



THE CITY OF WINNIPEG

BID OPPORTUNITY

BID OPPORTUNITY NO. 301-2009

**PROVINCE OF MANITOBA/CITY OF WINNIPEG 2009 STREET RENEWAL:
RUE AUBERT, COTTONWOOD ROAD AND VARIOUS OTHER LOCATIONS**

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PART B - BIDDING PROCEDURES

B1. CONTRACT TITLE

B1.1 PROVINCE OF MANITOBA/CITY OF WINNIPEG 2009 STREET RENEWAL:
RUE AUBERT, COTTONWOOD ROAD AND VARIOUS OTHER LOCATIONS

B2. SUBMISSION DEADLINE

B2.1 The Submission Deadline is 12:00 noon Winnipeg time, May 1, 2009.

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

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

B3. ENQUIRIES

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

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

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

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

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

B4. ADDENDA

B4.1 The Contract Administrator may, at any time prior to the Submission deadline, issue addenda correcting errors, discrepancies or omissions in the Bid Opportunity, or clarifying the meaning or intent of any provision therein.

B4.2 The Contract Administrator will issue each addendum at least two (2) Business Days prior to the Submission Deadline, or provide at least two (2) Business Days by extending the Submission Deadline.

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

B4.2.2 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.

B4.3 The Bidder shall acknowledge receipt of each addendum in Paragraph 10 of Form A: Bid. Failure to acknowledge receipt of an addendum may render a Bid non-responsive.

B5. SUBSTITUTES

- B5.1 The Work is based on the Plant, Materials and methods specified in the Bid Opportunity.
- B5.2 Substitutions shall not be allowed unless application has been made to and prior approval has been granted by the Contract Administrator in writing.
- B5.3 Requests for approval of a substitute will not be considered unless received in writing by the Contract Administrator at least five (5) Business Days prior to the Submission Deadline.
- B5.4 The Bidder shall ensure that any and all requests for approval of a substitute:
- (a) provide sufficient information and details to enable the Contract Administrator to determine the acceptability of the Plant, Material or method as either an approved equal or alternative;
 - (b) identify any and all changes required in the applicable Work, and all changes to any other Work, which would become necessary to accommodate the substitute;
 - (c) identify any anticipated cost or time savings that may be associated with the substitute;
 - (d) certify that, in the case of a request for approval as an approved equal, the substitute will fully perform the functions called for by the general design, be of equal or superior substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the proposed work schedule and the dates specified in the Supplemental Conditions for Substantial Performance and Total Performance;
 - (e) certify that, in the case of a request for approval as an approved alternative, the substitute will adequately perform the functions called for by the general design, be similar in substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the proposed work schedule and the dates specified in the Supplemental Conditions for Substantial Performance and Total Performance.
- B5.5 The Contract Administrator, after assessing the request for approval of a substitute, may in his sole discretion grant approval for the use of a substitute as an “approved equal” or as an “approved alternative”, or may refuse to grant approval of the substitute.
- B5.6 The Contract Administrator will provide a response in writing, at least two (2) Business Days prior to the Submission Deadline, only to the Bidder who requested approval of the substitute.
- B5.6.1 The Bidder requesting and obtaining the approval of a substitute shall be entirely responsible for disseminating information regarding the approval to any person or persons he wishes to inform.
- B5.7 If the Contract Administrator approves a substitute as an “approved equal”, any Bidder may use the approved equal in place of the specified item.
- B5.8 If the Contract Administrator approves a substitute as an “approved alternative”, any Bidder bidding that approved alternative may base his Total Bid Price upon the specified item but may also indicate an alternative price based upon the approved alternative. Such alternatives will be evaluated in accordance with B14.
- B5.9 No later claim by the Contractor for an addition to the Total Bid Price because of any other changes in the Work necessitated by the use of an approved equal or an approved alternative will be considered.
- B5.10 Notwithstanding B5.2 to B5.9, in accordance with B6.6, deviations inconsistent with the Bid Opportunity document shall be evaluated in accordance with B14.1(a).

B6. BID COMPONENTS

B6.1 The Bid shall consist of the following components:

- (a) Form A: Bid;
- (b) Form B: Prices, hard copy;
- (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;

B6.2 Further to B6.1, the Bidder should include the written correspondence from the Contract Administrator approving a substitute in accordance with B5.

B6.3 All components of the Bid shall be fully completed or provided, and submitted by the Bidder no later than the Submission Deadline, with all required entries made clearly and completely, to constitute a responsive Bid.

B6.4 The Bid shall be submitted enclosed and sealed in an envelope clearly marked with the Bid Opportunity number and the Bidder's name and address.

B6.4.1 Samples or other components of the Bid which cannot reasonably be enclosed in the envelope may be packaged separately, but shall be clearly marked with the Bid Opportunity number, the Bidder's name and address, and an indication that the contents are part of the Bidder's Bid.

B6.4.2 A hard copy of Form B: Prices must be submitted with the Bid. If there is any discrepancy between the Adobe PDF version of Form B: Prices and the Microsoft Excel version of Form B: Prices, the PDF version shall take precedence.

B6.5 Bidders are advised not to include any information/literature except as requested in accordance with B6.1.

B6.6 Bidders are advised that inclusion of terms and conditions inconsistent with the Bid Opportunity document, including the General Conditions, will be evaluated in accordance with B14.1(a).

B6.7 Bids submitted by facsimile transmission (fax) or internet electronic mail (e-mail) will not be accepted.

B6.8 Bids shall be submitted to:

The City of Winnipeg
Corporate Finance Department
Materials Management Division
185 King Street, Main Floor
Winnipeg MB R3B 1J1

B7. BID

B7.1 The Bidder shall complete Form A: Bid, making all required entries.

B7.2 Paragraph 2 of Form A: Bid shall be completed in accordance with the following requirements:

- (a) if the Bidder is a sole proprietor carrying on business in his own name, his name shall be inserted;
- (b) if the Bidder is a partnership, the full name of the partnership shall be inserted;
- (c) if the Bidder is a corporation, the full name of the corporation shall be inserted;

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

B7.2.1 If a Bid is submitted jointly by two or more persons, each and all such persons shall identify themselves in accordance with B7.2.

B7.3 In Paragraph 3 of Form A: Bid, the Bidder shall identify a contact person who is authorized to represent the Bidder for purposes of the Bid.

B7.4 Paragraph 12 of Form A: Bid shall be signed in accordance with the following requirements:

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

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

B7.5 If a Bid is submitted jointly by two or more persons, the word "Bidder" shall mean each and all such persons, and the undertakings, covenants and obligations of such joint Bidders in the Bid and the Contract, when awarded, shall be both joint and several.

B8. PRICES

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

B8.1.1 For the convenience of Bidders, and pursuant to B6.4.2 and B14.4.3, an electronic spreadsheet Form B: Prices in Microsoft Excel (.xls) format is available along with the Adobe PDF documents for this Bid Opportunity on the Bid Opportunities page at the Materials Management Division website at <http://www.winnipeg.ca/matmgt>

B8.2 The quantities listed on Form B: Prices are to be considered approximate only. The City will use said quantities for the purpose of comparing Bids.

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

B8.4 Prices from Non-Resident Bidders are subject to a Non-Resident Withholding Tax pursuant to the Income Tax Act (Canada).

B9. QUALIFICATION

B9.1 The Bidder shall:

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

- B9.2 The Bidder and any proposed Subcontractor (for the portion of the Work proposed to be subcontracted to them) shall:
- (a) be responsible and not be suspended, debarred or in default of any obligations to the City. A list of suspended or debarred individuals and companies is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/debar.stm>
- B9.3 The Bidder and/or any proposed Subcontractor (for the portion of the Work proposed to be subcontracted to them) shall:
- (a) have successfully carried out work similar in nature, scope and value to the Work; and
 - (b) be fully capable of performing the Work required to be in strict accordance with the terms and provisions of the Contract; and
 - (c) have a written workplace safety and health program if required pursuant to The Workplace Safety and Health Act (Manitoba);
- B9.4 Further to B9.3(c), the Bidder shall, within 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>)
- B9.5 The Bidder shall submit, within three (3) Business Days of a request by the Contract Administrator, proof satisfactory to the Contract Administrator of the qualifications of the Bidder and of any proposed Subcontractor.
- B9.6 The Bidder shall provide, on the request of the Contract Administrator, full access to any of the Bidder's equipment and facilities to confirm, to the Contract Administrator's satisfaction, that the Bidder's equipment and facilities are adequate to perform the Work.

B10. BID SECURITY

- B10.1 The Bidder shall provide bid security in the form of:
- (a) a bid bond, in the amount of at least ten percent (10%) of the Total Bid Price, and agreement to bond of a company registered to conduct the business of a surety in Manitoba, in the form included in the Bid Submission (Form G1: Bid Bond and Agreement to Bond); or
 - (b) an irrevocable standby letter of credit, in the amount of at least ten percent (10%) of the Total Bid Price, and undertaking issued by a bank or other financial institution registered to conduct business in Manitoba and drawn on a branch located in Winnipeg, in the form included in the Bid Submission (Form G2: Irrevocable Standby Letter of Credit and Undertaking); or
 - (c) a certified cheque or draft payable to "The City of Winnipeg", in the amount of at least fifty percent (50%) of the Total Bid Price, drawn on a bank or other financial institution registered to conduct business in Manitoba.
- B10.1.1 If the Bidder submits alternative bids, the bid security shall be in the amount of the specified percentage of the highest Total Bid Price submitted.
- B10.1.2 All signatures on bid securities shall be original.
- B10.1.3 The Bidder shall sign the Bid Bond.

