



THE CITY OF WINNIPEG

TENDER

TENDER NO. 547-2020

**2021-2023 REGIONAL PAVEMENT RENEWAL PROJECT – DUNKIRK DRIVE
REHABILITATION – ST MARY’S ROAD TO FERMOR AVENUE**

TABLE OF CONTENTS

PART A - BID SUBMISSION

- Form A: Bid/Proposal
- Form B: Prices
- Form G1: Bid Bond and Agreement to Bond

PART B - BIDDING PROCEDURES

B1. Contract Title	1
B2. Submission Deadline	1
B3. Enquiries	1
B4. Confidentiality	1
B5. Addenda	1
B6. Substitutes	2
B7. Bid Components	3
B8. Bid	3
B9. Prices	4
B10. Disclosure	4
B11. Conflict of Interest and Good Faith	4
B12. Qualification	5
B13. Bid Security	6
B14. Opening of Bids and Release of Information	7
B15. Irrevocable Bid	7
B16. Withdrawal of Bids	8
B17. Evaluation of Bids	8
B18. Award of Contract	8

PART C - GENERAL CONDITIONS

C0. General Conditions	1
------------------------	---

PART D - SUPPLEMENTAL CONDITIONS

General

D1. General Conditions	1
D2. Form of Contract Documents	1
D3. Scope of Work	1
D4. Definitions	1
D5. Contract Administrator	2
D6. Contractor's Supervisor	2
D7. Notices	2
D8. Furnishing of Documents	2

Submissions

D9. Authority to Carry on Business	3
D10. Safe Work Plan	3
D11. Insurance	3
D12. Contract Security	4
D13. Subcontractor List	4
D14. Detailed Work Schedule	5

Schedule of Work

D15. Commencement	5
D16. Working Days	5
D17. Restricted Work Hours	6
D18. Work By Others	6
D19. Sequence of Work	6
D20. Critical Stages	7
D21. Substantial Performance	7
D22. Total Performance	7

D23. Liquidated Damages	7
D24. COVID-19 Schedule Delays	8
D25. Scheduled Maintenance	8
Control of Work	
D26. Job Meetings	9
D27. Prime Contractor – The Workplace Safety and Health Act (Manitoba)	9
D28. The Workplace Safety and Health Act (Manitoba) – Qualifications	9
Measurement and Payment	
D29. Payment	9
Warranty	
D30. Warranty	9
Third Party Agreements	
D31. Funding and/or Contribution Agreement Obligations	9
Form H1: Performance Bond	11
Form H2: Labour and Material Payment Bond	13
Form J: Subcontractor List	15
Form L: Detailed Work Schedule	16

PART E - SPECIFICATIONS

General

E1. Applicable Specifications and Drawings	1
E2. Mobilization and Demobilization Payment	2
E3. Geotechnical Report	3
E4. Office Facilities	3
E5. Protection Of Existing Trees	3
E6. Traffic Control	4
E7. Traffic Management	5
E8. Refuse and Recycling Collection	5
E9. Pedestrian Safety	5
E10. Water Obtained From the City	5
E11. Surface Restorations	5
E12. Infrastructure Signs	6
E13. Supply and Installation of Pavement Repair Fabric	6
E14. Asphalt Patching of Miscellaneous Concrete	10
E15. Monolithic Curb and Sidewalk With Block Outs For Indicator Surfaces	11
E16. Paving Stones for Indicator Surfaces	11
E17. Transit Paving Stone Indicator Squares	13
E18. Sidewalk Renewal Beside Retaining Wall at 219 Dunkirk Drive	15
E19. Supply and Install Watermain and Water Service Insulation	15
E20. Supply and Install Directional Tactile Strip	16
E21. Sign Support Clamps	18
E22. Tree Removals	18
E23. Transit Shelter Foundations	18
E24. Video Inspection of Sewers	19
E25. Construction of Temporary Median Crossings and Openings	20
E26. Catch basins (dITCH iNLET)	20
E27. Hydro Excavation	21
E28. Boulevard and Median Grass Maintenance	21

Appendix 'A' - Geotechnical Report

Appendix 'B' - Directional Tactile Strip Product Specification

PART B - BIDDING PROCEDURES

B1. CONTRACT TITLE

B1.1 2021-2023 REGIONAL PAVEMENT RENEWAL PROJECT – DUNKIRK DRIVE
REHABILITATION – ST MARY’S ROAD TO FERMOR AVENUE

B2. SUBMISSION DEADLINE

B2.1 The Submission Deadline is 12:00 noon Winnipeg time, December 21, 2020.

B2.2 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 D5.

B3.2 If the Bidder finds errors, discrepancies or omissions in the Tender, 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 Tender 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 Tender 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.

B3.6 Any enquiries concerning submitting through MERX should be addressed to:
MERX Customer Support
Phone: 1-800-964-6379
Email: merx@merx.com

B4. CONFIDENTIALITY

B4.1 Information provided to a Bidder by the City or acquired by a Bidder by way of further enquiries or through investigation is confidential. Such information shall not be used or disclosed in any way without the prior written authorization of the Contract Administrator. The use and disclosure of the confidential information shall not apply to information which:

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

B4.2 The Bidder shall not make any statement of fact or opinion regarding any aspect of the Tender to the media or any member of the public without the prior written authorization of the Contract Administrator.

B5. ADDENDA

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

- B5.2 The Contract Administrator will issue each addendum at least two (2) Business Days prior to the Submission Deadline, or provide at least two (2) Business Days by extending the Submission Deadline.
- B5.3 Addenda will be available on the MERX website at www.merx.com.
- B5.4 The Bidder is responsible for ensuring that he/she has received all addenda and is advised to check the MERX website for addenda regularly and shortly before the Submission Deadline, as may be amended by addendum.
- B5.5 The Bidder shall acknowledge receipt of each addendum in Paragraph 10 of Form A: Bid/Proposal. Failure to acknowledge receipt of an addendum may render a Bid non-responsive.
- B5.6 Notwithstanding B3, enquiries related to an Addendum may be directed to the Contract Administrator indicated in D5.

B6. SUBSTITUTES

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

- B6.7 If the Contract Administrator approves a substitute as an “approved equal”, any Bidder may use the approved equal in place of the specified item.
- B6.8 If the Contract Administrator approves a substitute as an “approved alternative”, any Bidder bidding that approved alternative may base his/her Total Bid Price upon the specified item but may also indicate an alternative price based upon the approved alternative. Such alternatives will be evaluated in accordance with B17.
- B6.9 No later claim by the Contractor for an addition to the Total Bid Price because of any other changes in the Work necessitated by the use of an approved equal or an approved alternative will be considered.

B7. BID COMPONENTS

- B7.1 The Bid shall consist of the following components:
- (a) Form A: Bid;
 - (b) Form B: Prices; and
 - (c) Form G1: Bid Bond and Agreement to Bond.
- B7.2 Further to B7.1, the Bidder should include the written correspondence from the Contract Administrator approving a substitute in accordance with B6.
- B7.3 All components of the Bid shall be fully completed or provided, and submitted by the Bidder no later than the Submission Deadline, with all required entries made clearly and completely.
- B7.4 The Bid shall be submitted electronically through MERX at www.merx.com.
- B7.4.1 Bids will **only** be accepted electronically through MERX.
- B7.5 Bidders are advised that inclusion of terms and conditions inconsistent with the Tender document, including the General Conditions, will be evaluated in accordance with B17.1(a).

B8. BID

- B8.1 The Bidder shall complete Form A: Bid/Proposal, making all required entries.
- B8.2 Paragraph 2 of Form A: Bid/Proposal shall be completed in accordance with the following requirements:
- (a) if the Bidder is a sole proprietor carrying on business in his/her own name, his/her name shall be inserted;
 - (b) if the Bidder is a partnership, the full name of the partnership shall be inserted;
 - (c) if the Bidder is a corporation, the full name of the corporation shall be inserted; and
 - (d) if the Bidder is carrying on business under a name other than his/her own, the business name and the name of every partner or corporation who is the owner of such business name shall be inserted.
- B8.2.1 If a Bid is submitted jointly by two (2) or more persons, each and all such persons shall identify themselves in accordance with B8.2.
- B8.3 In Paragraph 3 of Form A: Bid/Proposal, the Bidder shall identify a contact person who is authorized to represent the Bidder for purposes of the Bid.
- B8.4 Paragraph 13 of Form A: Bid/Proposal shall be signed in accordance with the following requirements:
- (a) if the Bidder is a sole proprietor carrying on business in his/her own name, it shall be signed by the Bidder;

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

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

B8.5 If a Bid is submitted jointly by two (2) or more persons, the word "Bidder" shall mean each and all such Persons, and the undertakings, covenants and obligations of such joint Bidders in the Bid and the Contract, when awarded, shall be both joint and several.

B9. PRICES

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

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

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

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

B9.5 The Bidder shall enter the Total Bid Price from Form B: Prices into the Total Bid Price field in MERX.

B9.5.1 Bidders are advised that the calculation indicated in B17.4 will prevail over the Total Bid Price entered in MERX.

B10. DISCLOSURE

B10.1 Various Persons provided information or services with respect to this Work. In the City's opinion, this relationship or association does not create a conflict of interest because of this full disclosure. Where applicable, additional material available as a result of contact with these Persons is listed below.

B10.2 The Persons are:

- (a) N/A.

B11. CONFLICT OF INTEREST AND GOOD FAITH

B11.1 Further to C3.2, Bidders, by responding to this Tender, declare that no Conflict of Interest currently exists, or is reasonably expected to exist in the future.

B11.2 Conflict of Interest means any situation or circumstance where a Bidder or employee of the Bidder proposed for the Work has:

- (a) other commitments;
- (b) relationships;
- (c) financial interests; or
- (d) involvement in ongoing litigation;

that could or would be seen to:

- (i) exercise an improper influence over the objective, unbiased and impartial exercise of the independent judgment of the City with respect to the evaluation of Bids or award of the Contract; or
 - (ii) compromise, impair or be incompatible with the effective performance of a Bidder's obligations under the Contract.
- (e) has contractual or other obligations to the City that could or would be seen to have been compromised or impaired as a result of its participation in the Tender process or the Work; or
- (f) has knowledge of confidential information (other than confidential information disclosed by the City in the normal course of the Tender process) of strategic and/or material relevance to the Tender process or to the Work that is not available to other Bidders and that could or would be seen to give that Bidder an unfair competitive advantage.

B11.3 In connection with its Bid, each entity identified in B11.2 shall:

- (a) avoid any perceived, potential or actual Conflict of Interest in relation to the procurement process and the Work;
- (b) upon discovering any perceived, potential or actual Conflict of Interest at any time during the Tender process, promptly disclose a detailed description of the Conflict of Interest to the City in a written statement to the Contract Administrator; and
- (c) provide the City with the proposed means to avoid or mitigate, to the greatest extent practicable, any perceived, potential or actual Conflict of Interest and shall submit any additional information to the City that the City considers necessary to properly assess the perceived, potential or actual Conflict of Interest.

B11.4 Without limiting B11.3, the City may, in its sole discretion, waive any and all perceived, potential or actual Conflicts of Interest. The City's waiver may be based upon such terms and conditions as the City, in its sole discretion, requires to satisfy itself that the Conflict of Interest has been appropriately avoided or mitigated, including requiring the Bidder to put into place such policies, procedures, measures and other safeguards as may be required by and be acceptable to the City, in its sole discretion, to avoid or mitigate the impact of such Conflict of Interest.

B11.5 Without limiting B11.3, and in addition to all contractual or other rights or rights at law or in equity or legislation that may be available to the City, the City may, in its sole discretion:

- (a) disqualify a Bidder that fails to disclose a perceived, potential or actual Conflict of Interest of the Bidder or any of its employees proposed for the Work;
- (b) require the removal or replacement of any employees proposed for the Work that has a perceived, actual or potential Conflict of Interest that the City, in its sole discretion, determines cannot be avoided or mitigated;
- (c) disqualify a Bidder or employees proposed for the Work that fails to comply with any requirements prescribed by the City pursuant to B11.4 to avoid or mitigate a Conflict of Interest; and
- (d) disqualify a Bidder if the Bidder, or one of its employees proposed for the Work, has a perceived, potential or actual Conflict of Interest that, in the City's sole discretion, cannot be avoided or mitigated, or otherwise resolved.

