



THE CITY OF WINNIPEG

BID OPPORTUNITY

BID OPPORTUNITY NO. 24-2016

**CITY OF WINNIPEG – SELKIRK AVENUE PAVEMENT RECONSTRUCTION AND
STREETSCAPING: PART A – CONCRETE RECONSTRUCTION FROM
ARLINGTON STREET TO SALTER STREET; PART B – POWERS PLAZA
UPGRADE**

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PART B - BIDDING PROCEDURES

B1. CONTRACT TITLE

B1.1 CITY OF WINNIPEG – SELKIRK AVENUE PAVEMENT RECONSTRUCTION AND STREETSCAPING: PART A – CONCRETE RECONSTRUCTION FROM ARLINGTON STREET TO SALTER STREET; PART B – POWERS PLAZA UPGRADE

B2. SUBMISSION DEADLINE

B2.1 The Submission Deadline is 12:00 noon Winnipeg time, March 15, 2016.

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. ENQUIRIES

B3.1 All enquiries shall be directed to the Contract Administrator identified in D3.1.

B3.2 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.

B3.3 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.

B3.4 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.

B3.5 The Bidder shall not be entitled to rely on any response or interpretation received pursuant to B3 unless that response or interpretation is provided by the Contract Administrator in writing.

B4. CONFIDENTIALITY

B4.1 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.

B4.2 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.

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/bidopp.asp>
- 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.
- B5.3 The Bidder shall acknowledge receipt of each addendum in Paragraph 10 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, to the Bidder who requested approval of the substitute.
- B6.6.1 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.
- 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 B16.
- B6.9 No later claim by the Contractor for an addition to the Total Bid Price because of any other changes in the Work necessitated by the use of an approved equal or an approved alternative will be considered.

B7. BID COMPONENTS

- B7.1 The Bid shall consist of the following components:
- (a) Form A: Bid;
 - (b) Form B: Prices, hard copy;
 - (c) Bid Security
 - (i) Form G1: Bid Bond and Agreement to Bond, or
Form G2: Irrevocable Standby Letter of Credit and Undertaking, or
a certified cheque or draft;
- B7.2 Further to B7.1, the Bidder should include the written correspondence from the Contract Administrator approving a substitute in accordance with B6.
- B7.3 All components of the Bid shall be fully completed or provided, and submitted by the Bidder no later than the Submission Deadline, with all required entries made clearly and completely, to constitute a responsive Bid.
- B7.4 The Bid shall be submitted enclosed and sealed in an envelope clearly marked with the Bid Opportunity number and the Bidder's name and address.
- B7.4.1 Samples or other components of the Bid which cannot reasonably be enclosed in the envelope may be packaged separately, but shall be clearly marked with the Bid Opportunity number, the Bidder's name and address, and an indication that the contents are part of the Bidder's Bid.
- B7.4.2 A hard copy of Form B: Prices must be submitted with the Bid. If there is any discrepancy between the Adobe PDF version of Form B: Prices and the Microsoft Excel version of Form B: Prices, the PDF version shall take precedence.
- B7.5 Bidders are advised not to include any information/literature except as requested in accordance with B7.1.
- B7.6 Bidders are advised that inclusion of terms and conditions inconsistent with the Bid Opportunity document, including the General Conditions, will be evaluated in accordance with B16.1(a).
- B7.7 Bids submitted by facsimile transmission (fax) or internet electronic mail (e-mail) will not be accepted.
- B7.8 Bids shall be submitted to:
- The City of Winnipeg
Corporate Finance Department
Materials Management Division
185 King Street, Main Floor
Winnipeg MB R3B 1J1

B8. BID

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

- B8.2 Paragraph 2 of Form A: Bid shall be completed in accordance with the following requirements:
- (a) if the Bidder is a sole proprietor carrying on business in his/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 12 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 and the corporate seal, if the corporation has one, shall be affixed;
 - (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.
- B8.5 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 For the convenience of Bidders, and pursuant to B7.4.2 and B16.4.2, an electronic spreadsheet Form B: Prices in Microsoft Excel (.xls) format is available along with the Adobe PDF documents for this Bid Opportunity on the Bid Opportunities page at the Materials Management Division website at <http://www.winnipeg.ca/matmgt/>
- 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. DISCLOSURE

- B10.1 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.

B10.2 The Persons are:

(a) N/A

B11. QUALIFICATION

B11.1 The Bidder shall:

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

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

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

B11.3 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);

B11.4 Further to B11.3(c), the Bidder shall, within five (5) Business Days of a request by the Contract Administrator, provide proof satisfactory to the Contract Administrator that the Bidder/Subcontractor 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/>.)

B11.5 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.

B11.6 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.

B12. BID SECURITY

- B12.1 The Bidder shall provide bid security in the form of:
- (a) a bid bond, in the amount of at least ten percent (10%) of the Total Bid Price, and agreement to bond of a company registered to conduct the business of a surety in Manitoba, in the form included in the Bid Submission (Form G1: Bid Bond and Agreement to Bond); or
 - (b) an irrevocable standby letter of credit, in the amount of at least ten percent (10%) of the Total Bid Price, and undertaking 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 included in the Bid Submission (Form G2: Irrevocable Standby Letter of Credit and Undertaking); or
 - (c) a certified cheque or draft payable to "The City of Winnipeg", in the amount of at least fifty percent (50%) of the Total Bid Price, drawn on a bank or other financial institution registered to conduct business in Manitoba.
- B12.1.1 If the Bidder submits alternative bids, the bid security shall be in the amount of the specified percentage of the highest Total Bid Price submitted.
- B12.1.2 All signatures on bid securities shall be original.
- B12.1.3 The Bidder shall sign the Bid Bond.
- B12.1.4 The Surety shall sign and affix its corporate seal on the Bid Bond and the Agreement to Bond.
- B12.2 The bid security of the successful Bidder and the next two lowest evaluated responsive and responsible Bidders will be released by the City when a Contract for the Work has been duly executed by the successful Bidder and the performance security furnished as provided herein. The bid securities of all other Bidders will be released when a Contract is awarded.
- B12.2.1 Where the bid security provided by the successful Bidder is in the form of a certified cheque or draft pursuant to B12.1(c), it will be deposited and retained by the City as the performance security and no further submission is required.
- B12.2.2 The City will not pay any interest on certified cheques or drafts furnished as bid security or subsequently retained as performance security.
- B12.3 The bid securities of all Bidders will be released by the City as soon as practicable following notification by the Contract Administrator to the Bidders that no award of Contract will be made pursuant to the Bid Opportunity.

B13. OPENING OF BIDS AND RELEASE OF INFORMATION

- B13.1 Bids will be opened publicly, after the Submission Deadline has elapsed, in the office of the Corporate Finance Department, Materials Management Division, or in such other office as may be designated by the Manager of Materials.
- B13.1.1 Bidders or their representatives may attend.
- B13.1.2 Bids determined by the Manager of Materials, or his/her designate, to not include the bid security specified in B12 will not be read out.
- 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/>
- 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 11 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 until a Contract for the Work has been duly executed and the performance security furnished as herein provided, but any Bid shall be deemed to have lapsed unless accepted within the time period specified in Paragraph 11 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 12 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 12 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, including the right to retain the Bidder's bid security.

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 therefrom (pass/fail);
 - (b) qualifications of the Bidder and the Subcontractors, if any, pursuant to B11 (pass/fail);
 - (c) Total Bid Price;
 - (d) economic analysis of any approved alternative pursuant to B6.
- 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.

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.

B16.4.2 The electronic Form B: Prices and the formulas imbedded in that spreadsheet are only provided for the convenience of Bidders. The City makes no representations or warranties as to the correctness of the imbedded formulas. It is the Bidder's responsibility to ensure the extensions of the unit prices and the sum of Total Bid Price performed as a function of the formulas within the electronic Form B: Prices are correct.

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.

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:

- (a) Pavement Reconstruction and Streetscaping
 - (i) Stage 1 – Selkirk Avenue from the west side of Salter Street to centerline of McGregor Street
 - (ii) Stage 2 – Selkirk Avenue from centerline of McGregor Street to east side of Arlington Street
- (b) Stage 1 – Powers Plaza Upgrade

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

- (a) Pavement Reconstruction and Streetscaping
 - (i) Remove existing pavement
 - (ii) Remove existing concrete street car bedding and wood ties
 - (iii) Excavation
 - (iv) Installation of subdrains
 - (v) Insulation of water services (as required)
 - (vi) Compaction of existing sub-grade
 - (vii) Installation of curb and gutter inlets, catchbasins, catchpits and connection pipe
 - (viii) Insulation of catchbasins and catchpits (as required)
 - (ix) Connection to lined 600mm combined sewer
 - (x) Connection to brick combined sewers (900mm x 1350mm and 1000mm x 1500mm)
 - (xi) Placement of non-woven geotextile fabric (include geogrid as applicable)
 - (xii) Placement of sub-base and base course materials
 - (xiii) Adjustment of existing manholes
 - (xiv) Construction of 230mm plain dowelled concrete pavement utilizing slip-form paving equipment (centre lanes)
 - (xv) Construction of 230mm plain dowelled concrete pavement utilizing hand-placed methods c/w 180mm separate barrier curb (gutter lanes)
 - (xvi) Complete curb renewal at intersections beyond reconstruction limits (as required)
 - (xvii) Construction of 200mm plain dowelled concrete pavement at all side street connections
 - (xviii) Construction of 200mm reinforced concrete pavement (private driveways/approaches)
 - (xix) Remove existing concrete/paving stone sidewalk
 - (xx) Construct concrete tree wells
 - (xxi) Construct new 100mm concrete sidewalk c/w paving stone band and detectable surface warning tiles

- (xxii) Supply and Placement of Holland paving stones
 - (xxiii) Supply and placement of ornamental posts including foundation
 - (xxiv) Supply and Installation of amenities (bike racks, concrete planters, hanging baskets, etc.)
 - (xxv) Boulevard restoration
- (b) Site Improvements to Powers Plaza
- (i) Existing tree protection
 - (ii) Removal and stockpile of existing paving stone in concrete blockout for re-use
 - (iii) Removal of existing concrete sidewalk
 - (iv) Removal of existing asphalt / concrete pavement including concrete curb
 - (v) Removal of existing paving stones
 - (vi) Removal of sod and topsoil
 - (vii) Removal of benches
 - (viii) Removal of wood bollards
 - (ix) Removal of wood sign
 - (x) Compaction of sub-grade
 - (xi) Placement of non-woven geotextile fabric
 - (xii) Placement of base course material
 - (xiii) Placement of 6 mil. Poly moisture barrier - acrylotex surface paint areas
 - (xiv) Construction of barrier curb, modified barrier curb and concrete planter curb
 - (xv) Construction of asphalt patches
 - (xvi) Construction of concrete pile
 - (xvii) Construction of concrete sidewalk including blockout for indicator strip, saw cuts and curb ramps
 - (xviii) Placement of unit pavers from stockpile in concrete blockout
 - (xix) Placement of poured in place rubber surfacing
 - (xx) Placement of acrylotex surface paint over concrete
 - (xxi) Supply and installation of site furniture: log steppers and basketball equipment
 - (xxii) Supply and installation of signage.

D3. CONTRACT ADMINISTRATOR

- D3.1 The Contract Administrator is AECOM Canada Ltd., represented by:
Tanya Worms, P. Eng., M.Sc.
Transportation Engineer
Telephone No. 204 928-9210
- D3.2 At the pre-construction meeting, Tanya Worms, P. Eng., M.Sc. 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 B7.8

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.
- D4.2 At least two (2) business days prior to the commencement of any Work on the site, the Contractor shall provide the Contract Administrator with a phone number where the supervisor

identified in D4.1 or an alternate can be contacted twenty-four (24) hours a day to respond to an emergency.

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 or elsewhere in the Contract, shall be sent to the attention of the Contract Administrator at the facsimile number identified in D3.1.
- D6.3 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

- D6.4 Bids Submissions must be submitted to the address in B7.8.**

D7. FURNISHING OF DOCUMENTS

- D7.1 Upon award of the Contract, the Contractor will be provided with five (5) complete sets of the Bid Opportunity. If the Contractor requires additional sets of the Bid Opportunity, they will be supplied to him/her at cost.

