



**THE CITY OF WINNIPEG**

# **BID OPPORTUNITY**

**BID OPPORTUNITY NO. 59-2018**

**MCDERMOT AVENUE AND BANNATYNE AVENUE ADJUSTABLE BIKE LANES**

**Note to Bidders: Please be aware of revisions to B13.4**

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## **PART B - BIDDING PROCEDURES**

### **B1. CONTRACT TITLE**

B1.1 McDERMOT AVENUE AND BANNATYNE AVENUE ADJUSTABLE BIKE LANES

### **B2. SUBMISSION DEADLINE**

B2.1 The Submission Deadline is 12:00 noon Winnipeg time, April 17, 2018.

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.
- B5.3 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>
- B5.4 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.
- B5.5 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 **and Form G3: Agreement to Bond – Labour and Material Payment, or**
    - (ii) Form G2: Irrevocable Standby Letter of Credit and Undertaking, or a certified cheque or draft **and Form G3: Agreement to Bond – Labour and Material Payment;**
- 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.
- 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 13 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).
- B9.5 Form B: Prices is organized into Parts: Part 1 of the Work and Part 2 of the Work. Bidders shall provide a total price for each Part and, on the summary sheet, a Total Bid Price consisting of the sum of prices for Part 1 and Part 2.

## **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) Barkman Concrete Ltd. Barkman Concrete Ltd. was involved in the Adjustable Bike Lane Curb pilot project and provided high level cost estimates for City budgeting purposes.

## **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) Written confirmation of a safety and health certification meeting SAFE Work Manitoba's SAFE Work Certified Standard (e.g., COR™ and SECOR™) or
  - (i) 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
  - (ii) 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
- (b) a report or letter to that effect from an independent reviewer acceptable to the City. (A list of acceptable reviewers and the review template are available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/>.)

B11.5 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) **and an 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 G3: Agreement to Bond - Labour and Material Payment);** 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) **and an 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 G3: Agreement to Bond - Labour and Material Payment);** 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 **and an 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 G3: Agreement to Bond - Labour and Material Payment).**

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), their address(es) 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 The Freedom of Information and Protection of Privacy Act (Manitoba), by other authorities having jurisdiction, or by law or by City policy or procedures (which may include access by members of City Council).
- B13.4.1 To the extent permitted, the City shall treat as confidential information, those aspects of a Bid Submission identified by the Bidder as such in accordance with and by reference to Part 2, Section 17 or Section 18 or Section 26 of The Freedom of Information and Protection of Privacy Act (Manitoba), as amended.

### **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 13 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 13 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](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.
- D1.2 Further to C1, where used in the Contract:
- (a) “**Government of Canada**” includes the authorized officials and representatives of the Government of Canada;
  - (b) “**Government of Manitoba**” includes the authorized officials and representatives of the Government of Manitoba.

#### D2. SCOPE OF WORK

- D2.1 The Work to be done under the Contract shall consist of:
- (a) Asphalt Resurfacing and Associated Works
    - (i) McDermot Avenue – Furby Street to Waterfront Drive
    - (ii) Bannatyne Avenue – Furby Street to Waterfront Drive
    - (iii) Ellen Street – McDermot Avenue to Bannatyne Avenue
  - (b) Pavement Widening, Curb Extensions, and Associated Works
    - (i) McDermot Avenue – Rorie Street to Waterfront Drive
    - (ii) Bannatyne Avenue – Main Street to Waterfront Drive
    - (iii) Ellen Street – McDermot Avenue to Bannatyne Avenue
    - (iv) Hargrave Street – McDermot Avenue to Bannatyne Avenue
    - (v) Adelaide Street – McDermot Avenue to William Avenue
  - (c) Adjustable Bike Lane Construction
    - (i) McDermot Avenue – Furby Street to Waterfront Drive
    - (ii) Bannatyne Avenue – Furby Street to Waterfront Drive
    - (iii) Ellen Street – McDermot Avenue to Bannatyne Avenue
  - (d) Asphalt Pathway Construction
    - (i) Hargrave Street – McDermot Avenue to Bannatyne Avenue
- D2.2 The major components of the Work are as follows:
- (a) Asphalt Resurfacing and Associated Works
    - (i) Plane asphalt;
    - (ii) Construct new drainage infrastructure;
    - (iii) Remove curb inlets and install new catch pits;
    - (iv) Concrete slab and partial slab repairs;
    - (v) Curb renewal;
    - (vi) Asphalt pavement renewal;
  - (b) Pavement Widening, Curb Extensions and Associated Works;
    - (i) Remove existing curb, curb ramps, and sidewalk;
    - (ii) Remove existing concrete medians;
    - (iii) Remove existing pavement;
    - (iv) Excavation;
    - (v) Placement of geotextile fabric;

- (vi) Placement and compaction of base and subbase material;
  - (vii) Construction of 200mm reinforced concrete;
  - (viii) Construction of 150mm barrier curb;
  - (ix) Construction of curb ramps;
  - (x) Placement of asphalt pavement Type 1A;
  - (xi) Construction of 100mm sidewalk;
  - (xii) Regrade existing paving stones; and
  - (xiii) Topsoil and sod.
- (c) Adjustable Bike Lane Construction
- (i) Construction of precast adjustable bike lane curbs and end units;
  - (ii) Construction of concrete median slabs;
  - (iii) Construction of sidewalk at bus stops;
  - (iv) Installation of precast adjustable bike lane curbs and end units;
  - (v) Placement of asphalt pavement Type 1A at bus stops;
  - (vi) Install bike racks; and
  - (vii) Install green bike lane treatments.
- (d) Asphalt Pathway Construction
- (i) Excavation;
  - (ii) Placement of geotextile fabric;
  - (iii) Placement and compaction of base and subbase material;
  - (iv) Placement of asphalt pavement Type 1A; and
  - (v) Topsoil and seed.

### **D3. CONTRACT ADMINISTRATOR**

D3.1 The Contract Administrator is AECOM Canada Ltd., represented by:

Kevin Rae, P. Eng.  
Senior Transportation Engineer  
Telephone No. 204 928-8430  
Email Address kevin.rae@aecom.com

D3.2 At the pre-construction meeting, Kevin Rae 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.

### **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 D6.4 or elsewhere in the Contract, shall be sent to the attention of the Contract Administrator identified in D3.1.
- D6.3 Notwithstanding C21, all notices of appeal to the Chief Administrative Officer shall be sent to the attention of the Chief Financial Officer at the following:
- The City of Winnipeg  
Attn: Chief Financial Officer  
Office of the Chief Administrative Officer  
Susan A. Thompson Building  
2nd Floor, 510 Main Street  
Winnipeg MB R3B 1B9
- D6.4 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications required to be submitted or returned to the City Solicitor shall be sent to the following facsimile number:
- The City of Winnipeg  
Legal Services Department  
Attn: Director of Legal Services  
Facsimile No.: 204-947-9155
- D6.5 Bids Submissions must not be submitted to this facsimile number. Bids must be submitted in accordance with B7.**

## **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) Wrap-up liability insurance in an amount of no less than two million dollars (\$2,000,000) inclusive per occurrence and five millions dollars (\$5,000,000) general aggregate, covering bodily injury, personal injury, property damage and products and completed operations, sudden and accidental environmental impairment liability, contractual liability and cross liability clauses. Such policy will be written in the joint names of the City, Contractor, Consultants and all sub-contractors and sub-consultants and include twenty-four (24) months completed operations after Total Performance. The Government of Manitoba and its Ministers, officers, employees and agents shall be added as additional insureds;
  - (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 and the Government of Manitoba 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 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 and to the Government of Manitoba.
- D10.5 All policies must be taken out with insurers licensed to carry on business in the Province of Manitoba.

#### **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.
- D11.3 In addition to the requirements of D11.1, the Contractor shall, until expiration of the warranty period, provide and maintain a labour and material payment bond of a company registered to conduct the business of a surety in Manitoba, in the form attached to these Supplemental Conditions (Form H3: Labour and Material Payment Bond), in the amount of fifty percent (50%) of the Contract Price, covering all work performed by the Contractor and Subcontractors.
- D11.4 With respect to all Subcontractors, the Contractor shall, as soon as practicable after entering into a contract with a Subcontractor, give the Subcontractor written notice of the existence of the labour and material payment bond referred to in D11.3.

## **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; and
  - (b) a Gantt chart for the Work based on the C.P.M. scheduleall 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; and
  - (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 commence the Work on the Site within seven (7) Working Days of receipt of the letter of intent.

