



THE CITY OF WINNIPEG

BID OPPORTUNITY

BID OPPORTUNITY NO. 91-2010

**ARLINGTON STREET OVERPASS (CPR YARDS) – 2010 STRUCTURAL STEEL
REPAIRS**

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CPR Minimum Safety Requirements for Contractors Working on Railway Property, dated April 2007
(19 pages)

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Railway Flagging Signoff Form (1 page)

PART B - BIDDING PROCEDURES

B1. CONTRACT TITLE

B1.1 ARLINGTON STREET OVERPASS (CPR YARDS) – 2010 STRUCTURAL STEEL REPAIRS

B2. SUBMISSION DEADLINE

B2.1 The Submission Deadline is 12:00 noon Winnipeg time, April 9, 2010.

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 make an appointment to view the Site by contacting the Contract Administrator.

B3.2 The Bidder is advised that some portions of the work are on Canadian Pacific Railway (CPR) property. Prior permissions which will be obtained by the Contract Administrator are required prior to entry onto CPR property.

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 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 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.
- 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 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, should be affixed;
- (d) if the Bidder is carrying on business under a name other than his own, it shall be signed by the registered owner of the business name, or by the registered owner's authorized officials if the owner is a partnership or a corporation.

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 Prices from Non-Resident Bidders are subject to a 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.

B12.2 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 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, 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 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.
- 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 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 consists of structural steel repairs to the spans of the Arlington Street Overpass.

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

- (a) Type 1 Repair - Floor Beam Bottom Flange, which includes the provision of temporary shoring to the framing on each side of the floor beams to enable the repairs to be completed while the bridge is still open, removal of rivets and existing severely corroded bottom flange angles, installation of new rolled structural steel bottom flange angles, surface preparation and coating, and removal of the temporary shoring;
- (b) Type 2 Repair - Girder Bottom Flange, similar to the above Type 1 Repair - Floor Beam Bottom Flange;
- (c) Type 3 Repair - Diaphragm Beam Replacement, which includes temporary shoring, removal of rivets and existing severely corroded structural steel members, installation of new members, surface preparation and coating, and removal of temporary shoring;
- (d) Type 4 Repair - Deck Channel Replacement, which includes installation of new steel deck support channels that span between steel stringers; and
- (e) Type 5 Repair – Removal of Existing Platform Framing, which includes removal and disposal of miscellaneous severely corroded framing members.

D3. CONTRACT ADMINISTRATOR

D3.1 The Contract Administrator is:

Darren Burmey, P.Eng.
Bridge Maintenance Engineer
106-1155 Pacific Avenue
Winnipeg, Manitoba, R3E 3P1
Telephone No. (204) 986-5409
Facsimile No. (204) 986-5302

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

D4. CONTRACTOR'S SUPERVISOR

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

D5. NOTICES

D5.1 Except as provided for in C23.2.2, all notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the Contractor

shall be sent to the address or facsimile number identified by the Contractor in Paragraph 2 of Form A: Bid.

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

D5.3 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 address or facsimile number:

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

D6. FURNISHING OF DOCUMENTS

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

SUBMISSIONS

D7. AUTHORITY TO CARRY ON BUSINESS

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

D8. SAFE WORK PLAN

D8.1 The Contractor shall provide the Contract Administrator with a Safe Work Plan at least five (5) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract.

D8.2 The Safe Work Plan should be prepared and submitted in the format shown in the City's template which is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/Safety/default.stm>

D9. INSURANCE

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

- (a) commercial general liability insurance, in the amount of at least two million dollars (\$2,000,000.00) inclusive, with The City of Winnipeg added as an additional insured, with a cross-liability clause, such liability policy to also contain contractual liability, unlicensed motor vehicle liability, non-owned automobile liability and products and completed operations, to remain in place at all times during the performance of the Work and throughout the warranty period;
- (b) automobile liability insurance for owned automobiles used for or in connection with the Work in the amount of at least two million dollars (\$2,000,000.00) at all times during the performance of the Work and until the date of Total Performance;
- (c) all risks course of construction insurance in the amount of one hundred percent (100%) of the total Contract Price, written in the name of the Contractor and The City of Winnipeg, at all times during the performance of the Work and until the date of Total Performance.

D9.2 Deductibles shall be borne by the Contractor.

D9.3 The Contractor shall provide the City Solicitor with a certificate(s) of insurance, in a form satisfactory to the City Solicitor, at least two (2) Business Days prior to the commencement of any Work but in no event later than the date specified in C4.1 for the return of the executed Contract.

D9.4 The Contractor shall not cancel, materially alter, or cause each policy to lapse without providing at least thirty (30) 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 The Contractor shall provide the City Solicitor with the required performance security within seven (7) Calendar Days of notification of the award of the Contract by way of letter of intent and prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract.

D11. SUBCONTRACTOR LIST

D11.1 The Contractor shall provide the Contract Administrator with a complete list of the Subcontractors whom the Contractor proposes to engage (Form J: Subcontractor List) at least

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.

D12. DETAILED WORK SCHEDULE

D12.1 The Contractor shall provide the Contract Administrator with a detailed work schedule 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.

- (a) A portion of the works is on Canadian Pacific Railway (CPR) property and as such to schedule and carry out the work the Contractor will have to gain permissions and make arrangements for flagging that CPR may require (refer to D19). Costs for the required flagging shall be borne by the City of Winnipeg.
- (b) To minimize required flagging, once work has commenced on CPR property the Contractor will be expected to work continuously during normal flagging hours as agreed between CPR and the Contractor until all work on CPR property is complete.

D12.2 The detailed work schedule shall consist of the following:

- (a) a critical path method (C.P.M.) schedule for the Work;
- (b) a Gantt chart for the Work based on the C.P.M. schedule;
- (c) a daily manpower schedule for the Work;

all acceptable to the Contract Administrator.

D12.3 Further to D12.2(a), the C.P.M. schedule shall clearly identify the start and completion dates of all of the following activities/tasks making up the Work as well as showing those activities/tasks on the critical path:

D12.4 Further to D12.2(b), 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.

D12.5 Further to D12.2(c), the daily manpower schedule shall list the daily number of individuals on the Site for each trade.

SCHEDULE OF WORK

D13. COMMENCEMENT

D13.1 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.

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

- (a) the Contract Administrator has confirmed receipt and approval of:
 - (i) evidence of authority to carry on business specified in D7;
 - (ii) evidence of the workers compensation coverage specified in C6.15;
 - (iii) the Safe Work Plan specified in D8;
 - (iv) evidence of the insurance specified in D9;
 - (v) the performance security specified in D10;
 - (vi) the Subcontractor list specified in D11;
 - (vii) the detailed work schedule specified in D12; and
- (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. SUBSTANTIAL PERFORMANCE

- D14.1 The Contractor shall achieve Substantial Performance by September 30, 2010.
- D14.2 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.
- D14.3 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.

D15. TOTAL PERFORMANCE

- D15.1 The Contractor shall achieve Total Performance by October 7, 2010.
- D15.2 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.
- D15.3 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.

D16. LIQUIDATED DAMAGES

- D16.1 If the Contractor fails to achieve Total Performance in accordance with the Contract by the day fixed herein for Total Performance, the Contractor shall pay the City five hundred dollars (\$500) per Working Day for each and every Working Day following the day fixed herein for Total Performance during which such failure continues.
- D16.2 The amount specified for liquidated damages in D16.1 is based on a genuine pre-estimate of the City's damages in the event that the Contractor does not achieve Total Performance by the day fixed herein for same.
- D16.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

CONTROL OF WORK

D17. JOB MEETINGS

- D17.1 Regular weekly job meetings will be held at the Site. These meetings shall be attended by a minimum of one representative of the Contract Administrator one representative of the Contractor. Each representative shall be a responsible person capable of expressing the position of the Contract Administrator 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.
- D17.2 The Contract Administrator reserves the right to cancel any job meeting or call additional job meetings whenever he deems it necessary.