SUBMISSIONS

D8. AUTHORITY TO CARRY ON BUSINESS

- D8.1 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.

D9. SAFE WORK PLAN

- D9.1 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.
- D9.2 The Safe Work Plan shall 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>

D10. INSURANCE

- D10.1 The Contractor shall provide and maintain the following insurance coverage:
- (a) commercial general liability insurance, in the amount of at least two million dollars (\$2,000,000.00) inclusive, with The City of Winnipeg added as an additional insured, with a cross-liability clause, such liability policy to also contain contractual liability, unlicensed motor vehicle liability, non-owned automobile liability, broad form property damage cover 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) an 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.
- D10.2 Deductibles shall be borne by the Contractor.
- D10.3 The Contractor shall provide the City Solicitor 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 the date specified in the C4.1 for the return of the executed Contract.
- D10.4 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.

D11. PERFORMANCE SECURITY

- D11.1 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.

D11.1.1 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.

D11.2 If the bid security provided in his/her Bid was not a certified cheque or draft pursuant to B12.1(c), 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 letter of intent and prior to the commencement of any Work on the Site and in no event later than the date specified in the C4.1 for the return of the executed Contract.

D12. SUBCONTRACTOR LIST

D12.1 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 or prior to a pre-construction meeting, or 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 the C4.1 for the return of the executed Contract.

D13. DETAILED WORK SCHEDULE

D13.1 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 the General Conditions for the return of the executed Contract.

D13.2 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.

D13.3 Further to D13.2(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:

D13.4 Further to D13.2(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

D14. COMMENCEMENT

D14.1 The Contractor shall not commence any Work until he/she is in receipt of a letter of intent from the Award Authority authorizing the commencement of the Work.

D14.2 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 D8;
 - (ii) evidence of the workers compensation coverage specified in C6.15;
 - (iii) the twenty-four (24) hour emergency response phone number specified in D4.2.
 - (iv) the Safe Work Plan specified in D9;
 - (v) evidence of the insurance specified in D10;
 - (vi) the performance security specified in D11;

- (vii) the subcontractor list specified in D12;
 - (viii) the detailed work schedule specified in D13.
- (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.

D14.3 The Contractor shall not commence the Work on Stage 1 – Pavement Reconstruction from Salter Street to Centerline of McGregor Street and Powers Plaza Upgrade before May 2, 2016, and shall commence the Work on Stage 1 – Pavement Reconstruction from Salter Street to Centerline of McGregor Street and Powers Plaza Upgrade no later than May 17, 2016, as directed by the Contract Administrator and weather permitting.

D14.4 The Contractor shall not commence the Work on Stage 2 – Pavement Reconstruction from Centerline of McGregor Street to Arlington Street before the completion of the watermain renewal contract and the completion of Stage 1. July 1, 2016 is the expected completion date of the watermain renewal contract between McGregor Street and Arlington Street, Bid Opportunity No. 31-2016.

D14.5 The City intends to award this Contract by April 29, 2016.

D15. WORKING DAYS

D15.1 Further to C1.1(jj);

D15.1.1 The Contract Administrator will determine daily if a Working Day has elapsed and will record his/her assessment. On a weekly basis the Contract Administrator will provide the Contractor with a record of the Working Days assessed for the preceding week. The Contractor shall sign each report signifying that he/she agrees with the Contract Administrator's determination of the Working Days assessed for the report period.

D15.1.2 Work done to restore the Site to a condition suitable for Work, shall not be considered "work" as defined in the definition of a Working Day.

D16. RESTRICTED WORK HOURS

D16.1 Further to clause 3.10 of CW 1130, the Contractor shall require written permission forty-eight (48) hours in advance from the Contract Administrator for any work to be performed between 2000 hours and 0700 hours, or on Saturdays, Sundays, Statutory Holidays and or Civic Holidays.

D17. WORK BY OTHERS

D17.1 Work by others on or near the Site will include but not necessarily be limited to:

D17.1.1 Part A – Selkirk Avenue

- (a) City of Winnipeg – Transit Department – removal and replacement of bus shelters;
- (b) City of Winnipeg – Traffic Signals Department – removal and installation of traffic signals and pedestrian crossing poles at Arlington Street, McGregor Street, Andres Street and Powers Street;
- (c) City of Winnipeg – Traffic Service Department – miscellaneous sign removal and installation and line painting;
- (d) Manitoba Hydro Gas Division – lowering and/or rock wrapping of underground main and services as required;
- (e) Manitoba Hydro Street Lighting – removal of existing overhead and decorative streetlight poles and installation of new street lights on Selkirk Avenue, including lights and poles in the Powers Street Plaza area and installation of conduit and associated wiring;
- (f) Winnipeg Parking Authority – removal and re-installation of parking pay stations;

- (g) Merchants Hotel Development (541 Selkirk Avenue) – installation of new weeping tile, new 200mm land drainage and 150mm sanitary sewer service connections to the existing brick combined sewer on Selkirk Avenue;
- (h) Existing Watermain Renewal Contract – McGregor Street to Arlington Street, Bid Opportunity 31-2016;
- (i) City of Winnipeg – Geomatics Branch – various works on survey monuments.

D17.1.2 Part B – Powers Street Plaza

- (a) The installation of surface mounted log benches on concrete sidewalk, prior to installation of poured in place rubber surface.
- (b) The installation of surface mounted Kompan BLOQX3 play feature on concrete sidewalk, prior to installation of poured in place rubber surface.
- (c) The installation of surface mounted extruded foam turtle on concrete sidewalk, prior to installation of rubber surface.
- (d) The installation of surface mounted steel bollards on concrete sidewalk.
- (e) Installation of play equipment and site furniture.
- (f) Installation of soft landscaping including: planting medium, mulch, trees, shrubs and perennials.

D18. SEQUENCE OF WORK

D18.1 Further to C6.1, the sequence of work shall be as follows:

D18.1.1 The Work shall be divided into two Stages.

- (a) Stage 1 will include the Selkirk Avenue Pavement Reconstruction and Streetscaping from the west side of Salter Street to the centerline of McGregor Street and the Powers Plaza Upgrade and is to be completed first.
- (b) Stage 2 will include the Selkirk Avenue Pavement Reconstruction and Streetscaping from the centerline of McGregor Street to the east side of Arlington Street and will not commence until Stage 1 is totally performed and the Watermain Renewal Contract 31-2016 achieves Total Performance.

D19. CRITICAL STAGES

D19.1 The Contractor shall achieve critical stages of the Work in accordance with the following requirements:

- (a) Stage 1 – Selkirk Avenue Reconstruction and Streetscaping from Salter Street to the centerline of McGregor Street and the Powers Plaza Upgrade as described in D2 shall be totally performed within forty-five (45) consecutive working days of the commencement of Work as specified in D14.

D19.2 When the Contractor considers the Work associated with Stage 1 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 Completion. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be re-inspected.

D19.3 The date on which the Stage 1 Work has been accepted by the Contract Administrator as being completed to the requirements of the Contract is the date on which completion of Stage 1 has been achieved.

D20. SUBSTANTIAL PERFORMANCE

D20.1 The Contractor shall achieve Substantial Performance within ninety (90) consecutive Working Days of the commencement of the Work as specified in D14.

D20.2 When the Contractor considers the Work to be substantially performed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Substantial Performance. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be re-inspected.

D20.3 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.

D21. TOTAL PERFORMANCE

D21.1 The Contractor shall achieve Total Performance within ninety-five (95) consecutive Working Days of the commencement of the Work as specified in D14.

D21.2 When the Contractor or the Contract Administrator considers the Work to be totally performed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Total Performance. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be re-inspected.

D21.3 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.

D22. LIQUIDATED DAMAGES

D22.1 If the Contractor fails to achieve Critical Stages, 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) Stage 1 – Five Thousand dollars (\$5,000);
- (b) Substantial Performance – Five Thousand dollars (\$5,000);
- (c) Total Performance – One Thousand Five Hundred dollars (\$1,500).

D22.2 The amounts specified for liquidated damages in D22.1 are based on a genuine pre-estimate of the City's losses in the event that the Contractor does not achieve critical stages, Substantial Performance or Total Performance by the days fixed herein for same.

D22.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

D23. SCHEDULED MAINTENANCE

D23.1 The Contractor shall perform the following scheduled maintenance in the manner and within the time periods required by the Specifications:

- (a) Reflective crack maintenance as specified in CW3250;
- (b) Sod maintenance as specified in CW3510.

D23.2 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

D24. JOB MEETINGS

- D24.1 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.
- D24.2 The Contract Administrator reserves the right to cancel any job meeting or call additional job meetings whenever he/she deems it necessary.

D25. PRIME CONTRACTOR – THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA)

- D25.1 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).

D26. THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA) – QUALIFICATIONS

- D26.1 Further to B11.4, the Contractor/Subcontractor must, throughout the term of the Contract, have a Workplace Safety and Health Program meeting the requirements of The Workplace Safety and Health Act (Manitoba). At any time during the term of the Contract, the City may, at its sole discretion and acting reasonably, require updated proof of compliance, as set out in B11.4.

MEASUREMENT AND PAYMENT

D27. PAYMENT

- D27.1 Further to C12, the City may at its option pay the Contractor by direct deposit to the Contractor's banking institution.

WARRANTY

D28. WARRANTY

- D28.1 Notwithstanding C13.2, the warranty period shall begin on the date of Total Performance and shall expire two (2) years thereafter unless extended pursuant to C13.2.1 or C13.2.2, in which case it shall expire when provided for thereunder.
- D28.2 Notwithstanding C13.2, the Contract Administrator may permit the warranty period for a portion or portions of the Work to begin prior to the date of Total Performance if a portion of the Work cannot be completed because of unseasonable weather or other conditions reasonably beyond the control of the Contractor but that portion does not prevent the balance of the Work from being put to its intended use.
- D28.2.1 In such case, the date specified by the Contract Administrator for the warranty period to begin shall be substituted for the date specified in C13.2 for the warranty period to begin.

FORM H1: PERFORMANCE BOND
(See D11)

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. 24-2016

CITY OF WINNIPEG – SELKIRK AVENUE PAVEMENT RECONSTRUCTION AND STREETSCAPING:
PART A – CONCRETE RECONSTRUCTION FROM ARLINGTON STREET TO SALTER STREET; PART
B – POWERS PLAZA UPGRADE
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)

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)

FORM J: SUBCONTRACTOR LIST
 (See D12)

CITY OF WINNIPEG – SELKIRK AVENUE PAVEMENT RECONSTRUCTION AND STREETSCAPING:
 PART A – CONCRETE RECONSTRUCTION FROM ARLINGTON STREET TO SALTER STREET; PART
 B – POWERS PLAZA UPGRADE

<u>Portion of the Work</u>	<u>Name</u>	<u>Address</u>
<i>SURFACE WORKS:</i>		
<i>Supply of Materials:</i>		
Concrete		
Asphalt		
Base Course & Sub-Base		
Sod		
Holland Paving Stones		
<i>Installation/Placement:</i>		
Concrete		
Asphalt		
Base		
Holland Paving Stones		
Sod		
<i>UNDERGROUND WORKS:</i>		
<i>Supply of Materials:</i>		
Frames and Covers		
Catchbasins		
<i>Installation/Placement:</i>		
Catchbasin Leads		
Sewer Televising		
<i>OTHERS:</i>		
Reflective Crack Maintenance		