- B10.1.4 The Surety shall sign and affix its corporate seal on the Bid Bond and the Agreement to Bond.
- B10.2 The bid security of the successful Bidder and the next two lowest evaluated responsive and responsible Bidders will be released by the City when a Contract for the Work has been duly executed by the successful Bidder and the performance security furnished as provided herein. The bid securities of all other Bidders will be released when a Contract is awarded.
- B10.2.1 Where the bid security provided by the successful Bidder is in the form of a certified cheque or draft pursuant to B10.1(c), it will be deposited and retained by the City as the performance security and no further submission is required.
- B10.2.2 The City will not pay any interest on certified cheques or drafts furnished as bid security or subsequently retained as performance security.
- B10.3 The bid securities of all Bidders will be released by the City as soon as practicable following notification by the Contract Administrator to the Bidders that no award of Contract will be made pursuant to the Bid Opportunity.

B11. OPENING OF BIDS AND RELEASE OF INFORMATION

- B11.1 Bids will be opened publicly, after the Submission Deadline has elapsed, in the office of the Corporate Finance Department, Materials Management Division, or in such other office as may be designated by the Manager of Materials.
- B11.1.1 Bidders or their representatives may attend.
- B11.1.2 Bids determined by the Manager of Materials, or his designate, to not include the bid security specified in B10 will not be read out.
- B11.2 Following the submission deadline, the names of the Bidders and their Total Bid Prices (unevaluated, and pending review and verification of conformance with requirements) will be available on the Closed Bid Opportunities (or Public/Posted Opening & Award Results) page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt>
- B11.3 After award of Contract, the name(s) of the successful Bidder(s) and the Contract Amount(s) will be available on the Closed Bid Opportunities (or Public/Posted Opening & Award Results) page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt>
- B11.4 The Bidder is advised that any information contained in any Bid may be released if required by City policy or procedures, by The Freedom of Information and Protection of Privacy Act (Manitoba), by other authorities having jurisdiction, or by law.

B12. IRREVOCABLE BID

- B12.1 The Bid(s) submitted by the Bidder shall be irrevocable for the time period specified in Paragraph 11 of Form A: Bid.
- B12.2 The acceptance by the City of any Bid shall not release the Bids of the next two lowest evaluated responsive Bidders and these Bidders shall be bound by their Bids on such Work until a Contract for the Work has been duly executed and the performance security furnished as herein provided, but any Bid shall be deemed to have lapsed unless accepted within the time period specified in Paragraph 11 of Form A: Bid.

B13. WITHDRAWAL OF BIDS

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

- B13.1.1 Notwithstanding C23.3, the time and date of receipt of any notice withdrawing a Bid shall be the time and date of receipt as determined by the Manager of Materials.
- B13.1.2 The City will assume that any one of the contact persons named in Paragraph 3 of Form A: Bid or the Bidder's authorized representatives named in Paragraph 12 of Form A: Bid, and only such person, has authority to give notice of withdrawal.
- B13.1.3 If a Bidder gives notice of withdrawal prior to the Submission Deadline, the Manager of Materials will:
- (a) retain the Bid until after the Submission Deadline has elapsed;
 - (b) open the Bid to identify the contact person named in Paragraph 3 of Form A: Bid and the Bidder's authorized representatives named in Paragraph 12 of Form A: Bid; and
 - (c) if the notice has been given by any one of the persons specified in B13.1.3(b), declare the Bid withdrawn.
- B13.2 A Bidder who withdraws his Bid after the Submission Deadline but before his Bid has been released or has lapsed as provided for in B12.2 shall be liable for such damages as are imposed upon the Bidder by law and subject to such sanctions as the Chief Administrative Officer considers appropriate in the circumstances. The City, in such event, shall be entitled to all rights and remedies available to it at law, including the right to retain the Bidder's bid security.

B14. EVALUATION OF BIDS

- B14.1 Award of the Contract shall be based on the following bid evaluation criteria:
- (a) compliance by the Bidder with the requirements of the Bid Opportunity, or acceptable deviation therefrom (pass/fail);
 - (b) qualifications of the Bidder and the Subcontractors, if any, pursuant to B9 (pass/fail);
 - (c) Total Bid Price;
 - (d) economic analysis of any approved alternative pursuant to B5.
- B14.2 Further to B14.1(a), the Award Authority may reject a Bid as being non-responsive if the Bid is incomplete, obscure or conditional, or contains additions, deletions, alterations or other irregularities. The Award Authority may reject all or any part of any Bid, or waive technical requirements or minor informalities or irregularities, if the interests of the City so require.
- B14.3 Further to B14.1(b), the Award Authority shall reject any Bid submitted by a Bidder who does not demonstrate, in his Bid or in other information required to be submitted, that he is responsible and qualified.
- B14.4 Further to B14.1(c), the Total Bid Price shall be the sum of the quantities multiplied by the unit prices for each item shown on Form B: Prices.
- B14.4.1 If there is any discrepancy between the Total Bid Price written in figures, the Total Bid Price written in words and the sum of the quantities multiplied by the unit prices for each item, the sum of the quantities multiplied by the unit prices for each item shall take precedence.
- B14.4.2 Further to B14.1(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.
- B14.4.3 The electronic Form B: Prices and the formulas imbedded in that spreadsheet are only provided for the convenience of Bidders. The City makes no representations or warranties as to the correctness of the imbedded formulas. It is the Bidder's responsibility to ensure the extensions of the unit prices and the sum of Total Bid Price performed as a function of the formulas within the electronic Form B: Prices are correct.

B15. AWARD OF CONTRACT

- B15.1 The City will give notice of the award of the Contract or will give notice that no award will be made.
- B15.2 The City will have no obligation to award a Contract to a Bidder, even though one or all of the Bidders are determined to be responsible and qualified, and the Bids are determined to be responsive.
- B15.2.1 Without limiting the generality of B15.2, the City will have no obligation to award a Contract where:
- (a) the prices exceed the available City funds for the Work;
 - (b) the prices are materially in excess of the prices received for similar work in the past;
 - (c) the prices are materially in excess of the City's cost to perform the Work, or a significant portion thereof, with its own forces;
 - (d) only one Bid is received; or
 - (e) in the judgment of the Award Authority, the interests of the City would best be served by not awarding a Contract.
- B15.3 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 B14.
- B15.3.1 Following the award of contract, a Bidder will be provided with information related to the evaluation of his Bid upon written request to the Contract Administrator.

PART C - GENERAL CONDITIONS

C0. GENERAL CONDITIONS

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

PART D - SUPPLEMENTAL CONDITIONS

GENERAL

D1. GENERAL CONDITIONS

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

D2. SCOPE OF WORK

D2.1 The Work to be done under the Contract shall consist of:

- (a) Pavement Rehabilitation
 - (i) Rue Aubert from Rue St. Joseph to Rue Langevin
 - (ii) Cottonwood Road from Rue Archibald to Autumnwood Drive
 - (iii) Parkville Drive from Weaver Bay to Pullbery Street
- (b) Crack and Seating
 - (i) Doucet Street – Dufresne Avenue to Rue Archiblad
 - (ii) Chesterfield Avenue – Dakota Street to St. Mary's Road
 - (iii) Berrydale Avenue – St. David Road to St. George Road

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

- (a) Pavement Rehabilitation
 - (i) Planing of existing asphalt
 - (ii) Complete pavement patching
 - (iii) Renewal of existing curb
 - (iv) Renewal of existing sidewalk
 - (v) Partial depth patching
 - (vi) Adjustment of inlets and manholes and water valves
 - (vii) Installation of catch pits and connecting pipe
 - (viii) Installation of sub-drains
 - (ix) Placement of asphalt overlay (average thickness – 90mm)
 - (x) Boulevard Restoration
- (b) Crack and Seating of Existing Concrete Pavement
 - (i) Crack and seat existing pavement
 - (ii) Saw cut full depth at approaches and intersections
 - (iii) Remove existing curb in accordance with SD-206A, Alternative 1.
 - (iv) Complete sidewalk renewal
 - (v) Complete Pavement Patching
 - (vi) Installation of catch pits and connection pipe
 - (vii) Installation of sub-drains
 - (viii) Construct curb utilizing slip-form paving equipment
 - (ix) Complete curb renewal at intersections
 - (x) Placement of asphalt overlay complete with moisture/stress absorption fabric (average thickness – 90mm)
 - (xi) Boulevard Resoration

D3. CONTRACT ADMINISTRATOR

D3.1 The Contract Administrator is Stantec Consulting Ltd., represented by:

Vilko Maroti, P.Eng.
Senior Transportation Engineer
905 Waverley St.
Winnipeg, MB R3T 5P4
Telephone No. (204) 928-8834
Facsimile No. (204) 453-9012

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

D4. CONTRACTOR'S SUPERVISOR

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

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

D5. NOTICES

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

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

D5.3 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 shall be prepared and submitted in the format shown in the City's template which is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management 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, broad form property damage cover and products and completed operations, to remain in place at all times during the performance of the Work and throughout the warranty period;
 - (b) automobile liability insurance for owned automobiles used for or in connection with the Work in the amount of at least two million dollars (\$2,000,000.00) at all times during the performance of the Work and until the date of Total Performance;
 - (c) an all risks Installation Floater carrying adequate limits to cover all machinery, equipment, supplies and/or materials intended to enter into and form part of any installation.
- D9.2 Deductibles shall be borne by the Contractor.
- D9.3 The Contractor shall provide the City Solicitor with a certificate(s) of insurance, in a form satisfactory to the City Solicitor, at least two (2) Business Days prior to the commencement of any Work but in no event later than the date specified in the C4.1 for the return of the executed Contract.
- D9.4 The Contractor shall not cancel, materially alter, or cause each policy to lapse without providing at least 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 If the bid security provided in his Bid was not a certified cheque or draft pursuant to B10.1(c), the Contractor shall provide the City Solicitor with the required performance security within seven (7) Calendar Days of notification of the award of the Contract by way of letter of intent and prior to the commencement of any Work on the Site and in no event later than the date specified in the C4.1 for the return of the executed Contract.

