



THE CITY OF WINNIPEG

TENDER

TENDER NO. 147-2020

**2020 WATT STREET PAVEMENT RENEWAL & WATER MAIN RENEWAL –
CONTRACT 8**

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PART B - BIDDING PROCEDURES

B1. CONTRACT TITLE

B1.1 2020 Watt Street Pavement Renewal & Water Main Renewal – Contract 8

B2. SUBMISSION DEADLINE

B2.1 The Submission Deadline is 12:00 noon Winnipeg time, March 17, 2020.

B2.2 The Contract Administrator or the Manager of Materials may extend the Submission Deadline by issuing an addendum at any time prior to the time and date specified in B2.1.

B3. SITE INVESTIGATION

B3.1 Further to C3.1, the Bidder may view the Site without making an appointment.

B4. ENQUIRIES

B4.1 All enquiries shall be directed to the Contract Administrator identified in D3.1.

B4.2 If the Bidder finds errors, discrepancies or omissions in the 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.

B4.3 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.

B4.4 Responses to enquiries which, in the sole judgment of the Contract Administrator, do not require a correction to or a clarification of the Tender will be provided by the Contract Administrator only to the Bidder who made the enquiry.

B4.5 The Bidder shall not be entitled to rely on any response or interpretation received pursuant to B4 unless that response or interpretation is provided by the Contract Administrator in writing.

B4.6 Any enquiries concerning submitting through MERX should be addressed to:
MERX Customer Support
Phone: 1-800-964-6379
Email: merx@merx.com

B5. CONFIDENTIALITY

B5.1 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.

B5.2 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.

B6. ADDENDA

- B6.1 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.
- B6.2 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.
- B6.3 Addenda will be available on the MERX website at www.merx.com.
- B6.4 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.
- B6.5 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.
- B6.6 Notwithstanding B4, enquiries related to an Addendum may be directed to the Contract Administrator indicated in D3.

B7. SUBSTITUTES

- B7.1 The Work is based on the Plant, Materials and methods specified in the Tender.
- B7.2 Substitutions shall not be allowed unless application has been made to and prior approval has been granted by the Contract Administrator in writing.
- B7.3 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.
- B7.4 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.
- B7.5 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.

- B7.6 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.
- B7.6.1 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.
- B7.7 If the Contract Administrator approves a substitute as an “approved equal”, any Bidder may use the approved equal in place of the specified item.
- B7.8 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 B18.
- B7.9 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.

B8. BID COMPONENTS

- B8.1 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.
- B8.2 Further to B8.1, the Bidder should include the written correspondence from the Contract Administrator approving a substitute in accordance with B7.
- B8.3 All components of the Bid shall be fully completed or provided, and submitted by the Bidder no later than the Submission Deadline, with all required entries made clearly and completely.
- B8.4 The Bid shall be submitted electronically through MERX at www.merx.com.
- B8.4.1 Bids will **only** be accepted electronically through MERX.
- B8.5 Bidders are advised that inclusion of terms and conditions inconsistent with the Tender document, including the General Conditions, will be evaluated in accordance with B18.1(a).

B9. BID

- B9.1 The Bidder shall complete Form A: Bid/Proposal, making all required entries.
- B9.2 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.
- B9.2.1 If a Bid is submitted jointly by two or more persons, each and all such persons shall identify themselves in accordance with B9.2.

- B9.3 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.
- B9.4 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.
- B9.4.1 The name and official capacity of all individuals signing Form A: Bid/Proposal should be entered below such signatures.
- B9.5 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.

B10. PRICES

- B10.1 The Bidder shall state a price in Canadian funds for each item of the Work identified on Form B: Prices.
- B10.2 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.
- B10.3 The quantities for which payment will be made to the Contractor are to be determined by the Work actually performed and completed by the Contractor, to be measured as specified in the applicable Specifications.
- B10.4 Payments to Non-Resident Contractors are subject to Non-Resident Withholding Tax pursuant to the Income Tax Act (Canada).
- B10.5 The Bidder shall enter the Total Bid Price from Form B: Prices into the Total Bid Price field in MERX.
- B10.5.1 Bidders are advised that the calculation indicated in B18.4 will prevail over the Total Bid Price entered in MERX.

B11. DISCLOSURE

- B11.1 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.
- B11.2 The Persons are:
- (a) N/A

B12. CONFLICT OF INTEREST AND GOOD FAITH

- B12.1 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.