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>	<u>Drawing (Original) Sheet Size</u>
Part A – Selkirk Avenue Pavement Reconstruction and Streetscaping		
P-3471-00-CT-00	Cover Page and Location Plan	A1
P-3471-01-CT-01	Construction Staging Plan	A1
P-3471-02-CT-02	Plan/Profile – Arlington Street to Station 0+220	A1
P-3471-03-CT-03	Plan/Profile – Station 0+220 to Station 0+340	A1
P-3471-04-CT-04	Plan/Profile – Station 0+340 to Station 0+470	A1
P-3471-05-CT-05	Plan/Profile – Station 0+470 to Station 0+600	A1
P-3471-06-CT-06	Plan/Profile – Station 0+600 to Station 0+730	A1
P-3471-07-CT-07	Plan/Profile – Station 0+730 to Station 0+860	A1
P-3471-08-CT-08	Plan/Profile – Station 0+860 to Station 0+990	A1
P-3471-09-CT-09	Plan/Profile – Station 0+990 to Station 1+120	A1
P-3471-10-CT-10	Plan/Profile – Station 1+120 to Station 1+240	A1
P-3471-11-CT-11	Plan/Profile – Station 1+240 to Salter Street	A1
P-3471-12-CT-12	Streetscaping – Arlington Street to Station 0+650	A1
P-3471-13-CT-13	Streetscaping – Station 0+650 to Station 1+190	A1
P-3471-14-CT-14	Streetscaping – Station 1+190 to Salter Street and Details	A1
Part B – Powers Plaza Upgrade		
P-3471-15-L1-0	Powers Plaza Upgrade – Demolition Plan	A1
P-3471-16-L2-0	Powers Plaza Upgrade – Layout Plan	A1
P-3471-17-L3-0	Powers Plaza Upgrade – Grading Plan	A1
P-3471-18-L4-0	Powers Plaza Upgrade – Materials Plan	A1
P-3471-19-L5-1	Powers Plaza Upgrade – Details	A1
P-3471-20-L5-2	Powers Plaza Upgrade – Details by Others	A1

E2. GEOTECHNICAL REPORT

- E2.1 Further to C3.1, the geotechnical report is provided to aid the Contractor's evaluation of the pavement structure and/or existing soil conditions. The geotechnical report is contained in Appendix 'A'.

E3. OFFICE FACILITIES

- E3.1 The Contractor shall supply office facilities meeting the following requirements:
- (a) The field office shall be for the exclusive use of the Contract Administrator.
 - (b) The building shall be conveniently located near the site of the Work.
 - (c) The building shall have a minimum floor area of 25 square metres, a height of 2.4 m with two windows for cross ventilation and a door entrance with a suitable lock.
 - (d) The building shall be suitable for all weather use. It shall be equipped with an electric heater and air conditioner so that the room temperature can be maintained between either 16-18°C or 24-25°C.
 - (e) The building shall be adequately lighted with fluorescent fixtures and have a minimum of three wall outlets.
 - (f) The building shall be furnished with one desk, table 3m x 1.2m, and a minimum of 12 chairs.
 - (g) A portable toilet shall be located near the field office building. The toilet shall have a locking door and be for the exclusive use of the Contract Administrator and other personnel from the City.
 - (h) The field office building and the portable toilet shall be cleaned on a weekly basis immediately prior to each site meeting. The Contract Administrator may request additional cleaning when he/she deems it necessary.
- E3.2 The Contractor shall be responsible for all installation and removal costs, all operating costs, and the general maintenance of the office facilities.
- E3.3 The office facilities will be provided from the date of the commencement of the Work to the date of Total Performance.

E4. PROTECTION OF EXISTING TREES

- E4.1 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) The Contractor shall not stockpile materials and soil or park vehicles and equipment on boulevards or in areas within 2 metres of trees.
 - (b) Trees identified to be at risk by the Contract Administrator are to be strapped with 25 x 100 x 2400mm wood planks, or suitably protected as approved by the Contract Administrator.
 - (c) Excavation shall be performed in a manner that minimizes damage to the existing root systems. Where possible, excavation shall be carried out such that the edge of the excavation shall be a minimum of 1.5 times the diameter (measured in inches), with the outcome read in feet, from the closest edge of the trunk. Where roots must be cut to facilitate excavation, they shall be pruned neatly at the face of excavation.
 - (d) Operation of equipment within the dripline of the trees shall be kept to the 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 driplines of trees. The dripline of a tree shall be considered to be the ground surface directly beneath the tips of its outermost branches. The Contractor shall ensure that the operations do not cause flooding or sediment deposition on areas where trees are located.
 - (e) Work on-site shall be carried out in such a manner so as to minimize damage to existing tree branches. Where damage to branches does occur, they shall be neatly pruned.
- E4.2 All damage to existing trees caused by the Contractor's activities shall be repaired to the requirements and satisfaction of the Contract Administrator and the City Forester or his/her designate.
- E4.3 No separate measurement or payment will be made for the protection of trees.

E4.4 Except as required in clause E4.1(c) and E4.1(e), Elm trees shall not be pruned at any time between April 1 and July 31.

E5. TRAFFIC CONTROL

E5.1 Further to clauses 3.6 and 3.7 of CW 1130:

- (a) Where directed, the Contractor shall construct and maintain temporary asphalt ramps to alleviate vertical pavement obstructions such as manholes and planing drop-offs to the satisfaction of the Contract Administrator. Payment shall be in accordance with CW3410.
- (b) In accordance with the Manual of Temporary Traffic Control on City Streets (MTTC), the Contractor ("Construction Agency" in the manual) shall be responsible for placing, maintaining and removing the appropriate temporary traffic control devices as specified by the MTTC or by the Traffic Management Branch of the City of Winnipeg Public Works Department. The Contractor shall bear all costs associated with the placement of temporary traffic control devices by their own forces or subcontractor.

E5.2 Notwithstanding **Error! Reference source not found.**, in accordance with the MTTC, the Contract Administrator shall make arrangements with the **Traffic Services Branch of the City of Winnipeg** to place, maintain, and remove all **regulatory signs** and traffic control devices authorized and/or required by the Traffic Management Branch in the following situations:

- (a) Parking restrictions,
- (b) Stopping restrictions,
- (c) Turn restrictions,
- (d) Diamond lane removal,
- (e) Full or directional closures on a Regional Street,
- (f) Traffic routed across a median,
- (g) Full or directional closure of a non-regional street where there is a requirement for regulatory signs (turn restrictions, bus stop relocations, etc.) to implement the closure.
- (h) Approved Designated Construction Zones with a temporary posted speed limit reduction. Traffic Services will be responsible for placing all of the advance signs and 'Construction Ends' (TC-4) signs. The Contractor is still responsible for all other temporary traffic control including but not limited to barricades, barrels and tall cones.

E5.2.1 An exception to E5.2 is the 'KEEP RIGHT/KEEP LEFT' sign (RB-25 / RB-25L) which shall be supplied, installed, and maintained by the Contractor at their own expense.

E5.2.2 Further to E5.2, where the Contract Administrator has determined that the services of the Traffic Services Branch are required, the City shall bear the costs associated with the placement of temporary traffic control devices by the Traffic Services Branch of the City of Winnipeg in connection with the works undertaken by the Contractor

E6. TRAFFIC MANAGEMENT

E6.1 Further to clause 3.7 of CW 1130:

E6.1.1 Single lane closures on intersecting and/or adjoining Regional Streets shall only be permitted during non-peak periods when required for construction activities when approved by the Traffic Management Branch. Storage/parking of materials, equipment or vehicles is not permitted on Selkirk Avenue or any side streets at any time unless approved by the Contract Administrator, in consultation with the Traffic Management Branch. Construction vehicles and materials must be parked and/or stored within the construction area or on private property with written permission.

E6.1.2 Maintain a minimum of one lane of traffic northbound and one lane of traffic southbound on McGregor during their respective construction times, including during paving and milling

operations. When no work is being performed on site, non-essential lane closures will not be permitted.

- E6.1.3 North/South traffic at Arlington and Salter intersections must be maintained during construction to allow for one lane of traffic in each direction to go straight through. When no work is being performed in the intersection and providing it is safe for vehicles, north and south lane closures in the intersection will not be permitted.
- E6.1.4 Intersecting traffic on Parr and McKenzie street closures are to be staggered such that consecutive intersections are not closed at the same time. Traffic on intersecting regional/collector streets (McGregor, Arlington and Salter Streets) shall be maintained at all times as stated in E6.1.2 and E6.1.3 unless planing/paving operations require temporary complete closures. Temporary complete closures shall be no longer than 10 minutes during asphalt planing/paving operations and shall be completed during off peak hours.
- E6.1.5 During Stage 1, Selkirk Avenue from the west side of Salter Street to the centerline of McGregor Street will be closed to eastbound and westbound traffic including north/south traffic on Andrews Street. Upon completion of Stage 1 Construction Works, Stage 2 Selkirk Avenue from the centerline of McGregor Street to the east side of Arlington Street will be closed to eastbound and westbound traffic.
- E6.1.6 Flag persons may be necessary to maintain the flow of traffic during certain work operations.
- E6.1.7 Should the Contractor be unable to maintain pedestrian access to a residence or business, he/she shall review the planned disruption with the business or residence and the Contract Administrator, and take reasonable measures to minimize the impact. The Contractor shall provide a minimum of 24 hours notification to the affected residence or business and the Contract Administrator, prior to disruption of access.
- E6.1.8 Pedestrian access must be maintained at all times. A barricaded pedestrian crossing in the north-south direction must be maintained at each of the Powers and Andrews intersections at all times.
- E6.1.9 Ambulance/emergency vehicle access must be maintained at all times.

E7. PEDESTRIAN SAFETY

- E7.1 During the project, from Salter Street to Arlington Street, a temporary snow fence shall be installed along the edge of the excavation. The Contractor shall be responsible for maintaining the snow fence in a proper working condition. No measurement for payment shall be made for this Work.

E8. WATER OBTAINED FROM THE CITY

- E8.1 Further to Clause 3.7 of CW 1120, the Contractor shall pay for all costs, including sewer charges, associated with obtaining water from the City in accordance with the Waterworks and Sewer By-Laws.

E9. INFRASTRUCTURE SIGNS

- E9.1 The Contractor shall obtain infrastructure signs from the Traffic Services Sign Shop at 421 Osborne Street. The Contractor shall mount each sign securely to a rigid backing material approved by the Contract Administrator. The Contractor shall fasten each sign to a suitable support and erect and maintain one sign at each street as directed by the Contract Administrator. When the Contract Administrator considers the Work on the street complete, the Contractor shall remove and dispose of the signs and supports. No measurement for payment will be made for performing all operations herein described and all other items incidental to the work described.

E10. INSTALLATION OF INTERLOCKING PAVING STONES

DESCRIPTION

E10.1 General

- E10.1.1 This specification shall supplement and amend the City of Winnipeg Standard Construction Specification CW 3330 "Installation of Interlocking Paving Stones".
- E10.1.2 Referenced Standard Construction Specifications
 - (a) CW 3330 – Installation of Interlocking Paving Stones
- E10.1.3 Referenced Standard Detail
 - (a) SD-240A – Interlocking Paving Stone Detail for Medians and Private Approaches

MATERIALS

E10.2 Interlocking Paving Stones

- E10.2.1 Paving stones to be installed as detailed on the drawings.
- E10.2.2 100 x 200 x 60 Holland Stone Charcoal color running band to be installed as per the drawings.
- E10.2.3 200 x 200 x 60 Holland Stone Charcoal color to be installed in the paving pattern as per the drawings.
- E10.2.4 100 x 200 x 80 Eco-Holland Stone Charcoal color to be installed in the paving pattern as per the drawings.
- E10.2.5 Paving stones shall conform to the requirements of CAN3-A231.2, Precast Concrete Pavers.
- E10.2.6 Further to CAN3-A231.2.6.1.1, where concrete pavers are shipped for installation before the pavers are twenty-eight (28) days old, the average compressive strength of these pavers at the time of delivery to the work site shall be not less than 40 MPa.

MEASUREMENT AND PAYMENT

- E10.3 Measurement and payment will be in accordance with CW 3330 "Installation of Interlocking Paving Stones".

E11. TREE WELLS

DESCRIPTION

E11.1 General

- E11.1.1 This specification covers the construction of tree wells, including but not limited to construction of the concrete tree well curbing and placement of planting medium soil.
- E11.1.2 Referenced Standard Construction Specifications
 - (a) CW 3310 – Portland Cement Concrete Pavement Works

MATERIALS

E11.2 Concrete

- E11.2.1 Concrete for tree well curbing construction to be in accordance with CW 3310.

