



**THE CITY OF WINNIPEG**

# **BID OPPORTUNITY**

**BID OPPORTUNITY NO. 815-2013**

**REPAIR OF THE ASSINIBOINE RIVERWALK**



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## **PART B - BIDDING PROCEDURES**

### **B1. CONTRACT TITLE**

B1.1 REPAIR OF THE ASSINIBOINE RIVERWALK

### **B2. SUBMISSION DEADLINE**

B2.1 The Submission Deadline is 12:00 noon Winnipeg time, November 13, 2013.

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

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

### **B3. SITE INVESTIGATION**

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

B3.2 The Bidder is advised that the Site is located along a high pedestrian and vehicular traffic area and will require traffic control measures be in place for the duration of the Work. Construction access from Assiniboine Avenue down to the north bank Assiniboine River shoreline is located directly downstream (ie. east) of the Midtown Bridge. Maximum allowable loads as defined on City Drawing Number 815-2013\_0007\_01\_00 (ie. Drawing Sheet 8 of 8) of this Bid Opportunity must not be exceeded when crossing any of the existing structural boat docks located along the Assiniboine Riverwalk within the Site.

### **B4. ENQUIRIES**

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

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

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

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

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

### **B5. CONFIDENTIALITY**

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

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

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

## **B6. ADDENDA**

B6.1 The Contract Administrator may, at any time prior to the Submission Deadline, issue addenda correcting errors, discrepancies or omissions in the Bid Opportunity, or clarifying the meaning or intent of any provision therein.

B6.2 The Contract Administrator will issue each addendum at least two (2) Business Days prior to the Submission Deadline, or provide at least two (2) Business Days by extending the Submission Deadline.

B6.2.1 Addenda will be available on the Bid Opportunities page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/bidopp.asp>

B6.2.2 The Bidder is responsible for ensuring that he/she has received all addenda and is advised to check the Materials Management Division website for addenda regularly and shortly before the Submission Deadline, as may be amended by addendum.

B6.3 The Bidder shall acknowledge receipt of each addendum in Paragraph 10 of Form A: Bid. Failure to acknowledge receipt of an addendum may render a Bid non-responsive.

## **B7. SUBSTITUTES**

B7.1 The Work is based on the Plant, Materials and methods specified in the Bid Opportunity.

B7.2 Substitutions shall not be allowed unless application has been made to and prior approval has been granted by the Contract Administrator in writing.

B7.3 Requests for approval of a substitute will not be considered unless received in writing by the Contract Administrator at least five (5) Business Days prior to the Submission Deadline.

B7.4 The Bidder shall ensure that any and all requests for approval of a substitute:

- (a) provide sufficient information and details to enable the Contract Administrator to determine the acceptability of the Plant, Material or method as either an approved equal or alternative;
- (b) identify any and all changes required in the applicable Work, and all changes to any other Work, which would become necessary to accommodate the substitute;
- (c) identify any anticipated cost or time savings that may be associated with the substitute;
- (d) certify that, in the case of a request for approval as an approved equal, the substitute will fully perform the functions called for by the general design, be of equal or superior substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the proposed work schedule and the dates specified in the Supplemental Conditions for Substantial Performance and Total Performance;
- (e) certify that, in the case of a request for approval as an approved alternative, the substitute will adequately perform the functions called for by the general design, be similar in substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the proposed work schedule and the dates specified in the Supplemental Conditions for Substantial Performance and Total Performance.

B7.5 The Contract Administrator, after assessing the request for approval of a substitute, may in his/her sole discretion grant approval for the use of a substitute as an "approved equal" or as an "approved alternative", or may refuse to grant approval of the substitute.

- B7.6 The Contract Administrator will provide a response in writing, at least two (2) Business Days prior to the Submission Deadline, only to the Bidder who requested approval of the substitute.
- B7.6.1 The Bidder requesting and obtaining the approval of a substitute shall be entirely responsible for disseminating information regarding the approval to any person or persons he/she wishes to inform.
- B7.7 If the Contract Administrator approves a substitute as an “approved equal”, any Bidder may use the approved equal in place of the specified item.
- B7.8 If the Contract Administrator approves a substitute as an “approved alternative”, any Bidder bidding that approved alternative may base his/her Total Bid Price upon the specified item but may also indicate an alternative price based upon the approved alternative. Such alternatives will be evaluated in accordance with B16.
- B7.9 No later claim by the Contractor for an addition to the Total Bid Price because of any other changes in the Work necessitated by the use of an approved equal or an approved alternative will be considered.
- B7.10 Notwithstanding B7.2 to B7.9, and in accordance with B8.6 deviations inconsistent with the Bid Opportunity document shall be evaluated in accordance with B16.1(a).

## **B8. BID COMPONENTS**

- B8.1 The Bid shall consist of the following components:
- (a) Form A: Bid;
  - (b) Form B: Prices;
  - (c) Bid Security
    - (i) Form G1: Bid Bond and Agreement to Bond, or  
Form G2: Irrevocable Standby Letter of Credit and Undertaking, or  
a certified cheque or draft;
- B8.2 Further to B8.1, the Bidder should include the written correspondence from the Contract Administrator approving a substitute in accordance with B7.
- B8.3 All components of the Bid shall be fully completed or provided, and submitted by the Bidder no later than the Submission Deadline, with all required entries made clearly and completely, to constitute a responsive Bid.
- B8.4 The Bid shall be submitted enclosed and sealed in an envelope clearly marked with the Bid Opportunity number and the Bidder's name and address.
- B8.4.1 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.
- B8.5 Bidders are advised not to include any information/literature except as requested in accordance with B8.1.
- B8.6 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).
- B8.7 Bids submitted by facsimile transmission (fax) or internet electronic mail (e-mail) will not be accepted.
- B8.8 Bids shall be submitted to:
- The City of Winnipeg  
Corporate Finance Department

Materials Management Division  
185 King Street, Main Floor  
Winnipeg MB R3B 1J1

**B9. BID**

- B9.1 The Bidder shall complete Form A: Bid, making all required entries.
- B9.2 Paragraph 2 of Form A: Bid shall be completed in accordance with the following requirements:
- (a) if the Bidder is a sole proprietor carrying on business in his/her own name, his/her name shall be inserted;
  - (b) if the Bidder is a partnership, the full name of the partnership shall be inserted;
  - (c) if the Bidder is a corporation, the full name of the corporation shall be inserted;
  - (d) if the Bidder is carrying on business under a name other than his/her own, the business name and the name of every partner or corporation who is the owner of such business name shall be inserted.
- B9.2.1 If a Bid is submitted jointly by two or more persons, each and all such persons shall identify themselves in accordance with B9.2.
- B9.3 In Paragraph 3 of Form A: Bid, the Bidder shall identify a contact person who is authorized to represent the Bidder for purposes of the Bid.
- B9.4 Paragraph 12 of Form A: Bid shall be signed in accordance with the following requirements:
- (a) if the Bidder is a sole proprietor carrying on business in his/her own name, it shall be signed by the Bidder;
  - (b) if the Bidder is a partnership, it shall be signed by the partner or partners who have authority to sign for the partnership;
  - (c) if the Bidder is a corporation, it shall be signed by its duly authorized officer or officers and the corporate seal, if the corporation has one, should 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.
- B9.4.1 The name and official capacity of all individuals signing Form A: Bid should be printed below such signatures.
- B9.5 If a Bid is submitted jointly by two or more persons, the word "Bidder" shall mean each and all such persons, and the undertakings, covenants and obligations of such joint Bidders in the Bid and the Contract, when awarded, shall be both joint and several.

**B10. PRICES**

- B10.1 The Bidder shall state a price in Canadian funds for each item of the Work identified on Form B: Prices.
- B10.2 The quantities listed on Form B: Prices are to be considered approximate only. The City will use said quantities for the purpose of comparing Bids.
- B10.3 The quantities for which payment will be made to the Contractor are to be determined by the Work actually performed and completed by the Contractor, to be measured as specified in the applicable Specifications.
- B10.4 Payments to Non-Resident Contractors are subject to Non-Resident Withholding Tax pursuant to the Income Tax Act (Canada).