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

D18.1 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).

D19. COORDINATION OF REPAIRS WITH CPR YARDS

D19.1 General

- (a) The Contractor shall coordinate their work with the Canadian Pacific Railway (CPR) operations.
- (b) The Contractor shall contact Mr. Terry Reid (Telephone (204) 771-0085) to schedule the work on CPR property.
- (c) CPR safety requirements as indicated in D20 are applicable.
- (d) The Contractor shall provide CPR with copies of the Contractor's safety policies, construction safety plan, and emergency information at least five (5) working days before commencing any work over or adjacent to the tracks.
- (e) The Contractor shall conduct job briefings as required.

D19.2 Protection of CPR Yards and Adjacent Properties

- (a) The CPR tracks shall be kept free of obstruction and open to traffic at all times unless prior written permission is obtained by the Contractor from CPR for its closure and approval is granted by the Contract Administrator.
- (b) The Contractor shall be responsible for any damage, disruptions and/or inconvenience caused by his equipment or operations of work to the tracks, the railway's operation or their property.
- (c) During such times that repairs are not in progress in any particular work area, the Contractor shall leave the area free from any debris or obstructions, which would disrupt operations of CPR. Debris shall be removed from the area adjacent to the tracks daily.

D19.3 Temporary Storage on CPR Property

- (a) The Contractor will be responsible to obtain permission to temporarily store materials, equipment, and any other items on CPR property. The request shall be made in writing and a copy of the permission shall be provided to the Contract Administrator. The Contractor shall be responsible for clean-up and restoration after completion of the project.

D19.4 Access and Crossing Over CPR Tracks

- (a) The Contractor will be responsible to obtain permission to cross CPR tracks to access work areas. The request shall be made in writing and a copy of the permission shall be provided to the Contract Administrator.
- (b) Additionally, the Contractor will be responsible for requesting any temporary crossings to CPR. The request shall be made in writing and a copy of the permission shall be provided to the Contract Administrator. Any costs for temporary crossings shall be borne by the Contractor.

D19.5 CPR Track Closures

- (a) The Contractor will be responsible to obtain permission to work at areas over and adjacent to tracks which need to be closed. The request of track closures shall be made in writing a minimum of 24 hours in advance and a copy of the permission shall be provided to the Contract Administrator.
- (b) CPR has indicated that work at the Camel-Back Truss Spans between Piers 6 and 9 which will require closures should be scheduled during the month of July as it is not as

busy then. Also, the tracks in that area would likely only be closed during the Contractor's working hours and then may be reopened for non-working hours.

- (c) CPR may cancel or shorten track closures due to operational requirements at their discretion. No claim shall be made by the Contractor for shortened work days.

D19.6 CPR Flagmen

- (a) A CPR flagman will be required at all times when work is being performed under the overpass and over or adjacent to active tracks. The Contractor shall confirm with CPR to ensure a flagman is present when required.
- (b) Costs for CPR flagmen will be borne by the City.
- (c) The Contractor's personnel shall observe the instructions of the flagmen at all times.
- (d) The Contractor shall conduct the required job briefings with CPR at the start each day's work.
- (e) CPR has indicated they intend to provide flagging between 6:00 am and 9:00 pm, Monday to Friday only. The Contractor shall confirm flagging hours with CPR and adjust work hours as necessary to maximize utilization of the flagmen.
- (f) Based on the foregoing timeframe, it is expected that the Contractor will undertake 10 to 12 hours of on-site work when flagging operations are provided.
- (g) Insufficient work activity when CPR flagging has been arranged will result in the City deducting the cost of flagging from the Contract.
- (h) The Contractor shall fill out each day a "Railway Flagging Signoff Form" (see Appendix B) with a description of the work and details of flagging provided by CPR. The Contractor shall each day get CPR to sign-off on the sheet and provide copies to CPR and to the City.

D19.7 Costs Associated with CPR Coordination

- (a) All costs associated with the coordination of repairs with CPR, as set out in these Tender Documents, whether specifically described or not, shall be the responsibility of the Contractor; no separate payment will be made for this coordination.

D20. ADDITIONAL CPR SAFETY REQUIREMENTS FOR CONTRACTORS WORKING ON RAILWAY PROPERTY

D20.1 The following CPR document is applicable:

- (a) CPR Minimum Safety Requirements for Contractors Working on Railway Property, dated April 2007 (19 pages) – included in Appendix A.

MEASUREMENT AND PAYMENT

D21. PAYMENT

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

WARRANTY

D22. WARRANTY

- D22.1 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.

FORM H1: PERFORMANCE BOND
(See D10)

KNOW ALL MEN BY THESE PRESENTS THAT

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

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

_____ dollars (\$_____)

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

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

BID OPPORTUNITY NO. 91-2010

ARLINGTON STREET OVERPASS (CPR YARDS) – 2010 STRUCTURAL STEEL REPAIRS

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

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

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

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

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

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

_____ day of _____, 20____ .

SIGNED AND SEALED
in the presence of:

(Witness as to Principal if no seal)

(Name of Principal)

Per: _____ (Seal)

Per: _____

(Name of Surety)

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

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

(Date)

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

RE: PERFORMANCE SECURITY - BID OPPORTUNITY NO. 91-2010

ARLINGTON STREET OVERPASS (CPR YARDS) – 2010 STRUCTURAL STEEL REPAIRS

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)

PART E - SPECIFICATIONS

GENERAL

E1. APPLICABLE SPECIFICATIONS AND DRAWINGS

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

<u>Drawing No.</u>	<u>Drawing Name/Title</u>
B106-10-01	Arlington Street Overpass (CPR Yards) 2010 Structural Steel Repairs – Design Data and Drawing List Structural Steel Repairs
B106-10-02	Arlington Street Overpass (CPR Yards) 2010 Structural Steel Repairs – General Arrangement and Scope of Work
B106-10-03	Arlington Street Overpass (CPR Yards) 2010 Structural Steel Repairs – South Approach Spans
B106-10-04	Arlington Street Overpass (CPR Yards) 2010 Structural Steel Repairs – Pratt Truss Spans
B106-10-05	Arlington Street Overpass (CPR Yards) 2010 Structural Steel Repairs – Camel-Back Truss Spans
B106-10-06	Arlington Street Overpass (CPR Yards) 2010 Structural Steel Repairs – North Approach Spans
B106-10-07	Arlington Street Overpass (CPR Yards) 2010 Structural Steel Repairs – Structural Steel and Miscellaneous Details (1 of 2)
B106-10-08	Arlington Street Overpass (CPR Yards) 2010 Structural Steel Repairs – Structural Steel and Miscellaneous Details (2 of 2)

GENERAL REQUIREMENTS

E2. MOBILIZATION AND DEMOBILIZATION

- E2.1 Description
- This Specification shall cover all operations relating to the mobilization and demobilization of the Contractor to the Site, as specified herein
 - The Work to be done by the Contractor under this Specification shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools, supplies, and all things necessary for and incidental to the satisfactory performance and completion of all works as hereinafter specified.
- E2.2 Materials
- The Contractor shall be responsible for the supply, safe storage and handling of all materials as set forth in this Specification.
- E2.3 Construction Methods

- (a) The Contractor shall obtain written permission from private property owners for any use of private property. A copy of written permission shall be provided to the Contract Administrator prior use of the property in question.
- (b) The Contractor's Site supervisor is required to carry, at all times, a cellular telephone, with voice mail.
- (c) This section also includes travel and accommodation, set-up and demobilization of site offices, storage conveniences and other temporary facilities, construction plant, and other items not required to form part of the permanent works and not covered by other prices.

