



THE CITY OF WINNIPEG

BID OPPORTUNITY

BID OPPORTUNITY NO. 544-2015

**2015 BRIDGE MAINTENANCE – SHOREHILL DRIVE APPROACH ROADWAY
WORKS**

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PART B - BIDDING PROCEDURES

B1. CONTRACT TITLE

B1.1 2015 BRIDGE MAINTENANCE – SHOREHILL DRIVE APPROACH ROADWAY WORKS

B2. SUBMISSION DEADLINE

B2.1 The Submission Deadline is 4:00 p.m. Winnipeg time, August 4, 2015.

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.

B4. ENQUIRIES

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

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

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

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

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

B5. CONFIDENTIALITY

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

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

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

B6. ADDENDA

- B6.1 The Contract Administrator may, at any time prior to the Submission Deadline, issue addenda correcting errors, discrepancies or omissions in the Bid Opportunity, or clarifying the meaning or intent of any provision therein.
- B6.2 The Contract Administrator will issue each addendum at least two (2) Business Days prior to the Submission Deadline, or provide at least two (2) Business Days by extending the Submission Deadline.
- B6.2.1 Addenda will be available on the Bid Opportunities page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/>
- B6.2.2 The Bidder is responsible for ensuring that he/she has received all addenda and is advised to check the Materials Management Division website for addenda regularly and shortly before the Submission Deadline, as may be amended by addendum.
- B6.2.3 The Bidder shall acknowledge receipt of each addendum in Paragraph 8 of Form A: Bid. Failure to acknowledge receipt of an addendum may render a Bid non-responsive.

B7. SUBSTITUTES

- B7.1 The Work is based on the Plant, Materials, and methods specified in the Bid Opportunity.
- B7.2 Substitutions shall not be allowed unless application has been made to and prior approval has been granted by the Contract Administrator in writing.
- B7.3 Requests for approval of a substitute will not be considered unless received in writing by the Contract Administrator at least five (5) Business Days prior to the Submission Deadline.
- B7.4 The Bidder shall ensure that any and all requests for approval of a substitute:
- (a) provide sufficient information and details to enable the Contract Administrator to determine the acceptability of the Plant, Material or method as either an approved equal or alternative;
 - (b) identify any and all changes required in the applicable Work, and all changes to any other Work, which would become necessary to accommodate the substitute;
 - (c) identify any anticipated cost or time savings that may be associated with the substitute;
 - (d) certify that, in the case of a request for approval as an approved equal, the substitute will fully perform the functions called for by the general design, be of equal or superior substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the proposed work schedule and the dates specified in the Supplemental Conditions for Substantial Performance and Total Performance;
 - (e) certify that, in the case of a request for approval as an approved alternative, the substitute will adequately perform the functions called for by the general design, be similar in substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the proposed work schedule and the dates specified in the Supplemental Conditions for Substantial Performance and Total Performance.
- B7.5 The Contract Administrator, after assessing the request for approval of a substitute, may in his/her sole discretion grant approval for the use of a substitute as an "approved equal" or as an "approved alternative", or may refuse to grant approval of the substitute.
- B7.6 The Contract Administrator will provide a response in writing, at least two (2) Business Days prior to the Submission Deadline, to the Bidder who requested approval of the substitute.

- B7.6.1 The Contract Administrator will issue an Addendum, disclosing the approved materials, equipment, methods, and products to all potential Bidders. The Bidder requesting and obtaining the approval of a substitute shall be responsible for disseminating information regarding the approval to any person or persons he/she wishes to inform.
- B7.7 If the Contract Administrator approves a substitute as an “approved equal”, any Bidder may use the approved equal in place of the specified item.
- B7.8 If the Contract Administrator approves a substitute as an “approved alternative”, any Bidder bidding that approved alternative may base his/her Total Bid Price upon the specified item but may also indicate an alternative price based upon the approved alternative. Such alternatives will be evaluated in accordance with B16.
- B7.9 No later claim by the Contractor for an addition to the Total Bid Price because of any other changes in the Work necessitated by the use of an approved equal or an approved alternative will be considered.
- B7.10 Notwithstanding B7.2 to B7.9, and in accordance with B8.7, 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.
- B8.2 Further to B8.1, the Bidder should include the written correspondence from the Contract Administrator approving a substitute in accordance with B7.
- B8.3 All components of the Bid shall be fully completed or provided, and submitted by the Bidder no later than the Submission Deadline, with all required entries made clearly and completely, to constitute a responsive Bid.
- B8.4 The Bid Submission may be submitted by mail, courier or personal delivery, or by facsimile transmission.
- B8.5 If the Bid Submission is submitted by mail, courier or personal delivery, it shall be enclosed and sealed in an envelope clearly marked with the Bid Opportunity number and the Bidder's name and address, and shall be submitted to:
- The City of Winnipeg
Corporate Finance Department
Materials Management Division
185 King Street, Main Floor
Winnipeg, MB R3B 1J1
- B8.5.1 Samples or other components of the Bid Submission which cannot reasonably be enclosed in the envelope may be packaged separately, but shall be clearly marked with the Bid Opportunity number, the Bidder's name and address, and an indication that the contents are part of the Bidder's Bid Submission.
- B8.6 Bidders are advised not to include any information/literature except as requested in accordance with B8.1.
- B8.7 Bidders are advised that inclusion of terms and conditions inconsistent with the Bid Opportunity document, including the General Conditions, will be evaluated in accordance with B16.1(a).
- B8.8 If the Bid Submission is submitted by facsimile transmission, it shall be submitted to 204 949-1178.