### **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.

D15.1.3 When the Work includes two or more major types of Work that can be performed under different atmospheric conditions, the Contract Administrator shall consider all major types of Work in determining whether the Contractor was able to work in assessing Working Days.

### **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:

- (a) Downtown Bike Lane System and Street Improvements, 2018-2019 Pavement Renewals Princess Street – Notre Dame Avenue to William Avenue; Arthur Street – Notre Dame Avenue to McDermot Avenue; Notre Dame Avenue – Adelaide Street to Portage Avenue; Garry Street – Notre Dame Avenue to Portage Avenue; Garry Street – Portage Avenue to Assiniboine Avenue – Pavement resurfacing and reconstruction, construction of protected bike lanes and streetscaping;

- (b) 2017 Watermain Renewals Contract 8, Albert Street – Notre Dame Avenue to McDermot Avenue, installation of new watermain renewal on Albert Street, including connection of new watermain to existing watermain at the southwest corner of Albert Street and McDermot Avenue;
- (c) 2018 Watermain Renewals Contract 2 – Bannatyne Avenue Main Street to Waterfront Drive installation of new watermain renewal;
- (d) 2018 Northeast Exchange District Street Renewals – James Avenue and Waterfront Drive Pavement reconstruction, rehabilitation, streetscaping, and asphalt pathway construction including the construction of a raised intersection at McDermot Avenue and Waterfront Drive
- (e) Traffic Signals improvements at:
  - (i) McDermot Avenue and Isabel Street
  - (ii) McDermot Avenue and Ellen Street
  - (iii) McDermot Avenue and Hargrave Street
  - (iv) McDermot Avenue and King Street
  - (v) McDermot Avenue and Arthur Street
  - (vi) McDermot Avenue and Albert Street
  - (vii) McDermot Avenue and Main Street
  - (viii) Bannatyne Avenue and Rorie Street
  - (ix) Bannatyne Avenue and Main Street
  - (x) Bannatyne Avenue and King Street
  - (xi) Bannatyne Avenue and Hargrave Street
  - (xii) Bannatyne Avenue and Ellen Street
  - (xiii) Bannatyne Avenue and Isabel Street
- (f) Traffic Services – Pavement markings and signage installations
- (g) Winnipeg Parking Authority – removal and reinstallation of pay stations
- (h) Manitoba Hydro – installation of new street lights on Adelaide Street from Notre Dame Avenue to William Avenue, and McDermot Avenue from Rorie Street to Waterfront Drive
- (i) Manitoba Hydro – gas main realignment work at the northwest corner of McDermot Avenue and Furby Street – schedule to be determined.

## **D18. DOWNTOWN FESTIVALS**

- D18.1 The Contractor is advised that there are two festivals that will occur downtown in Summer 2018: the Winnipeg Jazz Festival on June 14-24, and the Winnipeg Fringe Festival on July 18-29. The Contractor shall not be allowed to commence any construction work immediately prior to or during these festivals in the Exchange District.

## **D19. SEQUENCE OF WORK**

- D19.1 Further to C6.1, the sequence of work shall be as follows:

- D19.1.1 The Work shall be divided into three stages and each stage shall have two sub-stages. . Work on each sub-stage must be completed before commencing work on the next.

- D19.1.2 **Stage 1** – Project Location: Bannatyne Avenue, McDermot Avenue, Hargrave Street and Adelaide Street between Dagmar Street and Main Street as described in D2.
- (a) **Stage 1A** – Stage 1A shall include all works on Bannatyne Avenue between Hargrave Street and Main Street, and all works on Adelaide Street between William Avenue and McDermot Avenue.
  - (b) **Stage 1B** – Stage 1B shall include all works on McDermot Avenue between Hargrave Street and Main Street, and all works on Adelaide Street between William Avenue and McDermot Avenue.
- D19.1.3 **Stage 2** – Project Location: Bannatyne Avenue and McDermot Avenue between Main Street and Waterfront Drive as described in D2.
- (a) **Stage 2A** – Stage 2A shall include all works on Bannatyne Avenue between Main Street and Waterfront Drive.
  - (b) **Stage 2B** – Stage 2B shall include all works on McDermot Avenue between Main Street and Waterfront Drive.
- D19.1.4 **Stage 3** – Project Location: Bannatyne Avenue and McDermot Avenue between Furby Street and Hargrave Street as described in D2.
- (a) **Stage 3** – Stage 3 shall include all works on McDermot Avenue and Bannatyne Avenue between Furby Street and Hargrave Street, all works on Ellen Street between Bannatyne Avenue and McDermot Avenue and all works on Hargrave Street between Bannatyne Avenue and McDermot Avenue.

## **D20. CRITICAL STAGES**

- D20.1 The Contractor shall achieve critical stages of the Work in accordance with the following requirements:
- (a) Work on Stage 1 construction shall be totally completed by June 14, 2019.
- D20.2 When the Contractor considers the Work associated with Stage 1 Construction to be completed, 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.
- D20.3 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 and Working Days will stop until the commencement of Stage 2 construction works.

## **D21. SUBSTANTIAL PERFORMANCE**

- D21.1 The Contractor shall achieve Substantial Performance within Sixty (60) consecutive Working Days of the commencement of the Work as specified in D14.
- D21.2 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.
- D21.3 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.

## **D22. TOTAL PERFORMANCE**

- D22.1 The Contractor shall achieve Total Performance within Sixty-Five (65) consecutive Working Days of the commencement of the Work as specified in D14.
- D22.2 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.
- D22.3 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.

## **D23. LIQUIDATED DAMAGES**

- D23.1 If the Contractor fails to achieve Critical Stages or Substantial 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 Construction – five thousand dollars (\$5,000.00);
  - (b) Substantial Performance – five thousand dollars (\$5,000.00);
    - (i) The amounts specified for liquidated damages in D23.1 are based on a genuine pre-estimate of the City's losses in the event that the Contractor does not achieve critical stages or Substantial Performance by the days fixed herein for same.
    - (ii) The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

## **D24. SCHEDULED MAINTENANCE**

- D24.1 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 CW 3250-R7;
  - (b) Sod Maintenance as specified in CW 3510-R9.
- D24.2 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**

### **D25. JOB MEETINGS**

- D25.1 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.
- D25.2 The Contract Administrator reserves the right to cancel any job meeting or call additional job meetings whenever he/she deems it necessary.

**D26. PRIME CONTRACTOR – THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA)**

D26.1 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).

**D27. THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA) – QUALIFICATIONS**

D27.1 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**

**D28. PAYMENT**

D28.1 Further to C12, the City may at its option pay the Contractor by direct deposit to the Contractor's banking institution.

**D29. ADDITIONAL REQUIREMENTS**

D29.1 Further to C12, the Contractor shall:

- (a) be responsible to properly account for the services or goods provided by the Contractor to the City in relation to the Work and payment received in this respect, prepared in accordance with generally accepted accounting principles in effect in Canada, including those principles and standards approved or recommended from time-to-time by the Chartered Professional Accountants of Canada or the Public Sector Accounting Board, as applicable, applied on a consistent basis.
- (b) preserve all accounting records, financial documents, copies of contracts with other parties and other records relating to the Work or to the Contract until at least March 31, 2026. Those materials bearing original signatures or professional seals or stamps must be preserved in paper form; other materials may be retained in electronic form.
- (c) keep available for inspection and audit at all reasonable times until at least 2026, all records, documents and contracts referred to in clause D29.1(b), for inspection and audit by the Government of Manitoba or the Government of Canada and their respective representatives and auditors, and to produce them on demand; to provide reasonable facilities for such inspections and audits, to provide copies of and extracts from such records, documents or contracts upon request by the City, the Government of Manitoba or the Government of Canada or their respective representatives or auditors, and to promptly provide such other information and explanations as may be reasonably requested by the City, the Government of Manitoba or the Government of Canada or their respective representatives or auditors, from time-to-time.

D29.2 If the *Lobbyists Registration Act* applies to the Contractor, represent and warrant that the Contractor has filed a return and is registered and in full compliance with the obligations of that Act and will continue to comply for the duration of this Contract.

D29.3 Further to C6.12, the Contractor shall comply with all applicable legislation and standards, whether federal, provincial or municipal, including (without limitation) labour, environmental and human rights laws, in the course of performing the Work.

D29.4 Further to C17, the Contractor shall indemnify and save the Government of Canada and the Government of Manitoba and each of their respective Ministers, officers, servants, employees and agents harmless from and against all claims and demands, losses, costs, damages, actions, suit or other proceedings brought or pursued in any manner in respect of any matter caused by the Contractor or arising from the Contract or by reason of the performance or purported performance of the Work by the Contractor, except those resulting from the

negligence of any of the Government of Canada's or the Government of Manitoba's Ministers, officers, servants, employees or agents, as the case may be.