## **B11. QUALIFICATION**

### **B11.1** The Bidder shall:

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

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

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

### **B11.3** The Bidder and/or any proposed Subcontractor (for the portion of the Work proposed to be subcontracted to them) shall:

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

### **B11.4** Further to B11.3(c), the Bidder shall, within five (5) Business Days of a request by the Contract Administrator, provide proof satisfactory to the Contract Administrator that the Bidder/Subcontractor has a workplace safety and health program meeting the requirements of The Workplace Safety and Health Act (Manitoba), by providing:

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

### **B11.5** The Bidder shall submit, within three (3) Business Days of a request by the Contract Administrator, proof satisfactory to the Contract Administrator of the qualifications of the Bidder and of any proposed Subcontractor.

### **B11.6** The Bidder shall provide, on the request of the Contract Administrator, full access to any of the Bidder's equipment and facilities to confirm, to the Contract Administrator's satisfaction, that the Bidder's equipment and facilities are adequate to perform the Work.

## **B12. BID SECURITY**

### **B12.1** The Bidder shall provide bid security in the form of:

- (a) a bid bond, in the amount of at least ten percent (10%) of the Total Bid Price, and agreement to bond of a company registered to conduct the business of a surety in Manitoba, in the form included in the Bid Submission (Form G1: Bid Bond and Agreement to Bond); or
- (b) an irrevocable standby letter of credit, in the amount of at least ten percent (10%) of the Total Bid Price, and undertaking issued by a bank or other financial institution registered to conduct business in Manitoba and drawn on a branch located in Winnipeg, in the form

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

### **B13. OPENING OF BIDS AND RELEASE OF INFORMATION**

- B13.1 Bids will be opened publicly, after the Submission Deadline has elapsed, in the office of the Corporate Finance Department, Materials Management Division, or in such other office as may be designated by the Manager of Materials.
- B13.1.1 Bidders or their representatives may attend.
- B13.1.2 Bids determined by the Manager of Materials, or his/her designate, to not include the bid security specified in B12 will not be read out.
- B13.2 Following the Submission Deadline, the names of the Bidders and their Total Bid Prices (unevaluated, and pending review and verification of conformance with requirements) will be available on the Closed Bid Opportunities (or Public/Posted Opening & Award Results) page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/>
- B13.3 After award of Contract, the name(s) of the successful Bidder(s) and the Contract amount(s) will be available on the Closed Bid Opportunities (or Public/Posted Opening & Award Results) page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/>
- B13.4 The Bidder is advised that any information contained in any Bid may be released if required by City policy or procedures, by The Freedom of Information and Protection of Privacy Act (Manitoba), by other authorities having jurisdiction, or by law.

### **B14. IRREVOCABLE BID**

- B14.1 The Bid(s) submitted by the Bidder shall be irrevocable for the time period specified in Paragraph 11 of Form A: Bid.

B14.2 The acceptance by the City of any Bid shall not release the Bids of the next two lowest evaluated responsive Bidders and these Bidders shall be bound by their Bids on such Work until a Contract for the Work has been duly executed and the performance security furnished as herein provided, but any Bid shall be deemed to have lapsed unless accepted within the time period specified in Paragraph 11 of Form A: Bid.

## **B15. WITHDRAWAL OF BIDS**

B15.1 A Bidder may withdraw his/her Bid without penalty by giving written notice to the Manager of Materials at any time prior to the Submission Deadline.

B15.1.1 Notwithstanding C23.3, the time and date of receipt of any notice withdrawing a Bid shall be the time and date of receipt as determined by the Manager of Materials.

B15.1.2 The City will assume that any one of the contact persons named in Paragraph 3 of Form A: Bid or the Bidder's authorized representatives named in Paragraph 12 of Form A: Bid, and only such person, has authority to give notice of withdrawal.

B15.1.3 If a Bidder gives notice of withdrawal prior to the Submission Deadline, the Manager of Materials will:

- (a) retain the Bid until after the Submission Deadline has elapsed;
- (b) open the Bid to identify the contact person named in Paragraph 3 of Form A: Bid and the Bidder's authorized representatives named in Paragraph 12 of Form A: Bid; and
- (c) if the notice has been given by any one of the persons specified in B15.1.3(b), declare the Bid withdrawn.

B15.2 A Bidder who withdraws his/her Bid after the Submission Deadline but before his/her Bid has been released or has lapsed as provided for in B14.2 shall be liable for such damages as are imposed upon the Bidder by law and subject to such sanctions as the Chief Administrative Officer considers appropriate in the circumstances. The City, in such event, shall be entitled to all rights and remedies available to it at law, including the right to retain the Bidder's bid security.

## **B16. EVALUATION OF BIDS**

B16.1 Award of the Contract shall be based on the following bid evaluation criteria:

- (a) compliance by the Bidder with the requirements of the Bid Opportunity, or acceptable deviation there from (pass/fail);
- (b) qualifications of the Bidder and the Subcontractors, if any, pursuant to B11 (pass/fail);
- (c) Total Bid Price;
- (d) economic analysis of any approved alternative pursuant to B7.

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.

**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.

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

D2.1 The Work to be done under the Contract shall consist of repairs to address flood damage and reinstate the Assiniboine Riverwalk to its pre-2011 flood condition.

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

- (a) Site development and restoration
- (b) Placement of additional rockfill riprap material along the shoreline down to the channel bottom to restore the original rockfill berm design geometry
- (c) Resetting or replacing the limestone curb located along the shoreline edge of the Assiniboine Riverwalk

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

D3.1 The Contract Administrator is KGS Group, represented by:

Bruno Pierre Arpin, P.Eng.  
Geotechnical Engineer

Telephone No. 204 896-1209

Facsimile No. 204 896-0754

D3.2 At the pre-construction meeting, Bruno Pierre Arpin, P.Eng. will identify additional personnel representing the Contract Administrator and their respective roles and responsibilities for the Work.

D3.3 Bids Submissions must be submitted to the address in B8.8

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

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

#### **D5. OWNERSHIP OF INFORMATION, CONFIDENTIALITY AND NON DISCLOSURE**

D5.1 The Contract, all deliverables produced or developed, and information provided to or acquired by the Contractor are the property of the City and shall not be appropriated for the Contractors own use, or for the use of any third party.

D5.2 The Contractor shall not make any public announcements or press releases regarding the Contract, without the prior written authorization of the Contract Administrator.

D5.3 The following shall be confidential and shall not be disclosed by the Contractor to the media or any member of the public without the prior written authorization of the Contract Administrator;

- (a) information provided to the Contractor by the City or acquired by the Contractor during the course of the Work;

- (b) the Contract, all deliverables produced or developed; and
- (c) any statement of fact or opinion regarding any aspect of the Contract.

D5.4 A Contractor who violates any provision of D5 may be determined to be in breach of Contract.

## **D6. NOTICES**

D6.1 Except as provided for in C23.2.2, all notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the Contractor shall be sent to the address or facsimile number identified by the Contractor in Paragraph 2 of Form A: Bid.

D6.2 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the City, except as expressly otherwise required in D6.3, D6.4 or elsewhere in the Contract, shall be sent to the attention of the Contract Administrator at the facsimile number identified in D3.1.

D6.3 Notwithstanding C21, all notices of appeal to the Chief Administrative Officer shall be sent to the attention of the Chief Financial Officer at the following facsimile number:

The City of Winnipeg  
Chief Financial Officer

Facsimile No.: 204 949-1174

D6.4 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications required to be submitted or returned to the City Solicitor shall be sent to the following facsimile number:

The City of Winnipeg  
Legal Services Department  
Attn: Director of Legal Services

Facsimile No.: 204 947-9155

## **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 should be prepared and submitted in the format shown in the City's template which is available on the Information Connection page at The City of Winnipeg,

Corporate Finance, Materials Management Division website at  
<http://www.winnipeg.ca/matmgt/Safety/default.stm>

## **D10. INSURANCE**

D10.1 The Contractor shall provide and maintain the following insurance coverage:

- (a) commercial general liability insurance, in the amount of at least two million dollars (\$2,000,000.00) inclusive, with The City of Winnipeg added as an additional insured, with a cross-liability clause, such liability policy to also contain contractual liability, unlicensed motor vehicle liability, non-owned automobile liability, broad form property damage cover and products and completed operations, to remain in place at all times during the performance of the Work and throughout the warranty period;
- (b) if applicable, Automobile Liability Insurance covering all motor vehicles, owned and operated and used or to be used by the Contractor directly or indirectly in the performance of the Work. The Limit of Liability shall not be less than \$2,000,000 inclusive for loss or damage including personal injuries and death resulting from any one accident or occurrence.
- (c) an all risks Installation Floater carrying adequate limits to cover all machinery, equipment, supplies and/or materials intended to enter into and form part of any installation.

