



THE CITY OF WINNIPEG

BID OPPORTUNITY

BID OPPORTUNITY NO. 195-2017

**VIMY RIDGE MEMORIAL PARK – PHASE 1 : VIMY RIDGE MEMORIAL AND
CANORA STREET ENTRANCE**

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PART B - BIDDING PROCEDURES

B1. CONTRACT TITLE

B1.1 Vimy Ridge Memorial Park – Phase 1 : Vimy Ridge Memorial and Canora Street Entrance

B2. SUBMISSION DEADLINE

B2.1 The Submission Deadline is 4:00 p.m. Winnipeg time, March 28, 2017.

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, a Site meeting will be held at 1:00 pm on March 15, 2017 to provide Bidders access to the Site. Attendance is strongly recommended.

B3.1.1 The electrical Sub-contractor should be in attendance as information about the existing electrical system will be provided at that time.

B3.2 The Bidder shall not be entitled to rely on any information or interpretation received at the Site Meeting unless that information or interpretation is the Bidder's direct observation, or is provided by the Contract Administrator in writing.

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 Plant, 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, to the Bidder who requested approval of the substitute.
- B7.6.1 The Contract Administrator will issue an Addendum, disclosing the approved materials, equipment, methods and products to all potential Bidders. The Bidder requesting and obtaining the approval of a substitute shall be 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 B16.
- 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.
- 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 B16.1(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.

B10.1.1 Notwithstanding C12.2.3(c), prices on Form B: Prices shall not include the Manitoba Retail Sales Tax (MRST, also known as PST), which shall be extra where applicable.

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. DISCLOSURE

B11.1 Various Persons provided information or services with respect to this Work. In the City's opinion, this relationship or association does not create a conflict of interest because of this full disclosure. Where applicable, additional material available as a result of contact with these Persons is listed below.

B11.2 The Persons are:

- (a) None

B11.3 Additional Material:

- (a) None

B12. QUALIFICATION

B12.1 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.

B12.2 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>

B12.3 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).

B12.4 Further to B12.3(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 copy of their valid Manitoba COR certificate and Letter of Good Standing (or Manitoba equivalency) as issued 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 copy of their valid Manitoba SECOR™ certificate and Letter of Good Standing (or Manitoba equivalency) as issued under the Small Employer Certificate of Recognition Program (SECOR™) administered by the Construction Safety Association of Manitoba or by the Manitoba Heavy Construction Association's WORKSAFELY™ COR™ Program; or

- (c) 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/>.)

B12.5 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.

B12.6 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.

B13. OPENING OF BIDS AND RELEASE OF INFORMATION

B13.1 Bids will not be opened publicly.

B13.2 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>

B13.3 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/>

B13.4 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.

B14. IRREVOCABLE BID

B14.1 The Bid(s) submitted by the Bidder shall be irrevocable for the time period specified in Paragraph 9 of Form A: Bid.

B14.2 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.

B15. WITHDRAWAL OF BIDS

B15.1 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.

B15.1.1 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.

B15.1.2 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.

B15.1.3 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 B15.1.3(b), declare the Bid withdrawn.

B15.2 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 B14.2 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.

B16. EVALUATION OF BIDS

B16.1 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 B12 (pass/fail);
- (c) Total Bid Price;
- (d) economic analysis of any approved alternative pursuant to B7.

B16.2 Further to B16.1(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.

B16.3 Further to B16.1(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.

B16.4 Further to B16.1(c), the Total Bid Price shall be the sum of the quantities multiplied by the unit prices for each item shown on Form B: Prices adjusted, if necessary, as follows:

- (a) if the lowest evaluated responsive Bid submitted by a responsible and qualified Bidder is within the budgetary provision for the Work, no adjustment will be made to the Total Bid Price; or
- (b) if the lowest evaluated responsive Bid submitted by a responsible and qualified Bidder exceeds the budgetary provision for the Work, the Total Bid Prices of all responsive Bids submitted by responsible and qualified Bidders will be adjusted by progressively deducting item(s) 22 and 16 in the order listed, until a Total Bid Price within the budgetary provision is achieved.

B16.4.1 Further to B16.1(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.

B17. AWARD OF CONTRACT

B17.1 The City will give notice of the award of the Contract or will give notice that no award will be made.

B17.2 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.

B17.2.1 Without limiting the generality of B17.2, 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.

B17.3 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 B16.

B17.3.1 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.

B17.4 Notwithstanding C4, the City may issue a Purchase Order to the successful Bidder in lieu of the execution of a Contract.

B17.5 The Contract, as defined in C1.1, in its entirety shall be deemed to be incorporated in and to form a part of the Purchase Order notwithstanding that it is not necessarily attached to or accompany said Purchase Order.

PART C - GENERAL CONDITIONS

C0. GENERAL CONDITIONS

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

PART D - SUPPLEMENTAL CONDITIONS

GENERAL

D1. GENERAL CONDITIONS

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

D2. SCOPE OF WORK

D2.1 The Work to be done under the Contract shall consist of the redevelopment of the Canora Street entrance to Vimy Ridge Memorial Park and the relocation of two existing war memorials.

