from time to time, necessitate a minor shut down of equipment to accommodate a funeral or visitation. All such shut down time is to be logged by the Contractor and verified by Cemetery staff at the time of the occurrence.

- E3.3 The Contractor's staff will not in any way desecrate the sanctity of the Cemetery through the scattering of litter whatsoever or the playing of music or radios. Appropriate respect will be shown to visitors and monuments / graves at all times. Failure to do so will result in the Contract Administrator asking the offender to remove himself immediately.
- E3.4 The Contractor's staff and equipment must at all times respect the right-of-way of funeral traffic flows within the Cemetery and about the construction Sites. They must promote safe and easy vehicular / pedestrian flow in every circumstance.
- E3.5 The Contractor's equipment shall be limited to existing road allowances only. No equipment shall be allowed to cross or occupy grassed portions of the Cemetery without express written permission of the Contract Administrator.
- E3.6 The Contractor's employees are unable to make use of the existing washroom facilities and must make alternate arrangements.
- E3.7 Water services at the Cemetery Sites are metered and permission from the Contract Administrator will be required prior to connecting to any services. Appropriate fees will be charged to the Contractor for such service.
- E3.8 The Contractor shall tape off the Work area with yellow or orange flagging tape, in order to protect the public so that no one is allowed within the Work area.

#### **E4. SITE ACCESS**

- E4.1 Access to the Sites will be determined at the pre-construction meeting. The access shall be provided and maintained by the Contractor at his own expense and approved by the Contract Administrator.
- E4.2 Further to E3.5, the Contractor shall be restricted to the Site access locations and routes only so that there is a minimum of disturbance to the existing ground surface. Damage to areas beyond the marked routes shall be repaired by and at the expense of the Contractor to the satisfaction of the Contract Administrator.

#### **E5. PERMITS, NOTICES, LICENSES, CERTIFICATES, LAWS AND RULES**

- E5.1 Further to C: 6.12, the Contractor shall give all necessary notices, obtain all necessary permits and pay all fees in order that the Work may be carried out. The Contractor shall submit all plans required by any inspection authority and obtain approval of same before proceeding with the Work, and pay any cost attached to the inspection of such plans.
- E5.2 The Contractor shall comply with all laws, ordinances, rules and regulations that would related to the Work.
- E5.3 All notices, consents, approvals, statements, authorizations, documents or other communications to the City shall be submitted to the Contract Administrator.
- E5.4 All Work shall be performed in compliance with Manitoba Workplace Safety and Health.
- E5.5 All Work shall be performed in compliance with Manitoba Workplace Safety and Health Fall Protection guidelines.
- E5.6 The Contractor and Sub-contractors must be fully aware of all Work involving hazardous materials. All Work must be performed in compliance with the Manitoba Department of Labour Workplace Safety and Health Guidelines and all other applicable codes. The Contractor is responsible for the immediate notification to the Contract Administrator of his/her encountering of suspected hazardous material during their course of Work.

#### **E6. PROTECTION OF SURVEY INFRASTRUCTURE**

- (a) Further to CW1130, Brookside has been cleared for survey monuments.

- (i) Geomatics Job Number is 13960.

## **E7. DAMAGE TO EXISTING STRUCTURES AND PROPERTY**

- E7.1 Further to E3.3, the construction Work will occur in close proximity to graves, monuments and scatter gardens and, as such, all necessary precautions shall be exercised by the Contractor to protect them from any damage or disturbances.
- E7.2 Further to C: 17, all necessary precautions shall be exercised by the Contractor so as not to remove, disturb, or damage any existing trees, shrubs, sod, pavements, streets, roads, boulevards, poles, hydrants, water pipes, gas pipes, electrical wires, cables, conduits, sewers or other existing facilities and equipment at the Sites of the Work. For all damage incurred thereto in the performance of the Work, the Contractor shall upon instructions from and to the satisfaction of the Contract Administrator and the owners thereof, either replace and repair such damage, whichever may be deemed necessary in the opinion of, and acceptable to, the Contract Administrator and the owners thereof. The cost of which shall be borne entirely by the Contractor. The Contractor shall also indemnify and save harmless the City and David Wagner Associates Inc. from all claims made directly or indirectly against it in respect to any such damage.

