



THE CITY OF WINNIPEG

BID OPPORTUNITY

BID OPPORTUNITY NO. 698-2012

**SOUTHWEST RAPID TRANSIT CORRIDOR – STAGE 1: INSTALLATION OF TILE &
ASSOCIATED WORKS FOR THE TRANSITWAY TUNNEL AT CN RIVERS
SUBDIVISION MILEAGE 1.38**

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PART B - BIDDING PROCEDURES

B1. CONTRACT TITLE

- B1.1 SOUTHWEST RAPID TRANSIT CORRIDOR – STAGE 1: INSTALLATION OF TILE & ASSOCIATED WORKS FOR THE TRANSITWAY TUNNEL AT CN RIVERS SUBDIVISION MILEAGE 1.38

B2. SUBMISSION DEADLINE

- B2.1 The Submission Deadline is 12:00 noon Winnipeg time, September 27, 2012.
- 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 Contract Administrator or an authorized representative will be available at the Pumping Station Parking Lot, 421 Osborne Street from 10:00 to 11:00 a.m. on September 19, 2012 to provide Bidders access to the Site. No additional Site visits on the Transit Corridor will be permitted without prior arrangements with the Contract Administrator in writing.
- B3.2 The Bidder is advised that the Site visit is to observe the tunnel as constructed.
- B3.3 The Bidder shall not be entitled to rely on any information or interpretation received at the Site investigation unless that information or interpretation is the Bidder's direct observation, or is provided by the Contract Administrator in writing.

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. ADDENDA

- B5.1 The Contract Administrator may, at any time prior to the Submission Deadline, issue addenda correcting errors, discrepancies or omissions in the Bid Opportunity, or clarifying the meaning or intent of any provision therein.

- B5.2 The Contract Administrator will issue each addendum at least two (2) Business Days prior to the Submission Deadline, or provide at least two (2) Business Days by extending the Submission Deadline.
- B5.2.1 Addenda will be available on the Bid Opportunities page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/bidopp.asp>
- B5.2.2 The Bidder is responsible for ensuring that he/she has received all addenda and is advised to check the Materials Management Division website for addenda regularly and shortly before the Submission Deadline, as may be amended by addendum.
- B5.3 The Bidder shall acknowledge receipt of each addendum in Paragraph 10 of Form A: Bid. Failure to acknowledge receipt of an addendum may render a Bid non-responsive.

B6. SUBSTITUTES

- B6.1 The Work is based on the Plant, Materials and methods specified in the Bid Opportunity.
- B6.2 Substitutions shall not be allowed unless application has been made to and prior approval has been granted by the Contract Administrator in writing.
- B6.3 Requests for approval of a substitute will not be considered unless received in writing by the Contract Administrator at least five (5) Business Days prior to the Submission Deadline.
- B6.4 The Bidder shall ensure that any and all requests for approval of a substitute:
- (a) provide sufficient information and details to enable the Contract Administrator to determine the acceptability of the Plant, Material or method as either an approved equal or alternative;
 - (b) identify any and all changes required in the applicable Work, and all changes to any other Work, which would become necessary to accommodate the substitute;
 - (c) identify any anticipated cost or time savings that may be associated with the substitute;
 - (d) certify that, in the case of a request for approval as an approved equal, the substitute will fully perform the functions called for by the general design, be of equal or superior substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the proposed Work schedule and the dates specified in the Supplemental Conditions for Substantial Performance and Total Performance;
 - (e) certify that, in the case of a request for approval as an approved alternative, the substitute will adequately perform the functions called for by the general design, be similar in substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the proposed Work schedule and the dates specified in the Supplemental Conditions for Substantial Performance and Total Performance.
- B6.5 The Contract Administrator, after assessing the request for approval of a substitute, may in his/her sole discretion grant approval for the use of a substitute as an “approved equal” or as an “approved alternative”, or may refuse to grant approval of the substitute.
- B6.6 The Contract Administrator will provide a response in writing, at least two (2) Business Days prior to the Submission Deadline, only to the Bidder who requested approval of the substitute.
- B6.6.1 The Bidder requesting and obtaining the approval of a substitute shall be entirely responsible for disseminating information regarding the approval to any person or persons he/she wishes to inform.
- B6.7 If the Contract Administrator approves a substitute as an “approved equal”, any Bidder may use the approved equal in place of the specified item.

- B6.8 If the Contract Administrator approves a substitute as an “approved alternative”, any Bidder bidding that approved alternative may base his/her Total Bid Price upon the specified item but may also indicate an alternative price based upon the approved alternative. Such alternatives will be evaluated in accordance with B15.
- B6.9 No later claim by the Contractor for an addition to the Total Bid Price because of any other changes in the Work necessitated by the use of an approved equal or an approved alternative will be considered.
- B6.10 Notwithstanding B6.2 to B6.9, and in accordance with B7.6 deviations inconsistent with the Bid Opportunity document shall be evaluated in accordance with B15.1(a).

B7. BID COMPONENTS

- B7.1 The Bid shall consist of the following components:
- (a) Form A: Bid;
 - (b) Form B: Prices;
 - (c) Bid Security
 - (i) Form G1: Bid Bond and Agreement to Bond, or
Form G2: Irrevocable Standby Letter of Credit and Undertaking, or
a certified cheque or draft;
- B7.2 Further to B7.1, the Bidder should include the written correspondence from the Contract Administrator approving a substitute in accordance with B6.
- B7.3 All components of the Bid shall be fully completed or provided, and submitted by the Bidder no later than the Submission Deadline, with all required entries made clearly and completely, to constitute a responsive Bid.
- B7.4 The Bid shall be submitted enclosed and sealed in an envelope clearly marked with the Bid Opportunity number and the Bidder's name and address.
- B7.4.1 Samples or other components of the Bid which cannot reasonably be enclosed in the envelope may be packaged separately, but shall be clearly marked with the Bid Opportunity number, the Bidder's name and address, and an indication that the contents are part of the Bidder's Bid.
- B7.5 Bidders are advised not to include any information/literature except as requested in accordance with B7.1.
- B7.6 Bidders are advised that inclusion of terms and conditions inconsistent with the Bid Opportunity document, including the General Conditions, will be evaluated in accordance with B15.1(a).
- B7.7 Bids submitted by facsimile transmission (fax) or internet electronic mail (e-mail) will not be accepted.
- B7.8 Bids shall be submitted to:
- The City of Winnipeg
Corporate Finance Department
Materials Management Division
185 King Street, Main Floor
Winnipeg MB R3B 1J1

B8. BID

- B8.1 The Bidder shall complete Form A: Bid, making all required entries.
- B8.2 Paragraph 2 of Form A: Bid shall be completed in accordance with the following requirements:

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

B8.2.1 If a Bid is submitted jointly by two or more persons, each and all such persons shall identify themselves in accordance with B8.2.

B8.3 In Paragraph 3 of Form A: Bid, the Bidder shall identify a contact person who is authorized to represent the Bidder for purposes of the Bid.

