



**THE CITY OF WINNIPEG**

# **BID OPPORTUNITY**

**BID OPPORTUNITY NO. 732-2007**

**BIBEAU DRAIN INLET SLOPE STABILIZATION AND INLET PROTECTION WORK**

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## **PART B - BIDDING PROCEDURES**

### **B1. CONTRACT TITLE**

B1.1 BIBEAU DRAIN INLET SLOPE STABILIZATION AND INLET PROTECTION WORK

### **B2. SUBMISSION DEADLINE**

B2.1 The Submission Deadline is 12:00 noon Winnipeg time, December 14, 2007.

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

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

### **B3. ENQUIRIES**

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

B3.2 If the Bidder finds errors, discrepancies or omissions in the Bid Opportunity, or is unsure of the meaning or intent of any provision therein, the Bidder shall notify the Contract Administrator of the error, discrepancy or omission, or request a clarification as to the meaning or intent of the provision at least five (5) Business Days prior to the Submission Deadline.

B3.3 Responses to enquiries which, in the sole judgment of the Contract Administrator, require a correction to or a clarification of the Bid Opportunity will be provided by the Contract Administrator to all Bidders by issuing an addendum.

B3.4 Responses to enquiries which, in the sole judgment of the Contract Administrator, do not require a correction to or a clarification of the Bid Opportunity will be provided by the Contract Administrator only to the Bidder who made the enquiry.

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

### **B4. ADDENDA**

B4.1 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.

B4.2 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.

B4.2.1 Addenda will be available on the Bid Opportunities page at The City of Winnipeg, Corporate Finance, Materials Management Branch internet site at <http://www.winnipeg.ca/matmgt>.

B4.2.2 The Bidder is responsible for ensuring that he has received all addenda and is advised to check the Materials Management Branch internet site for addenda regularly and shortly before the Submission Deadline, as may be amended by addendum.

B4.3 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.

### **B5. SUBSTITUTES**

B5.1 The Work is based on the Plant, Materials and methods specified in the Bid Opportunity.

- B5.2 Substitutions shall not be allowed unless application has been made to and prior approval has been granted by the Contract Administrator in writing.
- B5.3 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.
- B5.4 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.
- B5.5 The Contract Administrator, after assessing the request for approval of a substitute, may in his 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.
- B5.6 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.
- B5.6.1 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 wishes to inform.
- B5.7 If the Contract Administrator approves a substitute as an “approved equal”, any Bidder may use the approved equal in place of the specified item.
- B5.8 If the Contract Administrator approves a substitute as an “approved alternative”, any Bidder bidding that approved alternative may base his Total Bid Price upon the specified item but may also indicate an alternative price based upon the approved alternative. Such alternatives will be evaluated in accordance with B14.
- B5.9 No later claim by the Contractor for an addition to the Total Bid Price because of any other changes in the Work necessitated by the use of an approved equal or an approved alternative will be considered.

## **B6. BID COMPONENTS**

- B6.1 The Bid shall consist of the following components:
- (a) Form A: Bid;
  - (b) Form B: Prices;
  - (c) Form G1: Bid Bond and Agreement to Bond, or Form G2: Irrevocable Standby Letter of Credit and Undertaking, or a certified cheque or draft;

- B6.2 Further to B6.1, the Bidder should include the written correspondence from the Contract Administrator approving a substitute in accordance with B5.
- B6.3 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.
- B6.4 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.
- B6.4.1 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.
- B6.4.2 A hard copy of Form B: Prices must be submitted with the Bid. If there is any discrepancy between the Adobe PDF version of Form B: Prices and the Microsoft Excel version of Form B: Prices, the PDF version shall take precedence.
- B6.5 Bidders are advised not to include any information/literature except as requested in accordance with B6.1.
- B6.6 Bidders are advised that inclusion of terms and conditions inconsistent with the Bid Opportunity document, including the General Conditions, may result in the Bid being determined to be non-responsive.
- B6.7 Bids submitted by facsimile transmission (fax) or internet electronic mail (e-mail) will not be accepted.
- B6.8 Bids shall be submitted to:  
The City of Winnipeg  
Corporate Finance Department  
Materials Management Branch  
185 King Street, Main Floor  
Winnipeg MB R3B 1J1

**B7. BID**

- B7.1 The Bidder shall complete Form A: Bid, making all required entries.
- B7.2 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 own name, his 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 own, the business name and the name of every partner or corporation who is the owner of such business name shall be inserted.
- B7.2.1 If a Bid is submitted jointly by two or more persons, each and all such persons shall identify themselves in accordance with B7.2.
- B7.3 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.
- B7.4 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 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 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.

B7.4.1 The name and official capacity of all individuals signing Form A: Bid shall be printed below such signatures.

B7.4.2 All signatures should be witnessed, except where a corporate seal has been affixed.

B7.5 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.

## **B8. PRICES**

B8.1 The Bidder shall state a price in Canadian funds for each item of the Work identified on Form B: Prices.

B8.2 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.

B8.3 The quantities for which payment will be made to the Contractor are to be determined by the Work actually performed and completed by the Contractor, to be measured as specified in the applicable Specifications.

## **B9. QUALIFICATION**

B9.1 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.

B9.2 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 Branch internet site at <http://www.winnipeg.ca/matmgt>).

B9.3 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);

B9.4 Further to B9.3(c), the Bidder shall, within three (3) 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 Manitoba Construction Safety Association or by the Manitoba Heavy Construction Association's Safety, Health and Environment Program; or
- (b) a report or letter to that effect from an independent reviewer acceptable to the City. (A list of acceptable reviewers and the review template are available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Branch internet site at <http://www.winnipeg.ca/matmgt.>)

B9.5 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.

B9.6 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.

## **B10. BID SECURITY**

B10.1 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.

B10.1.1 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.

B10.1.2 All signatures on bid securities shall be original, and shall be witnessed or sealed as required.