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

- (a) Removals of asphalt paving, unit paving, site furniture, lights, planting beds and trees;
- (b) Relocation of two war memorials, including the supply and installation of new bases;
- (c) Site grading including the supply and installation of landscape catch pits;
- (d) Supply and Installation of a Tyndall stone faced concrete plinth;
- (e) Supply and installation of concrete piles, paving and curbs;
- (f) Supply and installation of unit paving;
- (g) Supply and installation of asphalt paving;
- (h) Supply and installation of stone faced pillars and walls;
- (i) Supply and installation of park lights including banner arms and complete electrical engineering and servicing;
- (j) Supply and installation of soft landscaping including topsoil, sod, and planting beds.

D3. CONTRACT ADMINISTRATOR

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

David Wagner
Landscape Architect

Telephone No. 204 452-2426
Email 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 B8.

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 email address 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
- D6.1 Bids Submissions must not be submitted to the above facsimile numbers. Bids must be submitted in accordance with B8.**

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 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.
- 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 the Site but in no event later than the date specified in C4.1 for the return of the executed Contract.

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

- (a) a critical path method (C.P.M.) schedule for the Work;
 - (b) a Gantt chart for the Work based on the C.P.M. schedule;
- all acceptable to the Contract Administrator.

D12.3 Further to D12.2(a), the C.P.M. schedule shall clearly identify the start and completion dates of all of the following activities/tasks making up the Work as well as showing those activities/tasks on the critical path:

- (a) Commencement date, Substantial Performance and Total Performance.
- (b) The ordering and delivery dates of materials such as Tyndall stone, lights, and any other items which may have critical timelines.
- (c) The relocation of the monuments.

D12.4 Further to D12.2(b), the Gantt chart shall show the time on a weekly basis, required to carry out the Work of each trade, or specification division. The time shall be on the horizontal axis, and the type of trade shall be on the vertical axis.

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;
 - (vi) the Subcontractor list specified in D11; and
 - (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 commence the Work on the Site within seven (7) Working Days of receipt of the Purchase Order.

D13.4 The City intends to award this Contract by May 1, 2017.

D13.4.1 If the actual date of award is later than the intended date, the dates specified for Substantial Performance, and Total Performance will be adjusted by the difference between the aforementioned intended and actual dates.

D14. SUBSTANTIAL PERFORMANCE

D14.1 The Contractor shall achieve Substantial Performance by August 4, 2017.

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 reinspected.

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 by August 11, 2017.

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 reinspected.

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);

(b) Total Performance - five hundred dollars (\$500).

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) Sod maintenance as specified in E27.

- 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 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.
- 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. DRAWINGS AND SPECIFICATIONS

- D19.1 The Contractor shall maintain one full size set of Drawings and Specifications on Site at all times during construction. This shall include the shop drawings, complete construction details, change orders and any other information pertinent to the construction of the project. The drawings shall be printed in colour if colour is used to convey information.
- D19.2 The Contractor shall maintain a set of Record Drawings on Site marking all Changes in Work. The information shall be transferred to an autocad drawing and submitted to the Contract Administrator at Total Performance. There shall be no separate payment for Record Drawings.

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

- D20.1 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).

D21. THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA) – QUALIFICATIONS

- D21.1 Further to B12.4, 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 B12.4.

MEASUREMENT AND PAYMENT

D22. PAYMENT

- D22.1 Further to C12, the City may at its option pay the Contractor by direct deposit to the Contractor's banking institution.

WARRANTY

D23. WARRANTY

- D23.1 Warranty is as stated in C13.

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. 195-2017

**VIMY RIDGE MEMORIAL PARK – PHASE 1 : VIMY RIDGE MEMORIAL AND
CANORA STREET ENTRANCE**

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. 195-2017

**VIMY RIDGE MEMORIAL PARK – PHASE 1 : VIMY RIDGE MEMORIAL AND
CANORA STREET ENTRANCE**

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>
L-SS	Site Survey
L1	Location Plan and Master Plan
L2	Removals Plan and Tree Protection Plan
L3	Development Plan
L4	Layout Plan
L5	Grading Plan
L6	Sections and Details
L7	Vimy Ridge Monument Details
L8	'The Pimple' and Mynarski Monument Details
L9	Electrical Plan and Details

GENERAL REQUIREMENTS

E2. PERMITS, NOTICES, LICENSES, CERTIFICATES, LAWS AND RULES

- E2.1 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.
- E2.2 The Contractor shall comply with all laws, ordinances, rules and regulations that would relate to the Work.
- E2.3 All notices, consents, approvals, statements, authorizations, documents or other communications to the City shall be submitted to the Contract Administrator.
- E2.4 All Work shall be performed in compliance with Manitoba Workplace Safety and Health.
- E2.5 All Work shall be performed in compliance with Manitoba Workplace Safety and Health Fall Protection guidelines.
- E2.6 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.

E3. PROTECTION OF SURVEY INFRASTRUCTURE

E3.1 Further to CW1130, Section 3.14, the Contractor is responsible for having the Site cleared for survey monuments.

- (i) Geomatics Branch is to be contacted at least 5 Working Days in advance of construction, at 204-918-1360, to schedule an appointment to provide the monument protection services required.

E4. DAMAGE TO EXISTING STRUCTURES AND PROPERTY

E4.1 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, 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.

