



**THE CITY OF WINNIPEG**

# **BID OPPORTUNITY**

**BID OPPORTUNITY NO. 562-2007**

**FORT GARRY BRIDGE REHABILITATION  
BISHOP GRANDIN DETOUR CONSTRUCTION  
STAGES 1 & 2**

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## **PART B - BIDDING PROCEDURES**

### **B1. CONTRACT TITLE**

- B1.1 Fort Garry Bridge Rehabilitation  
Bishop Grandin Detour Construction  
Stages 1 & 2

### **B2. SUBMISSION DEADLINE**

- B2.1 The Submission Deadline is 12:00 noon Winnipeg time, August 21, 2007.
- B2.2 Bids determined by the Manager of Materials to have been received later than the Submission Deadline will not be accepted and will be returned upon request.
- B2.3 The Contract Administrator or the Manager of Materials may extend the Submission Deadline by issuing an addendum at any time prior to the time and date specified in B2.1.

### **B3. 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. 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 Branch internet site at <http://www.winnipeg.ca/matmgt>.
- B5.2.2 The Bidder is responsible for ensuring that he has received all addenda and is advised to check the Materials Management Branch internet 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 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 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 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.

## **B7. BID COMPONENTS**

B7.1 The Bid shall consist of the following components:

- (a) Form A: Bid;
- (b) Form B: Prices, hard copy;
- (c) Form G1: Bid Bond and Agreement to Bond, or  
Form G2: Irrevocable Standby Letter of Credit and Undertaking, or  
a certified cheque or draft;

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.

B7.4.2 A hard copy of Form B: Prices must be submitted with the Bid. If there is any discrepancy between the Adobe PDF version of Form B: Prices and the Microsoft Excel version of Form B: Prices, the PDF version shall take precedence.

B7.5 Bidders are advised not to include any information/literature except as requested in accordance with B7.1.

B7.6 Bidders are advised that inclusion of terms and conditions inconsistent with the Bid Opportunity document, including the General Conditions, may result in the Bid being determined to be non-responsive.

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

- 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 own name, it shall be signed by the Bidder;
  - (b) if the Bidder is a partnership, it shall be signed by the partner or partners who have authority to sign for the partnership;
  - (c) if the Bidder is a corporation, it shall be signed by its duly authorized officer or officers and the corporate seal, if the corporation has one, shall be affixed;
  - (d) if the Bidder is carrying on business under a name other than his 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 shall be printed below such signatures.
- B8.4.2 All signatures should be witnessed, except where a corporate seal has been affixed.
- B8.5 If a Bid is submitted jointly by two or more persons, the word "Bidder" shall mean each and all such persons, and the undertakings, covenants and obligations of such joint Bidders in the Bid and the Contract, when awarded, shall be both joint and several.

## **B9. PRICES**

- B9.1 The Bidder shall state a price in Canadian funds for each item of the Work identified on Form B: Prices.
- B9.1.1 For the convenience of Bidders, and pursuant to B7.4.2 and an electronic spreadsheet Form B: Prices in Microsoft Excel (.xls) format is available along with the Adobe PDF documents for this Bid Opportunity on the Bid Opportunities page at the Materials Management Branch internet website at <http://www.winnipeg.ca/matmgt>.
- B9.2 The quantities listed on Form B: Prices are to be considered approximate only. The City will use said quantities for the purpose of comparing Bids.
- B9.3 The quantities for which payment will be made to the Contractor are to be determined by the Work actually performed and completed by the Contractor, to be measured as specified in the applicable Specifications.

## **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 Branch internet site at <http://www.winnipeg.ca/matmgt>.

- 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 three (3) Business Days of a request by the Contract Administrator, provide proof satisfactory to the Contract Administrator that the Bidder/Subcontractor has a workplace safety and health program meeting the requirements of The Workplace Safety and Health Act (Manitoba), by providing:
- (a) a valid COR certification number under the Certificate of Recognition (COR) Program administered by the Manitoba Construction Safety Association or by the Manitoba Heavy Construction Association's Safety, Health and Environment Program; or
  - (b) a report or letter to that effect from an independent reviewer acceptable to the City. (A list of acceptable reviewers and the review template are available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Branch internet site at <http://www.winnipeg.ca/matmgt>.)
- 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, and shall be witnessed or sealed as required.
- 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 Branch, 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 Branch internet site at <http://www.winnipeg.ca/matmgt>.
- 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 Branch internet site at <http://www.winnipeg.ca/matmgt>.
- 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 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 Bid after the Submission Deadline but before his 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 (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 Bid or in other information required to be submitted, that he 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 adjusted, if necessary, as follows:
- (a) if the lowest evaluated responsive Bid submitted by a responsible and qualified Bidder is within the budgetary provision for the Work, no adjustment will be made to the Total Bid Price; or
  - (b) if the lowest evaluated responsive Bid submitted by a responsible and qualified Bidder exceeds the budget for the Work, or if the operational considerations dictate the deletion of part of the Work, the Total Bid Prices of all responsive Bids submitted by responsible and qualified Bidders will be adjusted by deducting Part B – Michigan Left for detours.
- 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** The electronic Form B: Prices and the formulas imbedded in that spreadsheet are only provided for the convenience of Bidders. The City makes no representations or warranties as to the correctness of the imbedded formulas. It is the Bidder's responsibility to ensure the extensions of the unit prices and the sum of Total Bid Price performed as a function of the formulas within the electronic Form B: Prices are correct.

**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 Subject to B16.2, where an award of Contract is made by the City, the award shall be made to the responsible and qualified Bidder submitting the lowest evaluated responsive Bid.
- B16.3.1 Following the award of contract, a Bidder will be provided with information related to the evaluation of his Bid upon written request to the Contract Administrator.

## **PART C - GENERAL CONDITIONS**

### **C1. GENERAL CONDITIONS**

C1.1 The *General Conditions for Construction* (Revision 2006 12 15) are applicable to the Work of the Contract.

C1.1.1 The *General Conditions for Construction* are available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Branch internet site at <http://www.winnipeg.ca/matmgt>.

C1.2 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:

- (a) Construction of temporary asphalt pavement detour roads in median areas of Bishop Grandin Boulevard.
  - (i) Between Pembina Highway and the Fort Garry Bridge.
  - (ii) From River Road and approximately 800m to the east.

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

- (a) Construction of temporary asphalt pavement detour roads in the median areas of Bishop Grandin Boulevard.
  - (i) Relocate existing guardrail
  - (ii) Topsoil excavation
  - (iii) Common excavation
  - (iv) Granular subbase 50 mm (Limestone)
  - (v) Corrugated steel pipes
  - (vi) Planning of curb
  - (vii) Granular base course 50 mm (Limestone)
  - (viii) Granular base course 20mm (Limestone)
  - (ix) Asphalt pavement (Type 1)
  - (x) Placing pre-cast concrete barricade

D2.3 Stage 1 detours are to be available for the westbound bridge rehabilitation between April and October, 2008 and stage 2 detours are to be available for the eastbound bridge rehabilitation between April and October, 2009.