B10.2 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.

B10.2.1 Where the bid security provided by the successful Bidder is in the form of a certified cheque or draft pursuant to B10.1(c), it will be deposited and retained by the City as the performance security and no further submission is required.

B10.2.2 The City will not pay any interest on certified cheques or drafts furnished as bid security or subsequently retained as performance security.

B10.3 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.



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

B11.1 Bids will be opened publicly, after the Submission Deadline has elapsed, in the office of the Corporate Finance Department, Materials Management Branch, or in such other office as may be designated by the Manager of Materials.

B11.1.1 Bidders or their representatives may attend.

B11.1.2 Bids determined by the Manager of Materials, or his designate, to not include the bid security specified in B10 will not be read out.

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

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

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

## **B12. IRREVOCABLE BID**

B12.1 The Bid(s) submitted by the Bidder shall be irrevocable for the time period specified in Paragraph 11 of Form A: Bid.

B12.2 The acceptance by the City of any Bid shall not release the Bids of the next two lowest evaluated responsive Bidders and these Bidders shall be bound by their Bids on such Work 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.

## **B13. WITHDRAWAL OF BIDS**

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

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

B13.1.2 The City will assume that any one of the contact persons named in Paragraph 3 of Form A: Bid or the Bidder's authorized representatives named in Paragraph 12 of Form A: Bid, and only such person, has authority to give notice of withdrawal.

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

- (a) retain the Bid until after the Submission Deadline has elapsed;
- (b) open the Bid to identify the contact person named in Paragraph 3 of Form A: Bid and the Bidder's authorized representatives named in Paragraph 12 of Form A: Bid; and
- (c) if the notice has been given by any one of the persons specified in B13.1.3(b), declare the Bid withdrawn.

B13.2 A Bidder who withdraws his Bid after the Submission Deadline but before his Bid has been released or has lapsed as provided for in B12.2 shall be liable for such damages as are imposed upon the Bidder by law and subject to such sanctions as the Chief Administrative

Officer considers appropriate in the circumstances. The City, in such event, shall be entitled to all rights and remedies available to it at law, including the right to retain the Bidder's bid security.

#### **B14. EVALUATION OF BIDS**

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

- (a) compliance by the Bidder with the requirements of the Bid Opportunity (pass/fail);
- (b) qualifications of the Bidder and the Subcontractors, if any, pursuant to B9 (pass/fail);
- (c) Total Bid Price;
- (d) economic analysis of any approved alternative pursuant to B5.

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

B14.3 Further to B14.1(b), the Award Authority shall reject any Bid submitted by a Bidder who does not demonstrate, in his Bid or in other information required to be submitted, that he is responsible and qualified.

B14.4 Further to B14.1(c), the Total Bid Price shall be the sum of the quantities multiplied by the unit prices for each item shown on Form B: Prices.

B14.4.1 If there is any discrepancy between the Total Bid Price written in figures, the Total Bid Price written in words and the sum of the quantities multiplied by the unit prices for each item, the sum of the quantities multiplied by the unit prices for each item shall take precedence.

#### **B15. AWARD OF CONTRACT**

B15.1 The City will give notice of the award of the Contract or will give notice that no award will be made.

B15.2 The City will have no obligation to award a Contract to a Bidder, even though one or all of the Bidders are determined to be responsible and qualified, and the Bids are determined to be responsive.

B15.2.1 Without limiting the generality of B15.2, the City will have no obligation to award a Contract where:

- (a) the prices exceed the available City funds for the Work;
- (b) the prices are materially in excess of the prices received for similar work in the past;
- (c) the prices are materially in excess of the City's cost to perform the Work, or a significant portion thereof, with its own forces;
- (d) only one Bid is received; or
- (e) in the judgment of the Award Authority, the interests of the City would best be served by not awarding a Contract.

B15.3 Subject to B15.2, 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.

B15.3.1 Following the award of contract, a Bidder will be provided with information related to the evaluation of his 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 Branch internet site at <http://www.winnipeg.ca/matmgt>.
- 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 slope stabilization and inlet protection.

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

- (a) Excavation and backfill
- (b) Removal of existing Gabions
- (c) Installation of stone shear key and lateral drains
- (d) Installation of geotextile underneath Gabions
- (e) Installation of gabions
- (f) Installation of rip rap in and around inlet
- (g) Installation of erosion control blanket and seeding.

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

D3.1 The Contract Administrator is Dillon Consulting Limited, represented by:

Ameen Deraj, P.Eng.  
Project Engineer  
200 – 895 Waverley Street, Winnipeg, Manitoba R3T 5P4  
Telephone No. (204) 453-2301  
Facsimile No. (204) 452-4412

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

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

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

#### **D5. NOTICES**

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

D5.2 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the City, except as expressly otherwise required in D5.3, D5.4 or elsewhere in the Contract, shall be sent to the attention of the Contract Administrator at the address or facsimile number identified in D3.1.

- D5.3 All notices of appeal to the Chief Administrative Officer shall be sent to the following address or facsimile number:

The City of Winnipeg  
Chief Administrative Officer Secretariat  
Attn: Chief Administrative Officer  
Administration Building, 3rd Floor  
510 Main Street  
Winnipeg MB R3B 1B9  
Facsimile No.: (204) 949-1174

- D5.4 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications required to be submitted or returned to the City Solicitor shall be sent to the following address or facsimile number:

The City of Winnipeg  
Corporate Services Department  
Legal Services Division  
Attn: City Solicitor  
185 King Street, 3rd Floor  
Winnipeg MB R3B 1J1  
Facsimile No.: (204) 947-9155

#### **D6. FURNISHING OF DOCUMENTS**

- D6.1 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 at cost.