- B12.2 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.
- B12.3 In connection with its Bid, each entity identified in B12.2 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.
- B12.4 Without limiting B12.3, 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.
- B12.5 Without limiting B12.3, 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 B12.4 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.

B12.6 The final determination of whether a perceived, potential or actual Conflict of Interest exists shall be made by the City, in its sole discretion.

B13. QUALIFICATION

B13.1 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;
- (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.

B13.2 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>

B13.3 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).

B13.4 Further to B13.3(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/>).

B13.5 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.

B13.6 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.

B14. BID SECURITY

- B14.1 A sample Bid Bond and Agreement to Bond are available on The City of Winnipeg, Corporate Finance, Materials Management Division website at <https://www.winnipeg.ca/MatMgt/templates/files/eBidsecurity.pdf>.
- B14.2 The Bidder shall provide digital bid security in the form of a bid bond, in the amount of at least ten percent (10%) of the Total Bid Price, and agreement to bond of a company registered to conduct the business of a surety in Manitoba, in the form included in the Bid Submission (Form G1: Bid Bond and Agreement to Bond).
- B14.3 Bid security shall be submitted in an electronic or digital format meeting the following criteria:
- (a) 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; all digital seals; with the surety company, or an approved verification service provider of the surety company.
 - (b) 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.
 - (c) 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.
 - (d) The results of the verification must provide a clear, immediate and printable indication of pass or fail regarding B14.3(a).
- B14.4 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 B18.1(a).
- B14.5 Bonds passing the verification process will be treated as original and authentic.
- B14.5.1 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.
- B14.6 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.
- B14.7 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.

B15. OPENING OF BIDS AND RELEASE OF INFORMATION

- B15.1 Bids will not be opened publicly.
- B15.2 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.
- B15.3 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.
- B15.4 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).
- B15.4.1 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.

B16. IRREVOCABLE BID

- B16.1 The Bid(s) submitted by the Bidder shall be irrevocable for the time period specified in Paragraph 11 of Form A: Bid/Proposal.
- B16.2 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.

B17. WITHDRAWAL OF BIDS

- B17.1 A Bidder may withdraw his/her Bid without penalty prior to the Submission Deadline.

B18. EVALUATION OF BIDS

- B18.1 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 B13 (pass/fail);
 - (c) Total Bid Price;
 - (d) economic analysis of any approved alternative pursuant to B7.
- B18.2 Further to B18.1(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.
- B18.3 Further to B18.1(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.
- B18.4 Further to B18.1(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.
- B18.4.1 Bidders are advised that the calculation indicated in B18.4 will prevail over the Total Bid Price entered in MERX.

B19. AWARD OF CONTRACT

- B19.1 The City will give notice of the award of the Contract or will give notice that no award will be made.
- B19.2 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.
- B19.2.1 Without limiting the generality of B19.2, 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.

- B19.3 The Work of this Contract is contingent upon Council approval of sufficient funding in the 2020 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.
- B19.4 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 B18.
- B19.4.1 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. SCOPE OF WORK

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

- (a) Water Main Renewal
 - (i) Watt Street from Harbison Avenue to Washington Avenue
 - (ii) Watt Street from Winterton Avenue to Munroe Avenue
- (b) Concrete Pavement Reconstruction
 - (i) Watt Street from Chalmers Avenue to 40 m south of Munroe Avenue

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

- (a) Water Main Renewal
 - (i) Installation of 150 mm and 200 mm PVC pipe;
 - (ii) Installation of Hydrant Assemblies, Gate Valves, and Other Appurtenances;
 - (iii) Reconnection of Water Services;
 - (iv) Tie in to existing Water Mains;
 - (v) Removal of existing Hydrants;
 - (vi) Abandonment of existing Gate Valves;
 - (vii) Flushing, Hydrostatic Leakage Testing, and Disinfection;
 - (viii) Pavement and Sidewalk restoration.
- (b) Concrete Pavement Reconstruction
 - (i) Temporary pavement widening for construction staging;
 - (ii) Pavement Removal;
 - (iii) Sewer Repairs;
 - (iv) Excavation;
 - (v) Placement of geotextile fabric;
 - (vi) Placement of geogrid (if required);
 - (vii) Insulation of water services and feeder main;
 - (viii) Subgrade compaction;
 - (ix) Placement of sub-base and base course material;
 - (x) Installation of Catch Basin and connecting pipes;
 - (xi) Installation of subdrains;
 - (xii) Construction of slip form concrete pavement (250mm thickness);
 - (xiii) Construction of monolithic 180mm barrier curb and sidewalk;
 - (xiv) Installation of 150mm-200mm reinforced concrete approaches;
 - (xv) Asphalt planing and tie ins to approaches;
 - (xvi) Sidewalk Renewal;
 - (xvii) Adjustment of existing catch basins, manholes and appurtenances;
 - (xviii) Boulevard restoration.