B11.6 The Final Determination of whether a perceived, potential or actual Conflict of Interest exists shall be made by the City, in its sole discretion.

B12. QUALIFICATION

B12.1 The Bidder shall:

- (a) undertake to be in good standing under The Corporations Act (Manitoba), or properly registered under The Business Names Registration Act (Manitoba), or otherwise properly registered, licensed or permitted by law to carry on business in Manitoba; and

- (b) be financially capable of carrying out the terms of the Contract; and
- (c) have all the necessary experience, capital, organization, and equipment to perform the Work in strict accordance with the terms and provisions of the Contract.

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

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

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

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

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

- (a) Written confirmation of a safety and health certification meeting SAFE Work Manitoba's SAFE Work Certified Standard (e.g., COR™ and SECOR™) in the form of:
 - (i) a copy of their valid Manitoba COR certificate and Letter of Good Standing (or Manitoba equivalency) as issued under the Certificate of Recognition (COR) Program administered by the Construction Safety Association of Manitoba or by the Manitoba Heavy Construction Association's WORKSAFELY™ COR™ Program; or
 - (ii) a copy of their valid Manitoba SECOR™ certificate and Letter of Good Standing (or Manitoba equivalency) as issued under the Small Employer Certificate of Recognition Program (SECOR™) administered by the Construction Safety Association of Manitoba or by the Manitoba Heavy Construction Association's WORKSAFELY™ COR™ Program; or
- (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/>).

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

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

B13. BID SECURITY

B13.1 The Bidder shall include in its Bid Submission bid security in the form of a digital 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 Form G1: Bid Bond and Agreement to Bond, available on The City of Winnipeg, Corporate Finance, Materials Management Division website at <https://www.winnipeg.ca/MatMgt/templates/files/eBidsecurity.pdf>.

- B13.2 Bid security shall be submitted in a digital format meeting the following criteria:
- (a) the version submitted by the Bidder must have valid digital signatures and seals;
 - (b) the version submitted by the Bidder must be verifiable by the City with respect to the totality and wholeness of the bond form, including: the content; all digital signatures and digital seals; with the surety company, or an approved verification service provider of the surety company;
 - (c) the version submitted must be viewable, printable and storable in standard electronic file formats compatible with the City, and in a single file. Allowable formats include pdf;
 - (d) the verification may be conducted by the City immediately or at any time during the life of the bond and at the discretion of the City with no requirement for passwords or fees; and
 - (e) the results of the verification must provide a clear, immediate and printable indication of pass or fail regarding B13.2(a).
- B13.3 Bonds failing the verification process will not be considered to be valid and the bid shall be determined to be non-responsive in accordance with B17.1(a).
- B13.4 Bonds passing the verification process will be treated as original and authentic.
- B13.4.1 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.
- B13.5 The bid security of the successful Bidder and the next two (2) lowest evaluated responsive and responsible Bidders will be released by the City when a Contract for the Work has been duly formed with the successful Bidder and the contract securities are furnished as provided herein. The bid securities of all other Bidders will be released when a Contract is awarded.
- B13.6 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 Tender.

B14. OPENING OF BIDS AND RELEASE OF INFORMATION

- B14.1 Bids will not be opened publicly.
- B14.2 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 MERX website at www.merx.com.
- B14.3 After award of Contract, the name(s) of the successful Bidder(s) and their Contract amount(s) will be available on the MERX website at www.merx.com.
- B14.4 The Bidder is advised that any information contained in any Bid may be released if required by The Freedom of Information and Protection of Privacy Act (Manitoba), by other authorities having jurisdiction, or by law or by City policy or procedures (which may include access by members of City Council).
- B14.4.1 To the extent permitted, the City shall treat as confidential information, those aspects of a Bid Submission identified by the Bidder as such in accordance with and by reference to Part 2, Section 17 or Section 18 or Section 26 of The Freedom of Information and Protection of Privacy Act (Manitoba), as amended.

B15. IRREVOCABLE BID

- B15.1 The Bid(s) submitted by the Bidder shall be irrevocable for the time period specified in Paragraph 11 of Form A: Bid/Proposal.

B15.2 The acceptance by the City of any Bid shall not release the Bids of the next two (2) lowest evaluated responsive Bidders and these Bidders shall be bound by their Bids on such Work until a Contract for the Work has been duly formed and the contract securities have been 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/Proposal.

B16. WITHDRAWAL OF BIDS

B16.1 A Bidder may withdraw his/her Bid without penalty prior to the Submission Deadline.

B17. EVALUATION OF BIDS

B17.1 Award of the Contract shall be based on the following bid evaluation criteria:

- (a) compliance by the Bidder with the requirements of the Tender, or acceptable deviation therefrom (pass/fail);
- (b) qualifications of the Bidder and the Subcontractors, if any, pursuant to B12 (pass/fail);
- (c) Total Bid Price; and
- (d) economic analysis of any approved alternative pursuant to B6.

B17.2 Further to B17.1(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.

B17.3 Further to B17.1(b), the Award Authority shall reject any Bid submitted by a Bidder who does not demonstrate, in his/her Bid or in other information required to be submitted, that he/she is qualified.

B17.4 Further to B17.1(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.

B17.4.1 Further to B17.1(a), in the event that a unit price is not provided on Form B: Prices, the City may determine the unit price by dividing the Amount (extended price) by the approximate quantity, for the purposes of evaluation and payment.

B17.4.2 Bidders are advised that the calculation indicated in B17.4 will prevail over the Total Bid Price entered in MERX.

B18. AWARD OF CONTRACT

B18.1 The City will give notice of the award of the Contract or will give notice that no award will be made.

B18.2 The City will have no obligation to award a Contract to a Bidder, even though one (1) or all of the Bidders are determined to be qualified, and the Bids are determined to be responsive.

B18.2.1 Without limiting the generality of B18.2, 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 (1) 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.

- B18.3 The Work of this Contract is contingent upon Council approval of sufficient funding in the 2021 Capital Budget. If the Capital Budget approved by Council does not include sufficient funding for the Work, the City will have no obligation to award a Contract.
- B18.4 Where an award of Contract is made by the City, the award shall be made to the qualified bidder submitting the lowest evaluated responsive Bid, in accordance with B17.
- B18.4.1 Following the award of contract, a Bidder will be provided with information related to the evaluation of his/her Bid upon written request to the Contract Administrator.

PART C - GENERAL CONDITIONS

C0. GENERAL CONDITIONS

- C0.1 The *General Conditions for Construction* (Revision 2020-01-31) 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 Tender 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. FORM OF CONTRACT DOCUMENTS

D2.1 Notwithstanding C4.1(c) and C4.4, the Contract Documents will be provided to the Contractor electronically and there will be no requirement for execution and return to the City by the Contractor. Accordingly, the provisions under C4.4(a) and C4.4(b) are no longer applicable.

D3. SCOPE OF WORK

D3.1 The Work to be done under the Contract shall consist of:

- (a) Pavement Rehabilitation
 - (i) Dunkirk Drive – St Mary's Road to Fermor Avenue.

D3.2 The major components of the Work are as follows:

- (a) Roadway Rehabilitation
 - (i) construction of temporary crossovers and temporary Multi-Use Path;
 - (ii) planing of existing asphalt overlay as required;
 - (iii) removal of trees;
 - (iv) land drainage/sewer repairs;
 - (v) adjustment of catch basins, catch pits, manholes, water valves, drainage inlets and other pavement appurtenances;
 - (vi) installation of catch basins and connecting pipe;
 - (vii) full depth (two hundred (200) millimetres (mm) reinforced) concrete repairs of existing slabs and joints;
 - (viii) renewal of curbs, curb ramps, bullnoses, and miscellaneous concrete slabs as required;
 - (ix) construction of one hundred (100) mm sidewalk;
 - (x) boulevard grading and seeding/sodding;
 - (xi) asphalt patching over full depth concrete repairs;
 - (xii) placement of mainline asphalt overlay (average thickness eighty (80) mm) utilizing automatic grade control for final lift;
 - (xiii) placement of tie-in asphalt overlay for project limits and private approaches; and
 - (xiv) placement of asphalt for Multi-Use Path.

D4. DEFINITIONS

D4.1 When used in this Tender:

- (a) "**Local Street**" means an open (transversable) right-of-way that is not identified in Schedule E of the most recent City of Winnipeg By-Law No. 1481/77 (i.e. not a regional street);
- (b) "**Multi-Use Path**" means a hard surfaced facility, separated from vehicular lanes, which provides a path for mixed-use active transportation such as bicycles, pedestrians, and other vulnerable road users;

- (c) “**Regional Street**” means those street listed in Schedule E of the most recent City of Winnipeg By-Law No. 1481/77; and
- (d) “**Rehabilitation**” means pavement, curb and sidewalk repairs, replacement or adjustment of drainage infrastructure, adjustment of appurtenances in the pavement and boulevards, and an asphalt overlay.

D5. CONTRACT ADMINISTRATOR

D5.1 The Contract Administrator is Dillon Consulting Limited, represented by:

David Wiebe, P.Eng., PTOE
Project Manager

Telephone No. 204 453-2301

Email Address dwiebe@dillon.ca

D5.2 At the pre-construction meeting, David Wiebe will identify additional personnel representing the Contract Administrator and their respective roles and responsibilities for the Work.

D6. CONTRACTOR'S SUPERVISOR

D6.1 At the pre-construction meeting, the Contractor shall identify his/her designated supervisor and any additional personnel representing the Contractor and their respective roles and responsibilities for the Work.

D6.2 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 D6.1 or an alternate can be contacted twenty-four (24) hours a day to respond to an emergency.

D7. NOTICES

D7.1 Except as provided for in C22.4, 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/Proposal.

D7.2 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the City, except as expressly otherwise required in D7.3 or elsewhere in the Contract, shall be sent to the attention of the Contract Administrator identified in D5.

D7.3 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications required to be submitted or returned to the City Solicitor shall be sent to the following facsimile number:

The City of Winnipeg
Legal Services Department
Attn: Director of Legal Services
Facsimile No.: 204-947-9155

D8. FURNISHING OF DOCUMENTS

D8.1 Upon award of the Contract, the Contractor will be provided with 'issued for construction' Contract Documents electronically, including Drawings in PDF format only.

SUBMISSIONS

D9. AUTHORITY TO CARRY ON BUSINESS

D9.1 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.

D10. SAFE WORK PLAN

D10.1 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 Documents, if applicable.

D10.2 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>.

D10.3 Notwithstanding B12.4 at any time during the term of the Contract, the City may, at its sole discretion and acting reasonably, require an updated COR Certificate or Annual Letter of good Standing. A Contractor, who fails to provide a satisfactory COR Certificate or Annual Letter of good Standing, will not be permitted to continue to perform any Work.

D11. INSURANCE

D11.1 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 and Manitoba and its Ministers, officers, employees and agents added as additional insureds, with a cross-liability clause, such liability policy to also contain contractual liability, sudden and accidental pollution liability coverage with one hundred twenty (120) hours reporting for accidental escape of pollutants, 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 covering all motor vehicles, owned and operated and used or to be used by the Contractor directly or indirectly in the performance of the Work. The Limit of Liability shall not be less than \$5,000,000 inclusive for loss or damage including personal injuries and death resulting from any one (1) accident or occurrence;
- (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; and
- (d) property insurance for the field office, portable toilets, and contents on the Site.

D11.2 Deductibles shall be borne by the Contractor.

D11.3 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 Documents, as applicable.

D11.4 The Contractor shall not cancel, materially alter, or cause each policy to lapse without providing at least thirty (30) Calendar Days prior written notice to the Contract Administrator.

D11.5 All policies shall be taken out with insurers licensed to carry on business in the Province of Manitoba.