B8.8.1 The Bidder is advised that the City cannot take responsibility for the availability of the facsimile machine at any time.

B8.8.2 Bids submitted by internet electronic mail (e-mail) will not be accepted.

B9. BID

B9.1 The Bidder shall complete Form A: Bid, making all required entries.

B9.2 Paragraph 2 of Form A: Bid shall be completed in accordance with the following requirements:

- (a) if the Bidder is a sole proprietor carrying on business in his/her own name, his/her name shall be inserted;
- (b) if the Bidder is a partnership, the full name of the partnership shall be inserted;
- (c) if the Bidder is a corporation, the full name of the corporation shall be inserted;
- (d) if the Bidder is carrying on business under a name other than his/her own, the business name and the name of every partner or corporation who is the owner of such business name shall be inserted.

B9.2.1 If a Bid is submitted jointly by two or more persons, each and all such persons shall identify themselves in accordance with B9.2.

B9.3 In Paragraph 3 of Form A: Bid, the Bidder shall identify a contact person who is authorized to represent the Bidder for purposes of the Bid.

B9.4 Paragraph 10 of Form A: Bid shall be signed in accordance with the following requirements:

- (a) if the Bidder is a sole proprietor carrying on business in his/her own name, it shall be signed by the Bidder;
- (b) if the Bidder is a partnership, it shall be signed by the partner or partners who have authority to sign for the partnership;
- (c) if the Bidder is a corporation, it shall be signed by its duly authorized officer or officers;
- (d) if the Bidder is carrying on business under a name other than his/her own, it shall be signed by the registered owner of the business name, or by the registered owner's authorized officials if the owner is a partnership or a corporation.

B9.4.1 The name and official capacity of all individuals signing Form A: Bid should be printed below such signatures.

B9.4.2 All signatures shall be original.

B9.5 If a Bid is submitted jointly by two (2) 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. DISCLOSURE

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

B11.2 The Persons are:

- (a) N/A

B12. QUALIFICATION

B12.1 The Bidder shall:

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

B12.2 The Bidder and any proposed Subcontractor (for the portion of the Work proposed to be subcontracted to them) shall:

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

B12.3 The Bidder and/or any proposed Subcontractor (for the portion of the Work proposed to be subcontracted to them) shall:

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

B12.4 Further to B12.3(c), the Bidder shall, within five (5) Business Days of a request by the Contract Administrator, provide proof satisfactory to the Contract Administrator that the Bidder/Subcontractors has a workplace safety and health program meeting the requirements of The Workplace Safety and Health Act (Manitoba), by providing:

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

B12.5 The Bidder shall submit, within three (3) Business Days of a request by the Contract Administrator, proof satisfactory to the Contract Administrator of the qualifications of the Bidder, and of any proposed Subcontractor.

B12.6 The Bidder shall provide, on the request of the Contract Administrator, full access to any of the Bidder's equipment and facilities to confirm, to the Contract Administrator's satisfaction, that the Bidder's equipment and facilities are adequate to perform the Work.

B13. OPENING OF BIDS AND RELEASE OF INFORMATION

B13.1 Bids will not be opened publicly.

B13.2 Following the submission deadline, the names of the Bidders and their Total Bid Prices (unevaluated, and pending review and verification of conformance with requirements) will be available on the Closed Bid Opportunities (or Public/Posted Opening & Award Results) page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/bidopp.asp>

B13.3 After award of Contract, the name(s) of the successful Bidder(s) and the Contract amount(s) will be available on the Closed Bid Opportunities (or Public/Posted Opening & Award Results) page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/>

B13.4 The Bidder is advised that any information contained in any Bid may be released if required by City policy or procedures, by The Freedom of Information and Protection of Privacy Act (Manitoba), by other authorities having jurisdiction, or by law.

B14. IRREVOCABLE BID

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

B14.2 The acceptance by the City of any Bid shall not release the Bids of the next two (2) lowest evaluated responsive Bidders and these Bidders shall be bound by their Bids on such Work for the time period specified in Paragraph 9 of Form A: Bid.

B15. WITHDRAWAL OF BIDS

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

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

B15.1.2 The City will assume that any one of the contact persons named in Paragraph 3 of Form A: Bid or the Bidder's authorized representatives named in Paragraph 10 of Form A: Bid, and only such person, has authority to give notice of withdrawal.

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

- (a) retain the Bid until after the Submission Deadline has elapsed;
- (b) open the Bid to identify the contact person named in Paragraph 3 of Form A: Bid and the Bidder's authorized representatives named in Paragraph 10 of Form A: Bid; and
- (c) if the notice has been given by any one of the persons specified in B15.1.3(b), declare the Bid withdrawn.

