



THE CITY OF WINNIPEG

TENDER

TENDER NO. 29-2021

**2022-23 REGIONAL STREET PROGRAM- ERIN ST, WOLEVER TO NOTRE DAME,
RECONSTRUCTION**

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. Contract Administrator	2
D5. Contractor's Supervisor	2
D6. Notices	2
D7. Furnishing of Documents	2

Submissions

D8. Authority to Carry on Business	2
D9. Safe Work Plan	3
D10. Insurance	3
D11. Contract Security	4
D12. Subcontractor List	4
D13. Detailed Work Schedule	5

Schedule of Work

D14. Commencement	5
D15. Working Days	6
D16. Restricted Work Hours	6
D17. Work By Others	6
D18. Sequence of Work	7
D19. Critical Stages	7
D20. Substantial Performance	7
D21. Total Performance	8
D22. Liquidated Damages	8

D23. COVID-19 Schedule Delays	8
D24. Scheduled Maintenance	9
Control of Work	
D25. Job Meetings	9
D26. Prime Contractor – The Workplace Safety and Health Act (Manitoba)	9
D27. The Workplace Safety and Health Act (Manitoba) – Qualifications	9
Measurement and Payment	
D28. Payment	9
Warranty	
D29. Warranty	10
Third Party Agreements	
D30. Funding and/or Contribution Agreement Obligations	10
Form H1: Performance Bond	12
Form H2: Labour and Material Payment Bond	14
Form J: Subcontractor List	16

PART E - SPECIFICATIONS

General

E1. Applicable Specifications and Drawings	1
E2. Site Requirements for Accessibility	3
E3. Mobilization and Demobilization Payment	4
E4. Geotechnical Report	5
E5. Office Facilities	5
E6. Protection Of Existing Trees	5
E7. Traffic Control	9
E8. Traffic Management	9
E9. Water Obtained From the City	10
E10. Surface Restorations	10
E11. Operating Constraints for Work in Close Proximity to Feeder mains	10
E12. Operating Constraints for Work in Close Proximity to AC Water mains	11
E13. Working Around Manitoba Hydro Poles	12
E14. Manitoba Hydro Gas Information	12
E15. Work Within CP Right-of-Way	12
E16. Work Within BNSF Right-of-Way	13
E17. Hydro-Excavation	13
E18. Portland Cement Concrete Sidewalk With Block Outs For Indicator Surfaces	14
E19. Paving Stones for Indicator Surfaces	15
E20. Construction of Exposed Aggregate and Coloured Stamped Concrete Sidewalk	16
E21. Supply and Install Watermain and Water Service Insulation	16
E22. Splash Strip for Asphalt Pavement	17
E23. Existing Manhole Frame and Covers	18
E24. Repair Manhole Benching	18
E25. Catch Basins And Catchpits	18
E26. Concrete Steps	19
E27. Re-use of Base Course	20
E28. Landscaping Mulch	20
E29. Watermain Valve Box Casings	21
E30. Anchor Bolt Projections for Concrete Bases (Traffic Signals)	22
E31. Service Box Pre-Cast (Traffic Signals)	22
E32. Cutovers (Traffic Signals)	23
E33. Installation of Early Open Concrete Bases (Traffic Signals)	23
E34. Splicing Conduit (Traffic Signals)	24

Appendix 'A' – Geotechnical Report

Appendix 'B' - Manitoba Hydro Gas Information

Appendix 'C' – Allowable Excavations Around Manitoba Hydro Poles

Appendix 'D' – CP Safety and Flagging Information

PART B - BIDDING PROCEDURES

B1. CONTRACT TITLE

B1.1 2022-23 Regional Street Program- Erin St, Wolever to Notre Dame, Reconstruction

B2. SUBMISSION DEADLINE

B2.1 The Submission Deadline is 12:00 noon Winnipeg time, December 17, 2021.

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 D4.1.

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 D3.

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;
 - (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;
 - (c) Form G1: Bid Bond and Agreement to Bond.
- B7.2 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.
- B7.3 The Bid shall be submitted electronically through MERX at www.merx.com.
- B7.3.1 Bids will **only** be accepted electronically through MERX.
- B7.4 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;
 - (d) if the Bidder is carrying on business under a name other than his/her own, the business name and the name of every partner or corporation who is the owner of such business name shall be inserted.
- B8.2.1 If a Bid is submitted jointly by two or more persons, each and all such persons shall identify themselves in accordance with B8.2.
- B8.3 In Paragraph 3 of Form A: Bid/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;

- (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 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; and
 - (b) be fully capable of performing the Work required to be in strict accordance with the terms and provisions of the Contract; and
 - (c) have a written workplace safety and health program if required pursuant to The Workplace Safety and Health Act (Manitoba).
- 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.
- (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 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 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;
- (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 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 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) Asphalt Reconstruction and Associated Work
 - (i) Erin Street from Wolever Avenue to Notre Dame Avenue

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

- (a) Asphalt Reconstruction and Associated Work
 - (i) Removal of Existing Pavement;
 - (ii) Excavation;
 - (iii) External Point Sewer and Manhole Repairs;
 - (iv) Installation of catch basins and sewer service pipe;
 - (v) Watermain Service Insulation;
 - (vi) Compaction of sub-grade;
 - (vii) Installation of subdrains;
 - (viii) Placement of separation/ filtration geotextile fabric and Class A geogrid;
 - (ix) Placement of sub-base and base course (Granular A) materials;
 - (x) Adjustment of existing manholes and appurtenances;
 - (xi) Installation of Traffic Signals conduit, service boxes, and concrete bases;
 - (xii) Construct monolithic concrete barrier curb with splash strip for asphalt pavement (180 mm height) and modified barrier curb;
 - (xiii) Construction of 250 mm Plain Dowelled (31.8 mm dowels) and 200 mm Reinforced Concrete Pavements
 - (xiv) Construction of Monolithic Concrete Median Slabs and Bullnoses;
 - (xv) Construction of 100 mm Concrete Sidewalk with Block Outs for Paving Stone Indicator Surface;
 - (xvi) Installation of Paving Stone Indicator Surfaces;
 - (xvii) Installation of detectable surface warning tiles;
 - (xviii) Placement of Asphalt Pavement (Type 1A thickness 50 mm (1 lift), Type III thickness 140 mm (2 lifts)); and
 - (xix) Topsoil and Sod.

D4. CONTRACT ADMINISTRATOR

D4.1 The Contract Administrator is Morrison Hershfield, represented by:

Wayne Jaworski, C.E.T.
Senior Project Manager

Telephone No. 204-977-8370

Email Address wjaworski@morrisonhershfield.com

D4.2 At the pre-construction meeting, Wayne Jaworski, C.E.T. will identify additional personnel representing the Contract Administrator and their respective roles and responsibilities for the Work.

D5. CONTRACTOR'S SUPERVISOR

D5.1 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.

D5.2 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 D5.1 or an alternate can be contacted twenty-four (24) hours a day to respond to an emergency.

D6. NOTICES

D6.1 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.

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

D6.3 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

D7. FURNISHING OF DOCUMENTS

D7.1 Upon award of the Contract, the Contractor will be provided with 'issued for construction' Contract Documents electronically, including Drawings in PDF format only.

SUBMISSIONS

D8. AUTHORITY TO CARRY ON BUSINESS

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

D9. SAFE WORK PLAN

- D9.1 The Contractor shall provide the Contract Administrator with a Safe Work Plan at least five (5) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract Documents, if applicable.
- D9.2 The Safe Work Plan shall be prepared and submitted in the format shown in the City's template which is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/safety/default.stm>
- D9.3 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.

D10. INSURANCE

- D10.1 The Contractor shall provide and maintain the following insurance coverage:
- (a) commercial general liability insurance, in the amount of at least five million dollars (\$5,000,000.00) inclusive, with the City and Manitoba and its Ministers, officers, employees and agents added as an additional insureds, including a cross-liability clause. Such liability policy to also contain contractual liability, unlicensed motor vehicle liability, non-owned automobile liability, broad form property damage cover and products and completed operations, to remain in place at all times during the performance of the Work and throughout the warranty period;
 - (b) Automobile Liability Insurance 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 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;
 - (d) Property insurance for all equipment, tools, field office, and portable toilets used by the Contractor directly or indirectly in the performance of the Work on the project that may be owned, rented, leased, or borrowed.
- D10.2 Deductibles shall be borne by the Contractor.
- D10.3 All Subcontractors performing Work on the Project shall provide the Contractor with evidence of insurance as outlined in D10.1(a) and D10.1(b) above and be registered with Workers Compensation Board of Manitoba and maintain insurance and workers compensation coverage throughout the performance of the Work. The Contractor shall provide the Contract Administrator with evidence of same prior to the commencement of any Work.
- D10.4 The Contractor shall provide the City Solicitor and Manitoba with a certificate(s) of insurance including any certificates of insurance for subcontractors involved in the Work, 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.
- D10.5 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 and to Manitoba.
- D10.6 All policies shall be taken out with insurers duly licensed to carry on business in the Province of Manitoba.

D11. CONTRACT SECURITY

- D11.1 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.
- D11.1.1 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.
 - (e) the results of the verification must provide a clear, immediate and printable indication of pass or fail regarding D11.1(b).
- D11.1.2 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.
- D11.1.3 Digital bonds passing the verification process will be treated as original and authentic.
- D11.2 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.
- D11.3 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 D11.1(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.