D10.2 Deductibles shall be borne by the Contractor.

D10.3 The Contractor shall provide the City Solicitor with a certificate(s) of insurance, in a form satisfactory to the City Solicitor, at least two (2) Business Days prior to the commencement of any Work but in no event later than the date specified in C4.1 for the return of the executed Contract.

D10.4 The Contractor shall not cancel, materially alter, or cause each policy to lapse without providing at least thirty (30) Calendar Days prior written notice to the Contract Administrator.

## **D11. PERFORMANCE SECURITY**

D11.1 The Contractor shall provide and maintain performance security until the expiration of the warranty period in the form of:

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

D11.1.1 Where the performance security is in the form of a certified cheque or draft, it will be deposited by the City. The City will not pay any interest on certified cheques or drafts furnished as performance security.

D11.2 If the bid security provided in his/her Bid was not a certified cheque or draft pursuant to B12.1(c), the Contractor shall provide the City Solicitor with the required performance security within seven (7) Calendar Days of notification of the award of the Contract by way of letter of intent and prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract.

## **D12. SUBCONTRACTOR LIST**

D12.1 The Contractor shall provide the Contract Administrator with a complete list of the Subcontractors whom the Contractor proposes to engage (Form J: Subcontractor List) at 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.

## **SCHEDULE OF WORK**

### **D13. COMMENCEMENT**

D13.1 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.

D13.2 The Contractor shall not commence any Work on the Site until:

- (a) the Contract Administrator has confirmed receipt and approval of:
  - (i) evidence of authority to carry on business specified in D8;
  - (ii) evidence of the workers compensation coverage specified in C6.15;
  - (iii) the Safe Work Plan specified in D9;
  - (iv) evidence of the insurance specified in D10;
  - (v) the performance security specified in D11; and
  - (vi) the Subcontractor list specified in D12.
- (b) the Contractor has attended a pre-construction meeting with the Contract Administrator, or the Contract Administrator has waived the requirement for a pre-construction meeting.

D13.3 The Contractor shall commence the Work on the Site within seven (7) Working Days of receipt of the letter of intent.

D13.4 The City intends to award this Contract by December 4, 2013

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

### **D14. CRITICAL STAGES**

D14.1 The Contractor shall achieve the critical stages of the Work in accordance with the following requirement:

- (a) All Work related to the placement of additional rockfill riprap material along the shoreline down to the channel bottom to restore the original rockfill berm design geometry shall be completed by January 31, 2014. The Work shall be completed in two phases in accordance with the following requirement:
  - (i) The Contractor shall complete Phase 1 of the rockfill riprap Work defined as all portions of the rockfill riprap Work located between The Forks and the Donald Street Bridge (ie. Midtown Bridge) prior to proceeding with Phase 2 of the rockfill riprap Work. The Contractor shall start placement of the Phase 1 rockfill riprap material at The Forks and work in the upstream direction to the Donald Street Bridge.
  - (ii) Following completion of the Phase 1 rockfill riprap Work, the Contractor shall complete Phase 2 of the rockfill riprap Work defined as all portions of the rockfill riprap Work located between the Donald Street Bridge (ie. Midtown Bridge) and the Manitoba Legislative Building. The Contractor shall start placement of the Phase 2 rockfill riprap material at the Donald Street Bridge and work in the upstream direction to the Manitoba Legislative Building.
- (b) All Work related to the limestone curb and drainage blocks to restore the original limestone curb design geometry shall be completed by June 16, 2014. The Work shall be completed in two phases in accordance with the following requirement:

- (i) The Contractor shall complete Phase 1 of the limestone curb and drainage blocks Work defined as all portions of the curb restoration Work located between The Forks and the Donald Street Bridge (ie. Midtown Bridge) prior to proceeding with Phase 2 of the curb restoration Work. The Contractor shall start placement of the Phase 1 limestone curb and drainage blocks at The Forks and work in the upstream direction to the Donald Street Bridge.
- (ii) Following completion of the Phase 1 limestone curb and drainage blocks Work, the Contractor shall complete Phase 2 of the limestone curb and drainage blocks Work defined as all portions of the curb restoration Work located between the Donald Street Bridge (ie. Midtown Bridge) and the Manitoba Legislative Building. The Contractor shall start placement of the Phase 2 limestone curb and drainage blocks at the Donald Street Bridge and work in the upstream direction to the Manitoba Legislative Building.

#### **D15. SUBSTANTIAL PERFORMANCE**

- D15.1 The Contractor shall achieve Substantial Performance by June 16, 2014. There shall be no additional costs or claims by the Contractor to remobilize his forces and equipment after the 2014 spring freshet to complete the out-of-water component of the Work namely consisting of resetting or replacing the limestone curb along the shoreline edge of the Assiniboine Riverwalk.
- D15.2 When the Contractor considers the Work to be substantially performed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Substantial Performance. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be reinspected.
- D15.3 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.

#### **D16. TOTAL PERFORMANCE**

- D16.1 The Contractor shall achieve Total Performance by June 30, 2014.
- D16.2 When the Contractor or the Contract Administrator considers the Work to be totally performed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Total Performance. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be reinspected.
- D16.3 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.

#### **D17. LIQUIDATED DAMAGES**

- D17.1 If the Contractor fails to achieve Critical Stages and Substantial Performance in accordance with the Contract by the day fixed herein for Critical Stages and Substantial Performance, the Contractor shall pay the City two thousand and five hundred dollars (\$2,500.00) per Working Day for each and every Working Day following the day fixed herein for Critical Stages and Substantial Performance during which such failure continues.
  - (a) The amount specified for liquidated damages in D17.1 is based on a genuine pre-estimate of the City's damages in the event that the Contractor does not achieve Critical Stages and Substantial Performance by the day fixed herein for same.
- D17.2 If the Contractor fails to achieve Total Performance in accordance with the Contract by the day fixed herein for Total Performance, the Contractor shall pay the City five hundred dollars

(\$500.00) per Working Day for each and every Working Day following the day fixed herein for Total Performance during which such failure continues.

- (a) The amount specified for liquidated damages in D17.2 is based on a genuine pre-estimate of the City's damages in the event that the Contractor does not achieve Total Performance by the day fixed herein for same.

D17.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

## **CONTROL OF WORK**

### **D18. JOB MEETINGS**

D18.1 Regular weekly job meetings will be held at the Site. These meetings shall be attended by a minimum of one representative of the Contract Administrator, one representative of the City and one representative of the Contractor. Each representative shall be a responsible person capable of expressing the position of the Contract Administrator, the City and the Contractor respectively on any matter discussed at the meeting including the Work schedule and the need to make any revisions to the Work schedule. The progress of the Work will be reviewed at each of these meetings.

D18.2 The Contract Administrator reserves the right to cancel any job meeting or call additional job meetings whenever he/she deems it necessary.

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

D19.1 Further to C6.24, the Contractor shall be the Prime Contractor and shall serve as, and have the duties of the Prime Contractor in accordance with The Workplace Safety and Health Act (Manitoba).

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

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

## **MEASUREMENT AND PAYMENT**

### **D21. PAYMENT**

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

## **WARRANTY**

### **D22. WARRANTY**

D22.1 Warranty is as stated in C13.

**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. 815-2013

REPAIR OF THE ASSINIBOINE RIVERWALK

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. 815-2013  
REPAIR OF THE ASSINIBOINE RIVERWALK

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

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

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

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

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

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

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

Partial drawings are permitted.

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

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

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

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

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

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

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

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

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

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

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

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



## PART E - SPECIFICATIONS

### GENERAL

#### E1. APPLICABLE SPECIFICATIONS AND DRAWINGS

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

<u>Drawing No.</u>	<u>Drawing Name/Title</u>
815-2013_0000_01-00-R0	Cover Sheet and List of Drawings
815-2013_0001_01-00-R0	Site Plan (Existing Conditions September 2013)
815-2013_0002_01-00-R0	General Plan of Riverwalk Repair Works
815-2013_0003_01-00-R0	Detailed Plan and Sections (Sheet 1 of 3)
815-2013_0004_01-00-R0	Detailed Plan and Sections (Sheet 2 of 3)
815-2013_0005_01-00-R0	Detailed Plan and Sections (Sheet 3 of 3)
815-2013_0006_01-00-R0	Typical Details
815-2013_0007_01-00-R0	Miscellaneous Details

### GENERAL REQUIREMENTS

#### E2. OFFICE FACILITIES

- E2.1 The Contractor shall supply office facilities for the exclusive use of the Contract Administrator meeting the following requirements:
- The office shall have a minimum floor area of 20 square metres with a window and door entrance with a suitable lock.
  - The office shall be equipped with adequate heat, fluorescent lights, and electrical wall outlets.
  - The office shall be equipped with one desk, one meeting table and twelve chairs.
  - A separate toilet with door lock for the Contract Administrator's staff shall be provided with this accommodation.
  - The provision of the field office, furnishings and equipment shall also include maintenance and removal of the office, operating costs, and any service costs.
  - All of the Contractor's temporary structures shall be stabilized in a manner sufficient to prevent overturning by wind forces, in accordance with National Building Code of Canada requirements.
- E2.2 Costs for supply, operation, maintenance and removal of office facilities for the exclusive use of the Contract Administrator shall be considered incidental to Site Development and Restoration and no separate measurement or payment will be made.