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

B16. EVALUATION OF BIDS

- B16.1 Award of the Contract shall be based on the following bid evaluation criteria:
- (a) compliance by the Bidder with the requirements of the Bid Opportunity or acceptable deviation there from (pass/fail);
 - (b) qualifications of the Bidder and the Subcontractors, if any, pursuant to B12 (pass/fail);
 - (c) Total Bid Price;
 - (d) economic analysis of any approved alternative pursuant to B7.
- B16.2 Further to B16.1(a), the Award Authority may reject a Bid as being non-responsive if the Bid is incomplete, obscure or conditional, or contains additions, deletions, alterations or other irregularities. The Award Authority may reject all or any part of any Bid, or waive technical requirements or minor informalities or irregularities, if the interests of the City so require.
- B16.3 Further to B16.1(b), the Award Authority shall reject any Bid submitted by a Bidder who does not demonstrate, in his/her Bid or in other information required to be submitted, that he/she is responsible and qualified.
- B16.4 Further to B16.1(c), the Total Bid Price shall be the sum of the quantities multiplied by the unit prices for each item shown on Form B: Prices.
- 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 (1) or all of the Bidders are determined to be responsible and qualified, and the Bids are determined to be responsive.
- B17.2.1 Without limiting the generality of B17.2, the City will have no obligation to award a Contract where:
- (a) the prices exceed the available City funds for the Work;
 - (b) the prices are materially in excess of the prices received for similar work in the past;
 - (c) the prices are materially in excess of the City's cost to perform the Work, or a significant portion thereof, with its own forces;
 - (d) only one Bid is received; or
 - (e) in the judgment of the Award Authority, the interests of the City would best be served by not awarding a Contract.
- B17.3 Where an award of Contract is made by the City, the award shall be made to the responsible and qualified Bidder submitting the lowest evaluated responsive Bid, in accordance with B16.
- B17.3.1 Following the award of contract, a Bidder will be provided with information related to the evaluation of his/her Bid upon written request to the Contract Administrator.
- B17.4 Notwithstanding C4, the City may issue a Purchase Order to the successful Bidder in lieu of the execution of a Contract.
- B17.5 The Contract, as defined in C1.1, in its entirety shall be deemed to be incorporated in and to form a part of the Purchase Order notwithstanding that it is not necessarily attached to or accompany said Purchase Order.

PART C - GENERAL CONDITIONS

C0. GENERAL CONDITIONS

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

PART D - SUPPLEMENTAL CONDITIONS

GENERAL

D1. GENERAL CONDITIONS

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

D2. SCOPE OF WORK

D2.1 The Work to be done under the Contract shall consist of repair of the eastbound west approach drainage and expansion joint seal replacement.

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

- (a) installation of catch pit and land drainage components;
- (b) miscellaneous roadworks including concrete pavement reconstruction and asphalt overlay;
- (c) bridge expansion joint seal replacement.

D3. CONTRACT ADMINISTRATOR

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

Cameron Ward, P. Eng.
Project Manager
Telephone No. 204 453-2301
Email: cward@dillon.ca

D3.2 At the pre-construction meeting, Cameron Ward 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 B8.5.

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
- D6.5 **Bids Submissions** must be submitted to the address in B8.5.

SUBMISSIONS

D7. AUTHORITY TO CARRY ON BUSINESS

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

D8. SAFE WORK PLAN

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

D9. INSURANCE

- D9.1 The Contractor shall provide and maintain the following insurance coverage:

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

D9.2 Deductibles shall be borne by the Contractor.

D9.3 The Contractor shall provide the Contract Administrator with a certificate(s) of insurance, in a form satisfactory to the City Solicitor, at least two (2) Business Days prior to the commencement of any Work but in no event later than seven (7) Calendar Days from notification of the award of Contract by Purchase Order.

D9.4 The Contractor shall not cancel, materially alter, or cause each policy to lapse without providing at least thirty (30) Calendar Days prior written notice to the Contract Administrator.

D10. PERFORMANCE SECURITY

D10.1 If the Contract Price exceeds twenty-five thousand dollars (\$25,000.00), the Contractor shall provide and maintain performance security until the expiration of the warranty period in the form of:

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

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

D10.2 The Contractor shall provide the City Solicitor with the required performance security within seven (7) Calendar Days of notification of the award of the Contract by way of Purchase Order and prior to the commencement of any Work on the Site.

D11. SUBCONTRACTOR LIST

D11.1 The Contractor shall provide the Contract Administrator with a complete list of the Subcontractors whom the Contractor proposes to engage (Form J: Subcontractor List) at least two (2) Business Days prior to the commencement of any Work on the Site but in no event later than seven (7) Calendar Days from notification of the award of Contract.

SCHEDULE OF WORK

D12. COMMENCEMENT

- D12.1 The Contractor shall not commence any Work until he/she is in receipt of a Purchase Order from the Award Authority authorizing the commencement of the Work.
- D12.2 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; and
 - (vi) the Subcontractor list specified in D11.
 - (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.
- D12.3 The City intends to award this Contract by August 11, 2015.
- D12.3.1 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.

D13. SUBSTANTIAL PERFORMANCE

- D13.1 The Contractor shall achieve Substantial Performance by September 30, 2015.
- D13.2 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.
- D13.3 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.

D14. TOTAL PERFORMANCE

- D14.1 The Contractor shall achieve Total Performance by October 14, 2015.
- D14.2 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.
- D14.3 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.