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

D3.1 The Contract Administrator is Wardrop Engineering Inc., represented by:

Joe Funk, P.Eng.  
GM Transportation  
400-386 Broadway Winnipeg, MB R3C 4M8  
Telephone No. (204) 956-0980  
Facsimile No. (204) 957-5389

D3.2 At the pre-construction meeting, Mr. Joe Funk will identify additional personnel representing the Contract Administrator and their respective roles and responsibilities for the Work.

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

- D4.1 At the pre-construction meeting, the Contractor shall identify his designated supervisor and any additional personnel representing the Contractor and their respective roles and responsibilities for the Work.
- D4.2 At least two (2) Business Days prior to the commencement of any Work on the site, the Contractor shall provide the Contract Administrator with a phone number where the supervisor identified in D4.1 or an alternate can be contacted 24 hours a day to respond to an emergency.

#### **D5. NOTICES**

- D5.1 Except as provided for in C23.2.2, all notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the Contractor shall be sent to the address or facsimile number identified by the Contractor in Paragraph 2 of Form A: Bid.
- D5.2 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the City, except as expressly otherwise required in D5.3, D5.4 or elsewhere in the Contract, shall be sent to the attention of the Contract Administrator at the address or facsimile number identified in D3.1.
- D5.3 All notices of appeal to the Chief Administrative Officer shall be sent to the following address or facsimile number:  
The City of Winnipeg  
Chief Administrative Officer Secretariat  
Attn: Chief Administrative Officer  
Administration Building, 3rd Floor  
510 Main Street  
Winnipeg MB R3B 1B9  
Facsimile No.: (204) 949-1174
- D5.4 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications required to be submitted or returned to the City Solicitor shall be sent to the following address or facsimile number:  
The City of Winnipeg  
Corporate Services Department  
Legal Services Division  
Attn: City Solicitor  
185 King Street, 3rd Floor  
Winnipeg MB R3B 1J1  
Facsimile No.: (204) 947-9155

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

- D6.1 Upon award of the Contract, the Contractor will be provided with five (5) complete sets of the Bid Opportunity. If the Contractor requires additional sets of the Bid Opportunity, they will be supplied to him at cost.

#### **SUBMISSIONS**

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

- D7.1 The Contractor shall be in good standing under The Corporations Act (Manitoba), or properly registered under The Business Names Registration Act (Manitoba), or otherwise properly registered, licensed or permitted by law to carry on business in Manitoba, or if the Contractor does not carry on business in Manitoba, in the jurisdiction where the Contractor does carry on

business, throughout the term of the Contract, and shall provide the Contract Administrator with evidence thereof upon request.

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

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

#### **D9. INSURANCE**

- D9.1 The Contractor shall provide and maintain the following insurance coverage:
- (a) commercial general liability insurance, in the amount of at least two million dollars (\$2,000,000.00) inclusive, with The City of Winnipeg added as an additional insured, with a cross-liability clause, such liability policy to also contain contractual liability, unlicensed motor vehicle liability, non-owned automobile liability, broad form property damage cover and products and completed operations, to remain in place at all times during the performance of the Work and throughout the warranty period;
  - (b) automobile liability insurance for owned automobiles used for or in connection with the Work in the amount of at least two million dollars (\$2,000,000.00) at all times during the performance of the Work and until the date of Total Performance;
  - (c) an all risks Installation Floater carrying adequate limits to cover all machinery, equipment, supplies and/or materials intended to enter into and form part of any installation.
- D9.2 Deductibles shall be borne by the Contractor.
- D9.3 The Contractor shall provide the City Solicitor with a certificate(s) of insurance, in a form satisfactory to the City Solicitor, at least two (2) Business Days prior to the commencement of any Work but in no event later than the date specified in the C4.1 for the return of the executed Contract.
- D9.4 The Contractor shall not cancel, materially alter, or cause each policy to lapse without providing at least fifteen (15) Calendar Days prior written notice to the Contract Administrator.

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

- D10.1 The Contractor shall provide and maintain performance security until the expiration of the warranty period in the form of:
- (a) a performance bond of a company registered to conduct the business of a surety in Manitoba, in the form attached to these Supplemental Conditions (Form H1: Performance Bond), in the amount of fifty percent (50%) of the Contract Price; or
  - (b) an irrevocable standby letter of credit issued by a bank or other financial institution registered to conduct business in Manitoba and drawn on a branch located in Winnipeg, in the form attached to these Supplemental Conditions (Form H2: Irrevocable Standby Letter of Credit), in the amount of fifty percent (50%) of the Contract Price; or
  - (c) a certified cheque or draft payable to "The City of Winnipeg", drawn on a bank or other financial institution registered to conduct business in Manitoba, in the amount of fifty percent (50%) of the Contract Price.
- D10.1.1 Where the performance security is in the form of a certified cheque or draft, it will be deposited by the City. The City will not pay any interest on certified cheques or drafts furnished as performance security.

D10.2 If the bid security provided in his Bid was not a certified cheque or draft pursuant to B11.1(c), the Contractor shall provide the City Solicitor with the required performance security within seven (7) Calendar Days of notification of the award of the Contract by way of letter of intent and prior to the commencement of any Work on the Site and in no event later than the date specified in the C4.1 for the return of the executed Contract.

#### **D11. 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 or prior to a pre-construction meeting, or at least two (2) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in the C4.1 for the return of the executed Contract.

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

D12.1 The Contractor shall provide the Contract Administrator with a complete list of the equipment which the Contractor proposes to utilize for detour road construction in close proximity of the Branch II Aqueduct and Fort Garry-St. Vital Feedermain (Form K: Equipment List) at or prior to a pre-construction meeting, or at least two (2) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in the C4.1 for the return of the executed Contract.

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

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

D13.2 The detailed work schedule shall consist of the following:  
(a) a Gantt chart for the Work acceptable to the Contract Administrator.

D13.3 Further to D13.2(a), the Gantt chart shall show the time on a weekly basis, required to carry out the Work of each trade, or specification division. The time shall be on the horizontal axis, and the type of trade shall be on the vertical axis.

### **SCHEDULE OF WORK**

#### **D14. COMMENCEMENT**

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

D14.2 The Contractor shall not commence any Work on the Site until:  
(a) the Contract Administrator has confirmed receipt and approval of:  
(i) evidence of authority to carry on business specified in D7;  
(ii) evidence of the workers compensation coverage specified in C6.15;  
(iii) the twenty-four (24) hour emergency response phone number specified in D4.2.  
(iv) the Safe Work Plan specified in D8;  
(v) evidence of the insurance specified in D9;  
(vi) the performance security specified in D10;  
(vii) the detailed work schedule specified in D13.  
(b) The Contractor has attended a pre-construction meeting with the Contract Administrator or the Contract Administrator has waived the requirement for a pre-construction meeting.