### **E3. VERIFICATION OF WEIGHTS**

- E3.1 All Material which is paid for on a weight basis shall be weighed on a scale certified by Consumer & Corporate Affairs, Canada.
- E3.1.1 All weight tickets shall have the gross weight and the time and date of weighing printed by an approved electro/mechanical printer coupled to the scale.
- E3.1.2 The tare weight and net weight may either be hand written or machine printed. All weights, scales and procedures shall be subject to inspection and verification by the Contract Administrator. Such inspection and verification may include, but shall not be limited to:
- (a) checking Contractor's scales for Consumer & Corporate Affairs certification seals;
  - (b) observing weighing procedures;
  - (c) random checking of either gross or tare weights by having such trucks or truck/trailer(s) combinations as the Contract Administrator shall select weighed at the nearest available certified scale;
  - (d) checking tare weights shown on delivery tickets against a current tare.
- E3.2 The Contractor shall ensure that each truck or truck/trailer(s) combination delivering Material which is paid for on a weight basis carries a tare not more than one (1) month old.
- E3.2.1 The tare shall be obtained by weighing the truck or truck/trailer(s) combination on a certified scale and shall show:
- (a) upon which scale the truck or truck/trailer(s) combination was weighed;
  - (b) the mechanically printed tare weight;
  - (c) the license number(s) of the truck and trailer(s);
  - (d) the time and date of weighing.

### **E4. TRUCK WEIGHT LIMITS**

- E4.1 The City shall not pay for any portion of Material which results in the vehicle exceeding the maximum gross vehicle weight allowed under *The City of Winnipeg Traffic By-Law*, unless such vehicle is operating under special permit.

### **E5. ENVIRONMENTAL PROTECTION PLAN**

- E5.1 The Contractor shall plan and implement the Work of this Contract strictly in accordance with the requirements of the Environmental Protection Plan as herein specified, Fisheries Authorization & CEAA Screening report.
- E5.2 The Contractor is advised that at least the following Acts, Regulations, and By-laws apply to the Work and are available for viewing at the office of the Contract Administrator.
- E5.2.1 Federal
- 1. Canadian Environmental Assessment Act (CEAA) c.37
  - 2. Transportation of Dangerous Goods Act and Regulations c.34
  - 3. The Fisheries Act
  - 4. Navigable Waters Protection Act
- E5.2.2 Provincial
- 1. The Dangerous Goods Handling and Transportation Act D12
  - 2. The Endangered Species Act E111
  - 3. The Environment Act c.E125
  - 4. The Fire Prevention Act F80

5. The Manitoba Heritage Resources Act H39.1
6. The Manitoba Noxious Weeds Act N110
7. The Manitoba Nuisance Act N120
8. The Public Health Act c.P210
9. The Workplace Safety and Health Act W210
10. And current applicable associated regulations.  
(Note: Provincial regulations updated as of September 1999)

#### E5.2.3 Municipal

1. The City of Winnipeg By-law No. 2480/79 and all amendments up to and including 7969/2000
2. The City of Winnipeg By-law No. 1573/77 and all amendments up to and including 7670/2000
3. And any other applicable Acts, Regulations, and By-Laws.

E5.3 The Contractor is advised that the following environmental protection measures apply to the Work.

#### E5.3.1 Materials Handling and Storage

1. Construction materials shall not be deposited or stored on riverbanks or river shorelines unless written acceptance from the Contract Administrator is received in advance.
2. Construction materials and debris shall be prevented from entering the Red River. In the event that materials and/or debris inadvertently enter the watercourse, the Contract shall be required to remove the material and restore the watercourse to its original condition.

#### E5.3.2 Fuel Handling and Storage

1. The Contractor shall obtain all necessary permits from Manitoba Conservation for the handling and storage of fuel products and shall provide copies to the Contract Administrator.
2. All fuel handling and storage facilities shall comply with The Dangerous Goods and Transportation Act Storage and Handling of Petroleum Products Regulation and any local land use permits.
3. Fuels, lubricants, and other potentially hazardous materials as defined in The Dangerous Goods and Transportation Act shall be stored and handled within the approved storage areas.
4. In accordance with Section 2.5 (Construction: General Guidelines) of the Manitoba Stream Crossing Guidelines for the Protection of Fish and Fish Habitat, (DFO and DNR, 1996), the Contractor shall ensure that any temporary fuel storage areas established for construction of the project are contained by an impermeable dike and are located a minimum distance of 100 metres away from the high water line of the Red River. Dikes shall be designed, constructed, and maintained to retain not less than 100% of the capacity of the total number of containers or 110% of the largest container, whichever is greatest. The dikes shall be constructed of clay or similar impervious material. If this type of material is not available, the dike shall be constructed of locally available material and lined with high density polyethylene (HDPE). Furthermore, the fuel storage area(s) shall be secured by a barrier such as a high fence and gate to prevent vandalism.
5. The Contractor shall ensure that all fuel storage containers are inspected daily for leaks and spillage.
6. Products transferred from the fuel storage area(s) to specific work sites shall not exceed the daily usage requirement.

7. When servicing requires the drainage or pumping of fuels, lubricating oils or other fluids from equipment, a groundsheet of suitable material (such as HDPE) and size shall be spread on the ground to catch the fluid in the event of a leak or spill.
8. Refuelling of mobile equipment and vehicles shall take place at least 100 metres from a watercourse.
9. The area around storage sites and fuel lines shall be distinctly marked and kept clear of snow and debris to allow for routine inspection and leak detection.
10. A sufficient supply of materials, such as absorbent material and plastic oil booms, to clean up minor spills shall be stored nearby on-site. The Contractor shall ensure that additional material can be made available on short notice.

#### E5.3.3 Waste Handling and Disposal

1. The Site shall be kept clean and orderly at all times during and at completion of construction.
2. At no time during construction shall personal or construction waste be permitted to accumulate for more than one day at any location on the construction Site, other than at a dedicated storage area as may be approved by the Contract Administrator.
3. All resulting debris shall be deposited at a Waste Disposal Ground operating under the authority of Manitoba Regulation #150/91. Exceptions are liquid industrial and hazardous wastes which may require special disposal methods (see SC:21.4 D).
4. Indiscriminate dumping, littering, or abandonment shall not take place.
5. No on-site burning of waste is permitted.
6. Waste storage areas shall not be located so as to block natural drainage.
7. Run-off from a waste storage area shall not be allowed to cause siltation of a watercourse.
8. Waste storage areas shall be left in a neat and finished appearance and/or restored to their original condition to the satisfaction of the Contract Administrator.
9. Equipment shall not be cleaned near watercourses; contaminated water from onshore cleaning operations shall not be permitted to enter watercourses.

#### E5.3.4 Dangerous Goods/Hazardous Waste Handling and Disposal

1. Dangerous goods/hazardous wastes are identified by, and shall be handled according to, The Dangerous Goods Handling and Transportation Act and Regulations.
2. The Contractor shall be familiar with The Dangerous Goods Handling and Transportation Act and Regulations.
3. The Contractor shall have on-site staff that is trained and certified in the handling of the dangerous/hazardous goods, when said dangerous/hazardous goods are being utilized on-site for the performance of the Work.
4. Different waste streams shall not be mixed.
5. Disposal of dangerous goods/hazardous wastes shall be at approved hazardous waste facilities.
6. Liquid hydrocarbons shall not be stored or disposed of in earthen pits on-site.