D15. LIQUIDATED DAMAGES

- D15.1 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 dollars (\$500) per Calendar Day for each and every Calendar Day following the day fixed herein for Total Performance during which such failure continues.
- D15.2 The amount specified for liquidated damages in D15.1 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.
- D15.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

CONTROL OF WORK

D16. JOB MEETINGS

- D16.1 Regular job meetings will be held at the Site as determined by the Contract Administrator. 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.
- D16.2 The Contract Administrator reserves the right to cancel any job meeting or call additional job meetings whenever he/she deems it necessary.

D17. PRIME CONTRACTOR – THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA)

- D17.1 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).

D18. THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA) – QUALIFICATIONS

- D18.1 Further to B12.4, the Contractor/Subcontractor must, throughout the term of the Contract, have a Workplace Safety and Health Program meeting the requirements of The Workplace Safety and Health Act (Manitoba). At any time during the term of the Contract, the City may, at its sole discretion and acting reasonably, require updated proof of compliance, as set out in B12.4.

MEASUREMENT AND PAYMENT

D19. PAYMENT

- D19.1 Further to C12, the City may at its option pay the Contractor by direct deposit to the Contractor's banking institution.

WARRANTY

D20. WARRANTY

- D20.1 Notwithstanding C13.2, the warranty period shall begin on the date of Total Performance and shall expire one (1) year thereafter, except where longer warranty periods are specified in the respective Specification sections, unless extended pursuant to C13.2.1 or C13.2.2, in which case it shall expire when provided for thereunder.

- D20.1.1 For the purpose of Performance Security, the warranty period shall be one (1) year.
- D20.2 Notwithstanding C13.2, the Contract Administrator may permit the warranty period for a portion or portions of the Work to begin prior to the date of Total Performance if a portion of the Work cannot be completed because of unseasonable weather or other conditions reasonably beyond the control of the Contractor but that portion does not prevent the balance of the Work from being put to its intended use.
- D20.2.1 In such case, the date specified by the Contract Administrator for the warranty period to begin shall be substituted for the date specified in C13.2 for the warranty period to begin.

FORM H1: PERFORMANCE BOND
(See D10)

KNOW ALL MEN BY THESE PRESENTS THAT

_____ ,
(hereinafter called the "Principal"), and

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

_____ dollars (\$_____)

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

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

BID OPPORTUNITY NO. 544-2015

2015 BRIDGE MAINTENANCE – SHOREHILL DRIVE APPROACH ROADWAY WORKS

which is by reference made part hereof and is hereinafter referred to as the "Contract".

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

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

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

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

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

_____ day of _____, 20____.

SIGNED AND SEALED
in the presence of:

(Witness as to Principal if no seal)

(Name of Principal)

Per: _____ (Seal)

Per: _____

(Name of Surety)

By: _____ (Seal)
(Attorney-in-Fact)

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

(Date)

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

RE: PERFORMANCE SECURITY - BID OPPORTUNITY NO. 544-2015

2015 BRIDGE MAINTENANCE – SHOREHILL DRIVE APPROACH ROADWAY WORKS

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

(Name of Contractor)

(Address of Contractor)

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

_____ Canadian dollars.

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

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

Partial drawings are permitted.

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

(Address)

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

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

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

(Date)

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

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

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

(Name of bank or financial institution)

Per: _____
(Authorized Signing Officer)

Per: _____
(Authorized Signing Officer)

PART E - SPECIFICATIONS

GENERAL

E1. APPLICABLE SPECIFICATIONS AND DRAWINGS

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

<u>Drawing No.</u>	<u>Drawing Name/Title</u>
B230-15-01	Approach Roadway Works
B230-15-02	Approach Roadway Details
B230-15-03	Approach Roadway Joint Repair Details

E2. HAZARDOUS MATERIALS

- E2.1 If asbestos or other hazardous materials are encountered during the Work of the Contract, the Contractor shall stop all work and notify the Contract Administrator immediately. Removal of hazardous materials shall be dealt with by the City and the Contractor shall await further instruction by the Contract Administrator.

E3. PROTECTION OF EXISTING TREES

- E3.1 The Contractor shall take the following precautionary steps to prevent damage from construction activities to existing boulevard trees within the limits of the construction area:
- the Contractor shall not stockpile materials and soil or park vehicles and equipment on boulevards within 2 m of trees;
 - trees identified to be at risk by the Contract Administrator are to be strapped with 25 x 100 x 2400 mm wood planks, or suitably protected as approved by the Contract Administrator;
 - excavation shall be performed in a manner that minimizes damage to the existing root systems. Where possible, excavation shall be carried out such that the edge of the excavation shall be a minimum of 1.5 times the diameter (measured in inches), with the outcome read in feet, from the closest edge of the trunk. Where roots must be cut to facilitate excavation, they shall be pruned neatly at the face of excavation;

- (d) operation of equipment within the dripline of the trees shall be kept to the minimum required to perform the Work required. Equipment shall not be parked, repaired, refuelled; construction materials shall not be stored, and earth materials shall not be stockpiled within the driplines of trees. The dripline of a tree shall be considered to be the ground surface directly beneath the tips of its outermost branches. The Contractor shall ensure that the operations do not cause flooding or sediment deposition on areas where trees are located;
- (e) work on-Site shall be carried out in such a manner so as to minimize damage to existing tree branches. Where damage to branches does occur, they shall be neatly pruned.