E11.3 Reinforcing Steel

- E11.3.1 Reinforcing steel for tree well curbing construction to be in accordance with CW 3310.

E11.4 Planting Medium Soil

- E11.4.1 Mix imported topsoil with 20% peatmoss loose by volume, and 5% sand loose by volume. Incorporate bonemeal into planting soil at rate of 5 lbs /cu.yd. of soil mixture. Planting soil items to be comprised as follows:
- (a) Peatmoss: horticultural grade Class "A" decomposed plant material, fairly elastic and homogeneous. Free of decomposed colloidal residue, weed, sulphur and iron. To have pH value of 5.9 to 7.0, 60% organic matter by weight, moisture content not exceeding 15% and water absorption capacity of not less than 300% by weight on oven dry basis.
 - (b) Bonemeal: shall be raw bonemeal, finely ground with a minimum analysis of 3% nitrogen and 20% phosphoric acid.
 - (c) Imported topsoil: natural, fertile, agricultural soil typical of locality, capable of sustaining vigorous plant growth, from well drained Site that is free of flooding, not in frozen or muddy condition, not less than 6% organic matter to a maximum 25% organic matter by volume, and pH value of 5.9 to 7.0. Free from subsoil, slag or clay, stones, lumps, live plants and their roots, sticks, crabgrass, couchgrass, noxious weeds and foreign matter.
 - (d) Sand: hard, granular natural beach sand, washed free of impurities, chemical or organic matter.

CONSTRUCTION METHODS

E11.5 General

- E11.5.1 The Contractor must ensure that all buried utilities and services are located and if necessary, protected and exposed prior to any excavation in accordance with Specification CW 1120.

E11.6 Tree Well Construction

- E11.6.1 Hydro-excavate around existing tree pit to extend it to the dimensions shown on the drawing in accordance with E12. The Contractor is to make arrangements for City of Winnipeg Forestry personnel to be on site during hydro-excavation to ensure exposure of tree roots is acceptable.
- E11.6.2 Construct tree well curbing in accordance with Specification CW 3310 and the drawings.
- E11.6.3 Backfill to grade shown on the drawings with planting medium soil compacting sufficiently to provide good soil consistency and to minimize settlement.

MEASUREMENT AND PAYMENT

E11.7 Tree Well Curbing

- E11.7.1 Construction of tree well curbing will be measured on a linear bases and paid for at the Contract Unit Price per metre for "Tree Well Curbing". The length to be paid for will be the total number of metres constructed in accordance with this specification, accepted and measured by the Contract Administrator.

E11.8 Planting Medium Soil

- E11.8.1 Installation of planting medium soil will be measured on a volume basis and paid for at the Contract Unit Price per cubic metre for "Install Planting Medium Soil". The volume to be paid will be the total number of cubic metres installed in accordance with this specification, accepted and measured by the Contract Administrator.

E11.9 Hydro Excavation

- E11.9.1 Hydro excavation will be measured and paid for in accordance with E12 Hydro Excavation.

E12. HYDRO EXCAVATION

DESCRIPTION

E12.1 General

E12.1.1 This specification shall cover the removal of earthen material immediately adjacent to underground utilities infrastructure by means of high pressure water spray, and the recovery of evacuated material by vacuum type means or equivalent method as approved by the Contract Administrator.

E12.1.2 This specification shall also cover Hydro excavation around existing trees in tree pit applications for the work under E11 Tree Wells.

E12.2 Equipment

E12.2.1 Hydro excavation unit shall be capable of maintaining a minimum working pressure of 10,000 psi, at a rate of flow of 10 to 12 gallons per minute. Unit should be adjustable, so as to provide adequate pressure to remove earthen material identified by the Contract Administrator.

E12.2.2 Spray head shall be equipped with a rotating type nozzle, in order to provide a wider path of cut.

CONSTRUCTION METHODS

E12.3 Hydro-removal of earthen material

E12.3.1 Earthen material adjacent to utility entity shall be sprayed with high pressure water so as to remove all such material identified by the Contract Administrator.

E12.3.2 Earthen material adjacent to tree roots for tree well construction shall be sprayed with controlled pressure water so as to not cause damage to the tree. The contractor must make arrangements to have personnel for City Forestry present during Hydro Excavation for tree well construction.

E12.4 Recovery of Excavated Material

E12.4.1 The recovery of excavated material shall be done using vacuum type method, or other type method as approved by the Contract Administrator.

E12.4.2 The recovery of material shall follow immediately behind the excavation, to avoid excavated areas from filling with excavated material.

E12.4.3 The use of mechanical sweepers will not be allowed.

E12.4.4 Dispose of material in accordance with Section 3.4 of CW 1130.

E12.5 Backfill of Hydro Excavated Hole

E12.5.1 The Contractor shall be responsible for the backfill of the hydro excavated hole upon the completion of the Work described herein, to the approval of the Contract Administrator.

MEASUREMENT AND PAYMENT

E12.6 Hydro Excavation

E12.6.1 Hydro Excavation of earthen material will be measured on an hourly basis and paid for at the Contract Unit Price per hour for "Hydro Excavation". The hours to be paid for will be the total number of hours of Hydro Excavation in accordance with this specification, accepted and measured by the Contract Administrator. Travel to and from the Site will not be accounted for in the payment of this item.

E13. INSULATION OF EXISTING WATERMAINS AT CATCH PITS AND CATCHBASINS

DESCRIPTION

E13.1 General

E13.1.1 This Specification covers all operations relating to the insulation of watermains where a catch pit and/or catchbasins will be installed in the vicinity of existing watermain.

E13.1.2 The Work to be done by the Contractor under this Specification shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools, supplies, and all things necessary for and incidental to the satisfactory performance and completion of all Works as hereinafter specified.

CONSTRUCTION METHODS

E13.2 Further to CW 2110-R11 and SD-018, the Contractor shall modify the insulation to accommodate the installation of the catch pits and/or catchbasins in the vicinity of existing watermains as per the details shown on the Drawings.

MEASUREMENT AND PAYMENT

E13.3 Catch Pit Insulation

E13.3.1 Catch Pit/Catchbasin Insulation will be measured on a unit basis and paid for at the Contract Unit Price per each for "Catch Pit and Catchbasin Insulation", which price shall be payment in full for the supplying all materials and for completing all operations herein described and all other items incidental to the work included in this Specification, accepted and measured by the Contract Administrator.

E14. SUPPLY AND INSTALL WATERMAIN AND WATER SERVICE INSULATION

DESCRIPTION

E14.1 Notwithstanding 3.12 of CW 2110, this specification covers the supply and installation of insulation in roadway excavations over watermains and water services.

E14.2 Referenced Standard Construction Specifications

(a) CW 2030 – Excavation Bedding and Backfill

(b) CW 3110 – Sub –grade, Sub-base and Base Course Construction

E14.3 Referenced Standard Details

(a) SD-018 - Watermain and Water Service Insulation

MATERIALS

E14.4 Acceptable insulation is:

(a) Extruded Polystyrene rigid foam insulation – Type 4 ,
DOW Roofmate or Owen's Corning Foamular 350.
4" X 24" X 96"

E14.5 Sand Bedding :

(a) In accordance with CW 2030

CONSTRUCTION METHODS

E14.6 Prior to the installation of any sub-base material or geotextile material, locate all existing water services.

- E14.7 Further to SD-018, where directed by the Contract Administrator, excavate the sub-grade to allow the top of the insulation to be installed flush with the surrounding sub-grade. Install the insulation on a level surface centered over the located watermain or water service for the full width of the roadway excavation. Install sand bedding if required to level the surface.
- E14.8 Stockpile and dispose of excavated material in accordance with CW 3110.
- E14.9 Total width of insulation to be as directed by the Contract Administrator. Place sufficient full width panels to meet or exceed the specified width.
- E14.10 Place insulation panels adjacent to each other over the specified area with no gaps between panels and less than 15mm of elevation difference along the adjoined edges.
- E14.11 Use full panels of insulation where possible. Where necessary cut insulation panels to obtain coverage to specified lengths. Insulation pieces shall be a minimum of dimension of 300 mm in width or length.
- E14.12 Take appropriate measures to ensure panels are not displaced when installing geotextiles and during backfilling operations.

MEASUREMENT AND PAYMENT

- E14.13 Watermain and Water Service Insulation shall be measured on an area basis and paid for at the Contract Unit Price per square metre of "Watermain and Water Service Insulation". The area to be paid for shall be the total square meters of watermain and water service insulation supplied and installed in accordance with this specification, accepted and measured by the Contract Administrator.
- E14.14 Excavation of the roadway subgrade in accordance with E14.6 will not be measured for payment and will be included in the payment for "Watermain and Water Service Insulation".

E15. EXISTING STREET CAR TRACK BEDDING

DESCRIPTION

- E15.1 General
 - E15.1.1 This Specification covers the removal of existing street car track bedding on Selkirk Avenue within project limits.
- E15.2 Definitions
 - E15.2.1 Street Car Track Bedding – The concrete bedding, including wooden ties, for the two sets of street car tracks previously located in the centre lanes of Selkirk Avenue. The concrete bedding is estimated to be approximately 2.7 metres wide by 0.6 metres thick.
- E15.3 Referenced Standard Construction Specifications
 - E15.3.1 CW 1130 – Work Site Requirements.

CONSTRUCTION METHODS

- E15.4 Removal of Existing Street Car Track Bedding
 - E15.4.1 Remove the existing concrete bedding by demolishing, loading, hauling and disposing of the existing concrete bedding, including ties and any other materials encountered from the site.
- E15.5 Dispose of the removed bedding in accordance with Section 3.4 of CW 1130.

MEASUREMENT AND PAYMENT

E15.6 Removal of Existing Street Car Track Bedding

- E15.6.1 Removal of Existing Street Car Track Bedding shall be measured on a cubic metre basis and paid for at the Contract Unit Price for "Removal of Existing Street Car Track bedding", which price shall be payment in full for completing all operations herein described and all other items incidental to the work included in this Specification, accepted and measured by the Contract Administrator.

E16. PAVER GRATE

DESCRIPTION

E16.1 General

- E16.1.1 This Specification covers all operations relating to the supply and installation of suspended pavement type tree grates as shown on drawings and as specified.

- E16.1.2 The Work to be done by the Contractor under this Specification shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools, supplies, and all things necessary for and incidental to the satisfactory performance and completion of all Works as hereinafter specified.

SUBMITTALS

- E16.2 Contractor shall submit two set(s) of drawings of tree grates and frames for review by Contract Administrator prior to purchase and installation.

DELIVERY, STORAGE AND HANDLING

- E16.3 Store product in manufacturer's packaging until ready to install

- E16.4 Store protected from weather and excess moisture.

MATERIALS

E16.5 General

- E16.5.1 All materials supplied under this Specification shall be subject to inspection and acceptance by the Contract Administrator.

E16.6 Paver Grate

- E16.6.1 Manufacturer: Paver grates shall be as manufactured by IRONSMITH, INC., 41-701 Corporate Way, Unit 3, Palm Desert, CA 92260 (800) 338-4766, and as supplied by Park Street Solutions Inc, or equal as approved by the Contract Administrator, in accordance with B6:

Park Street Solutions Inc.
23-500 Fairway Road S, Suite 166
Kitchener, ON N2C 1X3
Contact: Kevin Bettridge
Ph: 1-888-788-7408
Email: Kevin@parkst.ca

- E16.6.2 Paver grates shall be: Model 4172 1220mm (48") x 1830 (72") galvanized steel Paver-Grate(tm) paver suspension system in halves with CUSTOM 724mm (28.5") tree opening or equal as approved by the Contract Administrator, in accordance with B6.

- E16.6.3 Suspended paver type tree grates shall be manufactured from standard steel shapes to ASTM A36 and expanded metal grating 3# to ASTM A569/569M. If required, Tubing to ASTM A500. Units shall be manufactured true to design and all components shall fit together in a satisfactory manner. Grates are to be of uniform quality, flat and free from distortion.