D12. SUBCONTRACTOR LIST

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

D13. DETAILED WORK SCHEDULE

- D13.1 The Contractor shall provide the Contract Administrator with a detailed work schedule at least two (2) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in the General Conditions for the return of the executed Contract Documents, as applicable.
- D13.2 The detailed work schedule shall consist of the following:
- (a) a Gantt chart for the Work acceptable to the Contract Administrator.
- D13.3 Further to D13.2(a), the Gantt chart shall show the time on a weekly basis, required to carry out the Work of each trade, or specification division. The time shall be on the horizontal axis, and the type of trade shall be on the vertical axis.

SCHEDULE OF WORK

D14. COMMENCEMENT

- D14.1 The Contractor shall not commence any Work until he/she is in receipt of an award letter from the Award Authority authorizing the commencement of the Work.
- D14.2 The Contractor shall not commence any Work on the Site until:
- (a) the Contract Administrator has confirmed receipt and approval of:
 - (i) evidence of authority to carry on business specified in D8;
 - (ii) evidence of the workers compensation coverage specified in C6.15;
 - (iii) the twenty-four (24) hour emergency response phone number specified in D5.2.
 - (iv) the Pedestrian and Cyclist Accessibility Plan specified in E2;
 - (v) the Safe Work Plan specified in D9;
 - (vi) evidence of the insurance specified in D10;
 - (vii) the contract security specified in D11;
 - (viii) the subcontractor list specified in D12; and
 - (ix) the detailed work schedule specified in D13.
 - (b) the Contractor has attended a pre-construction meeting with the Contract Administrator, or the Contract Administrator has waived the requirement for a pre-construction meeting.
- D14.3 The Contractor shall not commence the Work on the Site before May 16, 2022, and shall commence the Work on Site no later than May 24, 2022, as directed by the Contract Administrator and weather permitting.
- D14.4 The Contractor shall not commence the 2023 Work (Sargent Avenue to Notre Dame Avenue) before May 15, 2023, and shall commence the Work no later than May 22, 2023, as directed by the Contract Administrator and weather permitting.
- D14.5 The City intends to award this Contract by February 11, 2022.
- D14.5.1 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.

D15. WORKING DAYS

D15.1 Further to C1.1(tt);

- D15.1.1 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.
- D15.1.2 Work done to restore the Site to a condition suitable for Work, shall not be considered "work" as defined in the definition of a Working Day.
- D15.1.3 When the Work includes two or more major types of Work that can be performed under different atmospheric conditions, the Contract Administrator shall consider all major types of Work in determining whether the Contractor was able to work in assessing Working Days.
- D15.1.4 Saturdays and Sundays will also be considered a Working Day if the Contractor is working on Site and the Contract Administrator deems that the Contract Administrator's staff is also required on Site.

D16. RESTRICTED WORK HOURS

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

D17. WORK BY OTHERS

- D17.1 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.
- D17.2 Work by others on or near the Site will include but not necessarily be limited to:
- (a) Traffic Signals- Traffic Signals Branch will be responsible for coordinating removal of above ground plant and cabling to facilitate the installation of the underground plant. The Contractor must coordinate with Traffic Signals such that the signals operations at each intersection are maintained except where permitted by the Contract Administrator and Traffic Signals Branch. This may result in work being completed in multiple stages.
 - (b) Conduit – adjustment/ replacement of red light camera, loops and conduit at Sargent Avenue and Erin Street intersection.
 - (c) Manitoba Hydro, Gas Division – relocation of gas mains and/ or lowering/ rock wrapping of underground main and services as required;
 - (d) Bell/MTS, Telus, Shaw and Teraspan – relocations, protection and adjustments as required;
 - (e) Fiber.CA (Winnipeg School Division fiber) – relocation or protection as required;
 - (f) City of Winnipeg Traffic Services - installation of new traffic signage and line painting;
 - (g) City of Winnipeg Geomatics Branch – various work on survey infrastructure; and
 - (h) Tree trimming on Erin Street expected to be completed by JC Paving Ltd. prior to May 16, 2022.

- (i) City of Winnipeg Water and Waste Department – Watermain renewal (Tender 93-2021) at Erin Street and St. Matthews Avenue intersection expected to be complete by June 22, 2022.
- (j) City of Winnipeg Water and Waste Department – Watermain renewal (Tender 93-2021) on Erin Street under the CP tracks to Notre Dame Avenue expected to be completed in 2022.

D17.3 Further to D17.1 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 D17.2 in their construction schedule to complete the Work.

D18. SEQUENCE OF WORK

D18.1 Further to C6.1, the sequence of work shall be as follows:

D18.1.1 A recommended traffic staging plan has been included in E1.4 and is generally as follows:

- (a) 2022 Work: Wolever Avenue to Sargent Avenue (Stages 1 thru 6)
- (b) 2023 Work: Sargent Avenue to Notre Dame Avenue (Stages 7 thru 12)

D18.1.2 Placing the topsoil and finished grading of all boulevard areas shall be completed prior to commencing construction of asphaltic concrete pavements.

D18.1.3 Full width top lift of Type 1A asphalt shall be placed following Stage 6 Type III asphalt and Stage 6 concrete works in 2022 and following Stage 12 Type III asphalt and Stage 12 concrete works in 2023. One lane of traffic must be maintained at all times during paving. The Contractor shall minimize the amount of cold joints between the two lanes with consistent crossfall as much as practical (these are the two west lanes).

D19. CRITICAL STAGES

D19.1 The Contractor shall achieve critical stages of the Work in accordance with the following requirements:

- (a) 2022 Work (Wolever Avenue to Sargent Avenue) shall be completed by October 14, 2022. This shall include Stages 1 thru 6, inclusive, as shown on the Drawings.

D19.2 When the Contractor considers the Work associated with D19.1(a) to be completed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Completion. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be re-inspected.

D19.3 The date on which the D19.1(a) Work has been accepted by the Contract Administrator as being completed to the requirements of the Contract is the date on which completion of D19.1(a) has been achieved.

D20. SUBSTANTIAL PERFORMANCE

D20.1 The Contractor shall achieve Substantial Performance within two hundred ten (210) consecutive Working Days of the commencement of the Work as specified in D14.

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

D20.3 The date on which the Work has been certified by the Contract Administrator as being substantially performed to the requirements of the Contract through the issue of a certificate of Substantial Performance is the date on which Substantial Performance has been achieved.

D21. TOTAL PERFORMANCE

- D21.1 The Contractor shall achieve Total Performance within two hundred fifteen (215) consecutive Working Days of the commencement of the Work as specified in D14.
- D21.2 When the Contractor or the Contract Administrator considers the Work to be totally performed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Total Performance. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be re-inspected.
- D21.3 The date on which the Work has been certified by the Contract Administrator as being totally performed to the requirements of the Contract through the issue of a certificate of Total Performance is the date on which Total Performance has been achieved.

D22. LIQUIDATED DAMAGES

- D22.1 If the Contractor fails to achieve Critical Stages, 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 D19.1(a) – five thousand dollars (\$5,000);
 - (b) Substantial Performance – five thousand dollars (\$5,000);
 - (c) Total Performance – one thousand dollars (\$1,000).
- D22.2 The amounts specified for liquidated damages in D22.1 are based on a genuine pre-estimate of the City's losses in the event that the Contractor does not achieve critical stages, Substantial Performance or Total Performance by the days fixed herein for same.
- D22.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

D23. COVID-19 SCHEDULE DELAYS

- D23.1 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.
- D23.2 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.
- D23.3 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.
- D23.4 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 D23.3. Failure to provide this notice will result in no additional time delays being considered by the City.
- D23.5 The Work schedule, including the durations identified in D16 to D21 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.

- D23.6 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.
- D23.7 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.

D24. SCHEDULED MAINTENANCE

- D24.1 The Contractor shall perform the following scheduled maintenance in the manner and within the time periods required by the Specifications:
- (a) Sod maintenance as specified in CW 3510;
 - (b) Reflective crack maintenance as specified in CW3250.
- D24.2 Determination of critical stages, 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

D25. JOB MEETINGS

- D25.1 Regular weekly job meetings will be held at the Site. These meetings shall be attended by a minimum of one representative of the Contract Administrator, one representative of the City and one representative of the Contractor. Each representative shall be a responsible person capable of expressing the position of the Contract Administrator, the City and the Contractor respectively on any matter discussed at the meeting including the Work schedule and the need to make any revisions to the Work schedule. The progress of the Work will be reviewed at each of these meetings.
- D25.2 The Contract Administrator reserves the right to cancel any job meeting or call additional job meetings whenever he/she deems it necessary.

D26. PRIME CONTRACTOR – THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA)

- D26.1 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).

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

- D27.1 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

D28. PAYMENT

- D28.1 Further to C12, the City shall make payments to the Contractor's banking institution, and by no other means. Payments will not be made until the Contractor has made satisfactory direct

deposit arrangements with the City. Direct deposit application forms are at https://winnipeg.ca/finance/files/Direct_Deposit_Form.pdf.