## **WARRANTY**

### **D30. WARRANTY**

- D30.1 Notwithstanding C13.2, the warranty period shall begin on the date of Substantial Performance and shall expire one (1) year thereafter unless extended pursuant to C13.2.1 or C13.2.2, in which case it shall expire when provided for thereunder.
- D30.2 Notwithstanding C13.2 or D30.1, the Contract Administrator may permit the warranty period for a portion or portions of the Work to begin prior to the date of Total Performance if:
- (a) a portion of the Work cannot be completed because of unseasonable weather or other conditions reasonably beyond the control of the Contractor but that portion does not prevent the balance of the Work from being put to its intended use.
- D30.2.1 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. 59-2018

McDERMOT AVENUE AND BANNATYNE AVENUE ADJUSTABLE BIKE LANES  
which is by reference made part hereof and is hereinafter referred to as the "Contract".

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

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

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

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

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

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

**SIGNED AND SEALED**  
in the presence of:

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

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

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

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

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

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

**FORM H2: IRREVOCABLE STANDBY LETTER OF CREDIT  
(PERFORMANCE SECURITY)**  
(See D11)

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

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

RE: PERFORMANCE SECURITY – BID OPPORTUNITY NO. 59-2018

McDERMOT AVENUE AND BANNATYNE AVENUE ADJUSTABLE BIKE LANES

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

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

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

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

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

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

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

Partial drawings are permitted.

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

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

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

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

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

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

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

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

This credit is subject to the Uniform Customs and Practice for Documentary Credit (2007 Revision), International Chamber of Commerce Publication Number 600.

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

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

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

**FORM H3: LABOUR AND MATERIAL PAYMENT BOND**

(Page 1 of 2)

(See D11)

KNOW ALL MEN BY THESE PRESENTS THAT

\_\_\_\_\_  
his/its heirs, executors, administrators, successors or assigns (hereinafter called the "Principal"), and

\_\_\_\_\_  
his/its heirs, executors, administrators, successors or assigns (hereinafter called the "Surety"), are held and firmly bound unto **THE CITY OF WINNIPEG** (hereinafter called the "Obligee"), for the use and benefit of claimants as hereinbelow defined, in the amount of

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

of lawful money of Canada, for the payment whereof we, the Principal and the Surety jointly and severally bind ourselves firmly by these presents.

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

BID OPPORTUNITY NO. 59-2018

McDERMOT AVENUE AND BANNATYNE AVENUE ADJUSTABLE BIKE LANES

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 promptly make payment to all claimants as hereinafter defined, for all labour, service and material used or reasonably required for use in the performance of the Contract, then this obligation shall be void, otherwise it shall remain in full force and effect subject, however, to the following conditions:

- (a) A claimant is defined as one having a direct contract with the Principal for labour, service and material, or any of them, used or reasonably required for used in the performance of the contract, labour, service and material being construed to include that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental of equipment (but excluding rent of equipment where the rent pursuant to an agreement is to be applied towards the purchase price thereof) directly applicable to the Contract;
- (b) The above-named Principal and Surety hereby jointly and severally agree with the Obligee that every claimant as herein defined, who has not been paid in full before the expiration of a period of ninety (90) days after the date on which the last of such claimant's work, labour or service was done or performed, or materials were furnished by such claimant, may sue on this bond, prosecute the suit to final judgment for such sum or sums as may be justly due claimant, and have execution thereon;
- (c) No suit or action shall be commenced hereunder by any claimant
  - (ii) unless claimant shall have given written notice to the Principal and the Surety above-named, within one hundred and twenty (120) days after such claimant did or performed the last of the work, labour or service, or furnished the last of the materials for which said claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were furnished, or for whom the work, labour or service was done or performed. Such notice shall be served by mailing the same by registered mail to the Principal, and Surety, at any place where an office is regularly maintained for the transaction of business, or served in any manner in which legal process may be served in the Province of Manitoba;
  - (iii) after the expiration of one (1) year following the date on which Principal ceased work on said Contract; including work performed under the guarantees provided in the

Contract;

- (iv) other than in a court of competent jurisdiction in the Province of Manitoba.
- (d) The amount of this bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder, inclusive of the payment by Surety of mechanics liens which may be filed of record against said improvement, whether or not claim for the amount of such lien be presented under and against this bond.
- (e) The Surety shall not be liable for a greater sum than the specified penalty of this bond.

The Principal and Surety hereby agree that The Guarantors' Liability Act (Manitoba) shall apply to this Bond.

IN TESTIMONY WHEREOF, the Principal has hereunto set its hand affixed its seal, and the Surety has caused these presents to be sealed and with its corporate seal duly attested by the authorized signature of its signing authority this

\_\_\_\_\_ 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)



## 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>
P-3496-00	Cover Sheet	A1
P-3496-01	General Notes	A1
P-3496-02	McDermot Avenue – Station 9+980 to 10+290 –	A1
P-3496-03	McDermot Avenue – Station 10+290 to 10+470 – Plan and Profile	A1
P-3496-04	McDermot Avenue – Station 10+470 to 10+650 – Plan and Profile	A1
P-3496-05	McDermot Avenue – Station 10+650 to 10+830 – Plan and Profile	A1
P-3496-06	McDermot Avenue – Station 10+830 to 11+010 – Plan and Profile	A1
P-3496-07	McDermot Avenue – Station 11+010 to 11+190 – Plan and Profile	A1
P-3496-08	McDermot Avenue – Station 11+190 to 11+370 – Plan	A1
P-3496-09	McDermot Avenue – Station 11+370 to 11+560 – Plan and Profile	A1
P-3496-10	McDermot Avenue – Station 11+560 to 11+740 – Plan and Profile	A1
P-3496-11	Bannatyne Avenue – Station 19+950 to 20+300 – Plan	A1
P-3496-12	Bannatyne Avenue – Station 20+300 to 20+480 – Plan and Profile	A1
P-3496-13	Bannatyne Avenue – Station 20+480 to 20+660 – Plan and Profile	A1
P-3496-14	Bannatyne Avenue – Station 20+660 to 20+840 – Plan and Profile	A1
P-3496-15	Bannatyne Avenue – Station 20+840 to 21+020 – Plan and Profile	A1
P-3496-16	Bannatyne Avenue – Station 21+020 to 21+200 – Plan and Profile	A1
P-3496-17	Bannatyne Avenue – Station 21+200 to 21+380 – Plan and Profile	A1
P-3496-18	Bannatyne Avenue – Station 21+380 to 21+560 – Plan and Profile	A1
P-3496-19	Bannatyne Avenue – Station 21+560 to 21+700 – Plan and Profile	A1

<u>Drawing No.</u>	<u>Drawing Name/Title</u>	<u>Drawing (Original) Sheet Size</u>
P-3496-20	Ellen Street – Station 29+980 to 30+120 – Plan and Profile	A1
P-3496-21	Hargrave Street – Station 39+980 to 40+120 – Plan and Profile	A1
P-3496-22	Concrete, Bus-stop and Bike Facility Details	A1
P-3496-23	Curb Ramp, Indicator Strip, and Paver Details	A1
P-3496-24	McDermot Avenue – Station 9+980 to 10+290 – Signage and Pavement Markings	A1
P-3496-25	McDermot Avenue – Station 10+290 to 10+650 – Signage and Pavement Markings	A1
P-3496-26	McDermot Avenue – Station 10+650 to 11+010 – Signage and Pavement Markings	A1
P-3496-27	McDermot Avenue – Station 11+010 to 11+370 – Signage and Pavement Markings	A1
P-3496-28	McDermot Avenue – Station 11+370 to 11+740 – Signage and Pavement Markings	A1
P-3496-29	Bannatyne Avenue – Station 19+950 to 20+300 – Signage and Pavement Markings	A1
P-3496-30	Bannatyne Avenue – Station 20+300 to 20+660 – Signage and Pavement Markings	A1
P-3496-31	Bannatyne Avenue – Station 20+660 to 21+020 – Signage and Pavement Markings	A1
P-3496-32	Bannatyne Avenue – Station 21+020 to 21+380 – Signage and Pavement Markings	A1
P-3496-33	Bannatyne Avenue – Station 21+380 to 21+690 – Signage and Pavement Markings	A1
P-3496-34	Ellen Street and Hargrave Street – Signage and Pavement Markings	A1
P-3496-35	Adelaide Street – Station 50+000 to 50+300 – Signage and Pavement Markings	A1
P-3496-36	Adelaide Street – Station 50+300 to 50+393.95 and James Street – Signage and Pavement Markings	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 2.4m 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, one drafting table, table 3m x 1.2m, one stool, one four drawer legal size filing cabinet, 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 boulevard trees within the limits of the construction area:

- (a) The Contractor shall not stockpile materials and soil or park vehicles and equipment on boulevards 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, 3.7 and 3.8 of CW 1130:

- (a) Where directed by the Contract Administrator, 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 E5.1, 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:
- (a) 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 Regional Streets at any time unless approved by the Contract Administrator, in consultation with the Traffic Management Branch.
- E6.1.1 Maintain a minimum of one lane of traffic eastbound on McDermot Avenue (Stages 1B, 2A, and 3B) including during paving and milling operations. When no work is being performed on site, non-essential lane closures will not be permitted.
- E6.1.2 Maintain a minimum of one lane of traffic westbound on Bannatyne Avenue (Stages 1A, 2B, and 3A) 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 Maintain a minimum of one lane of traffic on Ellen Street, Hargrave Street, and Adelaide Street at all times during construction, including during paving and milling operations. When no work is being performed on site, non-essential lane closures will not be permitted.
- E6.1.4 Maintain parking in the north gutter lane of McDermot Avenue at all times during construction, where applicable.
- E6.1.5 Maintain parking in the south gutter lane of Bannatyne Avenue at all times during construction, where applicable.
- E6.1.6 Maintain parking on Ellen Street, Hargrave Street, and Adelaide Street at all times during construction, where applicable.

- E6.1.7 Intersecting local street, median opening and private approach access shall be maintained at all times unless joint/slab repairs or planing/paving operations require temporary closure. Temporary closures are to be staggered such that consecutive intersections are not closed at the same time. Traffic on intersecting regional/collector streets (list streets) shall be maintained at all times 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.
- E6.1.8 Flag persons may be necessary to maintain the flow of traffic during certain work operations.
- E6.1.9 Should the Contractor be unable to maintain pedestrian, cyclist, or vehicular 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.
- E6.1.10 Pedestrian access must be maintained on one side of the street at all times. One pedestrian crossing in each direction must be maintained at each intersection at all times.
- E6.1.11 Cyclist access must be maintained on one side of the street at all times.
- E6.1.12 Ambulance/emergency vehicle access must be maintained at all times.

## **E7. REFUSE AND RECYCLING COLLECTION**

- E7.1 While access to refuse and/or recycling collection vehicles is restricted, on collection day(s) the Contractor shall move all of the affected property owners refuse and/or recycling materials to a nearby common area, prior to an established time, in accordance with E7.2 to permit the normal collection vehicles to collect the materials. Immediately following recycling collection the Contractor shall return recycling receptacles to the addresses marked on the receptacles.

### **E7.2 Collection Schedule:**

#### **McDermot Avenue from Furby Street to Waterfront Drive.**

*Collection Day(s):* **Thursday**

*Collection Time:* **7:00 a.m. – 6:30 p.m.**

*Common Collection Area:* **Frances Street to Juno Street – front street. All other sections of McDermot Avenue are public lane pickup or are private pickup that varies.**

#### **Bannatyne Avenue from Furby Street to Waterfront Drive.**

*Collection Day(s):* **Thursday**

*Collection Time:* **7:00 a.m. – 6:30 p.m.**

*Common Collection Area:* **Ellen Street to Harriet Street – front street; Isabel Street to Juno Street – front street. All other sections of Bannatyne Avenue are public lane pickup or are private pickup that varies.**

#### **Hugh John McDonald School, Bannatyne Avenue**

*Collection Day(s):* **Varies, private**

*Collection Time:* **Varies**

*Common Collection Area:* **Front street**

**Victoria Albert School, Bannatyne Avenue**

*Collection Day(s):* **Varies, private**

*Collection Time:* **Varies**

*Common Collection Area:* **Front street**

E7.3 No measurement or payment will be made for the work associated with this specification.

**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. SURFACE RESTORATIONS**

E9.1 Further to clause 3.3 of CW 1130, when Total Performance is not achieved in the year the Contract is commenced, the Contractor shall temporarily repair any Work commenced and not completed to the satisfaction of the Contract Administrator. The Contractor shall maintain the temporary repairs in a safe condition as determined by the Contract Administrator until permanent repairs are completed. The Contractor shall bear all costs associated with temporary repairs and their maintenance.

**E10. INFRASTRUCTURE SIGNS**

E10.1 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.

**E11. TREE REMOVAL**

E11.1 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.

E11.2 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.

**E12. SUPPLY AND INSTALLATION OF PRECAST ADJUSTABLE BIKE LANE CURBS**

**DESCRIPTION**

E12.1 General

E12.1.1 This Specification covers all operations relating to the supply and installation of precast adjustable bike lane curbs.

E12.1.2 The Work to be done by the Contractor under this Specification shall include the furnishing of all superintendence, overhead, labor, materials, equipment, tools, supplies, and all

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

## MATERIALS

### E12.2 Precast Adjustable Bike Lane Curbs with Drainage Channels

E12.2.1 The precast adjustable bike lane curbs with drainage channels shall be manufactured as per the construction drawings and in accordance with the requirements hereinafter specified.

- (a) Reinforced with two 10M deformed rebar;
- (b) Have two 19mm holes constructed to accommodate 15M Deformed Galvanized Rebar Dowels
- (c) Manufactured in accordance with/as per CSA A23.1;
- (d) SCC concrete with integral waterproofing (50 MPa); and
- (e) Conform to concrete exposure class C-1.

### E12.3 Precast Adjustable Bike Lane Curb End Sections

E12.3.1 The precast adjustable bike lane curb end sections shall be manufactured as per the construction drawings and in accordance with the requirements hereinafter specified.

- (a) Reinforced with two 10M deformed rebar;
- (b) Have two 19mm holes constructed to accommodate 15M Deformed Galvanized Rebar Dowels;
- (c) Manufactured in accordance with/as per CSA A23.1;
- (d) SCC concrete with integral waterproofing (50 MPa); and
- (e) Conform to concrete exposure class C-1.

E12.3.2 Sign clamps, to be provided by Public Works, are to be cast into the precast adjustable bike lane curb end sections.

### E12.4 15 M Deformed Galvanized Rebar Dowels

E12.4.1 The 15M Deformed Galvanized Rebar Dowels shall be manufactured as per the CW 3230 and in accordance with the requirements hereinafter specified.

- (a) 450mm in length.

## SUBMITTALS

E12.5 Prior to construction, submit the following to the Contract Administrator.

E12.5.1 Shop drawings for the precast adjustable bike lane curbs with drainage channels and precast adjustable bike lane curb end sections to be supplied and installed.

## CONSTRUCTION METHODS

### E12.6 Installation

E12.6.1 Installation of precast adjustable bike lane curbs with drainage channel and precast adjustable bike lane curb end sections to be completed using a flat bed truck with a crane arm following the process described below:

- (a) Place the precast adjustable bike lane curb with drainage channel or precast adjustable bike lane curb end section into final position as directed by the Contract Administrator.
- (b) Drill two pilot holes into pavement for 15M deformed galvanized rebar dowels.
- (c) Place next precast adjustable bike lane curb with drainage channel or precast adjustable bike lane curb end section (if applicable).

- (d) Install 15M deformed galvanized rebar dowels and hammer the dowels flush to the top of the unit.
- (e) Countersink the 15M deformed galvanized rebar dowels approximately 15mm below the top of the unit.
- (f) Place sealant at the top of the hole.

E12.6.2 The last precast adjustable bike lane curb with drainage channel or precast adjustable bike lane curb end section in each segment may not be at the exact location identified on the drawings. Contract Administrator to confirm location.

#### MEASUREMENT AND PAYMENT

E12.7 Supply and Installation of precast adjustable bike lane curbs with drainage channel and precast adjustable bike lane curb end sections shall be measured on a unit basis and will be paid for at the contract Unit Price for the number of "Supply and Installation of Precast Adjustable Bike Lane Curbs with Drainage Channels" and "Supply and Installation of Precast Adjustable Bike Lane Curb End Sections" supplied and installed in accordance with this specification and accepted and measured by the Contract Administrator.

### **E13. SUPPLY OF PRECAST ADJUSTABLE BIKE LANE CURBS**

#### DESCRIPTION

E13.1 General

- E13.1.1 This Specification is supplemental to E12 and covers all operations relating to the supply of precast adjustable bike lane curbs.
- E13.1.2 The Work to be done by the Contractor under this Specification shall include the furnishing of all superintendence, overhead, labor, materials, equipment, tools, supplies, and all things necessary for and incidental to the satisfactory performance and completion of all Works as hereinafter specified.