7. Used oils shall be stored in appropriate drums, or tankage until shipment to waste oil recycling centres, incinerators, or secure disposal facilities approved for such wastes.
8. Used oil filters shall be drained, placed in suitable storage containers, and buried or incinerated at approved hazardous waste treatment and disposal facilities.
9. Dangerous goods/hazardous waste storage areas shall be located at least 100 metres away from the high water line and be dyked.
10. Dangerous goods/hazardous waste storage areas shall not be located so as to block natural drainage.
11. Run-off from a dangerous goods/hazardous waste storage area shall not be allowed to cause siltation of a watercourse.
12. Dangerous goods/hazardous waste storage areas shall be left in a neat and finished appearance and/or restored to their original condition to the satisfaction of the Contract Administrator.

#### E5.3.5 Emergency Response

1. The Contractor shall ensure that due care and caution is taken to prevent spills.
2. The Contractor shall report all major spills of petroleum products or other hazardous substances with significant impact on the environment and threat to human health and safety (as defined in Table 1 below) to Manitoba Conservation, immediately after occurrence of the environmental accident, by calling the 24-hour emergency phone number (204) 945-4888. The Contract Administrator shall also be notified.
3. The Contractor shall designate a qualified supervisor as the on-site emergency response co-ordinator for the project. The emergency response co-ordinator shall have the authority to redirect manpower in order to respond in the event of a spill.
4. The following actions shall be taken by the person in charge of the spilled material or the first person(s) arriving at the scene of a hazardous material accident or the on-site emergency response co-ordinator:
  1. Notify emergency-response co-ordinator of the accident:
    - identify exact location and time of accident
    - indicate injuries, if any
    - request assistance as required by magnitude of accident (Manitoba Conservation 24-hour Spill Response Line (204) 945-4888, Police, Fire Department, Ambulance, company backup)
  2. Attend to public safety:
    - stop traffic, roadblock/cordon off the immediate danger area
    - eliminate ignition sources
    - initiate evacuation procedures if necessary
  3. Assess situation and gather information on the status of the situation, noting:
    - personnel on-site
    - cause and effect of spill
    - estimated extent of damage
    - amount and type of material involved
    - proximity to waterways, sewers, and manholes
  4. If safe to do so, try to stop the dispersion or flow of spill material:

- approach from upwind
  - stop or reduce leak if safe to do so
  - dike spill material with dry, inert sorbet material or dry clay soil or sand
  - prevent spill material from entering waterways and utilities by diking
  - prevent spill material from entering manholes and other openings by covering with rubber spill mats or diking
5. Resume any effective action to contain, clean up, or stop the flow of the spilled product.
5. The emergency response co-ordinator shall ensure that all environmental accidents involving contaminants shall be documented and reported to Manitoba Conservation according to The Dangerous Goods Handling and Transportation Act Environmental Accident Report Regulation 439/87.
6. When dangerous goods are used on-site, materials for containment and cleanup of spill material (e.g. absorbent materials, plastic oil booms, and oversized recovery drums) shall be available on-site.
7. Minor spills of such substances that may be contained on land with no significant impact on the environment may be responded to with in-house resources without formal notification to Manitoba Environment.
8. City emergency response, 9-1-1, shall be used if other means are not available.
9. The on-site emergency response coordinator shall contact The Canadian Coast Guard, Selkirk (204) 785-6030, if the spill material reaches and is on or in the Red or Assiniboine Rivers.

**Table 1 Spills that must be reported to the Manitoba Conservation as Environmental Accidents**

<u>Classification</u>	<u>Hazard</u>	<u>Reportable Quantity/Level</u>
1	Explosives	All
2.1	Compressed Gas (flammable)	100 L*
2.2	Compressed Gas	100 L*
2.3	Compressed Gas (toxic)	All
2.4	Compressed Gas (corrosive)	All
3	Flammable Liquids	100 L
4	Flammable Solids	1 kg
5.1	PG** I & II	1 kg or 1 L
	PG III	50 kg or 50 L
5.2	Organic Peroxide	1 kg or 1 L
6.1	PG I	1 kg or 1 L
	PG II & III	5 kg or 5 L
6.2	Infectious	All
7	Radioactive	Any discharge or radiation level exceeding 10 mSv/h at the package surface and 200 uSv/h at 1 m from the package surface
8	Corrosive	5 kg or 5 L
9.1	Miscellaneous	50 kg (except PCB mixtures)
9.1	PCB Mixtures	500 g

9.2	Aquatic Toxic	1 kg or 1 L
9.3	Wastes (Chronic Toxic)	5 kg or 5 L

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\* Container capacity (refers to container water capacity)

\*\* PG = Packing Group(s)

#### E5.3.6 Vegetation

1. Vegetation shall not be disturbed without written permission of the Contract Administrator. The Contractor shall protect plants or trees which may be at risk of accidental damage. Such measures may include protective fencing or signage and shall be approved in advance by the Contractor Administrator.
2. Trees damaged during construction activities shall be examined by certified arborist tree care professionals; viable trees damaged during construction activities shall be pruned according to good practise by certified arborist tree care professionals. Damaged trees which are not viable shall be replaced at the expense of the Contractor.
3. Trees identified to be at risk by the Contract Administrator are to be strapped with 25 mm x 150 mm x 2400 mm wood planks, or suitably protected as approved by the Contract Administrator.
4. Herbicides and pesticides shall not be used adjacent to any surface watercourses.
5. All landowners adjacent to the area of application of herbicides or pesticides shall be notified prior to the Work.
6. Trees or shrubs shall not be felled into watercourses.
7. Areas where vegetation is removed during clearing, construction, and decommissioning activities, shall be revegetated as soon as possible in accordance with the landscaping plans forming part of the contract, or as directed by the Contract Administrator.

#### E5.3.7 Landscaping

1. Restoration of disturbed areas requiring topsoil and sod.

#### E5.3.8 Red and Assiniboine Rivers Navigation Protection

##### Dangerous Goods/Hazardous Waste Handling and Disposal

- (a) The Red and Assiniboine Rivers are open to navigation from approximately mid April to mid November, annually. During this period, it will be the responsibility of the Contractor to fully ensure the safety of river users.
- (b) The Contractor shall provide, install, and maintain adequate warning signs and lighting on any structure beyond the water's edge to notify boats and other craft navigating on the Red and Assiniboine River that construction is underway. These warnings shall meet the requirements of the City of Winnipeg Waterways Authority and of the Canadian Coast Guard.
- (a) Prior to commencing any applicable operations over the Red River, the Contractor shall provide to the Contract Administrator a copy of all necessary approvals received by the Contractor.

## **E6. PROTECTION OF EXISTING TREES**

- E6.1 Removal of trees will not be required. The Contractor shall take the following precautionary steps to avoid damage from construction activities to any existing trees within the limits of the construction area.
- E6.1.1 Do not stockpile materials and soil or park vehicles and equipment within 2 metres of trees.
- E6.1.2 Strap mature tree trunks with 25 mm x 150 mm x 2400 mm wood planks. Smaller trees shall be similarly protected using appropriately sized wood planks.
- E6.1.3 Work shall be carried out in a manner to minimize damage to existing root systems. Where roots must be cut to facilitate the Work they shall be neatly pruned.
- E6.1.4 Work on Site shall be carried out in a manner to minimize damage to existing tree branches. Where damage to tree branches does occur, the Contractor shall neatly prune the damaged branch.
- E6.1.5 American elm trees shall not be pruned between April 1st and August 1st and Siberian elm trees between April 1st and July 1st of any year under provisions of The Dutch Elm Disease Act.
- E6.2 All damage to existing trees due to construction activities shall be repaired to the requirements and satisfaction of the City of Winnipeg, Public Works Department, Urban Forestry Branch at the Contractor's expense.
- E6.3 Costs for protection of trees shall be considered incidental to Site Development and Restoration and no separate measurement or payment will be made.

## **E7. SITE DEVELOPMENT AND RESTORATION**

### **E7.1 Description**

This Specification shall cover all aspects of the Site development and restoration work, including equipment mobilization and demobilization, staging of the Contractor work area in the location as shown on the Drawings, erection and maintenance of safety and ice fencing, removal of debris along the bank including but not limited to existing damaged or destroyed limestone curb and drainage blocks, existing geotextile, granular base, rockfill riprap, snow and ice clearing, access development including temporary in-water riprap rockfill turnarounds and temporary bock dock crossing structural deck reinforcement, and site restoration.