D12. CONTRACT SECURITY

- D12.1 The Contractor shall provide and maintain the performance bond and the labour and material payment bond 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; and
 - (b) a labour and material payment bond of a company registered to conduct the business of a surety in Manitoba, in the form attached to these Supplemental Conditions (Form H2: Labour and Material Payment Bond), in an amount equal to fifty percent (50%) of the Contract Price.
- D12.1.1 Where the Contract security is a performance bond, it may be submitted in hard copy or digital format. If submitted in digital format the contract security must meet the following criteria:
- (a) the version submitted by the Contractor must have valid digital signatures and seals;
 - (b) the version submitted by the Contractor must be verifiable by the City with respect to the totality and wholeness of the bond form, including: the content; all digital signatures and digital seals; with the surety company, or an approved verification service provider of the surety company;
 - (c) the version submitted must be viewable, printable and storable in standard electronic file formats compatible with the City, and in a single file. Allowable formats include pdf;
 - (d) the verification may be conducted by the City immediately or at any time during the life of the bond and at the discretion of the City with no requirement for passwords or fees; and
 - (e) the results of the verification must provide a clear, immediate and printable indication of pass or fail regarding D12.1.1(b).
- D12.1.2 Digital bonds failing the verification process will not be considered to be valid and may be determined to be an event of default in accordance with C18.1. If a digital bond fails the verification process, the Contractor may provide a replacement bond (in hard copy or digital format) within seven (7) Calendar Days of the City's request or within such greater period of time as the City in its discretion, exercised reasonably, allows.
- D12.1.3 Digital bonds passing the verification process will be treated as original and authentic.
- D12.2 The Contractor shall provide the City Solicitor with the required performance and labour and material payment bonds within seven (7) Calendar Days of notification of the award of the Contract by way of an award letter and prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract Documents, if applicable.
- D12.3 The Contractor shall, as soon as practicable after entering into a contract with a Subcontractor:
- (a) give the Subcontractor written notice of the existence of the labour and material payment bond in D12.1(b); and
 - (b) post a notice of the bond and/or a copy of that bond in a conspicuous location at the Site of the Work.

D13. SUBCONTRACTOR LIST

- D13.1 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 ten (10) 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 Documents, if applicable.

D14. DETAILED WORK SCHEDULE

D14.1 The Contractor shall provide the Contract Administrator with a detailed work schedule (Form L: Detailed Work Schedule) at least ten (10) 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 Documents, as applicable .

SCHEDULE OF WORK

D15. COMMENCEMENT

D15.1 The Contractor shall not commence any Work until he/she is in receipt of an award letter from the Award Authority authorizing the commencement of the Work.

D15.2 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 D9;
 - (ii) evidence of the workers compensation coverage specified in C6.15;
 - (iii) the twenty-four (24) hour emergency response phone number specified in D6.2;
 - (iv) the Safe Work Plan specified in D10;
 - (v) evidence of the insurance specified in D11;
 - (vi) the contract security specified in D12;
 - (vii) the subcontractor list specified in D13; and
 - (viii) the detailed work schedule specified in D14.
- (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.

D15.3 The Contractor shall not commence the Work on the Site before May 17, 2021, and shall commence the Work on Site no later than May 25, 2021, as directed by the Contract Administrator and weather permitting.

D15.4 The City intends to award this Contract by February 12, 2021.

- (a) If the actual date of award is later than the intended date, the dates specified for Critical Stages, Substantial Performance, and Total Performance will be adjusted by the difference between the aforementioned intended and actual dates.

D16. WORKING DAYS

D16.1 Further to C1.1(tt);

D16.1.1 The Contract Administrator will determine daily if a Working Day has elapsed and will record his/her 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/she agrees with the Contract Administrator's determination of the Working Days assessed for the report period.

D16.1.2 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.

D16.1.3 Further to D17.1, if a Contractor receives permission from the Contract Administrator for work to be performed on Saturdays, each Saturday worked will be considered a Working Day.

D16.1.4 When the Work includes two (2) 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.

D17. RESTRICTED WORK HOURS

D17.1 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.

D18. WORK BY OTHERS

D18.1 Further to C6.25, the Contractor's attention is directed to the fact that other contractors, the personnel of other utilities, and staff of the City of Winnipeg will be working in the same area as this Contract. The activities of these agencies may coincide with the Contractor's execution of the Work, and it will be the Contractor's responsibility to cooperate to the fullest extent with the other agencies working in the area, and such cooperation is an obligation of the Contractor under the terms of this Contract.

D18.2 Work by others on or near the Site will include but not necessarily be limited to:

- (a) City of Winnipeg Traffic Service – Erection and maintenance of temporary traffic control signs in accordance with Section 2.04 of the "Manual of Temporary Traffic Control on City Streets (2020 Edition)" and E6. Provide sign clamps, replace any permanent signage and paint lines;
- (b) City of Winnipeg Traffic Signals – Traffic signal loops may require decommissioning and reinstallation, temporary alterations to existing signal heads at the St. Vital Road intersection for staging. Installation of new poles, davits, controllers and heads at the St. Mary's Road and St. Vital Road intersections;
- (c) City of Winnipeg Transit – Transit will remove existing bus shelters and stop flags for reuse and provide temporary Transit stop signage. The Contractor is to coordinate with Transit for the location of temporary stops and provide a safe, delineated area with temporary ramps where needed;
- (d) Xerox – Red light camera loops at St Vital Road may require decommissioning and reinstallation;
- (e) Manitoba Hydro Streetlights – Manitoba Hydro will activate and energize the new streetlight plant. Manitoba Hydro will provide inspection of new street lighting hardware installed by the Contractor; and
- (f) Outfront Media – Outfront Media will remove the northbound transit bench at Norberry Drive and reinstall if feasible at West Fernwood Avenue.

D18.3 Further to D18.1 the Contractor is expected to cooperate and coordinate all activities with parties performing required works to facilitate their own works. The Contractor must include and accommodate work by others identified in D18.2 in their construction schedule to complete the Work.

D19. SEQUENCE OF WORK

D19.1 Further to C6.1, the sequence of Work shall be as follows:

- D19.1.1 The Work shall be divided into two (2) stages. Each stage is further subdivided into major construction activities;
- D19.1.2 Refer to Traffic Staging Drawing P-3537-2021-19 to P-3537-2021-25.
- D19.1.3 Placing the topsoil and finished grading of all boulevard and median areas shall be completed prior to commencing construction of the asphaltic concrete overlay, including the scratch course.
- D19.1.4 At the end of daily asphalt placement activities, there shall be no drop-off accessible to traffic along any longitudinal joint, excepting the longitudinal joint between the gutter and approaches and in any median openings available to traffic.

D20. CRITICAL STAGES

- D20.1 The Contractor shall achieve critical stages of the Work in accordance with the following requirements:
- (a) Critical Stage 1 – The Multi-Use Path on the east side of Dunkirk Drive between St Mary's Road and five (5) metres (m) north of St Vital Road must be closed, renewed, and reopened to the public within ten (10) Working Days. The Multi-Use Path may not be closed to the public at any other time.
- D20.2 When the Contractor considers the Work associated with D20.1(a) (Critical Stage 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.
- D20.3 The date on which the Critical Stage 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 Critical Stage 1 has been achieved.

D21. SUBSTANTIAL PERFORMANCE

- D21.1 The Contractor shall achieve Substantial Performance within one hundred (100) consecutive Working Days of the commencement of the Work as specified in D15.
- D21.2 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.
- D21.3 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.

D22. TOTAL PERFORMANCE

- D22.1 The Contractor shall achieve Total Performance within one hundred and five (105) consecutive Working Days of the commencement of the Work as specified in D15.
- D22.2 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.
- D22.3 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.

D23. LIQUIDATED DAMAGES

- D23.1 If the Contractor fails to achieve Critical Stage, 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) Critical Stage 1 listed in D20.1(a) – one thousand dollars (\$1,000.00);
 - (b) Substantial Performance – three thousand eight hundred dollars (\$3,800.00); and
 - (c) Total Performance – one thousand five hundred dollars (\$1,500.00).

D23.2 The amounts specified for liquidated damages in D23.1 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.

D23.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

D24. COVID-19 SCHEDULE DELAYS

D24.1 The City acknowledges that the schedule for this Contract may be impacted by the COVID-19 pandemic. Commencement and progress of the Work shall be performed by the Contractor with due consideration to the health and safety of workers and the public, directives from health authorities and various levels of government and in close consultation with the Contract Administrator.

D24.2 If the Contractor is delayed in the performance of the Work by reason of the COVID-19 pandemic, the Work schedule may be adjusted by a period of time equal to the time lost due to such delay and costs related to such delay will be determined as identified herein.

D24.3 A minimum of seven (7) Calendar Days prior to the commencement of Work, the Contractor shall declare whether COVID-19 will affect the start date. The Contractor shall provide sufficient evidence that the delay is directly related to COVID-19, including but not limited to evidence related to availability of staff, availability of Material or work by others.

D24.4 For any delay related to COVID-19 and identified after Work has commenced, the Contractor shall within seven (7) Calendar Days of becoming aware of the anticipated delay declare the additional delay and shall provide sufficient evidence as indicated in D24.3. Failure to provide this notice will result in no additional time delays being considered by the City.

D24.5 The Work schedule, including the durations identified in D20 to D22 where applicable, will be adjusted to reflect delays accepted by the Contract Administrator. No additional payment will be made for adjustment of schedules except where seasonal Work, not previously identified in the Contract, is carried over to the following construction season.

D24.6 Where Work not previously identified is being carried over solely as a result of delays related to COVID-19, as confirmed by the Contract Administrator, the cost of temporary works to maintain the Work in a safe manner until Work recommences, will be considered by the Contract Administrator. Where the Work is carried over only partially due to COVID-19, a partial consideration of the cost of temporary works will be considered by the Contract Administrator.

D24.7 Any time or cost implications as a result of COVID-19 and in accordance with the above, as confirmed by the Contract Administrator, shall be documented in accordance with C7.

D25. SCHEDULED MAINTENANCE

D25.1 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 one (1) year warranty period) as specified in CW 3250-R7; and
- (b) sodding (maintenance period) as specified in CW 3510-R9.

D25.2 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

D26. JOB MEETINGS

- D26.1 Regular weekly job meetings will be held at the Site. These meetings shall be attended by a minimum of one (1) representative of the Contract Administrator, one (1) representative of the City and one (1) 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.
- D26.2 The Contract Administrator reserves the right to cancel any job meeting or call additional job meetings whenever he/she deems it necessary.

D27. PRIME CONTRACTOR – THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA)

- D27.1 Further to C6.26, 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).

D28. THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA) – QUALIFICATIONS

- D28.1 Further to B12.4, the Contractor/Subcontractor must, throughout the term of the Contract, have a Workplace Safety and Health Program meeting the requirements of The Workplace Safety and Health Act (Manitoba). At any time during the term of the Contract, the City may, at its sole discretion and acting reasonably, require updated proof of compliance, as set out in B12.4.

MEASUREMENT AND PAYMENT

D29. PAYMENT

- D29.1 Further to C12, the City may at its option pay the Contractor by direct deposit to the Contractor's banking institution.

WARRANTY

D30. WARRANTY

- D30.1 Notwithstanding C13.2, the warranty period shall begin on the date of Substantial Performance and shall expire one (1) year thereafter unless extended pursuant to C13.2.1 or C13.2.2, in which case it shall expire when provided for thereunder.

THIRD PARTY AGREEMENTS

D31. FUNDING AND/OR CONTRIBUTION AGREEMENT OBLIGATIONS

- D31.1 Funding for the Work of the Contract is being provided to the City of Winnipeg by the Government of Manitoba and/or the Government of Canada and accordingly, as required by the applicable funding agreements, the following terms and conditions shall apply.
- D31.2 For the purposes of D31:
- (a) **“Government of Canada”** includes the authorized officials, auditors, and representatives of the Government of Canada; and
 - (b) **“Government of Manitoba”** includes the authorized officials, auditors, and representatives of the Government of Manitoba.

D31.3 Indemnification By Contractor

D31.3.1 In addition to the indemnity obligations outlined in C17 of the General Conditions for Construction, the Contractor agrees to indemnify and save harmless the Government of Canada and the Government of Manitoba and each of their respective Ministers, officers, servants, employees, and agents from and against all claims and demands, losses, costs, damages, actions, suit or other proceedings brought or pursued in any manner in respect of any matter caused by the Contractor or arising from this Contract or the Work, or from the goods or services provided or required to be provided by the Contractor, except those resulting from the negligence of any of the Government of Canada's or the Government of Manitoba's Ministers, officers, servants, employees, or agents, as the case may be.