#### MATERIALS

E13.2 Precast Adjustable Bike Lane Curbs with Drainage Channels

- E13.2.1 The precast adjustable bike lane curbs with drainage channels shall be manufactured as per the construction drawings and in accordance with the requirements hereinafter specified.
  - (a) Reinforced with two 10M deformed rebar;
  - (b) Have two 19mm holes constructed to accommodate 15M Deformed Galvanized Rebar Dowels
  - (c) Manufactured in accordance with/as per CSA A23.1;
  - (d) SCC concrete with integral waterproofing (50 MPa); and
  - (e) Conform to concrete exposure class C-1.

E13.3 Precast Adjustable Bike Lane Curb End Sections

- E13.3.1 The precast adjustable bike lane curb end sections shall be manufactured as per the construction drawings and in accordance with the requirements hereinafter specified.
  - (a) Reinforced with two 10M deformed rebar;
  - (b) Have two 19mm holes constructed to accommodate 15M Deformed Galvanized Rebar Dowels;
  - (c) Manufactured in accordance with/as per CSA A23.1;
  - (d) SCC concrete with integral waterproofing (50 MPa); and
  - (e) Conform to concrete exposure class C-1.

E13.3.2 Sign clamps, to be provided by Public Works, are to be cast into the precast adjustable bike lane curb end sections.

E13.4 15 M Deformed Galvanized Rebar Dowels

E13.4.1 The 15M Deformed Galvanized Rebar Dowels shall be manufactured as per the CW 3230 and in accordance with the requirements hereinafter specified.

(a) 450mm in length.

#### DELIVERY

E13.5 All precast adjustable bike lane curbs with drainage channels and precast adjustable bike lane curb end sections are to be delivered to Public Works at 1220 Pacific Avenue.

#### MEASUREMENT AND PAYMENT

E13.6 Supply of precast adjustable bike lane curbs with drainage channel and precast adjustable bike lane curb end sections shall be measured on a unit basis and will be paid for at the contract Unit Price for the number of "Supply of Precast Adjustable Bike Lane Curbs with Drainage Channels" and "Supply of Precast Adjustable Bike Lane Curb End Sections" supplied and installed in accordance with this specification and accepted and measured by the Contract Administrator.

### **E14. 100 MM CONCRETE SIDEWALK WITH BLOCK-OUTS FOR INTERLOCKING PAVING STONES**

#### DESCRIPTION

E14.1 General

E14.1.1 Further to Specification CW 3325 the Contractor shall construct the proposed 100mm Concrete Sidewalk with Block-outs for Interlocking Paving Stones with a minimum 100mm depth of concrete below pavers. The "block-outs" shall be constructed utilizing forming techniques capable of accommodating the proposed paving stones to the dimensions and tolerances as confirmed with interlocking paving stone manufacturer.

E14.1.2 A 50mm levelling course of Base Course Material will be used for the 100mm Concrete Sidewalk with Block-outs for Interlocking Paving Stones.

E14.1.3 The concrete sidewalk shall be poured such that the "block-outs" and remaining sidewalk act as a monolithic section.

E14.1.4 All costs in connection with the additional forming and placement of concrete as a result of the "block-outs", shall be included in the Contract Unit Price for 100mm Concrete Sidewalk with Block-outs for Interlocking Paving Stones.

E14.1.5 Where concrete sidewalk is to be poured up to adjacent buildings, an approved bond breaker shall be supplied and installed from the base of the concrete slab up to the concrete surface. Cost of the bond breaker shall be included in the Contract Unit Price for Concrete Sidewalk with Block-outs for Interlocking Paving Stones.

E14.1.6 Further to Specification CW 3110, the Contractor must use Granular Base Course material for all sidewalk installations and renewals within 5 m of existing boulevard trees. No limestone or crushed concrete base course material will be permitted when constructing sidewalk within 5 m of existing boulevard trees as directed and approved by the Contract Administrator.

#### MEASUREMENT AND PAYMENT

E14.2 Construction of 100mm Concrete Sidewalk with Block-outs for Interlocking Paving Stones will be measured on an area basis and paid for at the Contract Unit Price per square metre for "100mm Concrete Sidewalk with Block-outs for Interlocking Paving Stones". The area to be paid for will be the total number of square metres constructed of 100mm Concrete Sidewalk with

Block-outs for Interlocking Paving Stones in accordance with this Specification, accepted and measured by the Contract administrator.

- E14.3 The supply, placement and compaction of Base Course Material for 100mm Concrete Sidewalk with Block-outs for Interlocking Paving Stones shall be included in the cost of 100mm Concrete Sidewalk with Block-outs for Interlocking Paving Stones and no separate measurement and payment will be made.

## **E15. INSTALLATION OF INTERLOCKING PAVING STONES**

### DESCRIPTION

#### E15.1 General

- E15.1.1 This Specification covers all operations relating to the installation of stockpiled concrete pavers and stockpiled clay pavers and supply and installation of concrete pavers and clay pavers in formed blockouts, as indicated on the drawings.
- E15.1.2 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.
- E15.1.3 This specification shall supplement and amend the City of Winnipeg Standard Construction Specification CW 3330 "Installation of Interlocking Paving Stones".
- E15.1.4 Referenced Standard Construction Specifications.
- (a) CW 3330 – Installation of Interlocking Paving Stones.
  - (b) CW 3335 – Installation of Interlocking Paving Stones on a Lean Concrete Base.
- E15.1.5 Referenced Standard Detail
- (a) SD-240A – Interlocking Paving Stone Detail for Medians and Private Approaches.
  - (b) SD-240B – Interlocking Paving Stone Detail on Lean Concrete Base.

### SUBMITTALS

- E15.2 Prior to construction, submit the following to the Contract Administrator;
- E15.2.1 The Contractor shall supply concrete paver and clay paver samples to the Contract Administrator for approval prior to installation.

### MATERIALS

- E15.3 Interlocking paving stones shall be installed as shown on the Drawings and as follows:
- E15.3.1 Stockpiled pavers.
- (a) Endicott brick pavers.
- E15.3.2 Endicott Brick Pavers
- (a) Endicott Brick Pavers are to be 92 x 194 x 57mm, Dark Ironspot – Yankee Hill Brick Pavers or equal as approved by the Contract Administrator, in accordance with B6.
  - (b) Supplied by Alston Brick Supply (contact Murray Alston; phone 204-292-2832).
- E15.3.3 Holland Stone
- (a) Blue Holland Stone Pavers are to be 105 x 210 x 60mm.
- E15.3.4 Tri-Hex Pavers
- (a) Tri-Hex Pavers are to be 80 x 186 x 92mm, red.

### CONSTRUCTION METHODS

- E15.4 The Contractor to verify the exact dimensions of pavers prior to construction of blockouts in concrete sidewalk.
- E15.5 Install blockouts in concrete sidewalk and as specified on Drawings.
- E15.6 Install bedding sand to a minimum of 13mm as specified on the drawings and to CW3330 standard.
- E15.7 Installation of stockpiled pavers.
- (a) Patterns and colours of stockpiled pavers to match existing patterns and colours in each location that the pavers are removed as indicated on the Drawings. Review with Contract Administrator prior to formwork and installation.
  - (b) Remove existing adjacent pavers as required to ensure that pavers do not require cutting to tie into adjoining interlocking paving stone pattern. Review with Contract Administrator prior to installation.

#### MEASUREMENT AND PAYMENT

- E15.8 Installation of Stockpiled Pavers
- E15.8.1 Installation of stockpiled concrete pavers and stockpiled clay pavers will be measured on an area basis and paid for at the Contract Unit Price per square metre for "Reinstallation of Stockpiled Pavers". The area to be paid will be the total number of square metres stockpiled and reinstalled in accordance with this specification, accepted and measured by the Contract Administrator.
- E15.9 Supply and Installation of Interlocking Paving Stones
- E15.9.1 The supply and installation of concrete pavers and clay pavers will be measured on an area basis and paid for at the Contract Unit Price per square metre as follows:
- (a) Endicott Brick Pavers
  - (b) Holland Stone Pavers
  - (c) Tri-Hex Pavers
- E15.9.2 The area to be paid will be the total number of square metres supplied and installed in accordance with this specification, accepted and measured by the Contract Administrator.

#### **E16. REMOVAL OF EXISTING INTERLOCKING PAVING STONES**

##### DESCRIPTION

- E16.1 General
- E16.1.1 This specification shall supplement the City of Winnipeg Standard Construction Specification CW 3330 and shall cover all operations related to the removal and stockpiling of existing interlocking paving stones for reinstallation.