E5. EXISTING SERVICES AND UTILITIES

E5.1 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.

E6. TEMPORARY UTILITIES

E6.1 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.

E6.2 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.

E7. SITE ACCESS

E7.1 Contractors are to work only within the Construction Boundary as shown on the Drawings or as directed by the Contract Administrator.

E7.2 Access to the Site will be determined at the pre-construction meeting. The access area(s) shall be maintained and restored by the Contractor at his own expense and approved by the Contract Administrator.

E7.3 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.

E8. SITE ENCLOSURES

- E8.1 Temporary Site enclosures, as determined at the pre-construction meeting, shall be erected and maintained as required for the duration of the construction period.
- E8.2 Refer to the Tree Protection Plan for other requirements.
- E8.3 Site enclosures shall be considered incidental to Mobilization and Tree Protection.

E9. STAKES AND MARKS

- E9.1 The Contractor is responsible for the identification and staking of the property lines and the establishment of the layout of all Work. Key grade stakes shall be identified at the pre-construction meeting.
- E9.2 The Contract Administrator shall be advised of the staking of the layout and site grades at least twenty-four (24) hours in advance in order that the layout and site grades may be inspected and adjusted as required prior to construction.
- E9.3 The Contractor is responsible for the establishment and maintenance of the fixed bench mark, layout and grade stakes throughout the construction process.
- E9.4 The Contractor shall determine the meaning and correctness of the stakes and marks before starting the Work. If an error is suspected in the Drawings, Specifications or directions of the Contract Administrator, Work will be discontinued until the error is rectified. No claim will be made due to alleged inaccuracies in the stakes and marks and for delay in the Work to rectify an error.

E10. SAMPLES

- E10.1 Samples called for in the Specification or requested by the Contract Administrator shall be submitted within fifteen (15) Calendar Days of request.
 - (a) Identify samples with name of project, date, name of Contractor, name of supplier/manufacturer and use of material represented by sample.
 - (b) Do not proceed with delivery of materials until samples are reviewed by the Contract Administrator. No deviation is permitted after approval of sample.
 - (c) Approval of samples does not imply acceptance of finished Work.
 - (d) Where required, submit a range of samples, as may be reasonable.

E11. TEST REPORTS

- E11.1 Where required by the Contract Administrator, the Contractor shall provide certified copies of tests upon materials to be used in construction of the Work, indicating that the materials comply with the Specifications.
- E11.2 Submit test results to the Contract Administrator within ten (10) Calendar Days of request.
- E11.3 All testing costs shall be the responsibility of the Contractor.

E12. SITE RESTORATION

- E12.1 Total Performance of the Work shall not be attained until the Contractor has cleaned up the Site and has removed all tools, equipment, waste, debris and surplus foundation earth to the satisfaction of the Contract Administrator. Unless otherwise specified, the Contractor shall restore all areas of the Site beyond the established limit of Work, which have been disturbed by the Contractor's operations to as good as or better than the original condition to the satisfaction of the Contract Administrator. The Contractor shall pay all costs associated with this Work.

SITE WORK PREPARATION

E13. PROTECTION OF EXISTING TREES

- E13.1 Further to the Tree Protection Plan, 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 at 6 inches above grade. Where roots must be cut to facilitate excavation, they shall be pruned neatly at the face of excavation.
 - (c) Equipment shall not be operated within the drip line without written permission from the Contract Administrator. 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.
- E13.2 Obtain approval from the Contract Administrator to excavate within 2.0 M of a tree.
- (a) Certain trees, identified to be at risk by the Contract Administrator, shall require a tree protection strategy to be determined in consultation with the Contract Administrator.
- E13.3 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. Contractor shall pay for cost of any damage, repairs or replacement value if tree is compromised.
- E13.4 Basis of Payment
- (a) Payment for Work specified under this section shall be for the protection of trees. It shall be paid for at the Lump Sum Price, which price shall include all costs of fencing and other protective measures.
 - (b) Items of Work:
 - (i) Mobilization and Tree Protection

E14. SITE PREPARATION

E14.1 General Description

- (a) Site Preparation shall include but not be limited to:
 - (i) The removal of trees as scheduled for removal and shown on the Drawings;
 - (ii) The removal of asphalt and unit paving, and any associated base materials;
 - (iii) The removal of site furnishings;

- (iv) The removal of a light and associated services;
 - (v) The removal of planting beds;
 - (vi) The preparation of sub-grade for the installation of new base materials for pavements and other structures; and,
 - (vii) Rough site grading.
- (b) The relocation of the existing monuments is specified in E18.
- (c) It shall also cover the removal of turf and any other demolition and removals necessary to construct the project, which may be considered incidental to other items of Work.