D3. CONTRACT ADMINISTRATOR

D3.1 The Contract Administrator is WSP, represented by:

Scott Minty, M.Sc., P.Eng.
Senior Project Manager

Telephone No. 204-943-3178

Email Address Scott.Minty@wsp.com

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

D4. CONTRACTOR'S SUPERVISOR

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

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

D5. NOTICES

D5.1 Except as provided for in 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.

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

D5.3 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

D6. FURNISHING OF DOCUMENTS

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

SUBMISSIONS

D7. AUTHORITY TO CARRY ON BUSINESS

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

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

D8. SAFE WORK PLAN

- D8.1 The Contractor shall provide the Contract Administrator with a Safe Work Plan at least five (5) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract Documents, if applicable.
- D8.2 The Safe Work Plan shall be prepared and submitted in the format shown in the City's template which is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/safety/default.stm>
- D8.3 Notwithstanding B13.4 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.

D9. INSURANCE

- D9.1 The Contractor shall provide and maintain the following insurance coverage:
- (a) commercial general liability insurance, in the amount of at least two million dollars (\$2,000,000.00) per occurrence. The Policy shall include a cross-liability clause, such liability policy to also contain contractual liability, sudden and accidental pollution liability, unlicensed equipment liability, non-owned automobile liability, broad form property damage cover and products and completed operations. The policy shall include The City of Winnipeg, Manitoba and its Ministers, officers, employees and agents shall be added as additional insureds. The policy 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 the field office, portable toilets, and contents on the site.
- D9.2 Deductibles shall be borne by the Contractor.
- D9.3 The Contractor shall require each of its Subcontractors to provide comparable insurance to that set forth under D9.1(a) and D9.1(b).
- D9.4 The Contractor shall provide the City Solicitor with a certificate(s) of insurance, in a form satisfactory to the City Solicitor, at least two (2) Business Days prior to the commencement of any Work but in no event later than the date specified in the C4.1 for the return of the executed Contract Documents, as applicable.
- D9.5 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.

D10. CONTRACT SECURITY

- D10.1 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.

D10.2 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.

D10.3 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 D10.1(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.

D11. SUBCONTRACTOR LIST

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

D12. EQUIPMENT LIST

D12.1 The Contractor shall provide the Contract Administrator with a complete list of the equipment which the Contractor proposes to utilize (Form K: Equipment List) at or prior to a pre-construction meeting, or at least two (2) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in the C4.1 for the return of the executed Contract 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 and 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 D7;
 - (ii) evidence of the workers compensation coverage specified in C6.15;
 - (iii) the twenty-four (24) hour emergency response phone number specified in D4.2.
 - (iv) the Safe Work Plan specified in D8;
 - (v) evidence of the insurance specified in D9;
 - (vi) the contract security specified in D10;
 - (vii) the subcontractor list specified in D11;
 - (viii) the equipment 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 commence the Work on Site no later than May 4, 2020, as directed by the Contract Administrator and weather permitting.
- D14.4 The City intends to award this Contract by April 21, 2020.
- D14.4.1 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.

D16. RESTRICTED WORK HOURS

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

D17. WORK BY OTHERS

- D17.1 Work by others on or near the Site will include but not necessarily be limited to:
- (a) Manitoba Hydro
 - (i) Relocation of hydro poles;
 - (ii) Installation of two davits and approx. 40 m of street lighting cable.
 - (b) BellMTS
 - (i) Manhole adjustments, as required.

- (c) City of Winnipeg Traffic Signals Operations
 - (i) Relocation of signals at intersections.
- (d) City of Winnipeg Traffic Services
 - (i) Traffic signing;
 - (ii) Lane markings
- (e) City of Winnipeg Water Services
- (f) Winnipeg Transit
 - (i) Removal of bus shelter
- (g) City of Winnipeg Geomatics Branch

D18. SEQUENCE OF WORK

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

D18.1.1 The Work shall be divided into two Phases . Each Phase shall be subdivided into stages. Stages are further subdivided into major items of work.