## **E8. EXISTING SERVICES AND UTILITIES**

- E8.1 No responsibility will be assumed by the Owner for correctness or completeness of the Drawings, when provided, with respect to the existing utilities, pipes or other objects either underground or on the surface; the Owner shall not be liable for the incorrectness and inadequacy thereof. It shall be the responsibility of the Contractor to determine the location of all such utilities, pipes and other objects and to make good any damage done to them.

## **E9. PROTECTION OF EXISTING TREES**

- E9.1 The Contractor shall take the following precautionary steps to prevent damage from construction activities to existing trees within the limits of the construction area:
- (a) Trees identified to be at risk by the Contract Administrator are to be strapped with 25x100x2440 mm wood planks, or other suitable protection as approved by the Contract Administrator. Do not use nails or other fasteners that penetrate the tree trunk. The width and length of strapping may be reduced to suit the tree being protected as approved by the Contract Administrator.
  - (b) Excavation shall be performed in a manner that minimizes damage to the existing root systems. Where possible, excavation shall be carried out such that the edge of the excavation shall be a minimum of 1.5 times the diameter (measured in inches) where 1 inch diameter equals 1 foot measured from the outside edge of the trunk of the tree. Where roots must be cut to facilitate excavation, they shall be pruned neatly at the face of excavation.
  - (c) Operation of equipment within the drip line shall be kept to a minimum required to perform the Work required. Equipment shall not be parked, repaired, refuelled; construction materials shall not be stored, and earth materials shall not be stockpiled within the drip lines of trees. The drip line of a tree shall be considered to be the entire ground surface located directly beneath the tree and radiating out to the tips of its outermost branches. The Contractor shall ensure that the operations do not cause flooding or sediment deposition on areas where trees are located.
  - (d) Repair, replace and maintain tree protection materials during construction until the Project completion.
  - (e) Carefully remove safety fencing and strapping material without harming the trees as soon as the construction and restoration Work is complete.
- E9.2 Obtain approval from the Contract Administrator to excavate within 2.0 M of a tree.



- E9.3 Excavate in a manner to minimize damage to the tree root systems. Keep exposed roots in excavations and trenches moist or shaded. If stockpiling of excavated soil material is required, stockpile in areas away from the tree roots if possible.
- E9.4 Prune exposed roots with equipment such as trencher, chain saws, root cutters or other methods acceptable to the Contract Administrator in a manner that will leave a neat, clean root end.
- E9.5 Take precautions to ensure tree limbs overhanging the Work area are not damaged by construction equipment. Contact the Forestry Branch for consultation or pruning of overhanging or damaged limbs and branches and other unanticipated problems with trees during the construction of the Works.
- E9.6 All damage or pruning required to existing trees caused by the Contractor's activities shall be repaired to the requirements and satisfaction of the Contract Administrator and the Forestry Branch. Damages must be repaired by an Individual with a Manitoba Arborist Licence or by the Forestry Branch.
- E9.7 No separate measurement or payment will be made for the protection of trees.

#### **E10. TEMPORARY UTILITIES**

- E10.1 Further to C: 6.12, the Contractor shall make his own arrangements in connection with the temporary use of lighting, power, gas, sewer, water or other utilities, and pay all costs in connection therewith.
- E10.2 All necessary permits, fees and other like expenses as well as the cost of temporary connections to existing facilities shall be arranged and paid for by the Contractor.

#### **E11. SITE ENCLOSURES**

- E11.1 Further to E3.8, temporary Site enclosures, if determined necessary at the pre-construction meeting, shall be erected and maintained as required for the duration of the construction period.
- E11.2 Site enclosures shall be considered incidental to the Contract Work.

#### **E12. LAYOUT**

- E12.1 The Contractor is responsible for the layout of all Work.
- E12.2 The Contract Administrator shall be advised of the staking of the layout at least twenty-four (24) hours in advance in order that the layout may be inspected and adjusted as required prior to construction.

### **SITE WORKS**

#### **E13. REMOVALS**

- E13.1 General Description
- (a) This specification shall cover:
    - (i) The removal of precast concrete curbs from the base of the Columbaria.
    - (ii) The removal of the existing bench pad at Transcona.
- E13.2 Work by Others
- (a) The two existing horizontal Columbaria at Transcona Cemetery will be raised in elevation by the Cemetery staff prior to these Works to accommodate proposed Site grades.
  - (b) Removals of site furnishings shall be by the Cemetery staff.