B8.4 Paragraph 12 of Form A: Bid shall be signed in accordance with the following requirements:

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

B8.4.1 The name and official capacity of all individuals signing Form A: Bid should be printed below such signatures.

B8.5 If a Bid is submitted jointly by two or more persons, the word "Bidder" shall mean each and all such persons, and the undertakings, covenants and obligations of such joint Bidders in the Bid and the Contract, when awarded, shall be both joint and several.

B9. PRICES

B9.1 The Bidder shall state a price in Canadian funds for each item of the Work identified on Form B: Prices.

B9.2 The quantities listed on Form B: Prices are to be considered approximate only. The City will use said quantities for the purpose of comparing Bids.

B9.3 The quantities for which payment will be made to the Contractor are to be determined by the Work actually performed and completed by the Contractor, to be measured as specified in the applicable Specifications.

B9.4 Payments to Non-Resident Contractors are subject to Non-Resident Withholding Tax pursuant to the Income Tax Act (Canada).

B10. QUALIFICATION

B10.1 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.

- B10.2 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>
- B10.3 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);
- B10.4 Further to B10.3(c), the Bidder shall, within five (5) Business Days of a request by the Contract Administrator, provide proof satisfactory to the Contract Administrator that the Bidder/Subcontractor has a workplace safety and health program meeting the requirements of The Workplace Safety and Health Act (Manitoba), by providing:
- (a) a valid COR certification number under the Certificate of Recognition (COR) Program administered by the 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 Division website at <http://www.winnipeg.ca/matmgt/>)
- B10.5 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.
- B10.6 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.
- B11. BID SECURITY**
- B11.1 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.
- B11.1.1 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.
- B11.1.2 All signatures on Bid securities shall be original.
- B11.1.3 The Bidder shall sign the Bid Bond.

- B11.1.4 The Surety shall sign and affix its corporate seal on the Bid Bond and the Agreement to Bond.
- B11.2 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.
- B11.2.1 Where the Bid security provided by the successful Bidder is in the form of a certified cheque or draft pursuant to B11.1(c), it will be deposited and retained by the City as the performance security and no further submission is required.
- B11.2.2 The City will not pay any interest on certified cheques or drafts furnished as Bid security or subsequently retained as performance security.
- B11.3 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.

B12. OPENING OF BIDS AND RELEASE OF INFORMATION

- B12.1 Bids will be opened publicly, after the Submission Deadline has elapsed, in the office of the Corporate Finance Department, Materials Management Division, or in such other office as may be designated by the Manager of Materials.
- B12.1.1 Bidders or their representatives may attend.
- B12.1.2 Bids determined by the Manager of Materials, or his designate, to not include the Bid security specified in B11 will not be read out.
- B12.2 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/default.stm>
- B12.3 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/default.stm>
- B12.4 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.

B13. IRREVOCABLE BID

- B13.1 The Bid(s) submitted by the Bidder shall be irrevocable for the time period specified in Paragraph 11 of Form A: Bid.
- B13.2 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.

B14. WITHDRAWAL OF BIDS

- B14.1 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.

- B14.1.1 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.
- B14.1.2 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.
- B14.1.3 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 B14.1.3(b), declare the Bid withdrawn.
- B14.2 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 B13.2 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.

B15. EVALUATION OF BIDS

- B15.1 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 B10 (pass/fail);
 - (c) Total Bid Price;
 - (d) economic analysis of any approved alternative pursuant to B6.
- B15.2 Further to B15.1(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.
- B15.3 Further to B15.1(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.
- B15.4 Further to B15.1(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.
- B15.4.1 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.
- B15.4.2 Further to B15.1(a), in the event that a unit price is not provided on Form B: Prices, the City will determine the unit price by dividing the Amount (extended price) by the approximate quantity, for the purposes of evaluation and payment.

B16. AWARD OF CONTRACT

- B16.1 The City will give notice of the award of the Contract or will give notice that no award will be made.

- B16.2 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.
- B16.2.1 Without limiting the generality of B16.2, 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.
- B16.3 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 B15.
- B16.3.1 Following the award of contract, a Bidder will be provided with information related to the evaluation of his/her Bid upon written request to the Contract Administrator.

PART C - GENERAL CONDITIONS

C0. GENERAL CONDITIONS

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

PART D - SUPPLEMENTAL CONDITIONS

GENERAL

D1. GENERAL CONDITIONS

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

D2. SCOPE OF WORK

D2.1 The Work to be done under the Contract shall consist of the supply and installation of the tile, lighting removal and re-installation, and associated works.

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

- (a) Site Development and Restoration
- (b) Traffic Control
- (c) Supply and Installation of Levelling Mortar
- (d) Supply and Installation of Tile and Associated Works
- (e) Supply and Deliver of Additional 2% Tile
- (f) Lighting Removal
- (g) Lighting Re-Installation

D3. CONTRACT ADMINISTRATOR

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

Dave Krahn, P.Eng.
Project Manager

Telephone No. 204 453-2301
Facsimile No. 204 452-4412

D3.2 Bids Submissions must be submitted to the address in B7.8.

D4. CONTRACTOR'S SUPERVISOR

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

D4.2 At least two (2) Business Days prior to the commencement of any Work on the Site, the Contractor shall provide the Contract Administrator with a phone number where the supervisor identified in B5.1 or an alternate can be contacted 24 hours a day to respond to an emergency.

D5. OWNERSHIP OF INFORMATION, CONFIDENTIALITY AND NON DISCLOSURE

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

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

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

- (a) information provided to the Contractor by the City or acquired by the Contractor during the course of the Work;
- (b) the Contract, all deliverables produced or developed; and
- (c) any statement of fact or opinion regarding any aspect of the Contract.

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

D6. NOTICES

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

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

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

The City of Winnipeg
Chief Financial Officer

Facsimile No.: 204 949-1174

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

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

Facsimile No.: 204 947-9155

D7. FURNISHING OF DOCUMENTS

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

SUBMISSIONS

D8. AUTHORITY TO CARRY ON BUSINESS

D8.1 The Contractor shall be in good standing under The Corporations Act (Manitoba), or properly registered under The Business Names Registration Act (Manitoba), or otherwise properly registered, licensed or permitted by law to carry on business in Manitoba, or if the Contractor does not carry on business in Manitoba, in the jurisdiction where the Contractor does carry on business, throughout the term of the Contract, and shall provide the Contract Administrator with evidence thereof upon request.

D9. SAFE WORK PLAN

D9.1 The Contractor shall provide the Contract Administrator with a Safe Work Plan at least five (5) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract.

D9.2 The Safe Work Plan should be prepared and submitted in the format shown in the City's template which is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/Safety/default.stm>

D10. INSURANCE

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

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

D10.2 Deductibles shall be borne by the Contractor.

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

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

D11. PERFORMANCE SECURITY

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

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

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

D11.2 The Contractor shall provide the City Solicitor with the required performance security within seven (7) Calendar Days of notification of the award of the Contract by way of letter of intent and prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract.

D12. SUBCONTRACTOR LIST

D12.1 The Contractor shall provide the Contract Administrator with a complete list of the Subcontractors whom the Contractor proposes to engage (Form J: Subcontractor List) at least two (2) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract.