E2.4 Measurement and Payment

- (a) Mobilization and demobilization will be paid for on a Lump Sum basis under "Mobilization and Demobilization," which price will be payment in full for supplying all materials and performing all operations herein described and all other items incidental to the Work included in this Specification and accepted by the Contract Administrator.
- (b) Mobilization and demobilization will be paid for at a percentage of the Contract Lump Sum Price for "Mobilization and Demobilization" specified as follows:
 - (i) 30% when the Contract Administrator is satisfied that construction has commenced.
 - (ii) 60% when Substantial Performance has been met.
 - (iii) 10% upon completion of the project.

E3. TRAFFIC AND PEDESTRIAN CONTROL

E3.1 General

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

E3.2 Construction Methods

- (a) Traffic control shall be carried out in accordance with the latest edition of the "Manual of Temporary Traffic Control in Work Areas on City Streets," issued by the City of Winnipeg and as specified herein.
- (b) Traffic lane and sidewalk closures shall only be undertaken if necessary and as approved by the Contract Administrator.
- (c) No lane closures are allowed when the Contractor is not working.
- (d) It is anticipated that no lane or sidewalk closures are required on the bridge.

E3.3 Measurement and Payment

- (a) Traffic and pedestrian control will be considered incidental to the Works of this Contract and no additional measurement or payment will be made.

E4. STRUCTURAL STEEL REPAIRS

E4.1 Description

- (a) This Specification shall cover the structural steel repairs to various superstructure components of the Arlington Street Overpass as shown on the Drawings and as specified herein.
- (b) The Work to be done by the Contractor under this Specification shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools,

supplied and all things necessary for and incidental to the satisfactory performance and completion of all work as hereinafter specified.

E4.2 Materials

E4.2.1 General

- (a) All Materials supplied under this Specification shall be of a type approved by the Contract Administrator, and shall be subject to inspection and testing by the Contract Administrator.
- (b) The Contractor shall be responsible for the safe removal and disposal of the existing severely corroded steel and for the supply, safe storage and handling of all Materials as set forth in the Specification. All Materials shall be handled in a careful and workman like manner, to the satisfaction of the Contract Administrator.

E4.2.2 Structural Steel

- (a) All general structural steel shall conform to the requirements of CSA Standard CAN/CSA-G40.21-M-92, Grade 300W or 350W.

E4.2.3 High Strength Bolts, Nuts and Washers

- (a) High strength bolts shall conform to the requirements of ASTM Specification A325, Type 1. Nuts shall conform to the requirements of ASTM Specification A563, Grade DH. Washers shall conform to the requirements of ASTM Specification F436, Type 1.

E4.2.4 Galvanizing

- (a) All items supplied under this Specification to be incorporated into the permanent works shall be hot-dip galvanized to CSA Standard G164-M92 to a net retention of 600 g/m² after fabrication.

E4.2.5 Abrasive for Blast Cleaning

- (a) The blast cleaning abrasive shall be free of corrosion-producing contaminants. Silica or other sand will not be permitted. Slag abrasives shall contain no more than 0.1% oil by weight. The blast-cleaning abrasives and grit size employed shall be capable of achieving a surface anchor-tooth profile having a peak-to-valley height of 2 to 4 mils.

E4.2.6 Self-Priming Topcoat

- (a) Self-priming topcoat shall be Termarust Series 2100 (RAVCS) as manufactured by Termarust Technologies. Colour shall be grey.

E4.2.7 Incidental Materials

- (a) All incidental and miscellaneous materials required for the undertaking the works of this Specification shall be as approved by the Contract Administrator.

E4.3 Construction Methods

E4.3.1 Scope of Work

- (a) The scope of Work shall include the following items, as indicated on the Drawings and as specified herein:
 - (i) Type 1 Repair - Floor Beam Bottom Flange, which includes the provision of temporary shoring to the framing on each side of the floor beams to enable the repairs to be completed while the bridge is still open, removal of rivets and existing severely corroded bottom flange angles, installation of new rolled structural steel bottom flange angles, surface preparation and coating, and removal of the temporary shoring;
 - (ii) Type 2 Repair - Girder Bottom Flange, similar to the above Type 1 Repair - Floor Beam Bottom Flange;
 - (iii) Type 3 Repair - Diaphragm Beam Replacement, which includes temporary shoring, removal of rivets and existing severely corroded structural steel

- members, installation of new members, surface preparation and coating, and removal of temporary shoring;
- (iv) Type 4 Repair - Deck Channel Replacement, which includes installation of new steel deck support channels that span between steel stringers; and
 - (v) Type 5 Repair – Removal of Existing Platform Framing, which includes removal and disposal of miscellaneous severely corroded framing members.

E4.3.2 Scheduling and Methods

- (a) At least five (5) days prior to the commencement of any scheduled Work on the Site, the Contractor shall submit to the Contract Administrator for review and approval a proposed schedule, including methods and sequence of operations.

E4.3.3 Details of Existing Structure

- (a) The applicable details and structure dimensions of the existing structure are shown on the Drawings for the information of the Contractor in establishing the methods and limits of removal and determining the cost of the Work from his examination of the Site.
- (b) The information shown has been obtained from existing drawings, measurements, and observations at the Site. The accuracy of this information is not guaranteed and the Contractor must verify all information before commencing Work.

E4.3.4 Access and Scaffolding

- (a) The Contractor shall at least five (5) days prior to the commencement of Work on the Site submit to the Contract Administrator for review and approval access routes and methods for men and equipment to the repair areas.
- (b) All scaffolding, platforms, swing-stages, man-lifts, or zoom booms shall be designed, constructed, erected and operated in accordance with Workplace Safety and Health Act, applicable Regulations and as approved by the Contract Administrator.
- (c) The Contractor shall coordinate with and obtain approval from CPR for all access routes on CPR property.
- (d) All access routes shall be restored to the pre-construction condition or better incidental to the Works of this Specification.

E4.3.5 Temporary Shoring

- (a) The contractor shall at least five (5) days prior to commencement of Work submit drawings of shoring required to enable Type 1, 2, and 3 Repairs to be completed with the bridge open to traffic to the Contract Administrator for review.
- (b) Shoring drawings shall be engineered and bear the seal of a Professional Engineer registered in the Province of Manitoba.

E4.3.6 Removals and Disposal of Debris

- (a) The Contractor shall only use methods of steel removal that will not damage the existing structure to remain or new structures.
- (b) The Contractor shall remove and dispose of surplus debris from CPR property.

E4.3.7 Fabrication and Installation of New Structural Steel

- (a) General
 - (i) Except as otherwise specified herein, steelwork shall be fabricated in accordance with the latest A.W.S. Specification D1.1 and subsequent revisions.
 - (ii) No fabrication shall commence until permission to do so has been received from the Contract Administration.
 - (iii) The repair of any members damaged during fabrication shall be approved by the Contract Administrator.