### **SUBMISSIONS**

#### **D7. AUTHORITY TO CARRY ON BUSINESS**

- D7.1 The Contractor shall be in good standing under The Corporations Act (Manitoba), or properly registered under The Business Names Registration Act (Manitoba), or otherwise properly registered, licensed or permitted by law to carry on business in Manitoba, or if the Contractor does not carry on business in Manitoba, in the jurisdiction where the Contractor does carry on business, throughout the term of the Contract, and shall provide the Contract Administrator with evidence thereof upon request.

#### **D8. SAFE WORK PLAN**

- D8.1 The Contractor shall provide the Contract Administrator with a Safe Work Plan at least five (5) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract.
- D8.2 The Safe Work Plan should be prepared and submitted in the format shown in the City's template which is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Branch internet site at <http://www.winnipeg.ca/matmgt>.

#### **D9. INSURANCE**

- D9.1 The Contractor shall provide and maintain the following insurance coverage:
- (a) commercial general liability insurance, in the amount of at least two million dollars (\$2,000,000.00) inclusive, with The City of Winnipeg and Dillon Consulting Limited added as an additional insured, with a cross-liability clause, such liability policy to also contain contractual liability, unlicensed motor vehicle liability, non-owned automobile liability and

products and completed operations, to remain in place at all times during the performance of the Work and throughout the warranty period;

- (b) automobile liability insurance for owned automobiles used for or in connection with the Work in the amount of at least two million dollars (\$2,000,000.00) at all times during the performance of the Work and until the date of Total Performance;
- (c) all risks course of construction insurance in the amount of one hundred percent (100%) of the total Contract Price, written in the name of the Contractor and The City of Winnipeg, at all times during the performance of the Work and until the date of Total Performance.

D9.2 Deductibles shall be borne by the Contractor.

D9.3 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.

D9.4 The Contractor shall not cancel, materially alter, or cause each policy to lapse without providing at least fifteen (15) Calendar Days prior written notice to the Contract Administrator.

#### **D10. PERFORMANCE SECURITY**

D10.1 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.

D10.1.1 Where the performance security is in the form of a certified cheque or draft, it will be deposited by the City. The City will not pay any interest on certified cheques or drafts furnished as performance security.

D10.2 If the bid security provided in his Bid was not a certified cheque or draft pursuant to B10.1(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.

#### **D11. SUBCONTRACTOR LIST**

D11.1 The Contractor shall provide the Contract Administrator with a complete list of the Subcontractors whom the Contractor proposes to engage (Form J: Subcontractor List) at least two (2) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract.

#### **D12. EQUIPMENT LIST**

D12.1 The Contractor shall provide the Contract Administrator with a complete list of the equipment which the Contractor proposes to utilize (Form K: Equipment 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 C4.1 for the return of the executed Contract.

### **D13. DETAILED WORK SCHEDULE**

D13.1 The Contractor shall provide the Contract Administrator with a detailed Work Schedule (Form L: Detailed Work Schedule) at least two (2) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract.

## **SCHEDULE OF WORK**

### **D14. COMMENCEMENT**

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

D14.2 The Contractor shall not commence any Work on the Site until:

- (a) the Contract Administrator has confirmed receipt and approval of:
  - (i) evidence of authority to carry on business specified in D7;
  - (ii) evidence of the workers compensation coverage specified in C6.15;
  - (iii) the Safe Work Plan specified in D8;
  - (iv) evidence of the insurance specified in D9;
  - (v) the performance security specified in D10;
  - (vi) the Subcontractor list specified in D11;
  - (vii) the equipment list specified in D12;
  - (viii) the detailed Work Schedule specified in D13.
- (b) the Contractor has attended a pre-construction meeting with the Contract Administrator, or the Contract Administrator has waived the requirement for a pre-construction meeting.

### **D15. SUBSTANTIAL PERFORMANCE**

D15.1 The Contractor shall achieve Substantial Performance by March 28, 2008.

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 1, 2008.

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 Total Performance in accordance with the Contract by the day fixed herein for Total Performance, the Contractor shall pay the City Five Hundred and Fifty dollars (\$550) per Working Day for each and every Working Day following the day fixed herein for Total Performance during which such failure continues.
- D17.2 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 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 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).

**WARRANTY**

**D20. WARRANTY**

- D20.1 Notwithstanding C13.2, the warranty period shall begin on the date of Total Performance and shall expire two (2) years thereafter unless extended pursuant to C13.2.1 or C13.2.2, in which case it shall expire when provided for thereunder.

**MEASUREMENT AND PAYMENT**

**D21. PAYMENT**

- D21.1 Further to C12, effective January 1, 2007 the City may at its option pay the Contractor by direct deposit to the Contractor's banking institution.



**FORM H1: PERFORMANCE BOND**  
(See D10)

KNOW ALL MEN BY THESE PRESENTS THAT

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

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

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

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

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

\_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, for:

BID OPPORTUNITY NO. 732-2007

BIBEAU DRAIN INLET SLOPE STABILIZATION AND INLET PROTECTION WORK

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)

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

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

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

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

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

**FORM H2: IRREVOCABLE STANDBY LETTER OF CREDIT  
(PERFORMANCE SECURITY)**  
(See D10)

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

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

RE: PERFORMANCE SECURITY - BID OPPORTUNITY NO. 732-2007

BIBEAU DRAIN INLET SLOPE STABILIZATION AND INLET PROTECTION WORK

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

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

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

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

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

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

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

Partial drawings are permitted.