E14.2 Removals

- (a) Further to CW 3010, the trees are to be marked for removal in consultation with the Contract Administrator and removed.
- (b) Removal of Asphalt and Unit Paving and Associated Base Materials
- (i) As per CW 3110.
 - (ii) Asphalt shall be sawcut to separate asphalt to remain from asphalt to be removed.
 - (iii) Asphalt is to be removed from areas designated on the Drawings, taking care to preserve adjacent paving surfaces that are to remain.
 - (iv) The unit paving is to be removed from area designated on the Drawings, stacked on a pallet and delivered to the City.
 - (v) Base materials are to be removed as well as rubble, stones, silt, rubbish and any surplus material as required to prepare the subgrade to receive new surfaces as shown on the Drawings.
- (c) Site furnishings to be removed are shown on the Drawings.
- (d) Removal of Light
- (i) Further to E21, the light, that is to be removed, is to be disconnected and removed. The fixture and pole are to be turned over to the City for possible re-use.
 - (ii) The pile is to be removed to a minimum of 300mm below the level of the new base materials that will be installed above it.
 - (iii) Refer to E21, for the abandonment of the electrical cable.
- (e) Removal of Water Line
- (i) The existing irrigation water line shall be capped off by others, outside of the Construction Boundary. Any abandoned lines or valves within the Construction Boundary are to be removed.
- (f) Planting beds to be removed are shown on the Drawings.
- (i) The Contractor, in consultation with the Contract Administrator, may choose to stockpile the planting bed soil on Site for re-use.
 - (ii) The planting beds may be graded to achieve the proposed Site grades and sodded over.
- (g) All materials, to be demolished and removed, are to be removed from the Site and disposed of in a safe and legal manner. Excavated materials shall be recycled or legally disposed of off-site.
- (h) Any holes left by the removal of posts or foundations shall be filled with compacted clean clay fill to meet the adjacent grades and be restored to match surrounding conditions to the satisfaction of the Contract Administrator.

E14.3 Rough Grading as per E15.

E14.4 Site Restoration

- (a) Any site restoration required due to removals, and not shown on the Drawings as areas for new development, shall be considered incidental to the removal Work.

E14.5 Basis of Payment

- (a) Payment for Work specified under this section shall be for complete site preparation. It shall be paid for at the Unit Price, measured on a square metre basis, which price shall include all costs of clearing, grubbing, removals and proper disposal, rough grading, and any associated Site restoration.
- (b) Items of Work:
 - (i) Site Preparation

E15. SITE GRADING

E15.1 General Description

- (a) Further to CW 3170, this specification shall cover the Site grading, including:
 - (i) The cut and fill required to achieve the proposed Site grades.

E15.2 Methods

- (a) 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.
- (b) Wherever the proposed Site grading is to meet existing Site grades, the grades are to match and positive Site drainage is to be maintained. Where sloped areas meet flat areas, at both top and bottom of slopes, the transition shall be rounded to the extent that future maintenance by turf mowing equipment can be easily done.
- (c) In fill areas, the Contractor shall scarify the existing ground to a minimum depth of 150mm prior to the placement of any fill. Should imported clean fill be required, it shall be considered incidental to the Work.
- (d) Compaction shall include the use of sheep's foot or other suitable compaction equipment as approved by the Contractor to achieve a minimum compaction of 95% Proctor Density.
- (e) All surplus or unsuitable materials shall be disposed of off Site in a legal manner and as directed by the Contractor.
- (f) Following rough grading and compaction, the Work area shall be fine graded to provide a maximum deviation of 25mm in 10m 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.

E15.3 Basis of Payment

- (a) Payment for Work, specified under this section, shall be incidental to the Site Preparation Work and no separate payment will be made for Site grading.

E16. SUB-SURFACE DRAINAGE SYSTEM

E16.1 General Description

- (a) Further to CW 3120, this specification shall cover the sub-surface drainage system:
 - (i) The supply and installation of two landscape catch pits and associated drainage pipe.
 - (ii) The supply and installation of drainage pipe and granular drainage layer for "The Pimple" planter.
 - (iii) The connection of the drainage pipe(s) to an existing catch basin.
 - (iv) The adjustment of an existing catch basin, as indicated on the Grading Plan, including the boxing out of the catch basin with concrete paving within the new plaza.

E16.2 Materials

- (a) Landscape Catch Pits
 - (i) The catch pit shall be 380mm (15") Nyloplast Catch Pit with one 100mm outlet C/W as shown on the Drawings, or approved substitute in accordance with B7.
 - (ii) The catch pit shall be complete with an H-20 grate and integrated ductile iron frame c/w locking screws and any other required fittings.
- (b) Drain Pipe
 - (i) Big 'O' - 100mm high density polyethylene corrugated tubing, non-perforated, or approved substitute in accordance with B7.
 - (ii) Big 'O' - 75mm high density polyethylene corrugated tubing, perforated c/w sock, or approved substitute in accordance with B7.
 - (iii) Fittings as specified by the manufacturer.
- (c) Geotextile for "The Pimple" planter
 - (i) CW 3130
 - (ii) Non-woven
- (d) Granular
 - (i) Backfill for trenches: to CW 2030
 - (ii) Drainage layer for "the Pimple" planter to be clean pea stone.

E16.3 Methods - Existing Catch Basin

- (a) The existing catch basin shall be inspected prior to having any work done on it and any damage found shall be reported to the Contract Administrator.
- (b) Prior to completion of the project the Contractor shall clean out the catch basin of all debris.
- (c) Further to CW 2130 and SD-025, the height of the existing catch basin shall be raised by adding rings as required, to meet the level of the new plaza.
- (d) The catch basin grated cover is to be replaced with a standard City of Winnipeg manhole cover.
- (e) The catch basin shall be boxed out with concrete paving to fit the module of the surrounding unit paving, as shown on the Drawings.
- (f) The Contractor shall be responsible for restoration of any damages caused during the Work under this section.
- (g) Connections to the existing catch basin shall be below the ground surface and grouted into place as per CW 2130 and SD-025.