D13. ENVIRONMENTAL PROTECTION PLAN

D13.1 Prior to commencing construction activities or delivery of materials to Site, submit an Environmental Protection Plan for review and approval by Contract Administrator. The Environmental Protection Plan shall present a comprehensive plan to address known or potential environmental issues which may be present during construction. Where applicable, the Environmental Protection Plan shall include subcontractor activities. The submission of the Environmental Protection Plan to the Contract Administrator shall in no way relieve the Contractor of full responsibility for the success or failure of all environmental management practices and procedures.

D13.2 The Environmental Protection Plan shall address the following:

- (a) Name[s] of person[s] responsible for ensuring adherence to Environmental Protection Plan.
- (b) Name[s] and qualifications of person[s] responsible for manifesting hazardous waste to be removed from Site.
- (c) Name[s] and qualifications of person[s] responsible for training Site personnel.
- (d) Erosion and sediment control plan which identifies type and location of erosion and sediment controls to be provided including monitoring and reporting requirements to assure that control measures are in compliance with erosion and sediment control plan, Federal, Provincial, and Municipal laws and regulations.
- (e) Work area plan showing proposed activity in each portion of area and identifying areas of limited use or non-use. Plan to include measures for marking limits of use areas including methods for protection of features including vegetation to be preserved within authorized Work areas.
- (f) Environmental Emergency Response: including procedures, instructions, and reporting in the event of unforeseen spill of regulated substance.
- (g) Non-Hazardous solid waste disposal plan identifying methods and locations for solid waste disposal including clearing debris.
- (h) Hazardous materials and waste management plan outlining storage, transportation and disposal.
- (i) Air pollution control plan detailing provisions to assure that dust, debris, materials, and trash, do not become air borne and travel off project Site.
- (j) Contaminant prevention plan that: identifies potentially hazardous substances to be used on job Site; identifies intended actions to prevent introduction of such materials into air, water, or ground; and details provisions for compliance with Federal, Provincial, and Municipal laws and regulations for storage and handling of these materials.
- (k) Waste water management plan that identifies methods and procedures for management and/or discharge of waste waters which are directly derived from construction activities, such as concrete wash or curing water, clean-up water, dewatering of ground water, hydrostatic test water, and water used in flushing of lines.
- (l) Monitor and report to ensure implementation of environmental protection measures.

D13.3 Fires

- (a) Fires and burning rubbish or waste materials on Site is not permitted.

D13.4 Disposal of Waste

- (a) Dispose all waste at licensed facilities or with licensed haulers.
- (b) All waste disposal grounds receiving debris and construction waste from this project must be operated under the authority of a valid permit issued pursuant to MR 150 (latest edition) Waste Disposal Grounds Regulation under the Environment Act.
- (c) Dispose of all sewage and seepage from the on-Site sanitary facilities in accordance with the Onsite Wastewater Management Systems Regulation MR 83/2003.
- (d) Do not bury waste materials on Site.
- (e) Do not dispose of solid or liquid wastes in drains or waterways.

D13.5 Hazardous Waste

D13.5.1 Definitions

- (a) Dangerous Goods: product, substance, or organism that is specifically listed or meets hazard criteria established in the Dangerous Goods Handling and Transportation Act or regulations including hazardous materials and wastes.
- (b) Hazardous Material: product, substance, or organism that is used for its original purpose; and that is either dangerous goods or a material that may cause adverse impact to environment or adversely affect health of persons, animals, or plant life when released into the environment.
- (c) Hazardous Waste: any hazardous material that is no longer used for its original purpose and that is intended for recycling, treatment or disposal.
- (d) Workplace Hazardous Materials Information System (WHMIS): a Canada-wide system designed to give employers and workers information about hazardous materials used in workplace. Under WHMIS, information on hazardous materials is provided on container labels, material safety data sheets (MSDS), and worker education programs. WHMIS is put into effect by combination of federal and provincial laws.

D13.5.2 Materials Management

- (a) Only bring on Site quantity of hazardous materials required to perform Work.
- (b) Maintain MSDSs in proximity to where materials are being used. Communicate this location to personnel who may have contact with hazardous materials.
- (c) Ensure personnel have been trained in accordance with Workplace Hazardous Materials Information System (WHMIS) requirements.

D13.5.3 Storage and Handling

- (a) Store and handle hazardous materials and wastes in accordance with applicable federal and provincial laws, regulations, codes, and guidelines.
 - (i) Sign storage areas.
 - (ii) Store and handle flammable and combustible materials in accordance with current Manitoba and National Fire Code of Canada requirements.
 - (iii) Do not transfer of flammable and combustible liquids in vicinity of open flames or heat-producing devices.
 - (iv) Do not use flammable liquids having flash point below 38 degrees C, such as naphtha or gasoline as solvents or cleaning agents.
 - (v) Store flammable and combustible waste liquids for disposal in approved containers located in safe, ventilated area. Keep quantities to minimum.
 - (vi) Observe smoking regulations, smoking is prohibited in areas where hazardous materials are stored, used, or handled.
- (b) Keep no more than 100 litres of flammable and combustible liquids such as gasoline, kerosene and naphtha for ready use.
 - (i) Store flammable and combustible liquids in approved safety cans bearing the Underwriters' Laboratory of Canada or Factory Mutual seal of approval.

- (ii) Storage of quantities of flammable and combustible liquids exceeding 100 litres for Work purposes requires the written approval of the Contract Administrator
 - (iii) Fuel storage exceeding 100L shall be a minimum distance of 100 metres from any water body and in compliance with the requirements of the Storage and Handling of Petroleum Products and Allied Products Manitoba Regulation 188/2001 of the Dangerous Goods Handling and Transportation Act.
- (c) Storage requirements for quantities of hazardous materials and wastes in excess of 5 kg for solids, and 5 litres for liquids:
- (i) Store hazardous materials and wastes in closed and sealed containers.
 - (ii) Label containers of hazardous materials and wastes in accordance with WHMIS.
 - (iii) Store hazardous materials and wastes in containers compatible with that material or waste.
 - (iv) Segregate incompatible materials and wastes. Ensure that different hazardous materials or hazardous wastes are not mixed.
 - (v) Store hazardous materials and wastes in secure storage area with controlled access.
 - (vi) Maintain clear egress from storage area.
 - (vii) Store hazardous materials and wastes in location that will prevent them from spilling into environment.
 - (viii) Store products on spill trays or berms with 110% capacity.
 - (ix) Do not store within 30 meters of a waterway or drain
 - (x) Have appropriate emergency spill response equipment available near storage area, including personal protective equipment.
 - (xi) Maintain inventory of hazardous materials and wastes, including product name, quantity, and date when storage began and disposal occurred. Maintain tipping and other disposal receipts.
- (d) Report spills or accidents immediately:
- (i) to the Contract Administrator.
 - (ii) to Manitoba Conservations Accident Reporting Line at 204-944-4888 in accordance with Manitoba Regulation 439/87 of the Dangerous Goods and Transportation Act.
 - (iii) Submit a written spill report to the Contract Administrator outlining cause and proposed corrective action and Manitoba Conservation as required. Provide copies of reports submitted to Manitoba Conservation to the Contract Administrator.