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

### **E7.2 Equipment**

All equipment, implements, tools and facilities used shall be of a size and type as required to complete the work in a reasonable time, approved by the Contract Administrator. The Contractor shall keep all equipment in good working order, and have sufficient standby equipment available at all times, as required.

### **E7.3 Construction Methods**

#### **E7.3.1 Mobilization/Demobilization**

The mobilization and demobilization of all equipment necessary to complete the Work is covered under this Specification, including installation, maintenance and removal of the Contract Administrators trailer.

### E7.3.2 Site Access and Development

The Contractor shall be responsible to develop suitable Site access within the limits shown on the Drawings. This includes but is not limited to, temporary bridging of structures such as but not limited to existing structural boat docks, temporary rockfill riprap turnarounds in the locations shown on the Drawings, temporary removal and reinstallation of safety and ice fencing, any landscaping and grading repairs, restoration of vegetation, etc. necessary to restore any Site and construction access areas to their pre-existing condition. Prior to commencing construction the Contractor shall submit their site access plan to the Contract Administrator for approval.

- (a) The locations of the Contractor's construction Site access and work area shall be restored to the same condition or better than it was prior to the initiation of any Work.
- (b) One (1) construction access from the upper bank area to the Assiniboine Riverwalk has been identified on the drawings adjacent to (east) of the Donald Street Bridge. Should the contractor wish to develop additional or alternate access points he shall be solely responsible to complete all design and obtain all necessary approvals including a City of Winnipeg Waterway Construction Permit. The use and development of any additional or alternate construction access points shall be subject to the approval of the Contract Administrator.
- (c) A total of four (4) temporary rockfill riprap turn-arounds along the Assiniboine Riverwalk have been identified for contractor access. Any changes to the location or number of turn-arounds shall be subject to approval from the Contract Administrator. Once the temporary turn-arounds are no longer needed for construction access the rockfill riprap material shall be incorporated in to the Assiniboine Riverwalk in accordance with E9.

### E7.3.3 Frozen Waterways Permit

The Contractor is responsible for obtaining a Frozen Water Permit for permission to Work on the river ice. Contact the City of Winnipeg Police Service.

### E7.3.4 Debris Removal

All debris shall be removed from the riverbank prior to the Work. The Contractor shall load and haul all trees, stumps, root, logs, brush, rubbish, existing damaged or destroyed limestone curb and drainage blocks, existing geotextile, granular base, rockfill riprap, and any other surface litter that may be on the slope from the site, and dispose of these materials at dumps located by the Contractor, and approved by the Contractor Administrator. All material to be removed shall be disposed of off-site immediately upon collection, and stockpiling will not be permitted.

### E7.3.5 Snow and Ice Removal

Snow and ice cover shall be cleared from the riverbank prior to the placement of the rockfill riprap. The methodology to clear the snow and ice shall be subject to the approval of the Contract Administrator. The Contractor will also be responsible for all snow and ice clearing for equipment access and staging work area. Ice at the shoreline of the river shall be broken and cleared before the placement of riprap below ice level. Care shall be taken to ensure that the ice is removed, and does not become trapped below rockfill riprap placement, as identified in E9.

### E7.3.6 Safety and Ice Fence

The Contractor shall erect and maintain for the duration of the project, a safety and ice fence to restrict access to the Site including the Contractor work area as shown on the

Drawings. The fencing shall enclose the entire site, with appropriate gates or openings that are closed at the end of each work day. Appropriate signs shall be erected to warn all recreational users of the river and Assiniboine Riverwalk that an open water hazard exists. Fence construction on grade, snow or ice shall consist of Dupont Number L70 orange plastic safety fence or approved equal with a mesh spacing of 45 mm and a minimum height of 1.2 metres supported by wooden or steel posts driven into the ground. The wooden or steel posts shall be sized and capable of maintaining the safety and ice fence material upright, regardless of conditions. Fence construction shall be as shown on the Drawings. Upon completion of the work, all fence materials shall be removed and disposed off-site.

#### E7.3.7 Site Restoration

The Site shall be restored to a condition at least equivalent to its original condition prior to initiation of the work, including removal of the Contract Administrators trailer, restoration of the Assiniboine Riverwalk granular path, and restoration of the Contractor work area as approved by the Contract Administrator. This may include, but is not necessarily limited to landscaping and grading repairs in accordance with the requirements of *The City of Winnipeg Standard Construction Specification CW 3510 – R9* for Sodding and is considered incidental to the Work and no separate measurement or payment will be made.

#### E7.4 Method of Measurement

The site development and restoration will be paid for on a lump sum basis. The work to be paid for shall be the total Work constructed in accordance with this Specification and accepted by the Contract Administrator. No measurement will be made for this work.

#### E7.5 Basis of Payment

The Site development and restoration will be paid for at the percentage of the Contract Lump Sum Price for "Site Development and Restoration", which price shall be payment in full for supplying all materials and for performing all operations herein described and all other items incidental to the work included in this Specification.

Percentages of the Contract Lump Sum Price shall be as follows:

- (a) 40% when the Contract Administrator is satisfied that the Work has commenced.
- (b) 40% during construction, proportional to the percent of Work completed.
- (c) 20% when the Contract Administrator is satisfied that the Contractor has achieved Total Performance.

### **E8. SILT FENCE**

#### E8.1 Description

This Specification covers the erection of temporary silt fencing, which shall be installed and maintained at the locations shown on the drawings to control runoff and minimize the release of detrimental silt loading to watercourses during resetting and replacing of the limestone curb blocks including subgrade excavation and supply and placement of the granular base materials.

The scope of Work included in this Specification is as follows:

- (a) Supply and Install temporary silt fencing at the locations as indicated on the Drawings, in accordance with the detailed drawing provided, prior to the start of the limestone curb and drainage blocks Work, and prior to undertaking any other activities on the Site

where silt fencing is required.

- (b) Maintain the silt fencing in serviceable condition throughout the entire duration of activities at the Site where silt fencing is required, including final restoration and cleanup of the construction Site.
- (c) Remove the silt fencing and restore the area where the fencing was installed, without further disturbing the area and without releasing any deleterious substances to the adjacent watercourse.

**E8.2 Materials**

**E8.2.1 Fences Posts**

- (a) Fence posts shall be 100 mm diameter untreated wood posts or 50 mm diameter steel.

**E8.2.2 Filter Fabric**

- (a) Filter Fabric Shall be a woven geotextile material specifically designed for a silt fence applications, meeting the following minimum requirements:

Property	Test Method	Value
Grab Tensile Strength	ASTM D 4632	0.55 kN
Grab Tensile Elongation	ASTM D 4632	15%
Mullen Burst	ASTM D 4786	2060 kPa
Puncture	ASTM D 4833	0.285 kN
Trapezoid Tear	ASTM D 4533	0.285 kN
UV Resistance	ASTM D 435	5 80 % @ 500 hrs
Apparent Opening Size (AOS)	ASTM D 4751	0.60 mm
Flow Rate	ASTM D 4491	405 l/min/m <sup>2</sup>

Acceptable Product: "Amoco 2130 Silt Fence Fabric" or approved equal in accordance with B6.

**E8.2.3 Wire Mesh**

Wire mesh shall be galvanized or plain metal with wire gauge = 3.0 mm, wire spacing @ 150 mm o/c.

**E8.2.4 Fencing Material Fasteners**

Staples or wire ties of sufficient strength and spacing to withstand 500 N (100 lbf) pull test at any point on the wire mesh.

**E8.3 Construction Methods**

**E8.3.1** Ensure that no deleterious substances are discharged into the adjacent watercourse at any time during construction activities.

**E8.3.2 Silt Fence Installation**

- (a) Silt fence posts can be driven or set into undisturbed soil and / or rockfill. Alternatively, excavate 150 mm x 150 mm (min.) anchor trench along alignment of silt fence as indicated.
- (b) Install fence posts as indicated. Ensure that fence posts are firmly driven into undisturbed soil, or are completely and firmly backfilled if installed via auger or other methods. Attach wire mesh as support backing for silt fence filter fabric with fasteners as specified. Attach silt fence filter fabric on top of wire mesh in similar

fashion. Overlap any fence seams (wire mesh or filter fabric) by 450 mm minimum. Ensure that wire mesh and filter fabric are installed on the upslope side of the post and are fully laid in anchor trench as shown.

- (c) If applicable, install and compact locally excavated materials into anchor trench and slope as indicated. Compact to 95% of maximum dry density (ASTM D-698).
- (d) Note that the installation methods of the silt fence and posts may be modified to suit the site conditions and rockfill and protect against loss of the granular fill into the watercourse, subject to acceptance by the Contract Administrator.