WARRANTY

D29. WARRANTY

- D29.1 Notwithstanding C13.2, the warranty period shall begin on the date of Total Performance and shall expire two (2) years thereafter, unless extended pursuant to C13.2.1 or C13.2.2, in which case it shall expire when provided for thereunder.
- D29.2 Notwithstanding C13.2 or D29.1, the Contract Administrator may permit the warranty period for a portion or portions of the Work to begin prior to the date of Total Performance if:
- (a) a portion of the Work cannot be completed because of unseasonable weather or other conditions reasonably beyond the control of the Contractor but that portion does not prevent the balance of the Work from being put to its intended use.
- D29.2.1 In such case the date specified by the Contract Administrator for the warranty period to begin shall be substituted for the date specified in C13.2 for the warranty period to begin.

THIRD PARTY AGREEMENTS

D30. FUNDING AND/OR CONTRIBUTION AGREEMENT OBLIGATIONS

- D30.1 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.
- D30.2 For the purposes of D30:
- (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.
- D30.3 Indemnification By Contractor
- D30.3.1 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.
- D30.4 Records Retention and Audits
- D30.4.1 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.
- D30.4.2 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 D30.4.1 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.

D30.5 Other Obligations

- D30.5.1 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.
- D30.5.2 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.
- D30.5.3 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.
- D30.5.4 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.
- D30.5.5 The Contractor represents and warrants that no current or former public servant or public office holder, to whom the Value and Ethics Code for the Public Sector, the Policy on Conflict of Interest and Post Employment, or the Conflict of Interest Act applies, shall derive direct benefit from this Contract, including any employment, payments, or gifts, unless the provision or receipt of such benefits is in compliance with such codes and the legislation.
- D30.5.6 The Contractor represents and warrants that no member of the House of Commons or of the Senate of Canada or of the Legislative Assembly of Manitoba is a shareholder, director or officer of the Contractor or of a Subcontractor, and that no such member is entitled to any benefits arising from this Contract or from a contract with the Contractor or a Subcontractor concerning the Work.

FORM H1: PERFORMANCE BOND
(See D11)

KNOW ALL MEN BY THESE PRESENTS THAT

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

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

_____ dollars (\$_____)

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

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

TENDER NO. 29-2021

2022-23 Regional Street Program- Erin St, Wolever to Notre Dame, Reconstruction
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 D11)

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. 29-2021

2022-23 Regional Street Program- Erin St, Wolever to Notre Dame, Reconstruction

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;
 - (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 D12)

2022-23 Regional Street Program- Erin St, Wolever to Notre Dame, Reconstruction

<u>Portion of the Work</u>	<u>Name</u>	<u>Address</u>
Supply of Materials		
Concrete		
Asphalt		
Base Course		
Sub-Base Material		
Paving Stones		
Sod		
Catchbasins		
Separation/ Filtration Fabric		
Class A Geogrid		
Frames & Covers		
Drainage Pipe		
Sewer Pipe		
Detectable Surface Warning Tiles		
Traffic Signals		
Installation/Placement		
Concrete		
Asphalt		
Excavation		
Base Course		
Sub-Base Material		
Paving Stones		
Catchbasin and CB Lead Installation		
Sewer Televising		
Landscaping		
Sewer Repairs		
Traffic Signals		
OTHERS		

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>Drawing Name/Title</u>	<u>Drawing (Original) Sheet Size</u>
P-3539-01	Cover Sheet – Location Plan & Drawing List	A1
P-3539-02	Erin Street, Horizontal Geometry - Wolever Ave to Sta 0+360	A1
P-3539-03	Erin Street, Horizontal Geometry - Sta 0+360 to Sta 0+620	A1
P-3539-04	Erin Street, Horizontal Geometry - Sta 0+620 to Sta 0+890	A1
P-3539-05	Erin Street, Horizontal Geometry - Sta 0+890 to Sta 1+150	A1
P-3539-06	Erin Street, Horizontal Geometry - Sta 1+150 to Sta 1+420	A1
P-3539-07	Erin Street, Horizontal Geometry - Sta 1+420 to Sta 1+680	A1
P-3539-08	Erin Street, Horizontal Geometry - Sta 1+680 to Sta 1+940	A1
P-3539-09	Erin Street, Horizontal Geometry - Sta 1+940 to Sta 2+200	A1
P-3539-10	Erin Street, Horizontal Geometry - Sta 2+200 to Sta 2+480	A1
P-3539-11	Erin Street, Horizontal Geometry - Sta 2+480 to Notre Dame Ave	A1
P-3539-12	Erin Street, Paving and Grading- Wolever Ave to Sta 0+230	A1
P-3539-13	Erin Street, Paving and Grading- Sta 0+230 to Sta 0+360	A1
P-3539-14	Erin Street, Paving and Grading- Sta 0+360 to Sta 0+490	A1

<u>Drawing No.</u>	<u>Drawing Name/Title</u>	<u>Drawing (Original) Sheet Size</u>
P-3539-15	Erin Street, Paving and Grading- Sta 0+490 to Sta 0+620	A1
P-3539-16	Erin Street, Paving and Grading- Sta 0+620 to Sta 0+750	A1
P-3539-17	Erin Street, Paving and Grading- Sta 0+750 to Sta 0+890	A1
P-3539-18	Erin Street, Paving and Grading- Sta 0+890 to Sta 1+025	A1
P-3539-19	Erin Street, Paving and Grading- Sta 1+025 to Sta 1+150	A1
P-3539-20	Erin Street, Paving and Grading- Sta 1+150 to Sta 1+290	A1
P-3539-21	Erin Street, Paving and Grading- Sta 1+290 to Sta 1+420	A1
P-3539-22	Erin Street, Paving and Grading- Sta 1+420 to Sta 1+550	A1
P-3539-23	Erin Street, Paving and Grading- Sta 1+550 to Sta 1+680	A1
P-3539-24	Erin Street, Paving and Grading- Sta 1+680 to Sta 1+810	A1
P-3539-25	Erin Street, Paving and Grading- Sta 1+810 to Sta 1+940	A1
P-3539-26	Erin Street, Paving and Grading- Sta 1+940 to Sta 2+070	A1
P-3539-27	Erin Street, Paving and Grading- Sta 2+070 to Sta 2+200	A1
P-3539-28	Erin Street, Paving and Grading- Sta 2+200 to Sta 2+340	A1
P-3539-29	Erin Street, Paving and Grading- Sta 2+340 to Sta 2+480	A1
P-3539-30	Erin Street, Paving and Grading- Sta 2+480 to Notre Dame Ave	A1
P-3539-31	Sections and Details	A1
S-1328	Traffic Signals Erin St. & St. Matthews Ave.	A1
S-1373	Pedestrian Corridor Erin St. & Wolever Ave.	A1
S-1409	Traffic Signals Erin St. & Notre Dame Ave.	A1
S-1522	Traffic Signals Ellice Ave. & Erin St.	A1
S-1758	Traffic Signals Erin St. & Wellington Ave.	A1
ST-01	2022 Phase 1- Wolever Ave to Sargent Ave (Including Intersections)- Stages 1, 2 & 3	11" x 17"
ST-02	2022 Phase 2- Wolever Ave to Sargent Ave (Including Intersections)- Stages 4, 5 & 6	11" x 17"
ST-03	2023 Phase 1- Sargent Ave to Notre Dame Ave (Including Intersections)- Stages 7, 8 & 9	11" x 17"
ST-04	2023 Phase 2- Sargent Ave to Notre Dame Ave (Including Intersections)- Stages 10, 11 & 12	11" x 17"
ST-05	2022 Phase 1 & 2023 Phase 2- Wolever Ave to Notre Dame Ave (Including Intersections)- Cross Sections	11" x 17"

E2. SITE REQUIREMENTS FOR ACCESSIBILITY

- E2.1 The Contractor shall provide the Contract Administrator with an Accessibility 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.
- E2.2 The Accessibility Plan shall demonstrate how the Contractor will accommodate the safe passage of pedestrians and cyclists in accordance with the Manual of Temporary Traffic Control, the Contract Drawings, Staging Plans, and Streets By-Law No. 1481/77 at all times for the duration of the Construction. Unless noted in the Contract, the Accessibility Plan must include a written plan for the following:
- (a) How the Contractor will maintain at least one crossing in each direction for each intersection (one north/south crosswalk and one east/west crosswalk).
 - (b) How the Contractor will maintain access to bus stops within the site.
 - (c) How the Contractor will maintain access to pedestrian corridors and half signals.
 - (d) How the Contractor will maintain cycling facilities.
 - (e) How the Contractor will maintain access to residents and businesses unless otherwise noted in the Contract.
 - (f) Any required detour signage at adjacent crossings to facilitate sidewalk or active transportation pathway closures.
- E2.3 The Accessibility Plan may also include figures, sketches, or drawings to demonstrate the proposed plan.
- E2.4 The Accessibility Plan shall include written details on how the Contractor intends to review, maintain, and document all items related to the Accessibility Plan on-site during Construction, including, but not limited to:
- (a) Signage
 - (b) Temporary Ramping
 - (c) Transit Stops
 - (d) Detour Signage
- E2.5 At minimum, the Contractor shall review the site conditions on a daily basis to ensure that all features related to the Accessibility Plan are in place. The site review is intended to correct deficiencies as a result of unforeseen events such as wind, traffic, or the general public. Deficiencies that are direct result of the Contractors actions must be corrected immediately.
- E2.6 Any changes to the Accessibility Plan must be approved by the Contract Administrator.
- E2.7 Upon request from the Contract Administrator, the Contractor shall provide records demonstrating that the site has been maintained.
- E2.8 Failure to produce records that demonstrate that the site was maintained in compliance with the Accessibility Plan or deficiencies as a direct result of actions by the Contractor that are not immediately corrected may result in a pay adjustment. The rate of pay adjustment will be as per the following schedule:
- (a) First Offence – A warning will be issued and documented in the weekly site meeting.
 - (b) Second Offence - A field instruction to immediately correct the site will be issued by the Contract Administrator.
- E2.9 Third and subsequent Offences – A pay reduction will be issued in the amount of \$250.00 per instance and per day.