D18.1.2 **Phase I** – Watt Street Water Main Renewal Work from Harbison Avenue to Washington Avenue and Winterton Avenue to Munroe Avenue.

D18.1.3 **Phase II** – Watt Street Pavement Renewal from Chalmers Avenue to 40 m south of Munroe Avenue.

- (a) **Stage I** – Northbound Lanes, Tie Ins, and Sidewalk
 - (i) Construction of temporary pavement widening on Watt Street and Roch Street;
 - (ii) Removal of existing drainage inlets and catch basins;
 - (iii) Installation of catch basins and sewer service connections;
 - (iv) Pavement removal;
 - (v) Excavation;
 - (vi) Sub-grade compaction;
 - (vii) Installation of separation geotextile fabric;
 - (viii) Placement of sub-base and base material;
 - (ix) Construction of main line concrete pavement;
 - (x) Construction of concrete approaches and tie ins;
 - (xi) Construction of monolithic curb and sidewalk;
 - (xii) MMA markings;
 - (xiii) Boulevard restoration;
 - (xiv) Construction of asphalt approaches and tie ins.
- (b) **Stage I** – Southbound Lanes, Tie Ins, and Sidewalk
 - (i) Removal of pavement widening and restoration on Roch Street;
 - (ii) Removal of existing drainage inlets and catch basins;
 - (iii) Installation of catch basins and sewer service connections;
 - (iv) Pavement removal;
 - (v) Excavation;
 - (vi) Sub-grade compaction;
 - (vii) Installation of separation geotextile fabric;
 - (viii) Placement of sub-base and base material;
 - (ix) Construction of main line concrete pavement;
 - (x) Construction of concrete approaches and tie ins;
 - (xi) Construction of monolithic curb and sidewalk;
 - (xii) MMA markings;

- (xiii) Boulevard restoration;
- (xiv) Construction of asphalt approaches and tie ins.

D18.1.4 An approved staging plan for Phase II has been provided in E1.3.

D19. CRITICAL STAGES

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

- (a) All Water Main Renewal Work shall be completed within twenty (20) consecutive Working Days of the commencement of the Work as specified in D14.

D19.2 When the Contractor considers the Work associated with the Water Main Renewal 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 Water Main Renewal Work has been accepted by the Contract Administrator as being completed to the requirements of the Contract is the date on which completion of the Water Main Renewal Work has been achieved.

D20. SUBSTANTIAL PERFORMANCE

D20.1 The Contractor shall achieve Substantial Performance within one hundred and five (105) 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 one hundred and ten (110) 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 - Four Thousand dollars (\$4,000.00);

- (b) Substantial Performance – Four Thousand dollars (\$4,000.00);
- (c) Total Performance – Two Thousand dollars (\$2,000.00).

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

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

D23. SCHEDULED MAINTENANCE

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

- (a) Sod Maintenance as specified in CW3510.

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

CONTROL OF WORK

D24. JOB MEETINGS

D24.1 Regular weekly job meetings will be held at site. These meetings shall be attended by a minimum of one representative of the Contract Administrator, 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.

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

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

D25.1 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).

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

D26.1 Further to B13.4, 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 B13.4.

MEASUREMENT AND PAYMENT

D27. PAYMENT

D27.1 Further to C12, the City may at its option pay the Contractor by direct deposit to the Contractor's banking institution.

WARRANTY

D28. WARRANTY

- D28.1 Notwithstanding C13.2, the warranty period shall begin on the date of Substantial 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.
- D28.2 Notwithstanding C13.2 or D28.1, the Contract Administrator may permit the warranty period for a portion or portions of the Work to begin prior to the date of Substantial 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.
- D28.2.1 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

D29. FUNDING AND/OR CONTRIBUTION AGREEMENT OBLIGATIONS

- D29.1 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.
- D29.2 For the purposes of D29:
- (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.
- D29.3 Indemnification By Contractor
- D29.3.1 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.
- D29.4 Records Retention and Audits
- D29.4.1 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.
- D29.4.2 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 D29.4.1 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.

D29.5 Other Obligations

- D29.5.1 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.
- D29.5.2 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.
- D29.5.3 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.
- D29.5.4 The Contractor shall properly account for the Work provided under this Contract and payment received in this respect, prepared in accordance with generally accepted accounting principles in effect in Canada, including those principles and standards approved or recommended from time-to-time by the Chartered Professional Accountants of Canada or the Public Sector Accounting Board, as applicable, applied on a consistent basis.