D14.3 The Contractor shall commence the Work on the Site within seven (7) Working Days of receipt of the letter of intent.

**D15. RESTRICTED WORK HOURS**

D15.1 Further to clause 3.10 of CW 1130, the Contractor shall require written permission Forty Eight (48) hours in advance from the Contract Administrator for any work to be performed between 2000 hours and 0700 hours, or on Saturdays, Sundays, Statutory Holidays and or Civic Holidays.

D15.2 The following work hour restrictions shall also apply:

- (a) The Contractor shall not close any lanes on Bishop Grandin Boulevard during peak hours (07:00 hrs to 09:00 hrs and 15:00 hrs to 17:00 hrs) and shall remove all temporary traffic control devices from these lanes accordingly. One (1) lane on Bishop Grandin may be closed during off peak hours when working within Four (4) metres of the edge of travelled lanes.

**D16. WORK BY OTHERS**

D16.1 Work by others on or near the Site will include but not necessarily be limited to:

- (a) Installation of temporary detour illumination facilities by Manitoba Hydro;
- (b) Installation of temporary and permanent traffic signal works by City of Winnipeg Traffic Signals Branch.
- (c) Signage and line painting by Traffic Services.

**D17. SEQUENCE OF WORK**

D17.1 Further to C6.1, the sequence of work shall be as follows:

D17.1.1 The Work shall be divided into 2 stages . Stages are further subdivided into major items of work.

D17.1.2 **Stage I** - Construction of Stage 1 Detours on both sides of the Red River including the "Michigan" left for 2008 Spring to Fall Operation

- (i) Relocate existing guardrail
- (ii) Topsoil excavation
- (iii) Common excavation
- (iv) Granular subbase 50 mm (Limestone)
- (v) Corrugated steel pipes
- (vi) Granular base course 50 mm (Limestone)
- (vii) Granular base course 20mm (Limestone)
- (viii) Asphalt pavement (Type 1)
- (ix) Placing pre-cast concrete barricades

**Stage II** – Construction of Stage 2 Detours on both sides of the Red River for 2009 Spring to Fall Operation.

The major items of work are the same as stage 1.

D17.1.3 Stage I is to be completed by October 12, 2007 as outlined in D18, Critical States. Stage II is to be completed by November 2, 2007 as outlined in D20, Total Performance.

**D18. CRITICAL STAGES**

D18.1 The Contractor shall achieve critical stages of the Work in accordance with the following requirements:

(a) Completion of Stage I related works before October 12, 2007.

D18.2 When the Contractor considers the Work associated with Stage I to be completed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Completion. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be re-inspected.

D18.3 The date on which the Stage I Work has been accepted by the Contract Administrator as being completed to the requirements of the Contract is the date on which completion of Stage I has been achieved.

**D19. SUBSTANTIAL PERFORMANCE**

D19.1 The Contractor shall achieve Substantial Performance by October 26, 2007.

D19.2 When the Contractor considers the Work to be substantially performed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Substantial Performance. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be re-inspected.

D19.3 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.

**D20. TOTAL PERFORMANCE**

D20.1 The Contractor shall achieve Total Performance by November 2, 2007.

D20.2 When the Contractor or the Contract Administrator considers the Work to be totally performed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Total Performance. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be re-inspected.

D20.3 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.

**D21. LIQUIDATED DAMAGES**

D21.1 If the Contractor fails to achieve Critical Stages or Total Performance in accordance with the Contract by the day fixed herein for Critical Stages or Total Performance, the Contractor shall pay the City the following amounts per calendar day for each and every calendar day following the day fixed herein for Critical Stages or Total Performance during which such failure continues:

(a) Critical Stage - Completion of Stage I Detours – One Thousand Dollars (\$1,000);

(b) Total Performance – One Thousand Dollars (\$1,000).

D21.2 The amount specified for liquidated damages in D21.1 is based on a genuine pre-estimate of the City's damages in the event that the Contractor does not achieve Critical Stages or Total Performance by the days fixed herein for same.

- D21.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

## **CONTROL OF WORK**

### **D22. JOB MEETINGS**

- D22.1 Regular weekly job meetings will be held at the Contract Administrators field office. 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.
- D22.2 The Contract Administrator reserves the right to cancel any job meeting or call additional job meetings whenever he deems it necessary.

### **D23. PRIME CONTRACTOR – THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA)**

- D23.1 Further to C6.24, the Contractor shall be the Prime Contractor and shall serve as, and have the duties of the Prime Contractor in accordance with The Workplace Safety and Health Act (Manitoba).

## **WARRANTY**

### **D24. WARRANTY**

- D24.1 Notwithstanding C13.2 the warranty period shall begin on the date of Total Performance and shall expire one (1) year thereafter for Stage 1 of the temporary asphalt pavement detours, and two (2) years thereafter for Stage 2 of the temporary asphalt pavement detours, unless extended pursuant to C13.2.1 or C13.2.2 in which case it shall expire when provided for there under.

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

KNOW ALL MEN BY THESE PRESENTS THAT

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

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

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

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

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

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

BID OPPORTUNITY NO. 562-2007

Fort Garry Bridge Rehabilitation  
Bishop Grandin Detour Construction  
Stages 1 & 2

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

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

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

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

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

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

\_\_\_\_\_  
(Witness)

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

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

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

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

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

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

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

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

**RE: PERFORMANCE SECURITY – BID OPPORTUNITY NO. 562-2007**

Fort Garry Bridge Rehabilitation  
Bishop Grandin Detour Construction  
Stages 1 & 2

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

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

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

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

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

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

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

Partial drawings are permitted.

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

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

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

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

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

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

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

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

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

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

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

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





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

Fort Garry Bridge Rehabilitation  
Bishop Grandin Detour Construction  
Stages 1 & 2

(FOR WORK IN CLOSE PROXIMITY TO THE AQUEDUCT OR FEEDERMAIN)

**1. Category/type:**

Make/Model/Year: \_\_\_\_\_ Serial No.: \_\_\_\_\_

Registered owner: \_\_\_\_\_

Equipment Specifications outlined in E7.4 \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Make/Model/Year: \_\_\_\_\_ Serial No.: \_\_\_\_\_

Registered owner: \_\_\_\_\_

Equipment Specifications outlined in E7.4 \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**2. Category/type:**

Make/Model/Year: \_\_\_\_\_ Serial No.: \_\_\_\_\_

Registered owner: \_\_\_\_\_

Equipment Specifications outlined in E7.4 \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Make/Model/Year: \_\_\_\_\_ Serial No.: \_\_\_\_\_

Registered owner: \_\_\_\_\_

Equipment Specifications outlined in E7.4 \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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