D31.4 Records Retention and Audits

D31.4.1 The Contractor shall maintain and preserve accurate and complete records in respect of this Contract and the Work, including all accounting records, financial documents, copies of contracts with other parties and other records relating to this Contract and the Work during the term of the Contract and for at least six (6) years after Total Performance. Those records bearing original signatures or professional seals or stamps must be preserved in paper form; other records may be retained in electronic form.

D31.4.2 In addition to the record keeping and inspection obligations outlined in C6 of the General Conditions for Construction, the Contractor shall keep available for inspection and audit at all reasonable times while this Contract is in effect and until at least six (6) years after Total Performance, all records, documents, and contracts referred to in D31.4.1 for inspection, copying and audit by the City of Winnipeg, the Government of Manitoba and/or the Government of Canada and their respective representatives and auditors, and to produce them on demand; to provide reasonable facilities for such inspections, copying and audits, to provide copies of and extracts from such records, documents, or contracts upon request by the City of Winnipeg, the Government of Manitoba, and/or the Government of Canada and their respective representatives and auditors, and to promptly provide such other information and explanations as may be reasonably requested by the City of Winnipeg, the Government of Manitoba, and/or the Government of Canada from time-to-time.

D31.5 Other Obligations

D31.5.1 The Contractor consents to the City providing a copy of the Contract Documents to the Government of Manitoba and/or the Government of Canada upon request from either entity.

D31.5.2 If the Lobbyists Registration Act (Manitoba) applies to the Contractor, the Contractor represents and warrants that it has filed a return and is registered and in full compliance with the obligations of that Act, and covenants that it will continue to comply for the duration of this Contract.

D31.5.3 The Contractor shall comply with all applicable legislation and standards, whether federal, provincial, or municipal, including (without limitation) labour, environmental, and human rights laws, in the course of providing the Work.

D31.5.4 The Contractor shall properly account for the Work provided under this Contract and payment received in this respect, prepared in accordance with generally accepted accounting principles in effect in Canada, including those principles and standards approved or recommended from time-to-time by the Chartered Professional Accountants of Canada or the Public Sector Accounting Board, as applicable, applied on a consistent basis.

FORM H1: PERFORMANCE BOND
(See D12)

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

TENDER NO. 547-2020

2021-2023 REGIONAL PAVEMENT RENEWAL PROJECT – DUNKIRK DRIVE REHABILITATION – ST MARY'S ROAD TO FERMOR AVENUE

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

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

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

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

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

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

_____ day of _____, 20____.

SIGNED AND SEALED
in the presence of:

(Witness as to Principal if no seal)

(Name of Principal)

Per: _____ (Seal)

Per: _____

(Name of Surety)

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

FORM H2: LABOUR AND MATERIAL PAYMENT BOND
(See D12)

KNOW ALL MEN BY THESE PRESENTS THAT

his/its heirs, executors, administrators, successors or assigns (hereinafter called the "Principal"), and

his/its heirs, executors, administrators, successors or assigns (hereinafter called the "Surety"), are held and firmly bound unto **THE CITY OF WINNIPEG** (hereinafter called the "Obligee"), for the use and benefit of claimants as herein below defined, in the amount of

_____ dollars (\$_____)

of lawful money of Canada, for the payment whereof we, the Principal and the Surety jointly and severally bind ourselves firmly by these presents.

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

TENDER NO. 547-2020

2021-2023 REGIONAL PAVEMENT RENEWAL PROJECT – DUNKIRK DRIVE REHABILITATION – ST MARY’S ROAD TO FERMOR AVENUE

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 promptly make payment to all claimants as hereinafter defined, for all labour, service and material used or reasonably required for use in the performance of the Contract, then this obligation shall be void, otherwise it shall remain in full force and effect subject, however, to the following conditions:

- (a) A claimant is defined as one having a direct contract with the Principal for labour, service and material, or any of them, used or reasonably required for use in the performance of the contract, labour, service and material being construed to include that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental of equipment (but excluding rent of equipment where the rent pursuant to an agreement is to be applied towards the purchase price thereof) directly applicable to the Contract;
- (b) The above-named Principal and Surety hereby jointly and severally agree with the Obligee that every claimant as herein defined, who has not been paid in full before the expiration of a period of ninety (90) days after the date on which the last of such claimant’s work, labour or service was done or performed, or materials were furnished by such claimant, may sue on this bond, prosecute the suit to final judgment for such sum or sums as may be justly due claimant, and have execution thereon;
- (c) No suit or action shall be commenced hereunder by any claimant:
 - (i) unless claimant shall have given written notice to the Principal and the Surety above-named, within one hundred and twenty (120) days after such claimant did or performed the last of the work, labour or service, or furnished the last of the materials for which said claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were furnished, or for whom the work, labour or service was done or performed. Such notice shall be served by mailing the same by registered mail to the Principal, and Surety, at any place where an office is regularly maintained for the transaction of business, or served in any manner in which legal process may be served in the Province of Manitoba;

- (ii) after the expiration of one (1) year following the date on which Principal ceased work on said Contract; including work performed under the guarantees provided in the Contract; and
 - (iii) other than in a court of competent jurisdiction in the Province of Manitoba.
- (d) The amount of this bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder, inclusive of the payment by Surety of mechanics liens which may be filed of record against said improvement, whether or not claim for the amount of such lien be presented under and against this bond.
- (e) The Surety shall not be liable for a greater sum than the specified penalty of this bond.

The Principal and Surety hereby agree that The Guarantors' Liability Act (Manitoba) shall apply to this Bond.

IN TESTIMONY WHEREOF, the Principal has hereunto set its hand affixed its seal, and the Surety has caused these presents to be sealed and with its corporate seal duly attested by the authorized signature of its signing authority this

_____ day of _____, 20_____ .

SIGNED AND SEALED
in the presence of:

(Witness as to Principal if no seal)

(Name of Principal)

Per: _____ (Seal)

Per: _____

(Name of Surety)

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

FORM J: SUBCONTRACTOR LIST
(See D13)

2021-2023 REGIONAL PAVEMENT RENEWAL PROJECT – DUNKIRK DRIVE REHABILITATION – ST MARY’S ROAD TO FERMOR AVENUE

<u>Portion of the Work</u>	<u>Name</u>	<u>Address</u>
SURFACE WORKS:		
<i>Supply of Materials:</i>		
Concrete		
Asphalt		
Base Course and Sub-Base		
Sod, Topsoil and Seeding		
<i>Installation/Placement:</i>		
Asphalt Planing		
Concrete		
Asphalt		
Base Course and Sub-Base		
Sod, Topsoil and Seeding		
Signals Works – Conduit, anchor bolts, concrete for bases		
UNDERGROUND WORKS:		
<i>Supply of Materials:</i>		
Catch basins/Manholes		
Connecting Pipe		
<i>Installation/Placement:</i>		
Catch basins/Manholes		
Connecting Pipe		
Sewer Repairs		
Sewer Televising		
MISCELLANEOUS:		
Tree Removal		
OTHERS:		

FORM L: DETAILED WORK SCHEDULE
(See D14)

2021-2023 REGIONAL PAVEMENT RENEWAL PROJECT – DUNKIRK DRIVE REHABILITATION – ST MARY’S ROAD TO FERMOR AVENUE

For each item of Work, indicate the cumulative percentage proposed to be completed by the end of each time period until 100% completion is achieved.					
Items of Work	Time Period in Working Days				
	25	50	75	100	105
Stage 1 – Northbound Lanes					
Construction of temporary crossovers and temporary Multi-Use Path					
Planing of existing asphalt					
Removal of trees					
Land drainage/sewer repairs and installation of catch basins/leads and adjustments					
Full depth concrete repairs of existing slabs and joints					
Renewal of curbs, curb ramps, bullnoses, and miscellaneous concrete slabs					
Construction of one hundred (100) mm sidewalk					
Boulevard grading and seeding/sodding					
Asphalt patching over full depth concrete repairs					
Placement of mainline asphalt overlay					
Placement of tie-in asphalt overlay for project limits and private approaches					
Placement of asphalt for Multi-Use Path					
Stage 2 – Southbound Lanes					
Planing of existing asphalt overlay					
Land drainage/sewer repairs and installation of catch basins/leads and adjustments					
Full depth concrete repairs of existing slabs and joints					
Renewal of curbs, curb ramps, bullnoses, and miscellaneous concrete slabs as required					
Construction of one hundred (100) mm sidewalk					
Boulevard grading and seeding/sodding					
Asphalt patching over full depth concrete repairs					
Temporary median and Multi-Use Path restoration					
Placement of mainline asphalt overlay					
Placement of tie-in asphalt overlay for project limits and private approaches					

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 Tender shall govern over *The City of Winnipeg Standard Construction Specifications*.
- E1.3 Bidders are reminded that requests for approval of substitutes as an approved equal or an approved alternative shall be made in accordance with B6. In every instance where a brand name or design specification is used, the City will also consider approved equals and/or approved alternatives in accordance with B6.
- E1.4 The following are applicable to the Work:

<u>Drawing No.</u>	<u>City Drawing No.</u>	<u>Drawing Name/Title</u>	<u>Drawing (Original) Sheet Size</u>
01	P-3537-2021-01	Cover Sheet	A1
02	P-3537-2021-02	St Mary's Tie-in Plan Profile	A1
03	P-3537-2021-03	Plan Profile - Start to STA: 1+085	A1
04	P-3537-2021-04	Plan Profile – STA: 1+085 to 1+230	A1
05	P-3537-2021-05	Plan Profile – STA: 1+230 to 1+390	A1
06	P-3537-2021-06	Plan Profile – STA: 1+390 to 1+535	A1
07	P-3537-2021-07	Plan Profile – STA: 1+535 to 1+695	A1
08	P-3537-2021-08	Plan Profile – STA: 1+695 to 1+850	A1
09	P-3537-2021-09	Plan Profile – STA: 1+850 to 2+010	A1
10	P-3537-2021-10	Plan Profile – STA: 2+010 to 2+165	A1
11	P-3537-2021-11	Plan Profile – STA: 2+165 to 2+330	A1
12	P-3537-2021-12	Plan Profile – STA: 2+320 to 2+480	A1
13	P-3537-2021-13	Plan Profile – STA: 2+460 to 2+630	A1
14	P-3537-2021-14	Plan Profile – STA: 2+630 to End	A1
15	P-3537-2021-15	Right Turn Lane and ATP Plan Profile	A1
16	P-3537-2021-16	Cross Sections (1 of 2)	A1
17	P-3537-2021-17	Cross Sections (2 of 2)	A1
18	P-3537-2021-18	Details	A1
19	P-3537-2021-19	Traffic Staging – Stage 1 (1 of 4)	A1
20	P-3537-2021-20	Traffic Staging – Stage 1 (2 of 4)	A1
21	P-3537-2021-21	Traffic Staging – Stage 1 (3 of 4)	A1
22	P-3537-2021-22	Traffic Staging – Stage 1 (4 of 4)	A1
23	P-3537-2021-23	Traffic Staging – Stage 2 (1 of 3)	A1
24	P-3537-2021-24	Traffic Staging – Stage 2 (2 of 3)	A1
25	P-3537-2021-25	Traffic Staging – Stage 2 (3 of 3)	A1
26	S-1208	Traffic Signals – Dakota/Dunkirk & St Mary's	A1
27	S-1655	Traffic Signals – Dunkirk & St Vital	A1
28	S-1659	Pedestrian Corridor – Dunkirk & Hastings	A1

E2. MOBILIZATION AND DEMOBILIZATION PAYMENT

DESCRIPTION

- E2.1 This Specification shall cover all operations relating to the mobilization and demobilization of the Contractor to the project location(s).
- E2.2 The Work to be done by the Contractor under this Specification shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools, supplies, and all things necessary for and incidental to the satisfactory performance and completion of all Works as hereinafter specified.
- E2.3 The inclusion of a payment item for the Work under this Specification shall not release or reduce the responsibilities of the Contractor under any other specification in this Contract.