D11. SUBCONTRACTOR LIST

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

D12. EQUIPMENT LIST

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

D13. DETAILED WORK SCHEDULE

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

SCHEDULE OF WORK

D14. COMMENCEMENT

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

- D14.2 The Contractor shall not commence any Work on the Site until:
- (a) the Contract Administrator has confirmed receipt and approval of:
 - (i) evidence of authority to carry on business specified in D7;
 - (ii) evidence of the workers compensation coverage specified in C6.15;
 - (iii) the twenty-four (24) hour emergency response phone number specified in D4.2.
 - (iv) the Safe Work Plan specified in D8;
 - (v) evidence of the insurance specified in D9;
 - (vi) the performance security specified in D10;
 - (vii) the subcontractor list specified in D11;
 - (viii) the equipment list specified in D12;
 - (ix) the detailed work schedule specified in D13; 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.
- D14.3 The Contractor shall commence the Work on the Site within seven (7) Working Days of receipt of the letter of intent.
- D14.4 The Contractor shall not commence the Work on the Site before May 26, 2009, and no later than seven (7) days after the issuance of the Letter of Intent, as directed by the Contract Administrator and weather permitting. In addition, the Contractor shall not start sooner than the first (1st) Working Day or later than the sixth (6th) Working Days following the completion of the Watermain Renewal on Parkville Drive. The watermain renewal work on Parkville Drive is anticipated to begin in the beginning of July 2009 and completed in the end of July 2009.

D15. WORKING DAYS

- D15.1 Further to C1.1(gg);
- D15.1.1 The Contract Administrator will determine daily if a Working Day has elapsed and will record his assessment. On a weekly basis the Contract Administrator will provide the Contractor with a record of the Working Days assessed for the preceding week. The Contractor shall sign each report signifying that he agrees with the Contract Administrator's determination of the Working Days assessed for the report period.
- D15.1.2 Work done to restore the Site to a condition suitable for Work, shall not be considered "work" as defined in the definition of a Working Day.
- D15.1.3 When the Work includes two or more major types of Work that can be performed under different atmospheric conditions, the Contract Administrator shall consider all major types of Work in determining whether the Contractor was able to work in assessing Working Days.

D16. RESTRICTED WORK HOURS

- D16.1 Further to clause 3.10 of CW 1130, the Contractor shall require written permission forty-eight (48) hours in advance from the Contract Administrator for any work to be performed between 2000 hours and 0700 hours, or on Saturdays, Sundays, Statutory Holidays and or Civic Holidays.

D17. WORK BY OTHERS

- D17.1 Work by others on or near the Site will include but not necessarily be limited to:
- (a) Geomatics Services Branch of Property Planning and Development – Various work on survey monuments at various locations through the sites;
 - (b) Manitoba Hydro - Street lighting works on all streets as required and repairing any existing damaged cables.

- (c) Water and Waste Department performing watermain renewal work on Parkville Drive.

D18. SEQUENCE OF WORK

D18.1 Further to C6.1, the sequence of work shall comply with the following:

- D18.1.1 Providing that the Work on each street is completed in a similar order to the order that the Work was commenced in, the Contractor will be permitted to have a maximum of three (3) streets under construction at any one time. Completion of a street means that all of the necessary concrete, asphalt including approaches and landscaping Work is completed to the satisfaction of the Contract Administrator.
- D18.1.2 Where the Contractor utilizes two (2) or more crews that work independently on the same major component of the Work as identified in D2, the Contract Administrator may approve an increase to the maximum number of streets under construction at any time.
- D18.1.3 Placing the topsoil and finished grading of all boulevard and median areas shall be completed prior to commencing construction of asphaltic concrete overlays, including scratch courses.

D19. CRITICAL STAGES

- D19.1 The Contractor shall achieve critical stages of the Work in accordance with the following requirements:
- (a) Cottonwood Road shall commence after July 1st, 2009 and be completed by August 28th, 2009.
- D19.2 When the Contractor considers the Work associated with D19.1 to be completed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Completion. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be re-inspected.
- D19.3 The date on which the D19.1 Work has been accepted by the Contract Administrator as being completed to the requirements of the Contract is the date on which completion of D19.1 has been achieved.

D20. SUBSTANTIAL PERFORMANCE

- D20.1 The Contractor shall achieve Substantial Performance within sixty (60) consecutive Working Days of the commencement of the Work as specified in D14.
- D20.2 When the Contractor considers the Work to be substantially performed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Substantial Performance. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be re-inspected.
- D20.3 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.

D21. TOTAL PERFORMANCE

- D21.1 The Contractor shall achieve Total Performance within sixty-five (65) consecutive Working Days of the commencement of the Work as specified in D14.
- D21.2 When the Contractor or the Contract Administrator considers the Work to be totally performed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Total Performance. Any defects or deficiencies in the

Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be re-inspected.

- D21.3 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.

D22. LIQUIDATED DAMAGES

- D22.1 If the Contractor fails to achieve Substantial Performance or Total Performance in accordance with the Contract by the days fixed herein for same, the Contractor shall pay the City the following amounts per Working Day for each and every Working Day following the days fixed herein for same during which such failure continues:

- (a) Substantial Performance – Two thousand dollars (\$2000.00);
- (b) Total Performance – Five hundred dollars (\$500.00).

- D22.2 The amounts specified for liquidated damages in D22.1 are based on a genuine pre-estimate of the City's losses in the event that the Contractor does not achieve critical stages, Substantial Performance or Total Performance by the days fixed herein for same.

- D22.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

D23. SCHEDULED MAINTENANCE

- D23.1 The Contractor shall perform the following scheduled maintenance in the manner and within the time periods required by the Specifications:

- (a) Reflective Crack Maintenance (during the one year warranty period) as specified in CW3250-R7;
- (b) Maintenance of Sodding as specified in CW3510-R9;

- D23.2 Determination of Substantial Performance and Total Performance shall be exclusive of scheduled maintenance identified herein. All scheduled maintenance shall be completed prior to the expiration of the warranty period. Where the scheduled maintenance cannot be completed during the warranty period, the warranty period shall be extended for such period of time as it takes the Contractor to complete the scheduled maintenance.

CONTROL OF WORK

D24. JOB MEETINGS

- D24.1 Regular weekly job meetings will be held at Site. These meetings shall be attended by a minimum of one representative of the Contract Administrator, the City and one representative of the Contractor. Each representative shall be a responsible person capable of expressing the position of the Contract Administrator, the City and the Contractor respectively on any matter discussed at the meeting including the Work schedule and the need to make any revisions to the Work schedule. The progress of the Work will be reviewed at each of these meetings.

- D24.2 The Contract Administrator reserves the right to cancel any job meeting or call additional job meetings whenever he deems it necessary.

D25. PRIME CONTRACTOR – THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA)

- D25.1 Further to C6.24, the Contractor shall be the Prime Contractor and shall serve as, and have the duties of the Prime Contractor in accordance with The Workplace Safety and Health Act (Manitoba).

WARRANTY

D26. WARRANTY

- D26.1 Notwithstanding C13.2, the warranty period shall begin on the date of Total Performance and shall expire one (1) year thereafter, except where longer warranty periods are specified in the respective Specification sections, unless extended pursuant to C13.2.1 or C13.2.2, in which case it shall expire when provided for thereunder.
- D26.1.1 For the purpose of Performance Security, the warranty period shall be one (1) year.
- D26.2 Notwithstanding C13.2, the Contract Administrator may permit the warranty period for a portion or portions of the Work to begin prior to the date of Total Performance if a portion of the Work cannot be completed because of unseasonable weather or other conditions reasonably beyond the control of the Contractor but that portion does not prevent the balance of the Work from being put to its intended use.
- D26.2.1 In such case, the date specified by the Contract Administrator for the warranty period to begin shall be substituted for the date specified in C13.2 for the warranty period to begin.