#### E8.3.3 Silt Fence Maintenance

- (a) Inspect silt fence daily, prior to starting any other construction activities. If fence posts are found loose or not upright, repair in accordance with installation procedure as specified. If silt fence is found to be loose or torn, repair or replace as necessary.
- (b) If silt deposition at the fence is 300 mm or more in depth, carefully remove and dispose of silt offsite without disturbing silt fence.

#### E8.3.4 Silt Fence Removal

- (a) The silt fence shall remain in place until all limestone curb and drainage blocks related Work has been completed, as determined by the Contract Administrator.
- (b) Upon authorization of the Contract Administrator, remove all fence posts, wire mesh, fabric, and fasteners from Site.
- (c) Restore areas disturbed as directed by the Contract Administrator without releasing any deleterious substances to the adjacent watercourse.

#### E8.4 Measurement and Payment

E8.4.1 The supply, placement, maintenance and removal of silt fence shall be measured on a length basis and paid for at the Contract Unit Price per lineal metre for "Silt Fence". The length to be paid for shall be the total number of metres supplied and placed in accordance with this Specification, accepted and measured by the Contract Administrator. Payment of silt fence shall be in accordance with the following payment schedule:

- (b) Sixty percent (60%) of the Contract Unit Price per lineal metre for "Silt Fence" shall be paid following supply and installation.
- (c) Forty percent (40%) of the Contract Unit Price per lineal metre for "Silt Fence" shall be paid following final removal.

E8.4.2 Removal of accumulated sediment from the silt fence is considered incidental to the Work and no separate measurement or payment will be made.

### TECHNICAL SPECIFICATIONS

#### E9. ROCKFILL RIPRAP

##### E9.1 Description

This Specification shall cover the Supply and Placement of Rockfill Riprap.

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 an incidental to the satisfactory performance and completion of all work as hereinafter specified.

##### E9.2 Materials

The Contractor shall be responsible for the supply, safe storage and handling of all materials set forth in this Specification.

The rockfill material for use as riprap shall consist of a clean free draining material, free from organics, roots, silts, sand, clay, or any other material that would detract from the strength and drainage characteristics of clean rockfill. Individual particles shall be shaped such that no dimension is greater than two times the smallest dimension. Flat, elongated or platy particles will not be accepted. The Los Angeles abrasion loss determined using ASTM procedures shall not exceed 32%. The riprap shall range in size from 50 to 450 mm in diameter, with at least 50% being larger than 300 mm and less than 5% finer than 5 mm. The riprap shall be durable white crystalline limestone. Softer buff to yellow dolomite or dolostone will not be accepted. Rock samples shall be submitted to the Contract Administrator for approval a minimum of five (5) days prior to their use. No rockfill will be permitted without providing the source and supplier. Inspection of the source will be performed by the Contract Administrator prior to written acceptance.

### E9.3 Equipment

All equipment, implements, tools and facilities used shall be of a size and type as required to complete the Work in a reasonable time, approved by the Contract Administrator. The Contractor shall keep all equipment in good working order, and have sufficient standby equipment available at all times, as required.

### E9.4 Construction Methods

#### E9.4.1 Riprap Placement

- a) Debris, snow and ice shall be removed from the bank in accordance with E7 prior to placement of the rockfill riprap.
- b) The supply of rockfill riprap along the Assiniboine Riverwalk shall be in accordance with maximum allowable loads as shown on the Drawings, and accepted by the Contract Administrator. Temporary structural reinforcement of the existing structural boat dock located at the bottom of the existing access down to the Assiniboine Riverwalk as shown on the Drawings shall be completed to the satisfaction of the Contract Administrator and is considered incidental to the Work and no separate measurement or payment will be made.
- c) The rockfill riprap shall be placed, pushed or rolled into place in such a manner that the larger rocks are uniformly distributed and the smaller rocks serve to fill the places between the larger stones, and that excessive segregation of the various particle sizes does not occur. Note that the rockfill below winter ice level shall generally be placed prior to the upper rockfill, unless otherwise approved by the Contract Administrator. Sufficient levelling shall be done to procure a neat and uniform surface, conforming to the shape and dimensions shown on the Drawings, and accepted by the Contract Administrator. The allowable fill tolerances shall be within 0.1 m of the grades and thicknesses as shown on the Drawings. Care shall be taken when placing the outside edges of the riprap to provide a smooth flow transition from the existing river bottom to the riprap areas, as identified on the Drawings, and subject to the approval of the Contract Administrator. Final shaping of the rockfill riprap is considered incidental to the Work and no separate measurement or payment will be made.
- d) All new rockfill riprap shall be blended into the existing rockfill particularly on the upper portion of the Assiniboine Riverwalk above the winter ice level. In addition, the new rockfill riprap shall be carefully placed against the new or reset limestone curb blocks to provide support.

### E9.5 Quality Control

#### E9.5.1 Inspection

All workmanship and all materials furnished and supplied under this Specification are subject to close and systematic inspection and testing by the Contract Administrator including all operations from the selection and production of materials through the final acceptance of the specified work. 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.

#### E9.5.2 Access

The Contract Administrator shall be afforded full access for the inspection and control testing of materials at the site to determine whether the material is being selected and placed in accordance with this Specification.

#### E9.6 Method of Measurement

The supply and placement of the rockfill riprap will be measured on a weight basis. The weight to be paid for shall be the total number of metric tonnes of rockfill riprap supplied and placed in accordance with this Specification, as measured by a certified weigh scale and accepted by the Contract Administrator. The Contractor shall provide the weigh tickets to the Contract Administrator for the material supplied to the site at the time of delivery. No payment will be made for any weigh tickets which are not supplied at the time of delivery, or which are lost.

#### E9.7 Basis of Payment

E9.7.1 The supply and placement of rockfill riprap will be paid for at the Contract Unit Price per metric tonne for the "Rockfill Riprap", measured as specified herein, which price shall be payment in full for supplying all materials and for performing all operations herein described and all other items incidental to the work included in this Specification.

### **E10. LIMESTONE CURB AND DRAINAGE BLOCKS**

#### E10.1 Description

This Specification shall cover the Supply and Placement of limestone curb and drainage blocks.

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 an incidental to the satisfactory performance and completion of all Work as hereinafter specified.

#### E10.2 Materials

##### E10.2.1 General

The Contractor shall be responsible for the supply, safe storage and handling of all materials set forth in this Specification.

##### E10.2.2 Limestone Curb and Drainage Blocks

All new limestone blocks shall be Manitoba Tyndall limestone as quarried and supplied by Gillis Quarries Ltd. to ASTM C568-79 Category II, High Density Sound Hard Stone, free of clay pockets.

Limestone curb blocks on grade shall be 300 mm wide x 300 mm thick x 1200 mm to 1900 mm random length with rustic top and sides with drilled and split edges on two sides. The ends and bottom shall be sawn cut. The colour shall match the limestone used on the existing Assiniboine Riverwalk.

Drainage Blocks (ie. spacers) for the limestone curb blocks shall be 300 mm wide x 150 mm thick x 200 mm length, sawn cut all sides. The colour shall match the drainage blocks used on the existing Assiniboine Riverwalk.

The Contract Administrator shall identify all existing limestone curb and drainage blocks suitable for re-use and re-setting.

#### E10.2.3 Granular Base

The granular base shall be in accordance with the requirements of *The City of Winnipeg Standard Construction Specification* CW 3110 – R17 for 20 mm crushed limestone.

#### E10.2.4 Geotextile (Non-Woven)

The geotextile fabric shall be in accordance with the requirements of *The City of Winnipeg Standard Construction Specification* CW 3130 – R4 for separation (non-woven) geotextile fabric.

#### E10.3 Equipment

All equipment, implements, tools and facilities used shall be of a size and type as required to complete the Work in a reasonable time, approved by the Contract Administrator. The Contractor shall keep all equipment in good working order, and have sufficient standby equipment available at all times, as required.

#### E10.4 Construction Methods

##### E10.4.1 Supply and Placement of New Limestone Curb and Drainage Blocks

- a) Debris, existing damaged or destroyed limestone curb and drainage blocks, existing geotextile, granular base and rockfill riprap, and snow and ice shall be removed from the bank in accordance with E7 prior to placement of the new limestone curb and drainage blocks and is considered incidental to the Work and no separate measurement or payment will be made.