##### CONSTRUCTION METHODS

- E16.2 Removal of existing interlocking paving stones (concrete pavers and clay pavers) for stockpiling shall include: removal of paving stones and base course material as required; disposal of base course material and unusable paving stones; and stockpiling of paving stones in an area approved by the Contract Administrator.

##### MEASUREMENT AND PAYMENT

- E16.3 Removal and stockpiling of existing interlocking paving stones will be measured on an area basis and paid for at the Contract Unit Price per square metre for "Removal and Stockpiling of Existing Paving Stones". The area to be paid will be the total number of square metres removed

and stockpiled in accordance with this specification, accepted and measured by the Contract Administrator.

## **E17. CATCH BASIN FLOW RESTRICTORS**

### DESCRIPTION

#### E17.1 General

E17.1.1 The work included in this specification includes the supply and installation of PVC flow restrictors in new catch basins.

### REFERENCED SPECIFICATIONS

E17.2 City of Winnipeg Standard Construction Specifications

E17.2.1 CW 2130 – Gravity Sewers

E17.2.2 CW 2160 – Concrete Underground Structure and Works

### MATERIALS

#### E17.3 Flow restrictors

E17.3.1 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").

#### E17.4 Grout

E17.4.1 Grout in accordance with CW 2160 – Concrete Underground Structure and Works

### CONSTRUCTION METHODS

#### E17.5 Installation

E17.5.1 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.

E17.5.2 File each cut end smooth.

E17.5.3 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.

E17.5.4 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

#### E17.6 Catch Basin Flow Restrictors

E17.6.1 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.

## **E18. SALT TOLERANT GRASS SEEDING**

### DESCRIPTION

E18.1 Further to CW 3520 and CW3540, this specification shall cover sub-grade preparation and the supply and placement of Salt Tolerant Grass Seed.

## MATERIALS

### E18.2 Salt Tolerant Grass Seed

#### E18.2.1 Salt Tolerant Grass Seed for boulevards shall be a mixture composed of:

- (a) Seventy percent (70%) Fults or Nuttals Alkaligrass (*Puccinellia* spp.), twenty percent (20%) Audubon or Aberdeen Creeping Red Fescue and ten percent (10%) Perennial Ryegrass.

## EQUIPMENT

E18.3 Scarification equipment shall be suitable for the area being scarified, shall be capable of scarifying the sub-grade to the specified depth and shall be accepted by the Contract Administrator. For confined areas a toothed bucket may be acceptable. For larger areas tilling equipment may be required.

## CONSTRUCTION METHODS

### E18.4 Preparation of Existing Grade

E18.4.1 Prior to placing topsoil, in areas to be seeded greater in width than 600mm, prepare the existing sub-grade by scarifying to a minimum depth of 75mm and to a maximum depth of 100mm to the satisfaction of the Contract Administrator.

E18.4.2 Scarification shall consist of breaking up and loosening the sub-grade. No scarification shall occur within the edge of a tree canopy (or drip line).

### E18.5 Salt Tolerant Grass Seeding

E18.5.1 Salt Tolerant Grass Seed shall be sown at a rate of 2.2 kilograms per 100 square meters.

## MEASUREMENT AND PAYMENT

E18.6 Supply, placement and maintenance of Salt Tolerant Grass Seed will be paid for at the Contract Unit Price per square metre for "Salt Tolerant Grass Seeding", measured as specified herein, 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. Payment for Salt Tolerant Grass Seeding shall be in accordance with the following:

- (a) Sixty five (65%) percent of quantity following supply and placement.
- (b) Remaining thirty five (35%) percent of quantity following termination of the Maintenance Period.

## **E19. GREEN BIKE LANE TREATMENT**

### DESCRIPTION

#### E19.1 General

E19.1.1 This Specification covers all operations relating to the supply and installation of green bike lane treatment at cycling corridor conflict points, as noted on the drawings.

E19.1.2 The Work to be done by the Contractor under this Specification shall include the furnishing of all superintendence, overhead, labor, materials, equipment, tools, supplies, and all things necessary for and incidental to the satisfactory performance and completion of all Works as hereinafter specified.

## MATERIALS

### E19.2 Green Bike Lane Treatment

E19.2.1 The Green Bike Lane Treatment shall be Cycle Grip MMAX by Ennis-Flint color to be EF Bike Lane Green, PumaTrack MMA Cold Applied Surface Treatment by HITEX

International Group color to meet MUTCD requirements or equivalent, in accordance with B6 as approved by the Contract Administrator. A link to the manufacturer's specifications is provided:

Cycle Grip MMAX:

[www.ennisflintamericas.com/downloads/dl/file/id/83/product/945/product\\_data\\_sheet\\_cycle\\_gripmmax.pdf](http://www.ennisflintamericas.com/downloads/dl/file/id/83/product/945/product_data_sheet_cycle_gripmmax.pdf)

PumaTrack MMA Cold Applied Surface Treatment:

[https://www.hitexinternational.com/wp-content/uploads/2017/03/Hitex\\_PumaTrack\\_Website.pdf](https://www.hitexinternational.com/wp-content/uploads/2017/03/Hitex_PumaTrack_Website.pdf).

## SUBMITTALS

E19.3 Prior to construction submit the following to the Contract Administrator

E19.3.1 Material data sheets for the product proposed to be supplied and installed.

## CONSTRUCTION METHODS

E19.4 Surface Preparation

E19.4.1 Surface Preparation to be in accordance with Manufacturer's instructions.

E19.5 Masking

E19.5.1 Masking of the edges of all green bike lane treatment areas to be in accordance with Manufacturer's instructions.

E19.6 Paint Mixing

E19.6.1 Mix paint in accordance with manufacturer's instructions.

E19.7 Installation of Green Bike Lane Treatment

E19.7.1 Install Green Bike Lane Treatment in accordance with Manufacturer's instructions.

E19.7.2 Any damage done to the Green Bike Lane Treatment prior to completion of each marking area shall be rectified at the Contractor's expense.

## MEASUREMENT AND PAYMENT

E19.8 Supply and Installation of Green Bike Lane Treatment shall be measured on an area basis and will be paid for at the Contract Unit Price per square metre for "Supply and Installation of Green Bike Lane Treatment" supplied and installed in accordance with this specification and accepted and measured by the Contract Administrator. The payment item will vary based on the surface type that the "Supply and Installation of Green Bike Lane Treatment" is installed on including "Existing Asphalt" and "Existing Concrete".

## **E20. POLYPOSTS**

### DESCRIPTION

E20.1 General

E20.1.1 This Specification covers all operations relating to the supply and installation of permanent surface mount polyposts for delineation of cycling corridors.

E20.1.2 The Work to be done by the Contractor under this Specification shall include the furnishing of all superintendence, overhead, labor, materials, equipment, tools, supplies, and all things necessary for and incidental to the satisfactory performance and completion of all Works as hereinafter specified.

## MATERIALS

## E20.2 Polyposts

- E20.2.1 Polyposts shall be PEXCO, Flexi-Guide, FG 300, Model EFX Green in color, or equivalent in accordance with B6 as approved by the Contract Administrator. A link to the manufacturer's website is provided:  
<http://www.pexco.com/markets/industrial/traffic/bollards-and-channelizer-posts/fg-300-posts/>

### SUBMITTALS

- E20.3 Prior to construction, submit the following to the Contract Administrator.

- E20.3.1 Shop drawings for the type of polypost proposed to be supplied and installed.

### CONSTRUCTION METHODS

## E20.4 Surface Preparation

- E20.4.1 Surface Preparation to be in accordance with Manufacturer's instructions.

## E20.5 Installation

- E20.5.1 Installation of Polyposts to be in accordance with Manufacturer's instructions and at the locations shown on the drawings.

### MEASUREMENT AND PAYMENT

- E20.6 Supply and Installation of Polyposts shall be measured on a unit basis and will be paid for at the contract Unit Price for the number of "Supply and Installation of Polyposts" supplied and installed in accordance with this specification and accepted and measured by the Contract Administrator.

## **E21. BICYCLE RACKS**

### DESCRIPTION

## E21.1 General

- E21.1.1 This Specification covers all operations relating to the supply and installation of bicycle racks.
- E21.1.2 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

- E21.2 Contractor shall submit shop drawing for review to Contract Administrator prior to purchase and installation.

### MATERIALS

## E21.3 General

### E21.3.1 U-Style Bicycle Rack

- (a) Bicycle rack to be U-Style Bicycle Rack – 50 mm x 50 mm (2" x 2") square tube, 813 mm (32") height, 915 mm (36") diameter, complete with mounting plate and black finish as shown on the Contract Drawings.