E16.6.4 Finish: Grates are to be supplied galvanized by hot spray and / or hot dip method.

CONSTRUCTION METHODS

E16.7 Preparation

E16.7.1 Clean surfaces thoroughly prior to installation.

E16.7.2 Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

E16.8 Installation

E16.8.1 Install materials and systems in proper relation with adjacent construction and with uniform appearance. Coordinate with work of other sections.

E16.8.2 Install grates where indicated on plans per details on plans and Manufacturer's instructions.

E16.8.3 Paver Grate Suspended pavement system footings must be flat and leveled so that grates do not rock or appear unstable before unit pavers are set. Footings are to be set to ensure that unit pavers over the paver suspension system are flush and level with the surrounding areas.

E16.8.4 Cover Paver Grate Suspended pavement system with permeable landscape fabric before setting unit pavers to permit sanding joints.

E16.8.5 Cut unit pavers to fit around tree opening ensuring a secure fit against Paver-Grate(tm) Suspended pavement system opening stop.

PROTECTION AND CLEANUP

E16.9 Do not allow any contamination of tree planting area. This includes, but is not limited to, construction debris, excess concrete, paint or other chemical contaminants.

E16.10 Do not allow water from new concrete to run off or wash onto tree grate exposed areas to prevent damage from concrete exudates, lime and efflorescence

E16.11 Touch up, repair or replace damaged products.

MEASUREMENT AND PAYMENT

E16.12 Paver Grates

E16.12.1 Supply and installation of paver grates will be measured on a unit basis and paid for at the Contract Unit Price per unit for "Supply and Install Paver Grates". The number of units to be paid for will be the total number of paver grates supplied, installed and for completing all operations herein described and all other items incidental to the work in accordance with this specification, accepted and measured by the Contract Administrator.

E16.12.2 Supply and installation of Permeable landscape fabric will be incidental to the supply and installation of paver grates.

E17. SITE AMENITIES

DESCRIPTION

E17.1 General

E17.1.1 This Specification covers all operations relating to the supply and installation of bicycle racks, planters and brackets and hanging planters for the ornamental poles and lights.

E17.1.2 The Work to be done by the Contractor under this Specification shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools, supplies, and all

things necessary for and incidental to the satisfactory performance and completion of all Works as hereinafter specified.

SUBMITTALS

- E17.2 Contractor shall submit two set(s) of drawings of double arm post brackets for review by Contract Administrator prior to purchase and installation.

MATERIALS

E17.3 General

- E17.3.1 The Contractor shall be responsible for the supply, safe storage, handling and installation of all materials set forth in this Specification. All materials supplied under this Specification shall be subject to inspection and acceptance by the Contract Administrator.

E17.4 Site Amenities and Accessories:

- E17.4.1 Bicycle racks: Dero Heavy Duty Hoop Rack stainless steel with satin finish; surface mount, as supplied by Playgrounds-R-Us, or equal as approved by the Contract Administrator, in accordance with B6:

Playgrounds-R-Us
250 Transport Road
Box 7, GRP 582, RR. #5
Winnipeg, Manitoba R2C 2Z2
Ph: 204-632-7000
Contact: Michael Lacroix

- E17.4.2 Planters: Barkman Santa Fe GFRC 1830mm x 750mm x 750mm (72"x30"x30"), Product No. 105400, Rectangular Planter; Colour: Flagstone as supplied by Barkman, or equal as approved by the Contract Administrator, in accordance with B6:

Barkman
909 Gateway Rd.
Winnipeg, MB R2K 3L1
Ph: 204-986-5505
Contact: Anthony Militano, Commercial Product Consultant
Email: Amilitano@barkmanconcrete.com

- E17.4.3 Double Armed Post Brackets: 500mm Double Arm Post Brackets Flat Steel; Arm Length 500mm; Bracket Height 380mm; Finish: Powder Coated; Colour: Black, as supplied by StressCrete Group, or equal as approved by the Contract Administrator, in accordance with B6:

StressCrete Group
840 Walkers Line
P.O. Box 7
Burlington, ON L7R 3X9
Ph: 905-632-8116
Email: sales@stresscrete.com

- E17.4.4 Hanging baskets for existing ornamental light standards: Planters Unlimited 560mm (22") English Garden Flat Steel Hanging Basket with Coco Liner and Chain including 560mm (22") Fibreglass Insert; Colour: Black, as supplied by Planters Unlimited by Hooks and Lattice, or equal as approved by the Contract Administrator, in accordance with B6:

Planters Unlimited by Hooks and Lattice
6088 Corte Del Cedro,
Carlsbad, CA 92011
Ph: 760-707-5400
Email: sales@plantersunlimited.com

- E17.4.5 Hanging baskets for new ornamental poles: Urbanscape Self Watering Planters – Breeze Hanging Planter (20”) with Chains. Colour: Graphite, as supplied by Urbanscape Self Watering Planters, or equal as approved by the Contract Administrator, in accordance with B6:

Urbanscape Self Watering Planters
337 Campbell Street,
Winnipeg, MB, R3N 1B6
Ph: 204-770-6568
Contact: Peter Klym
Email: info@urbanscapeplanters.com

CONSTRUCTION METHODS

E17.5 Bicycle Racks

- E17.5.1 Surface mount bicycle racks on concrete footings as indicated on the Construction Drawings. Follow manufacturer’s instructions for surface mounting of bicycle racks.

- E17.5.2 Insure all bicycle racks are level during and after installation.

E17.6 Planters

- E17.6.1 Surface mount planters on concrete slab.

- (a) Bolt the planter onto the concrete slab with two stainless steel bolts. Place a stainless steel washer between the planter and the concrete.

E17.7 Double Armed Post Brackets

- E17.7.1 Mount double armed post brackets on existing ornamental standards to height as indicated on the Construction Drawings and as per manufacturer’s specifications.

E17.8 Hanging baskets

- E17.8.1 Insert coco liner into hanging basket for existing ornamental light standard.

- E17.8.2 If fiberglass insert does not have a drainage hole, drill a 10mm hole into bottom prior to inserting into coco liner.

- E17.8.3 Fill all hanging baskets with imported topsoil to within 30mm of top, tamp soil down.

- E17.8.4 Hang baskets on brackets to the height as indicated on the Construction Drawings.

MEASUREMENT AND PAYMENT

E17.9 Site Amenities

- E17.9.1 Bicycle racks, planters, double armed post brackets and hanging baskets will be measured on a unit basis and paid for at the Contract Unit Prices per each for “Bicycle Racks”, “Planters”, “Double Armed Post Brackets” and “Hanging Baskets for Existing Ornamental Light Standards”, and “Hanging Baskets for Ne Ornamental Poles”, which price shall be payment in full for supplying and installing all materials and for completing all operations herein described and all other items incidental to the work included in this Specification, accepted and measured by the Contract Administrator.

E18. IMPORTED TOPSOIL

DESCRIPTION

- E18.1 General

- E18.1.1 This Specification shall amend and supplement City of Winnipeg Standard Specification CW 3540 "Topsoil and Finish Grading for Establishment of Turf Areas" and covers all operations relating to the supply, preparation and placement of topsoil.
- E18.1.2 The Work to be done by the Contractor under this Specification shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools, supplies, and all things necessary for and incidental to the satisfactory performance and completion of all Works as hereinafter specified.
- E18.2 Quality Control
- E18.2.1 Testing and Samples:
- (a) Submit to the Contract Administrator analyses of soil base to be used in creating growing medium, obtained for at least three separate samples taken from each area of the site. The analysis shall be carried out by a qualified soil testing laboratory and shall include the percentage of organic material by weight, as well as recommendations for fertilizers and/or other soil ameliorants. Minimum sample size to be 1 kg for each separate sample taken from each area of the site.
 - (b) Soil testing shall determine N, P, K, Na, Cl, Ca, Mg, organic matter, C.E.C., pH, bulk density and C/N ratio.
- E18.2.2 Deliver and store fertilizer in waterproof bags showing weight, analysis and name of manufacturer. Minimum sample size to be 1 litre.

MATERIALS

- E18.3 General
- E18.3.1 The Contractor shall be responsible for the supply, safe storage and handling of all materials set forth in this Specification. All materials supplied under this Specification shall be subject to inspection and acceptance by the Contract Administrator.
- E18.3.2 Imported topsoil and fertilizer shall conform to CW 3540.
- E18.3.3 Fertilizer: chemical fertilizers shall have N-P-K compositions as recommended by an agricultural soil testing laboratory approved by the Contract Administrator, provided for each of the following:
- (a) Horticultural annual flowers
- E18.3.4 Chemical Herbicide Application: Roundup or similar chemical herbicide approved by Agriculture Canada. Use only with the approval of the Contract Administrator.
- E18.3.5 Wood Chip Mulch:
- (a) Wood chip mulch shall be chipped ash, maple, poplar, birch and other deciduous trees. Mulch shall be chipped to sizes ranging from 50mm to 100mm. Mulch may contain stringy twigs and seed, free of non-organic material, wood preservatives or diseased wood. The mulch shall contain no more than 5% of the following materials in total: soil, sawdust, peatmoss, coniferous wood and needles.
 - (b) The Contractor shall supply a wood chip mulch sample to the Contract Administrator for approval prior to installation. Minimum sample size to be 1 kg.

CONSTRUCTION METHODS

- E18.4 Imported Topsoil:
- E18.4.1 Installation of imported topsoil in planters and hanging baskets, including placing topsoil, applying fertilizer shall conform to CW 3540-R5.
- E18.4.2 Install imported topsoil in hanging baskets to within 30mm of top and in planters to within 50mm of top.
- E18.5 Fertilizer:

- E18.5.1 Fertilize trees using slow-release organic fertilizers (nitrates and phosphates) suitable for deciduous trees.
- E18.5.2 Apply fertilizer at rates determined by the sub-soil analysis.
- E18.5.3 Incorporate slow-release organic fertilizers into hanging baskets and planters suitable for growing annual flowers.
- E18.6 Wood Chip Mulch: supply and install 75 mm deep deciduous wood chip mulch in all tree wells as shown on the Construction Drawings. Wood chip mulch to be pulled away from trunks of all trees.

MEASUREMENT AND PAYMENT

- E18.7 Imported Topsoil
 - E18.7.1 Supply and installation of Imported topsoil shall be made on an unit basis and paid for at the Contract Unit Price per cubic metre placed at the specified depth for "Imported Topsoil", which payment shall be considered compensation in full for the supply of all materials and the performing of all operations necessary to complete the Work as specified including any items incidental to the Work of this specification.
- E18.8 Supply and application of fertilizers will be incidental to the installation of topsoil.
- E18.9 Wood Chip Mulch:
 - E18.9.1 Supply and installation of wood chip mulch shall be made on an unit basis and paid for at the Contract Unit Price per cubic metre placed at the specified depth for "Wood Chip Mulch", which payment shall be considered compensation in full for the supply of all materials and the performing of all operations necessary to complete the Work as specified including any items incidental to the Work of this specification.

E19. CATCH BASIN FLOW RESTRICTORS

DESCRIPTION

- E19.1 General
 - E19.1.1 The work included in this specification includes the supply and installation of PVC flow restrictors in new catch basins.

REFERENCED SPECIFICATIONS

- E19.2 City of Winnipeg Standard Construction Specifications
 - E19.2.1 CW 2130 – Gravity Sewers
 - E19.2.2 CW 2160 – Concrete Underground Structure and Works

MATERIALS

- E19.3 Flow restrictors
 - E19.3.1 PVC SDR35 piping in accordance with City of Winnipeg Standard No. AT-4.2.2.10: Extruded Polyvinyl Chloride (PVC) Connection Sewer Pipe in Diameters 150 mm (6") and 200 mm (8").
- E19.4 Grout
 - E19.4.1 Grout in accordance with CW 2160 – Concrete Underground Structure and Works

CONSTRUCTION METHODS

- E19.5 Installation

- E19.5.1 Cut sewer piping of the specified diameter to 300 mm in length square to the pipe. The restrictor pipe shall not include the pipe bell.
- E19.5.2 File each cut end smooth.
- E19.5.3 Coat inside of the catch basin lead and outside of the restrictor pipe with an approved cementing agent and coat with sand prior to grouting.
- E19.5.4 Insert the restrictor pipe into the catch basin pipe and grout in place, maintaining the restrictor pipe centered in the catch basin lead. Grout on the outlet end of the restrictor pipe shall be square to the pipe.