SCOPE OF WORK

- E2.4 Further to C12 of the *General Conditions for Construction*, where mobilization and demobilization is included as a bid item, it shall consist of the following, as applicable:
- (a) mobilization shall include, but not be limited to:
 - (i) all activities and associated costs for transportation of the Contractor's personnel, equipment, and operating supplies to the Site, and/or Sites, and/or between Sites;
 - (ii) establishment of offices, buildings, other necessary general facilities and equipment parking/staging areas for the Contractor's operations at the Site or Sites;
 - (iii) premiums paid for performance and payment bonds including coinsurance and reinsurance agreements as applicable;
 - (iv) general cleanup and housekeeping needed maintain a neat and orderly project Site and/or Sites; and
 - (v) other job related items;
 - (b) demobilization shall include, but not be limited to:
 - (i) all activities and costs for transportation of personnel, equipment, and supplies not used in the project from the Site, and/or Sites, and/or between Sites;
 - (ii) disassembly, removal, and Site cleanup and restoration of offices, buildings, and other facilities assembled on the Site and/or Sites;
 - (iii) repair of access roads, temporary haul roads, and equipment parking areas leaving the project Site in the same or better condition than at the start of the project; and
 - (iv) general cleanup and housekeeping needed to restore a neat and orderly project Site.
- E2.5 Access to the Site, equipment parking, and staging areas are limited to that shown on the Drawings or as approved by the Contract Administrator.

MEASUREMENT AND PAYMENT

- E2.6 The lump sum price for the "Mobilization and Demobilization" bid item shall not exceed five percent (5%) of the Total Bid Price for the Contract.
- E2.6.1 Further to B9, B17, C12, and E2.6, should the lump sum price exceed five percent (5%) of the Total Bid Price the lump sum price will be reduced to five percent (5%) of the Total Bid Price, the Total Bid Price will be determined using the reduced lump sum price and payment will be based on the reduced lump sum price.
- E2.7 Payment for Mobilization
- (a) Sixty percent (60%) of the lump sum price will be paid to the contractor for mobilization on the first progress estimate for the Contract.

E2.8 Payment for Demobilization

- (a) The remaining forty percent (40%) of the lump sum price will be paid upon:
- (i) restoration of the Site and/or Sites to the satisfaction of the Contract Administrator; and
 - (ii) distribution of the declaration of Total Performance.

E2.9 "Mobilization and Demobilization" will be paid only once (to a maximum of one hundred percent (100%)), regardless of the number of times the Contractor mobilizes to the Site and/or Sites.

E3. GEOTECHNICAL REPORT

E3.1 Further to C3.1, the geotechnical report is provided to aid the Contractor's evaluation of the pavement structure and/or existing soil conditions. The geotechnical report is contained in Appendix 'A'.

E4. OFFICE FACILITIES

E4.1 The Contractor shall supply office facilities meeting the following requirements:

- (a) the field office shall be for the exclusive use of the Contract Administrator;
- (b) the building shall be conveniently located near the Site of the Work;
- (c) the building shall have a minimum floor area of twenty (20) square metres (m²), a height of 2.4 m with two (2) windows for cross ventilation and a door entrance with a suitable lock;
- (d) the building shall be suitable for all weather use. It shall be equipped with an electric heater and air conditioner so that the room temperature can be maintained between either sixteen (16) to eighteen (18) degrees Celsius or twenty-four (24) to twenty-five (25) degrees Celsius;
- (e) the building shall be adequately lighted with fluorescent fixtures and have a minimum of three (3) wall outlets;
- (f) the building shall be furnished with one (1) desk, one (1) drafting table, one (1) meeting table, one (1) stool, one (1) legal sized filing cabinet and minimum of eight (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; and
- (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/she deems it necessary.

E4.2 The Contractor shall be responsible for all installation and removal costs, all operating costs, and the general maintenance of the office facilities.

E4.3 The office facilities will be provided from the date of the commencement of the Work to the date of Total Performance.

E4.4 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.

E5. PROTECTION OF EXISTING TREES

E5.1 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 two (2) m of trees;

- (b) trees identified to be at risk by the Contract Administrator are to be strapped with twenty-five (25) by one hundred (100) by two thousand four hundred (2400) mm 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; and
- (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.

E5.2 All damage to existing trees caused by the Contractor's activities shall be repaired to the requirements and satisfaction of the Contract Administrator and the City Forester or his/her designate.

E5.3 No separate measurement or payment will be made for the protection of trees.

E5.4 Except as required in clause E5.1(c) and E5.1(e), Elm trees shall not be pruned at any time between April 1 and July 31.

E6. TRAFFIC CONTROL

E6.1 Further to clauses 3.6, 3.7 and 3.8 of CW 1130:

- (a) where directed by the Contract Administrator, 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; and
- (b) in accordance with the Manual of Temporary Traffic Control on City Streets (MTTC), the Contractor ("Construction Agency" in the manual) shall be responsible for placing, maintaining and removing the appropriate temporary traffic control devices as specified by the MTTC or by the Traffic Management Branch of the City of Winnipeg Public Works Department. The Contractor shall bear all costs associated with the placement of temporary traffic control devices by their own forces or the Subcontractor.

E6.2 Notwithstanding E6.1, in accordance with the MTTC, the Contract Administrator shall make arrangements with the **Traffic Services Branch of the City of Winnipeg** to place, maintain, and remove all **regulatory signs** and traffic control devices authorized and/or required by the Traffic Management Branch in the following situations:

- (a) parking restrictions;
- (b) stopping restrictions;
- (c) turn restrictions;
- (d) diamond lane removal;
- (e) full or directional closures on a Regional Street;
- (f) traffic routed across a median;
- (g) full or directional closure of a non-regional street where there is a requirement for regulatory signs (turn restrictions, bus stop relocations, etc.) to implement the closure;

- (h) approved Designated Construction Zones with a temporary posted speed limit reduction. Traffic Services will be responsible for placing all of the advance signs and 'Construction Ends' (TC-4) signs. The Contractor is still responsible for all other temporary traffic control including but not limited to barricades, barrels, and tall cones; and
- (i) directional and guidance signs for temporary Multi-Use Path detour between St Vital Road and Fermor Avenue.

E6.2.1 An exception to E6.2 is the 'KEEP RIGHT/KEEP LEFT' sign (RB-25 / RB-25L) which shall be supplied, installed, and maintained by the Contractor at their own expense.

E6.2.2 Further to E6.2, where the Contract Administrator has determined that the services of the Traffic Services Branch are required, the City shall bear the costs associated with the placement of temporary traffic control devices by the Traffic Services Branch of the City of Winnipeg in connection with the works undertaken by the Contractor.

E7. TRAFFIC MANAGEMENT

E7.1 Further to clause 3.7 of CW 1130, refer to Traffic Staging Drawings P-3537-2021-19 to P-3537-2021-25 for traffic management details for each stage.

E8. REFUSE AND RECYCLING COLLECTION

E8.1 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 E8.2 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.

E8.2 Collection Schedule:

Southbound Dunkirk Drive, from Fermor Avenue to St Vital Road.

Collection Day(s): **Wednesday**

Collection Time: **0700**

Common Collection Area: **West boulevard in front of residence**

E8.3 No measurement or payment will be made for the Work associated with this Specification.

E9. PEDESTRIAN SAFETY

E9.1 During the project, a temporary snow fence shall be installed in locations where hazards exist adjacent to pedestrian facilities, such as open excavations. 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.

E10. WATER OBTAINED FROM THE CITY

E10.1 Further to clause 3.7 of CW 1120, the Contractor shall pay for all costs, including sewer charges, associated with obtaining water from the City in accordance with the Waterworks and Sewer By-laws.

E11. SURFACE RESTORATIONS

E11.1 Further to clause 3.3 of CW 1130, when Total Performance is not achieved in the year the Contract is commenced, the Contractor shall temporarily repair any Work commenced and not completed to the satisfaction of the Contract Administrator. The Contractor shall maintain the temporary repairs in a safe condition as determined by the Contract Administrator until

permanent repairs are completed. The Contractor shall bear all costs associated with temporary repairs and their maintenance.

E12. INFRASTRUCTURE SIGNS

E12.1 The Contractor shall contact Colin Carson at 204-794-4333 to coordinate pick-up of two (2) infrastructure signs from the City of Winnipeg Central Stores at 1277 Pacific Avenue. 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 the signs 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.

E13. SUPPLY AND INSTALLATION OF PAVEMENT REPAIR FABRIC

DESCRIPTION

E13.1 General

E13.1.1 This specification covers the supply and installation of pavement repair fabrics for reinforcement of asphalt layers, distribution of loads, and reducing reflective cracking distresses.

E13.1.2 Referenced Standard Construction

- (a) CW 3110 – Sub-Grade, Sub-Base and Base Course Construction
- (b) CW 3410 – Asphaltic Concrete Pavement Works
- (c) Approved Products for Surface Works

E13.2 Definitions

E13.2.1 Pavement Repair Fabric composed of fiberglass strands coated with an elastomeric polymer and formed into a grid structure.

E13.2.2 Minimum Average Roll Value (MARV) is property value calculated as typical minus two (2) standard deviations. It shall yield a 97.7 percent degree of confidence that any sample taken during quality assurance testing will exceed the value reported.

E13.2.3 Apertures are the open spaces formed between the interconnected network of longitudinal and transverse ribs of a fabric.

E13.2.4 Type A Pavement Repair Fabric will be used for full width asphalt reinforcement by allowing asphalt particles to penetrate through the fabric to achieve high interlock and effective bonding of the two (2) asphalt lifts.

E13.2.5 Type B Pavement Repair Fabric is high strength fabric in the cross-machine direction and will be used for localized repair reinforcement (i.e., at joints and cracks) to minimize both thermal and stress related reflective cracking.

MATERIALS

E13.3 Approved Products

E13.3.1 Use only those materials listed as *Approved Products for Surface Works*. The *Approved Products for Surface Works* are available at the City of Winnipeg, Corporate Finance, Material Management Internet site at:

https://www.winnipeg.ca/finance/findata/matmgt/std_const_spec/current/Docs/Approved_Products_Surface_Works.pdf

E13.4 Material Identification

E13.4.1 Pavement Repair Fabric shall be labelled in accordance with ASTM D4873/D4873M, and must clearly show the manufacturer name, product style number, and roll number. Products without proper identification or labelling, mislabelling, or misrepresentation of materials shall be rejected.

E13.5 Storage and Handling

E13.5.1 Pavement Repair Fabric rolls shall be elevated off the ground and adequately covered to protect them from site construction damage, precipitation, any contamination of dirt or dust, and any other deleterious materials.

E13.5.2 Pavement Repair Fabric rolls shall be protected from extended ultraviolet radiation including sunlight, chemicals that are strong acids or strong bases, flames including welding sparks, excess temperatures, and any other environmental conditions that may damage the physical properties of the fabric.

E13.5.3 Store and handle the Pavement Repair Fabric in accordance with the manufacturer's recommendations. Manufacturer's data sheets shall include preparation instructions and recommendations as well as storage and handling requirements and recommendations.

E13.6 Certification

E13.6.1 The Contractor shall provide Manufacturer's Mill Certificate and MARV Roll Data to the Contract Administrator prior to installation. The certification shall state that the Pavement Repair Fabric meets MARV requirements as evaluated under the manufacturer's quality control program. The certification shall be attested to by a person having legal authority to bind the manufacturer. The Pavement Repair Fabric shall be annually tested by accredited a third party testing facility.

E13.6.2 The Contractor shall provide a letter to the Contract Administrator stating the product name, manufacturer, style number, and other pertinent information to fully describe the Pavement Repair Fabric.

E13.6.3 All testing and data shall be in accordance with approved ASTM standards. Data reported in accordance with other standards will not be accepted.

E13.7 Pavement Repair Fabric Properties

E13.7.1 Pavement Repair Fabric shall consist of a high strength, fiberglass grid custom knitted, and coated with an elastomeric polymer and self-adhesive glue with square or rectangular opening configurations.

E13.7.2 The axis with the least strength will be taken as the ultimate strength of the fabric for any given property.