E16.4 Methods – Landscape Catch Pits

- (a) The layout of the sub-drain systems is to be marked on Site and approved by the Contract Administrator prior to construction of this item.
- (b) Drainage systems are to be installed as shown on the Drawings and as per CW 3120.
- (c) The outlet pipe is to be connected to the existing catch basin as per CW 2130 and SD-025.
- (d) Trenches are to be excavated with a trenching machine or by hand. Trenches are to be inspected by the Contract Administrator prior to backfilling. 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 and depth shall be as specified on the Drawings.
- (e) 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 granular prior to the placement of the drain. Where 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. All excavated material shall be removed from the Site daily and disposed of legally.

- (f) The grades of the bottom of the trenches are to be reviewed by the Contract Administrator prior to installation of pipe.
- (g) Big 'O' non-perforated drain pipe is to be installed as shown on the Drawings.
- (h) Trench is to be backfilled according to CW 2030.
- (i) Fittings for the drains shall be installed in accordance with manufacturer's recommendations.

E16.5 Methods – 'The Pimple'

- (a) The drainage layer in the planter of 'The Pimple' is to be as shown on the Drawings.
- (b) It shall include the granular drainage layer, non-woven geotextile above and below the drainage layer, and the drainage pipes to be connected to the catch basin.

E16.6 Basis of Payment

- (a) Payment for Work specified under this section shall be paid for at the Unit Price, measured on a lump sum basis, for the Items of Work listed below, which price shall include all costs of material supply, proper material installation, work on existing catch basins and any associated Site restoration.
- (b) Items of Work:
 - (i) Adjustment to the Existing Catch Basin
 - (ii) Landscape Catch Pits c/w Connection to Existing Catch Basin
 - (iii) Drainage Pipe, Granular, Geotextile and Connection to Existing Catch Basin for 'The Pimple'

STRUCTURES

E17. PILES

E17.1 General Description

- (a) Further to CW 2160 and CW 3310, this specification shall cover the supply and installation of concrete piles and pile caps and/or bases for:
 - (i) Piles – Type 1: For the Vimy Ridge Monument and the Andrew Mynarski Monument;
 - (ii) Piles – Type 2: For Lights – Type1 (Lights with Pillars);
 - (iii) Piles – Type 3: For Lights – Type 2, inc. Pile Cap.
- (b) Stamped engineering drawings are available for the Andrew Mynarski monument piles and installation done in 2015.

E17.2 Materials

- (a) Concrete piles and pile caps
 - (i) Further to CW 2160 and CW 3310, concrete and reinforcing specifications shall be as shown on Drawings.
- (b) Anchor bolts and accessories for light poles shall be as specified by the pole manufacturer.
- (c) Conduit – 25mm (Min.).
- (d) Void forms shall be 150mm cardboard.

E17.3 Methods

- (a) The layout and grade elevations for the piles and pile caps (slabs) shall be reviewed with the Contract Administrator prior to installation.
 - (i) Concrete piles shall not be more than 50mm out of position shown on the plans.
- (b) Installation as per CW 2160 and CW 3310 and Drawings.
- (c) Concrete Contractor shall place all components to be embedded in the concrete such as anchor bolts, conduits, dowels and sleeves.

- (d) The top 3m of concrete shall be vibrated for pile.

E17.4 Basis of Payment

- (a) Payment for Work specified under this section shall be paid for at the Unit Price, measured on a per unit basis, for the Items of Work listed below, which price shall include all costs of material supply, proper material installation, and any associated Site restoration.
- (b) Items of Work:
 - (i) Pile – Type 1, inc. Pile Cap
 - (ii) Pile – Type 2
 - (iii) Pile – Type 3, inc. Pile Cap

E18. EXISTING MONUMENT RELOCATION

E18.1 General Description

- (a) This specification shall cover the relocation of the Vimy Ridge Monument and the Andrew Mynarski Monument, including:
 - (i) The supply and installation of a new granite base for the Vimy Ridge Monument.
 - (ii) The removal of the monuments from their current locations and their complete installation on the new bases, including any restoration of the monuments if required.
 - (iii) The removal of the old piles and base materials as required for the new construction going in those areas.

E18.2 Background Information

- (a) Vimy Ridge Monument
 - (i) The monument was originally located in France and relocated to Vimy Ridge Park in 1926. There is a book sealed in the monument base. The monument was restored in 1967 and 1992.
 - (ii) No information is available with respect to the construction of the monument or the structural base it sits on.
- (b) Andrew Mynarski Monument
 - (i) The monument was installed by J&D Penner in June 2015. Stamped engineering drawings are available for the pile and other installation details.
 - (ii) The base consists of three pieces of granite, two slabs weighing a total of 4500 lbs. and one block weighing 6500 lbs. The bronze is 5' tall and weighs 400 lbs. It is anchored to the base with 4-1" Ø rods, 12" long into predrilled holes. The rods go through the top slab into the block and they are epoxied in place.