Fort Garry Bridge Rehabilitation  
Bishop Grandin Detour Construction  
Stages 1 & 2

(FOR WORK IN CLOSE PROXIMITY TO THE AQUEDUCT OR FEEDERMAIN)

**3. Category/type:**

Make/Model/Year: \_\_\_\_\_ Serial No.: \_\_\_\_\_

Registered owner: \_\_\_\_\_

Equipment Specifications outlined in E7.4 \_\_\_\_\_

\_\_\_\_\_

Make/Model/Year: \_\_\_\_\_ Serial No.: \_\_\_\_\_

Registered owner: \_\_\_\_\_

Equipment Specifications outlined in E7.4 \_\_\_\_\_

\_\_\_\_\_

**4. Category/type:**

Make/Model/Year: \_\_\_\_\_ Serial No.: \_\_\_\_\_

Registered owner: \_\_\_\_\_

Equipment Specifications outlined in E7.4 \_\_\_\_\_

\_\_\_\_\_

Make/Model/Year: \_\_\_\_\_ Serial No.: \_\_\_\_\_

Registered owner: \_\_\_\_\_

Equipment Specifications outlined in E7.4 \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## PART E - SPECIFICATIONS

### GENERAL

#### E1. APPLICABLE SPECIFICATIONS AND DRAWINGS

E1.1 These Specifications shall apply to the Work.

E1.2 *The City of Winnipeg Standard Construction Specifications* in its entirety, whether or not specifically listed on Form B: Prices, shall apply to the Work.

E1.2.1 *The City of Winnipeg Standard Construction Specifications* is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Branch internet site at <http://www.winnipeg.ca/matmgt>.

E1.2.2 The version in effect three (3) Business Days before the Submission Deadline shall apply.

E1.2.3 Further to C2.4(d), Specifications included in the Bid Opportunity shall govern over *The City of Winnipeg Standard Construction Specifications*.

E1.3 The following are applicable to the work:

<u>Drawing No.</u>	<u>Drawing Name/Title</u>	<u>Drawing (Original) Sheet Size</u>
	Cover Page	594 mm x 841 mm
C0001	Stage 1 (2008 proposed operation) proposed detour lanes over all plans showing traffic movements.	594 mm x 841 mm
C0002	Stage 2 (2009 proposed operation) proposed detour lanes overall plan showing traffic movements.	594 mm x 841 mm
C0003	Stage 1 detour for 2008 operation westbound exit lane to Pembina Highway.	594 mm x 841 mm
C0004	Stage 1 detour for 2008 operating westbound through lane to Waverley Street.	594 mm x 841 mm
C0005	Stage 1 detour for 2008 operations westbound east of Red River Road to 170 m east of River Road.	594 mm x 841 mm
C0006	Stage 1 detour for 2008 operations westbound 170 m east of River Road to 370 m east of River Road.	594 mm x 841 mm
C0007	Stage 2 detour for 2009 operations eastbound through lane from Waverley Street.	594 mm x 841 mm
C0008	Stage 2 detour for 2009 operations detour eastbound east of Red River.	594 mm x 841 mm
C0009	Stage 1 & 2 detours proposed detour lanes Michigan Left.	594 mm x 841 mm

#### E2. OFFICE FACILITIES

E2.1 The Contractor shall supply office facilities meeting the following requirements:

- (a) The field office shall be for the exclusive use of the Contract Administrator.
- (b) The building shall be conveniently located near the site of the Work.
- (c) The building shall have a minimum floor area of 20 square metres, with two windows for cross ventilation and a door entrance with a suitable lock.
- (d) The building shall be suitable for all weather use. It shall be equipped with an electric heater and air conditioner so that the room temperature can be maintained between either 16-18°C or 24-25°C.

- (e) The building shall be adequately lighted with fluorescent fixtures and have a minimum of three wall outlets.
- (f) The building shall be furnished with one desk, one drafting table, table 3m x 1.2m, one stool, one four drawer legal size filing cabinet, and a minimum of 12 chairs.
- (g) A portable toilet shall be located near the field office building. The toilet shall have a locking door and be for the exclusive use of the Contract Administrator and other personnel from the City.
- (h) The field office building and the portable toilet shall be cleaned on a weekly basis immediately prior to each site meeting. The Contract Administrator may request additional cleaning when he deems it necessary.

E2.2 The Contractor shall be responsible for all installation and removal costs, all operating costs, and the general maintenance of the office facilities.

E2.3 The office facilities will be provided from the date of the commencement of the Work to the date of Substantial Performance..

E2.4 On a one time basis, where directed by the Contract Administrator, the Contractor shall relocate the office facilities to a location more convenient for the remaining Work.

### **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:

- (a) The Contractor shall not stockpile materials and soil or park vehicles and equipment on boulevards within 2 metres of trees.
- (b) Trees identified to be at risk by the Contract Administrator are to be strapped with 25 x 100 x 2400mm wood planks, or suitably protected as approved by the Contract Administrator.
- (c) Excavation shall be performed in a manner that minimizes damage to the existing root systems. Where possible, excavation shall be carried out such that the edge of the excavation shall be a minimum of 1.5 times the diameter (measured in inches), with the outcome read in feet, from the closest edge of the trunk. Where roots must be cut to facilitate excavation, they shall be pruned neatly at the face of excavation.
- (d) Operation of equipment within the dripline of the trees shall be kept to the minimum required to perform the work required. Equipment shall not be parked, repaired, refuelled; construction materials shall not be stored, and earth materials shall not be stockpiled within the driplines of trees. The dripline of a tree shall be considered to be the ground surface directly beneath the tips of its outermost branches. The Contractor shall ensure that the operations do not cause flooding or sediment deposition on areas where trees are located.
- (e) Work on-site shall be carried out in such a manner so as to minimize damage to existing tree branches. Where damage to branches does occur, they shall be neatly pruned.

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 designate.

E3.3 No separate measurement or payment will be made for the protection of trees.

### **E4. TRAFFIC CONTROL**

E4.1 Further to clauses 3.6 and 3.7 of CW 1130-R1:

- (a) Where directed, the Contractor shall construct and maintain temporary asphalt ramps to alleviate vertical pavement obstructions such as manholes and planning drop-offs to the satisfaction of the Contract Administrator. No measurement for payment will be made for this work.

- (b) In accordance with the Manual of Temporary Traffic Control, the Contractor ("Agency" in the manual) shall make arrangements with the Traffic Services Section of the City of Winnipeg to place all temporary regulatory signs. The Contractor shall bear all costs associated with the placement of temporary traffic control devices by the Traffic Services Section of the City of Winnipeg in connection with the works undertaken by the Contractor.