### E21.3.2 WPA Bicycle Rack

- (a) The WPA style bicycle racks are to be picked up from Public Works at 1220 Pacific Avenue.

## CONSTRUCTION METHODS

### E21.4 U-Style Bicycle Rack

- (a) Surface mount bicycle rack on concrete pad as indicated on the Contract Drawings. Location to be confirmed by the Contract Administrator.

### E21.5 WPA Bicycle Rack

- (a) Place corrosion resistant sleeve (min. 3" inside diameter) into base course in final position. Place top of sleeve at finished height of sidewalk. Install concrete sidewalk and allow to cure. Place WPA bicycle rack into sleeve level and straight. Ensure the top of the rack is 840 mm to 915mm from the top of sidewalk. Set into place using epoxy grout.

## MEASUREMENT AND PAYMENT

### E21.6 U-Style Bicycle Rack

- E21.6.1 Bicycle racks will be measured on a unit basis and paid for at the Contract Unit Prices per each for "Supply and Install U-Style Bicycle Rack", 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.

### E21.7 WPA Bicycle Rack

- E21.7.1 Bicycle racks will be measured on a unit basis and paid for at the Contract Unit Prices per each for "Install WPA Bicycle Rack", which price shall be payment in full for 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.

## **E22. SUPPLY AND INSTALLATION OF INFORMATION PANELS**

### DESCRIPTION

- E22.1 Provide all labour, materials, methods, equipment, and accessories for the fabrication and installation of information panels.

### REFERENCES

- E22.2 American Society for Testing and Materials International, (ASTM)
  - (a) ASTM A53/A53M-02, Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated Welded and Seamless.
  - (b) ASTM A307-02, Specification for Carbon Steel Bolts and Studs, 60,000 PSI Tensile Strength.
- E22.3 Canadian Standards Association (CSA International)
  - (a) CAN/CSA-G40.20/G40.21-98, General Requirements for Rolled or Welded Structural Quality Steel.
  - (b) CAN/CSA-S16.1-01, Limit States Design of Steel Structures.
  - (c) CSA W48-01, Filler Metals and Allied Materials for Metal Arc Welding (Developed in co-operation with the Canadian Welding Bureau).
  - (d) CSA W59-1989, R2001, Welded Steel Construction, Metal Arc Welding, Imperial Version.

### SUBMITTALS

- E22.4 Submit sample of white oak.

### MATERIALS

#### E22.5 Information Panel

- (a) 457 x 1817 x 12mm thk. steel panel.
- (b) 482 x 1117 x 12mm thk. steel panel.
- (c) 656 x 609 x 12mm thk. base plate.
- (d) Information Panel: iZone 420 x 890mm, 0.75 thickness, exterior matte finish available from Parkworks, ph. 204-414-2990, or approved equal.
- (e) Wood Block: 442 x 102 x 640mm white oak wood block, kiln dried and sanded sides faces and edges from a local source.
- (f) Fasteners: 6m dia. x 536mm stainless steel threaded rod with washers and bolts.
- (g) Anchor Bolts: 6mm dia. x 100mm stainless steel.

#### E22.6 Accessories

- (a) Paint for exterior metal: in accordance with Exterior Metal Painting specification.

#### DELIVERY, STORAGE, AND HANDLING

E22.7 Deliver materials to site, suitably packaged, clearly marked indicating manufacturer name and any other identifying symbols or information. Do not deliver materials long before they are required on site. Cause no delays to scheduling.

E22.8 Leave protective covering in place until final cleaning of site. Provide instructions for removal of protective covering.

E22.9 Store materials in a dry location off the ground, and prevent damage.

E22.10 Materials that have been damaged or deemed unfit for use during delivery or storage shall be immediately replaced at no cost.

#### CONSTRUCTION METHODS

E22.11 Obtain approval of submittals including mock-ups and shop drawings prior to ordering materials and commencing fabrication.

E22.12 Fabricate work square, true, straight, and accurate to required sizes, with joints closely fitted and properly secured.

E22.13 Where possible, fit and shop assemble work, ready for erection.

E22.14 Ensure exposed welds are continuous for length of each joint. File or grind exposed welds smooth and flush.

E22.15 De-grease and be-bur all sharp edges in the shop left behind after fabrication is complete.

#### INSTALLATION

E22.16 Erect metal work square, plumb, straight and true, accurately fitted, with tight joints and intersections.

E22.17 Do welding work in accordance with CSA W59, unless specified otherwise.

E22.18 Touch up rivets, field welds, bolts and burnt or scratched surfaces after erection.

#### ACCEPTANCE

E22.19 Work will be accepted only if it is erected true to the design intent in conformation with shop drawings and site instructions.

#### MEASUREMENT AND PAYMENT

E22.20 Information Panels will be measured on a unit basis and paid for at the Contract Unit Prices per each for "Supply and Install Information Panels", 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.

## **E23. EXTERIOR METAL PAINTING**

### DESCRIPTION

E23.1 Provide all labour, materials, methods, equipment and accessories for the painting of the information panels.

### REFERENCES

E23.2 Painting for Exterior Applications:

- (a) SSPC – Steel Structures Painting Council.
- (b) CAN/CGSB-1.40-97, Anti-corrosive Structural Steel Alkyd Primer.
- (c) CAN//CGSB-1.181-92, Ready-Mixed, Organic Zinc-Rich Coating.

### SUBMITTALS

E23.3 Submit two (2) copies of WHMIS MSDS - Material Safety Data Sheets for each paint product.

### MATERIALS

E23.4 Paint for information panels:

- (a) Primer: Approved high-build epoxy primer, 4 mil. min. thickness. Ensure compatibility with urethane coating.
- (b) Coating: 2 coats or 2 mil min. thickness, high performance alkyd rust-inhibiting industrial coating, such as CIL Fortified Urethane or approved equal. Colour to be Satin Finish Black.

### QUALITY ASSURANCE

E23.5 Painter shall be trained and qualified industrial metal painting professionals with more than five (5) years of experience. Shop must be ISO certified and fully equipped to prepare, prime and paint large scale structural metal members and deliver them to site for field erection.

E23.6 All workmanship and all materials furnished and supplied under this specification shall be of the highest standards and are subject to close and systematic inspection and testing by the Contract Administrator including all operations, from the selection of materials, through to final acceptance of the Work.

E23.7 Strict conformance to this specification will be enforced. The Contractor shall be wholly responsible for the control of all operations incidental thereto notwithstanding any inspection or approval that may have been previously given. The Contract Administrator reserves the right to reject any materials or works that are not in accordance the requirements of this specification.

### CONSTRUCTION METHODS

E23.8 Preparation, priming and painting of members shall be completed in the controlled environment of a paint shop if at all possible. If painting operations must occur in the field obtain Contract Administrators to review the Work that is to be completed in the field, prior to proceeding.

E23.9 Debur and degrease metal surfaces using products approved by the paint manufacturer.

E23.10 Conduct abrasive blasting to fully clean the metal.

- E23.11 Clean metal to white metal by dry abrasive blasting. Ensure surface is free of grease, rust, or scale.
- E23.12 Contact Contract Administrator for review and approval of prepared surface. Apply paint within 12 hours of sandblasting.
- E23.13 Paint shall be stored, thinned, handled, mixed and applied in accordance with SSPC-PA 1, Shop Field and Maintenance Coating of Steel, and per the express written specifications of the manufacturer.
- E23.14 Apply paint coats only when temperatures can be controlled or predicted to be within the manufacturers acceptable window. When there is a drop in temperature after the coating is applied adjust recoat time period per manufacturers specifications.
- E23.15 Paint shall be applied within 24 hours of completion of surface preparation.
- E23.16 Use spray gun system for main application and brushes of suitable size for field touch ups. Point spray gun at outside edges coating edges and seams thoroughly prior to coating remaining areas.
- E23.17 Touch-up runs and snags immediately while paint application is in progress.
- E23.18 Application related failures shall be corrected prior to the application of a subsequent coat.
- E23.19 Where excessive coating thickness produces 'Mud Cracking' coating shall be scraped back to bare metal, and sanded to a soundly bonded coating layer then reapplied to the specified thickness.
- E23.20 Apply as many coats as necessary to ensure even and proper coating of metal, to be reviewed and approved by the Contract Administrator.

#### DELIVERY TO SITE

- E23.21 Allow all shop painted members to fully cure before preparing for shipment.
- E23.22 Once fully cured wrap members in cellophane plastic or bubble wrap designed to protect finished surfaces without scratching or marring them during transport. Secure wrappings with appropriate tape or adhesives that are sturdy but can easily be removed at the site.
- E23.23 Deliver to site with equipment suitable for carrying steel loads and capable of hoisting steel members over other features into their final locations.