D13.5.4 Transportation

- (a) Transport hazardous materials and wastes in accordance with the Manitoba Dangerous Goods Handling and Transportation Act.
- (i) Ensure that trained personnel handle, offer for transport, or transport dangerous goods.
 - (ii) Use licensed carrier authorized by provincial authorities to accept subject material.
 - (iii) Label container[s] with legible, visible safety marks as prescribed by federal and provincial regulations.
 - (iv) Provide photocopy of shipping documents and waste manifests to the Contract Administrator.
 - (v) Track receipt of completed manifest from consignee after shipping dangerous goods. Provide a photocopy of completed manifest to the Contract Administrator.

- (vi) Report discharge, emission, or escape of hazardous materials immediately to the Contract Administrator and appropriate provincial authority. Take measures to control release.

D13.5.5 Disposal

- (a) Dispose of hazardous waste materials in accordance with applicable federal and provincial acts, regulations, and guidelines.
 - (i) Recycle hazardous wastes for which there is approved, cost effective recycling process available.
 - (ii) Send hazardous wastes to authorized hazardous waste disposal or treatment facilities.
 - (iii) Burning, diluting, or mixing hazardous wastes for purpose of disposal is prohibited.
 - (iv) Disposal of hazardous materials in waterways, storm or sanitary sewers, or in municipal solid waste landfills is prohibited.

D13.5.6 Erosion and Sediment Control

- (a) Develop an erosion control plan to control negative impacts on water and air quality; plan should meet these objectives:
 - (i) Prevent sedimentation of the land drainage system and receiving streams with dust, particulate matter or eroded sediment.
- (b) Supply, install, maintain and remove (as applicable and when no longer required) effective sediment control barriers and erosion control before starting Work that may result in the deposit of sediment into a ditch or water body to avoid potential impacts to fish and fish habitat.
 - (i) Erosion and sediment control measures and installations include, as required, silt socks around storm drains, silt fence barriers, erosion control blanket, straw wattles, and geotextile fabric as appropriate.
 - (ii) Routinely inspect all erosion and sediment control measures and installations and immediately repair any deficiencies.

D13.5.7 Work to Adjacent Waterways

- (a) Do not operate construction equipment in waterways and, where possible, avoid operating equipment within 30 meters of the waterway.
- (b) Do not use waterway beds for borrow material.
- (c) Do not dump excavated fill, waste material or debris in ditches or waterway.
- (d) Design and construct temporary crossings to minimize erosion to waterways.
- (e) Dispose of excavated materials above the high water mark and 30 meters way from a watercourse.

D13.5.8 Drainage

- (a) Do not pump water containing suspended materials into waterways, sewer or drainage systems.
- (b) Control disposal or runoff of water containing suspended materials or other harmful substances in accordance with local authority requirements.

D13.5.9 Reducing Site Disturbances

- (a) Do not disturb, in any way, the embankment slopes, roadway shoulders, and adjacent ground surfaces areas outside the limits of the construction areas including the approved lay down, staging and access unless written permission has been obtained from the Contract Administrator. Such written permission will be granted only if it can be shown that there is no alternative.
- (b) Minimize disturbance of any undeveloped areas on Site and maintain existing Site grading where indicated and where possible.

- (i) Minimize stripping of topsoil and vegetation
- (ii) Re-grade and plant vegetation on construction Site as soon as possible.
- (iii) Avoid soil compaction where possible.

D13.5.10 Pollution Control

- (a) Maintain temporary erosion and pollution control features installed under this contract.
- (b) Maintain construction equipment in good working order. Control emissions from equipment.
- (c) Cover or wet down dry materials and stockpiled soils to prevent blowing dust and debris. Provide dust control for the construction Site, temporary and access roads.
- (d) Bring only clean fill, granular, rip rap and other similar construction materials to the project Site.

D14. EQUIPMENT LIST

D14.1 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.

D15. DETAILED WORK SCHEDULE

D15.1 The Contractor shall provide the Contract Administrator with a detailed Work schedule at least two (2) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract.

D15.2 The detailed Work schedule shall consist of the following:

- (a) The Detailed Work Schedule shall be provided in Gantt chart format and shall include all major tasks and milestones specified for the Work.
- (b) Update the Detailed Work Schedule to reflect actual progress on a regular basis and as requested by the Contract Administrator. Update the schedule at minimum once per month and within two (2) Business Days before every Site meeting.

D15.3 The Contractor shall schedule the Work continuous without interruptions or stop of Work.

D15.4 The Contractor shall request Work in stages to the Contract Administrator in which the Contractor must submit a Detailed Work Scheduled as specified in D15.1 prior to mobilizing on site.

D15.5 For any stop of Work required by the Contractor, the Contractor must fully leave Site, allowing Transit to resume all operations. This includes but not limited to demobilizing of scaffolding, storage, temporary fencing, traffic control, etc.

D15.6 Once the Contractor is ready to resume Work on Site, the Contract shall notify the Contract Administrator five (5) Business Days prior to mobilizing on Site.

D15.7 No additional payment or compensation will be made for the work as described in D15 Detailed Work Schedule, as this is considered incidental to the Contract.

SCHEDULE OF WORK

D16. COMMENCEMENT

D16.1 The Contractor shall not commence any Work until he/she is in receipt of a letter of intent from the Award Authority authorizing the commencement of the Work.

D16.2 The Contractor shall not commence any Work on the Site until:

- (a) The Contract Administrator has confirmed receipt and approval of:
 - (i) evidence of authority to carry on business specified in D8;
 - (ii) evidence of the workers compensation coverage specified in C6.15;
 - (iii) the Safe Work Plan specified in D9;
 - (iv) evidence of the insurance specified in D10;
 - (v) the performance security specified in D11;
 - (vi) the Subcontractor list specified in D12;
 - (vii) the Environmental Protection Plan specified in D13
 - (viii) the equipment list specified in D14; and
 - (ix) the detailed Work schedule specified in D15.
- (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.
- (c) The Contractor has attended a Transit safety meeting to be arranged by Shane Trumbley at (204) 986-2960.

D16.3 The Contractor shall commence the Work on the Site within seven (7) Working Days of receipt of the letter of intent.

D16.4 The City intends to award this Contract by October 5, 2012.

D16.4.1 If the actual date of award is later than the intended date, the dates specified for Commencement, Substantial Performance, and Total Performance will be adjusted by the difference between the aforementioned intended and actual dates.

D17. SUBSTANTIAL PERFORMANCE

D17.1 The Contractor shall achieve Substantial Performance by July 31, 2013 .

D17.2 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.

D17.3 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.

D18. TOTAL PERFORMANCE

D18.1 The Contractor shall achieve Total Performance by August 30, 2013 .

D18.2 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.

D18.3 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.

D19. LIQUIDATED DAMAGES

D19.1 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 four thousand dollars

(\$4,000) per Calendar Day for each and every Calendar Day following the day fixed herein for Total Performance during which such failure continues.