E13.7.3 Type A Pavement Repair Fabric shall meet the requirements in Table CW 3140.1.

Table CW 3140.1 – Type A Pavement Repair Fabric Property Requirements

Physical Property	Machine Direction	Cross-Machine Direction	Test Method
Tensile Strength, Minimum	100 kN/m	100 kN/m	ASTM D 6637
Tensile Strength @ 2% Strain, Minimum	80 kN/m	80 kN/m	ASTM D 6637
Secant Stiffness EA at 2% Strain	4,000 kN/m	4,000 kN/m	ASTM D 6637
Elongation at Break, Maximum	3%		ASTM D 6637
Coating Softening Point, Minimum	150 °C		ASTM D 36
Coating Melting Point, Minimum	350 °C		ASTM D 276
Glass Melting Point, Minimum	820 °C		ASTM D 338
Mass/Unit Area, Minimum	420 g/m ²		ASTM D 5261

E13.7.4 Type B Pavement Repair Fabric shall meet the requirements in Table CW 3140.2.

Table CW 3140.2 – Type B Pavement Repair Fabric Property Requirements

Physical Property	Machine Direction	Cross-Machine Direction	Test Method
Tensile Strength, Minimum	100 kN/m	200 kN/m	ASTM D 6637
Tensile Strength @ 2% Strain, Minimum	80 kN/m	160 kN/m	ASTM D 6637
Secant Stiffness EA at 2% Strain	4,000 kN/m	8,000 kN/m	ASTM D 6637
Elongation at Break, Maximum	3%		ASTM D 6637
Coating Softening Point, Minimum	150 °C		ASTM D 36
Coating Melting Point, Minimum	350 °C		ASTM D 276
Glass Melting Point, Minimum	820 °C		ASTM D 338
Mass/Unit Area, Minimum	420 g/m ²		ASTM D 5261

E13.7.5 All physical property requirements are MARV determined in accordance with ASTM 4759. Values not labelled as MARV will not be accepted.

E13.7.6 Aperture sizes shall be as follows:

- (a) Between ten (10) mm and fourteen (14) mm for pavement repair fabric immediately below or within Type 1A asphalt layer.
- (b) Between nineteen (19) mm and 25.4 mm for pavement repair fabric immediately below or within Type III asphalt layer.

E13.7.7 If the fabric has a rectangular aperture size, the smaller dimension shall be used to establish the suitable Pavement Repair Fabric.

CONSTRUCTION METHODS

E13.8 General

E13.8.1 Pavement Repair Fabric shall not be placed when weather conditions, in the opinion of the Contract Administrator, are not suitable for installation including heavy rainfall, extreme cold or frost conditions, or extreme heat.

E13.8.2 Make all repairs as required prior to placement of Pavement Repair Fabric. Seal cracks and fill holes using a method that provides a proper level surface. Receiving surface shall be smooth, with the existing cracks pretreated.

E13.8.3 Surfaces shall be mechanically cleaned by sweeping and vacuuming and be free of oil, vegetation, sand, dirt, water, gravel, and other contaminants prior to placement of Pavement Repair Fabric.

E13.8.4 Pavement Repair Fabric placement should not be undertaken if rain is likely to fall prior to covering the fabric with an asphalt mat overlay. Pavement Repair Fabric that is placed and will not adhere due to moisture shall be removed and replaced at the Contractor's expense.

E13.8.5 Pavement Repair Fabric shall be laid out by mechanical means or by hand using sufficient pressure to eliminate ripples. Remove any ripples by pulling the fabric tight. Cutting of the fabric may be permitted on tight radii to prevent ripples.

E13.8.6 Transverse joints shall be overlapped seventy-five (75) mm or as recommended by the manufacturer, whichever is greater. Longitudinal joints shall be overlapped 37.5 mm or as recommended by the manufacturer, whichever is greater.

E13.8.7 Prior to the asphalt topping placement, the fabric shall be inspected by the Contract Administrator for damage during installation. Damaged fabric shall be removed and replaced at the Contractor's expense.

- E13.8.8 Activate self-adhesive glue by rolling with a rubber coated drum roller or a pneumatic tire roller. In no instance shall steel-wheeled or vibratory rollers be used. Rolling shall continue until the adhesive is activated and the fabric is bonded to the levelling course.
- E13.8.9 Roller tires shall be kept clean to the satisfaction of the Contract Administrator.
- E13.8.10 If bonding of the fabric is not readily achieved, it shall be removed and replaced at the Contractor's expense.
- E13.8.11 Pavement Repair Fabric shall be laid and rolled over ironworks (e.g., manhole covers). Once the fabric has been rolled, those portions covering the ironworks shall be removed by cutting the fabric with a utility knife or other methods approved by the Contract Administrator.
- E13.8.12 Protect the Pavement Repair Fabric until placement of the finished asphalt topping.
- E13.8.13 Where a tack coat or emulsified asphalt is specified, the approved tack coat/emulsion and dose should be used as recommended by the manufacturer in conjunction with the Pavement Repair Fabric. Tack coat or emulsified asphalts shall not be diluted. Unless otherwise recommended by the manufacturer, apply tack coat or emulsified asphalt at the rate of 0.35 liters per square meter of surface area.
- E13.8.14 Where tack coat or emulsified asphalt is placed prior to the fabric, it must fully cure prior to placement of the fabric. Where tack coat or emulsified asphalt is placed after the fabric, it must fully cure prior to construction traffic, including paving, travelling on the surface.
- E13.8.15 Prevent spattering of tack coat or emulsified asphalt when placed adjacent to curbs, gutters, structures and other adjacent surfaces. Clean any surfaces where it has been contaminated by the tack coat or emulsified asphalt.
- E13.8.16 Levelling course or overlay layer shall be a minimum thickness of forty (40) mm. Place and compact asphalt over the Pavement Repair Fabric in accordance with CW 3410.

QUALITY ASSURANCE TESTING

- E13.9 The Contract Administrator shall test the adhesion for pavement repair fabric in field during construction is as follows:
- E13.9.1 Place approximately one (1) m² of fabric on a prepared surface that is representative of the project conditions.
- E13.9.2 Activate self-adhesive glue by rolling with a rubber-tired roller or by applying adequate pressure to fully activate the pressure-sensitive adhesive.
- E13.9.3 Use a calibrated spring balance by inserting the hook of the balance under the centre of the fabric and pulling upward until the fabric starts to pull away from the surface.
- E13.9.4 A nine (9) kilograms pull is required without pulling the grid free or creating ripples in the fabric.

METHOD OF MEASUREMENT

- E13.10 Pavement Repair Fabric
- E13.10.1 The supply and installation of the pavement repair fabric will be measured on an area basis in accordance with this Specification as computed by the Contract Administrator.

BASIS OF PAYMENT

- E13.11 Pavement Repair Fabric
- E13.11.1 The supply and installation of the pavement repair fabric will be paid for on an area basis at the Contract Unit Price per m² for "Pavement Repair Fabric". The area to be paid for will be the total number of m² of pavement repair fabric supplied and installed in accordance with this Specification, accepted and measured by the Contract Administrator.

- E13.11.2 Only material placed within the designated limits will be included in the payment for "Supply and Install Pavement Repair Fabric".
- E13.11.3 No payment will be made for "Supply and Install Pavement Repair Fabric" removed and replaced due to improper installation or damaged materials.
- E13.11.4 No payment will be made for transverse and longitudinal overlap.

E14. ASPHALT PATCHING OF MISCELLANEOUS CONCRETE

DESCRIPTION

E14.1 General

- E14.1.1 Further to CW 3410, this specification covers the placement of asphalt patches in various situations to prepare a concrete pavement for subsequent placement of mainline asphalt pavement overlay. This includes patching full depth concrete repairs, cracks, joints, and vertical faults.
- E14.1.2 Referenced City of Winnipeg Standard Construction Specifications
 - (a) CW 1130 – Site Requirements
 - (b) CW 3410 – Asphaltic Concrete Pavement Works

MATERIAL AND EQUIPMENT

E14.2 Asphalt materials

- E14.2.1 Asphalt material supplied shall be in accordance with CW 3410 Type 1A Asphalt Material.

E14.3 Equipment

- E14.3.1 Equipment shall be in accordance with CW 3410 Clause 8.

CONSTRUCTION METHODS

E14.4 Full Depth Concrete Repairs

- E14.4.1 Place asphaltic concrete over the newly constructed joint repair area with greater than 20 mm elevation difference between the repair surface and the adjacent surface. Remove any loose or debonded asphalt at the joint perimeter and place new asphaltic concrete in these areas as well.
- E14.4.2 Dispose of all material in accordance with CW 1130 Section 3.4.
- E14.4.3 Ensure surface is dry and clean prior to placement of asphaltic concrete patching material.
- E14.4.4 Prepare the joint repair area surface with a uniform application of tack coat applied in small quantities sufficient to wet the concrete surface.
- E14.4.5 Place and compact asphaltic concrete over the joint repair area in accordance with CW 3410 Clause 9.3 and to the satisfaction of the Contract Administrator so that the finished elevation of the patch is flush with the adjacent surrounding area.
- E14.4.6 Compact the asphaltic concrete to an average of ninety five percent (95%) of the 75 blow Marshal Density of the paving mixture with no individual test being less than ninety percent (90%).
- E14.4.7 Traffic is not permitted on the patch area until the asphalt has cooled to ambient temperature.

MEASUREMENT AND PAYMENT

- E14.5 Asphalt Patching of Miscellaneous Concrete will be measured on an area basis and paid for at the Contract Unit Price per square metre for "Construction of Asphalt Patches". The area to be paid for will be the total number of square metres of full depth joints, cracks and joints, and vertical faults patched in accordance with this Specification.

E15. MONOLITHIC CURB AND SIDEWALK WITH BLOCK OUTS FOR INDICATOR SURFACES

DESCRIPTION

- E15.1 This Specification shall supplement CW 3325-R5 "Portland Cement Concrete Sidewalks".

CONSTRUCTION METHODS

- E15.2 Add the following to section 9 of CW 3325:
- E15.2.1 As shown on the Drawings and as directed by the Contract Administrator, construct sidewalk with block outs and/or monolithic curb and sidewalk with block outs, to allow for the installation of indicator surfaces.
- E15.2.2 Verify dimensions of paving stones (indicator surface) prior to construction of the block-outs. Gaps between paving stones and concrete pavement shall not exceed five (5) mm.
- E15.2.3 Concrete curbs for monolithic curb and sidewalk with block outs shall be constructed in accordance with CW 3240.

METHOD OF MEASUREMENT

- E15.3 Add the following to section 12 of CW 3325:
- E15.3.1 Construction of concrete sidewalks with block outs for indicator surfaces will be measured on a surface area basis. The surface area to be paid for shall be the number of m² constructed in accordance with this Specification and accepted by the Contract Administrator, as computed by measurements made by the Contract Administrator.

BASIS OF PAYMENT

- E15.4 Add the following to section 13 of CW 3325:
- E15.4.1 Construction of concrete sidewalks with block outs for indicator surfaces will be paid for at the Contract Unit Price per m² for E15.4.2, measured as specified herein, which price shall be payment in full for supplying all materials and for performing all operations herein described and all other items incidental to the Work included in this Specification.
- E15.4.2 Items of Work:
(a) Monolithic Curb and 100 mm Sidewalk with Block Outs
- E15.4.3 Concrete thickness greater than the specified sidewalk thickness as a result of shaping the base material to accommodate the block outs is incidental to the listed E15.4.2.

E16. PAVING STONES FOR INDICATOR SURFACES

DESCRIPTION

- E16.1 This Specification shall supplement CW 3330-R5 "Installation of Interlocking Paving Stones".

MATERIALS

- E16.2 Add the following to section 5 of CW 3330:
- E16.2.1 Paving stones for indicator surfaces shall be as shown on the Drawings.

- E16.2.2 Paving stones for indicator surfaces shall be:
- (a) Barkman Concrete paving stones – Charcoal Holland Paver (sixty (60) mm by two hundred ten (210) mm by two hundred ten (210) mm)
<https://www.barkmanconcrete.com/>;
 - (b) Endicott Clay Paver (ninety-two (92) mm by fifty-seven (57) mm by one hundred ninety-four (194) mm) – Dark Ironspot
<https://endicott.com/>; and
 - (c) Yankee Hill Brick (ninety-two (92) mm by fifty-seven (57) mm by one hundred ninety-four (194) mm) – Dark Ironspot
<http://yankeehillbrick.com/>.