E18.3 Shop Drawings

- (a) Shop Drawings are required for the installation of the Monuments onto the new bases. Pieces shall be dowelled and epoxied in place.

E18.4 Materials

- (a) New Granite Base for the Vimy Ridge Monument
 - (i) As specified on Drawings. Sample to be provided.
- (b) Grout and other incidentals
 - (i) As specified on Drawings. Sample to be provided.

E18.5 Methods

- (a) The relocations of the monuments are to be completed prior to the construction of the other Site elements. The monuments are to be protected at all times during construction.

- (b) The proposed method and equipment for moving the monuments shall be reviewed with the Contract Administrator prior to commencement of Work.

E18.6 Basis of Payment

- (a) Payment for Work specified under this section shall be paid for at the Unit Price, measured on a per unit basis, for the Items of Work listed below, which price shall include all costs of material supply, proper material installation, work on existing catch basins and any associated Site restoration.
- (b) Items of Work:
 - (i) New Granite Base for Vimy Monument
 - (ii) Monument Relocation – Removal from Existing Location and Installation on New Base
- (c) The removal of the old piles and base materials shall be incidental to E14.

E19. VIMY RIDGE MONUMENT PLINTH AND PEDESTALS

E19.1 General Description

- (a) This specification shall cover the complete construction of the plinth and pedestals for the Vimy Ridge Monument, including:
 - (i) supply and installation of the base materials for the structure.
 - (ii) supply and installation of poured-in-place concrete structural base.
 - (iii) supply and installation of the Tyndall stone blocks, pavers and face stones.

E19.2 Materials

- (a) Concrete and reinforcing shall be as per CW3310.
- (b) Granular base shall be compacted 19mm down crushed limestone.
- (c) Reinforcing steel shall be as shown on the Drawings.
- (d) Geotextile fabric shall be in accordance with CW 3130 and as shown on the Drawings.
- (e) Tyndall stone blocks, pavers and face stones
 - (i) Gillis Quarries.
 - (ii) As specified on the Drawings.
 - (iii) Samples shall be required.
- (f) Grout and adhesives - to be approved by the Contract Administrator.

E19.3 Methods

- (a) Shop Drawings shall be required for the concrete formwork to ensure the applied Tyndall stonework meets the design intent.
- (b) Layout is to be established on Site after excavation and grading operations, and reviewed by the Contract Administrator prior to formwork being completed.
- (c) Granular base, formwork and reinforcing are to be reviewed on Site by the Contract Administrator prior to pouring of concrete.
- (d) The Vimy Ridge Monument is to be in place and protected at all times during the construction of the plinth.
- (e) The plinth and pedestals are to be cleaned of any excess grout or adhesive that may be on the stonework.

E19.4 Basis of Payment

- (a) Payment for Work specified under this section shall be paid for at the Unit Price, measured on a lump sum basis for the Items of Work listed below, which price shall include all costs of material supply, proper material installation and any associated Works required to complete the Plinth as shown on the Drawings.

- (b) Items of Work
 - (i) New Plinth and Pedestals for the Vimy Ridge Monument

E20. STONE PILLARS AND WALLS

E20.1 General Description

- (a) This specification shall cover the construction of the 'The Pimple', except for:
 - (i) The drainage system for the planter in E16.
 - (ii) The planting soil in E26.
- (b) This specification shall cover the construction of the pillars for the Lights – Type 1, except for:
 - (i) The piles in E17.
 - (ii) The lights in E21.

E20.2 Shop Drawings

- (a) Shop Drawings shall be required for the complete construction of the pillars for the lights.
- (b) Shop Drawings shall be required for the pillar caps, prior to custom ordering, to ensure the caps will fit with light posts.

E20.3 Materials

- (a) Concrete and reinforcing shall be as per CW3310.
- (b) Granular base shall be compacted 19mm down crushed limestone.
- (c) Reinforcing steel shall be as shown on the Drawings.
- (d) Geotextile fabric shall be in accordance with CW 3130 and as shown on the Drawings.
- (e) Stone facing and planter cap
 - (i) Manitoba limestone.
 - (ii) As specified on the Drawings.
 - (iii) Samples shall be required.
- (f) Pillar Caps
 - (i) Custom precast concrete pillar caps by Barkman Concrete, as shown on the Drawings.
 - (ii) Wetcast concrete, colour to be natural concrete colour.
- (g) Grout and adhesives - to be approved by the Contract Administrator.

E20.4 Methods

- (a) Layout is to be established on Site after excavation and grading operations, and reviewed by the Contract Administrator prior to formwork being completed.
- (b) Granular base, formwork and reinforcing are to be reviewed on Site by the Contract Administrator prior to pouring of concrete.
- (c) Pillar construction shall be coordinated with the supply and installation of the lights and electrical servicing.

E20.5 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 and any associated Works required to complete the pillars and 'The Pimple' as shown on the Drawings.
- (b) Items of Work
 - (i) 'The Pimple' – Planter Wall

- (ii) Pillars for Lights

ELECTRICAL

E21. LIGHTS AND ELECTRICAL

E21.1 This specification shall cover the supply and installation of park lighting, including the complete electrical power hook-up to the new lights and connections to the existing electrical service in the park.