FORM H1: PERFORMANCE BOND
(See D10)

KNOW ALL MEN BY THESE PRESENTS THAT

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

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

_____ dollars (\$_____)

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

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

TENDER NO. 147-2020

2020 Watt Street Pavement Renewal & Water Main Renewal – Contract 8

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 D10)

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. 147-2020

2020 Watt Street Pavement Renewal & Water Main Renewal – Contract 8

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 D11)

2020 Watt Street Pavement Renewal & Water Main Renewal – Contract 8

<u>Portion of the Work</u>	<u>Name</u>	<u>Address</u>
PAVEMENT RENEWAL WORKS:		
<u>Supply of Materials:</u>		
Concrete		
Asphalt		
Base Course & Sub-Base		
Separation Geotextile		
Geogrid		
Sod		
Catch Basin		
Catch Pit		
Frame & Cover		
Sewer Service Pipe		
Drainage Pipe		
Sewer Pipe		
MMA Markings		
<u>Installation/Placement:</u>		
Excavation		
Sub-Base		
Base		
Concrete		
Asphalt		
Underground Works		
Sewer Televising		
Landscaping		
MMA Markings		

FORM K: EQUIPMENT
(See D12)

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<p>1. Category/type:</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p>
<p>2. Category/type:</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p>
<p>3. Category/type:</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p>

FORM K: EQUIPMENT
(See D12)

2020 Watt Street Pavement Renewal & Water Main Renewal – Contract 8

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

PART E - SPECIFICATIONS

GENERAL

E1. APPLICABLE SPECIFICATIONS AND DRAWINGS

- E1.1 These Specifications shall apply to the Work.
- E1.2 *The City of Winnipeg Standard Construction Specifications* in its entirety, whether or not specifically listed on Form B: Prices, shall apply to the Work.
- E1.2.1 *The City of Winnipeg Standard Construction Specifications* is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/Spec/Default.stm>
- E1.2.2 The version in effect three (3) Business Days before the Submission Deadline shall apply.
- E1.2.3 Further to C2.4(d), Specifications included in the 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 B7. 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 B7.

<u>Drawing No.</u>	<u>Drawing Name/Title</u>	<u>Drawing (Original) Sheet Size</u>
	Cover Sheet	A1
D-15651	INDEX PAGE	A1
D-15652	WATT STREET NL OF HARBISON AVENUE WEST TO 16.9M NNL OF LARSEN AVENUE	A1
D-15653	WATT STREET 16.9M NNL OF LARSEN AVENUE TO 15.8 SSL OF JAMISON AVENUE	A1
D-15654	WATT STREET 15.8 SSL OF JAMISON AVENUE TO SL OF WASHINGTON AVENUE	A1
D-15655	WATT STREET SL OF WINTERTON AVENUE TO 62.8 NSL OF WINTERTON AVENUE	A1
P-3521-01	WATT STREET HORIZONTAL GEOMETRY STA. 0+75.91 TO STA. 3+73	A1
P-3521-02	WATT STREET HORIZONTAL GEOMETRY STA. 3+73 TO STA. 6+65	A1
P-3521-03	WATT STREET HORIZONTAL GEOMETRY STA. 6+65 TO 8+42	A1
P-3521-04	WATT STREET CONCRETE RECONSTRUCTION STA. 0+75.91 TO STA. 1+50	A1
P-3521-05	WATT STREET CONCRETE RECONSTRUCTION STA. 1+50 TO STA. 3+00	A1
P-3521-06	WATT STREET CONCRETE RECONSTRUCTION STA. 3+00 TO STA. 4+50	A1
P-3521-07	WATT STREET CONCRETE RECONSTRUCTION STA. 4+50 TO STA. 5+85	A1
P-3521-08	WATT STREET CONCRETE RECONSTRUCTION STA. 5+85 TO STA. 7+00	A1
P-3521-09	WATT STREET CONCRETE RECONSTRUCTION STA. 7+00 TO STA. 7+85	A1
P-3521-10	WATT STREET CONCRETE RECONSTRUCTION STA. 7+85 TO STA. 8+55	A1
P-3521-11	WATT STREET STAGING PLAN	A1
P-3521-12	WATT STREET STAGING PLAN	A1

E2. MOBILIZATION AND DEMOBILIZATION PAYMENT

DESCRIPTION

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

SCOPE OF WORK

- E2.4 Further to C12 of the General Conditions, 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) 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.
- E2.5 Access to the site, equipment parking, and staging areas are limited to that shown on the drawings or as approved by the Contract Administrator.