E3.2 All damage to existing trees caused by the Contractor's activities shall be repaired to the requirements and satisfaction of the Contract Administrator and the City Forester or his/her designate.

E3.3 Elm trees shall not be pruned at any time between April 1 and July 31.

E3.4 No separate measurement or payment will be made for performing all operations herein described and all other items incidental to the Work described.

E4. PROTECTION OF EXISTING UTILITIES

E4.1 In accordance with and further to CW1120, the Contractor shall protect and maintain all existing utilities that may be affected by the Work. The Contractor shall identify and locate utilities, and select appropriate excavation methods, which may include soft digging, as may be required by utility agencies or the Contract Administrator. The protection of existing utilities shall be considered incidental to the Work and no separate measurement or payment will be made.

E5. WATER OBTAINED FROM THE CITY

E5.1 Further to clause 3.7 of CW 1120, the Contractor shall pay for all costs, including sewer charges, associated with obtaining water from the City in accordance with the Waterworks and Sewer By-laws.

E6. VERIFICATION OF WEIGHTS

E6.1 All material which is paid for on a weight basis shall be weighed on a scale certified by Consumer & Corporate Affairs, Canada.

E6.2 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.

E6.3 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 and 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.

E6.4 No charge shall be made to The City for any delays or loss of production caused by such inspection and verification.

E6.5 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.

E6.6 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.

E6.7 No separate measurement or payment will be made for performing all operations herein described and all other items incidental to the Work described.

E7. SURFACE RESTORATIONS

E7.1 Further to clause 3.3 of CW 1130, when Total Performance is not achieved in the year the Contract is commenced, the Contractor shall temporarily repair any Work commenced and not completed to the satisfaction of the Contract Administrator. The Contractor shall maintain the temporary repairs in a safe condition as determined by the Contract Administrator until permanent repairs are completed. The Contractor shall bear all costs associated with temporary repairs and their maintenance.

E8. TRAFFIC AND PEDESTRIAN CONTROL

E8.1 Description

- (a) The Work covered under this item shall include all items relating to traffic and pedestrian control at the Site.
- (b) The Work to be done by the Contractor under this Specification shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools, supplies, and all things necessary for and incidental to the satisfactory performance and completion of all Work as hereinafter specified.

E8.2 Construction Methods

E8.2.1 General

- (a) Further to clauses 3.6 and 3.7 of CW 1130, In accordance with the Manual of Temporary Traffic Control in Work Areas on City Streets, the Contractor ("Agency" in the manual) shall make arrangements with the Traffic Services Branch of the City of Winnipeg to place all temporary regulatory signs, with the exception of the "Keep Right / Keep Left" sign (RB-25 / RB-25L) which shall be installed by the Contractor.
- (b) The Contractor shall erect and maintain all other applicable traffic control devices (including but not limited to warning signs, barrels, tall cones and chevrons) in accordance with the provision contained in the latest edition of the "Manual of Temporary Traffic Control in Work Areas on City Streets," issued by the City of Winnipeg.
- (c) The Contractor will be responsible for pedestrian and traffic control at the Site acceptable to the Contract Administrator.
- (d) The Contractor shall provide and maintain flagmen in accordance with the above-mentioned manual.
- (e) The Contractor shall take all other safety measures necessary to cope with any peculiar or unusual circumstances that have not been set out in the above-mentioned manual and shall, at all times, ensure that maximum protection is afforded to the road-user and that his operations in no way interfere with the safe operation of traffic.
- (f) Improper signing will be sufficient reason for the Contract Administrator or Inspector to immediately shut down the entire job.
- (g) Barricades supplied and installed by the Contractor shall be marked with the name and the telephone number(s) at which the Contractor can be reached twenty-four (24) hours per day, seven (7) days per week.

- (h) During the hours when the Contractor is not working, equipment and stockpiled materials shall be left in such a location so as not to interfere with or present a hazard to motorists or pedestrians.

E8.2.2 Pedestrian Controls

- (a) During construction operations that require the closure of the south side of Shorehill Drive sidewalk, the Contractor shall erect signage at the east end of the bridge notifying pedestrians of the closure, and directing them to the north side via the existing bridge underpass. On the west side, the Contractor shall erect barricades in such a way that pedestrian traffic is diverted to the north side of Shorehill Drive by crossing at the signalized intersection at St. Anne's Road.

E8.2.3 Lane Widths

- (a) A minimum lane width of 3.0 m shall be maintained throughout construction, except during complete lane closures as permitted in the following sections.

E8.2.4 Lane Closures for Seal Replacement and Header Removals

- (a) Seal Replacement and Header Removals shall be completed in sections such that a 3.0m single lane width can be maintained at all times. The Contractor shall maintain emergency vehicle access at all times.
- (b) Where possible, the Contractor shall schedule seal replacement work and asphalt paving operations simultaneously, such that the work can be carried out without multiple individual lane closures. Otherwise, provide minimum 3.0m single lane width.