- D19.2 The amount specified for liquidated damages in D19.1 is based on a genuine pre-estimate of the City's damages due to additional City's and Consultants time spent and the direct impacts to bus schedule, ridership and timing in the event that the Contractor does not achieve Total Performance by the day fixed herein for same.
- D19.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

CONTROL OF WORK

D20. JOB MEETINGS

- D20.1 Regular weekly job meetings will be held at Dillon Consulting Limited located at 1558 Willson Place, Winnipeg, Mb. 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.
- D20.2 The Contract Administrator reserves the right to cancel any job meeting or call additional job meetings whenever he/she deems it necessary.

D21. PRIME CONTRACTOR – THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA)

- D21.1 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).

D22. LAYOUT OF THE WORK

- D22.1 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. The Contractor shall provide all required instruments and competent personnel for performing all layouts.
- D22.2 Should an error appear or arise in location, levels, dimensions, and/or alignments during the course of Work, the Contractor shall promptly rectify such errors to the satisfaction of the Contract Administrator, at his own expense.
- D22.3 The Contract Administrator shall be notified two (2) Business Days prior to any Work being commenced in order to have the option to check and review all elevations and layouts at his discretion.
- D22.4 The Contractor shall carefully protect and preserve all benchmarks, markings, and other items used in giving the basic data supplied by the Contract Administrator. Any such benchmarks or marking 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.

MEASUREMENT AND PAYMENT

D23. PAYMENT

- D23.1 Further to C12, the City may at its option pay the Contractor by direct deposit to the Contractor's banking institution.

- D23.2 Further to C12, payment shall be in accordance with the following payment schedule:
- (a) All portions of Work including those designated for lump sum payment, will be paid for on a monthly pro-rata basis as determined by the Contract Administrator in consultation with the Contractor provided the portion of the Work to be paid for has been permanently incorporated into the Works.

WARRANTY

D24. WARRANTY

- D24.1 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.
- D24.1.1 For the purpose of Performance Security, the warranty period shall be one (1) year.
- D24.2 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.
- D24.2.1 In such case, the date specified by the Contract Administrator for the warranty period to begin shall be substituted for the date specified in C13.2 for the warranty period to begin.

FORM H1: PERFORMANCE BOND
(See D11)

KNOW ALL MEN BY THESE PRESENTS THAT

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

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

_____ dollars (\$_____)

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

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

BID OPPORTUNITY NO. 698-2012

SOUTHWEST RAPID TRANSIT CORRIDOR – STAGE 1: INSTALLATION OF TILE & ASSOCIATED WORKS FOR THE TRANSITWAY TUNNEL AT CN RIVERS SUBDIVISION MILEAGE 1.38

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

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

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

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

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

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

_____ day of _____, 20____ .

SIGNED AND SEALED
in the presence of:

(Witness as to Principal if no seal)

(Name of Principal)

Per: _____ (Seal)

Per: _____

(Name of Surety)

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

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

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

(Date)

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

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

This credit is subject to the Uniform Customs and Practice for Documentary Credit (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 D13)

**SOUTHWEST RAPID TRANSIT CORRIDOR – STAGE 1: INSTALLATION OF TILE & ASSOCIATED
WORKS FOR THE TRANSITWAY TUNNEL AT CN RIVERS SUBDIVISION MILEAGE 1.38**

<p>1. Category/type:</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>2. Category/type:</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>3. Category/type:</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 D13)

SOUTHWEST RAPID TRANSIT CORRIDOR – STAGE 1: INSTALLATION OF TILE & ASSOCIATED WORKS FOR THE TRANSITWAY TUNNEL AT CN RIVERS SUBDIVISION MILEAGE 1.38

<p>4. Category/type:</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>5. Category/type:</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>6. Category/type:</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 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 and are for reference purposes only:
- E1.3.1 Southwest Rapid Transit Corridor – Stage 1
 Contract #4
 Transitway Tunnel at CN Rivers Subdivision Mileage 1.38 & Associated Works

<u>Consultant Drawing No.</u>	<u>City Drawing No.</u>	<u>Drawing Name/Title</u>	<u>Size</u>
GENERAL			
C4-G100-C	U237-09-01	Cover Sheet	A1
C4-G102-C	U237-09-03	Legend and Design Notes	A1
C4-G104-C	U237-09-05	General Arrangement	A1
C4-G105-C	U237-09-06	General Information	A1
C4-G106-C	U237-09-07	Typical Tunnel Section	A1
C4-G107-C	U237-09-08	Tunnel Geometry	A1
STRUCTURAL			
C4-S1121-C	U237-09-44	South Retaining Walls	A1
C4-S1123-C	U237-09-46	South Wall Elevations	A1
C4-S1126-C	U237-09-49	Retaining Wall Details Sheet 1 of 2	A1
ELECTRICAL			
C4-E1200-C	U237-09-56	Electrical Layout	A1
C4-E1201-C	U237-09-57	Electrical Details	A1
ARCHITECTURAL FINISHES			
C4-S1300-C	U237-09-58	Architectural Details Plan	A1
C4-S1301-C-R1	U237-09-59	Tile Pattern Layout West Wall	A1
C4-S1302-C-R1	U237-09-60	Tile Pattern Layout East Wall	A1
C4-S1303-C-R1	U237-09-61	Tiling Details	A1

- E1.3.2 Southwest Rapid Transit Corridor – Stage 1
 Contract #6
 Transitway Construction, Landscaping & Associated Works

<u>Consultant Drawing No.</u>	<u>City Drawing No.</u>	<u>Drawing Name/Title</u>	<u>Size</u>
C6-C3033-C	P-3317-33	Paving & Grading – Transitway – Sta. 11+715 to 11+905	A1

C6-C3035-C	P-3317-35	(Plan) Paving & Grading – Transitway – Sta. 11+905 to 12+100 (Plan)	A1
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GENERAL REQUIREMENTS

E2. SHOP DRAWINGS

E2.1 Description

E2.1.1 This Specification provides instructions for the preparation and submission of shop drawings.

- (a) The term 'shop drawings' means drawings, diagrams, illustrations, schedules, performance charts, brochures, and other data, including Site erection drawings which are to be provided by the Contractor to illustrate details of a portion of the Work.
- (b) Submit specified shop drawings to the Contract Administrator for review. All submissions must be in metric units. Where data is in imperial units, the correct metric equivalent shall also be show on all submissions for Contract Administrator review.

E2.2 Shop Drawings

E2.2.1 Original drawings shall be prepared by Contractor, Subcontractor, supplier, distributor or manufacturer to illustrate appropriate portion of Work including fabrication, layout, setting or erection details as specified in appropriate sections.

E2.2.2 Shop drawings for the following components shall be submitted for review:

- (a) Traffic Control Plan
- (b) Water jet cut logos
- (c) Tile details showing all tile installation Work including location of all expansion and control joints, tile colour arrangement.