FORM H1: PERFORMANCE BOND
(See D10)

KNOW ALL MEN BY THESE PRESENTS THAT

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

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

_____ dollars (\$_____)

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

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

BID OPPORTUNITY NO. 301-2009

PROVINCE OF MANITOBA/CITY OF WINNIPEG 2009 STREET RENEWAL:
RUE AUBERT, COTTONWOOD ROAD AND VARIOUS OTHER LOCATIONS
which is by reference made part hereof and is hereinafter referred to as the "Contract".

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

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

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

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

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

_____ day of _____, 20____.

SIGNED AND SEALED
in the presence of:

(Witness as to Principal if no seal)

(Name of Principal)

Per: _____ (Seal)

Per: _____

(Name of Surety)

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

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

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

(Date)

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

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

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

(Name of bank or financial institution)

Per: _____
(Authorized Signing Officer)

Per: _____
(Authorized Signing Officer)

FORM J: SUBCONTRACTOR LIST
(See D11)

PROVINCE OF MANITOBA/CITY OF WINNIPEG 2009 STREET RENEWAL:
RUE AUBERT, COTTONWOOD ROAD AND VARIOUS OTHER LOCATIONS

<u>Portion of the Work</u>	<u>Name</u>	<u>Address</u>
SURFACE WORKS:		
<i>Supply of Materials:</i>		
Geotextile Fabrics		
Moisture Barrier/stress Absorption Geotextile Fabric		
Crack and Seating		
Sub-base and Base Course		
Concrete		
Asphalt		
Joint Sealant		
<i>Installation/Placement:</i>		
Geotextile Fabrics		
Moisture Barrier/stress Absorption Geotextile Fabric		
Planing		
Pavement Removal/Excavation		
Sub-base and Base Course		
Concrete		
Asphalt		
Topsoil / Sod		
Joint Sealant		
UNDERGROUND WORKS:		
<i>Supply of Materials:</i>		
Precast Concrete Catch Pit/Catch Basin/Risers		
Catch Pit/Catch Basin/Manhole Frames, Covers, Boxes and Ring Sections		
Drainage Pipe/ Sewer Service Pipe/ Fittings		
Watermain Valve/service Boxes		
Subdrains		

FORM J: SUBCONTRACTOR LIST
(See D11)

PROVINCE OF MANITOBA/CITY OF WINNIPEG 2009 STREET RENEWAL:
RUE AUBERT, COTTONWOOD ROAD AND VARIOUS OTHER LOCATIONS

<u>Portion of the Work</u>	<u>Name</u>	<u>Address</u>
<i>Installation/Placement:</i>		
Precast Concrete Riser/Catch Pit/Catch Basin/Risers		
Catch Pit/Catch Basin/Manhole Frames, Covers, Boxes and Ring Sections		
Drainage Pipe/ Sewer Service Pipe/Fittings		
Watermain Valve/service Boxes		
Subdrains		

FORM K: EQUIPMENT
(See D12)

PROVINCE OF MANITOBA/CITY OF WINNIPEG 2009 STREET RENEWAL:
RUE AUBERT, COTTONWOOD ROAD AND VARIOUS OTHER LOCATIONS

1. Category/type: Slip Form Paver for Curbing

Make/Model/Year: _____ Serial No.: _____

Registered owner: _____

Make/Model/Year: _____ Serial No.: _____

Registered owner: _____

Make/Model/Year: _____ Serial No.: _____

Registered owner: _____

2. Category/type: Asphalt Paving

Make/Model/Year: _____ Serial No.: _____

Registered owner: _____

Make/Model/Year: _____ Serial No.: _____

Registered owner: _____

Make/Model/Year: _____ Serial No.: _____

Registered owner: _____

3. Category/type: Crack and Seal Equipment

Make/Model/Year: _____ Serial No.: _____

Registered owner: _____

Make/Model/Year: _____ Serial No.: _____

Registered owner: _____

Make/Model/Year: _____ Serial No.: _____

Registered owner: _____

FORM K: EQUIPMENT
(See D12)

PROVINCE OF MANITOBA/CITY OF WINNIPEG 2009 STREET RENEWAL:
RUE AUBERT, COTTONWOOD ROAD AND VARIOUS OTHER LOCATIONS

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

PART E - SPECIFICATIONS

GENERAL

E1. APPLICABLE SPECIFICATIONS AND DRAWINGS

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

<u>Drawing No.</u>	<u>Drawing Name/Title</u>	<u>Drawing (Original) Sheet Size</u>
F-0 8808	Cover Sheet and Drawing List Cypress Bay (East and West legs) MH @ Cottonwood Rd to 1 st MH N of Cottonwood Rd 200 CS & 250 LDS Point Repairs	11x17 A3
8809	Ducet Street MH @ Dufresne Av to 1 st MH E of Dufresne Av 300 CS Point Repairs	A3
LD-5346	Chesterfield Avenue 1 st Set of CBC S of Dakota St 200 CB Lead Repair	A3
F-1	Aubert Avenue – Rue St. Joseph to Autumnwood Drive	Letter
F-2	Cottonwood Road – Rue Archibald to Autumnwood Drive	11x17
F-3	Doucet Street – Dufresne Avenue to Rue Archibald	Letter
F-4	Berrydale Avenue – St. David Road to St. George Road	Letter
F-5	Chesterfield Avenue – Dakota Street to St. Mary's Road	Letter
F-6	Parkville Drive – Weaver Bay to Pullberry Street	Letter

E2. OFFICE FACILITIES

- E2.1 The Contractor shall supply office facilities meeting the following requirements:
- The field office shall be for the exclusive use of the Contract Administrator.
 - The building shall be conveniently located near the site of the Work.
 - The building shall have a minimum floor area of 20 square metres, a height of 2.4m with two windows for cross ventilation and a door entrance with a suitable lock.
 - The building shall be suitable for all weather use. It shall be equipped with a heater and air conditioner so that the room temperature can be maintained between either 16-18°C or 24-25°C.
 - The building shall be adequately lighted with fluorescent fixtures and have a minimum three wall outlets.
 - The building shall be furnished with two desks, one drafting table, table 3m X 1.2m, one stool, one four drawer legal size filing cabinet, and a minimum of 8 chairs.

- (g) A portable toilet shall be located near the field office building. The toilet shall have a locking door and be for the exclusive use of the Contract Administrator and other personnel from the City.
- (h) The field office building and the portable toilet shall be cleaned on a weekly basis immediately prior to each site meeting. The Contract Administrator may request additional cleaning when he deems it necessary.

- E2.2 The Contractor shall be responsible for all installation and removal costs, all operating costs, and the general maintenance of the office facilities.
- E2.3 The office facilities will be provided from the date of the commencement of the Work to the date of Substantial Performance.
- E2.4 On a one time basis, where directed by the Contract Administrator, the Contractor shall relocate the office facilities to a location more convenient for the remaining Work.

E3. PROTECTION OF EXISTING TREES

- E3.1 The Contractor shall take the following precautionary steps to prevent damage from construction activities to existing boulevard trees within the limits of the construction area:
 - (a) The Contractor shall not stockpile materials and soil or park vehicles and equipment on boulevards within 2 metres of trees.
 - (b) Trees identified to be at risk by the Contract Administrator are to be strapped with 25 x 100 x 2400mm wood planks, or suitably protected as approved by the Contract Administrator.
 - (c) Excavation shall be performed in a manner that minimizes damage to the existing root systems. Where possible, excavation shall be carried out such that the edge of the excavation shall be a minimum of 1.5 times the diameter (measured in inches), with the outcome read in feet, from the closest edge of the trunk. Where roots must be cut to facilitate excavation, they shall be pruned neatly at the face of excavation.
 - (d) Operation of equipment within the dripline of the trees shall be kept to the minimum required to perform the work required. Equipment shall not be parked, repaired, refuelled; construction materials shall not be stored, and earth materials shall not be stockpiled within the driplines of trees. The dripline of a tree shall be considered to be the ground surface directly beneath the tips of its outermost branches. The Contractor shall ensure that the operations do not cause flooding or sediment deposition on areas where trees are located.
 - (e) Work on-site shall be carried out in such a manner so as to minimize damage to existing tree branches. Where damage to branches does occur, they shall be neatly pruned.
- E3.2 All damage to existing trees caused by the Contractor's activities shall be repaired to the requirements and satisfaction of the Contract Administrator and the City Forester or his designate.
- E3.3 No separate measurement or payment will be made for the protection of trees.
- E3.4 Except as required in clause E3.1(c) and E3.1(e), Elm trees shall not be pruned at any time between April 1 and July 31.

E4. TRAFFIC CONTROL

- E4.1 Further to clauses 3.6 and 3.7 of CW 1130-R1:
 - (a) Where directed, the Contractor shall construct and maintain temporary asphalt ramps to alleviate vertical pavement obstructions such as manholes and planing drop-offs to the satisfaction of the Contract Administrator. Payment shall be in accordance with CW3410.
 - (b) In accordance with the Manual of Temporary Traffic Control, the Contractor ("Agency" in the manual) shall make arrangements with the Traffic Services Section of the City of Winnipeg to place all temporary regulatory signs. The Contractor shall bear all costs

associated with the placement of temporary traffic control devices by the Traffic Services Section of the City of Winnipeg in connection with the works undertaken by the Contractor.