MEASUREMENT AND PAYMENT

- E19.6 Catch Basin Flow Restrictors
 - E19.6.1 Supply and installation of Catch Basin Flow Restrictors will be measured on a unit basis and paid for at the Contract Unit Price for " Catch Basin Flow Restrictors", for each catch basin flow restrictor acceptably installed, which price shall be payment in full for supplying all materials and for completing all operations herein described and all other items incidental to the work included in this Specification.

E20. SAWCUTTING

DESCRIPTION

- E20.1 Further to CW 3240-R8, the Contractor will be required to sawcut the existing concrete sidewalk full depth as follows:
 - E20.1.1 At the back of sidewalk along the face of the existing buildings so as not to damage the face of the buildings during removal.
 - E20.1.2 In the event of damage to any buildings by the Contractor, the Contractor shall immediately notify the Contract Administrator and make all repairs or replacements necessary, at his own expense, to the satisfaction of the Contract Administrator and the Owner of the building.

MEASUREMENT AND PAYMENT

- E20.2 All costs in connection with the above sawcutting are incidental and shall be included in the Contract Unit Price for "Miscellaneous Concrete Slab Removal, i) 100 mm Sidewalk (includes paving stone)".

E21. REMOVAL AND RE-INSTALLATION OF GAS METER BOLLARDS

DESCRIPTION

- E21.1 General
 - E21.1.1 This specification covers the removal, salvaging and re-installation of existing MB Hydro Gas Meter Bollards.

CONSTRUCTION METHODS

- E21.2 Removal and Salvage of Gas Meter Bollards
 - E21.2.1 Existing MB Hydro gas meter bollards designated for removal to facilitate construction shall be carefully removed and salvaged. All components and all hardware shall be salvaged for reuse and stockpiled at locations designated by the Contractor Administrator.
 - E21.2.2 In the event of damage to any materials by the Contractor, the Contractor shall immediately notify the Contract Administrator and make all repairs or replacements

necessary, at his own expense, to the satisfaction of the Contract Administrator. In no case shall the Contractor reinstall a damaged component.

E21.3 Re-Installation of Salvaged Gas Meter Bollards

E21.3.1 Re-Install salvaged gas meter bollards to the satisfaction of the Contract Administrator and MB Hydro Gas Division.

MEASUREMENT AND PAYMENT

E21.4 Remove and Reinstall Salvaged Gas Meter Bollards

E21.4.1 The removal and reinstall of salvaged gas meter bollards are incidental to the removal of the sidewalk and shall be included in the Contract Unit Price for "Miscellaneous Concrete Slab Removal, i) 100 mm Sidewalk (includes paving stone)".

E22. CONNECTING TO EXISTING SEWERS

DESCRIPTION

E22.1 General

E22.1.1 This specification is in addition to CW 2130 for the catch basin connections to the combined brick and lined sewers along Selkirk Avenue.

CONSTRUCTION METHODS

E22.2 Coring into Brick and Lined Combined Sewers

E22.2.1 Connect to existing lined and brick sewers where no fitting is provided by coring a circular hole in the existing sewer a maximum of 25 millimetres larger than the sewer service pipe to be connected. Insert a short piece of sewer service pipe into the hole with the bell end resting on the outside of the existing sewer pipe. Grout around and between the sewer or service pipe bell and the existing sewer pipe wall with mortar in accordance with SD-009 or construct a concrete collar in accordance with the Drawings to make a watertight connection.

E22.2.2 Limit excavation around the sewers to only what is required to make the connection. Fill any voids with grout or cement stabilized fill.

E22.2.3 No pneumatic or impact tools shall be used to make the connection.

E22.2.4 The Contractor shall notify the Contract Administrator immediately if there is damage to the sewers. All costs associated with the repair shall be at the Contractor's expense.

MEASUREMENT AND PAYMENT

E22.3 Connecting to Existing Sewers

E22.3.1 Connecting to existing sewers will be measured on a unit basis and paid for at the Contract Unit Price for each sewer service connection for the "Items of Work", listed here below, which price shall be payment in full for supplying all materials and for completing all operations herein described and all other items incidental to the work included in this Specification, CW 2130, and accepted and measured by the Contract Administrator.

(a) Items of Work

(i) Connecting to Existing Sewers

- ◆ 250 mm PVC to 600mm Lined Combined Sewer
- ◆ 250 mm PVC to 900mm x 1350mm Brick Combined Sewer
- ◆ 250 mm PVC to 1000mm x 1500mm Brick Combined Sewer

E23. MERCHANT HOTEL TEMPORARY SIDEWALK

DESCRIPTION

E23.1 General

- E23.1.1 This specification covers the placement and maintenance of temporary asphalt sidewalk around the Merchant Hotel property (541 Selkirk Avenue) for the duration of the project including the warranty period in accordance with CW 3410.
- E23.1.2 At the end of the warranty period the Contractor is to remove the temporary sidewalk and place permanent 100mm concrete sidewalk and paving stone bands. Permanent Concrete sidewalk to be placed in accordance with CW 3325.

CONSTRUCTION METHODS

E23.2 Temporary Asphalt Sidewalk

- E23.2.1 The Contractor shall place and maintain the temporary asphalt sidewalk around the Merchant Hotel property once the weeping tile work has been completed by others.
- E23.2.2 It is the Contractor's responsibility to maintain the sidewalk for the duration of the project including during the 2 year warranty period.

E23.3 Permanent Concrete Sidewalk

- E23.3.1 At the end of the 2 year warranty period the Contractor shall remove the temporary sidewalk, place compacted base course and construct 100 mm concrete sidewalk in accordance with CW 3325.
- E23.3.2 The replacement of the temporary sidewalk with permanent concrete sidewalk after the 2 year warranty period shall be exempt of an additional 2 year warranty period.

MEASUREMENT AND PAYMENT

E23.4 Temporary Asphalt Sidewalk

- E23.4.1 Temporary Asphalt Sidewalk will be measured on a unit basis and paid for at the Contract Unit Price for per tonne placed to construct and maintain the sidewalk at the "Contract Unit Price for Construction of Asphaltic Concrete Pavement i) Tie-ins and Approaches ", listed here below, which price shall be payment in full for supplying all materials and for completing all operations herein described and all other items incidental to the work included in this Specification, CW 3410, and accepted and measured by the Contract Administrator.

E23.5 Permanent Concrete Sidewalk

- E23.5.1 Permanent Concrete Sidewalk will be measured on a unit basis and paid for at the Contract Unit Price for per square meter placed to construct the sidewalk at the "Contract Unit Price for Miscellaneous Concrete Slab Installation i) 100 mm Sidewalk", listed here below, which price shall be payment in full for supplying all materials and for completing all operations herein described and all other items incidental to the work included in this Specification, CW 3410, and accepted and measured by the Contract Administrator.

E24. TEMPORARY PARKING LOT ACCESS

DESCRIPTION

E24.1 General

- E24.1.1 This specification covers the removal, salvage and reinstallation of existing fences between 472 to 484 Selkirk Avenue and 518 to 530 Selkirk Avenue to provide access to existing properties from the back lanes during construction as indicated on the Drawings.

E24.1.2 The existing fence between 472 and 484 Selkirk Avenue is a wood rail parking fence.

E24.1.3 The existing fence between 518 and 530 Selkirk Avenue is a chain link fence.

CONSTRUCTION METHODS

E24.2 Removal and Salvage of existing fence

E24.2.1 The Contractor shall carefully dismantle the existing fence and carefully remove and salvage the existing posts.

E24.2.2 The Contractor shall clean all material from the posts in preparation for the reinstallation.

E24.2.3 All components and all hardware shall be salvaged for reuse and stockpiled at locations designated by the Contractor Administrator.

E24.2.4 In the event of damage to any materials by the Contractor, the Contractor shall immediately notify the Contract Administrator and make all repairs or replacements necessary, at his own expense, to the satisfaction of the Contract Administrator. In no case shall the Contractor reinstall a damaged component.

E24.2.5 The Contractor shall place temporary asphalt ramps to alleviate vertical pavement obstructions to the satisfaction of the Contract Administrator.

E24.3 Re-Installation of existing fence

E24.3.1 Re-Install salvaged fencing to the satisfaction of the Contract Administrator.

MEASUREMENT AND PAYMENT

E24.4 Remove, Salvage and Re-Installation of Existing Fence

E24.4.1 Removal and Salvage of existing fence will be measured on a linear meter basis and paid for at the Contract Unit Price per metre for "Removal and Salvage of Existing Fence". The total length of the parking fence paid for will be the total number of meters of fence removed and salvaged in accordance with this Specification as accepted and measured by the Contract Administrator.

E24.4.2 Re-Installation of existing fence will be measured on a linear meter basis and paid for at the Contract Unit Price per metre for "Re-Installation of Existing Fence". The total length of the parking fence paid for will be the total number of meters of fence reinstalled in accordance with this Specification as accepted and measured by the Contract Administrator.

E24.5 Temporary Asphalt

E24.5.1 Measurement and payment shall be in accordance with CW 3410.

E25. TREE REMOVAL

E25.1 Further to CW 3010 - Clearing and Grubbing, tree removal including the roots shall be measured on a unit basis for the number of trees (larger than 75 mm in diameter) removed in accordance with CW 3010. Payment shall be at the Contract Unit Price bid for "Tree Removal" measured as specified herein for the total number of trees removed in accordance with this Specification, accepted and measured by the Contract Administrator.

E25.2 The Contractor shall identify trees that may be affected by Work and inform the Contract Administrator of trees that need to be removed. No trees shall be removed from the project without written approval from the Contract Administrator.

E26. ORNAMENTAL POLES AND PRECAST CONCRETE POLE BASES

DESCRIPTION

E26.1 General

- E26.1.1 This Specification covers all operations relating to the supply and installation of ornamental poles and precast concrete pole bases as shown on drawings and as specified.
- E26.1.2 The Work to be done by the Contractor under this Specification shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools, supplies, and all things necessary for and incidental to the satisfactory performance and completion of all Works as hereinafter specified.

SUBMITTALS

- E26.2 Contractor shall submit two set(s) of drawings of ornamental posts and precast concrete pole bases for review by Contract Administrator prior to supply and installation.

MATERIALS

E26.3 General

- E26.3.1 The Contractor shall be responsible for the supply, safe storage and handling of all materials set forth in this Specification. All materials supplied under this Specification shall be subject to inspection and acceptance by the Contract Administrator.

E26.4 Ornamental Poles

- E26.4.1 Ornamental poles shall be manufactured and supplied by King Luminaire, or equal as approved by the Contract Administrator, in accordance with B6:

King Luminaire part of StressCrete Group
840 Walkers Line
P.O. Box 7
Burlington, ON L7R 3X9
Contact: Kyle Jackman, Regional Sales Manager
Ph: 905-632-8116
Email: kjackman@stresscrete.com

- E26.4.2 Ornamental poles to be KMRF-21-FPH, round one-piece tapered aluminum pole. The poles shall be 6.4m (21') in height with a 152mm (6") O.D. base tapering to 105mm (4.14") O.D. top, complete with base plate and double brackets for hanging baskets. Finish to be textured powder coated; Colour to be Standard Black. Or substitute approved in accordance with Substitution procedures.

- E26.4.3 The following to be incidental to the supply and installation of the Ornamental Poles:

- (a) Anchor bolts.
- (b) Top to be a round 150mm diameter ball finial.
- (c) Base plate cover to be finished in Standard Black.
- (d) Double brackets for hanging baskets to hold 22.68kg (50lbs) each.