- (b) Submissions
 - (i) At five (5) days prior to the scheduled commencement of any fabrication, the operator's qualifications, the shop drawings and mill certificates shall be submitted to the Contract Administrator for review and approval.
- (c) Preparation of Material
 - (i) Prior to being used in fabrication, all structural steel shall be straight and free from kinks or bends. If straightening is necessary, it shall be done by methods that will not injure the metal. The steel shall not be heated unless permission is given by the Contract Administrator. Sharp kinks and bends will be cause for rejection of the steel.
 - (ii) Steel may be cut to size by sawing, shearing, flame-cutting or machining. All steel after cutting shall be marked by a method agreed to by the Contract Administrator so that it's specification may be immediately identified.
 - (iii) Sheared edges of plates more than 16mm in thickness shall be planed to a depth of 6mm.
 - (iv) Special attention shall be given to the cutting of cover plates or flange plates. Occasional gouges not in excess of 6mm deep will be accepted in areas of low stress at the discretion of the Contract Administrator. The repair or removal of such gouges shall be to the Contract Administrator's instructions.
 - (v) Edges of flame cut edges shall be ground to a radius of 2mm. Re-entrant cuts shall be filleted to a radius of not less than 19mm.
- (d) Bolt Holes
 - (i) All bolt holes for high strength bolts shall be drilled and shall be of a nominal diameter not more than 2mm in excess of the nominal bolt diameter.
 - (ii) Drilling shall be done with twist drills. Burrs on the outside surface shall be removed.
 - (iii) Poor matching of holes will be cause for rejection.
- (e) Material Storage and Care
 - (i) Structural steel, either plain or fabricated shall be stored above the ground on platforms, skids or other supports. It shall be kept free from dirt and other foreign matter, and shall be protected, as far as practical, from corrosion. Long members shall be supported on skids placed near enough together to prevent injury from deflection.
 - (ii) Prior to fabrication, all steel shall be marked for identification by heat number and specification by a marking system approved by the Contract Administrator.
- (f) Field Assembly
 - (i) The new structural steel shall be snug tight to the underside of the steel plate or steel deck grating. Steel shims shall be installed where necessary as shown on the Drawings. The new channels shall be used as a template to drill bolt holes in the existing steel channels.
 - (ii) All field connections shall be bolted with high strength bolts. Bolting with high strength bolts shall be carried out in accordance with "AASHTO Standard Specifications for Highway Bridges-1996 Division II, Clause 11.5-Assembly – turn of nut method."
- (g) Straightening of Bent Material
 - (i) The straightening of plates and angles or other shapes shall be done by methods that will not produce fracture or injury. The metal shall not be heated unless permitted by the Contract Administrator, in which case the heating shall not be a higher temperature than that producing a "dark cherry red" colour. After heating, the metal shall be cooled as slowly as possible.
 - (ii) Following the straightening of a bend or buckle, the surface of the metal shall be carefully inspected for evidence of fractures and if necessary, replaced or repaired to the satisfaction of the Contract Administrator.

(h) Misfits

- (i) The correction of minor misfits involving harmless amounts of reaming, cutting and chipping as determined by the Contract Administrator will be considered a legitimate part of erection. However, any error in shop fabrication, which prevents the proper assembling and fitting up of parts by the moderate use of drift pins or by a moderate amount of reaming and slight chipping or cutting, shall be cause for rejection and shall be corrected by the Contractor to the satisfaction of the Contract Administrator.

E4.3.8 Surface Preparation of Existing Structural Steel

(a) General

- (i) All surfaces of the existing steel are to be coated as shown on the Drawings. Existing coatings beyond the identified repair areas that are damaged by the Contractor's operations shall be repaired at the Contractor's expense to the satisfaction of the Contract Administrator.
- (ii) The Contractor is advised that paint samples from the existing bridge have not been tested for lead content but may contain lead.
- (iii) The Contractor shall comply with all applicable environmental, health, and safety regulations related to the surface preparation and coating of the existing structural steel. As a minimum, the Contractor shall collect all spent blasting abrasives, cleaned off paint residue, and new coating material overspray from the work area. All such materials shall be disposed of off and away from the site by the Contractor in accordance with the appropriate regulations to the satisfaction of the Contract Administrator.

(b) Surface Cleaning

- (i) Before any blast cleaning operations or coating applications commence, the following surface cleaning operations shall be undertaken on all structural steel designated to receive coating.
- (ii) All organic materials such as bird droppings, nests and other non-structural obstructions or pollutants attached to the steel are to be removed by hand cleaning operations.
- (iii) All oil and grease shall be removed manually with solvent cleaning as per SSPC Specification SP1.

(c) Blast Cleaning Operation

- (i) The Contractor shall prepare the existing structural by blast cleaning in accordance with SP 6/NACE No. 3 – "Commercial Blast Cleaning." Alternatively, wire wheel cleaning in accordance with SSPC Specification SP 11 – "Power Tool Cleaning to Bare Metal" that achieves the same results will be acceptable.
- (ii) The Contractor shall ensure that the amount of blasting medium used for blast cleaning is kept to the absolute minimum by conscientious efforts of his workforce and by the efficient use of equipment.
- (iii) No rust scale shall remain in the designated areas.
- (iv) The blasting shall be performed so as not to damage or contaminate any previously coated areas.
- (v) New structural steel shall be installed on freshly prepared steel and shall be coated as quickly as practical thereafter. However, if the freshly prepared steel begins to rust prior to the application of the coating, the steel must be re-blasted to meet the specified SSPC Specification.

(d) Blast Clean-up Operations

- (i) Following all blast cleaning operations and prior to the Contract Administrator's inspection, all surfaces involved shall be blown off with compressed air or cleaned by vacuum for the purpose of removing any and all traces of blast products from the surface, and for the removal of abrasion from all pocket and

corners. Following surface preparation cleanup operations, the Contractor shall immediately notify the Contract Administrator so that testing and inspection can be undertaken prior to the application of any coating.

(e) Surface Testing and Inspection

- (i) The Contractor shall provide the Contract Administrator with access and notice to allow for testing and inspection of prepared surfaces.
- (ii) Immediately following blast cleaning and clean-up operations, the Contractor shall notify the Contract Administrator in order that a chemical analysis of the blasted steel and a surface profile inspection can be carried out. No structural steel installation shall take place until the prepared surface is approved by the Contract Administrator.
- (iii) The Contract Administrator may analyze the blasted steel surface for chloride ion content.
- (iv) New structural steel shall not be installed over existing steel surfaces where the chloride ion content exceeds an average of 30 milligrams per square metre, based on three readings taken from three separate areas of 150 mm x 150 mm each, or any one reading that exceeds 50 milligrams per square metre of chloride ion content. Any area that exceeds these upper limits shall be high pressure washed clean to flush off the chloride ions and re-blasted by the Contractor at his own cost incidental to the surface preparation operations. These areas will then be retested by the Contract Administrator.

E4.3.9 Coating of Existing Structural Steel

- (a) Existing structural steel in the repair areas shall be cleaned and coated and indicated on the Drawings and as specified herein.
- (b) In areas where prepared steel is not coated on a timely basis, the steel may need to be flushed and re-blasted.
- (c) All exposed surfaces of the existing structural steel within the repair areas shall be coated with Termarust Series 2100 (RAVCS) to the Recommended DFT (Dry Film Thickness) of 250 – 300 microns (10 – 12 mils) in accordance with the manufacturer's recommendations.
- (d) The coating shall not be applied at temperatures below 2°C. In addition, there must be a 2°C spread between the temperature and the dew point. The relative humidity must be no greater than 99% and the steel should be free of surface moisture.

E4.4 Quality Control

E4.4.1 Inspection

- (a) All workmanship and all materials furnished and supplied under this specification are subject to close and systematic inspection and testing by the Contract Administrator including all operations from the selection and production of materials through to final acceptance of the specified Work. The Contractor shall be wholly responsible for the control of all operations incidental thereto notwithstanding any inspection or acceptance that may have been previously given. The Contract Administrator reserves the right to reject any materials or Works, which are not in accordance with the requirements of this Specification.

E4.4.2 Access

- (a) The Contractor shall allow the Contract Administrator free access to all parts of the Work at all times. The Contractor shall supply samples to the Contract Administrator or his inspector for testing purposes as required. There will be no charge to the City for samples taken.

E4.5 Measurement and Payment

E4.5.1 Structural Steel Repairs

- (a) Structural steel repairs will be measured on a unit basis and paid for at the Contract Unit Price for the "Items of Work" listed here below. The item to be paid for will be the total number of each type of repairs that are completed in accordance with this Specification, accepted and measured by the Contract Administrator.

Items of Work:

- (ii) Type 1 Repair - Floor Beam Bottom Flange
- (iii) Type 2 Repair - Girder Bottom Flange
- (iv) Type 3 Repair - Diaphragm Replacement
- (v) Type 4 Repair - Deck Channel Replacement

E4.5.2 Removal of Existing Platform Framing

- (a) Removal of Existing Platform Framing will be paid for at the Contract Lump Sum Price for "Type 5 Repair - Removal of Existing Platform Framing", which price will be payment in full for performing all operations herein described that are completed in accordance with this Specification and accepted by the Contract Administrator.