E3. MOBILIZATION AND DEMOBILIZATION PAYMENT

DESCRIPTION

- E3.1 This Specification shall cover all operations relating to the mobilization and demobilization of the Contractor to the project location(s).
- E3.2 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.
- E3.3 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

- E3.4 Further to C12 of the General Conditions, 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;
 - (v) Development, and implementation of the Accessibility Site Plan as per E2.
 - (vi) 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;
 - (iv) General cleanup and housekeeping needed to restore a neat and orderly project site.
 - (v) Monitoring, maintenance, and reporting of the Accessibility Site Plan as per E2.
- E3.5 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

- E3.6 The lump-sum price for the Mobilization and Demobilization bid item shall not exceed five percent (5.00%) of the total bid price for the Contract.
- E3.6.1 Further to B9, B17, C12 and E3.6, should the lump sum price exceed 5% of the Total Bid Price the lump sum price will be reduced to 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.
- E3.7 Payment for Mobilization:
- (a) 60% of the lump-sum price will be paid to the contractor for Mobilization on the first Progress Estimate for the Contract.

- E3.8 Payment for Demobilization:
- (a) The remaining 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;
 - (ii) Distribution of the Declaration of Total Performance.

- E3.9 Pay Reduction for Accessibility Site Plan
- (a) The Demobilization payment will be reduced by the number of pay adjustments incurred in accordance with E2 and as determined by the Contract Administrator.

- E3.10 Mobilization and Demobilization will be paid only once (to a maximum of 100%), regardless of the number of times the Contractor mobilizes to the site and/or sites.

E4. GEOTECHNICAL REPORT

- E4.1 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'.

E5. OFFICE FACILITIES

- E5.1 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 25 square metres, a height of 2.4 m with two windows for cross ventilation and a door entrance with a suitable lock.
 - (d) The building shall be suitable for all weather use. It shall be equipped with an electric heater and air conditioner so that the room temperature can be maintained between either 16-18°C or 24-25°C.
 - (e) The building shall be adequately lighted with florescent fixtures and have a minimum of three wall outlets.
 - (f) The building shall be furnished with one desk, one drafting table, table 3m x 1.2m, one stool, one four drawer legal size filing cabinet, and a minimum of 12 chairs.
 - (g) A portable toilet shall be located near the field office building. The toilet shall have a locking door and be for the exclusive use of the Contract Administrator and other personnel from the City.
 - (h) The field office building and the portable toilet shall be cleaned on a weekly basis immediately prior to each site meeting. The Contract Administrator may request additional cleaning when he/she deems it necessary.
- E5.2 The Contractor shall be responsible for all installation and removal costs, all operating costs, and the general maintenance of the office facilities.
- E5.3 The office facilities will be provided from the date of the commencement of the Work to the date of Total Performance.

E6. PROTECTION OF EXISTING TREES

- E6.1 DEFINITIONS
- (a) Tree Protection Plan: Is a report that outlines how construction work is to be done and the steps to be taken to protect trees adjacent to the construction site.
 - (b) Qualified Arborist: An arborist that holds a valid ISA certification and meets the general contractor requirements for the City of Winnipeg.

- (c) Construction Area: The entire area of site disturbance, including excavation, construction traffic, material and equipment, vehicle storage, and access points.
- (d) DBH: Diameter at Breast Height – a measurement of the tree trunk, in centimeters, taken at 1.4m above grade.
- (e) Impervious Surface: An area with an existing paved surface such as concrete, asphalt surface, brick, or compacted granular.
- (f) City Forester or Designate: As represented by a person employed by the City of Winnipeg as an Urban Forester, Supervisor of Urban Forestry Technical Services, or Forestry Technician authorized to provide consulting Services.
- (g) TPZ: Tree protection zone. This includes the soil inside the TPZ and the entire tree including roots.
- (h) Barrier: A physical barrier at the edge of the TPZ to ensure protection of the TPZ.
- (i) Access Routes: An alternative route that is required for work to commence that interferes or enters the TPZ.

E6.2 Tree Protection

- E6.2.1 No public tree may be pruned, damaged, or removed, without the written consent from the City Forester or Designate.
- E6.2.2 A Tree Protection Plan is required before any construction starts.
- E6.2.3 Specification for Tree Protection Zone applies to all public trees where the TPZ intersects with the Construction Area.

E6.3 Tree Protection Zone (TPZ)

- E6.3.1 A TPZ shall be established by surrounding all Tree and Root Zones that are to be protected.
- E6.3.2 No activity is permitted inside the TPZ, including any traffic, construction excavation, change of grade, or disposal/storage of materials, chemicals.
- E6.3.3 No accumulation of water as a result of activities associated with construction is permitted within the TPZ.
- E6.3.4 No parking of vehicles or equipment.
- E6.3.5 The outside of the boundary of the TPZ shall be delineated by a physical barrier as specified in E6.4 and E6.5.

E6.4 TPZ Setback Distance

- E6.4.1 The following chart identifies required distance for a TPZ. Distance is to be measured from the outside edge of the tree trunk.

Trunk Diameter (DBH)	Minimum Protection Distances Required
< 10.1 cm	2.0 m
10.1 – 40.0 cm	2.4 m
40.1 – 50.0 cm	3.0 m
50.1 – 60.0 cm	3.6 m
60.1 – 70.0 cm	4.2 m

70.1 – 80.0 cm	4.8 m
80.1 – 90.0 cm	5.4 m
90.1 – 100.0 cm	6.0 m
> 100.0 cm	6.0 cm for each 1.0 cm of trunk diameter

- E6.4.2 A physical barrier shall be constructed prior to the commencement of any disturbance on the Site by erecting a barrier as described in E6.4 and E6.5.
- (i) The Contractor shall obtain approval from the Contract Administrator for placement and installation of barriers prior to commencing any construction activities.
 - (ii) Barriers are to remain in place and be fully functional throughout the duration of the project until all work is completed to the satisfaction of the Contract Administrator.
 - (iii) Where the TPZ is interrupted by an impervious surface, the TPZ barrier will be installed at the edge of the hard surface area.
- E6.5 Materials for the Barrier shall meet the following specifications:
- E6.5.1 Frame to consist of 50X100mm (2X4") wood posts set 450mm deep into finished grade at each of the 4 corners of the TPZ. Max spacing of 2m apart. 50X100mm rails (2X4") wood rails on top and bottom.
- E6.5.2 Orange plastic web snow fence securely fastened to the outside of the frame to act as a barrier.
- E6.5.3 Where fill or excavation material must be stored within 1m of the outside of the TPZ, a barrier of ¾" thick plywood must be securely installed along the outside of the orange plastic web snow fencing and must be long enough to accommodate the full extent or fill or excavated material to ensure that no material enters the TPZ.
- E6.5.4 The fence must be with a minimum of 1.2m to a maximum height of 1.8m. Adjustments may be made where height interferes with the normal branching habit of the tree and as accepted by the Contract Administrator.
- E6.5.5 A "Tree Protection Zone" sign must be mounted on any side facing foot and vehicular traffic, including construction traffic. The sign shall be produced in colour and be 45X60cm in size and made of white coroplast. A template for the sign will be provided by the Contract Administrator. Only the provided design shall be used.
- E6.6 Adjustments to the TPZ shall only be made as approved by the Contract Administrator and may include:
- E6.6.1 TPZ may be adjusted due to the proximity of the tree to roadway or sidewalk excavation.
- E6.6.2 TPZ may be adjusted to allow for necessary access.
- E6.6.3 Where work must be performed within the TPZ to install or repair underground utilities, tunneling or directional boring is preferred to open trenching across the roots. In these cases, modifications to the TPZ may be permitted with approval of the Contract Administrator. If open pits is the only acceptable means of access to utilities then the Contractor must arrange for an approved arborist to be on site to minimize risk to the public, workers and tree.
- E6.6.4 Hydro excavation isn't permitted within the TPZ without the written consent of the Contract Administrator.
- E6.6.5 Access routes within the TPZ shall only be permitted with the consent of the Contract Administrator.
- E6.6.6 Where barriers are not feasible as determined by the Contract Administrator, tree protection shall be described as below:

- (i) Trees with a DBH greater than 10cm in diameter shall have trunk protection installed consisting of wood planks with a minimum thickness of 25mm and minimum length of 2440mm or the 1st set of branches whichever is lowest. Planks will be held in place with straps. Nails or other penetrating fasteners are not permitted.
- (ii) Trees with a DBH less than 10cm, fencing shall be erected surrounding the tree at a distance of 2m from the trunk as approved by the CA.

E6.7 Pruning of Tree Branches

- E6.7.1 Branch pruning shall be performed to avoid anticipated conflicts between tree branches with construction activities or structures and are only to be performed with the written consent of the Contract Administrator.
- E6.7.2 The Contractor shall be responsible for the cost of any precautionary branch pruning.
- E6.7.3 Tree branch pruning shall be performed by a qualified arborist.
- E6.7.4 Branch pruning must be consistent with practices found in the latest edition of the American National Standards Institute (ANSI) A300 and the latest edition of the companion publication "Best Management Practices – Tree Pruning".
- E6.7.5 No Pruning work will be permitted on elm trees for the period April 1st to July 31st as directed in the Manitoba Forest Health Protection Act and Regulations unless deemed an emergency.