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

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

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

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

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

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

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

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

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

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

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

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



**FORM K: EQUIPMENT**  
(See D12)

**BIBEAU DRAIN INLET SLOPE STABILIZATION AND INLET PROTECTION WORK**

<p><b>1. Category/type:</b></p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p>
<p><b>2. Category/type:</b></p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p>
<p><b>3. Category/type:</b></p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p>

**FORM K: EQUIPMENT**  
(See D12)

**BIBEAU DRAIN INLET SLOPE STABILIZATION AND INLET PROTECTION WORK**

<p><b>4. Category/type:</b></p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p>
<p><b>5. Category/type:</b></p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p>
<p><b>6. Category/type:</b></p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p>





## **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 Branch internet site at <http://www.winnipeg.ca/matmgt>.
- E1.2.2 The version in effect three (3) Business Days before the Submission Deadline shall apply.
- E1.2.3 Further to C2.4(d), Specifications included in the Bid Opportunity shall govern over *The City of Winnipeg Standard Construction Specifications*.
- E1.3 The following are applicable to the Work:

<u>Drawing No.</u>	<u>Drawing Name/Title</u>
LD-3569	General Arrangement and Proposed Works
LD-3570	Gabions Sections and Details

#### **E2. DAMAGE TO EXISTING STRUCTURES AND PROPERTY**

- E2.1 Further to Clause C.6.26(a) of the General Conditions, special care shall be taken to avoid damage to the existing adjacent structures or properties during the course of the Work.
- E2.2 Any damage caused by the negligence of the Contractor or his Subcontractors to the adjacent structures or properties shall be promptly repaired by him at his own expense, to the satisfaction of the property owner and the Contract Administrator.

#### **E3. COOPERATION WITH OTHERS**

- E3.1 The Contractor's attention is directed to the fact that other Contractor's, the personnel of Utilities and the staff of the City may be working on the structure, approach roadways, adjacent roadways or right-of-ways. The activities of these agencies may coincide with the Contractor's execution of the Work, and it will be the Contractor's responsibility to cooperate to the fullest extent with the other personnel working in the area, and such cooperation is an obligation of the Contractor under the terms of this Contract.

#### **E4. EXISTING SERVICES AND UTILITIES**

- E4.1 Further to Clause C.3.1 of the General Conditions, information shown on the drawings is supplied by the City to the best of their knowledge from record information. It is hereby expressly understood that the information provided with respect to type of, or location of services shall be accepted by the Contractor at his own risk, and the City shall assume no responsibility for the accuracy or completeness of the information contained therein.

#### **E5. SURFACE MAINTENANCE**

- E5.1 The Contractor shall maintain all surfaces in accordance with the latest edition of the Streets By-law No.1481 until permanent restorations have been completed. Should the Contractor fail to maintain all disturbed surfaces, the City or its designate may perform the Work required and Contractor shall be charged with all associated costs.

## **E6. SAFETY PRECAUTIONS**

- E6.1 Further to CW1130-R1 – “Site Requirements”, Clause 3.1, the Contractor shall ensure that any excavation left open or exposed overnight, over a weekend or for any length of time unattended shall have full and adequate safety precautions provided. These precautions shall include but not be limited to covering the excavation with timber planks or steel plates and erecting a barricade completely around the excavation complete with signing in accordance with the City of Winnipeg Manual of Temporary Traffic Control.

## **E7. TRAFFIC CONTROL AND MAINTENANCE OF ACCESS**

- E7.1 The Contractor's attention is drawn to CW1130-R1 – “Site Requirements”, Clause 3.6 and 3.7 regarding his responsibility for notification to utilities and other authorities as well as their responsibility concerning traffic control and maintenance of access.
- E7.1.1 Traffic control shall be done in accordance with the City of Winnipeg "Manual of Temporary Traffic
- E7.1.2 Traffic Control in Work Areas on City Streets, Contractor is required to notify the City of Winnipeg Emergency Services.
- E7.2 No Work shall be carried out on Regional Streets during the hours of 07:00-09:00 and 15:30-17:30, Monday through Friday, Statutory or Civic Holidays excepted.
- E7.3 Further to these requirements, the Contractor shall note that Work shall be carried out on Regional Streets only during the times approved by the Superintendent of Traffic Services, Traffic Operations Section of Streets and Traffic Branch in the Streets and Transportation Department of the City of Winnipeg.
- E7.3.1 No additional compensation will be considered for evening or weekend Work that may result to meet these requirements.
- E7.3.2 The following is a list of Regional Streets included in or intersecting the Work:
- (a) Lagimodiere Boulevard
- E7.4 In accordance with the Manual of Temporary Traffic Control, the Contractor ("Agency" in the Manual) shall not be responsible for any costs incurred from required meter hooding and parking restriction signs erected by The City of Winnipeg, Traffic Services Branch. The Contractor will provide a minimum of forty-eight (48) hours notice to the Contract Administrator when meter hooding or parking restrictions are required. The Contract Administrator will contact Traffic Services to arrange for the implementation of the parking restrictions. Immediately upon completion of the Work, the Contractor will notify the Contract Administrator who will instruct Traffic Services to reinstate the parking. Traffic Services will submit their invoice to the Contract Administrator for payment. The placement of all other traffic control devices and the associated costs shall be the Contractor's responsibility.

## **E8. SETTING OUT**

- E8.1 Further to Clause C6.28 of the General Conditions and CW1130-R1 – “Site Requirements”, clause 3.15, the Contractor shall provide and pay for all survey stakes required for the layout of the Work.

## **E9. PAVEMENT RESTORATIONS**

- E9.1 The restoration of pavement areas excavated or damaged in any way during the construction Works will be considered incidental to the contract Work. No separate measurement or payment will be made for pavement restorations of any kind. All pavement restorations shall strictly conform with these Specifications, and the Standard Construction Specifications of the City of Winnipeg.

- E9.2 The Contractor shall maintain all surfaces in accordance with the latest edition of the Streets By-law No. 1481 until permanent restorations have been completed. Should the Contractor fail to maintain all disturbed surfaces, the City or its designate may perform the Work required and the Contractor shall be charged with all associated costs.