APPENDIX A



**CANADIAN
PACIFIC**

**MINIMUM SAFETY REQUIREMENTS FOR CONTRACTORS
WORKING ON RAILWAY PROPERTY**

April 2007

Initialed by:

Canadian Pacific's Minimum Safety Requirements for Contractors Working on Railway Property is the minimum safety requirements to be followed at all Times.

Note –

Prior to the commencement of any work at the worksite, a local safety orientation must be conducted in conjunction with Canadian Pacific and shall include the following:

- Hazard identification / risk assessment of hazards inherent in the work to be undertaken or generated by the work processes to be used.
- Various controls used to mitigate risk of the hazards present both as a result of the railway and contractor work processes.
- Local communication procedures including emergency call-out / response.
- Local evacuation procedures.

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TABLE A - EMERGENCY INFORMATION SHEET

SR1 INTRODUCTION

1.1 At Canadian Pacific (“CP”), safety is an integral part of the way we do business. We expect everyone working on Canadian Pacific’s property (“**Railway property**”) to be unconditionally committed to safety. Safety must be given top priority and will take precedence over deadlines, production schedules, and all other considerations.

SR2 GENERAL

2.1 The Contractor shall be solely responsible for the safety of it’s agents, employees and subcontractors (“**Contractor Personnel**”).

2.2 The Contractor shall comply with all applicable health and safety legislation, regulations and codes applicable to the work.

2.3 The Contractor shall ensure that all Contractor’s Personnel comply with the following safety requirements when working on Railway property. The Contractor shall have a copy of the following documents on site at all times:

2.3.1 Canadian Pacific’s Minimum Safety Requirements for Contractors Working on Railway Property.

2.3.2 Contractor’s construction safety plan pursuant to section SR15 (if applicable).

2.3.3 Contractor’s Emergency Information Sheet pursuant to section SR15.

2.3.4 Contractor’s safety policies, rules and work procedures pursuant to SR14.

2.4 Access to Railway property for any Contractor Personnel is at CP’s sole discretion. Such access is only for the purpose of Contractor Personnel performing services for CP, and only for the duration of Contractor’s contract with CP. The Contractor shall ensure that Contractor Personnel wear appropriate Contractor photo identification and/or visitor tags while on Railway property, and have appropriate documentation to verify the services being performed for CP. The Contractor shall ensure that Contractor Personnel comply with CP’s instructions regarding security restrictions or other restrictions resulting from emergent conditions.

SR3 PERSONAL ATTIRE

3.1 The Contractor shall ensure that Contractor Personnel wear clothing required by applicable legislation, regulation and codes and is suitable to perform job functions safely, protect against hazards to the skin and adequate for existing weather conditions.

SR4 PERSONAL PROTECTIVE EQUIPMENT

4.1 The Contractor shall ensure that Contractor Personnel wear personal protective equipment required by applicable legislation, regulations, codes and as necessary to protect against personal injuries while on Railway property, and in accordance with this Article SR4. All personal protective equipment shall be approved by the Canadian Standards Associations (CSA) or by the American National Standards Institute (ANSI), and shall be in good condition and be properly fitted.

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4.2 The following mandatory protective equipment shall be supplied by the Contractor at its own expense, and Contractor shall ensure that it is worn by Contractor Personnel on Railway property:

4.2.1 Safety hard hat shall be worn at all times, except inside enclosed vehicles or equipment.

4.2.2 Safety boots shall be worn at all times. They must have puncture resistant soles and meet CSA Z195 Grade One Green Triangle (Canada), or US ANSI Z41, Section 5 standards.

4.2.3 Safety glasses with permanently attached side shields that meet CSA Standard 94.3 (in Canada) and ANSI Standard 87.1 (in the US) must be worn at all times, except inside office buildings*** and inside enclosed cabs of vehicles.

***Safety glasses as specified above must be worn in office buildings, if the task being performed, results in a risk of injury to the eyes (i.e. construction related tasks, working with electrical hazards, etc.).

Additional eye and face protection equipment is to be worn as determined necessary by the Contractor, based upon the contractor's risk assessment.

Under special circumstances, whereby, the wearing of safety glasses will hinder specialized work being performed by the contractor or that the safety can be improved for the contracted employee(s) by varying from the standard outline above, the wearing of such will be determined by the Contractor, based upon the contractor's risk assessment.

4.2.4 Hearing protectors shall be worn in all designated locations and as required by any applicable governing legislation, regulations, and codes.

4.2.5 Appropriate respirators shall be worn whenever work processes create airborne particulates (i.e. dust, mist, vapour or fumes).

4.2.6 High visibility fluorescent work wear with reflective striping (CSA (Canada) or ANSI (US) approved preferred) shall be worn when-on Railway property.

High visibility work wear must not be covered by other clothing or equipment, except where necessary for safety reasons such as where fall protection or pole climbing equipment is being used.

SR5 PERSONAL CONDUCT

5.1 Entry upon Railway property when in possession of, or under the influence of intoxicants, narcotics, controlled substances or medication which may in any way adversely affect alertness, concentration, reaction response time or safety is prohibited. Contractors must have appropriate programs and processes in place to ensure that Contractor Personnel are in compliance with this requirement.

5.2 Possessing or using any alcoholic beverage or drug is prohibited when working on Railway property:

- 5.3 CP is committed to providing and maintaining a work environment that supports the dignity of all individuals and will not tolerate any discrimination, harassment or violence in the workplace. Contractor shall ensure that Contractor Personnel conduct themselves in a manner consistent with these principles.
- 5.4 Smoking is prohibited in all buildings and on all Railway property, except where CP management has designated an outdoor smoking area.

SR6 PROTECTION OF RAILWAY TRAFFIC AND PROPERTY

- 6.1 The work shall be organized and executed in such a manner as to ensure no interference with the regularity and safety of railway operations. No step in any sequence of operations which might either directly or indirectly affect the regularity or safety of railway traffic shall be started until approval of the project manager has been obtained. No temporary structure, materials, or equipment shall be permitted closer than 12 feet (3.66 meters) to the nearest rail of any track without prior approval in writing of the project manager.
- 6.2 No work shall be done on or above, or use made of, any trackage without approval by the project manager and then only under the direct supervision of a qualified CP flagperson, or unless they are specifically authorized and qualified to perform said work.
- 6.3 The Contractor shall, at all times, conduct its operations in a wholly responsible manner to avoid damage to the CP's trackage or property.
- 6.4 Signs, signals and flags necessary for the safe operation of the railway shall not be obstructed, removed, relocated, or altered in any way without proper authorization. Blue flag protection on tracks signifies CP employees are on, under or between rolling stock equipment. Blue flags are important safety devices and must not be touched or obstructed.
- 6.5 Only qualified personnel are permitted to operate switches, derails, electric locking mechanisms or other appliances. The Contractor shall keep equipment, material and Contractor Personnel clear of this equipment at all times. Neither the Contractor nor Contractor Personnel shall operate or tamper with any signal or communication systems or any other railway safety devices unless specifically authorized and qualified.
- 6.6 While railway traffic is passing through, within 50 feet of the work area, the mechanisms for securing rotating equipment must be used to prevent rotational movement. Buckets on shovels must be lowered to the ground to rest. Operators shall get out of their equipment and position themselves in a safe area 20 feet from the track as a minimum where possible.

When working in multi-track territory Operators shall exit to the non-live side of the track and position themselves in a safe area 20 feet from the track as a minimum where possible (do not stand on or between adjacent tracks).

- 6.7 Construction equipment parked on Railway property on nights or weekends shall be secured in a safe position well clear of all tracks to prevent accidental contact with trains and moving equipment and to not restrict train crew sightlines. As much as possible, materials shall be stored in locations where they are not subject to public viewing in

order to prevent vandals from using them to cause derailments or damage to Railway property. Scrap materials shall be disposed of as soon as possible. The Contractor shall consult with CP personnel to determine the best location to store equipment and materials.