E6.8 Pruning of Tree Roots

- E6.8.1 Root pruning shall be performed to avoid anticipated conflicts between tree roots and construction activities or structures and are only to be performed with the written consent of the Contract Administrator.
- E6.8.2 The Contractor shall be responsible for the cost of any precautionary root pruning.
- E6.8.3 Tree pruning of City of Winnipeg-owned trees shall be performed by a qualified Arborist.
- E6.8.4 All exposed or surface roots greater than 40mm diameter damaged at the edge of the TPZ shall be cut cleanly by sawing. Severing or crushing roots by excavator or another mechanical device is not acceptable.

E6.9 Tree Damage and Site Remediation

- E6.9.1 If the TPZ was damaged by soil compaction as determined by the City Forester or Designate, a qualified arborist must be hired to remediate the soil or perform services as required to remediate the site.
- E6.9.2 Damaged branches, roots or any part of the tree that may pose a safety risk is to be reported immediately to the Contract Administrator.
- E6.9.3 The contractor shall be responsible for the cost of any work required to repair damages to the tree or soil found with the TPZ.

E6.10 Tree Removals

- E6.10.1 In cases where the City Forester or Designate determines that trees found with the TPZ are damaged to the point where the existing tree needs to be removed, the affected trees shall be removed by the Contractor using the guidelines set out in the: https://winnipeg.ca/publicworks/parksOpenSpace/UrbanForestry/PDF/Agreement_for_Contractors_August_2016.pdf
- E6.10.2 Financial compensation for lost trees shall be paid to the City of Winnipeg Urban Forestry Branch and submitted to 1539 Waverley St R3T 4V7.
- E6.10.3 Compensation will be calculated as follows:
 - (i) For trees 10cm DBH and less, compensation values will be determined by the Urban Forestry's Branch current cost of replacement (for the same or similar tree species).

- (ii) For trees greater than 10cm DBH, compensation values will be determined by using the method described in the 9th edition of "The Guide for Plant Appraisals by the Council of Tree and Landscape Appraisers"

E7. TRAFFIC CONTROL

E7.1 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.
- (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 subcontractor.

E7.2 Notwithstanding E7.1, in accordance with the MTTC, the Contractor shall be responsible to supply, place, maintain, and remove all temporary traffic control signs and traffic control devices authorized and/or required.

E7.2.1 Further to E7.2, where the Contract Administrator has determined that the services of the City of Winnipeg Traffic Services Branch are required, the City shall bear the costs associated with the placement of additional temporary traffic control devices by the Traffic Services Branch of the City of Winnipeg in connection with the works undertaken by the Contractor.

E8. TRAFFIC MANAGEMENT

E8.1 Further to clause 3.7 of CW 1130:

E8.1.1 Maintain a minimum of one lane of traffic within the Site at all times during construction;

E8.1.2 Intersecting street and private approach access shall be maintained at all times;

E8.1.3 Should the Contractor be unable to maintain pedestrian or vehicular access to a residence or business, he shall review the planned disruption with the business or residence and the Contract Administrator, and take reasonable measures to minimize the impact. The Contractor shall provide a minimum of 72 hours notification to the affected residence or business and the Contract Administrator, prior to disruption of access.

E8.1.4 The Contractor shall provide a flag person to assist business owners unload trucks which are using the truck offloading areas within the construction site during normal business hours as required. The Contract Administrator will notify the Contractor, with reasonable notice, when this is required.

E8.1.5 Pedestrian, bus and ambulance/ emergency vehicle access must be maintained at all times.

E8.1.6 A minimum of one north/south and one east/west pedestrian crossing must be maintained at each signalized intersection at all times. Where possible (as deemed so by the Contract Administrator), three out of four pedestrian crossings at each signalized intersection shall be maintained. This may require temporary curb ramps as shown in the 2021 Manual of Temporary Traffic Control on City Streets.

E8.1.7 The Contractor shall refer to the traffic staging figures provided for more traffic management details.

E9. WATER OBTAINED FROM THE CITY

E9.1 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.

E10. SURFACE RESTORATIONS

E10.1 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.

E11. OPERATING CONSTRAINTS FOR WORK IN CLOSE PROXIMITY TO FEEDERMAINS

E11.1 Description

E11.1.1 This Specification details operating constraints for all Work to be carried out in close proximity to the following feeder mains:

- (a) 600 mm Sargent Feedermain.
- (b) 400 mm Wellington Feedermain

Close proximity shall be deemed to be any construction activity within a 3 m offset from the centreline of the feeder mains.

E11.2 General Considerations for Work in Close Proximity to the Feeder mains.

E11.2.1 Work around Feeder mains shall be planned and implemented to minimize the time period that Work is carried out in close proximity to the Feedermain and to ensure that the pipeline is not subjected to excessive construction related loads, including excessive vibrations and/or concentrated or asymmetrical lateral loads during backfill placement.

E11.2.2 Precaution must be undertaken to ensure that applied loading during all phases of construction is within accepted loading parameters.

E11.3 Protection of Feeder mains During Construction

E11.3.1 The Drawings provide the location of the Feedermain through the construction site. Pipe locations noted on the Drawings are based on the original record drawings.

E11.3.2 The Contractor shall determine pipeline location and obvert elevation at locations marked out by the Contract Administrator by soft excavation methods (hydrovac or hand digging) prior to the start of construction.

- (a) Exposure of the Feedermain shall be completed in the presence of the Contract Administrator;
- (b) Payment for soft excavation shall be included in the installation of the water main renewal.

E11.3.3 Contractors working in close proximity to the Feedermain shall meet the following conditions and technical requirements:

- (a) Pre-Work, Planning and General Execution
 - (i) No Work shall commence in close proximity to the feeder main until after a meeting has taken place with a representative from each of the City of Winnipeg Water and Waste Department, Contract Administrator and Contractor. The meeting will review Specification E11 – Operating Constraints for Work in Close Proximity to Feeder mains. Also, the meeting will verify that the feeder main location has been clearly delineated in the field.

- (ii) Notify the Contract Administrator 7 days prior to commencement of any work near the feedermain.
- (iii) For transverse crossings of the feedermain in support of pavement construction activities, designate crossing locations and confine equipment crossing the pipe to these locations. Reduce equipment speeds to levels that minimize the impacts of impact loading.
- (iv) For construction Work activities either longitudinally or transverse to the alignment of the feedermain, Work only with equipment and in the manner that meet the requirements noted herein.
- (v) Subgrade, subbase and base construction shall be kept in a rut free condition at all times. Construction equipment is prohibited from crossing pipelines if the grade is insufficient to support the equipment without rutting.
- (vi) Granular material, construction material, soil or other material shall not be stockpiled on the pipelines or within 3.0 metres of the pipe centerline.
- (vii) Where Work is in proximity to the feedermain, utilize construction practices and procedures that do not impart excessive vibration loads on the feedermain or that would cause settlement of the subgrade below the feedermain.

E11.3.4 Construction Methods

- (a) Excavation and Pavement Removal
 - (i) All excavation required within 3.0 metres of the pipe centerline either adjacent to or over the feedermain, utilize only smooth edged excavation bucket, soft excavation or hand excavation techniques.
 - (ii) Offset backhoe from feedermain a minimum of 2.5 meters from feedermain centerline, to carry out excavation.
 - (iii) All materials intended for backfill shall not be dumped directly on pipelines but shall be carefully bladed in place.
 - (iv) Concrete demolition and removal within 3.0 meters horizontally of feedermain shall be completed by saw cutting or use of hand-held jackhammers. Use of machine mounted concrete breakers is prohibited.
- (b) Subgrade Construction
 - (i) Subgrade compaction shall be limited to static compaction methods
 - (ii) Stage Work activities to minimize the time period that unprotected subgrade is exposed to the environment and protect the subgrade against the impacts of adverse weather if subbase/ base course construction activities are not sequential with excavation.
- (c) Subbase and Base Course Construction
 - (i) Subbase or base course materials shall not be dumped directly on pipelines but shall be carefully bladed in-place.
 - (ii) Subbase compaction shall be either carried out by static methods without vibration or with smaller approved equipment such as hand held plate packers or smaller roller equipment.
- (d) Asphalt Pavement Construction
 - (i) Asphalt pavement shall be either carried out by static methods without vibration or with smaller approved equipment such as hand held plate packers or smaller roller equipment.

E12. OPERATING CONSTRAINTS FOR WORK IN CLOSE PROXIMITY TO AC WATERMAINS

E12.1 Description

- E12.1.1 This Specification details operating constraints for all Work to be carried out in close proximity to the following asbestos cement (AC) watermains:

- (a) 150 mm and 200 mm AC watermain on Erin Street between Wolever Avenue and Notre Dame Avenue;
- (b) 150 mm AC watermain on Richard Avenue; and
- (c) 200 mm AC watermain on Wellington Avenue.

Close proximity shall be deemed to be any construction activity within a 3 m offset from the centreline of the aqueduct.