## **E10. SUPPLY OF WATER**

- E10.1 In accordance with CW1120-R1 – “Existing Services, Utilities, and Structures”, clause 3.7, water shall be available for the Contractors use in conducting the Work. An approved backflow preventing device shall be used at all times and no fire hydrant shall be obstructed in case of a fire in the area served by the hydrant.
- E10.2 A hydrant(s) shall be considered “in the Contractor’s control” from the time the City has turned on the hydrant and until the City has turned off the hydrant.
- E10.3 The following procedure shall remain in place between November 1, 2007 and April 30, 2008.
- E10.4 While in the Contractor’s control, the Contractor shall take all the necessary precautions to ensure the hydrant(s) and appurtenances do not freeze. The Contractor shall be responsible for the costs related to maintenance and repair of any freeze related damage to the hydrant and appurtenances while in their control.
- E10.5 At the end of each day the Contractor shall notify Water Services Division, Monday to Friday, 08:00-15:00. The Contractor shall wait at the hydrant from the requested time until WSD arrives to turn off the hydrant and pump it out.
- E10.6 Outside the stated hours, Emergency Services Branch (986-2626) shall be contacted to turn off the hydrant. The Contractor shall be responsible for pumping out the hydrant. Typically, the Emergency Services Branch will require a minimum of two hours notice.

## **E11. DISPOSAL OF SURPLUS SOIL MATERIAL**

- E11.1 Description
- E11.1.1 This Specification shall revise, amend, and supplement City of Winnipeg Standard Construction Specification CW 2030-R7.
- E11.2 Description of Material
- E11.2.1 If the Contractor has not arranged for an approved disposal site for any surplus material, the City shall provide an optional disposal site for all surplus clean clay from the construction site. The material is not to include any refuse, concrete, metals, wood, organics, construction waste, or any other deleterious materials. Any surplus soil material not meeting these requirements shall not be considered clean clay.
- E11.3 Disposal Locations
- E11.3.1 The disposal locations provided by the City will be at the Brady Road Landfill Site. The City may provide additional disposal sites, for clean clay only, at various locations within the City limits. The Contractor shall notify the Contract Administrator, a minimum of two (2) working days prior to the disposal of any surplus clean clay, if he requires access to the landfill site or any of the other disposal sites (if applicable). The Contract Administrator will make arrangements with staff at the landfill site or other disposal site for the disposal of the surplus soil material.
- E11.4 Tipping Fees
- E11.4.1 There will be no tipping fees charged to the Contractor for the disposal of surplus soil material meeting the requirements of clean clay as specified. Tipping fees will be charged for the disposal of material not meeting the requirements of clean clay as specified. Disposal of material not meeting the requirements of clean clay at any additional disposal sites provided by the City other than the landfill sites will not be permitted.

### E11.5 Measurement and Payment

E11.5.1 There shall be no measurement of surplus soil material disposed of at any disposal site. No additional payment will be made for disposal of surplus soil materials. It shall be considered incidental to the cost of the Work.

## E12. LAYOUT OF WORK

E12.1 The Contract Administrator will provide the basic centrelines and an elevation of the Works.

E12.2 The Contractor shall be responsible for the true and proper layout of the Work and for the correctness of the location, levels, dimensions, and alignment of all aspects of the Work. He shall provide all required instruments and competent personnel for performing all layouts.

## E13. SOILS INVESTIGATION REPORT

E13.1 Further to C:3.1 of the General Conditions, a soils investigation report in letter form dated August 20, 2007 by A. Dean Gould, P. Eng. & Associates exists and may be viewed at the offices of the Contract Administrator.

E13.2 Soil information presented in the above Geotechnical Report represents subsurface conditions encountered at the time of the field investigation and may not be indicative of the actual conditions that will be encountered during the time of construction.

E13.3 The above Geotechnical Reports were used by the Contract Administrator as a reference during the design of the proposed Works. The recommendations in these reports shall not be construed as a requirement of the proposed Works unless also contained in the Contract Documents.

E13.4 Although the above Geotechnical Reports and borehole information are available for Bidders' examination and review at the office of Dillon Consulting Limited, it is the responsibility of those using this information to ensure it is suitable for their purposes and to supplement it as they consider necessary.

## E14. VERIFICATION OF WEIGHTS

E14.1 All Material which is paid for on a weight basis shall be weighed on a scale certified by Consumer & Corporate Affairs, Canada.

E14.1.1 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.

E14.1.2 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.

E14.2 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.

E14.2.1 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.

#### **E15. TRUCK WEIGHT LIMITS**

E15.1 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.

#### **E16. NIGHT WORK AND NOISE LIMITATIONS**

- E16.1 Night Work may have to be undertaken by the Contractor, as required by his Schedule of Work and by his actual work progress, to ensure timely completion of all Works of this Contract, all at his own cost.
- E16.2 Further to the General Conditions, the Contractor shall show that he has the approval of all applicable authorities in regard to said night Work and to the anticipated/actual construction noise levels. In particular, such Work shall conform with the Noise Control By-Law No. 2480/79. Also, the Contractor, at his own cost, incidental to these Works, shall supply sufficient lighting to enable all night Work to be done in a safe and efficient manner, satisfactory to the Contract Administrator.
- E16.3 The Contractor is advised that possible noise level problems may limit his Work activities on Sundays and at night. The Contractor must request and receive approval from the Contract Administrator at least 48 hours in advance of any Contract Work to be undertaken on Sundays or at night. It will be the Contractor's responsibility to schedule Work activities to minimize potential problems and/or to employ noise-reduction measures to lower the noise to an acceptable level. Time extension will not be granted on the basis of the Contractor being ordered to limit his activities at night.

#### **E17. MOBILIZATION AND DEMOBILIZATION**

This Specification shall cover all operations relating to the mobilization and demobilization of the Contractor to the site, as specified herein.

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

##### **E17.1 Materials**

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

##### **E17.2 Construction Method**

###### **E17.2.1 This section Includes**

###### **(a) Cellular Telephone Communication**

The Contractor's site supervisor is required to carry, at all times, a cellular telephone.

###### **(b) Existing Chain-Link Fencing**

The existing chain-link fence on the site shall be preserved in at least its current condition. If desired by the Contractor, the fence may be dismantled for construction, but it must be restored when the project is complete.