- (i) The removal and salvage of benches for relocation within the Sites.
- (ii) The removal and salvage of signage for relocation within the Sites.
- (c) The Contractor is to advise the Contract Administrator of the expected start date at least ten (10) Working Days in advance so that the removals can be done.

**E13.3 Excavation and Removals**

- (a) The precast curbs and bench pad shall be removed and disposed of off Site in a safe and legal manner.

**E13.4 Basis of Payment**

- (a) Payment for Work specified under this section shall be considered incidental to the other Works.

**E14. EXCAVATION, EARTHWORK AND GRADING**

**E14.1 General Description**

- (a) Further to CW 3170, this specification shall cover the Site grading, including:
  - (i) The removal of existing turf for the purposes of rough grading.
  - (ii) The cut and fill required to achieve the rough grades and drainage patterns as shown on the Drawings.

**E14.2 Related Works**

- (a) Sub-surface drainage system
- (b) The two existing horizontal Columbaria at Transcona Cemetery will be raised in elevation by the Cemetery staff prior to these Works to accommodate proposed Site grades.

**E14.3 Methods**

- (a) The existing turf shall be stripped from the construction area and removed to a location within the Cemetery as advised by the Contract Administrator.
- (b) The construction area is to be excavated or filled to achieve rough grade.
  - (i) Rough grade is to be to levels, profiles and contours allowing for surface treatment as indicated on Drawings and as specified herein.
- (c) Wherever the proposed Site grading is to meet existing Site grades, the grades are to match and positive Site drainage is to be maintained.
- (d) In fill areas, the Contractor shall scarify the existing ground to a minimum depth of 150mm prior to the placement of any fill.
- (e) Compaction shall include the use of sheep's foot or other suitable compaction equipment as approved by the Contract Administrator to achieve a minimum compaction of 95% SPD.
- (f) All surplus materials shall be disposed of to a location within the Cemetery as advised by the Contract Administrator.
- (g) The rough grading shall be completed and reviewed by the Contract Administrator prior to installation of other Works.

**E14.4 Basis of Payment**

- (a) Payment for Work specified under this section shall be considered incidental to the other Works.

**E15. SUB-SURFACE DRAINAGE**

**E15.1 General Description**

- (a) This specification shall cover the supply and installation of a geocomposite prefabricated drainage system as shown on the Drawings.

- (i) The drainage system shall be in accordance with these Specifications and in reasonably close conformity with the locations and dimensions as shown on the plans or as specified by the Contract Administrator. The quantity 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. Such variations in quantity will not be considered as alterations in the details of construction or a change in the character of the Work.

**E15.2 Materials**

**(a) Multi-Flow Drain System**

- (i) Drainage pipe shall be Multi-Flow or approved substitute in accordance with B6. Size shall be 150mm as shown on Drawings. All fittings shall be sized to fit and approved for use with Multi-Flow or approved substitute by the manufacturer.
- (ii) The drain conduit shall be of flexible, prefabricated, rounded rectangular shaped, composite product. The drain conduit shall be wrapped with a non-woven geotextile and shall be a non-woven needle-punched construction and consist of long-chain polymeric fibres composed of polypropylene, polyethylene or polyamide. The fibres shall be oriented into a multi-directional stable network whereby they retain their positions relative with each other and allow the passage of water as specified. The fabric shall be free of any chemical treatment or coating, which reduces permeability and shall be inert to chemicals commonly found in soil. The geotextile shall conform to the following minimum average roll values:

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

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

Thickness, inches	ASTM D-1777	1.0
Flow rate, gpm/ft <sup>***</sup>	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.