The Contract Administrator shall identify all existing limestone curb and drainage blocks designated for disposal. Intact blocks of suitable size and quality may be incorporated into the rockfill riprap, subject to acceptance by the Contract Administrator.

- b) Subgrade preparation shall be in accordance with the requirements of *The City of Winnipeg Standard Construction Specification* CW 3110 – R17 and conform to the subgrade shape and dimensions shown on the Drawings, and accepted by the Contract Administrator. The allowable cut tolerances shall be within 0.05 m of the grades as shown on the Drawings. Subgrade preparation is considered incidental to the Work and no separate measurement or payment will be made.
- c) Supply and placement of granular base shall be in accordance with the requirements of *The City of Winnipeg Standard Construction Specification* CW 3110 – R17 for 20 mm crushed limestone. The granular base and levelling course shall conform to the shape and dimensions shown on the Drawings, and accepted by the Contract Administrator. The granular base shall be placed in maximum 150 mm thick lifts and compacted to a minimum of 100% Standard Proctor Maximum Dry Density. The levelling course shall be placed in maximum 50 mm thick lifts and compacted to a minimum of 95% Standard Proctor Maximum Dry Density. The allowable fill tolerances shall be within 0.025 m of the grades as shown on the Drawings. Supply and placement of the granular base and levelling course is considered incidental to the Work and no separate measurement or payment will be made.

- d) Supply and placement of geotextile fabric shall be in accordance with the requirements of *The City of Winnipeg Standard Construction Specification* CW 3130 – R4 for separation (non-woven) geotextile fabric. The geotextile fabric shall conform to the shape and dimensions shown on the Drawings with a minimum 300 mm overlap at all seams, and accepted by the Contract Administrator. The geotextile shall be placed on the prepared subgrade and wrapped around the compacted granular base. The geotextile shall be overlapped and secured directly under the new limestone curb and drainage blocks. Supply and placement of the geotextile is considered incidental to the Work and no separate measurement or payment will be made.
- e) Supply and placement of new limestone curb and drainage blocks shall be done to procure a neat and uniform alignment, conforming to the shape and dimensions shown on the Drawings, and accepted by the Contract Administrator. The blocks shall be level and plumb at the required grade and match the grade and face of the adjacent block surface. The allowable placement tolerances shall be within 0.010 m of the grades as shown on the Drawings. If the blocks are on a curved section of the alignment, the blocks shall have a mitre-cut to the approximate radius and placed to ensure uniform curvature along the alignment. Joints shall be chiselled on site as required to provide a smooth transition from block to block. Care shall be taken when placing rockfill riprap along the riverside edge of the new limestone curb and drainage blocks to provide support for the blocks, while maintaining a smooth and neat transition, as shown on the Drawings, and subject to the approval of the Contract Administrator. Final shaping of the rockfill riprap along the riverside edge of the new limestone curb and drainage blocks is considered incidental to the Work and no separate measurement or payment will be made.

#### E10.4.2 Resetting of Existing Limestone Curb and Drainage Blocks

- a) Debris, existing geotextile, granular base and rockfill riprap, and snow and ice shall be removed from the bank in accordance with E7 prior to resetting of the existing limestone curb and drainage blocks and is considered incidental to the Work and no separate measurement or payment will be made.
- b) Subgrade preparation shall be in accordance with the requirements of *The City of Winnipeg Standard Construction Specification* CW 3110 – R17 and conform to the subgrade shape and dimensions shown on the Drawings, and accepted by the Contract Administrator. The allowable cut tolerances shall be within 0.05 m of the grades as shown on the Drawings. Subgrade preparation is considered incidental to the Work and no separate measurement or payment will be made.
- c) Supply and placement of granular base shall be in accordance with the requirements of *The City of Winnipeg Standard Construction Specification* CW 3110 – R17 for 20 mm crushed limestone. The granular base and levelling course shall conform to the shape and dimensions shown on the Drawings, and accepted by the Contract Administrator. The granular base shall be placed in maximum 150 mm thick lifts and compacted to a minimum of 100% Standard Proctor Maximum Dry Density. The levelling course shall be placed in maximum 50 mm thick lifts and compacted to a minimum of 95% Standard Proctor Maximum Dry Density. The allowable fill tolerances shall be within 0.025 m of the grades as shown on the Drawings. Supply and placement of the granular base and levelling course is considered incidental to the Work and no separate measurement or payment will be made.
- d) Supply and placement of geotextile fabric shall be in accordance with the requirements of *The City of Winnipeg Standard Construction Specification* CW 3130 – R4 for separation (non-woven) geotextile fabric. The geotextile fabric shall conform to the shape and dimensions shown on the Drawings with a minimum 300 mm overlap at all seams, and accepted by the Contract Administrator. The geotextile shall be placed on the prepared subgrade and wrapped around the compacted granular base. The geotextile shall be overlapped and secured directly under the existing reset limestone curb and drainage

blocks. Supply and placement of the geotextile is considered incidental to the Work and no separate measurement or payment will be made.

- e) The resetting of existing limestone curb and drainage blocks shall be done to procure a neat and uniform alignment, conforming to the shape and dimensions shown on the Drawings, and accepted by the Contract Administrator. The blocks shall be level and plumb at the required grade and match the grade and face of the adjacent block surface. The allowable placement tolerances shall be within 0.010 m of the grades as shown on the Drawings. If the blocks are on a curved section of the alignment, the blocks shall have a mitre-cut to the approximate radius and placed to ensure uniform curvature along the alignment. Joints shall be chiselled on site as required to provide a smooth transition from block to block. Care shall be taken when placing rockfill riprap along the riverside edge of the existing reset limestone curb and drainage blocks to provide support for the blocks, while maintaining a smooth and neat transition, as shown on the Drawings, and subject to the approval of the Contract Administrator. Final shaping of the rockfill riprap along the riverside edge of the existing reset limestone curb and drainage blocks is considered incidental to the Work and no separate measurement or payment will be made.

## E10.5 Quality Control

### E10.5.1 Inspection

All workmanship and all materials furnished and supplied under this special provision are subject to close and systematic inspection and testing by the Contract Administrator including all operations from the selection and production of materials through the final acceptance of the specified work. 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.

### E10.5.2 Access

The Contract Administrator shall be afforded full access for the inspection and control testing of materials at the site to determine whether the material is being selected and placed in accordance with this Specification.

### E10.5.3 Submittals

Two 200 mm x 200 mm x 12 mm samples of the limestone curb blocks and two 150 mm x 200 mm x 300 mm samples of the drainage blocks shall be submitted for approval by the Contract Administrator prior to commencing the Work. Submitted samples shall be representative of the range of colour and finish to be supplied.

## E10.6 Method of Measurement

### E10.6.1 Supply New Limestone Curb and Drainage Blocks

The supply of new limestone curb and drainage blocks will be measured on a length basis. The length to be paid for shall be the total number of lineal meters of new limestone curb and drainage blocks supplied in accordance with this Specification, as measured by the Contract Administrator.

### E10.6.2 Placement of New Limestone Curb and Drainage Blocks

The placement of new limestone curb and drainage blocks will be measured on a length basis. The length to be paid for shall be the total number of lineal meters of new limestone curb and drainage blocks placed in accordance with this Specification, as measured by the Contract Administrator.

### E10.6.3 Resetting of Existing Limestone Curb and Drainage Blocks

The resetting of existing limestone curb and drainage blocks will be measured on a length basis. The length to be paid for shall be the total number of lineal meters of existing limestone curb and drainage blocks reset in accordance with this Specification, as measured by the Contract Administrator.

### E10.7 Basis of Payment

E10.7.1 The supply of new limestone curb and drainage blocks will be paid for at the Contract Unit Price per lineal meter of "Supply New Limestone Curb and Drainage Blocks", measured as specified herein, which price shall be payment in full for supplying all materials incidental to the work included in this Specification.

E10.7.2 The placement of new limestone curb and drainage blocks will be paid for at the Contract Unit Price per lineal meter of "Placement of New Limestone Curb and Drainage Blocks", measured as specified herein, which price shall be payment in full for performing all operations herein described and all other items incidental to the work included in this Specification.

E10.7.3 The resetting of existing limestone curb and drainage blocks will be paid for at the Contract Unit Price per lineal meter of "Resetting of Existing Limestone Curb and Drainage Blocks", measured as specified herein, which price shall be payment in full for performing all operations herein described and all other items incidental to the work included in this Specification.