###### **(c) Miscellaneous**

This section shall also include travel and accommodation, set-up, and demobilization of site offices, storage conveniences, and other temporary facilities, construction plant, and other items not required to form part of the permanent works and not covered by other prices.

E17.3 Method of Measurement

E17.3.1 Mobilization and demobilization shall be paid for on a Lump Sum basis, as accepted by the Contract Administrator, and no measurement will be made for this Work.

E17.4 Basis of Payment

E17.4.1 Mobilization and demobilization will be paid for at the Contract Lump Sum Price for "Mobilization and Demobilization," 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.

**E18. EXCAVATION AND BACKFILL**

E18.1 Description

E18.1.1 This Specification shall cover all operations related to the excavation and backfill required for the gabions, stone shear keys, and rip rap in and around the inlet. It shall also include drain channel reshaping.

E18.1.2 The Work to be done by the Contractor under this Specification shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools, supplies, and all things necessary for and incidental to the satisfactory performance and completion of all Works as hereinafter specified.

E18.2 Materials

E18.2.1 General

E18.2.2 The Contractor shall be responsible for the supply, safe storage and handling of all materials as set forth in this Specification. All materials shall be handled in a careful and workmanlike manner, to the satisfaction of the Contract Administrator.

E18.2.3 Excavation

E18.2.4 Excavated material shall be unclassified excavation and shall include the excavation and satisfactory disposal of all surplus earth, gravel, sandstone, loose detached rock, shale, cemented gravel or hard pan, disintegrated stone, rock in ledge or mass formation, and dry or all other material of whatever character that may be encountered.

E18.3 Equipment

E18.3.1 General

E18.3.2 All equipment, tools, and facilities shall be of a type approved by the Contract Administrator and shall be kept in good working order.

E18.4 Construction Methods

E18.4.1 Stone Shear Keys, and Gabions

E18.4.2 Backfill the trenches for the stone shear keys and their lateral drains, and the gabions with crushed limestone. Place in lifts not exceeding 300 mm and compact with a backhoe bucket or equivalent as approved by the Contract Administrator.

E18.4.3 Embankment Shaping and Grading

E18.4.4 Through excavation and backfill with suitable site or imported material, shape the embankment and drain invert to smooth slopes and to the grades indicated on the Drawing in accordance with the methods described for "Grading of Boulevards" of City of Winnipeg Specification CW 3110-R10.

**E18.4.5 Surface Erosion Protection and Rough Grading**

E18.4.6 The Contractor will be responsible to cover all unvegetated surfaces of the embankments with an erosion control blanket and/or to erect silt fences or use other suitable methods to prevent soil erosion into the drain, both during and after construction up until the time of expiry of the maintenance period of the grass seeding.

E18.4.7 Provide rough grading to all disturbed surfaces within the construction area to the requirements of the "Preparation of Existing Grade" of Specification CW 3450-R5, in preparation for final landscaping.

**E18.4.8 Excess Material**

E18.4.9 Excavated material that is unsuitable for, or surplus to, the backfill requirements shall become the property of the Contractor and shall be removed from the site. Excavated material shall not be disposed of in a manner that will obstruct the flow of watercourses. During freezing weather, the excess material shall be disposed of before it freezes.

**E18.5 Method of Measurement**

E18.5.1 Excavation and backfill shall be paid for on a lump sum basis, as accepted by the Contract Administrator and no measurement will be made for this Work.

**E18.6 Basis of Payment**

E18.6.1 Excavation and backfill shall be paid for at the Contract Lump Sum Price for "Excavation and Backfill", 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.

**E19. SUPPLY AND INSTALLATION OF SHEAR KEY**

**E19.1 Description**

E19.1.1 Excavate trenches for the stone shear keys and their lateral drains to the dimensions and inverts as shown on the Drawings. Backfill the trenches in accordance with the Specification for Backfill.

**E19.2 Material**

E19.2.1 The shear key stone material shall consist of crushed quarried dolomitic limestone particles, free of snow, ice, or other deleterious material and having the following gradation:

<u>Canadian Metric Sieve Size</u>	<u>Percent Passing</u>
40,000	95% - 100%
20,000	25% - 70%
10,000	10% - 20%
5,000m	0% - 5%

**E19.3 Method of Measurement**

E19.3.1 Supply and Installation of Shear Key shall be paid for on a volume basis.

**E19.4 Method of Payment**

E19.4.1 Payment will be made at the Contract Unit Price bid per cubic metre for "Crushed Limestone Fill", which payment which be considered compensation in full for the supply and installation of all materials and performing all operations necessary to complete the Work as specified including items incidental to the Work.

**E20. SUPPLY AND INSTALLATION OF GABIONS**

**E20.1 Description**

E20.1.1 This Specification shall cover all phases of supply and installation of PVC coated gabions used in construction of a retaining wall structure as outlined on the construction drawings. Transitions in gabion wall height are also indicated on the construction drawings.

E20.1.2 Gabions are to be made of 8 x 10 hexagonal double twisted wire mesh type per ASTM A975-97. Each gabion shall be filled with stones at the project site to form a flexible and permeable retaining wall in accordance with the specification and details shown on the construction drawings.

E20.1.3 The base gabion mesh wire is to be constructed of heavy zinc coated soft temper steel. A PVC coating shall cover the base mesh wire.

E20.1.4 Each gabion is divided into cells by means of diaphragms positioned at approximately one (1) metre centres. In order to reinforce the structure, all edges are salvaged with a wire having a greater diameter than the mesh wire.