E8.2.5 Lane Closures for Asphalt Paving

- (a) For asphalt paving operations, complete closure of eastbound Shorehill Drive will be permitted for one working day.
- (b) The closure shall occur between the times of 9:00 AM and 3:00 PM, Monday to Friday.
- (c) The Contractor shall notify the Contract Administrator seven (7) days in advance of implementing the planned closure to allow the Contract Administrator sufficient time to coordinate the closure with Traffic Services, Winnipeg Transit and other City agencies.
- (d) Traffic is permitted to travel on the exposed concrete header. When this is occurring, the Contractor shall erect and maintain "caution bump" signs, as approved by the Contract Administrator.

E8.3 Measurement and Payment

- (a) Traffic control will not be measured. This item of Work will be paid for at the Contract Lump Sum Price for "Traffic Control", listed here below, performed in accordance with the Specification and accepted by the Contract Administrator.

E9. MONOLITHIC MODIFIED BARRIER CURB AND SIDEWALK

E9.1 Description

- E9.1.1 This Specification shall cover all operations related to the installation of monolithic modified barrier curb and sidewalk.

E9.2 Materials

- E9.2.1 Materials for monolithic modified barrier curb and sidewalk shall be in accordance with CW 3310, SD-203B and SD-228B.

E9.3 Construction Methods

- E9.3.1 Construction methods for modified barrier curb and sidewalk shall be in accordance with SD-203B and SD-228B and as shown on the Contract Drawings.

E9.3.2 Construct monolithic modified barrier curb and sidewalk at locations where the sidewalk is located directly adjacent to the roadway as shown on the Contract Drawings.

E9.3.3 Transition curb from the existing safety curb on the approach slab to modified barrier curb.

E9.4 Measurement and Payment

E9.4.1 Installation of the monolithic modified barrier curb and sidewalk will be measured on an area basis and paid for at the Contract Unit Price for "Monolithic Modified Barrier Curb and Sidewalk". The area to be paid for will be the total area monolithic modified barrier curb and sidewalk in accordance with the Contract Drawings and accepted by the Contract Administrator.

- (i) Payment for monolithic modified barrier curb and sidewalk will include payment for the curb transition from safety curb to modified barrier curb. No additional payment will be made for curb transitions.

E10. CUSTOM GROUTED RIP RAP

E10.1 Description

E10.1.1 This Specification shall cover all operations related to the installation of grouted rip-rap. Grouted rip-rap shall consist of a cast-in-place concrete slab with hand-placed field stone in the surface.

E10.2 Materials

E10.2.1 Concrete shall be supplied in accordance with CW3310, Type 1.

E10.2.2 Rock for grouted rip-rap shall consist of hard, dense, durable rock. The rock shall be fieldstone, dense and durable, and resistant to the action of frost and water and suitable in all other respects for the purpose intended. Stone rip-rap shall be free of sod, roots, organic material, and debris prior to placement. Individual pieces of stone shall be free of defects such as seams or cracks prior to placement. The stones shall range in size from 100 mm to 200 mm in diameter. The Contract Administrator shall approve the rock for riprap prior to placing.

E10.2.3 Expansion joint material shall be rot-proof and of the preformed, non-extruding, resilient type made with a bituminous fibre and shall conform to the requirements of ASTM Standard D1751, Specification for Preformed Expansion Joint fillers for Concrete Paving and Structural Construction.

E10.2.4 Flexible joint sealant shall be guaranteed non-staining, grey polyurethane, as approved by the Contract Administrator and applied in strict accordance with the manufacturer's instructions.

E10.2.5 Reinforcing bars shall be in accordance with CSA G30.18, grade 400W.

E10.2.6 Epoxy grout for reinforcing bars shall be a City of Winnipeg Approved Product, as approved by the Contract Administrator.

E10.3 Construction Methods

E10.3.1 All work related to the supply and installation of the concrete slab for grouted stone rip-rap shall be performed in accordance with CW3310.

E10.3.2 The existing ground shall be excavated, shaped, and trimmed to the lines as shown on the Drawings, prior to placing of any grouted rip-rap. No concrete shall be placed until the bed has been inspected and approved by the Contract Administrator. The bed shall consist of undisturbed subgrade. Disturbed areas shall be repaired by the placing and compacting as suitable granular backfill, to the satisfaction of the Contract Administrator.

E10.3.3 The outside perimeter of the grouted riprap shall be constructed using a vertical formed edge equal to the depth of the grouted rip-rap.

- E10.3.4 Dowel in reinforcing bars into the existing structural sidewalk. Epoxy shall be installed in accordance with the manufacturer's recommendations.
- E10.3.5 Immediately following concrete placement but before finishing, rocks shall be hand placed in the surface of the concrete slab. The rock shall be partially embedded below the surface of the concrete, a minimum depth of 60% of their nominal diameter. For example, a 150 mm diameter stone would be embedded a minimum of 90 mm into the concrete.
- E10.3.6 Placement of stones shall be as follows:
- (a) randomized in appearance;
 - (b) maximum gap between adjacent stones to be 200 mm;
 - (c) minimum gap between adjacent stones to be 50 mm.
- E10.3.7 Concrete consolidation (vibration) and finishing should commence after placement of stones. Sufficiently work concrete around all stones, providing a durable surface with positive drainage. A rounded edge at all formed edges shall be provided upon concrete finishing.
- E10.3.8 Expansion joints shall be constructed where the riprap is placed against any structure, or where directed by the Contract Administrator, or where indicated on the Plans. A 13 mm thick fibre joint filler shall be installed in expansion joints. The fibre joint shall extend from the base of the grouted rip-rap, up to 13 mm below the grout surface. A bond breaker, as approved by the Contract Administrator, shall be placed along the bottom of the 13 mm deep by 13 mm wide notch, and the top shall be filled with flexible joint sealant in accordance with the manufacturer's recommended procedures, as approved by Contract Administrator.
- E10.3.9 The Contractor shall be responsible for removal, off-site, of all surplus excavated material.
- E10.4 Measurement and Payment
- E10.4.1 Installation of the grouted rip rap will not be measured. This item of Work will be paid for at the Contract Lump Sum Price for "Custom Grouted Rip Rap". The payment will be considered full compensation for performing all operations herein described or shown on the Drawings and all other items incidental to the Work.