E5. TRAFFIC MANAGEMENT

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

E5.1.1 The Contractor shall schedule construction activities to meet the following:

- (a) All Streets, under this Residential Street Package, will be closed to through traffic. Local access and/or bus traffic shall be maintained. The Contractor shall sign the street "Road Closed Local Access Only" in accordance with the Manual of Temporary Traffic Control.
- (b) All Streets, under this Residential Street Package intersecting street and private approach access shall be maintained at all times.

E5.1.2 Should the Contractor be unable to maintain an existing access to a residence or business, he shall review the planned disruption with the business or residence and the Contract Administrator, and take reasonable measures to minimize the impact. The Contractor shall provide a minimum of 24 hours notification to the affected residence or business and the Contract Administrator, prior to disruption of access.

E5.1.3 Pedestrian and ambulance/emergency vehicle access must be maintained at all times.

E6. REFUSE AND RECYCLING COLLECTION

E6.1 While access to refuse and/or recycling collection vehicles is restricted, on collection day(s) the Contractor shall move all of the affected property owners refuse and/or recycling materials to a nearby common area, prior to an established time, in accordance with E6.2 to permit the normal collection vehicles to collect the materials. Immediately following recycling collection the Contractor shall return recycling receptacles to the addresses marked on the receptacles.

E6.2 Collection Schedule:

Rue Aubert from Rue St. Joseph to Rue Langevin

Collection Day(s): **5**

Collection Time: **7.00am**

Common Collection Area: **Back Lane**

Cottonwood Road from Rue Archibald to Autumnwood Drive

Collection Day(s): **4**

Collection Time: **7.00am**

Common Collection Area: **No collection on Cottonwood, but access will be required to all side streets in this area.**

Doucet Street from Dufresne Avenue to Rue Archibald

Collection Day(s): **5**

Collection Time: **7.00am**

Common Collection Area: **Back Lane**

Berrydale Avenue from St. David Road to St. George Road t

Collection Day(s): **5**

Collection Time: **7.00am**

Common Collection Area: **Northeast corner of Berrydale Avenue and St. David Road**

Chesterfield Avenue from Dakota Street to St. Mary's Road

Collection Day(s): **5**

Collection Time: **7.00am**

Common Collection Area: **Collection along St. Mary's Road and Monday/Thursday apartment collection on Chesterfield Avenue.**

Parkville Drive from Weaver Bay to Pullberry Street

Collection Day(s): **5**

Collection Time: **7.00am**

Common Collection Area: **Northwest corner of Parkville Drive and Pullberry Stree**

E6.3 No measurement or payment will be made for the work associated with this specification.

E7. PEDESTRIAN SAFETY

E7.1 During the project, a temporary snow fence shall be installed at open excavations to replace CB's or make connections that are adjacent to pedestrian facilities. The Contractor shall be responsible for maintaining the snow fence in a proper working condition. No measurement for payment shall be made for this work.

E8. WATER USED BY CONTRACTOR

E8.1 Further to clause 3.7 of CW 1120-R1, the Contractor shall pay for all costs associated with obtaining water in accordance with the Waterworks By-law. Sewer charges will not be assessed for water obtained from a hydrant.

E9. SURFACE RESTORATIONS

E9.1 Further to clause 3.3 of CW 1130-R1, when Total Performance is not achieved in the year the Contract is commenced, the Contractor shall temporarily repair any Work commenced and not completed to the satisfaction of the Contract Administrator. The Contractor shall maintain the temporary repairs in a safe condition as determined by the Contract Administrator until permanent repairs are completed. The Contractor shall bear all costs associated with temporary repairs and their maintenance.

E10. INFRASTRUCTURE SIGNS

E10.1 The Contractor shall obtain infrastructure signs from the Traffic Services Sign Shop at 421 Osborne Street. The Contractor shall mount each sign securely to a rigid backing material approved by the Contract Administrator. The Contractor shall fasten each sign to a suitable support and erect and maintain one sign at each street as directed by the Contract Administrator. When the Contract Administrator considers the Work on the street complete, the Contractor shall remove and dispose of the signs and supports. No measurement for payment will be made for performing all operations herein described and all other items incidental to the work described

E11. COORDINATION OF CONSTRUCTION WITH THE RAILWAY COMPANIES

E11.1 General Requirements

E11.1.1 The Contractor shall be responsible to meet all railway companies, Canadian Pacific Railway (CP), constraints, requirements, and safety measures.

E11.2 Description of Work

E11.2.1 The Contractor shall construct the sidewalk and road renewals on Cottonwood Road as per the Contract Documents up to the CP right of way. CP shall be notified one week prior to the commencement of any construction activity within the affected defined proximity of the track crossing as identified in Appendix 'B'.

E11.3 Railway Flagging Costs

E11.3.1 The railway companies will provide a Protecting Foreman for the protection of the railway's plant and equipment and the cost of such shall be borne by the Contractor. No measurement for payment will be made for performing all operations herein described and all other items incidental to the Work described.

E11.3.2 CP shall be contacted one week prior to the date where a Protecting Foreman is required.

E11.4 CP Requirements

E11.4.1 CP Requirements are included in Appendix 'B'. The Contractor is advised that the requirements are applicable to all of the Contractor's personnel and equipment crossing CP tracks and property.

E11.5 Working Within the Rail Right-of-Way

E11.5.1 The Contractor shall minimize the time working within the rail right-of-way. The Contractor shall only enter the right away for;

- (a) Construction of the pavement and related works adjacent to the rail and only if required;
- (b) Working with CP within the right-of-way.

E12. CRACK AND SEATING OF EXISTING CONCRETE PAVEMENT

DESCRIPTION

E12.1 General

E12.1.1 This specification covers the crack and seating of existing concrete pavements.

E12.2 Definitions

E12.2.1 Proof Rolling – applying of a dynamic load to a concrete pavement with the intent of cracking and embedding the cracked concrete into the existing base.

E12.3 Referenced Standard Construction Specifications

- (a) CW 3110 – Sub-Grade, Sub-Base and Base Course Construction.
- (b) CW 3310 – Portland Cement Concrete Pavement Works

E12.4 Referenced Standard Details

- (a) SD-206A – Barrier Curb Replacement.

CONSTRUCTION METHODS

E12.5 Curb Removal and Saw-Cutting

E12.5.1 Remove curb in accordance with SD-206A, Alternative 1.

- E12.5.2 Saw cut full depth at approaches and intersections to isolate approaches and intersections from pavement to be cracked and sealed. Saw cut full depth along longitudinal joint.
- E12.6 Crack and Seating
- E12.6.1 The equipment for the crack and seating will be a roller having a single axle, unless approved otherwise by the Contract Administrator.
- E12.6.2 The single axle roller will have a maximum of four (4) pneumatic tire wheels and the wheels will be evenly spaced in one line across the width of the roller and be arranged so that each wheel will carry an approximate equal load when operated over an uneven surface. The centre-to-centre spacing between adjacent wheels will not exceed 800 millimetres. The roller equipment will have a suitable body for ballast loading with a minimum capacity of 40 tonnes and the ability to add additional ballast to a maximum capacity of 60 tonnes.
- E12.6.3 Complete initial proof rolling of the concrete pavement with the equipment specified in accordance with clauses E11.6.2 of this specification.
- E12.6.4 Complete passes as necessary to ensure that the equipment has contacted the entire pavement surface.
- E12.6.5 Undertake second proof rolling as directed by the Contract Administrator.
- E12.6.6 Loading requirements for each proof rolling will be identified by the Contract Administrator.
- E12.6.7 Avoid proof rolling areas of instability. Remove existing concrete pavement in areas of instability in accordance with the drawings and with Section 3.1 of CW3110.
- E12.6.8 One rolling cycle will consist of two complete proof rolling applications to the pavement surface.
- E12.6.9 Complete partial depth saw-cuts at 2/3 the depth of the existing concrete pavement at locations as directed by the Contract Administrator.
- E12.6.10 Complete additional rolling cycles and partial depth saw-cuts until the existing concrete pavement has been cracked to a minimum of 300 millimetres to a maximum of 600 millimetres pieces and the pavement has been seated into the sub-base, as directed by the Contract Administrator.
- E12.6.11 Install curb in accordance with SD-206A, Alternative 1.

MEASUREMENT AND PAYMENT

- E12.7 Crack and Seating Pavement
- E12.7.1 Crack and seating of existing concrete pavement will be measured on an area basis and paid for at the Contract Unit Price per square metre for "Crack and Seating Pavement". The area to be paid for will be the total number of square metres of existing concrete pavement cracked and seated in accordance with this specification, accepted and measured by the Contract Administrator.
- E12.7.2 Additional rolling cycles will be measured and paid in accordance with this specification.
- E12.7.3 Saw-cutting of the existing concrete pavement along the longitudinal joint and at approaches and intersections will be included in the payment for "Cracking and Seating Pavement".
- E12.8 Partial Depth Saw-Cutting
- E12.8.1 Partial depth saw-cutting will be measured on a length basis and paid for at the Contract Unit Price per metre for "Partial Depth Saw-Cutting". The length to be paid for will be the total number of metres of existing concrete pavement saw-cut in accordance with this specification, accepted and measured by the Contract Administrator.
- E12.9 Curb Renewal

E12.9.1 Curb Renewal will be paid in accordance with CW 3240.