E21.2 Scope

- (a) The Contractor shall visit the Site and examine all related Drawings and local conditions affecting the Work and ascertain that all Work shown can be satisfactorily carried out without additional changes to the Contract. Any discrepancies are to be reported to the Contract Administrator immediately.
- (b) The Contractor shall provide design and shop drawings for all electrical Work complete with necessary stamps by a qualified electrical engineer licensed to practice in the Province of Manitoba.
- (c) The Contractor shall provide all materials, labour, plant and equipment required for a complete and working installation as specified herein and on the Drawings
- (d) The electrical installation shall be in accordance with the current edition of the Canadian Electrical Code, Provincial and Municipal codes and regulations.
- (e) The Contractor shall obtain all permits, approvals and pay all related fees required for this installation.
- (f) The Contractor shall arrange for and co-ordinate all inspections with the City of Winnipeg and the Contract Administrator.

E21.3 Materials

- (a) All equipment supplied under this Contract shall be new and be CSA approved.
- (b) All equipment, wiring, etc. shall be sized and specified on the Shop Drawings.
- (c) Contractor is to provide all required electrical devices, components, conduits, fittings, wiring, disconnects and miscellaneous equipment to make all connections.
- (d) Lights – Type 1
 - (i) As specified on the Drawings.
 - (ii) This light is to be installed on stone pillars and is complete with banner arms and decorative base covers.
- (e) Lights – Type 2
 - (i) As specified on the Drawings.
 - (ii) This light is installed on concrete pile caps and is complete with ground fault duplex receptacles and decorative base covers.
- (f) Banner arms and connectors shall be custom made to match the specified poles. Shop drawings shall be required. Engineering for the structural integrity of the banner arms and poles shall be included.
 - (i) Banners are to be supplied and installed by others.

E21.4 Methods

- (a) Scheduling of the Work shall be arranged with the Contract Administrator to minimize disruptions to the City operations during normal working hours. Any shutdown or interruptions to the system shall be at times acceptable to the City of Winnipeg.
- (b) All Work shall be completed in a first class manner. Work is to be coordinated with other trades working on Site.

- (c) Existing wiring and conduits on Site, required to remain in use, shall be re-routed, altered and/or diverted as required by the Contractor in an approved manner.
- (d) Any branch circuit wiring, conduit, etc., no longer required to remain in use, shall be removed, or rendered permanently inaccessible and completely disconnected from the panels.
- (e) Service to the new lights shall be powered from the existing pedestal. Pedestal shall be retrofitted as required.
- (f) Trenching
 - (i) Contractor shall confirm existing utility cable routes prior to trenching.
 - (ii) Layout of trenching is to be reviewed by the Contract Administrator.
 - (iii) Trenching shall be a minimum 1000mm below grade.
- (g) Concrete piles and pillars are specified on the Drawings and in E17 and E20.
- (h) Luminaires, including lamps, poles and base covers, are to be installed as per manufacturer's specifications.
- (i) The lights shall be in accordance with the current edition of the Canadian Electrical Code, Provincial and Municipal codes and regulations.
- (j) Lighting shall adhere to the Manitoba Hydro Power Smart Program.

E21.5 Commissioning

- (a) The electrical installation shall be completely tested demonstrating that the equipment and systems installed perform in the manner intended.
- (b) Complete As-Built Drawings, including circuiting of new and existing equipment, shall be submitted to the Contract Administrator.
- (c) The Contractor shall submit a Certificate of Inspection from the local Inspection Authority upon completion of the Work.

E21.6 Basis of Payment

- (a) Payment for Work specified under this section shall be paid for at the Unit Price, measured on a lump sum basis for the Items of Work listed below, which price shall include all costs of design, permits, material supply, proper material installation and any Work necessary to provide a complete working lighting and electrical service.
- (b) Items of Work
 - (i) Electrical Supply to New Lights inc. Design Engineering, Permits and Hook Up to Existing Panel
 - (ii) Lights – Type 1, inc. Base Covers and Banner Accessories
 - (iii) Lights –Type 2, inc. Base Covers and GF Duplex Receptacles

SITE WORKS

E22. POURED-IN PLACE CONCRETE CURBS

E22.1 General Description

- (a) Further to CW 3310, this specification shall cover the supply and installation of poured-in-place concrete edging curb and planter curb.

E22.2 Materials

- (a) Concrete shall be 30MPa and as per CW3310.
- (b) Granular base shall be compacted 19mm down crushed limestone.
- (c) Reinforcing steel shall be 15M with 15M ties at 600mm O.C.
- (d) Geotextile fabric shall be in accordance with CW 3130 and as shown on the Drawings.

E22.3 Methods

- (a) Layout is to be established on Site after excavation and grading operations, and reviewed by the Contract Administrator prior to formwork being completed.
- (b) Granular base, formwork and reinforcing are to be reviewed on Site by the Contract Administrator prior to pouring of concrete.
- (c) The vertical rebar ties are to be set into the granular base.
- (d) Concrete is to be trowel finished. All exposed edges are to be rounded as shown on the Drawings.
- (e) Concrete edging shall have saw cut control joints at 1.5m intervals.