E11. CONCRETE HEADER REMOVALS

E11.1 Description

E11.1.1 This Specification shall cover all operations relating to the removal and disposal of existing concrete headers to the limits as specified herein and as shown on the Drawings. This Specification shall cover concrete removal Works, including all necessary staging, demolition, removal, salvaging, transporting, unloading, stockpiling, and disposal of applicable materials.

E11.1.2 The Work to be done by the Contractor under this Specification shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools, supplies, and all things necessary for and incidental to the satisfactory performance and completion of all Work as hereinafter specified.

E11.2 Materials

E11.2.1 All materials supplied under this Specification shall be of a type approved by the Contract Administrator, and shall be subject to inspection and testing by the Contract Administrator.

E11.2.2 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.

E11.3 Equipment

E11.3.1 All equipment shall be of a type acceptable to the Contract Administrator and shall be kept in good working order.

E11.4 Construction Methods

E11.4.1 General

- (a) Concrete removals shall be deemed to include all the items of Work as to the limits as shown on the Contract Drawings or otherwise directed by the Contract Administrator.
- (b) The Contractor shall prevent damage and destructive vibrations of existing structures to remain, services, expansion joints, and adjacent roadways. If safety of the structure being removed, existing structures or services appears to be endangered the Contractor shall cease operations and notify the Contract Administrator immediately.
- (c) All removed material shall become the responsibility of the Contractor except as otherwise indicated herein.
- (d) The Contractor shall promptly haul all removed materials indicated for disposal, off and away from the Site. No storage of any materials on-Site will be allowed without written approval of the contract Administrator. It shall be the Contractor's responsibility to find suitable disposal areas away from the Site.
- (e) The Contractor shall take all necessary precautions to ensure that materials do not fall onto any neighbouring roadways or sidewalks during removal operations.
- (f) The Contractor shall visit the Site to become familiar with the existing conditions and scope of Work prior to Bid submission. No allowance for extras will be made for any concrete removals, not foreseen by the Contractor, required to complete the scope of Work.
- (g) The details and dimensions of the existing structures shown on the Drawings are for assisting the Contractor in establishing methods and limits of removal and for determining the cost of the Work. All available Drawings for the existing bridge structure and modifications are available for viewing with the Contract Administrator. No guarantee for the accuracy of the information is given. No allowance for extras will be given for information on the Drawings that does not represent existing conditions.
- (h) In no case will the Contractor be permitted to use removal equipment, or other equipment or methods which may cause damage to any remaining structural elements or to any new construction. In the event that any element is damaged, the Contractor shall repair such element at his own expense to the satisfaction of the Contract Administrator.
- (i) The Contractor shall provide all necessary access to facilitate concrete removals and subsequent inspection of all the Works by the Contract Administrator.
- (j) The Contractor shall be fully responsible for ensuring the public safety in all areas, and will be held responsible for any loss or damage caused due to neglect by the Contractor or his employees.
- (k) The Contractor shall only use methods of concrete removal that will not damage the existing structure to remain or new structures. For partial removal of concrete, edges shall be saw-cut to clean and straight lines.
- (l) The Contractor shall only use methods of concrete removal that will not damage the existing structural steel or new structures. Care must be taken in areas of low cover to terminate the diamond grinding before contact is made with the existing reinforcing steel.
- (m) Limits of demolition shall be saw-cut to provide a clean edge at the extent of demolition.

E11.4.2 Removal of Concrete Header

- (a) Removal of concrete at headers shall take place in areas shown on the Drawings to a nominal depth of 25 mm measured from the top of the existing concrete deck surface at the limits shown on the Drawings, tapering to 5 mm at 2 m distance from the limit.

- (b) All of the existing reinforcing steel is to remain in place. The Contractor shall ensure that the reinforcing steel is not damaged.

E11.5 Measurement and Payment

- E11.5.1 Removal of the concrete header will not be measured. This item of Work will be paid for at the Contract Lump Sum Price for "Removal of Header Concrete." The payment will be considered full compensation for performing all operations herein described or shown on the Drawings and all other items incidental to the Work.

E12. JOINT SEAL REPLACEMENT

E12.1 Description

- E12.1.1 This Specification shall cover all operations related to the supply and installation of replacement bridge and roadway joint seals.