## **E5. TRAFFIC MANAGEMENT**

E5.1 Further to clause 3.7 of CW 1130-R1:

- E5.1.1 The Contractor may close the median traffic lane when working in the median adjacent to these lanes. These closures must be removed during peak hours, 0700 hrs to 0900 hrs and 1500 hrs to 1700 hrs.
- E5.1.2 Intersecting street and private approach access shall be maintained at all times.
- E5.1.3 Pedestrian and ambulance/emergency vehicle access must be maintained at all times.
- E5.1.4 A Flag Person must be available to control traffic when construction equipment / materials are arriving and leaving the site.

## **E6. WATER USED BY CONTRACTOR**

E6.1 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.

## **E7. OPERATING CONSTRAINTS FOR WORK IN CLOSE PROXIMITY TO THE BRANCH II AQUEDUCT AND FORT GARRY-ST. VITAL FEEDERMAIN**

E7.1 Description

- E7.1.1 This Section details operating constraints for all work to be carried out in close proximity to the Branch II Aqueduct and Fort Garry-St. Vital Feedermain. Close proximity shall be deemed to be any construction activity within a 5 m offset from the centreline of the feedermain or Aqueduct.
- E7.2 General Considerations for Work in Close Proximity to the Branch II Aqueduct and Fort Garry-St. Vital Feedermain
- E7.2.1 The Branch II Aqueduct and Fort Garry-St. Vital Feedermain are critical components of the City of Winnipeg Regional Water Supply System and work in close proximity to either pipeline shall be undertaken with an abundance of caution. The pipes cannot be taken out of service to facilitate construction and inadvertent damage caused to either pipe would likely have catastrophic consequences.
- E7.2.2 Work around the Aqueduct and Feedermain shall be planned and implemented to minimize the time period that work is carried out in close proximity to them and to ensure that the pipelines are not subjected to excessive construction related loads, including excessive vibrations and/or concentrated or asymmetrical lateral loads during backfill placement.
- E7.2.3 The Branch II Aqueduct and Fort Garry-St. Vital Feedermain are constructed of Prestressed Concrete Cylinder Pipe conforming to AWWA Standard C301. The Branch II Aqueduct east of the Red River was manufactured and constructed in 1959. The Branch II Aqueduct and Fort Garry-St. Vital Feedermain west of the Red River were generally manufactured and installed in 1988.
- E7.2.4 AWWA C301 pipe has limited ability to withstand increased earth and live loading. Therefore, every precaution must be undertaken to ensure that applied loading during all phases of construction is within accepted loading parameters.

E7.2.5 Loading limitations and calculated loads associated with typical construction equipment is attached to this specification as Appendix A. The loading calculations shall be interpreted with caution, however, as many factors can cause applied loads to increase considerably, such as unbalanced loading, variations in wheel base or track width, payload, impact factors due to excessive speed or vibration, etc.

### E7.3 Submittals

E7.3.1 Submit Form K: Equipment List at or prior to a pre-construction meeting, or at least two (2) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in the C4.1 for the return of the executed Contract.

E7.3.2 Submittal shall include;

- (a) Equipment operating weight and dimensions including wheel or track base, track length or axle spacings, track widths or wheel configurations
- (b) Payload weights
- (c) Load distributions in the intended operating configuration

E7.3.3 Submit a Construction Method Statement with proposed construction plan including material haul route locations crossing the aqueduct/feedermain, excavation equipment locations, loading positioning and base construction sequencing to the Contract Administrator for review seven (7) days prior to construction. Do not commence construction until the Construction Method Statement has been reviewed and accepted by the Contract Administrator.

### E7.4 Protection of the Branch II Aqueduct and Fort Garry-St. Vital Feedermain During Construction

E7.4.1 The Drawings detail 11 locations with 14 feedermain/Aqueduct crossings. Pipe locations are noted on the Drawings based on the original record drawings.

E7.4.2 The Contractor shall determine pipeline location and obvert elevation at each crossing location by soft excavation methods (hydrovac or hand digging) prior to construction. Soft excavation will be paid for on an hourly basis.

E7.4.3 Contractors carrying out repair work or working in close proximity to the Aqueduct or feedermain shall meet the following conditions and technical requirements:

#### (a) Pre-work, Planning and General Execution

- (i) No work shall commence at the site until the Construction Method Statement has been accepted and the Aqueduct and feedermain locations has been clearly delineated in the field.
- (ii) Work shall only be carried out with equipment that has been reviewed and quantified in terms of its loading implications by the Contract Administrator.
- (iii) For transverse crossings of the Aqueduct and/or feedermain in support of pavement construction activities, designate crossing locations and confine equipment crossing the pipe(s) to these locations. Reduce equipment speeds to levels that minimize the impacts of impact loading.
- (iv) For construction work activities either longitudinally or transverse to the alignment of the feedermain work only with equipment and in the manner stipulated in the accepted Construction Method Statement and the supplemental requirements noted herein.
- (v) Subgrade, subbase and base construction shall be kept in a rut free condition at all times. Construction equipment is prohibited from crossing pipelines if the grade is insufficient to support the equipment without rutting.
- (vi) Granular material, construction material, soil or other material shall not stockpiled on the pipelines or within 5 metres of the pipe centerline.
- (vii) Stage construction such that the Aqueduct and/or feedermain are not subjected to significant asymmetrical loading at any time.

(viii) Where work is in proximity to the Aqueduct and/or feedermain, utilize construction practices and procedures that do not impart excessive vibration loads on the Aqueduct and/or feedermain or that would cause settlement of the subgrade below the Aqueduct and/or feedermain.

(b) Excavation

(i) Where there is less than 2.5 m of cover over the Aqueduct and/or feedermain, offset backhoe from Aqueduct and/or feedermain, a minimum of 2.5 m from Aqueduct/feedermain centerline, to carry out excavation.

(ii) Where there is less than 1.5 metres of earth cover over the Aqueduct and/or feedermain and further excavation is required either adjacent to or over the aqueduct/feedermain, utilize only smooth edged excavation buckets, soft excavation or hand excavation techniques and continue offset excavation.

(iii) Excavated materials intended for reuse shall not be dumped directly on pipelines but shall be carefully bladed in place.

(c) Subgrade Construction

(i) Subgrade compaction shall be limited to static compaction methods and only with equipment that are well within the rated loading superimposed loading capacity of the Aqueduct and/or feedermain.

(ii) Stage work activities to minimize the time period that unprotected subgrade is exposed to the environment and protect the subgrade against the impacts of adverse weather if subbase/ base course construction activities are not sequential with excavation.

(d) Subbase and Base Course Construction

(i) Place a 5.0m length of Reinforcement/Separation Geotextile Fabric the width of the pavement subgrade in accordance with CW 3130-R1.

(ii) Subbase or base course materials shall not be dumped directly on pipelines but shall be carefully bladed in-place.

(iii) Subbase compaction shall be either carried out by static methods without vibration or with smaller approved equipment such as hand held plate packers or smaller roller equipment.