E26.5 Precast Concrete Pole Bases

- E26.5.1 Precast concrete pole bases shall be manufactured and supplied by Barkman Concrete Ltd, or equal as approved by the Contract Administrator, in accordance with B6:

Barkman Concrete Ltd.
990 Gateway Rd.
Winnipeg, MB R2K 3L1
Contact: Josh B. Friesen, Product Consultant
Ph: 204-667-3310
Email: jfriesen@barkmanconcrete.com

- E26.5.2 Precast concrete pole bases to be Barkman Standard Base for 7.7m Street Light Poles with **CUSTOM** faceplate to match Ornamental Pole Baseplate. The base to be precast

concrete 400mm hexagon by 1680mm in length, complete with anchor bolts, or equal as approved by the Contract Administrator, in accordance with B6:.

E26.6 Base and Backfill

E26.6.1 Backfill and base material for precast concrete pole bases to be gravel, 20mm down limestone and pit run material.

CONSTRUCTION METHODS

E26.7 Excavation

E26.7.1 Ornamental poles and precast concrete pole bases shall be located as per construction drawings.

E26.7.2 Exact locations of the precast concrete pole bases for the ornamental poles shall be inspected and approved by the Contract Administrator prior to the excavation for the precast concrete pole bases.

E26.7.3 Excavation for precast concrete pole bases shall be done by auger, by hand or by other methods which may be necessary to install a concrete base as per this specification.

E26.7.4 The excavated hole shall be 200mm to 300mm larger than the precast concrete base.

E26.7.5 Depth of hole to include 150mm for gravel foundation.

E26.7.6 The precast concrete pole base excavation shall be kept dry at all times. The Contractor shall have on hand sufficient pumps to satisfy this requirement.

E26.7.7 Rocks or boulders hindering the continuation of drilling shall be removed in whole or part, using approved method.

E26.8 Installation of Precast Concrete Pole Bases

E26.8.1 Remove all loose debris from the excavation.

E26.8.2 Install 150mm foundation of gravel in bottom of hole and compact to 95% standard proctor density.

E26.8.3 Set the precast concrete pole base into final location, level, true and plumb.

E26.8.4 Set the top of the precast concrete pole base between 75mm to 100mm above finished design elevation.

E26.8.5 Brace the precast concrete pole base as required to maintain unit level, true and plumb until backfill has been placed and compacted.

E26.8.6 Backfill to be: 20mm down limestone. Place uniformly around perimeter of the precast concrete pole base in 150mm lifts. Compact each lift to 95% standard proctor density.

E26.8.7 The orientation of the concrete base shall be determined on site by the Contract Administrator prior to the installation of the pole base.

E26.9 Installation of Ornamental Poles

E26.9.1 The Contractor shall orient the ornamental poles as specified by the Contract Administrator.

E26.9.2 Mount ornamental poles on precast concrete pole bases plumb and true in all 4 directions, utilizing shims as required.

E26.9.3 Securely anchor poles to concrete piles as specified by the manufacturer.

E26.9.4 Following installation and final adjustment of the ornamental poles, Fill the space between the base plate and precast concrete pole base with Embeco non-shrink construction grout. Follow manufacturer's instructions.

- E26.9.5 Install top finial and base plate covers included with pole as per manufacturer's instructions.
- E26.9.6 Mount double armed post brackets on new ornamental poles to height as indicated on the Construction Drawings and as per manufacturer's specifications.
- E26.9.7 Touch up all chips and scratches on ornamental poles upon completion. Use identical finishing material and colour used on ornamental poles when delivered to site.

CLEANUP

- E26.10 Immediately on installation of all precast concrete pole bases and ornamental poles, the Contractor shall remove from site all equipment, timbers, shores, excavated material, rubbish, etc., caused by his operations, and leave the site clean.
- E26.11 The Contractor shall be responsible for making good all areas damaged by his operations in connection with this specification regardless of the limits of the Contract as shown on the drawings.

MEASUREMENT AND PAYMENT

- E26.12 Precast Concrete Pole Bases and Ornamental Poles
 - E26.12.1 Installation of precast concrete pole bases and ornamental poles will be measured on a unit bases and paid for at the Contract Unit Price per unit for "Supply and Installation of Precast Concrete Pole Bases" and "Supply and Installation of Ornamental Poles". The number of units to be paid for will be the total number of units installed in accordance with this specification, accepted and measured by the Contract Administrator.

SITE IMPROVEMENTS TO POWERS PLAZA

E27. SITEWORK DEMOLITIONS AND REMOVALS

DESCRIPTION

- E27.1 General
 - E27.1.1 This Specification shall supplement CW 3170 and shall cover the requirements for demolition, stockpile, removal and disposal wholly or in part of various items designated to be removed or partially removed.
 - E27.1.2 The Work to be done by the Contractor under this Specification shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools, supplies and all things necessary for and incidental to the satisfactory performance and completion of all Work as hereinafter specified.

REFERENCED SPECIFICATIONS

- E27.2 City of Winnipeg Standard Construction Specifications
 - E27.2.1 CW 3170 - Earthwork and Grading
 - E27.2.2 CW 2030 - Excavation Bedding and Backfill

EQUIPMENT

- E27.3 All equipment shall be of a type approved by the Contract Administrator and shall be kept in good working order.
- E27.4 The size, weight, and destructive capabilities of the equipment shall be matched to the type of removal to be done

CONSTRUCTION METHODS

E27.5 Scope of Work

E27.5.1 The Work under this Specification shall include the following items as shown within the limit of Work on the Drawings or otherwise directed by the Contract Administrator:

- (a) Removal and stockpile pavers in blockout for re-use.
- (b) Remove concrete sidewalk including paving stones, curb and asphalt/pavement to the depths required as shown on the Drawings.
- (c) Remove sod and topsoil to depths required.
- (d) Remove benches and frames attached to existing planters.
- (e) Remove benches.
- (f) Remove wood bollards.
- (g) Remove wood sign.

E27.6 Fees and Permits

E27.6.1 Further to C6.12 the Contractor shall obtain and pay for all licenses and permits necessary for the demolition work.

E27.6.2 The Contractor shall comply with all Municipal, Provincial, and Federal Government regulations relating to the demolition of structures.

E27.7 Safety Precautions

E27.7.1 The Contractor shall provide flagmen, barricades, railings, and whenever necessary, warning signs at excavation holes, plywood access ramps and /or other construction necessary to secure the safety of workers, the public, and personnel alike and shall comply with all Provincial Statutes applicable to the Work of this nature. The Contractor shall provide all other protective measures as may be required by any law in force in Manitoba.

E27.8 Protection of Existing Items

E27.8.1 Protect existing items designated to remain. In event of damage to such items, immediately replace or make repairs to approval of the City and at no cost to the City.

E27.9 Preparation of Site

E27.9.1 Inspect Site and verify with Contract Administrator items designated for removal, disposal, and items to remain.

E27.9.2 Locate and protect all utility lines. Preserve in operating condition active utilities traversing Site.

E27.9.3 **Notify utility companies before starting demolition. Utilities to provide clearance before any excavation is done.**

E27.9.4 **Notify Geomatics Service Branch at 986-4826 to obtain clearance and mark survey infrastructure minimum of 72 hours before any excavation.**

E27.10 Stockpile

E27.10.1 Stockpile unit pavers on site for re-use. Keep whole pavers only and dispose of any pavers that are damaged.

E27.10.2 Place unit pavers on wood pallet, shrink-wrap and store at a safe and secure location.

E27.11 Removals

E27.11.1 Remove items as indicated on the Drawings and as directed by the Contract Administrator. Do not disturb adjacent items designated to remain in place.

E27.12 Disposal of Materials

E27.12.1 The Contractor shall promptly dispose of materials not designated for salvage or re-use in Work, off-site.

E27.12.2 Trim disposal areas to approval of Contract Administrator.

E27.13 Backfill

E27.13.1 Backfill in areas as indicated in accordance with Excavation Bedding and Backfill - CW 2030.

E27.14 Restoration

E27.14.1 Restore areas and existing works outside areas of demolition to match condition of adjacent undisturbed areas.

E27.15 Site Clean-Up

E27.15.1 Upon completion of Work, remove debris, trim surfaces and leave Work Site clean. Removal and Salvage of existing fence

MEASUREMENT AND PAYMENT

E27.16 Remove and Stockpile Pavers

E27.16.1 Removal and stockpile of pavers in blockout for re-use will be measured on a square meter basis and paid for at the Contract Unit Price per square metre for "Removal and Stockpile of Pavers". The total area of pavers removed and stockpiled for re-use paid for will be the total number of square meters of pavers removed and stockpiled in accordance with this Specification as accepted and measured by the Contract Administrator.

E27.17 Remove Concrete Sidewalk including Paving Stones, Curb, Asphalt/Pavement

E27.17.1 Remove concrete sidewalk including paving stones, curb and asphalt/pavement to the depths required will be measured on a square meter basis and paid for at the Contract Unit Price per metre for "Remove Concrete Sidewalk including Paving Stones, Curb and Asphalt/Pavement". The total area of removed concrete sidewalk including paving stones, curb and asphalt/pavement paid for will be the total number of square meters of concrete sidewalk including paving stones, curb and asphalt/pavement removed in accordance with this Specification as accepted and measured by the Contract Administrator.

E27.18 Removal of Sod and Topsoil

E27.18.1 Removal of sod and topsoil to the depths required will be measured on a square meter basis and paid for at the Contract Unit Price per square metre for "Removal of sod and topsoil". The total area of removed sod and topsoil paid for will be the total number of square meters of sod and topsoil removed in accordance with this Specification as accepted and measured by the Contract Administrator.

E27.19 Removal of Benches and Frames

E27.19.1 Removal of benches and frames attached to existing planters, benches, wood bollards and wood sign required will be measured on a unit each basis and paid for at the Contract Unit Price per each item of work. The total number of removed benches and frames attached to existing planters, benches, wood bollards and wood sign paid for will be the total number of benches and frames attached to existing planters, benches, wood bollards and wood sign removed in accordance with this Specification as accepted and measured by the Contract Administrator.

E28. EARTH AND BASE WORKS

DESCRIPTION

E28.1 General

- E28.1.1 This specification shall cover all labour, materials, methods, equipment and accessories for the supply and installation of subgrade compaction, non-woven geotextile fabric, base course material – A Base, and moisture barrier.

REFERENCED SPECIFICATIONS

- E28.2 City of Winnipeg Standard Construction Specifications
- E28.2.1 CW 3110 – Sub-Grade, Sub-Base and Base Course Construction
- E28.2.2 CW 3130 – Supply and Install of Geotextile Fabrics

MATERIALS

- E28.3 General
- E28.3.1 All materials shall conform to CW 3110 and CW 3130.
- E28.4 Moisture Barrier
- E28.4.1 Moisture barrier: 6 mil. Poly.

CONSTRUCTION METHODS

- E28.5 General
- E28.5.1 All construction methods shall conform to CW 3110 and CW 3130.
- E28.6 Supply and Install Moisture Barrier
- E28.7 Place moisture barrier on top of compacted base course material prior to installation of CIP concrete sidewalk. Moisture barrier to be installed under areas where concrete sidewalk is to be painted with Acrylotex Decorative Pavement Coating. Coordinate location and extents of moisture barrier with Acrylotex installer.

MEASUREMENT AND PAYMENT

- E28.8 Sub-grade compaction
- E28.8.1 Measurement and payment shall be in accordance with CW 3110.
- E28.9 Geotextile Fabric
- E28.9.1 Measurement and payment shall be in accordance with CW 3130.
- E28.10 Base Course Material
- E28.10.1 Measurement and payment shall be in accordance with CW 3110.
- E28.11 6 mil. Poly Moisture Barrier
- E28.11.1 6 mil. Poly Moisture Barrier will be measured on a square meter basis and paid for at the Contract Unit Price per square metre for “6 mil. Poly Moisture Barrier”. The total area of 6 mil. Poly Moisture Barrier paid for will be the total number of square meters of 6 mil. Poly Moisture Barrier supplied and placed in accordance with this Specification as accepted and measured by the Contract Administrator.