- (b) Fittings
  - (i) The fittings used with the drainage system shall be of a snap together design. In no case shall any product be joined without the use of the manufacturer's connector designed specifically for the purpose.
- (c) Pipe
  - (i) Pipe for drain outlets shall be 75mm (3") either PVC pipe meeting the requirements of ASTM D-2729 or ASTM F-949, or high density polyethylene pipe meeting the requirements of AASHTO M252.2.4.
  - (ii) A rodent screen made of 7.6 mm by 7.6 mm square opening size, 1.6 mm gauge, stainless steel or galvanized welded mesh shall be installed in each outlet line. When using galvanized welded wire mesh, the rodent screen shall be galvanized after it has been formed to the shape and dimensions required.
- (d) Emitter
  - (i) Emitter shall be 75mm (3") polyolefin pop-up drainage emitter with elbow joint, product - NDS#620 or approved substitute in accordance with B6. Multi-Flow shall be connected to the emitter using manufacturer's adaptor for connecting drainage pipe to 75mm or 100mm round orifice on appropriate hardware. Place two screws onto emitter to secure cap.
  - (ii) Contact for emitter:  
Consolidated Turf  
986 Powell Avenue  
Winnipeg, Manitoba  
R3H 0H6  
Tel: 1-204-633-7276  
Fax: 1-204-633-3447
- (e) Granular Backfill
  - (i) Backfill for the trenches shall be 6mm clean washed pea stone.
  - (ii) Geotextile Fabric to be non-woven and to CW 3130.

### E15.3 Methods

- (a) The layout of the sub-drain and proposed elevations are to be marked on Site and reviewed by the Contract Administrator.
- (b) Trenches are to be excavated with a trenching machine or by hand. Locations, where the trench crosses existing utilities, irrigation pipes and all other sub-surface pipes or fixtures, are to be excavated by hand. The amount of trench excavated at any time shall not exceed the amount of drain that can be set and backfilled completely prior to the end of that Working Day. Trench width shall be as specified on the Drawings.
- (c) The bottom surface of the trench is to be free of loose particles and is to have the slope shown on the Drawings. Over excavation in the bottom of the trench shall be backfilled to the proper grade with the excavated material or sand prior to the placement of the drain. Where sand or excavated material is used to fill the trench to the proper elevation that material shall be compacted to 95% of standard proctor density using appropriate means. Where the trench is to pass through an area of existing turf, the excavated material is not to remain on the grassed surface for a period of longer than 24 hours. All excavated material shall be removed from the Site daily and disposed of legally.
- (d) Trenches are to be inspected by the Contract Administrator prior to backfilling.
- (e) Multi-Flow drain pipe is to be placed in the trench and the trench is to be backfilled according to detail Drawings. Backfill is to be lightly tamped into place to eliminate any voids.
- (f) Fittings for the drain shall be installed in accordance with manufacturer's recommendations.

- (g) Contractor is to protect the subdrain from excessive weight during the duration of construction. Any damaged drain system shall be replaced or repaired by splicing in an undamaged section of like material at the Contractor's expense.
- (h) The Contractor shall be responsible for restoration of any surfaces damaged during the Work under this section.

#### E15.4 Basis of Payment

- (a) Payment for Work specified under this section shall be paid for at the Unit Price, measured on a linear metre, for the Items of Work listed below, which price shall include all costs of material supply, piping, fittings, trenching, proper material installation, backfill, Site restoration and all other items incidental to the Work.
- (b) Items of Work
  - (i) Multi-Flow Drain System

### E16. CONCRETE WORK

#### E16.1 General Description

- (a) Further to CW 3110, CW 2160, CW 3310 and CW 3325, this specification shall cover the supply and installation of patterned / stamped concrete walkways and various memorial foundations as shown on the Drawings.
  - (i) New memorials and columbaria shall be supplied and installed by the Owner as noted on the Drawings and are not in this Contract.
- (b) This specification shall cover the supply and installation of granular infill strips between the various memorials and the new concrete walkways.
  - (i) The granular infill shall be incidental to the various concrete Works.

#### E16.2 Materials and Methods

- (a) Granular base CW 3110.
- (b) Patterned Concrete Paving
  - (i) CW 3310, Type 1 Concrete Mix
  - (ii) Concrete colour shall be "Silver Grey" colour with a charcoal release. Colour to be finalized at a later date. Colour shall be integral throughout paving.
  - (iii) Pattern shall be a seamless "Slate" or approved alternative.
  - (iv) Contractor is to supply a colour and pattern concrete sample, minimum one square metre in size, to the satisfaction of the Contract Administrator, prior to installation.
  - (v) Install 150mm thick concrete paving on 150mm depth of compacted granular base.
  - (vi) Reinforce concrete with 10M epoxy coated rebar at 460mm O.C. both ways, minimum 50mm coverage.
  - (vii) All outside edges are to be trowel finished with a 19mm radius.
  - (viii) Tooled and sawcut control joints to be approved by Contract Administrator prior to implementation.
  - (ix) Sealer shall be Type 1, non-yellowing, solvent based c/w 25% solids. Provide two (2) coats of sealer. The first coat after installation and power washing. The second coat at 28 days after curing of the concrete. Power wash prior to applying the second coat.
- (c) Foundations
  - (i) Piles: CW 2160 and as per Details.
  - (ii) Foundation Slabs: CW 3310 and as per Details.
  - (iii) All tops are to have a light broom finish. All outside edges are to be trowel finished with a 19mm radius.