CONSTRUCTION METHODS

E16.3 Add the following to section 9.2 of CW 3330:

E16.3.1 Preparation of “Sand-Base for Paving Stones in Sidewalk Block Outs”.

- (a) Place a fifteen (15) mm layer of bedding sand in the blocked out sidewalk areas. SPEC NOTE: the bedding sand and paver dimensions must be considered in the block out dimensions on the drawing.
- (b) The bedding sand shall be spread and levelled so that the paving stones when installed are five (5) mm higher than the finished grade.
- (c) No more sand shall be spread than can be covered in with paving stone on the same day.
- (d) The bedding sand shall not be compacted or disturbed prior to laying the paving stones.

E16.4 Add the following to section 9.3 of CW 3330:

E16.4.1 For indicator surface paving stones, commence installation of paving stones against the long edge of the block out to obtain the straightest possible course of installation.

METHOD OF MEASUREMENT

E16.5 Add the following to section 12 of CW 3330:

E16.6 Supply and Installation of Paving Stones for Indicator Surfaces

E16.6.1 Paving stones for indicator surfaces will be measured on surface area basis. The surface area to be paid for shall be the number of m² constructed in accordance with this specification and accepted by the Contract Administrator, as computed by measurements made by the Contract Administrator.

BASIS OF PAYMENT

E16.7 Add the following to section 13 of CW 3330:

E16.7.1 The supply and installation of paving stones for indicator surfaces will be paid for at the Contract Unit Price per m² for “Paving Stone Indicator Surface”, measured as specified herein, which price shall be payment in full for supplying all materials and for performing all operations herein described and all other items incidental to the Work included in this Specification.

E16.7.2 Concrete thickness greater than the specified sidewalk thickness as a result of shaping the base material to accommodate the block outs is incidental to the listed Items of Work.

E17. TRANSIT PAVING STONE INDICATOR SQUARES

DESCRIPTION

- E17.1 Further to the latest version of the City of Winnipeg Standard Construction Specification CW 3335, this Specification shall cover the:
- (a) Supplying and installing the interlocking paving stones (unit pavers) used in Transit stop paving band square;
 - (b) Supplying and installing the sand setting bed,
- E17.2 The Work to be done by the Contractor under this Specification shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools, supplies and all other things necessary and/or incidental to the satisfactory performance and completion of all Work as hereinafter specified.
- E17.3 Referenced Specifications and Drawings
- (a) The latest version of the City of Winnipeg Standard Construction Specifications
 - (i) CW 3330 Installation of Interlocking Paving Stones

MATERIALS

- E17.4 General
- (a) All materials supplied under this Specification shall be of the type approved by the Contract Administrator, and shall be subject to inspection and testing by the Contract Administrator.
 - (b) The Contractor shall be responsible for the supply, safe storage and handling of all materials set forth in this Specification. All materials shall be handled in a careful and workmanlike manner, to the satisfaction of the Contract Administrator.
- E17.5 Interlocking Paving Stones
- (a) Concrete interlocking paving stones (unit pavers) for indicator strips or equivalent in accordance with B6, supplied by:
 - Barkman Concrete
 - Phone: 204-667-3310
 - www.barkmanconcrete.com
 - (b) As shown on the Drawings and as follows:
 - (i) Blue Holland Stone 105 x 210 x 60 mm
 - (c) Concrete interlocking paving stones (unit pavers) for indicator strips shall be clay brick pavers conforming to CAN3-A231.2, Precast Concrete Pavers. Further to CAN3-A231.2.6.1.1, where concrete pavers are shipped for installation before the pavers are twenty-eight (28) days old, the average compressive strength of thee pavers at the time of delivery to the site of work shall not be less than 40 MPa.
- E17.5.1 Sand
- (a) Clean brick sand as joint filler.
 - (b) Clean brick sand as minimum 13 mm depth setting bed.
 - (c) Bedding sand shall be fine aggregate as specified in Specification CW 3330.

EQUIPMENT

- E17.6 All equipment shall be of a type acceptable to the Contract Administrator and shall be kept in good working order.

CONSTRUCTION METHODS

E17.7 Installation of paving stones in paving band square.

- (a) Paving stones shall be installed in formed concrete blockouts in accordance with CW 3330, set in locations and patterns as shown on the Drawings. Spaces between the joints shall not exceed three (3) mm and shall be uniform and consistent while maintaining true patterns as indicated on the Drawings.
- (b) Contractor to verify the exact dimensions of pavers prior to construction of blockouts in concrete sidewalk.
- (c) Remove and dispose of existing paving stones in existing sidewalks. Any removal and/or disposal shall be incidental to the Work within this Specification.
- (d) Install concrete sidewalk complete with blockouts for paving stones as specified on the Drawings.
- (e) Install sand setting bed to a minimum thirteen (13) mm depth as shown on the Drawings.
- (f) Do not compact sand setting bed prior to installation of paving stones.
- (g) Sand setting bed shall be covered with pavers in the same day.
- (h) Remove adjacent paving stones in patterns as required to ensure that paving stones do not require cutting to fit existing paving stone pattern.
- (i) Where paving stones conflict with vertical structural elements or other elements, paving stones must be saw cut and fit true and hand tight.
- (j) Commence installation of paving stones along a straight edge to obtain the straightest possible course for installation.
- (k) Paving stones shall be cut with a saw only, to obtain true, even, and undamaged edges. Chipped paving stones are unacceptable.
- (l) Crews installing paving stones shall work from installed pavers and not the sand bedding.
- (m) Spread fine grade brick sand over paving stone surface and sweep into joints in multiple directions. Sand is incidental to the price for supply and installation of paving stones.
- (n) Compact pavers with vibratory plate compactor having a mass of not less than one hundred and thirteen (113) kilograms. Compaction is incidental to the price for supply and installation of paving stones.
- (o) Sweep remaining sand over all paving areas until joints are full and remove excess from site.
- (p) Remove cracked, shipped, broken, or otherwise damages paving materials from site immediately.
- (q) Upon completion, clean in accordance with manufacturers recommendations.

MEASUREMENT AND PAYMENT

E17.8 Transit Paving Stone Indicator Squares

- (a) The supply and installation of paving stones for indicator squares will be paid for at the Contract Unit Price per square meter for "Transit Paving Stone Indicator Squares", measured as specified herein, which price shall be payment in full for supplying all materials and for performing all operations herein described and all other items incidental to the work included in this specification.
- (b) Concrete thickness greater than the specified sidewalk thickness as a result of shaping the base material to accommodate the block outs is incidental to the listed Items of Work.

E18. SIDEWALK RENEWAL BESIDE RETAINING WALL AT 219 DUNKIRK DRIVE

DESCRIPTION

- E18.1 This Specification covers the renewal of the existing sidewalk beside the retaining wall at 219 Dunkirk Drive.

MATERIALS

- E18.2 15M deformed tie bars shall be supplied in accordance with CW 3230.
- E18.3 Sidewalk materials shall be supplied in accordance with CW 3325.

CONSTRUCTION METHODS

- E18.4 Sawcut existing concrete sidewalk adjacent to the retaining wall as indicated on the Drawings and in accordance with CW 3235, Section 3.1. Do not excavate base and sub-base material more than fifty (50) mm below the underside of the remaining sidewalk for a minimum three hundred (300) mm width beside the remaining sidewalk.
- E18.5 Install 15M deformed tie-bars into the remaining sidewalk slab six hundred (600) mm on-center as indicated on the Drawings and in accordance with CW 3230.
- E18.6 Install concrete sidewalk as indicated on the Drawings and in accordance with CW 3325.
- E18.7 The period of time from the commencement of sawcutting in front of the retaining wall to the completion of concrete sidewalk placement along the entire length of the wall shall not exceed forty-eight (48) hours.
- E18.8 The Contractor is responsible to ensure the stability of the retaining wall is maintained. Cracking or movement of the retaining wall may result in replacement of the retaining wall at the Contractor's expense.

MEASUREMENT AND PAYMENT

- E18.9 Sidewalk Renewal Beside Retaining Wall at 219 Dunkirk Drive
- (a) The renewal of concrete sidewalk beside retaining wall at 219 Dunkirk Drive shall be paid for at the Contract Lump Sum price for "Sidewalk Renewal Beside Retaining Wall at 219 Dunkirk Drive", which price shall be payment in full for supplying all materials and for performing all operations herein described and all other items incidental to the work included in this Specification.

E19. SUPPLY AND INSTALL WATERMAIN AND WATER SERVICE INSULATION

DESCRIPTION

- E19.1 Notwithstanding 3.12 of CW 2110, this specification covers the supply and installation of insulation in roadway excavations over watermains and water services.
- E19.2 Referenced Standard Construction Specifications
- (a) CW 2030 – Excavation Bedding and Backfill
- (b) CW 3110 – Sub-grade, Sub-base and Base Course Construction
- E19.3 Referenced Standard Details:
- (a) SD-018 - Watermain and Water Service Insulation.

MATERIALS

E19.4 Acceptable insulation is:

- (a) Extruded Polystyrene rigid foam insulation – Type 4, one hundred (100) mm (4 inches) thickness.
 - (i) DOW – Roofmate or Highload 40
 - (ii) Owen’s Corning – Foamular 350 or Foamular 400.
- (b) Fifty (50) mm (2 inches) by one thousand two hundred nineteen (1219) mm (48 inches) by two thousand four hundred thirty-eight (2438) mm (96 inches), fifty (50) mm (2 inches) by six hundred ten (610) mm (24 inches) by two thousand four hundred thirty-eight (2438) mm (96 inches), one hundred two (102) mm (4 inches) by six hundred ten (610) mm (24 inches) by two thousand four hundred thirty-eight (2438) mm (96 inches).

E19.5 Sand Bedding:

- (a) in accordance with CW 2030.

CONSTRUCTION METHODS

- E19.6 Prior to the installation of any sub-base material or geotextile material, locate all existing water services. Further to SD-018, where directed by the Contract Administrator, excavate the sub-grade to allow the top of the insulation to be installed flush with the surrounding sub-grade. Install the insulation on a level surface centered over the located watermain or water service for the full width of the roadway excavation. Install sand bedding if required to level the surface. Stockpile and dispose of excavated material in accordance with CW 3110.
- E19.7 Thickness of insulation is one hundred (100) mm (4 inches). If using fifty (50) mm (2 inches) panels two (2) layers are required. Total width of insulation to be as directed by the Contract Administrator. Place sufficient full width panels to meet or exceed the specified width.
- E19.8 Place insulation panels adjacent to each other over the specified area with no gaps between panels and less than fifteen (15) mm of elevation difference along the adjoined edges. Where fifty (50) mm (2 inches) thick panels are being used, offset the top layer to prevent the panel joints from aligning with the joints in the lower layer.
- E19.9 Use full panels of insulation where possible. Where necessary cut insulation panels to obtain coverage to specified lengths. Insulation pieces shall be a minimum of dimension of three hundred (300) mm in width or length.
- E19.10 Take appropriate measures to ensure panels are not displaced when installing geotextiles and during backfilling operations.

MEASUREMENT AND PAYMENT

- E19.11 Watermain and Water Service Insulation shall be measured on an area basis and paid for at the Contract Unit Price per m² of “Watermain and Water Service Insulation”. The area to be paid for shall be the total m² of watermain and water service insulation supplied and installed in accordance with this specification, accepted and measured by the Contract Administrator.
 - (a) excavation of the roadway subgrade in accordance with E19.6 will not be measured for payment and will be included in the payment for “Watermain and Water Service Insulation”.

E20. SUPPLY AND INSTALL DIRECTIONAL TACTILE STRIP

DESCRIPTION

- E20.1 This Specification covers the supply and installation of directional bar tiles in one hundred (100) mm concrete sidewalks. These are used at bus stops where the sidewalk must cross a Multi-Use Path or bicycle path.