E7.4.4 The Contractor shall ensure that all work crew members understand and observe the requirements of this specification. Prior to commencement of on-site work, the Contractor shall jointly conduct an orientation meeting with the Contractor Administrator with all superintendents, foremen and heavy equipment operators to make all workers on site are fully cognizant of the limitations of altered loading on the Aqueduct and feedermain, the ramifications of inadvertent damage to the pipelines, the constraints associated with work in close proximity to the Aqueduct and the feedermain and the specific details of the Construction Method Statement in instances where a Construction Method Statement is in effect.

E7.4.5 Employees of the Contractor or any Subcontractor that fail to comply with the conditions for working in close proximity to the Aqueduct and/or feedermain shall be promptly removed from the Site.

## **E8. INSTALLATION OF PRE-CAST CONCRETE TRAFFIC BARRIERS**

### **E8.1 Description**

E8.1.1 This specification covers the hauling and installation of pre-cast concrete barriers.

### **E8.2 Materials**

E8.2.1 The pre-cast concrete traffic barriers will be supplied by the City and will be available for pick up at the City Bridge Yard, Building H, 849 Ravelstone.

### E8.3 Construction Methods

E8.3.1 Installation of pre-cast concrete portable traffic barriers

(a) Construction Method

- (i) The contractor shall install pre-cast concrete traffic barriers supplied by the City. The contractor will be responsible for loading, transporting and unloading the traffic barriers. The locations and positioning of the barriers will generally be along the completed detours where they meet existing travelled roadways. The Contract Administrator will provide further information on the positioning of the barriers at the pre-construction meeting.

### E8.4 Measurement and Pavement

E8.4.1 Install pre-cast concrete traffic barriers

- (a) Installation of pre-cast concrete traffic barriers will be measured on a unit bases and paid for at the contract unit price per each unit for "installation of pre-cast concrete traffic barriers". The units to be paid for will be the total number of pre-cast concrete traffic barriers installed in accordance with this specification, accepted, and measured by the Contract Administrator.

## E9. TOPSOIL AND COMMON EXCAVATION STOCKPILING

E9.1 Topsoil and surplus common excavation shall be stockpiled and trimmed within the project limits for site restoration by the Bridge Contract in 2009. Stockpiling locations are to be approved by the Contract Administrator prior to use.

## E10. MILLING INTEGRAL CURB

E10.1 Further to section 3.1 - Concrete Curb Removal in CW 3240-R6 Renewal of Existing Curbs, where curb is to be removed for detour construction and where identified as Integral Curb and Gutter the curb is to be removed by milling.

## E11. SUPPLY GOOD USED CORRUGATED STEEL PIPE

E11.1 Further to section 5.3 - Pipe Culverts, Fittings, and Accessories in CW 3610-R3 Installation of Culverts, good used materials may be used where culverts are required. The materials are to be in good condition acceptable to the Contract Administrator. Good used materials may not be installed until reviewed and approved for use by the Contract Administrator.

## E12. ASPHALT PAVEMENT MAINTENANCE REPAIRS

E12.1 Description

E12.1.1 This specification covers maintenance repairs on the asphalt pavement for the detour roads during operations for the duration of the Warranty period.

E12.2 Materials

E12.2.1 Asphalt Pavement materials in accordance with CW 3410-R7.

E12.3 Construction Methods

E12.3.1 Repair asphalt pavement surfaces.

- (a) Repair asphalt pavement surfaces that have deteriorated/broken away from the pavement where identified by the Contract Administrator.
- (b) Saw cut and remove area marked out for repair.



- (c) Level base course and compact in accordance with CW 3110-R10. If required place base course material to meet the required grades. Contract Administrator to review surface for approval prior to proceeding with the repair.
- (d) Place prime coat on the base coarse and tack coat on the saw cut vertical face of the asphalt pavement area being repaired in accordance with CW 3410-R7.
- (e) Place asphalt Type 1A in repair area in accordance with CW 3410-R7.
- (f) Contract Administrator to review and approve Asphalt pavement repairs prior to opening to traffic.

#### E12.4 Measurement and Pavement

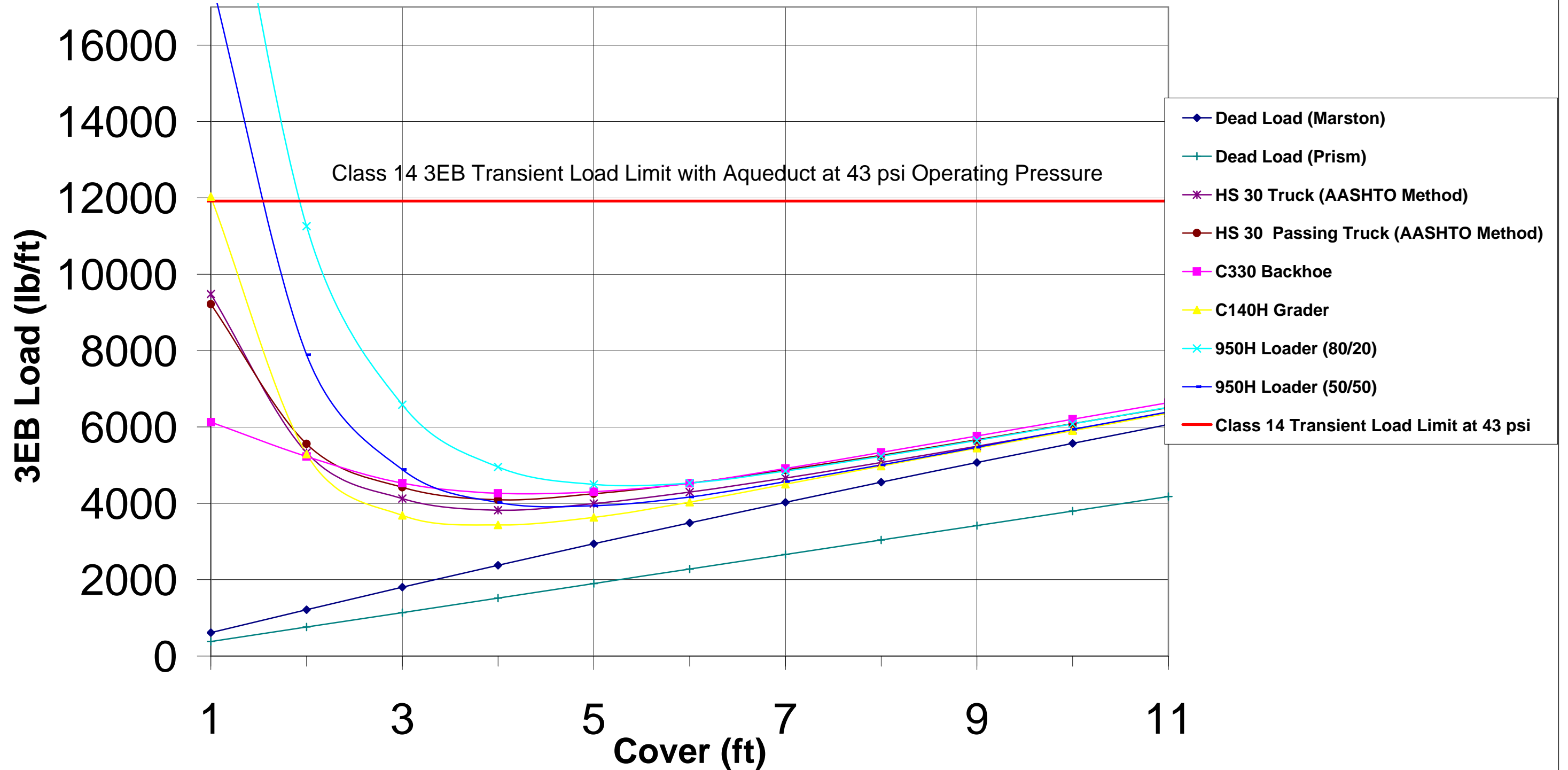
##### E12.4.1 Asphalt Pavement Maintenance Repairs