- (d) Granular Infill
  - (i) 38mm clean Crushed Black Granite.

#### E16.3 Basis of Payment

- (a) Payment for Work specified under this section shall be paid for at the Unit Price for the Items of Work listed below, which price shall include all costs of supply and installation of granular base, piling, concrete, reinforcing, sealers and control joints. All walkways shall be measured by the square metre. Concrete foundations for the various memorials shall be measured on a per unit basis. Granular infill strips and site restoration shall be considered incidental to the Work.
- (b) Items of Work
  - (i) Concrete Pathways
  - (ii) Foundation - Round Columbarium
  - (iii) Foundation - Square Columbarium
  - (iv) Foundation - Estate Columbarium
  - (v) Foundation – Pedestal Niche
  - (vi) Ossuary Pit

### **E17. RETAINING WALLS, PILLARS AND STEPS**

#### E17.1 General Description

- (a) This specification shall cover the supply and installation of precast concrete block retaining walls, pillars and steps at the Brookside Site.

#### E17.2 Materials

- (a) Barkman Belvedere Collection
  - (i) Wall blocks, corner blocks and coping blocks (caps).
  - (ii) Dimensional steps, size 72" x 30" x 7" riser.
  - (iii) Colour: Fon du Lac
- (b) Levelling Pad Material: Granular A Base
- (c) Drainage material: natural gravel or crushed stone to CW 3130.
- (d) Geotextile: non-woven type to CW 3130.
- (e) Concrete adhesive: LePage PL landscape block adhesive or approved equal.

#### E17.3 Methods

- (a) Site preparation and installation shall be as per the Drawings and manufacturer's specifications.
- (b) Each row of block and coping shall be glued down with concrete adhesive.

#### E17.4 Basis of Payment

- (a) Payment for Work specified under this section shall be paid for at the Lump Sum for the Items of Work listed below, which price shall include all costs of material supply, proper material installation, Site restoration and all other items incidental to the Work.
- (b) Items of Work
  - (i) Belvedere Steps, Walls and Pillars

### **E18. MEMORY STONES**

#### E18.1 General Description

- (a) This specification shall cover the supply and installation of memory stones.

## E18.2 Materials

- (a) Local boulders chosen to conform to the specified size and having one relatively smooth, flat face suitable to house a bronze plaque (by others).
- (b) Boulders of various type and colour are desired.
- (c) The Contractor shall supply, to the Site, more boulders than specified so that the required stones may be chosen by the Contract Administrator. Excess boulders shall be removed from the Site.

## E18.3 Methods

- (a) The boulders are to be installed as shown on the Drawings.
- (b) The flat face is to face the walkway.

## E18.4 Basis of Payment

- (a) Payment for Work specified under this section shall be paid for at the Unit Price for the Items of Work listed below, which price shall include all costs of material supply, proper material installation, Site restoration and all other items incidental to the Work.
- (b) Items of Work
  - (i) Memory Stones

## E19. PLANTING BED PREPARATION

### E19.1 General Description

- (a) This specification shall cover the preparation of planting beds.

### E19.2 Materials

- (a) Topsoil: Three Way Mix as per CW 3540.
- (b) Soil is to be inspected by the Contract Administrator prior to placement.