- 6.8 Before starting excavation operations, the Contractor shall ascertain that there are no underground wires, fibre optic cables, pipelines or other facilities which could be damaged or , if present, that such installations are properly protected. Fibre optic cables are present on most segments of the right-of-way. Prior to commencing any excavation, the Contractor shall contact the proper authority to obtain the necessary permit and to locate and protect such cables.

Excavations shall not be left unattended unless they are properly protected; and the CP supervisor shall be notified.

- 6.9 Railway pole lines carry electric power and should be treated as any other power lines.
- 6.10 Any Contractor Personnel discovering a hazardous or potentially unsafe condition which may affect the safe passage of railway traffic must advise CP immediately:

In Canada – Network Management Centre (NMC) Calgary 1-800-795-7851

In the US – Operations Centre Minneapolis – 1-800-SOO-HELP (1-800-766-4357)

SR7 TRAIN MOVEMENTS AND WORKING NEAR TRACKS

- 7.1 The Contractor shall ensure that all Contractor Personnel are aware of and comply with the following safety rules which apply to working near railway tracks:
 - 7.1.1 Personnel shall be alert to train movement shall expect the movement of trains, engines, cars, or other moveable equipment at any time, on any track, and in any direction, even cars on sidings that appear to be stationary or in storage. Stay at least 50 feet (15 meters) away from the ends of stationary cars when crossing the track, and never climb on, under or between cars. To cross tracks, personnel shall look both ways, and if the tracks are clear, walk at a right angle to them.
 - 7.1.2 Personnel shall not rely on others to protect them from train movement. The responsibility is theirs for safety on the railway.
 - 7.1.3 Personnel shall not stand on the track in front of an approaching engine, car or other equipment.
 - 7.1.4 Personnel shall be aware of the location of structures or obstructions where clearances are close.
 - 7.1.5 Personnel shall not stand or walk on railroad tracks, either between the rails or on the ends of ties unless absolutely necessary. Personnel shall stay clear of tracks whenever possible.

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- 7.1.6  Within the **United States**, “ON TRACK SAFETY” rules apply. This is a set of rules, which were developed and promulgated by the Federal Railroad Administration (FRA 49 CFR Part 214, Subpart C - Roadway Worker Protection Regulations). The On Track Safety rules apply to contractors to a railroad who perform inspection, maintenance or repair to railroad facilities. These rules and procedures must be complied with to work on or near Railroad property. Specific training and obedience to these rules and procedures are a requirement of the FRA. Significant willful fines can result from the violation of these rules.

 Please refer to Canadian Pacific’s General Requirement for Contractors On Track Safety Procedures.

Contractors will not be allowed to foul a track unless:

- They have been properly advised of the On Track Safety awareness procedures;
- A railway employee who is qualified to provide protection is present at the work site.

Fouling Track - The placement of an individual or an item of equipment in such proximity to a track that the individual or equipment could be struck by a moving train or track unit or in any case within four (4) feet of the field side of the nearest rail.

- 7.1.7 No work activities or processes are allowed within 50 feet (15 meters) of the track centerline while trains are passing through the work site unless specifically authorized. Personnel shall always, where possible, stand at least 20 feet back from the track(s), to prevent injury from flying debris or loose rigging. Also, personnel shall observe the train as it passes and be prepared to take evasive action in the event of an emergency.
- 7.1.8 Personnel shall not remain in a vehicle that is within 50 feet (15 meters) of a passing train, and shall not drive near moving trains. Personnel shall move vehicles away from the tracks at least 50 feet (15.24 meters) unless specifically authorized, or park the vehicle away from the tracks and walk to a safe distance whenever trains pass.
- 7.1.9 Personnel shall not stand on or between adjacent tracks in multiple track territory when a train is passing. Personnel shall be especially alert in yards and terminal areas as engines may be pushing cars, cars may be moving without any engine attached and engine/cars change tracks often.
- 7.1.10 Personnel shall not walk, stand or sit on the rails. As the rail surface can be extremely slippery, personnel must step over the rails when crossing tracks. Personnel shall also be aware railway ties can also be slippery and that railway ballast can shift while walking on top of it.

Personnel shall stay away from track switches as remotely operated switch points can move unexpectedly with enough force to crush ballast rock.

Personnel shall stay away from any other railway devices they are unsure of. Personnel shall not disturb or foul the ballast at any time.

- 7.1.11 Personnel shall not foul the track with any piece of equipment without a CP flagperson and proper protection.
- 7.1.12 Certain projects will require the assistance of a qualified flagperson. The decision as to where flagpersons are required rests with CP. One week advance notice is required before entering Railway property so that flagging protection requirements may be determined and arranged for.
- 7.1.13 Good communication between Contractor Personnel and CP's flagperson is imperative. Everyone must have knowledge of the flagging limits, time limits and location to clear for any train movements. CP's flagperson will be responsible for clearing any movement of workers and equipment near the tracks, no matter how minor.
- 7.1.14 Contractor Personnel shall not interfere with a CP's flagperson who is communicating by radio with the dispatcher or other CP employees. Personnel shall wait until the flagperson is finished and able to give them full attention. Personnel shall not assume a move is cleared by something overheard on a radio conversation.
- 7.1.15 Personnel shall not move equipment across the tracks except at established road crossings, or unless under the protection and authorization of a CP flagperson and only if the job site has been properly prepared for such a move. Tracked equipment will require a CP flagperson any time railroad tracks are crossed.
- 7.1.16 Personnel shall not move equipment across railroad bridges or through tunnels, except as expressly agreed by CP, and under such conditions as stipulated by CP, including without limitation, a CP flagperson.
- 7.1.17 The Contractor shall keep all Contractor personnel informed of current weather conditions. Personnel shall stay alert for possible high water conditions or flash floods. During severe weather conditions:
 - Personnel shall be prepared to take cover in the event of a tornado.
 - Personnel shall not work while lightning is occurring;
 - If storm conditions arise unexpectedly, Contractor Personnel shall ensure that equipment is in the clear of the tracks and secured before seeking cover. Contractor Personnel shall stay away from railroad tracks when visibility is poor, such as during fog or blizzard conditions.

SR8 TOOLS, EQUIPMENT AND MACHINERY

8.1 All Contractor equipment, machinery and highway vehicles must:

- Be in good working order (including lights and safety devices such as back-up alarms) and properly serviced and maintained;
- Be safe for their proposed use;
- Be equipped with appropriate emergency equipment (examples include fire extinguisher, first aid kit;) based upon Contractor's risk assessment;
- Comply with all applicable legislation, regulations and codes.

8.2 Drivers of highway vehicles must be in possession of a valid driver's license of the proper class of the vehicle being operated. The use of seat belts is mandatory for all drivers and passengers. Operators of vehicles and construction equipment must keep their headlights on at all times and observe all facility/area's speed limits and traffic rules. Unless otherwise posted, the speed limit on the CP's roads is 15 mph (24 km/h) or less as conditions warrant.

8.3 Unless authorized in writing, contractors' employees are not permitted to operate or ride on any CP rolling stock and shall not be carried in CP vehicles except in case of an emergency or unless specifically authorized.

8.4 Tools must be used only for the purpose for which they are designed. Defective tools must be repaired or replaced.

8.5 Machinery and equipment must be operated and maintained only by persons properly trained and qualified for that duty.

8.6 All equipment shall be in compliance with applicable legislation, regulations and codes and be equipped with appropriate safety apparatus. In particular, all mobile equipment, including excavators, shall be equipped with beacons and backup alarms.

8.7 The Contractor shall provide adequate lighting when performing work between sunset and sunrise.

SR9 CRANES

9.1 The Contractor shall ensure that its cranes and their operation by Contractor Personnel are in compliance with applicable legislation, regulations and codes and be equipped with appropriate safety apparatus. A copy of the latest annual crane inspection shall be provided to CP prior to the commencement of work.