E13. SUPPLY AND INSTALLATION OF MOISTURE BARRIER/STRESS ABSORPTION GEOTEXTILE FABRIC

DESCRIPTION

E13.1 General

E13.1.1 This specification covers the supply and installation of Moisture Barrier/Stress Absorption Geotextile.

E13.1.2 Referenced Standard Construction Specifications

(a) CW 3130 – Supply and Installation of Geotextile Fabrics.

(b) CW 3410 – Asphaltic Concrete Pavement Works.

MATERIALS

E13.2 Mill Certificate and Bill of Lading

E13.2.1 Provide mill certificate and bill of lading in accordance with Section 2 of CW 3130.

E13.3 Storage and Handling

E13.3.1 Store and handle material in accordance with Section 2 of CW 3130.

E13.4 Moisture Barrier/Stress Absorption Geotextile Fabric

E13.4.1 Geotextile fabric will be non-woven.

E13.4.2 All physical property requirements are minimum average roll values determined in accordance with ASTM 4759. The moisture barrier/stress absorption geotextile fabric will meet or exceed the standards as follows:

PROPERTY	STANDARD	TEST METHOD
Grab Tensile Strength	0.40 kN	ASTM D4632
Grab Elongation	50%	ASTM D4632
Mullen Burst	1240 kPa	ASTM D3786

E13.4.3 Acceptable products will be Amoco-Petromat 4599, MIRAFI MIRAPAVE 400, NILEX-9W99 or an approved equal.

E13.5 Tack Coat

E13.5.1 Tack coat will be 150 – 200 asphalt cement supplied in accordance with Clause 5.4.2 of CW 3410.

CONSTRUCTION METHODS

E13.6 General

E13.6.1 Install moisture barrier/stress absorption geotextile fabric at the locations as shown on the Drawings or as directed by the Contract Administrator.

E13.6.2 Proceed with installation upon completion and acceptance of the asphalt levelling course.

E13.6.3 Ensure pavement surface is clean and free of all dirt, water, oil or foreign materials.

E13.6.4 Apply tack coat with a distribution truck in accordance with manufacturer's specifications and recommendations. Ensure uniform coverage of entire pavement surface.

- E13.6.5 Install geotextile fabric in accordance with the manufacturer's specifications and recommendations.
- E13.6.6 Only construction equipment required to place the final asphalt surface course will be allowed to travel on the exposed geotextile fabric.
- E13.6.7 Replace damaged or improperly placed geotextile fabric.
- E13.6.8 All fabric installed must be covered with asphalt the same day.
- E13.6.9 Commence placement of asphalt material after the fabric has been placed over the full width of the pavement surface and accepted by the Contract Administrator.
- E13.6.10 Ensure temperature of asphalt material does not exceed the melting point of the fabric.

MEASUREMENT AND PAYMENT

- E13.7 Moisture Barrier/Stress Absorption Geotextile Fabric
 - E13.7.1 Supply and installation of Moisture Barrier/Stress Absorption Geotextile Fabric will be measured on an area basis and paid for at the Contract Unit Price per square metre for "Moisture Barrier/Stress Absorption Geotextile Fabric". The area to be paid for will be the total number of square metres of geotextile fabric supplied and installed in accordance with this specification, accepted and measured by the Contract Administrator.
 - E13.7.2 The supply and application of the tack coat will be included in the payment for "Moisture Barrier/Stress Absorption Geotextile Fabric".

E14. PATCHING OF EXISTING PAVEMENT

DESCRIPTION

- E14.1 General
 - E14.1.1 This specification covers patching of existing concrete pavement in preparation for an asphalt overlay.
 - E14.1.2 Referenced Standard Construction Specifications
 - (a) CW 3110 – Sub-Grade, Sub-Base and Base Course Construction.
 - (b) CW 3130 – Supply and Installation of Geotextile Fabrics.
 - (c) CW 3410 – Asphaltic Concrete Pavement Works.

MATERIALS

- E14.2 Crushed Sub-Base Material
 - E14.2.1 Crushed Sub-base material will have a maximum aggregate size of 50 millimetre and be supplied in accordance with Section 2.1 of CW 3110.
- E14.3 Geotextile Fabric
 - E14.3.1 Geotextile fabric will be supplied in accordance with Section 2 of CW 3130.
- E14.4 Asphalt Material
 - E14.4.1 Asphalt material will be Type 1A and will be supplied in accordance with Sections 5 and 6 of CW 3410.

CONSTRUCTION METHODS

E14.5 General

- E14.5.1 Remove existing concrete pavement to a minimum width of 1.5 metres at locations as shown on the Drawings or as directed by the Contract Administrator in accordance with Section 3.1 of Specification CW 3110.
- E14.5.2 Excavate to a depth of 350 millimetres below the top of the existing pavement.
- E14.5.3 Compact existing sub-grade to a minimum of 95% Standard Proctor Density.
- E14.5.4 Place separation/reinforcement geotextile fabric in accordance with Specification CW 3130.
- E14.5.5 Place and compact crushed sub-base material in accordance with CW 3110 to a 300 millimetres compacted depth. Compact to a minimum of 100% Standard Proctor Density.
- E14.5.6 Place and compact asphalt material to a 50 millimetres compacted depth matching the top of the existing concrete pavement. Compact to an average of 95% percent of the 75 Blow Marshall Density of the paving mixture with no individual test being less than 90% percent.
- E14.5.7 Each layer must be levelled and accepted by the Contract Administrator before the succeeding layer may be placed.
- E14.5.8 Additional excavation and placement of sub-base material beyond the identified pavement structure will be completed in accordance with CW 3110 as directed by the Contract Administrator.

MEASUREMENT AND PAYMENT

E14.6 Pavement Patching

- E14.6.1 Pavement patching will be measured on an area basis and paid for at the Contract Unit Price per square metre for "Pavement Patching". The area to be paid for will be the total number of square metres of pavement patched in accordance with this specification, accepted and measured by the Contract Administrator.

E15. RECYCLED CONCRETE BASE COURSE MATERIAL

DESCRIPTION

E15.1 General

- E15.1.1 Further to CW 3110, this specification covers supply and placement of recycled concrete base course material for Full-Depth Partial Slab Patches (Class A, B, C, & D), miscellaneous concrete slabs and sidewalks.

E15.2 Definitions

- E15.2.1 Deleterious material – are materials such as vegetation, organic material, wood, glass, plastic, metal, reinforcing steel, building rubble, brick, salvaged asphalt materials, clay, shale, and friable particles.

E15.3 Referenced Standard Construction Specifications

- (a) CW 3110 – Sub-Grade. Sub-Base and Base Course Construction.
- (b) CW 3230 – Full-Depth Patching of Existing Pavement Slabs and Joints.
- (c) CW 3235 – Renewal of Existing Miscellaneous Concrete Slabs.
- (d) CW 3325 – Portland Cement Concrete Sidewalk.

MATERIALS

E15.4 Recycled Concrete Base Course Material

E15.4.1 Recycled concrete base course material when used for Full-Depth Partial Slab Patches (Class A, B, C, & D), miscellaneous concrete slabs and sidewalks will be considered equal to granular or limestone base course material specified in Section 2.2 of CW 3110.

E15.4.2 Recycled concrete base course material will be approved by the Contract Administrator.

E15.4.3 Recycled concrete base course material will consist of sound durable particles produced by crushing, screening, and grading of recovered concrete materials, free from soft material that would disintegrate through decay or weathering.

E15.4.4 The recycled concrete base course material will be well graded and conform to the following grading requirements:

Recycled Concrete Base Course Material Grading Requirements

CANADIAN METRIC SIEVE SIZE	PERCENT OF TOTAL DRY WEIGHT PASSING EACH SIEVE
20 000	100%
5 000	40% - 70%
2 500	25% - 60%
315	8% - 25%
80	6% - 17%

E15.4.5 Recycled concrete base course material when subjected to the abrasion test will have a loss of not more than 35% when tested in accordance with grading B of ASTM C131, Test for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine.

E15.4.6 The amount of deleterious material will be limited to a maximum of two percent of the total dry weight.

CONSTRUCTION METHODS

E15.5 Placement of Recycled Concrete Base Course Material

E15.5.1 Place and compact recycled concrete base course material as a levelling course to a maximum thickness of 50 millimetres.

E15.5.2 Spread materials uniformly to avoid segregation free of pockets of fine and coarse material.

E15.5.3 Level and compact to the finished elevation. Compact to 100% Standard Proctor Density for Full-Depth Partial Slab Patches (Class A, B, C, & D) and 90% Standard Proctor Density for miscellaneous concrete slabs and sidewalks.

E15.5.4 Maintain the finished material until the pavement or sidewalk is placed.

MEASUREMENT AND PAYMENT

E15.6 Recycled Concrete Base Course Material

E15.6.1 The supplying, placing and compaction of recycled concrete base course material will be measured on a volume basis and paid for at the Contract Unit Price per cubic metre for the "Supplying and Placing Base Course Material" as specified in accordance with CW 3110.

E15.6.2 No measurement or payment will be made for material placed as a levelling course under miscellaneous concrete slabs and sidewalks where the costs are included in accordance with CW 3235 and CW 3325.