E12.2 Materials

E12.2.1 EMSEAL Precompressed Foam Joint Filler

- (a) Expansion joint seal shall be EMSEAL BEJS or equivalent as approved by the Contract Administrator to ASTM C711 and ASTM G155-00A.
- (b) The seal width shall be as indicated on the Drawings.
- (c) Sealant system shall be comprised of three (3) components:
 - (i) Cellular polyurethane foam impregnated with hydrophobic 100% acrylic, water-based emulsion, factory coated with highway-grade, fuel resistant silicone;
 - (ii) Field-applied epoxy adhesive primer; and,
 - (iii) Field-injected silicone sealant bands.
- (d) Impregnation agent to have proven non-migratory characteristics. Silicone coating to be highway-grade, low-modulus, fuel resistant silicone applied to the impregnated foam sealant at a width greater than maximum allowable joint extension and which when cured and compressed will form a bellows. Depth of seal as recommended by manufacturer. BEJS foam seal to be installed into manufacturer's standard field-applied epoxy adhesive. The BEJS SYSTEM is to be installed recessed from the surface such that when the field-applied injection band of silicone is installed between the substrates and the foam-and-silicone-bellows, the system will be ½" (12 mm) down from the substrate surface.
- (e) Material shall be capable, as a dual seal, of movements of +50% to -50% (100% total) of nominal material size. Changes in plane and direction shall be executed using factory fabricated "Universal 90" transition assemblies. Transitions shall be warranted to be watertight at inside and outside corners through the full movement capabilities of the product.
- (f) All substitute candidates to be certified in writing to be free in composition of any waxes or asphalts, wax compounds, or asphalt compounds. All substitute candidates shall be certified in writing to be:
 - (i) Capable of withstanding 65°C for three (3) hours while compressed down to the minimum of movement capability dimension of the basis of design product (-50% of normal material size) without evidence of any bleeding of impregnation medium from the material; and,
 - (ii) That the same material after the heat stability test will self-expand to the maximum of movement capability dimension of the basis-of-design product (+50% of nominal material size) within twenty-four (24) hours at room temperature 20°C.

E12.3 Construction Methods

E12.3.1 Removals and Cleaning

- (a) Completely remove the existing joint seals where replacement is indicated on the Drawings.
- (b) Clean all concrete surfaces as required by the seal manufacturer's installation instructions

E12.3.2 Confirmation of Seal Width

- (a) After removals, the Contractor shall afford the Contract Administrator full access to the exposed joints to confirm the selection of seal widths indicated on the Drawings.
- (b) The Contractor is advised that final selection of the seal width may not occur until after removal of the existing seals.

E12.3.3 Seal Installation

- (a) Install the seal in strict accordance with the manufacturer's recommendations.
- (b) For roadway surfaces to remain as exposed concrete, the seal shall be recessed approximately 12 mm below the pavement surface.
- (c) For roadway surfaces to be subsequently overlaid with asphalt, the seal shall be set flush with the top of the concrete pavement.

E12.3.4 Asphalt joint sealant

- (a) For joints indicated on the Drawings, after asphalt installation, saw-cut and install hot poured asphalt joint sealant above new concrete joint seals.
- (b) Installation of asphalt joint sealant is considered incidental the Work and no separate measurement or payment will be made.

E12.3.5 EMSEAL BEJS Kickout Terminations

- (a) Kickout Terminations shall be supplied and installed as shown on the Drawings.
- (b) Install in accordance with the manufacturer's recommendations.
- (c) Kickout terminations shall be considered incidental to the work and no separate measurement or payment will be made.

E12.4 Measurement and Payment

- (a) Joint seal replacement will be measured on a linear meter basis and paid for at the Contract Unit Price per meter for "Joint Seal Replacement", 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 and accepted by the Contract Administrator.

E13. LAYOUT OF THE ROAD WORKS

E13.1 Further to C6 of the General Conditions for Construction, the Contract Administrator will provide reference lines and final design elevations to the Contractor at intervals and offsets deemed necessary by the Contract Administrator.

E13.2 The Contractor shall be responsible for the layout of any additional grades required as deemed necessary by the Contractor. Grades that the Contractor is responsible for includes but is not limited to sub-grade, sub-base, and base course elevations.

E13.3 The Contractor shall provide all required instruments and competent personnel for performing all layouts. Any Work found to be defective due to errors in layout completed by the Contractor shall be corrected at the expense of the Contractor.

E13.4 The Contract Administrator shall be notified at least one (1) Working Day prior to any Work being commenced in order to have the option to check and review all elevations and layouts at his discretion.

- E13.5 The Contractor shall carefully protect and preserve all benchmarks, stakes, and other items used to convey the basic data to the Contractor by the Contract Administrator. Any such benchmarks or stakes removed or destroyed by the Contractor, without the consent of the Contract Administrator, shall be replaced by the Contract Administrator at the expense of the Contractor. The Contract Administrator shall be notified at least two (2) Working Days prior to replacing any benchmarks, stakes, and other items used to convey the basic data to the Contractor.
- E13.6 The Contractor shall arrange and carry on his Work so as not to conflict with the collection of any data and layout of reference lines and design elevations in anyway by the Contract Administrator. The Contractor shall adjust Work and/or remove any interference as directed by the Contract Administrator at the expense of the Contractor.