9.2 All cranes shall be equipped with anti-two-blocking devices and safety latches on every hook.

9.3 All lifting apparatus such as steel cables, nylon slings, chains, shackles, etc., must be safety certified.

9.4 The Contractor shall conduct any work in proximity to power lines in such a manner that permits/procedures as required under applicable legislation, regulations and codes are adhered to.

- 9.5 While railway traffic is passing through the work area, loads on cranes must be lowered to the ground to rest. Cranes without bucket or load must have their load line tightened or retracted to prevent movement.
- 9.6 Cranes parked on Railway property on nights or weekends shall be secured in a safe position well clear of all tracks to prevent accidental contact with trains and moving equipment and to not restrict train crew sightlines. Consult with CP personnel to determine the best location to store equipment and materials. Crane booms shall be lowered onto ground supports so that it will be impossible for them to rotate and cause a track to be fouled.

SR10 CLEANUP, ENVIRONMENT AND FIRE PREVENTION

- 10.1 The Contractor shall take care to avoid any hazardous, unsafe, unhealthy or environmentally unsound condition, activity or spill on Railway property. The Contractor shall maintain Railway property in a tidy condition and free from the accumulation of waste products and debris. The Contractor shall not permit any debris, products used in the work, or water used to rinse out equipment, to be discharged or spilled on Railway property or into any adjacent lands, ditches, streams, ponds, sewers, etc.
- 10.2 The Contractor shall ensure that Contractor Personnel take all necessary precautions to prevent fires. All flammable material such as paper, rubbish, sawdust, oily or greasy rags, etc. must be kept away from buildings, structures and other facilities subject to fire damage. All flammable material must be disposed of daily by Contractor.
- 10.3 Storing or transporting fuel or gasoline in unapproved containers is prohibited.
- 10.4 If possible, the use of cutting or welding torches must be avoided during the last one-half hour of shifts.
- 10.5 Suitable, charged fire extinguishers and/or full water pump cans must be readily available at all times on the work site. Where the Contractor is working on the right-of-way or other property where a fire risk exists, the Contractor shall have appropriate fire prevention and suppression plan (including emergency numbers for CP, local firefighters and fire control districts) as well as such additional fire fighting equipment and trained Contractor Personnel on site, as required by provincial regulations, codes and guidelines.
- 10.6 CPR's representative must be advised promptly of any fire. Such fire must be fully extinguished or protection provided prior to leaving the work site.
- 10.7 Upon completion of the work, the Contractor shall remove his surplus materials and equipment from Railway property. The Contractor shall also remove all waste products and debris, including rinse out water, and leave Railway property clean and suitable for occupancy.

SR11 HAZARDOUS MATERIALS and RESPONSIBLE CARE

- 11.1 If chemicals are required by the Contractor to carry out its contractual obligations, the Contractor must ensure that the transport, label, use and storage of any chemicals are in accordance with all applicable laws, regulations and codes.

- 11.2 For all chemicals to be used, the Contractor must have available on site the latest Material Safety Data Sheet (MSDS) and provide CP with a list of employees' names who have been trained in Workplace Hazardous Materials Information System (WHMIS), or in OSHA's Hazard Communication Standard.
- 11.3 A current emergency response plan must be maintained by the Contractor and made available upon request to CP. Emergency response plans must include at a minimum:
- Contractor reporting procedures in the event of an incident or spill;
 - Emergency response contacts and phone numbers;
 - Incident reporting phone numbers including phone numbers for CP incident reporting and local CP personnel.

Any Contractor Personnel discovering a hazardous or potentially unsafe condition which may affect the safe passage of railway traffic or reporting an emergency or spill must advise CP immediately at:

In Canada,

**Network Management Centre (NMC) Calgary 1-800-795-7851
(excluding the Montreal Service Area (i.e. Oshawa, Ont. East))**

Montreal Service Area – Montreal Operation Centre 1-800-363-3277

In the US,

Operations Centre Minneapolis – 1-800-SOO-HELP (1-800-766-4357)

Canadian Pacific Police Services – 1-800-716-9132

- 11.4 In the event of an incident or spill, The Contractor must take all reasonable actions to contain the spill and respond in accordance with its emergency response plan.
- 11.5 The Contractor shall dispose of all chemicals and surplus waste materials in accordance with all relevant legislation, regulations and codes.
- 11.6 In addition to compliance with all applicable legislation, regulations and codes and as part of CP's commitment to Responsible Care (an initiative by the chemical industry to which CP is a Responsible Care partner), contractors must have appropriate systems and controls in place to mitigate potential environmental, health and safety risks while using chemicals on Railway property. CP will provide Contractor with information regarding Responsible Care upon request from Contractor.

SR12 FIRST AID, INCIDENT AND ACCIDENT REPORTING

- 12.1 The Contractor must have a first aid kit, of a size suitable for the crew, available in the immediate vicinity of the work site. It must be examined by the Contractor prior to the commencement of work, after each use and regularly each month to ensure that it is properly equipped. Any missing or altered articles must be promptly replaced by the Contractor.

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12.2 Where required, other first aid equipment such as stretchers, emergency showers, eye wash stations, etc. must be made available by Contractor at the work site.

12.3 All accidents, personal injury, occupational illness, damage to Railway property or customer property, and incidents, such as environmental spills, must be reported promptly by the Contractor to CP. The Contractor shall provide CPR with as much detailed information as possible, including:

- Time of incident;
- Location of incident;
- Extent of injuries and/or damage;
- Description of incident including the cause of incident, if known; and
- Contractor's name and telephone number.

Canadian Pacific Emergency Numbers

In Canada,

**Network Management Centre (NMC) Calgary 1-800-795-7851
(excluding the Montreal Service Area (i.e. Oshawa, Ont. East))**

Montreal Service Area – Montreal Operation Centre 1-800-363-3277

In the US,

Operations Centre Minneapolis – 1-800-SOO-HELP (1-800-766-4357)

Canadian Pacific Police Services – 1-800-716-9132

In the event of an environmental spill or any spill that could have a negative impact on the environment, the Contractor shall also provide CP with the following information:

- Description of location and surrounding area, including any sensitive environmental areas nearby (e.g., rivers, parks, sewers);
- Type and quantity of substance released;
- Cause of spill or deposit, if known; and
- Details of any immediate action taken or action proposed to be taken to contain spill and recover substance.

12.4 Security concerns and security incidents (i.e. theft, vandalism, bribery, stalking, assault or other incidents that may cause injury or property damage, or involve criminal activity) must be reported by Contractor to the Canadian Pacific Police Service 1-800-716-9132.

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SR13 JOB BRIEFINGS

- 13.1 When required by CP or by the Contractor, a job briefing must be conducted.
- 13.2 The Contractor Personnel performing services on Railway property must participate in the job briefing and any such individuals who are not able to be present at the main briefing, must attend a separate briefing. Contractor must ensure that all Contractor Personnel on the work site understand the content of the job briefing. CP representative(s) or designates may attend at CP's sole discretion and shall include the participation of the CP Flagperson if present at the worksite.
- 13.3 The following topics should be covered in the job briefing:
 - Tasks to be accomplished;
 - Work location;
 - Contractor Personnel responsibilities;
 - Equipment to be used;
 - Specific safety reminder due to a hazardous condition;
 - Identification of all potential hazards specific to the area(s) in which they will be working and the tasks they are performing;
 - Special instructions due to an unusual situation or practice;
 - Type of track protection along with it's time and physical limits and identification of CP's employee responsible for the protection;
 - Emergency response plan/evacuation procedures.

SR14 CONTRACTOR SAFETY POLICY

- 14.1 Prior to the commencement of any work, the Contractor shall provide CP with its applicable safety policies, rules and procedures.