E12.2 Construction Methods

E12.2.1 Pavement Removal

- (a) Concrete demolition and removal within 3.0 meters horizontally of the asbestos-concrete watermain shall be completed by saw cutting or use of hand-held jackhammers. Use of machine mounted concrete breakers above asbestos-concrete water mains is prohibited.

E12.2.2 Subgrade, Subbase and Base Course Construction

- (a) Use of vibratory heavy equipment within 3.0 meters horizontally of the asbestos-concrete water main centerline is prohibited for subgrade, and sub-base materials. This restriction does not apply to the use of vibratory rollers on the pavement surface layers and base course layer.

E13. WORKING AROUND MANITOBA HYDRO POLES

GENERAL REQUIREMENTS

- E13.1 When excavating for the road within 3.0 metres of a Manitoba Hydro wood pole, a Safety Watch will be required. The Contractor shall provide a digger truck capable of holding the pole in place while excavation and granular subbase backfill is completed back to original grade.
- (a) The digger truck to be provided by the Contractor shall be to the satisfaction of the Contract Administrator and Manitoba Hydro Safety Watch personnel.
 - (b) See Appendix 'C' for allowable excavations around existing poles.

MEASUREMENT AND PAYMENT

- E13.2 The Work described in this Specification will be considered incidental to "Excavation" and no measurement or payment will be made.

E14. MANITOBA HYDRO GAS INFORMATION

- E14.1 While working in close proximity to Manitoba Hydro gas infrastructure, all procedures and precautions outlined in Appendix 'B' as well as any supplemental direction from Manitoba Hydro must be adhered to. Ensure that all locates and clearances are current and have been received and understood prior to construction.
- E14.2 Any costs associated with the provision of Safety Watches for Manitoba Hydro gas infrastructure will be considered incidental to the Work and no payment will be made.

E15. WORK WITHIN CP RIGHT-OF-WAY

GENERAL REQUIREMENTS

- E15.1 The Contractor shall be responsible to meet all Canadian Pacific Railway (CP) constraints, requirements, and safety measures.
- E15.2 The Contractor shall arrange with CP to have CP supply a flag person for all activity on the CP right-of-way or the extension of the right-of-way as required by CP.

- E15.3 The Contractor is expected to schedule his work in order to minimize the need for flagging.
- E15.4 Information regarding flagging is included in Appendix 'D'.

MEASUREMENT AND PAYMENT

- E15.5 Coordination of construction with CP Rail will be paid for at the Contract Lump Sum Price for "Coordination of Construction with CP Rail". Payment will be made upon completion of all construction work within CP right-of-way and will be compensation in full for the costs of coordination efforts, flagging costs and all other costs associated with coordination and working within the CP right-of-way.

E16. WORK WITHIN BNSF RIGHT-OF-WAY

GENERAL REQUIREMENTS

- E16.1 The Contractor shall be responsible to meet all BNSF Railway constraints, requirements, and safety measures.
- E16.2 The Contractor shall arrange with BNSF to have BNSF supply a flag person for all activity on the BNSF right-of-way or the extension of the right-of-way as required by BNSF.
- E16.3 The Contractor is expected to schedule his work in order to minimize the need for flagging.

MEASUREMENT AND PAYMENT

- E16.4 Coordination of construction with BNSF Rail will be paid for at the Contract Lump Sum Price for "Coordination of Construction with BNSF Rail". Payment will be made upon completion of all construction work within BNSF right-of-way and will be compensation in full for the costs of coordination efforts, flagging costs and all other costs associated with coordination and working within the BNSF right-of-way.

E17. HYDRO-EXCAVATION

DESCRIPTION

- E17.1 This Specification shall cover the removal of earthen material immediately adjacent to underground utilities infrastructure by means of high pressure water spray, and the recovery of excavated material by vacuum type means or equivalent method as approved by the Contract Administrator.

CONSTRUCTION METHODS

- E17.2 Hydro-Removal of Earthen Material
 - E17.2.1 The Contractor shall only be compensated for hydro-excavation undertaken with prior permission of the Contract Administrator. The Contractor will only be compensated for hydro-excavation required to locate utilities whose location is uncertain. Hydro-excavation required to expose utilities shown on the Drawings by Safety Watches will not be compensated and shall be considered incidental to the Work.
 - E17.2.2 Earthen material adjacent to utility entity shall be sprayed with high pressure water so as to remove all such material identified by the Contract Administrator. Expose the buried utility by using a sweeping motion only, perpendicular to the locate markings, until the line is sighted. After sighting, the line shall not be contacted by spray or vacuum to avoid damage.
 - E17.2.3 Maximum settings when excavating within 1 m of marked utilities will be 38°C (100°F) temperature and 10,342 kPa (1500 psi) pressure.
- E17.3 Recovery of Excavated Material

- E17.3.1 The recovery of excavated material shall be done using a vacuum type method, or other type method as approved by the Contract Administrator.
- E17.3.2 The recovery of material shall follow immediately behind the excavation, to avoid excavated areas from filling with excavated material.
- E17.3.3 The use of mechanical sweepers will not be allowed.
- E17.3.4 Dispose of material in accordance with Section 3.4 or CW 1130-R1.
- E17.4 Backfill of Hydro Excavated Material
- E17.4.1 The Contractor shall be responsible for the backfill of the hydro excavated hole upon acceptance of the Work described herein by the Contract Administrator.

MEASUREMENT AND PAYMENT

- E17.5 Hydro-Excavation
- E17.5.1 Hydro-Excavation of earthen material and its recovery and disposal as well as backfilling the hole 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 completed in accordance with this Specification, accepted and measured by the Contract Administrator.
- E17.5.2 The hours to be paid for "Hydro-Excavation" shall be measured as the time spent on-site by the required equipment and shall be approved daily by the Contract Administrator.

E18. PORTLAND CEMENT CONCRETE SIDEWALK WITH BLOCK OUTS FOR INDICATOR SURFACES

DESCRIPTION

- E18.1 This specification shall supplement CW 3325-R5 "Portland Cement Concrete Sidewalks".

CONSTRUCTION METHODS

- E18.2 Add the following to section 9 :
 - E18.2.1 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.
 - E18.2.2 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) millimetres.
 - E18.2.3 Concrete curbs for monolithic curb and sidewalk with block outs shall be constructed in accordance with CW 3240.

MEASUREMENT AND PAYMENT

- E18.3 Add the following to section 12 :
 - E18.3.1 Construction of concrete sidewalks with block outs for indicator surfaces will be measured on surface area basis. The surface area to be paid for shall be the number of square metres constructed in accordance with this specification and accepted by the Contract Administrator, as computed by measurements made by the Contract Administrator.

BASIS OF PAYMENT

- E18.4 Add the following to section 13 :
 - E18.4.1 Construction of concrete sidewalks with block outs for indicator surfaces will be paid for at the Contract Unit Price per square meter for the "Items of Work" listed here below,

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.

E18.4.2 Items of Work:

(a) 100 mm Sidewalk with Block Outs

E18.4.3 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 Items of Work.

E19. PAVING STONES FOR INDICATOR SURFACES

DESCRIPTION

E19.1 This specification shall supplement CW 3330-R5 "Installation of Interlocking Paving Stones"

MATERIALS

E19.2 Add the following to section 5 :

E19.2.1 Paving Stones for indicator surfaces shall be as shown on the drawings.

E19.2.2 Paving Stones for indicator surfaces shall be :

Barkman Concrete paving stones -
Charcoal Holland Paver (60mm X 210 mm X 210 mm)
<https://www.barkmanconcrete.com/>

CONSTRUCTION METHODS

E19.3 Add the following to section 9.2 "Preparation of Sub-grade, Sub-base and Sand-base" :

E19.3.1 Preparation of Sand-Base for Paving Stones in Sidewalk Block Outs.

E19.3.2 Place a 15mm layer of bedding sand in the blocked out sidewalk areas.

E19.3.3 The bedding sand shall be spread and levelled so that the paving stones when installed are 5 mm higher than the finished grade.

E19.3.4 No more sand shall be spread than can be covered in with paving stone on the same day.

E19.3.5 The bedding sand shall not be compacted or disturbed prior to laying the paving stones.

E19.4 Add the following to section 9.3 "Installation of Paving Stones" :

E19.4.1 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.

MEASUREMENT AND PAYMENT

E19.5 Add the following to section 12 :

E19.6 Supply and Installation of Paving Stones for Indicator Surfaces

E19.6.1 Paving stones for indicator surfaces will be measured on surface area basis. The surface area to be paid for shall be the number of square metres constructed in accordance with this specification and accepted by the Contract Administrator, as computed by measurements made by the Contract Administrator.

BASIS OF PAYMENT

E19.7 Add the following to section 13 :

E19.7.1 The supply and installation of paving stones for indicator surfaces will be paid for at the Contract Unit Price per square meter 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.

- E19.7.2 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.

E20. CONSTRUCTION OF EXPOSED AGGREGATE AND COLOURED STAMPED CONCRETE SIDEWALK

DESCRIPTION

E20.1 General

- E20.1.1 This Specification covers the construction of 100 mm exposed aggregate private sidewalks and 100 mm coloured stamped concrete sidewalk.

E20.2 CONSTRUCTION METHODS

E20.3 General

- E20.3.1 Further to CW 3235, construct 100 mm exposed aggregate or 100 mm coloured stamped concrete private sidewalks at the locations shown on the Drawings or as directed by the Contract Administrator. Construct new sidewalk to match the existing surface treatment and colour of the adjacent sidewalk to the satisfaction of the Contract Administrator.