E22.4 Basis of Payment

- (a) Payment for Work specified under this section shall be paid for at the Unit Price, measured on a linear metre basis for the Items of Work listed below, which price shall include all costs of material supply, excavation, sub-grade preparation, proper material installation and any associated Site restoration.
- (b) Items of Work
 - (i) Concrete Edging Curb
 - (ii) Raised Concrete Planter Curb

E23. CONCRETE PAVING

E23.1 General Description

- (a) Further to CW 3110, CW 3310 and CW 3325, this specification shall cover:
 - (i) The supply and installation of standard concrete paving as shown on the Drawings.

E23.2 Materials and Methods for Concrete Paving

- (a) 100mm sidewalk paving to CW 3325.
- (b) Layout, grades and details for concrete sidewalks are to be as shown on the Drawings.
- (c) Granular base and formwork are to be reviewed on Site by the Contract Administrator prior to pouring of concrete.
- (d) Saw cut locations to be reviewed by the Contract Administrator prior to implementation.

E23.3 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 base preparation, proper material installation, and any associated Site restoration.
- (b) Items of Work
 - (i) Concrete Paving

E24. UNIT PAVING

E24.1 General Description

- (a) Further to CW 3110 and CW 3330, this specification shall cover:
 - (i) The supply and installation of unit paving as shown on the Drawings.

E24.2 Materials

- (a) Pavers: Barkman 'Cobble', 80mm thick, all sizes, colour to be Ebony.
- (b) Polymeric sand: colour Granite Grey.
- (c) Granular base: compacted 19mm down crushed limestone.
- (d) Geotextile fabric shall be in accordance with CW 3130 and as shown on the Drawings.

E24.3 Methods

- (a) Unit paving to CW 3330.
- (b) Layout, grades, pattern and details for unit paving are to be as shown on the Drawings.
- (c) Granular base is to be reviewed on Site by the Contract Administrator

E24.4 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 base preparation, proper material installation, and any associated Site restoration.
- (b) Items of Work
 - (i) Unit Paving

E25. ASPHALT PAVING

E25.1 General Description

- (a) Further to CW 3110 and CW3410, this specification shall cover the supply and installation of the asphalt path including excavation, sub-base and base construction, and asphaltic paving.
 - (i) Sleeves shall be installed under the asphalt path, as shown on the Drawings, to allow for future irrigation water line installation.

E25.2 Materials and Method

- (a) Materials and installation as per SCD-648R, CW 3110 and CW3410.
- (b) Sub-base and base materials and depths are as specified on the Drawings.
- (c) Asphaltic paving depth as specified on the Drawings.
- (d) Path widths and grades are indicated on the Drawings.
- (e) The sub-base shall inspect by the Contract Administrator prior to the installation of asphalt.
- (f) Pathway edges are to be straight and true to layout and shall be sawcut trimmed if required.

E25.3 Basis of Payment

- (a) Payment for Work, specified under this section shall be paid for at the Unit Price, measured the square meter, for the Items of Work listed below. The price for Asphaltic Paving shall include all costs of material supply and proper material installation for sub-grade, sub-base and base preparation, and asphaltic paving. Site restoration work shall be considered incidental to the Work.
- (b) Items of Work:
 - (i) Asphalt Paving

E26. PLANTING BEDS

E26.1 General Description

- (a) This specification shall cover the supply and installation of:
 - (i) planting beds.
 - (ii) planting soil for the raised concrete planter.
 - (iii) planting soil for 'The Pimple' raised planter.

E26.2 Materials

- (a) Further to CW 3540, the planting soil shall be a 4 way topsoil mix:
 - (i) 40% Peat Moss, 40% Topsoil, 10% Manure, 10% Sand

E26.3 Methods

- (a) Planting soil shall be placed and compacted in 150mm lifts to the depths shown on the Drawings.
- (b) Planting soil from removed planting beds may be used for the new planting beds only if approved by the Contract Administrator.

E26.4 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 material supply, sub-grade preparation, proper material installation, and all other items incidental to the Work.
- (b) Items of Work
 - (i) Planting Beds

E27. TOPSOIL AND SODDING

E27.1 General Description

- (a) This specification shall cover the supply and installation of topsoil and sod.
 - (i) Associated Site rough grading shall be as per E15.

E27.2 Materials

- (a) Topsoil: As per CW 3540.
- (b) Sodding
 - (i) As per CW 3510.
 - (ii) Sod shall be mineral base.

E27.3 Methods

- (a) Areas to be sodded shall be fine graded to meet the grades required for the installation of topsoil and sod and as shown on the Drawings. Surplus materials shall be removed off-site in a legal manner.
- (b) No area for Sodding shall be less than the width of a full piece of sod.
- (c) Where Sodding meets existing turf, the edges are to be cut neatly in straight lines using a sod cutter and new sod is to be installed to match the existing grades of the surrounding turf.
- (d) Seams between new and old turf are to be topdressed, seeded and rolled.
- (e) Only those areas shown on the Drawings as New Sodding shall be paid for under this section. All other Site restoration shall be considered incidental to other Works.

E27.4 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.

E27.5 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 material supply, sub-grade preparation, proper material installation, maintenance and all other items incidental to the Work.
- (b) Items of Work
 - (i) Topsoil and Sodding