E2.3 Contractor's Responsibilities

- (a) Review shop drawings, product data and samples prior to submission and stamp and sign drawings indicating conformance to the Contract requirements.
- (b) Verify:
 - (i) Field Measurements
 - (ii) Field Construction Criteria
 - (iii) Catalogue numbers and similar data
- (c) Coordinate each submission with requirements of Work and Contract Documents. Individual shop drawings will not be reviewed until all related drawings are available.
- (d) Notify Contract Administrator, in writing at time of submission, of deviations from requirements of Contract Documents.
- (e) Notify Contract Administrator, in writing at time of submission, of deviations from requirements of Contract Documents.
- (f) Responsibility for deviations in submission from requirements of Contract Documents is not relieved by Contract Administrator's review of submission, unless Contract Administrator gives written acceptance of specified deviations.
- (g) Responsibility for errors and omissions in submission is not relieved by Contract Administrator's review of submittals.
- (h) Make any corrections required by the Contract Administrator and resubmit the required number of corrected copies of Shop Drawings. Direct specific attention in writing or on resubmitted Shop Drawings to revisions other than the corrections requested by the Contract Administrator on previous submission.

- (i) After Contract Administrator's review and return of copies, distribute copies to Subcontractors and others as appropriate.
- (j) Maintain one (1) complete set of reviewed shop drawings, filed by Specification Section Number, at the Site of the Work for use and reference of the Contract Administrator and Subcontractors.

E2.4 Submission Requirements

- (a) Schedule submissions at least fourteen (14) Calendar Days before dates reviewed submissions will be needed, and allow for a fourteen (14) Calendar Day period for review by the Contract Administrator of each individual submission and re-submission, unless noted otherwise in the Contract Documents.
- (b) Submit two (2) paper prints of shop drawings. The Contract Administrator will retain one (1) copy of all submittals and return one (1) copy to the Contractor.
- (c) Accompany submissions with transmittal letter containing:
 - (i) Date
 - (ii) Project title and Bid Opportunity number
 - (iii) Contractor's name and address
 - (iv) Number of each shop drawing, product data and sample submitted
 - (v) Specification Section, Title, Number and Clause
 - (vi) Drawing Number and Detail / Section Number
 - (vii) Other pertinent data
- (d) Accompany submissions with transmittal letter containing:
 - (i) Date and revision dates
 - (ii) Project title and Bid Opportunity number
 - (iii) Name of:
 - ◆ Contractor
 - ◆ Subcontractor
 - ◆ Supplier
 - ◆ Manufacturer
 - ◆ Detailer (if applicable)
 - (iv) Identification of product or material.
 - (v) Relation to adjacent structure or materials.
 - (vi) Field dimensions, clearly identified as such.
 - (vii) Specification section name, number and clause number or drawing number and detail / section number.
 - (viii) Applicable standards, such as CSA or CGSB numbers.
 - (ix) Contractor's stamp, initialled or signed, certifying review of submission, verification of field measurements and compliance with Contract Documents.

E2.5 Other Considerations

- (a) Fabrication, erection, installation or commissioning may require modifications to equipment or systems to conform to the design intent. Revise pertinent shop drawings and resubmit.
- (b) Material and equipment delivered to the Site of the Works will not be paid for at least until pertinent shop drawings have been submitted and reviewed.
- (c) Incomplete shop drawing information will be considered as stipulated deductions for the purposes of progress payment certificates.
- (d) No delay or cost claims will be allowed that arise because of delays in submissions, re-submissions and review of shop drawings.

E2.6 No additional payment or compensation will be made for the requirements as described in E2 as this is considered incidental to the Contract.

E3. WATER USED BY CONTRACTOR

E3.1 Further to clause 3.7 of CW 1120-R1, the Contractor shall pay for all costs associated with obtaining water in accordance with the Waterworks By-law. Sewer charges will not be assessed for water obtained from a hydrant.

E4. SITE DEVELOPMENT AND RESTORATION

E4.1 Description

E4.1.1 This Specification shall cover aspects of the Site Development and Restoration Work, including but not limited to snow clearing, access development, mobilizing and demobilization of equipment and material required for the Work, access maintenance and removal, and Site restoration.

E4.2 Materials

E4.2.1 Equipment

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

E4.3 Construction Methods

E4.3.1 Site Inspection

- (a) Inspect Site with Contract Administrator and verify extent and location of items designated for removal, disposal, salvage and items to remain.

E4.3.2 Site and Construction Access

- (a) The Contractor shall be responsible to develop suitable Site access. This includes but is not limited to any landscaping and grading repairs, etc necessary to restore any Site and construction access areas to their pre-existing condition.

E4.3.3 Existing Chain Link Fencing

- (a) The existing fence around the property and on the tunnel retaining walls shall be reconstructed if damaged during construction. New fence materials used for the reconstruction shall be consistent with the existing fence.
- (b) Contractor is responsible for maintaining only authorized Site access at all times. Any existing security fencing, etc. that may be altered or damaged during construction will need to have an equivalent replacement.
- (c) The Contractor shall ensure that the existing gates are closed and locked at the end of each Work day.

E4.3.4 Environmental Regulations

- (a) The Contractor shall adhere D13 and to all relevant Federal and Provincial environmental regulations.

E4.3.5 Snow and Ice Removal

- (a) Snow cover shall be cleared from the construction Site prior to commencement of the Work. The methodology to clear the snow shall be subject to the approval of the Contract Administrator.

E4.3.6 General Site Cleanup and Restoration

- (a) On a daily basis maintain premises free from debris and waste material.

- (b) Maintain project Site and public properties free from accumulations of waste materials and rubbish.
- (c) Remove waste materials and rubbish from Site.
- (d) Disposal of waste on Railway property by dumping, burial or burning shall not be permitted.
- (e) All areas of the construction Site shall be restored to a condition at least equivalent to its original condition prior to initiation of Work. This may include, but is not necessarily limited to the Contractor's lay down area and removal of all temporary security fencing.

E4.4 Measurement and Payment

E4.4.1 Site Development and Restoration

- (a) The Site Development and Restoration will not be measured. This Item of Work will be paid for in the Contract Lump Sum Price for "Site Development and Restoration", performed in accordance with this Specification and accepted by the Contract Administrator.

E5. TRAFFIC CONTROL

E5.1 Description

E5.1.1 The Contractor shall be responsible for Traffic Control for the duration of the Contract which includes but not limited to the following:

- (a) Concrete preparation as described in E8,
- (b) Tile installation as described in E8,
- (c) All Electrical Work as described in E9,
- (d) And all associated Work included in this Specification.

E5.2 Requirements

E5.2.1 The Contractor shall submit a Traffic Control Plan as specified in E2 bearing the seal of a Professional Engineer registered in the Province of Manitoba, to the Contract Administrator for approval prior to mobilizing on Site.

E5.2.2 The Traffic Control Plan shall be in accordance with the Manual of Temporary Traffic Control in Work Areas on City Streets. The Contractor shall bear all costs associated with the placement of temporary traffic control devices and all associated works.

E5.2.3 The Contractor shall maintain all Traffic Control devices and shall be inspected by the Contractor on a daily basis.