MEASUREMENT AND PAYMENT

E20.4 Exposed Aggregate Sidewalk

- E20.4.1 Construction of 100 mm exposed aggregate concrete sidewalks will be measured on an area basis and paid for at the Contract Unit Price per square metre for "Construction of Exposed Aggregate Sidewalk". The area to be paid for shall be the total area of sidewalk renewed in accordance with this Specification, accepted and measured by the Contract Administrator.

E20.5 Coloured Stamped Concrete Sidewalk

- E20.5.1 Construction of 100 mm coloured stamped concrete sidewalks will be measured on an area basis and paid for at the Contract Unit Price per square metre for "Construction of Coloured Stamped Concrete Sidewalk". The area to be paid for shall be the total area of sidewalk renewed in accordance with this Specification, accepted and measured by the Contract Administrator.

E21. SUPPLY AND INSTALL WATERMAIN AND WATER SERVICE INSULATION

DESCRIPTION

- E21.1 Notwithstanding 3.12 of CW 2110, this specification covers the supply and installation of insulation in roadway excavations over watermains and water services.

E21.2 Referenced Standard Construction Specifications

- (a) CW 2030 – Excavation Bedding and Backfill
- (b) CW 3110 – Sub –grade, Sub-base and Base Course Construction

E21.3 Referenced Standard Details

- (a) SD-018 - Watermain and Water Service Insulation

MATERIALS

- E21.4 Acceptable insulation is:

- (a) Extruded Polystyrene rigid foam insulation – Type 4, 4" in thickness.

DOW - Roofmate or Highload 40

Owen's Corning - Foamular 350 or Foamular 400.

2" X 48" X 96", 2" X 24" X 96", 4" X 24" X 96"

- E21.5 Sand Bedding :

- (a) In accordance with CW 2030

CONSTRUCTION METHODS

- E21.6 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.

- E21.7 Thickness of insulation is 100 mm (4"). If using 50 mm (2") panels 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.

- E21.8 Place insulation panels adjacent to each other over the specified area with no gaps between panels and less than 15mm of elevation difference along the adjoined edges. Where 2" thick panels are being used, offset the top layer to prevent the panel joints from aligning with the joints in the lower layer.

- E21.9 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 300 mm in width or length.

- E21.10 Take appropriate measures to ensure panels are not displaced when installing geotextiles and during backfilling operations.

MEASUREMENT AND PAYMENT

- E21.11 Watermain and Water Service Insulation shall be measured on an area basis and paid for at the Contract Unit Price per square metre of "Watermain and Water Service Insulation". The area to be paid for shall be the total square meters 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 E21.6 will not be measured for payment and will be included in the payment for "Watermain and Water Service Insulation".

E22. SPLASH STRIP FOR ASPHALT PAVEMENT

- E22.1 Description

- E22.1.1 This Specification shall cover the construction of concrete splash strip with monolithic barrier curb for asphalt pavements and shall supplement and amend CW 3310.

- E22.2 Materials

- E22.2.1 All materials including concrete and reinforcing steel shall conform to Sections 5 and 6 of CW 3310.

- E22.3 Construction Methods

- E22.3.1 Construction of concrete splash strip with monolithic barrier curb for asphalt pavements shall be as shown on the Drawings and in accordance with Sections 9 and 10 of CW 3310.

E22.4 Measurement and Payment

- E22.4.1 Construction of concrete splash strip with monolithic barrier curb for asphalt pavements will be measured on a length basis and paid for at the Contract Unit Price per linear metre for "Construction of Splash Strip (180 mm ht, Monolithic Barrier Curb, 750 mm width) for Asphalt Pavement". The price paid shall be payment in full for supplying all materials and performing all operations herein described and all other items incidental to the work included in this Specification.

E23. EXISTING MANHOLE FRAME AND COVERS

E23.1 Description

- E23.1.1 This Specification shall amend CW 3210-R8.

E23.2 Materials

- E23.2.1 Concrete shall meet the requirements of CW 2160.

E23.3 Construction Methods

- E23.3.1 Prior to asphalt paving, existing manhole frames and covers shall have a concrete collar poured around them as shown on the Drawings.

E23.4 Measurement and Payment

- E23.5 There shall be no measurement or payment made for the items described in this Specification. They shall be included in the Unit Price paid for "Adjustment of Manholes/ Catch Basins Frames".

E24. REPAIR MANHOLE BENCHING

DESCRIPTION

E24.1 General

- E24.1.1 This Specification covers the repair of benching in existing manholes.

E24.2 CONSTRUCTION METHODS

E24.3 Repair Manhole Benching

- E24.3.1 The Contractor shall remove and dispose of existing loose or crumbling benching mortar or concrete to the satisfaction of the Contract Administrator.
- E24.3.2 The Contractor shall bench and channel manhole floor with mortar or concrete in accordance with CW 2130, SD-010 and SD-011. Flow channels shall curve smoothly and provide a smooth transition between inlet and outlet pipes.

MEASUREMENT AND PAYMENT

E24.4 Repair Manhole Benching

- E24.4.1 Repair of existing manhole benching will be measured on a unit basis and paid for at the Contract Unit Price for "Repair Manhole Benching". The number to be paid for shall be the total number of manholes that have been repaired in accordance with this Specification, accepted and measured by the Contract Administrator.

E25. CATCH BASINS AND CATCHPITS

E25.1 Description

- E25.1.1 This Specification shall amend CW 2130-R12.

E25.2 Materials

E25.2.1 Inlet Frame and Grated Covers

- (a) Inlet frame and grated covers, where shown on the Drawings as such, shall be Titan Foundry, TF-100 or approved equal.
- (b) Frame and grated covers (TF-100) shall conform to all applicable City of Winnipeg Standard Construction Specifications, specifically the City of Winnipeg Standard for Gray and Ductile Iron Municipal Castings.
- (c) All gray iron shall conform to the requirements of ASTM A48, Class 30 with a minimum Ultimate Tensile Strength (UTS) of 206.8427 MPa (30,000 p.s.i.). All gray iron shall meet the applicable quality-assurance test requirements of ASTM A48 with regard to material, workmanship and minimum design load.
- (d) Basic materials shall be made from virgin or recycled and meets the physical and chemical properties as defined in ASTM A48 for Class 30 gray iron.

E25.2.2 Temporary Drainage Conduit

- (a) Temporary drainage conduit for interim drainage shall be 50 mm polyethylene conduit.

E25.3 Construction Methods

E25.3.1 Outlet Restrictors

- (a) Outlet restrictors shall be constructed, where shown on the Drawings, in accordance with SD-025B.

E25.3.2 Inlet Frame and Grated Covers

- (a) Catch basins (SD-024, SD-025) and catch pits (SD-023) requiring frame and grated covers (TF-100) will be labelled on the Drawings. The Contractor shall install the TF-100 instead of the frames and covers shown on the Standard Details.

E25.3.3 Temporary Drainage Conduit

- (a) Where shown on the Drawings, the Contractor shall install temporary drainage conduit for interim drainage as shown on the Drawings.
- (b) Prior to paving top lift of asphalt pavement the Contractor shall remove the drainage conduit and patch the holes in the catch basin wall with grout and fill any remaining voids with flowable fill from the outside of the catch basin.

E25.4 Measurement and Payment

E25.4.1 Outlet Restrictors

- (a) Outlet restrictors shall be measured on a unit basis and paid for at the Contract Unit Price per unit for "Outlet Restrictor" for each size supplied and installed in accordance with this Specification. The price paid shall be payment in full for supplying all materials and performing all operations herein described and all other items incidental to the work included in this Specification.

E25.4.2 Inlet Frame and Grated Covers

- (a) There shall be no measurement or payment made for inlet frames and grated covers installed on new catch basins or catch pits. They shall be considered incidental to the installation of catch basins or catch pits.

E25.4.3 Temporary Drainage Conduit

- (a) There shall be no measurement or payment made for temporary drainage conduit. They shall be considered incidental to the installation of catch basins or catch pits.

E26. CONCRETE STEPS

E26.1 Description

- E26.1.1 This Specification covers the construction of concrete steps as shown on the Drawings.
- E26.1.2 Concrete steps are located at the following addresses:
- (a) 1079 Wellington Avenue: 1- 300 mm deep x 130 mm high x 1,415 mm long step. This step shall include the installation of a fire hydrant marker;
 - (b) 1035 Erin Street: 2- 300 mm deep x 170 mm high x 4,850 mm long steps;
 - (c) 1421 Erin Street: 2- 300 mm deep x 225 mm high x 0.897 mm long steps; and
 - (d) 1423 Erin Street: 2- 300 mm deep x 165 mm high x 1,546 mm long steps.
- E26.2 Materials
- E26.2.1 All materials shall be in accordance with CW 3310-R17.
- E26.2.2 Fire hydrant marker to be in accordance with AP-005
- E26.3 Construction Methods
- E26.3.1 Concrete steps shall be constructed in accordance with CW 3310-R17 and as shown on the Drawings.
- E26.3.2 Concrete steps shall include one 10M reinforcing steel bar mat spaced 150 mm on centre in both directions.
- E26.4 Measurement and Payment
- E26.4.1 Concrete steps will not be measured and will be paid for at the Contract Lump Sum Price per location "Concrete Steps", which price shall be payment in full for performing all operations herein described and all other items incidental to the Work included in this Specification.