E15.6.3 No measurement or payment will be made for materials rejected by the Contract Administrator.

E16. DROP STRUCTURE MANHOLE EXTERNAL POINT REPAIR – CYPRESS BAY (WEST LEG) AT COTTONWOOD ROAD

E16.1 This specification covers the supply and installation of the drop structure manhole external point repair at Cypress Bay (West Leg) at Cottonwood Road.

E16.2 Reference Standard Construction Specification CW 2130.

E16.3 Measurement and Payment

E16.3.1 Unit price bid for “Sewer Repair – Up to 3 metres Long” will be payment for the installation of the External Point Repair including the connection to the existing drop pipe, tee, couplings, pipe, plug, concrete support and backfill.

APPENDIX 'A'

RAILWAY REQUIREMENTS

APPENDIX 'A' – RAILWAY REQUIREMENTS



**CANADIAN
PACIFIC
RAILWAY**

MINIMUM SAFETY REQUIREMENTS FOR CONTRACTORS WORKING ON RAILWAY PROPERTY

Calgary, July 1999

Engineer

Contractor

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Engineer

Contractor

SR1 INTRODUCTION

- 1.1 At Canadian Pacific Railway, Safety is an integral part of the way we do business. We expect everyone working on Canadian Pacific Railway's 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 its agents, employees and subcontractors.
- 2.2 The Contractor shall comply with all safety laws and regulations applicable to the work.
- 2.3 All Contractor's personnel, and those under contract to him, shall comply to the following safety requirements when working on the Railway's property and on the property of Railway's customers. The Contractor shall have a copy of the following documents on site at all times:
- 2.3.1 Canadian Pacific Railway's Minimum Safety Requirements for Contractors Working on Railway Property.
 - 2.3.2 Contractor's Safety Plan.
 - 2.3.3 Contractor's Emergency Information Sheet.
 - 2.3.4 Contractor's Safety Policy, Rules and Work Procedures.

SR3 PERSONAL ATTIRE

- 3.1 Clothing must be suitable to perform job functions safely, protect against hazards to the skin and be adequate for existing weather conditions. Shirts must be worn at all times, pants should be at least ankle length.

SR4 PERSONAL PROTECTIVE EQUIPMENT

- 4.1 All personal protective equipment shall be approved by the Canadian Standards Associations (CSA) or by the American National Standards Institute (ANSI).
- 4.2 The following mandatory protective equipment shall be supplied by the Contractor at his own expense; it shall be in good condition and be properly fitted.
 - 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 meet CSA Z195 Grade One, Green Triangle, or US ANSI Z41-83 standards. They must be laced and the laces must be tied securely to provide adequate support for the ankle, and have a minimum six inch high upper and a 5/8" heel measured from the sole.
 - 4.2.3 Safety eyeglasses with side shields shall be worn at all times except when alternate mandatory equipment is being used as prescribed in appended Table A.
 - 4.2.4 Hearing protectors shall be worn in all designated locations and also wherever noise level exceeds 85 decibels.
 - 4.2.5 Appropriate respirators shall be worn whenever work involving dust or fumes is performed.
 - 4.2.6 Fluorescent orange work wear with reflective striping shall be worn whenever work is being done in the vicinity of tracks, crossings and roadways, and in whatever areas used by moving vehicles or equipment, and in all other designated areas, except when fall protection or pole climbing equipment is being used.

SR5 PERSONAL CONDUCT

- 5.1 Entry upon Railway property when 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.
- 5.2 Possessing or using any drug or alcoholic beverage are prohibited when working on the Railway's property.

- 5.3 Smoking is prohibited in all buildings and in all areas where there is a risk of fire or explosion such as fueling stations.

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 use made of, any trackage of the Railway without approval by the project manager and then only under the direct supervision of a qualified Railway flagperson.
- 6.3 The Contractor shall, at all times, conduct his operation in a wholly responsible manner to avoid damage to the Railway'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.
- 6.5 Blue flag protection on tracks signifies Railway employees are on, under or between rolling-stock equipment. Blue flags are important safety devices and must not be touched or obstructed.
- 6.6 Only qualified personnel are permitted to operate switch, derail, electric locking mechanisms or other appliances. The Contractor shall keep equipment, material and personnel clear of these facilities at all times.
- 6.7 While railway traffic is passing through 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.
- 6.8 Construction equipment parked on Railway property on nights or weekends shall be secured in a safe position well clear of all tracks. 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.

- 6.9 Before starting excavation operations, the Contractor shall ascertain that there are no underground wires, fiber optic cables, pipelines or other facilities which could be damaged or that such installations are properly protected. Excavations shall not be left unattended unless they are properly protected; and the Railway supervisor shall be notified.
- 6.10 Fiber optic cables are present on most segments of the Railway's right-of-way. Prior to commencing any excavation, the Contractor shall contact the proper authority to locate and protect such cables.
- 6.11 Railway pole lines carry electric power and should be treated as any other power wires.
- 6.12 Any Contractor's personnel discovering a hazardous or potentially unsafe condition which may affect the safe passage of railway traffic must advise the Railway's flagperson(s) or site supervisor immediately.

SR7 TRAIN MOVEMENTS AND WORKING NEAR TRACKS

- 7.1 The Contractor's personnel shall be alert to train movement. Unless protected by a Railway flagperson, the Contractor's personnel shall expect the movement of trains, engines, cars, or other moveable equipment at any time, on any track, and in either direction, even cars on sidings that appear to be stationary or in storage. Personnel shall 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.
- 7.2 The Contractor's personnel shall never rely on others to protect them from train movement, unless while working under the direct supervision of a Railway flagperson. Personnel shall watch for themselves. The responsibility is theirs for safety on the railway.
- 7.3 The Contractor's personnel shall not stand on the track in front of an approaching engine, car or other equipment.
- 7.4 The Contractor's personnel shall be aware of the location of structures or obstructions where clearances are close.

- 7.5 The Contractor's personnel shall never 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.
- 7.6 Within the United States, "ON TRACK SAFETY" rules apply. This is a set of rules, developed and promulgated by the Federal Railroad Administration (FRA), that must be complied with to work on or near Railroad property. Specific training and obedience of these rules are a requirement of the FRA. Significant fines can result from the violation of these rules.
- 7.7 No work is allowed within 50 feet (15 meters) of the track centerline while trains are passing through the work site. The Contractor's personnel shall always stand as far back as possible 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.
- 7.8 The Contractor's 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 meters), or park the vehicle away from the tracks and walk to a safe distance whenever trains pass.
- 7.9 The Contractor's personnel shall not stand on or between adjacent tracks in multiple track territory when a train is passing except when working under the direct supervision of a Railway flagperson and only under specific Railway instructions. The Contractor's personnel shall be especially alert in yards and terminal areas; engines may be pushing cars, or cars may be moving without any engine attached.
- 7.10 The Contractor's personnel shall not walk, stand or sit on the rails. The rail surface can be extremely slippery. Personnel shall step over rails when crossing tracks and shall stay away from track switches. Remotely operated switch points can move unexpectedly with enough force to crush ballast rock. Personnel shall also stay away from any other railway devices they are unsure of. Personnel shall not disturb or foul the ballast at any time.
- 7.11 The Contractor's personnel shall not foul the track with any piece of equipment without a Railway flagperson and proper protection.
- 7.12 Certain projects will require the assistance of a qualified Railway flagperson. The decision as to where flagpersons are required rests with the Railway. One week advance notice is required before entering the Railway's property so that flagging protection requirements may be determined and arranged for.

- 7.13 Good communication between the Contractor's personnel and the Railway's flagperson is imperative. Everyone must have a knowledge of the flagging limits, time limits and location to clear for any train movements. The Railways' flagperson will be responsible for clearing any movement of workers and equipment near the tracks, no matter how minor.
- 7.14 The Contractor's personnel shall not interfere with the Railway's flagperson who is communicating by radio with the dispatcher or other Railway employees. The Contractor's 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.
- 7.15 The Contractor's personnel shall not move equipment across the tracks except at established road crossings or unless under the protection of a Railway flagperson and only if the job site has been properly prepared for such a move. Tracked equipment will require the supervision of a Railway flagperson any time railroad tracks are crossed.
- 7.16 The Contractor's personnel shall not move equipment across railroad bridges or through tunnels, unless under the direct supervision of a Railway flagperson and only under specific Railway instructions.
- 7.17 The Contractor shall keep all employees 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 lightening is occurring.
- If storm conditions arise unexpectedly, the Contractor's personnel shall ensure that equipment is in the clear of the tracks and secured before seeking cover. 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 equipment, machinery and highway vehicles must:
- Be properly serviced and maintained;
 - Be safe for their proposed use;
 - Be equipped with a 5 lb. fire extinguisher and a first aid kit;
 - Comply with all applicable regulatory requirements or standards.
- 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 observe all facility/area's traffic rules. Unless otherwise posted, the speed limit on the Railway's roads is 15 mph (24 km/h) or less as conditions warrant. No Contractor's personnel shall be carried in Railway vehicles except in case of an emergency or unless specifically authorized.