E5.2.4 The Contract Administrator reserves the right to direct the Contractor at any time to fix, replace, or reposition any damaged or misplaced signage.

E5.2.5 The Contractor shall not revise the Traffic Control Plan without written approval from the Contract Administrator.

E5.3 Traffic Management

E5.3.1 The Contractor shall schedule construction activities to meet the following:

- (a) Site access for Rapid Transit buses and authorized vehicles shall be maintained at all times.
- (b) Ambulance and emergency vehicle access must be maintained at all times.
- (c) Maintain a minimum of one lane of traffic northbound and one lane of traffic southbound at all times, unless directed in writing by the Contract Administrator.
- (d) Traffic lanes shall be a minimum of 3.5 m clear.

- (e) Maximum traffic speed through the Detour shall be 50 km/hr and shall be posted at each end of the Detour.
- (f) Full access at the intersection located north and south of the tunnel structure must be maintained at all times during construction.
- (g) The Contractor shall access the tunnel structure for loading and unloading purposes by entering at the north approach via Warsaw Avenue and exit through the south approach via Brandon Avenue. Access to the transitway during rush hour periods will be severely restricted. The Contractor shall schedule operations requiring access during non-peak times and as directed by the Contract Administrator.
- (h) Rush hour periods from Monday to Friday are as follows:
 - (i) 6:30 to 9:30
 - (ii) 15:30 to 18:30
- (i) The Contractor shall give the Contract Administrator a minimum of 48 hours notice prior to any loading and unloading operations.
- (j) The Contractor shall give Transit a minimum of 48 hours notice prior to access the transitway for loading and unloading operations. Contact Chief Inspector George Fatouros (204) 986-5745 or gfatouro@winnipeg.ca.
- (k) Outside of regular business hours or in the event of an emergency, Transit Control Centre can be reached at (204) 986-5788.
- (l) The Contractor shall not have access to parking along the Transit Corridor unless it is inside the limits of the Tile installation and does not interfere with Transit operations.

E5.4 Measurement and Payment

E5.4.1 Traffic Control

- (a) The Traffic Control will not be measured. This Item of Work will be paid for in the Contract Lump Sum Price for "Traffic Control", performed in accordance with this Specification and as accepted by the Contract Administrator.

E6. ENCROACHMENT ON PRIVATE PROPERTY

E6.1 Further to Section 3.11 of CW 1130 of the General Requirements, 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.

E6.2 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 building, fencing, trees and plants, and provision shall be made to maintain full drainage for private properties during construction.

E6.3 No additional payment or compensation will be made for the requirements as described in E6 as this is considered incidental to the Contract.

E7. DAMAGE TO EXISTING STRUCTURES AND PROPERTY

E7.1 Further to Section 3.13 of CW 1130 of the General Requirements, special care shall be taken to avoid damage to the tunnel structure, existing conduits and luminaires at the tunnel structure, existing adjacent structures, and properties during the course of the Work.

E7.2 Any damage caused by the Contractor or his Subcontractors to the adjacent structures or properties shall be promptly repaired by the Contractor at his own expense to the satisfaction of the Contract Administrator.

E7.3 No additional payment or compensation will be made for the requirements as described in E7 as this is considered incidental to the Contract.

E8. TILE

E8.1 Description

E8.1.1 This specification covers the supply and installation of porcelain tile to be applied to the existing concrete surface commencing from Sta. 11+970.00, located at the entrance of the tunnel structure in Stage 1 to the end of south retaining walls in Stage 2 at Sta. 11+715.00. This includes, but is not limited to tile installation, required pattern, custom water jet cut logos and all associated material required for tile installation.

E8.2 Shop Drawings

E8.2.1 Contractor shall submit the following shop drawings as specified in E2 to the Contract Administrator;

- (a) Water jet cut logos
- (b) Details showing all tile installation Work including location of all expansion and control joints, tile colour arrangement.

E8.3 Material Storage

E8.3.1 The Contractor shall store material in a cool, dry, well-ventilated area in accordance to the manufacturer's requirements.

E8.4 Material

E8.4.1 Porcelain tile to be Casalgrande Padana as supplied by Julain Tile, contact Wendy Scott (204) 632-8453, in the following styles, colours and sizes.

- (a) Unicolore, Granitogres – Nero 12"x12"
- (b) Unicolore, Granitogres – Blu Forte 8"x8"
- (c) Unicolore, Granitogres – Bianco Assoluto 12"x12"
- (d) Unicolore, Granitogres – Bianco Assoluto 8"x8"
- (e) Caleidoscopio, Monopadana – Rosso Sellenio 8"x8"
- (f) 3mm thick Schluter-SCHIENE Edger in Stainless Steel, depth to match grout and tile. The Contract shall supply a sample for approval by the Contract Administrator.

E8.4.2 The City of Winnipeg has retained the following approximate amount of tiles located in trailers at the City of Winnipeg Yards at 849 Ravelston Avenue W, Winnipeg, MB;

- (a) Unicolore, Granitogres – Nero 12"x12" = 55 pieces
- (b) Unicolore, Granitogres – Blu Forte 8"x8" = 1,720 pieces
- (c) Unicolore, Granitogres – Bianco Assoluto 12"x12" = 22,245 pieces
- (d) Caleidoscopio, Monopadana – Rosso Sellenio 8"x8" = 1,185 pieces

E8.4.3 The Contract shall be responsible for verifying tile quantities and ordering the required amounts to complete the Work.

E8.4.4 The pre-tile levelling mortar shall be Ardex AM 100 Pre-Tile Repair Mortar as manufactured by ARDEX Americas.

E8.4.5 Tile setting mortar shall be Ardex X77 Microtec Thin Set Mortar as manufactured by ARDEX Americas.

E8.4.6 Grout shall be white Ardex Flex Sanded Fast Setting, Water Repellent, Flexible Grout as manufactured by ARDEX Americas.

E8.4.7 Siliconized acrylic color caulking shall be white Ultra-Performance Color Specific Caulk as manufactured by COLORFAST Industries Inc.

E8.5 Delivery

- (a) The Contractor shall be responsible for transporting all new tiles, and all existing tile at the City of Winnipeg yard to the site.
- (b) The Contractor shall also supply at the completion of the project an additional 2% by area of each type of tile for future maintenance to the City of Winnipeg. Contractor to round up to the nearest box. Tile shall be packaged, labelled, delivered, and off-loaded by the Contractor, as directed by the Contract Administrator to 421 Osborne Street, Stores Receiving between the hours of 7:00 to 14:20. Contractor shall give the Contract Administrator five (5) Business Days notice prior to delivery to ensure storage location is prepared to receive the product.