REFERENCES

E20.2 Referenced Specifications and Drawings

- E20.2.1 The latest version of the City of Winnipeg Standard Construction Specifications
- (a) CW 3235 – Renewal of Existing Miscellaneous Concrete Slabs
 - (b) CW 3310 – Portland Cement Concrete Pavement Works
 - (c) CW 3325 – Portland Cement Concrete Sidewalk

MATERIALS AND EQUIPMENT

- E20.3 Acceptable Directional Tactile Strip product is (or equivalent in accordance with B6)
- (a) three hundred and five (305) mm times six hundred and ten (610) mm Cast in Place (Wet Set) with Anchors – Manufactured by ADA Solutions;
 - (b) Part # 1224BAR1875Y;
 - (c) Flush Mount, Federal Yellow;
 - (d) Fasteners: six (6) mm Dia. times thirty-eight (38) mm Long SS FH Bolts (Hex Drive) and six (6) mm Dia. times thirty-eight (38) mm Long Zinc Inserts; and,
 - (e) Sealant: Manufacturer recommended.
- E20.3.2 Product specifications found in **Appendix 'B'** of this document.

EQUIPMENT

- E20.4 All equipment shall be of a type acceptable to the Contract Administrator and shall be kept in good working order.

CONSTRUCTION METHODS

- E20.5 Install Wet Set Replaceable units as per manufacturer's recommendations, and as shown on Contract Drawings.
- E20.6 Where necessary, cut Wet Set Replaceable units accurately using a sixty (60) tooth carbide or diamond blade with a suitable cutting device. No cut unit shall measure less than two hundred and fifty (250) mm in length. In accordance with manufacture's recommendations, supplemental fasteners and Inserts shall be added as needed when the distance between the cut face of the unit and the original hardware exceeds one hundred (100) mm.
- E20.7 Install Wet Set Replaceable units true to grade, in location, layout pattern as indicated on the Drawings.
- E20.8 Wet Set Replaceable units shall be set flush into a minimum sixty-five (65) mm depth of concrete. Vibrate or tamp (with rubber mallet) the Wet Set Replaceable units into the fresh concrete to insure that there are no voids underlying the units and that the units are flush with the adjacent substrate. Temporary weights can be added as necessary in the event of float during initial set of the units.
- E20.9 Joint Lines between successive Wet Set Replaceable Units: Maintain a three (3) mm to five (5) mm consistent joint line between successive units.
- E20.10 Tooled Edge Detail: Maintain a three (3) mm to six (6) mm tooled edge detail along the perimeter of the Wet Set Replaceable unit installation. Installation of the tooled edge detail facilitates future removal and replacement of the units.
- E20.11 Protective Plastic Sheet: Particularly in direct sunlight and when temperatures exceed twenty-five (25) degrees Celsius, remove the protective plastic sheeting from the Wet Set Replaceable units within forty-eight (48) hours of installation of the unit. Failure to do so will be solely at the Contractors risk and may result in the protective plastic bonding to the unit thus requiring a

considerable effort to remove the protective plastic sheeting. If plastic sheeting cannot be removed, it will be at the Contractors expense to replace that unit.

MEASUREMENT AND PAYMENT

E20.12 Directional Tactile Strip

E20.12.1 Directional Tactile Strip shall be measured on a unit basis and paid for at the Contract Unit Price per unit for the item listed here below. The number of units to be paid for shall be the total number of Directional Tactile Strip supplied and installed in accordance with this specification, accepted and measured by the Contract Administrator.

- (a) Directional Tactile Strip: three hundred and five (305) mm x six hundred and ten (610) mm tiles.

E21. SIGN SUPPORT CLAMPS

E21.1 The Contractor shall install all new sign support clamps at the locations shown on the Drawings or as directed by the Contract Administrator. The City shall supply all sign support clamps.

E21.2 All costs in connection with the installation of sign support clamps are incidental to the Contract.

E22. TREE REMOVALS

DESCRIPTION

E22.1 This Specification shall amend the City of Winnipeg Standard Construction Specification CW 3010 "Clearing and Grubbing" and shall cover the removal of trees as specified on the Contract Drawings. The City of Winnipeg, Forestry Branch must be contacted prior to removing any trees.

CONSTRUCTION METHODS

E22.2 Remove only trees marked and confirmed for removal in the field by the Contract Administrator.

E22.3 Remove trees in accordance with CW 3010.

E22.4 The Contractor shall arrange for any Elmwood to be disposed of by the City of Winnipeg.

MEASUREMENT AND PAYMENT

E22.5 Removal of trees will be measured on a unit basis and paid for at the Contract Unit Price per unit item of "Tree Removal". The number to be paid for will be the total number of trees removed in accordance with this specification and accepted by the Contract Administrator.

E23. TRANSIT SHELTER FOUNDATIONS

DESCRIPTION

E23.1 This Specification shall cover the installation of concrete bus shelter pad foundations as identified on the Drawings.

E23.2 The Work to be done by the Contractor under this specification shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools, supplies, and all things necessary for and incidental to the satisfactory performance and completion of all works as hereinafter specified.

REFERENCES

E23.3 Referenced Specifications and Drawings

- (a) The latest version of the City of Winnipeg Standard Construction Specifications

- (i) CW 3310 – Portland Cement Concrete Pavement Works
- (ii) CW 3325 – Portland Cement Concrete Sidewalk

MATERIALS AND EQUIPMENT

E23.4 General

- (a) All materials supplied under this Specification shall be of a type approved by the Contract Administrator and shall be subject to inspection and testing by the Contract Administrator.
- (b) The Contractor shall be responsible of the supply, safe storage and handling of all materials set forth in this Specification. All materials shall be handled in a careful and workmanlike manner, to the satisfaction of the Contract Administrator.

E23.5 Concrete and Reinforcing Steel

- (a) Concrete mix design shall comply with Clause 6.2a) of the latest version of the CW 3310 specification.
- (b) All other materials as per Clause 5 of the latest version of the CW 3310 specification.

CONSTRUCTION METHODS

E23.6 Construction shall take place in accordance with the Drawings, CW 3310, and CW 3325.

E23.7 All forming is incidental to the unit price Bid for the Specification.

E23.8 Verify dimensions of bus shelter pads prior to construction.

E23.9 Meet existing grades and slopes unless otherwise indicated on the Drawings. Notify the Contract Administrator where this requirement will not result in positive drainage.

E23.10 Removal of an existing concrete bus shelter pad shall be incidental to the Work.

MEASUREMENT AND PAYMENT

E23.11 Transit Shelter Foundations

E23.11.1 Construction of the Transit Shelter Foundations shall be paid for at the Contract Unit Price per m² for "Transit Shelter Foundations", measured as specified herein, performed in accordance with this specification and accepted by the Contract Administrator, which price shall be payment in full for supplying all materials and performing all operations herein described and all other items incidental to the Work. The area to be paid for shall be the total number of square metres of Transit Shelter Foundations constructed in accordance with this specification and as measured and accepted by the Contract Administrator.

E24. VIDEO INSPECTION OF SEWERS

DESCRIPTION

E24.1 This Specification amends CW 2130 and CW 2145. It covers the incidental video inspection of existing sewers following tying in new catch basin leads or the abandonment of existing catch basin leads.

CONSTRUCTION METHODS

E24.2 Video inspection of existing sewers shall be done in accordance with CW 2130 and CW 2145.

MEASUREMENT AND PAYMENT

E24.3 Video inspection of existing sewers following tying in new catch basin leads or the abandonment of existing catch basin leads shall not be measured and shall be considered incidental to the work.

E25. CONSTRUCTION OF TEMPORARY MEDIAN CROSSINGS AND OPENINGS

DESCRIPTION

- E25.1 This Specification shall cover the construction of temporary median crossing and temporary median opens as identified on the Drawings.
- E25.2 Referenced City of Winnipeg Standard Construction Specifications
- (a) CW 3110 – Sub-Grade, Sub-Base and Base Course Construction
 - (b) CW 3170 – Earthwork and Grading
 - (c) CW 3410 – Asphaltic Concrete Pavement Works

MATERIAL AND EQUIPMENT

- E25.3 Asphalt Materials
- E25.3.1 Asphalt material supplied shall be in accordance with CW 3410 Type 1A Asphalt Material.
- E25.4 Asphalt Paving Equipment
- E25.4.1 Equipment shall be in accordance with CW 3410 Clause 8.

CONSTRUCTION METHODS

- E25.5 Construction shall take place in accordance with the Drawings, CW 3110, CW 3170, and CW 3410.
- E25.6 Temporary median crossovers shall be excavated to the limits noted and constructed using the pavement structure identified on the Drawings. Median openings must be paved using Type 1A Asphalt Material as per CW 3410 and be maintained by the Contractor as needed during construction. The Contract Administrator may direct the Contractor to repave or repair the crossovers.
- E25.7 Temporary median openings shall be excavated to the limits noted and constructed using the pavement structure identified on the Drawings. Median openings will be granular and must be maintained by the Contractor as needed during construction. The Contract Administrator may direct the Contractor to add additional base course to the median openings.

MEASUREMENT AND PAYMENT

- E25.8 Median crossovers and openings shall be measured on an area basis and paid for at the Contract Unit Price per square metre of "Construction of Temporary Median Crossovers and Median Openings". The area to be paid for shall be the total square meters constructed in accordance with this specification, accepted and measured by the Contract Administrator.
- E25.9 Restoration of the crossovers and median openings will be paid separately under existing line items for curbs, landscaping and median type.

E26. CATCH BASINS (DITCH INLET)

DESCRIPTION

- E26.1 This Specification shall supplement CW 2130 for catch basins as it pertains to the detail for Catch basin (Ditch Inlet).
- construction methods
- E26.2 Install Catch basin (Ditch Inlet) according to SD-025 except as modified in P-3537-20201-18 detail for Ditch Inlet with Grate Cover.
- E26.3 Install grouted stone rip rap according to CW 3615.

MEASUREMENT AND PAYMENT

- E26.4 Measurement and payment for “SD-025, 1800 mm deep (Ditch Inlet Grate)” shall be according to CW 2130 4.4.
- E26.5 Measurement and payment for “Grouted Stone Rip Rap” will be as per CW 3615.

E27. HYDRO EXCAVATION

DESCRIPTION

- E27.1 This Specification covers the removal of earthen material immediately adjacent to underground utilities infrastructure by means of high pressure water spray, and the recovery of evacuated material by vacuum type means or equivalent method as approved by the Contract Administrator.

EQUIPMENT

- E27.2 Hydro Excavation unit shall be capable of maintaining a minimum working pressure of 10,000 psi, at a rate of ten (10) to twelve (12) gallons per minute. Unit should be adjustable, so as to provide adequate pressure to remove earthen material identified by the Contract Administrator.
- E27.3 Spray head shall be equipped with a rotating nozzle, in order to provide a wider path of cut.

CONSTRUCTION METHODS

- E27.4 Hydro-Removal of Earthen Material
- (a) Earthen material adjacent to utility entity shall be sprayed with high pressure water so as to remove all such material identified by the Contractor Administrator.
- E27.5 Recovery of Excavated Material
- (a) The recovery of excavated material shall be done using a vacuum type method, or other type of method approved by the Contract Administrator.
 - (b) The recovery of material shall follow immediately behind the excavation, to avoid excavated areas from filling with excavated material.
 - (c) The use of mechanical sweepers will not be allowed.
 - (d) Dispose of material in accordance with Section 3.4 of CW 1130.
- E27.6 Backfill of Hydro Excavated Hole
- (a) The Contractor shall be responsible for the backfill of the hydro excavated hole upon the completion of the Work described herein, to the approval of the Contract Administrator.

MEASUREMENT AND PAYMENT

- E27.7 Hydro Excavation of earthen material will be measured on an hourly basis and paid for at the Contract Unit Price per hour for “Hydro Excavation”. The hours to be paid for will be the total number of hours of Hydro Excavation in accordance with this Specification, accepted and measured by the Contract Administrator.

E28. BOULEVARD AND MEDIAN GRASS MAINTENANCE

- E28.1 During construction, the Contractor is to maintain the grassed median and boulevards within the project area to a height of less than one hundred and fifty (150) mm. No measurement for payment shall be made for this Work.