#### TOUCH-UPS

- E23.24 Ensure all welding work and mechanical fasteners are wiped clean and free of oil, debris and grit.
- E23.25 Apply touch-ups with appropriately sized brushes to get into all grooves and voids.
- E23.26 Thickness of touch-ups shall match thickness of adjacent paint.
- E23.27 Once all touch-ups are complete contact Contract Administrator for review and approval of metal work and coating.

#### STANDARD OF ACCEPTANCE

- E23.28 Paint finishes shall be accepted if they meet the performance standards of the product supplier and match the sample accepted as the standard of performance at the commencement of painting.
- E23.29 Painted surfaces shall be warrantied against corrosion, peeling and general failure for two (2) years after date of total performance.

## FINAL ACCEPTANCE

- E23.30 Provide the City of Winnipeg with maintenance manual inserts detailing products and methods used to achieve metal panting finishes.
- E23.31 Provide City of Winnipeg with one (1) gallon of each type of paint.

## MEASUREMENT AND PAYMENT

- E23.32 Painting of information panels will not be measured for payment and shall be included in the supply and install of said items.

## **E24. SUPPLY AND INSTALLATION OF DIRECTIONAL BAR TILES**

### DESCRIPTION

- E24.1 This specification covers the supply and installation of directional bar tiles in 100mm concrete sidewalks.

### SPECIFICATIONS

- E24.2 Referenced Standard Construction Specifications and Standard Details
- (a) CW 3235 - Renewal of Existing Miscellaneous Concrete Slabs
  - (b) CW 3310 - Portland Cement Concrete Pavement Works
  - (c) CW 3325 - Portland Cement Concrete Sidewalk

### MATERIALS

- E24.3 Acceptable Directional Bar Tile product is:
- (a) 305mm x 610mm Cast in Place (Wet Set) with Anchors – Manufactured by ADA Solutions
    - (i) Part # 1224BAR375Y
    - (ii) Flush Mount, Federal Yellow
    - (iii) Fasteners: 6mm Dia. x 38mm Long SS FH Bolts (Hex Drive) and 6mm Dia. x 38mm Long Zinc Inserts.
    - (iv) Sealant: Manufacturer recommended

### INSTALLATION INSTRUCTIONS

- E24.4 Installation Instructions for Directional Bar Tiles
- (a) Install Wet Set Replaceable units as per manufacturer's recommendations, and as shown on Contract Drawings.
  - (b) Refer to Section 03 33 00 Cast In Place Concrete
  - (c) Where necessary, cut Wet Set Replaceable units accurately using a 60 tooth carbide or diamond blade with a suitable cutting device. No cut unit shall measure less than 250mm in length. In accordance with manufacturer's recommendations, supplemental fasteners and Inserts shall be added as needed when the distance between the cut face of the unit and the original hardware exceeds 100mm.
  - (d) Install Wet Set Replaceable units true to grade, in location, layout and pattern as indicated on the contract drawings.
  - (e) Wet Set Replaceable units shall be set flush into a minimum 65mm depth of concrete (100mm-175mm slump). Vibrate or tamp (with a rubber mallet) the Wet Set Replaceable units into the fresh concrete to insure that there are no voids underlying the units and that the units are flush with the adjacent substrate. Temporary weights can be added as necessary in the event of float during initial set of the units.

- (f) Joint Lines between successive Wet Set Replaceable Units: Maintain a 3mm-5mm consistent joint line between successive units.
- (g) Tooled Edge Detail: Maintain a 3mm to 6mm tooled edge detail along the perimeter of the Wet Set Replaceable unit installation. Installation of the tooled edge detail facilitates future removal and replacement of the units.
- (h) Sealant: Fill all Joints and Tooled Edge Details with Sikaflex 1A, BASF NP1, or Tremco Dynamic Sealant in the color(s) indicated on the contract drawings. Sealant renders the installation water resistant and provides for a pleasing architectural finish.
- (i) Protective Plastic Sheet: Particularly in direct sunlight and when temperatures exceed 25 degrees C, remove the protective plastic sheeting from the Wet Set Replaceable units within 48 hours of installation of the unit. Failure to do so will be solely at Contractor risk and may result in the protective plastic bonding to the unit thus requiring a considerable effort to remove the protective plastic sheeting.

#### MEASUREMENT AND PAYMENT

##### E24.5 Directional Bar Tiles

- E24.5.1 Directional Bar Tiles shall be measured on a unit basis and paid for at the Contract Unit Price per unit for the "Items of Work" listed here below. The number of units to be paid for shall be the total number of Directional Bar Tiles supplied and installed in accordance with this specification, accepted and measured by the Contract Administrator.

#### **E25. REMOVAL OF EXISTING PLANTERS**

##### DESCRIPTION

##### E25.1 General

- E25.1.1 This specification covers the removal of existing cast in place concrete planters.
- E25.1.2 Existing planters consist of soil material, various shrubs and a perimeter of cast in place barrier curb roughly 150mm in height.

##### CONSTRUCTION METHODS

##### E25.2 Removal of Existing Planters

- E25.2.1 Remove concrete curb and all materials contained within.

##### MEASUREMENT AND PAYMENT

##### E25.3 Removal of Existing Planters

- E25.3.1 Removal of Existing Planters will be measured on an area basis and paid for at the Contract Unit Price per square metre for "Removal of Existing Planters" and installed in accordance with this specification and accepted and measured by the Contract Administrator.

#### **E26. ADJUSTMENT OF MANITOBA HYDRO MANHOLE FRAMES**

##### DESCRIPTION

##### E26.1 General

- E26.1.1 This specification covers the adjustment of Manitoba Hydro manhole frames which works include but are not limited to removing the existing frame, making any required changes to the structure to accommodate new frame installation, reinstalling the existing frame or installing a new frame and cover and constructing any required temporary asphalt ramps.
- E26.1.2 Pavement removal and replacement will be in accordance with Specifications CW 3100 and CW 3230.

- E26.1.3 The Contractor is to provide a minimum 48 hour notice to Manitoba Hydro and the Contract Administrator prior to undertaking any of the proposed works on the utility manholes.
- E26.1.4 The Contractor to make arrangements through Manitoba Hydro for watch personnel to be present during construction of the required works to the utility manholes.
- E26.1.5 Referenced Standard Construction Specifications (a) CW 3110 – Sub-Grade, Sub-Base and Base Course Construction; (b) CW 3230 – Full-Depth Patching of Existing Slabs and Joints.

#### MATERIALS

- E26.2 Manhole Frames, Covers and Riser Rings
  - E26.2.1 Utility manhole frames and covers shall be provided by Manitoba Hydro.

#### CONSTRUCTION METHODS

- E26.3 Removal of Existing Pavement
  - E26.3.1 Remove complete concrete slab surrounding utility manhole in accordance with Specification CW 3110.
  - E26.3.2 Removal procedures to be done in a manor not to damage utility manhole structure.
- E26.4 Removal of Manhole Frame and Cover
  - E26.4.1 Remove the required concrete embedding the frame and remove the frame and cover. Hydro Watch personnel to approve construction method prior to proceeding. The Contractor is to provide opportunity for Hydro to collect the old frame and cover if applicable, otherwise the old frame and covers are to be disposed of off-site as directed by the Contract Administrator.
- E26.5 Installation of New Frame and Cover
  - E26.5.1 Install new or existing frame and cover as specified herein and or on the drawings, if applicable. Existing frames identified as being in good condition are to be reused.
  - E26.5.2 The Contractor shall set the frame and cover to the proposed grade utilizing shims and a form inside the manhole frame to prevent concrete from spilling into the interior of the manhole and produce a neat finished surface inside the frame. The Contractor shall then pour concrete around the outside of the frame to secure it to the manhole.
- E26.6 Construct temporary asphalt ramp
  - E26.6.1 Where required for re-opening lane to traffic, construct temporary asphalt ramp to the grades as noted on the drawings and as directed by the Contract Administrator.

#### MEASUREMENT AND PAYMENT

- E26.7 Adjustment of Manitoba Hydro Manhole Frame
  - E26.7.1 Adjustment of Hydro manhole frames and covers will be measured on a unit basis and paid for at the Contract Unit Price per unit for "Adjustment of Manitoba Hydro Frame and Cover". The number of units to be paid for will be the total number of manhole frames c/w covers adjusted/installed in accordance with this specification, accepted and measured by the Contract Administrator.
- E26.8 Concrete Pavement removal and replacement will be measured and paid for in accordance with Specification CW 3230.