- (a) Asphalt Pavement Maintenance Repairs will be measured on a area bases and paid for at the contract unit price per square metre for "Asphalt Pavement Maintenance Repairs". The area to be paid for will be the total number of square metres of Asphalt Pavement Maintenance Repairs constructed in accordance with this specification, accepted, and measured by the Contract Administrator.

## **APPENDIX A**

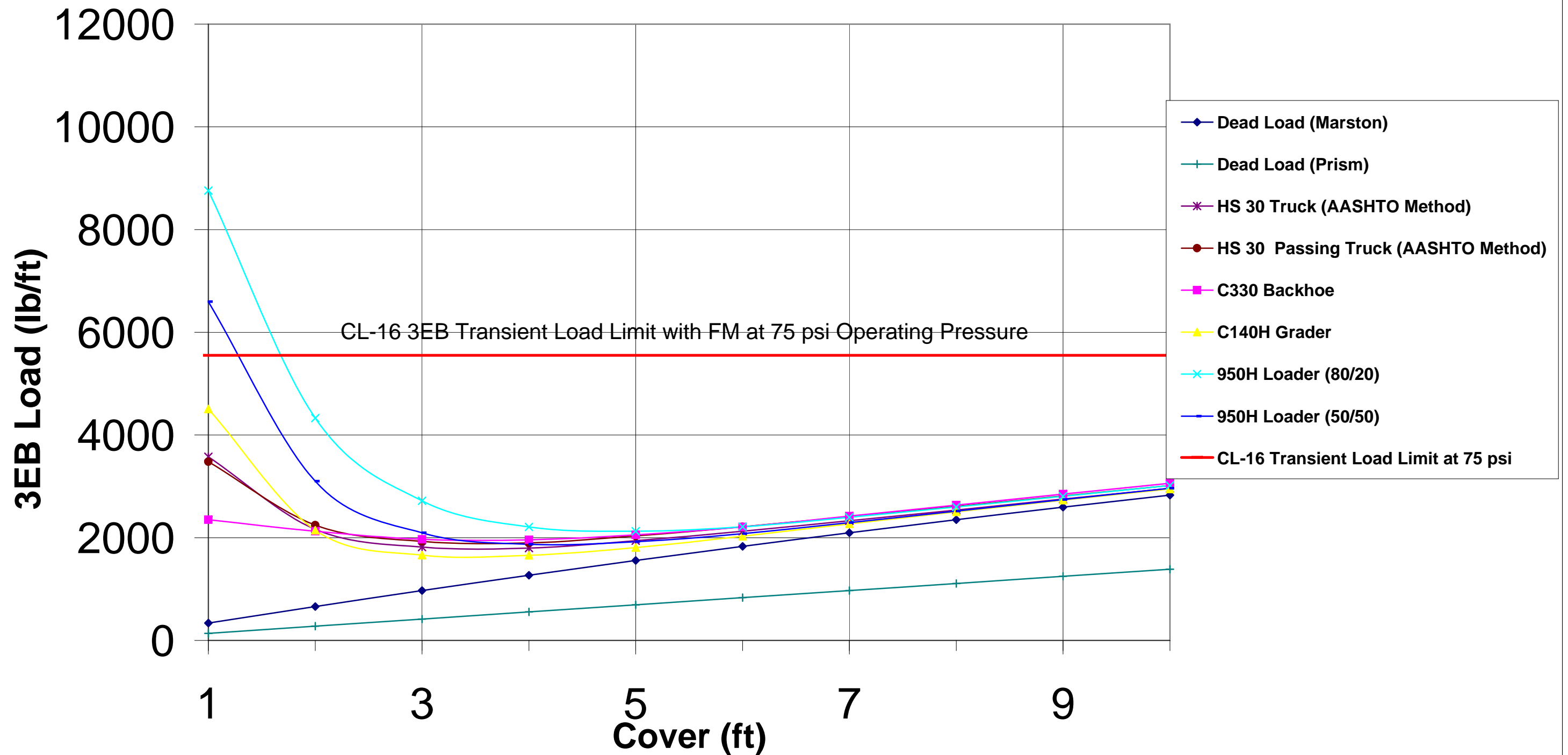
Branch II Aqueduct and Ft. Garry - St. Vital Feedermain  
Loading Limitations and Calculated Loads Associated with  
Typical Construction Equipment for Construction  
Crossings Identified on This Project