### E19.3 Methods

- (a) Planting bed areas are to be excavated to 450mm depth below the finished grades shown on the Drawings. All excavated materials are to be removed to a location within the Cemetery as advised by the Contract Administrator.
- (b) The planting soil is to be spread after the Contract Administrator has reviewed the subgrade.
- (c) The planting soil is to be spread with adequate moisture in uniform layers over unfrozen subgrade.
- (d) Soil is to be placed to a compacted depth of 450mm.
- (e) The planting beds are to be fine graded to the elevations shown on the Drawings, eliminating any rough spots and ensuring positive drainage.
- (f) The bed is to be raked leaving a smooth, uniform surface, firm against deep foot printing with a fine loose texture.
- (g) A crisp spade edge shall be provided along all turf or sodded edges. Turf adjacent to the planting beds shall be cut in straight lines or smoothly curved arcs as shown on the Drawings. A 100mm deep vertical channel shall be cut sloping into the bed around all sides.

### E19.4 Basis of Payment

- (a) Payment for Work specified under this section shall be paid for at the Unit Price, measured on a square metre basis, for the Items of Work listed below, which price shall include all costs of earthworks and site grading, material supply, proper material installation, and all other items incidental to the Work.

- (b) Items of Work
  - (i) Planting Bed Preparation

## **E20. MAINTENANCE STATION**

### **E20.1 General Description**

- (a) This specification shall cover the supply and installation of maintenance stations.

### **E20.2 Materials**

- (a) Post
  - (i) 150 x 150mm tight knot cedar post, top to be trimmed as shown on the Drawings.
  - (ii) Wood shall be smooth (not rough sawn), free of rough areas, no wane, bark, checking or splitting permitted.
- (b) Granular for Post Holes
  - (i) 38mm Ø crushed limestone.
- (c) Granular for Granular Pad
  - (i) 38mm crushed clean black granite.
- (d) Waste Receptacle
  - (i) Metal Stat Type, as per SCD119, Product #52501062, manufactured by the City of Winnipeg.
  - (ii) Colour: black
  - (iii) The contact is:
    - Aaron Lennon
    - Supervisor of Central Repair/Manufacturing Facility
    - City of Winnipeg
    - Fax No.: (204) 783-1248
    - Email: [alennon@winnipeg.ca](mailto:alennon@winnipeg.ca)
- (e) Water Spigot as per Drawings.
- (f) Hook as per Drawings. Colour: black.

### **E20.3 Methods**

- (a) Post is to be set true to vertical and as shown on the Drawings.
- (b) Waste receptacle: SCD-119.
- (c) Water hook-up to the water line to be as shown on the Drawings. The water line and hook-up to the Cemetery water system shall be done by Cemetery staff.
- (d) The granular pad shall be as shown on the Drawings. The edges are to be clean cut in rectangular shape.

### **E20.4 Basis of Payment**

- (a) Payment for Work specified under this section shall be paid for at the Unit Price for the Items of Work listed below, which price shall include all costs of material supply, piping, fittings, proper material installation, Site restoration and all other items incidental to the Work.
- (b) Items of Work
  - (i) Maintenance Station

## **E21. TURF RENOVATION**

### **E21.1 General Description**

- (a) This specification shall cover the site preparation and the supply and installation of topsoil and sod for the renovation of turf.



#### E21.2 Materials and Methods

- (a) Topsoil: As per CW 3540.
- (b) Sodding
  - (i) As per CW 3510.
  - (ii) Sod shall be mineral base.
- (c) No area for Turf Renovation shall be less than the width of a full piece of sod.
- (d) Following review of rough grading and compaction, the Work area shall be fine graded to provide a maximum deviation of 25mm in 10 metres from the design grade with no low areas to hold water. The finished surface of all disturbed areas shall be dragged smooth in such a manner that there are no loose soil particles greater than 25mm in maximum dimensions.
- (e) Where the new sod meets existing turf, the existing turf is to be cut with a sod cutter to create neat and even edges. The sod is to meet the existing turf in a level manner after rolling. Seams shall be topdressed and seeded.
- (f) Only those areas shown on the Drawings as Turf Renovation shall be paid for under this section. All other Site restoration shall be considered incidental to other Works.

#### E21.3 Maintenance Period

- (a) The Contractor shall maintain the sod for 30 Calendar Days after the completion of the installation or until such a time as the turf is established in accordance with CW 3510.

#### E21.4 Basis of Payment

- (a) Payment for Work specified under this section shall be paid for at the Unit Price, measured on a square metre basis, for the Items of Work listed below, which price shall include all costs of removals and disposal, earthworks and site grading, material supply, proper material installation, maintenance and all other items incidental to the Work.
- (b) Items of Work
  - (i) Turf Renovation