SR15 CONSTRUCTION SAFETY PLAN

- 15.1 Prior to commencement of any construction work, the Contractor shall provide CP with a Construction Safety Plan.
- 15.2 The Construction Safety Plan shall:
 - 15.2.1 List and define the construction methods that will be used for each major phase of the work and describe the process and safety procedures to be incorporated.
 - 15.2.2 Integrate the necessary safeguards to be implemented in the work's planning schedules.

15.2.3 List all safety activities and their frequency including:

- Contractor Personnel's Review of:
 - Canadian Railway's Minimum Safety Requirements for Contractors Working on Railway Property;
 - Contractor's Safety Plan;
 - Contractor's Emergency Information Sheet, and Emergency Response Plan;
- Contractor Personnel Orientation Meetings;
- Site Hazard Assessments;
- Site Inspections and Monitoring;
- Safety Meetings.

15.2.4 Provide for each piece of heavy equipment to be used, such as loaders, excavators and cranes, a summary of the Contractor Personnel's experience, past performance and safety tests, and list of previous accidents resulting from the equipment's operation.

15.2.5 Provide the layout of temporary construction buildings and facilities, including how the Contractor will ensure safe use.

15.2.6 Provide details of emergency procedures for work near or over water. Emergency equipment such as ring buoys, floating vests and, if physically possible, a powered boat must be readily available in the downstream vicinity of the work site.

15.2.7 Provide details of safety procedures for blasting work. Explosive materials must be handled, stored and used in accordance with all applicable legislation, regulations and codes.

15.2.8 Provide details of safety procedures for work in confined spaces including:

- Atmosphere test results;
- Evaluation of hazard within the confined space;
- Procedures for entering/exiting the confined space;
- Required protection equipment;
- Emergency procedures and equipment.

Prior to entry of any Contractor Personnel into a confined space, Contractor shall conduct such testing, and obtain such permits as required under applicable

legislation, regulations and codes. Contractor shall ensure Contractor Personnel wear such additional protective equipment as determined necessary by the Contractor, based upon the Contractor's risk assessment of the space (examples include full body harness, approved respirators, etc.).

15.2.9 Provide the layout of cranes, proposed lifting procedures and other pertinent information such as cranes' capacity charts, working radius, loads, possible obstacles or site restrictions, etc.

15.2.10 Provide an Emergency Information Sheet for notifying medical assistance, emergency transportation and direction of rescue operations, including the information identified in appended Table A. Copies of this document shall be present on site at all times and be in a location readily accessible to all Contractor Personnel on the site. Its content shall be reviewed at the beginning of each week and when job location changes. The Contractor must ensure that all Contractor Personnel on the work site are familiar with its contents.

15.3 The Safety Plan shall also include drawings and specifications prepared, sealed and signed by a qualified professional engineer, for each of the following items, whenever applicable to the work:

15.3.1 Details of the design, erection, use and inspection of fall prevention structures such as scaffolding, work platforms and other staging. These are mandatory wherever Contractor Personnel are working at heights in excess of 8 feet (2.44 meters), in Canada or 10 feet (3.05 meters), in the USA, above the nearest permanent safe level or where a drowning hazard exists. This requirement does not apply where pre-engineered scaffolding is used as a fall prevention device; provided it is used in accordance with the manufacturer specifications and is designed to meet all applicable legislation, regulations and codes.

Details of fall protection systems when it is physically impossible to provide safe fall prevention structures or when working on a temporary structure more than 20 feet (6.10 meters) in Canada and as per health and safety legislation, regulations and codes applicable to the work in the US, above the nearest permanent safe level. Personal fall protection equipment shall include a CSA or ANSI approved full body harness, lanyard and shock-absorbing device, attached to a CSA or ANSI approved or engineered anchored lifeline or fixed anchor. The system shall also provide a retrieval device or equipment readily available on the work site. Safety nets are acceptable in lieu of personal fall protection equipment, if it is impracticable to use a fall protection system. The Contractor shall also provide a fall rescue plan to be used in accordance with any fall protection plan as required.

15.3.2 Details of shoring systems for excavations, which may endanger nearby Contractor Personnel or structures. Shoring systems shall be designed to comply with applicable legislation, regulations and codes. Excavations must be properly covered or barricaded with appropriate reflective equipment. Lights or flares must be used where practicable.

SR16 COMPLIANCE WITH SAFETY REQUIREMENTS

- 16.1 If ever the Contractor's Personnel do not comply with the safety requirements, the Contractor's site supervisor will be reminded of the requirements by the CP's representative. If Contractor Personnel refuses to comply with the safety requirements, the Contractor will be required to ensure that such Contractor Personnel immediately leave the property, failing which CP maintains the right to require the Contractor Personnel to immediately leave the property. Any working procedures not conforming to the safety requirements will result in the closing down of the work site.
- 16.2 CP will not accept any claims for delays or lost time due to safety compliance or procedures issues.

The above provisions and requirements may be amended from time to time by Canadian Pacific.

TABLE A - EMERGENCY INFORMATION SHEET

WORK SITE INFORMATION

Work Site Location: (Mileage, Subdivision) (Address, Number and Street)
Contractor' Supervisor: (Name) (Title)
Site Telephone:
Emergency Site Access Route: (Provide sketch - showing access roads, physical landmarks to guide EMS to location)
Nearest Town:
Certified First Aid Attendant:
Location of First Aid Supplies at Site:
Location of Fire Extinguishing Equipment:

EMERGENCY CONTACT INFORMATION

EMERGENCY CONTACTS	PHONE	LOCATION
Railway Traffic Controller:	()	
Firefighter:	()	
Police:	()	
Ambulance:	()	
Hospital:	()	
Physician:	()	
Aircraft Service, (if applicable):	()	
Watercraft Service, (if applicable):	()	
Stretcher location at site:	()	
Location of WHIMS data sheets:	()	
Type and location of retrieval systems at bridges, (if applicable):	()	
Type and location of emergency equipment for work near or over water, (if applicable):	()	
Employee(s) responsible for rescue operations, (if applicable):	()	
Designated Evacuation Vehicle:	()	
Emergency Evacuation Route, (Provide sketch):	()	

UTILITIES INFORMATION

UTILITIES CONTACT	PHONE	LOCATION
Natural Gas:	()	
Electrical:	()	
Fibre Optic Line:	()	
Water & Sewer:	()	
Telephone:	()	
Cable System:	()	
Qualified employee(s) in:	()	
Confined Space Entry, (if applicable):	()	
Equipment requirements for Confined Space Entry, (if applicable):	()	

Initialed by:

All job sites will be open to audits by CP Safety and Health representatives.

Date: _____

Signed: _____

Contractor's Supervisor

Initialed by:

APPENDIX B

Public Works Department

Engineering Division
Bridge Operations Branch
#106-1155 Pacific Avenue
Winnipeg, Manitoba
R3E 3P1
Tel: 986-5004
Fax: 986-5302



RAILWAY FLAGGING SIGN OFF FORM

PROJECT TITLE: _____ BID OPPORTUNITY No.: _____

PROJECT LOCATION: _____ DATE: _____

CONTRACTOR: _____ FORM No.: _____

RAILWAY: CANADIAN NATIONAL (CNR) CANADIAN PACIFIC (CPR)

DESCRIPTION OF WORK: _____

RAILWAY PERSONEL:

NAME (PRINT)	JOB TITLE	HOURS ON SITE		
		S.T.	O.T.	TOTAL

RAILWAY EQUIPMENT:

DESCRIPTION	EQUIPMENT No.	HOURS ON SITE

CITY OF WINNIPEG OR CONTRACTOR REPRESENTATIVE

PRINT NAME _____ SIGNATURE _____ DATE _____

RAILWAY REPRESENTATIVE

PRINT NAME _____ SIGNATURE _____ DATE _____

COPY TO: CONTRACTOR _____ CITY OF WINNIPEG _____
 RAILWAY _____ OTHER _____

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