E27. RE-USE OF BASE COURSE

- E27.1 Description
- E27.1.1 This Specification covers the re-use of base course previously supplied to the Site.
- E27.2 Materials
- E27.2.1 Base Course previously supplied to the Site for the temporary ramping of driveways shall be re-used on the road once it is no longer required.
- E27.3 Construction Methods
- E27.3.1 Base course shall be carefully removed from the temporary driveway and transported and deposited at the proposed location.
- E27.3.2 Placement of the base course will be in accordance with CW 3110.
- E27.4 Measurement and Payment
- E27.4.1 Re-use of base course will be measured on a volume basis and will be paid for at the Contract Unit Price per cubic metre for "Re-use of Base Course", measured as specified herein, which price shall be payment in full for performing all operations herein described and all other items incidental to the Work included in this Specification.

E28. LANDSCAPING MULCH

- E28.1 Description
- E28.1.1 This Specification covers the supply and installation of landscaping mulch.
- E28.2 Materials

- E28.2.1 The Contractor shall supply landscaping mulch. Mulch shall:
- (a) Be a clean bark or wood chip with minimal amount of leaves, branches, and other extraneous matter;
 - (b) Not contain adhesives, wood preservatives or any other chemical contaminants, and
 - (c) Consist of chips not less than 15 mm nor larger than 75 mm in size and not more than 20 mm thick.

E28.3 Construction Methods

- E28.3.1 Landscaping mulch shall be placed to a thickness of 100 mm.

E28.4 Measurement and Payment

- E28.4.1 Supply and installation of landscaping mulch will be measured on an area basis and will be paid for at the Contract Unit Price per square metre for "Landscaping Mulch", measured as specified herein, which price shall be payment in full for performing all operations herein described and all other items incidental to the Work included in this Specification.

E29. WATERMAIN VALVE BOX CASINGS

E29.1 Description

- E29.1.1 This Specification covers the replacement of casings (upper or lower) on watermain valve boxes.

E29.2 Materials

- E29.2.1 Materials are to be in accordance with CW 2110-R11, AP-001 and AT4.1.1.81 of the Approved Products for Underground Use in the City of Winnipeg.

E29.3 Construction Methods

E29.3.1 Replacement of Watermain Valve Box Upper Casings

- (a) The Contractor shall remove and dispose of the existing upper casing.
- (b) The Contractor shall supply and install a new upper casing plumb and centered on the valve stem with the top of the box at finished grade.
- (c) Valve box lid shall be oriented to close with the direction of traffic where installed in pavement.

E29.3.2 Replacement of Watermain Valve Box Lower Casings

- (a) The Contractor shall excavate to the location of the existing valve, remove and dispose of the existing lower casing.
- (b) The Contractor shall supply and install a new lower casing plumb and centered on the valve stem.
- (c) The Contractor shall backfill the excavation with sand supplied in accordance with CW 2030.

E29.4 Measurement and Payment

E29.4.1 Replacement of Watermain Valve Box Upper Casings

- (a) Replacement of watermain valve box upper casings shall be measured on a unit basis and paid for at the Contract Unit Price per unit for "Replacement of Watermain Valve Box- Upper Casing" supplied and installed in accordance with this Specification. The price paid shall be payment in full for supplying all materials and performing all operations herein described and all other items incidental to the work included in this Specification.

E29.4.2 Replacement of Watermain Valve Box Lower Casings

- (a) Replacement of watermain valve box lower casings shall be measured on a unit basis and paid for at the Contract Unit Price per unit for "Replacement of Watermain Valve Box- Lower Casing" supplied and installed in accordance with this Specification. The price paid shall be payment in full for supplying all materials and performing all operations herein described and all other items incidental to the work included in this Specification.

E30. ANCHOR BOLT PROJECTIONS FOR CONCRETE BASES (TRAFFIC SIGNALS)

E30.1 Further to Section 3.7 of CW 3620 Concrete Type A, Type G, Type OD and Type J bases shall have an anchor bolt projection as specified below.

- (a) The following bolt projections shall override what has been specified on SD-310, SD-313, and SD-314.

Concrete Base Type	Anchor Bolt Projection (mm)	Tolerance (mm)
Type A	76.0	(71.0 – 76.0)
Type G	89.0	(84.0 – 89.0)
Type OD	50.8	(45.8 – 50.8)
Type J	150.0	(145.0 – 150.0)

E31. SERVICE BOX PRE-CAST (TRAFFIC SIGNALS)

DESCRIPTION

E31.1 This Specification covers the use and installation of a service box pre-cast (SD-322 Rev 2) 17" x 30" x 18" and 13" x 24" x 18".

MATERIALS

E31.2 Materials shall be as per Section 2 of CW 3620

CONSTRUCTION METHODS

E31.3 Service Box Pre-cast

- (a) Install pre-cast service box in grass boulevards/ medians, and hard surfaced medians or as shown on the Drawings or as directed by the Contract Administrator.
- (b) Fill bottom of excavation with compacted limestone base course material to set precast service box to grade.
- (c) Install pre-cast service box on top of the compacted granular fill material to pavement, sidewalk or boulevard finished grade.
- (d) All conduits must be bundled into a group in the centre of the pre-cast service box. Install plastic plugs prior to backfill.
- (e) Backfill around pre-cast service box exterior. Backfill shall conform with the requirements of SD-342.
- (f) Pre-cast service boxes shall meet the grade of the sidewalk or boulevard given by the Contract Administrator.

MEASUREMENT AND PAYMENT

E31.4 Service Box Pre-cast

E31.4.1 Installation of service boxes shall be measured on a unit basis and paid for at the Contract Unit Price per unit for "Service Box Pre-Cast". The number of units to be paid for shall be

the total number of service boxes installed in accordance with this Specification, accepted and measured by the Contract Administrator.

E32. CUTOVERS (TRAFFIC SIGNALS)

E32.1 Perform the following tasks for cutovers:

- (a) Expose existing conduits where new conduit is specified to be coupled.
- (b) Remove cables from the conduit (if present).
- (c) Cut conduit at specified location.
- (d) Push existing cables into new conduit (if present).
- (e) Couple old and new conduits together as specified in SD-340.
- (f) Backfill as specified in SD-342.
- (g) Restore as directed by the Contract Administrator.

MEASUREMENT AND PAYMENT

E32.2 Cutovers

- (a) As per 4.15 of CW 3620.

E33. INSTALLATION OF EARLY OPEN CONCRETE BASES (TRAFFIC SIGNALS)

DESCRIPTION

E33.1 This Specification shall cover the installation of early open concrete bases.

MATERIALS

E33.2 Early Open Concrete Bases

- (a) Supply concrete for bases in accordance with CW 2160, Table CW 2160.1 Design Requirements for Concrete Used for Underground Structures, for Type A Structures (monolithic sewers and reinforced structures).
- (b) Further to E26.2(a), the supplied concrete shall achieve a minimum compressive strength of 22 MPa at 48 hours.
- (c) City supplied materials shall be as per Section 2.10 of CW 3620.

CONSTRUCTION METHODS

E33.3 Early Open Concrete Bases

E33.3.1 Install early open concrete bases as per Section 3.7 of CW 3620.

MEASUREMENT AND PAYMENT

E33.4 Early Open Concrete Bases

E33.4.1 Installation of concrete bases shall be measured on a unit basis and paid for at the Contract Unit Price per unit for the "Items of Work" listed below. The number of units to be paid for shall be the total number of concrete bases installed in accordance with this Specification, accepted and measured by the Contract Administrator.

Items of Work:

- (a) Signal Pole Base Early Open – Type A
- (b) Signal Pole Base Early Open – Type OD
- (c) Signal Pole Base Early Open – Type G
- (d) Signal Pole Base Early Open – Type J

- E33.4.2 Payment for the items of work in this Specification include the supply and installation of ready mix or mixed concrete on site.
- E33.4.3 Payment for the items of work listed above include the supply and installation of grounding rods (electrodes) installed with the concrete bases.
- E33.4.4 Payment for the items of work listed above include boring.
- E33.4.5 Payment for the items of work listed above include top ring forms.

E34. SPLICING CONDUIT (TRAFFIC SIGNALS)

- E34.1 In addition to CW 3620 3.11.12, Joining of conduit will not be allowed except:
 - (d) Where joining of conduit is required for Convenience of Road Construction Sequencing with a maximum of one (1) joint per conduit.

- E34.2 In place of CW 3620 3.11.13, Joining of conduit shall use an approved oversize coupler to connect nominal size 1.5" or 2" LDPE pipe, IPEX Series 75, installation to follow manufacture's recommendations.
 - (a) Approved Products:
 - (i) Plasson Universal Slip Repair Coupler 60-64, Product Code: 176100060064 for use with nominal 2" LDPE.
 - (ii) Plasson Universal Slip Repair Coupler 48-51, Product Code: 176100048051 for use with nominal 1.5" LDPE.
 - (b) Substitutes will not be allowed except:
 - (i) Where application has been made to and approval has been provided by Traffic Signals. The Contractor shall provide sufficient information and details to enable the Traffic Signals to determine acceptability.

- E34.3 As per CW 3620 4.11.5, No measurement or payment shall be made for Joining of Conduit.

- E34.4 Removal of CW 3620 2.10.1 (b) Conduit coupling pipe and gear clamps.