- 8.3 Tools must be used only for the purpose for which they are designed. Defective tools must be repaired or replaced.
- 8.4 Machinery and equipment must be operated and maintained only by persons properly trained and qualified for that duty.
- 8.5 All equipment shall be in compliance with applicable regulatory requirements or standards and be equipped with appropriate safety apparatus. In particular, all mobile equipment, including excavators, shall be equipped with beacons and backup alarms.
- 8.6 The Contractor shall provide adequate lighting when performing work between sunset and sunrise.

SR9 CRANES

- 9.1 Cranes and their operation shall be in compliance with applicable regulatory requirements or standards and be equipped with appropriate safety apparatus. A copy of the latest annual crane inspection shall be provided to the Railway's project manager prior to the work's debut.
- 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 All power lines that can be reached by cranes shall be de-energized or relocated.
- 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's property on nights or weekends shall be secured in a safe position well clear of all tracks. 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 maintain the Railway's 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 the Railway's property or into any adjacent lands, ditches, streams, ponds, sewers, etc.
- 10.2 Precautions must be taken 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.
- 10.3 Storing or transporting fuel or gasoline in unapproved containers is prohibited.
- 10.4 If possible, the use of cutting or welding torches will 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.
- 10.6 The Railway's flagperson(s) or site supervisor 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 the Railway's property. He shall also remove all waste products and debris, including rinseout water, and leave the Railway's property clean and suitable for occupancy.

SR11 HAZARDOUS MATERIALS

- 11.1 If chemicals are required by the Contractor to carry out its contractual obligations, he must transport, label, use and store them in accordance with all relevant laws and regulations.
- 11.2 For all chemicals to be used, the Contractor must have available on site the latest Material Safety Data Sheet (MSDS) and provide the Railway's project manager with a list of employees' names who have been trained in Work place Hazardous Materials Information System (WHMIS), or in OSHA's Hazard Communication Standard.
- 11.3 The Contractor shall dispose of all surplus waste materials in accordance with all relevant laws and regulations.

SR12 FIRST AID, INCIDENT AND ACCIDENT REPORTING

- 12.1 A first aid kit must be available in the immediate vicinity of the work site. It must be examined prior to the work's debut, after each use and regularly each month to ensure that it is properly equipped. Any missing or altered articles must be promptly replaced.
- 12.2 Where required, other first aid equipment such as stretchers, emergency showers, eye wash stations, etc. must be available at the work site.
- 12.3 All accidents, personal injury, occupational illness, damage to Railway or Customer property, and incidents, such as environmental spills, must be reported promptly to the Railway's flagperson or site supervisor.

SR13 JOB BRIEFINGS

- 13.1 When required by the Railway or by the Contractor, a job briefing must be conducted.
- 13.2 The Contractor's supervisor(s), employees and subcontractor(s), along with Railway's representative(s) and employee(s) must participate in the job briefing. For those who are not able to be present at the main briefing, a separate briefing must be held with them. The Contractor must ensure that all personnel on the work site understand the content of the job briefing.

- 13.3 The following topics should be covered in the job briefing:
- Tasks to be accomplished;
 - Work location;
 - Employees' responsibilities;
 - Equipment to be used;
 - Specific safety reminder due to a hazardous condition;
 - Identification of all potential hazards;
 - Special instructions due to an unusual situation or practice;
 - Type of track protection along with its time and physical limits;
 - Identification of the Railway's employee responsible for the protection.

SR14 CONTRACTOR SAFETY POLICY

- 14.1 Prior to the commencement of the work, the Contractor shall provide the Railway's project manager with his corporate Safety Policy, Rules and Work Procedures.

SR15 CONSTRUCTION SAFETY PLAN

- 15.1 Prior to commencement of the work, the Contractor shall provide the Railway's project manager with a Construction Safety Plan for his review and approval.

- 15.2 The 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 implementation in the work's planning schedules.
- 15.2.3 List all safety activities and their frequency including:
- Employee's review of:
 - Canadian Pacific Railway's Minimum Safety Requirements for Contractors Working on Railway Property;
 - Contractor's Safety Plan;
 - Contractor's Emergency Information Sheet;
 - Employee Orientation Meetings;
 - Site Hazard Assessments;
 - Site Inspections and Monitoring;
 - Safety Meetings.

- 15.2.4 Provide for each heavy equipment to be used, such as loaders, excavators and cranes, a summary of the operator'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 laws and regulations.
- 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 personnel into a confined space, a permit must be issued by a competent Atmosphere Tester for each person and location. Permits shall be renewed at the beginning of each shift and posted at all access locations. Personal protection equipment shall include a full body harness connected to a lifeline and, if appropriate, an approved respirator.
- 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 as per appended Table B. Copies of this document shall be present on site at all times and be in a location readily accessible to all personnel on the site. It's content shall be reviewed at the beginning of each week and when job location changes. The Contractor must ensure that all personnel on the work site are familiar with it's 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 personnel are working at heights in excess of 8 feet (2.44 meters), in Canada or 12 feet (3.66 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 legislations applicable to the work site.
 - 15.3.2 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) 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.
 - 15.3.3 Details of shoring systems for excavations which may endanger nearby personnel or structures. Shoring systems shall be designed to comply with the applicable laws and regulations. Excavations must be properly covered or barricaded with appropriate reflective equipment. Lights or flares must be used where practicable.

SR16 COMPLIANCE WITH RAILWAY SAFETY REQUIREMENTS

- 16.1 If ever the Contractor's personnel does not comply with the Railway safety requirements, the Contractor's site supervisor will be reminded of the requirements by the Railway's representative. Personnel refusing to comply with the safety requirements will be required to leave the property immediately.
- 16.2 Any working procedures not conforming to the Railway safety requirements will result in the closing down of the work site.

- 16.3 The Railway will not accept any claims for delays or lost time due to safety compliance or procedures issues.

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TABLE A - EYE AND FACE PROTECTION GUIDE

	Spectacles							
	Clear	Filter	Goggles	Face	Welding	Welding		
	Lens	Lens		Shields	Goggles	Helmet		
Abrasive Saws			M	and M				
Acids & Caustics			M	and M				
Adzing	M	or	M					
Applying Rail Anchors	M	or	M					
Buffing	M	or	M					
Chain Saw			M	and M				
Chemicals			M					
Chisels								
(Wood-Stone-Metal)	M	or	M					
Chipping	M	or	M					
Compressed Air			M					
Cutting								
(Wire-Steel Strapping)	M	or	M					
Drilling	M	or	M					
Dusts	M	or	M					
Furnace Operations		M	or M					
Glare (Harmless)		M	or M					
Glare (Harmful)								
Infra-Red/Ultra-Violet						M		
Green Machine (Blower)			M	and M				
Grinding-light	M	or	M					
Grinding-heavy			M					
Hand & Power Tools	M	or	M					
Jack Hammers	M	or	M					
Machine Shop								
Operations	M	or	M					
Molten Metals			M					
Picking (Ice-Ballast)	M	or	M					
Plant Visitors	M	or	M					
Riveting	M	or	M					
Rivet Busting	M	or	M	and M				
Soil Compactors	M	or	M					
Spiking	M	or	M					
Spike Pulling	M	or	M					
Steam Boiler Operation			M					
Welding Cutting &								
Burning (Acetylene)						M	or	M(i)
Welding (Electric Arc)	M	or	M		and			M
Welding (Spot & Buff)		M	or M		or	M		
Welding (Helpers or								
Adjacent to)		M	or M		or	M		
Whipper Snipper - cord	M	or	M					
Whipper Snipper -blade	M	or	M	and M				
Woodworking	M	or	M					

TABLE A - EYE AND FACE PROTECTION GUIDE.....CONT'D.

Keys:

- M : Mandatory Protection;
- or : Either type of mandatory protection may be used;
- and : If the use of a polycarbonate faceshield or a welding helmet is mandatory, they must be worn in combination with safety spectacles or goggles;
- (i) : Welding helmets must be worn in combination with safety spectacles or goggles.

To determine the type of equipment required for the hazards listed, read the table from left to right. The first outlined basic device must be used for minimum protection. Other devices indicated in the following columns shall be used in addition to, or instead of the minimum requirement.

Photo-colored prescription lenses do not meet CSA Standards, therefore their use is prohibited.

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TABLE B - EMERGENCY INFORMATION SHEET

Work Site Location :
 (Mileage, Subdivision)
 (Address - Number and Street)

Contractor' Supervisor : (Name) (Title)

Site Telephone :

Emergency Site Access Route :
 (Provide sketch)

Nearest Town :

Certified First Aid Attendant :

Location of First Aid :
 Supplies at Site

Location of Fire :
 Extinguishing Equipment

Emergency Contacts	Phone	Location
Railway Traffic Controller	()	
Firefighter	()	
Police	()	
Ambulance	()	
Hospital	()	
Physician	()	
Aircraft Service (if applicable)	()	
Watercraft Service (if applicable)	()	

TABLE B - EMERGENCY INFORMATION SHEET.....CONT'D.

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 Contact	Phone	Location
Natural Gas	()	
Electrical	()	
Water & Sewer	()	
Telephone	()	
Cable System	()	

Qualified employee(s) in :
Confined Space Entry
(if applicable)

Equipment requirements for :
Confined Space Entry
(if applicable)

All job sites will be open to audits by the Railway' Safety and Health
representatives.

Date: _____ Signed: _____
CONTRACTOR' S SUPERVISOR