## 66" (1650mm) Class 14 Aqueduct Crossing 1 3EB Load vs Cover with Live Loading

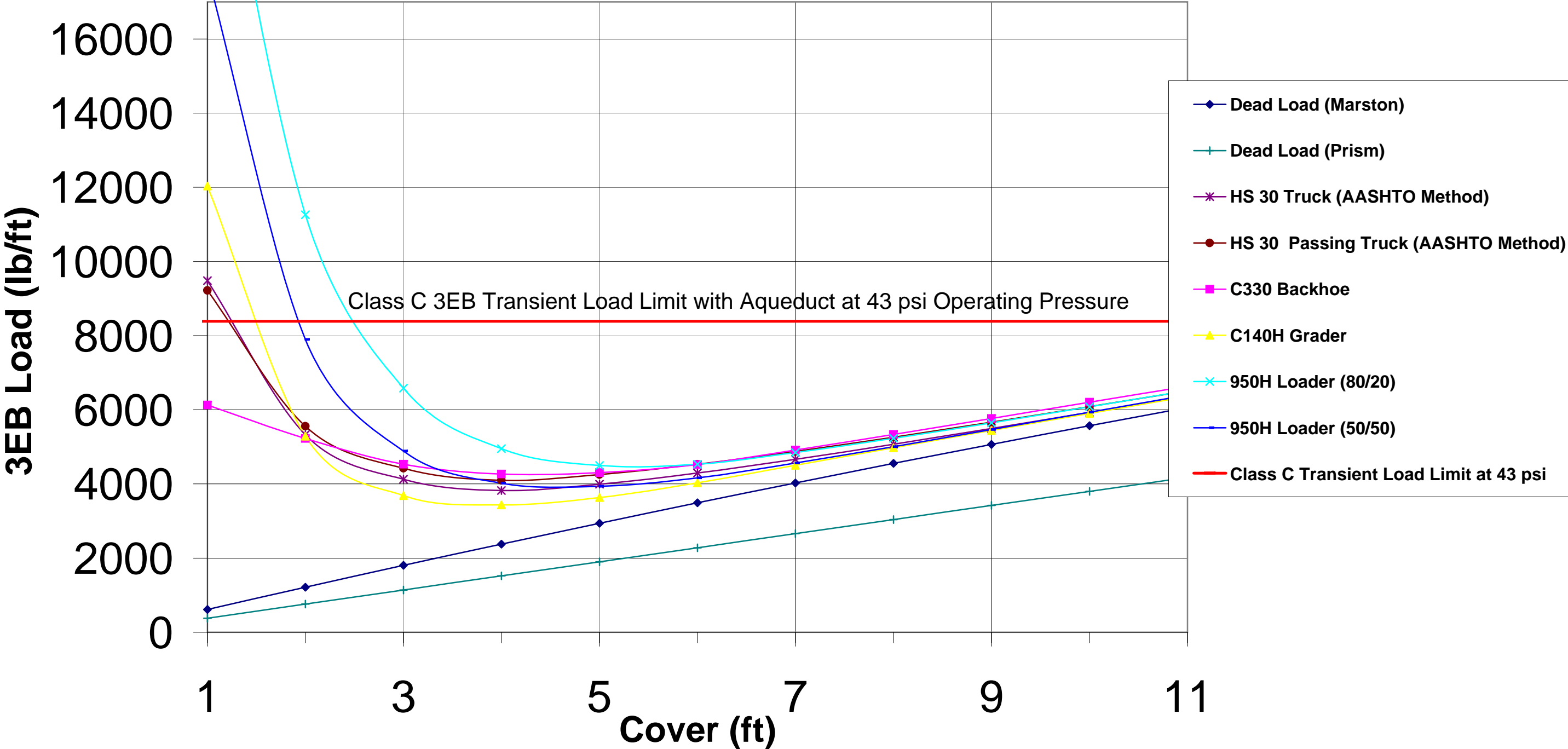


## 24" (600mm) CL-16 FM Crossing 2, 5, 7a/b

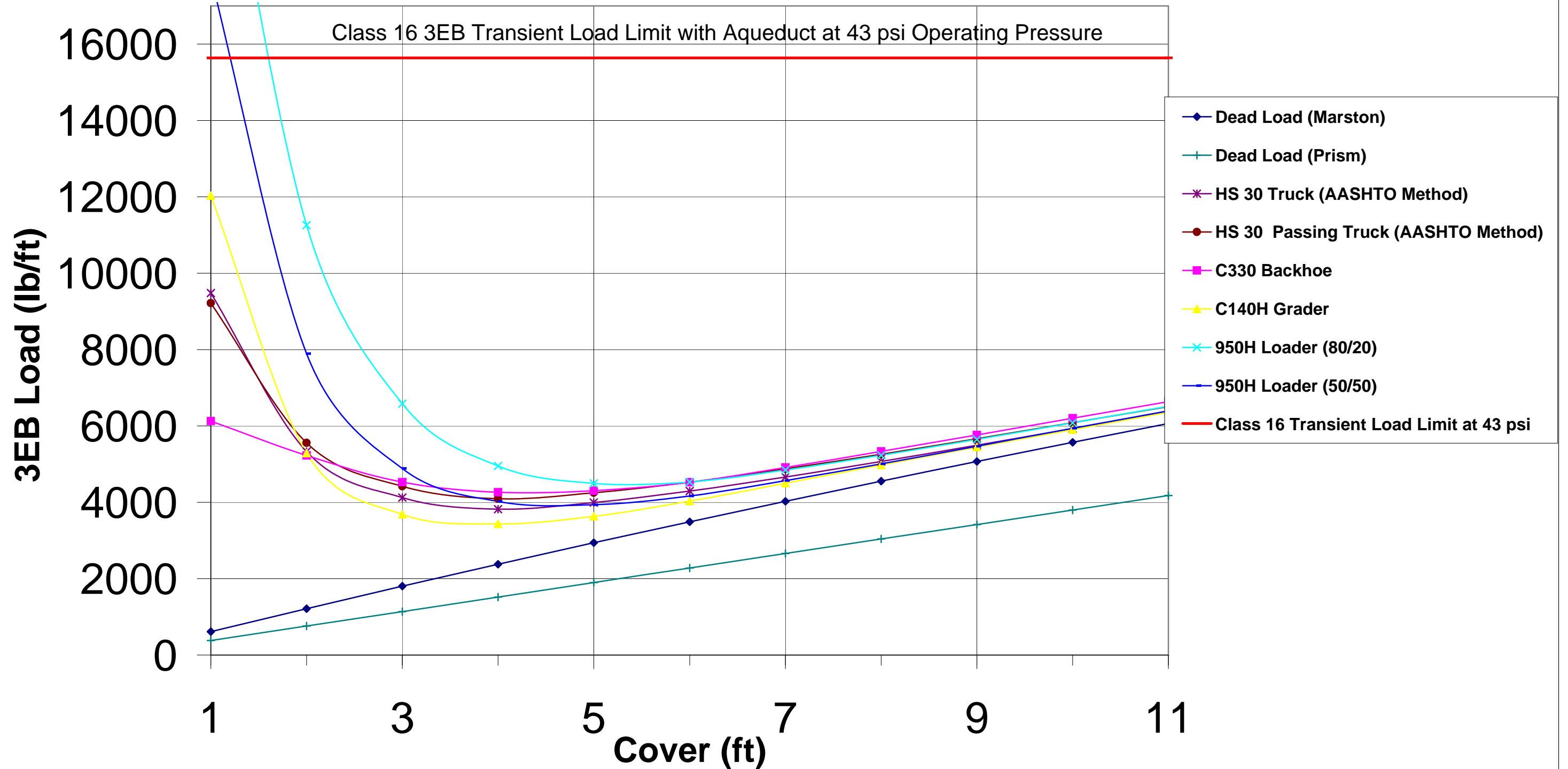
### 3EB Load vs Cover with Live Loading



### 66" (1650mm) Class C Aqueduct Crossing 3, 9a/b 3EB Load vs Cover with Live Loading



## 66" (1650mm) Class 16 Aqueduct Crossing 4a/b 3EB Load vs Cover with Live Loading





## 66" (1650mm) Class B Aqueduct Crossing 10, 11 3EB Load vs Cover with Live Loading