**E20.2 Materials**

**E20.2.1 Gabion Crushed Limestone Base**

- (a) Base course material for the gabion base shall be a well graded crushed limestone conforming to CW 3110-R10 amended as follows:
  - (i) Crushed limestone when subjected to the Los Angeles abrasion test shall have a loss of not more than thirty-two percent (32%).
  - (ii) Crushed limestone when subjected to the Magnesium Sulphate Soundness test shall have a loss of not more than thirteen percent (13%).
- (b) The sample material shall be crushed to 37.5 mm maximum aggregate size and tested in accordance with ASTM C131 - Resistance to Degradation of Small Size Course Aggregate by Abrasion and Impact in the Los Angeles Machine and ASTM C88 - Soundness of Aggregates by Use of Magnesium Sulphate.

**E20.2.2 Gabions**

- (a) Each gabion shall consist of PVC coated wire basket/cell, fill stone, and either lacing wire or stainless steel rings. Dimensions, tolerances, and sizes of PVC coated gabions are as follows:

<b>Gabions (8 x 10 mesh)</b>				
<b>Length (m)</b>	<b>Width (m)</b>	<b>Height (m)</b>	<b>Number of Cells</b>	<b>Capacity (m<sup>3</sup>)</b>
2	1	0.5	2	1
4	1	0.5	4	2
2	1	1.0	2	2
4	1	1.0	4	4
Tolerances of ±5% of the width, height, and length of the gabions shall be permitted.				
Note: All sizes and dimensions are nominal.				

Gabions shall be laid out as shown on the Drawings.

- (b) Wire

The PVC coating shall have a nominal thickness of 0.50 mm. Minimum specifications for the mesh wire are as follows:

<b>Standard Gabion Mesh Wire</b>				
<b>Type</b>	<b>Distance Between the Axis of Twist (mm)</b>	<b>Tolerance</b>	<b>Internal Wire Diameter (mm)</b>	<b>External Wire Diameter (mm)</b>
8x10/xZn+PVC	83	±10%	2.70	3.70

The following tests must be performed on the wire prior to manufacturing the mesh:



**Tensile Strength** - The gabion mesh wire and the lacing wire shall have a tensile strength of 38-48 kg/mm<sup>2</sup> in accordance with ASTM A641-92.

**Elongation** - Elongation shall not be less than 12% in accordance with ASTM A370-92. The test sample must be at least 30 cm in length.

**Zinc Coating** - Minimum quantities of zinc shall meet the requirements of ASTM A641-92, Class III soft temper coating.

**Adhesion of Zinc** - Adhesion of the zinc coating shall be in accordance with ASTM A641-92. When the wire is wrapped six turns around a mandrel having four times the diameter of the wire, it does not flake or crack when rubbed with the bare fingers.

The PVC coating shall meet the following minimum specifications:

**Specific Gravity** - Shall be 1.30 to 1.36 kg/dm<sup>3</sup> in accordance with ASTM D792 Table 1.

**Hardness** - Shall be between 50 to 60 Shore D in accordance with ASTM D2240.

**Tensile Strength** - Shall not be less than 210 kg/cm<sup>2</sup> in accordance with ASTM D412-92.

**Modulus of Elasticity** - Shall not be less than 190 kg/cm<sup>2</sup> in accordance with ASTM D412-92.

**Abrasion Resistance** - The percentage of the weight loss shall be less than 12% in accordance with ASTM D1242-92.

**Creeping Corrosion** - Maximum penetration of corrosion of the wire from a square cut end shall be 25 mm when the specimen has been immersed for 2,000 hours in a 5% solution of hydrochloric acid.

The accelerated aging tests are as follows:

**Salt Spray Test** - The test period shall be 3,000 hours in accordance with test method ASTM B117-94.

**Exposure to UV Rays** - The test period shall be 3,000 hours at 63°C in accordance with test method ASTM D1499-92a and ATM G23-93 Apparatus Type E.

**Brittleness Temperature** - Shall not be higher than -9°C in accordance with ASTM D74.

The properties after aging tests shall be as follows:

**Appearance of Coated Mesh** - No cracking, stripping, or air bubbles, and no appreciable variation in colour.

**Specific Gravity** - Variations shall not exceed 6%.

**Hardness** - Variations shall not exceed 10%.

**Tensile Strength** - Variations shall not exceed 25%.

**Modulus of Elasticity** - Variations shall not exceed 25%.

**Abrasion Resistance** - Variations shall not exceed 10%.

**Brittleness Temperature** - Shall not exceed +18°C.

<b>Gabion Wire Summary</b>			
<b>Wire</b>	<b>PVC Mesh Diameter (mm)</b>	<b>Wire Tolerance (mm)</b>	<b>Minimum Quantity of Zinc (g/m<sup>2</sup>)</b>
Lacing Wire	2.20	0.10	213
Mesh Wire	2.70	0.10	244
Salvage Wire	3.40	0.10	260

(c) Recycled Crushed Limestone Fill

Gabion fill stones shall be clean crushed limestone recycled from the existing gabions. All recycled crushed limestone shall be cleaned, and free of all debris, soil, vegetation, and/or any other material.

(d) Lacing

All gabion edges shall be joined together using one of the following lacing techniques:

**Manual Lacing Technique Using Lacing Wire** - This technique involves the use of a continuous wire looped tightly around every other mesh opening, alternating single and double loops.

**Mechanical Lacing Technique Using Stainless Steel Rings** - This technique involves the use of a pneumatic or hand power tool, employing stainless steel "C" shaped fasteners. Spacing shall be every mesh opening and shall not exceed 150 mm. The stainless steel fastener shall have a closed diameter of 20 mm or less.

E20.3 Construction Methods

E20.3.1 This specification shall provide a general summary of assembly and installation procedures for PVC coated gabions. The Contractor shall reference the construction drawings as well as the manufacturer's product installation manual(s) for further details on proper gabion assembly and installation.

E20.3.2 Prior to assembly and installation of the gabions, the following base preparation shall be completed:

- (a) Compact subgrade conforming to CW 3110-R10.
- (b) Install and compact the base course material conforming to CW 3110-R10.