E8.6 Construction Methods

E8.6.1 Surface Preparation

- (a) The Contractor is to prepare the surface as required by the mortar manufacturer's specifications.
- (b) As a minimum, the Contractor will be required to sand blast the concrete surface to remove all loose or weak concrete, dirt, debris and any contaminants that could act as a bond breaker. Sand blast to the confined area of the tile installation as shown on the Drawings.
- (c) Sandblasting can only proceed 48 hours in advance of tile and the cleaned surface must be protected against contamination by sealing the area with tarps that extend to just under the lower row of the tunnel lighting. Tarps shall not be placed directly against the concrete surface and must allow for air movement.
- (d) Contractor shall be required to protect the existing electrical conduits and luminaire's from concrete surface preparation as specified in E9.3.
- (e) Contractor shall protect the existing precast barriers from any damage that may happen during concrete surface cleaning and during Contractor's construction activities. Any damage to the existing precast barriers from installation shall be promptly repaired and/or replaced by the Contractor at his own expense to the satisfaction of the Contract Administrator.
- (f) The Contractor shall thoroughly sweep or vacuum to remove all loose material. The resulting surface must be deemed clean, sound and solid by the mortar manufacturers prior to proceeding with the tile installation.
- (g) The Contractor shall ensure that no sandblasting material or loose debris enter the low point catchbasins or sewer system in the bottom of the tunnel.

E8.6.2 Mortar

- (a) Install ARDEX AM 100 levelling mortar in accordance with the technical brochure and the mortar manufacturer's instructions.
- (b) Allow the ARDEX AM 100 levelling mortar to harden prior to installing porcelain tile using ARDEX X 77 in accordance with the technical brochure, the mortar manufacturer's instructions, and ANSI A 108.5.
- (c) Contractor shall protect the existing precast barriers from any debris that may happen during mortar application, grout application, and during Contractor's construction activities. Any debris from installation of mortar and grout shall be promptly cleaned by the Contractor at his own expense to the satisfaction of the Contract Administrator.

E8.6.3 Tile

- (a) Set out overall pattern of tile ensuring continuity with existing tile located at the north retaining walls in Stage 1 and ensure colour scheme is consistent with the design drawings.

- (b) Cut tiles as required to fit patterns.
- (c) Cut edges of tiles are not to be exposed on edges of tile areas.
- (d) Determine location of all water jet cut logos. Contract Administrator to approve location of logos prior to start of tile installation.
- (e) Ensure tiles are square and plumb.
- (f) Tile inside the tunnel structure shall be installed from the top of the precast concrete barriers to the underside of the bottom luminaires as detailed in the Drawings. Line of top of tiles located at the underside of the bottom luminaires are to run parallel to the roadway surface.
- (g) Tile located at the south retaining walls shall be installed from the top of the precast concrete barriers to the top of the retaining wall as detailed in the Drawings.
- (h) Grout lines shall be approximately 3 mm (1/8") wide, matching existing tile grout lines.
- (i) Back butter and set tiles firmly into mortar to ensure minimum 95% tile to mortar contact and flush surface across tiles.
- (j) Install movement joints to meet the most current Terrazzo, Tile and Marble Association of Canada (TTMAC) guide.
- (k) Contractor shall be responsible for determining the existing locations of horizontal and vertical concrete pour joints.
- (l) Joint widths shall match the concrete pour joint widths in the concrete substrate. Pour joint widths located between the colored tiles are strictly prohibited.
- (m) Protect Tile Work with Schluter-SCHIENE Edger in Stainless Steel along both edges of wall concrete pour joints and tile expansion joints. As detailed on the drawings, Stainless Steel Edger is also required at the top and bottom horizontal tile edge throughout the tunnel structure. Stainless Steel Edger is required at the bottom horizontal tile edge throughout the south retaining walls.

E8.6.4 Logos

- (a) Water jet cut logos to be cut off-site at an approved facility. Logo design will be provided in CAD format by the Contract Administrator. Completed logo to be inspected at the cutting facility prior to transport to Site and prior to fabrication of remaining logos. Notify the Contract Administrator five (5) Business Days prior to the first logo is complete and ready for inspection.
- (b) Transport logos to Site as a unit.

E8.6.5 Grout

- (a) Grout tiles as per grout manufacturer's specifications.
- (b) Grouting can proceed once the tiles have set.
- (c) Grout lines on the top of the retaining wall must be worked to slope down to the sides so that there will be no standing water on horizontal surfaces.

E8.7 Measurement and Payment

E8.7.1 Supply of Tile and Associated Materials

- (a) The supply of tile and associated materials will not be measured. This Item of Work will be paid for in the Contract Lump Sum Price for "Supply of Tile and Associated Materials", performed in accordance with this Specification and accepted by the Contract Administrator.

E8.7.2 Installation of Tile and Associated Materials

- (a) The installation of tile and associated materials will not be measured. This Item of Work will be paid for in the Contract Lump Sum Price for "Installation of Tile and Associated Materials", performed in accordance with this Specification and accepted by the Contract Administrator.

E8.7.3 Supply and Installation of Levelling Mortar

- (a) The supply and installation of ARDEX AM 100 Levelling Mortar will be measured in square meters in accordance with the Plans, Specification, and as computed from measurements made by the Contract Administrator.
- (b) The Contract Unit Price for "Supply and Installation of Levelling Mortar" will be payment in full for supplying, installation, and for all Work necessary for performing all operations herein described and all other items incidental to the Work included in this Specification.

E8.7.4 Supply and Delivery of Additional 2% Tile

- (a) The supply and delivery of additional 2% tile will not be measured. This Item of Work will be paid for in the Contract Lump Sum Price for "Supply and Delivery of Additional 2% Tile", performed in accordance with this Specification and accepted by the Contract Administrator.

E9. ELECTRICAL

E9.1 Description

- E9.1.1** Contractor shall coordinate all electrical operations herein with McCaine Member of the Canem Group as this item of Work is currently under warrantee. Contact Ron Nault at (204) 487-5939.

E9.2 General

- (a) The City of Winnipeg shall be supplying the Contractor McCaine's services for the removal and re-installation of the existing conduits and luminaire at Stage 2 retaining wall as per the original design condition as shown on the drawings and as installed on Site.
- (b) The Contractor shall give the Contract Administrator ten (10) Business Days notice prior to the required removal of the existing conduits and luminaire.
- (c) The Contractor shall give the Contract Administrator ten (10) Business Days notice prior to the required re-installation of the existing conduits and luminaire.

E9.3 Contractors Construction Methods

- (a) Contractor shall not cover any conduit or luminaires unless approved in writing by the Contract Administrator.
- (b) Contractor shall protect conduits and luminaires from any damage that may happen during concrete surface cleaning and during Contractor's construction activities. Any damage to the existing conduits and/or luminaires shall be promptly repaired and/or replaced by McCaine (on behalf of the Contractor) at the Contractors own expense to the satisfaction of the Contract Administrator.
- (c) The Contractor shall employ McCaine, if required, to re-program the lighting for any reason including but not limited to temporary scaffolding placement, revised traffic patterns, light protection during concrete surface cleaning, and as directed by the Contract Administrator. The Contractor shall cover the costs for such operations.

E9.4 Measurement and Payment

E9.4.1 Lighting Removal and Installation Associated Works

- (a) Lighting Removal and Installation will not be measured. This Item of Work will be paid for in the Contract Lump Sum Price for "Lighting Removal and Installation Associated Works", performed in accordance with this Specification and accepted by the Contract Administrator.