E29. SITE CONCRETE

DESCRIPTION

- E29.1 General
- E29.1.1 Provide all labour, materials, methods, equipment and accessories for the construction of: barrier curb, modified barrier curb – curb and gutter at curb ramp, concrete sidewalk

including placement of sign base clamps, concrete blockout in sidewalk, concrete curb planter and concrete pile.

REFERENCED SPECIFICATIONS

- E29.2 The City of Winnipeg Standard Construction Specifications
- E29.2.1 CW 2160 – Concrete Underground Structures and Works
- E29.2.2 CW 3310 – Portland Cement Concrete Pavement Works
- E29.2.3 CW 3325 – Portland Cement Concrete Sidewalk

MATERIALS

- E29.3 All underground concrete material shall conform to CW 2160.
- E29.4 All surface concrete materials shall conform to CW 3310.

CONSTRUCTION METHODS

- E29.5 All construction methods shall conform to CW 2160, CW 3310 and CW 3325.
- E29.6 Ensure moisture barrier is in place prior to installation of concrete sidewalk.

MEASUREMENT AND PAYMENT

- E29.7 Barrier Curb and Ramp Curb
- E29.7.1 Measurement and payment shall be in accordance with CW 3310.
- E29.8 Concrete Sidewalk and Concrete Blockout in Sidewalk
- E29.8.1 Measurement and payment shall be in accordance with CW 3325.
- E29.9 Concrete Curb Planter
- E29.9.1 Concrete Curb Planter will be measured on a cubic meter basis and paid for at the Contract Unit Price per cubic metre for “Concrete Curb Planter”. The total area of Concrete Curb Planter paid for will be the total number of cubic meters of Concrete Curb Planter supplied and placed in accordance with this Specification as accepted and measured by the Contract Administrator.
- E29.10 Concrete Pile
- E29.10.1 Concrete Pile will be measured on an each unit basis and paid for at the Contract Unit Price per each unit for “Concrete Pile”. The total number of concrete piles paid for will be the total number concrete piles supplied and placed in accordance with this Specification as accepted and measured by the Contract Administrator.

E30. RUBBER SAFETY SURFACING

DESCRIPTION

- E30.1 General
- E30.1.1 Provide all labour, materials, methods, equipment and accessories for the supply and install of poured in place rubber safety surfacing.
- E30.1.2 All rubber surfacing must be installed to the manufacturer’s recommendation and to comply with the current CSA Safety Standards for impact and protective zones.
- E30.1.3 Upon completion of the project the Contractor must certify, and provide in writing, that the rubber safety surfacing has been installed according to the Manufacturer’s installation requirements, as well as complying with the CSA Safety Standards.

SUBMITTALS

E30.2 General

- E30.2.1 Product data for poured in place Rubber Safety Surfacing including description of: SBR base layer, EPDM top layer and binder.
- E30.2.2 Submit colour samples for review and approval.

MATERIALS

E30.3 General

- E30.3.1 Rubber Safety Surfacing must comply ASTM F1292-13 Standard Specification for Impact Attenuation of Surfacing Materials Within the Use Zone of Playground Equipment. Finished product shall meet or exceed current ASTM F1292 and CAN/CSA Z-614 for GMAX and HIC.
- E30.3.2 All materials utilized for base courses, geotextiles, or drainage systems must be as recommended by the rubber surfacing manufacturer. The Contractor shall provide the Contract Administrator with a detail construction description of the installation layers of materials and methods, within 72 hours of a request for the information.

E30.4 Course and Wear Course:

- E30.4.1 Base Layer (SBR): rubber from recycled tires made from Manitoba tires.
- E30.4.2 Top Layer (EPDM): coloured rubber, blue and brown.
- E30.4.3 Binder: aromatic binder.

E30.5 Supplier and Installer

- E30.5.1 Poured in place rubber surfacing to be supplied and installed by either:
 - (a) J&D Penner Ltd., ph. 204-895-8602.
 - (b) Rubaroc, Prairie Safety Surfacing, ph. 204-795-2807, or equal as approved by the Contract Administrator, in accordance with B6.

WARRANTY

- E30.6 Rubber Safety Surfacing shall be warranted for defects in materials and workmanship for a minimum of 5 years from the date of completed installation.

CONSTRUCTION METHODS

E30.7 General

- E30.7.1 All work is to be located and installed in accordance with the Drawings and suppliers specifications.
- E30.7.2 Installation of the rubber safety surfacing shall be installed by an experienced, certified rubber installer that has completed at least 10 installations. Provide certification prior to commencing Work.
- E30.7.3 Install play equipment in rubber areas prior to commencing rubber installation.
- E30.7.4 Coordinate with play equipment installer to ensure protective safety zones and fall height requirements are met. Rubber installer is ultimately responsible to ensure play equipment protective surfacing zones and applicable fall height safety requirements are built to required standards.
- E30.7.5 Obtain Contract Administrator's approval of base and compaction test results prior to installing rubber safety surface.
- E30.7.6 Do not install rubber when overnight temperature will fall below 5° Celsius (40°F).

- E30.7.7 Obtain Contract Administrator's approval of rubber installation. Repair any deficiencies noted immediately.
- E30.7.8 Conduct an impact attenuation test through a certified laboratory. Provide test results to confirm installed poured rubber safety surfacing or tile systems meets the requirements of ASTM F-1292-13. Rubber surfacing will not be accepted until test results are submitted and approved by the City of Winnipeg.

MEASUREMENT AND PAYMENT

E30.8 Rubber Safety Surfacing

- E30.8.1 The supply and installation of poured in place rubber surfacing will be measured on an each square metre basis and paid for at the Contract Unit Price per square metre for "Rubber Safety Surfacing". The total square metres of rubber surfacing paid for will be the total area supplied and placed in accordance with this Specification as accepted and measured by the Contract Administrator.

E31. PAVEMENT MARKING

DESCRIPTION

E31.1 General

- E31.1.1 Provide all labour, materials, methods, equipment and accessories for the supply and installation of Acrylotex Decorative Pavement Coating.

REFERENCED SPECIFICATIONS

- E31.2 CAN/CGSB-1.5M91, Low Flash Petroleum Spirits Thinner.
- E31.3 CGSB1-GP-12c-68, Standard Paint Colours.
- E31.4 CGSB1-GP-71-83, Method, of Testing Paints and Pigments.
- E31.5 CGSB1-GP-74M-79, Paint, Traffic, Alkyd.

SUBMITTALS

E31.6 General

- E31.6.1 Submit product data for paint including manufacturers specifications, and installation guidelines.

MATERIALS

E31.7 Paint

- E31.7.1 Paint: Acrylotex Decorative Pavement Coating available from California Products Corporation, or equal as approved by the Contract Administrator, in accordance with B6.
- E31.7.2 Colours: cape grey, orange, sahara sand, yellow, and white.

E31.8 Installer

- E31.8.1 Acrylotex Decorative Paint to be installed by the following local installer, approved by California Products Corporation: Cord's Park Mark Ltd., ph. 204-895-1471 or equal as approved by the Contract Administrator, in accordance with B6.

CONSTRUCTION METHODS

E31.9 Preparation

- E31.9.1 Verify to Contract Administrator that poly barrier between granular and concrete sidewalk is in place and to the satisfaction of the paint installer prior to concrete installation. Contractor will be responsible for replacing any concrete that does not meet this requirement, at no cost to the City.
- E31.9.2 Verify to Contract Administrator that concrete where paint is to be applied has not been chemically cured. Contractor will be responsible for replacing any concrete that does not meet this requirement, at no cost to the City.
- E31.10 Condition of Surfaces
- E31.10.1 Pavement surface to be dry, free from ponding water, frost, ice, dust, oil, grease and other foreign materials. Clean paved areas as necessary to achieve acceptable surface preparation.
- E31.11 Traffic Control
- E31.11.1 Barricade areas to be painted to all vehicular traffic during installation and until paint has cured.
- E31.12 Application
- E31.12.1 Install to manufacturers specifications.
- E31.12.2 Lay out pavement markings as indicated on the drawings. Obtain Contract Administrator approval prior to painting.
- E31.12.3 Unless otherwise approved by Contract Administrator, apply paint only when air temperature is above 10°C, wind speed is less than 60 km/h and no rain is forecast within the next 24 hours.
- E31.12.4 Apply paint evenly at rate recommended by manufacturer.
- E31.13 Tolerance
- E31.13.1 Pavement markings to be within plus or minus 6mm of dimensions indicated, straight and true and aligned with fixed features such as curbs, sidewalks and walls.
- E31.13.2 Remove incorrect pavement markings and re-apply at no extra cost to The City.
- E31.14 Protection of Completed Work
- E31.14.1 Protect pavement markings until dry.
- E31.15 Cleaning
- E31.15.1 Upon completion of installation, remove construction and accumulated environmental dirt, surplus materials, rubbish, tools and equipment barriers.

MEASUREMENT AND PAYMENT

- E31.16 Pavement Markings
- E31.16.1 The supply and installation of pavement markings will be measured on an each square metre basis and paid for at the Contract Unit Price per square metre for "Pavement Markings". The total square metres of pavement markings paid for will be the total area supplied and placed in accordance with this Specification as accepted and measured by the Contract Administrator.

E32. SITE FURNITURE

DESCRIPTION

- E32.1 General

- E32.1.1 Provide all labour, materials, methods, equipment and accessories for the supply and install of log steppers and basketball equipment.

SUBMITTALS

E32.2 General

- E32.2.1 Submit shop drawings for log steppers and basketball equipment. Indicate sizes, assembly, and installation details. Use Drawings and as-built field measurements to prepare shop drawings.

MATERIALS

E32.3 Log Stepper

- E32.3.1 28" log stepper model #173909 and 18" log stepper model #173908, direct bury as supplied from Landscape Structures ph. 204-632-7000, or equal as approved by the Contract Administrator, in accordance with B6.

E32.4 Basketball Equipment

- E32.4.1 Post: Douglas gooseneck heavy duty basketball standard, 4-1/2" O.D. pole, 4 ft. extension w/braces, 36" ground bury, Model No. 39180, or equal as approved by the Contract Administrator, in accordance with B6.
- E32.4.2 Backboard: Douglas FAL fan shaped aluminum backboard Model No. 39166, or equal as approved by the Contract Administrator, in accordance with B6.
- E32.4.3 Rim & Net: Douglas Dura Goal I durable steel ring goal incl. synthetic net Model No. 39159, or equal as approved by the Contract Administrator, in accordance with B6.
- E32.4.4 Basketball equipment shall be as supplied from: Douglas Sports Equipment ph. 1-800-553-8907, or equal as approved by the Contract Administrator, in accordance with B6.

CONSTRUCTION METHODS

E32.5 Preparation

- E32.5.1 All work is to be located and installed in accordance with the Drawings and manufacturers specifications.
- E32.5.2 All equipment to be installed plumb and true to correct elevations and location, as directed by the Contract Administrator. The Contractor shall confirm proposed locations of all site furnishings with Contract Administrator prior to installation.
- E32.5.3 All equipment to be carefully handled so that no parts will be bent, broken, or otherwise damaged. Contractor is responsible for replacing any damaged furnishings, prior to installation, at no cost to the City.

MEASUREMENT AND PAYMENT

E32.6 Log Stepper

- E32.6.1 The supply and installation for the Log Steppers will be measured on an each unit basis and paid for at the Contract Unit Price per each unit for "Log Stepper". The total number of log steppers to be paid for will be the total number log steppers supplied and placed in accordance with this Specification as accepted and measured by the Contract Administrator.

E32.7 Basketball Equipment

- E32.7.1 The supply and installation for the basketball equipment will be measured on an lump sum basis and paid for at the Contract Unit Price for "The supply and Installation of Basketball Equipment". The lump sum to be paid for will be the basketball equipment including the

pole set in the concrete pile, backboard, rim and net supplied and placed in accordance with this Specification as accepted and measured by the Contract Administrator.