E20.3.3 Gabions are typically delivered to the construction site unassembled in a collapsed form. Once the gabions have been unfolded, remove all folds due to the packaging on a flat, hard surface.

E20.3.4 Once the sides and diaphragms have been pulled up to form an open box, the corners and diaphragms are bound together using either lacing wire or stainless steel rings provided with the gabions. Rings must be closed and there must be one ring in every mesh opening. Ring spacing should not exceed 150 mm.

E20.3.5 Once the gabions have been laced together properly and the appropriate connecting wire has been installed in each cell, the gabions are stretched in a direction of the row and filled with recycled crushed limestone fill. The fill stone shall have a diameter of 100 mm to 200 mm with no stone less than 100 mm. Before binding the gabion lids down, fill stones shall be manually fitted along the corners of each cell to ensure proper shape is maintained.

E20.3.6 Each gabion must be connected to each other along all the adjacent corners. Gabion units should be placed back to back to enable lids to be laced down in pairs and also to facilitate dumping of the fill stone.

E20.3.7 For sections having two or three row high gabions, each gabion row shall be offset by 250 mm.

E20.4 Method of Measurement and Basis of Payment

E20.4.1 Supply and Installation of Crushed Limestone Base

- E20.4.2 The supply and placement of channel base shall be measured on a volume basis.
- E20.4.3 Payment will be made at the Contract Unit Price bid per cubic metre for "Crushed Limestone Base," which payment shall be considered compensation in full for the supply and installation of all materials and performing all operations necessary to complete the Work as specified including any items incidental to the Work.
- E20.4.4 Supply and Installation of Recycled Limestone Base
- E20.4.5 The supply and placement of channel base shall be measured on a volume basis.
- E20.4.6 Payment will be made at the Contract Unit Price bid per cubic metre for "Recycled Limestone Base," which payment shall be considered compensation in full for the supply and installation of all materials and performing all operations necessary to complete the Work as specified including any items incidental to the Work.
- E20.4.7 Supply and Installation of Gabions
- E20.4.8 The supply and placement of gabions shall be measured on a length per linear metre basis.
- E20.4.9 Payment will be made at the Contract Unit Prices bid per linear metre for "0.5 m High by 2 m Length," "0.5 m High by 4 m Length," "1 m High by 2 m Length," and "1 m High by 4 m Length," respectively, which payment shall be considered compensation in full for the supply and installation of all materials and performing all operations necessary to complete the Work as specified including any items incidental to the Work

## **E21. SUPPLY AND INSTALLATION OF EROSION CONTROL BLANKET**

### **E21.1 Description:**

- E21.1.1 The erosion control blanket shall be a 100% straw blanket stitched with one photo/degradable polypropylene net (1.49 x 1.27 cm mesh size) or approved equal. It shall have a minimum cover factor = 0.11 on a 3:1 slope at 75 mm per hour rainfall. An approved product is S31 by ErosionControlBlanket.com and available in Manitoba throughout Brock White.

### **E21.2 Method of Measurement**

Supply and Installation of Erosion Control Blanket shall be paid for on an area basis.

### **E21.3 Method of Payment**

- E21.3.1 Payment will be made at the Contract Unit Price bid per square metre for "Supply and Installation of Erosion Control Blanket", which payment shall be considered compensation in full for the supply and installation of all materials and performing all operations necessary to complete the Work as specified including items incidental to the Work.

## **E22. ENCROACHMENT ON PRIVATE PROPERTY**

- E22.1 Further to Clause C:6 of the General Conditions, the Contractor shall confine his Work to the public right of ways at all times, except if he has received written permission from the property owner. The Contractor shall provide the Contract Administrator with a copy of any written permission he has received to enter onto private property.
- E22.2 The Contractor's construction activities shall be confined to the minimum area necessary for undertaking the Work and he shall be responsible for all damage to private property resulting from his work. Particular care shall be taken to assure no damage is done to buildings, trees and plants and provision shall be made to maintain full drainage for private properties during construction.
- E22.3 All repairs to damaged private property shall be to the satisfaction of the property owner and the Contract Administrator with all costs borne by the Contractor.

## **E23. PROTECTION OF SURVEY BARS**

- E23.1 Further to CW1130-R1 "Site Requirements", clause 3.14, all known survey posts, bars, cut crosses and/or control monuments are indicated on the Drawings. If the Contractor is in doubt about the location of any of the foregoing items in the field, he shall contact the Contract Administrator before doing any Work in the area. Other survey posts, bars, cut crosses and/or control monuments may exist and the Contractor shall exercise care at intersections and other locations where such survey posts, bars, cut crosses or control monuments may exist.
- E23.2 If a survey post, bar, cut cross or control monument lies within two (2) metres of the proposed Work and there is the possibility that it may be disturbed, the Contractor shall provide the Contract Administrator with a notice of three (3) working days to have the survey post, bar, cut cross or control monument referenced prior to and replaced, if required, after construction at no cost to the Contractor. However, if the Contractor fails to follow this procedure and inadvertently disturbs, moves, covers, mutilates or destroys a survey post, bar, cut cross or control monument the Contractor will be charged a replacement cost to a maximum of one thousand dollars (\$1,000.00) for each survey post, bar or cut cross and three thousand dollars (\$3,000.00) for each control monument.
- E23.3 This does not relieve the Contractor of undertaking due care and diligence when working near any survey post, bar, cut cross or control monument. If, in the opinion of the Contract Administrator, the Contractor, through lack of proper care and diligence, caused the need for a replacement of a referenced survey post, bar, cut cross or control monument, the Contractor will be charged the above replacement cost.

## **E24. ENVIRONMENTAL PLANNING**

- E24.1 The Contractor shall conduct his operations in accordance with all current federal, provincial or other regulations concerning environmental protection and pollution control. It shall be the Contractor's responsibility to familiarize himself with all applicable regulations and to obtain all necessary approvals and permits for his operations.