MEASUREMENT AND PAYMENT

- E2.6 The lump-sum price for the Mobilization and Demobilization bid item shall not exceed five percent (5.00%) of the total bid price for the Contract.
- E2.6.1 Further to B10, B18, C12 and E2.6, 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.
- E2.7 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.

E2.8 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.

E2.9 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.

E3. GEOTECHNICAL REPORT

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

E4. OFFICE FACILITIES

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

- (a) The field office shall be for the exclusive use of the Contract Administrator.
- (b) The building shall be conveniently located near the site of the Work.
- (c) The building shall have a minimum floor area of 25 square metres, 2.4 with two windows for cross ventilation and a door entrance with a suitable lock.
- (d) The building shall be suitable for all weather use. It shall be equipped with an electric heater and air conditioner so that the room temperature can be maintained between either 16-18°C or 24-25°C.
- (e) The building shall be adequately lighted with fluorescent fixtures and have a minimum of three wall outlets.
- (f) The building shall be furnished with one desk, one drafting table, table 3 m X 1.2 m, 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.

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

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

E4.4 On a one time basis, where directed by the Contract Administrator, the Contractor shall relocate the office facilities to a location more convenient for the remaining Work.

E5. PROTECTION OF EXISTING TREES

E5.1 The Contractor shall take the following precautionary steps to prevent damage from construction activities to existing boulevard trees within the limits of the construction area:

- (a) The Contractor shall not stockpile materials and soil or park vehicles and equipment on boulevards within 2 metres of trees.
- (b) Trees identified to be at risk by the Contract Administrator are to be strapped with 25 x 100 x 2400mm wood planks, or suitably protected as approved by the Contract Administrator.

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

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

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

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

E6. TRAFFIC CONTROL

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

- (a) Where directed by the Contract Administrator, the Contractor shall construct and maintain temporary asphalt ramps to alleviate vertical pavement obstructions such as manholes and planing drop-offs and maintain pedestrian crossings 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.

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

- (a) Parking restrictions,
- (b) Stopping restrictions,
- (c) Turn restrictions,
- (d) Diamond lane removal,
- (e) Full or directional closures on a Regional Street,
- (f) Traffic routed across a median,
- (g) Full or directional closure of a non-regional street where there is a requirement for regulatory signs (turn restrictions, bus stop relocations, etc.) to implement the closure.
- (h) Approved Designated Construction Zones with a temporary posted speed limit reduction. Traffic Services will be responsible for placing all of the advance signs and 'Construction Ends' (TC-4) signs. The Contractor is still responsible for all other temporary traffic control including but not limited to barricades, barrels and tall cones.

- E6.2.1 An exception to E6.2 is the 'KEEP RIGHT/KEEP LEFT' sign (RB-25 / RB-25L) which shall be supplied, installed, and maintained by the Contractor at their own expense.
- E6.2.2 Further to E6.2, where the Contract Administrator has determined that the services of the Traffic Services Branch are required, the City shall bear the costs associated with the placement of temporary traffic control devices by the Traffic Services Branch of the City of Winnipeg in connection with the works undertaken by the Contractor.

E7. TRAFFIC MANAGEMENT

E7.1 Further to clause 3.7 of CW 1130:

- (a) Single lane closures on intersecting and/or adjoining Regional Streets shall only be permitted during non-peak periods when required for construction activities when approved by the Traffic Management Branch. Storage/parking of materials, equipment or vehicles is not permitted on Regional Streets at any time unless approved by the Contract Administrator, in consultation with the Traffic Management Branch.

E7.1.1 The regional street(s) intersecting Watt Street are:

- (a) Levis Street

E7.1.2 Phase I – Watt Street Water Main Renewal Work

- (a) Maintain a minimum of one lane of traffic in each direction on Watt Street at all times during construction;
- (b) Intersecting streets and private approach access must be maintained at all times;
- (c) Bus traffic must be maintained at all times;
- (d) Maintain pedestrian access on both sides of Watt Street at all times during construction;
- (e) The Contractor shall maintain safe pedestrian crossings at each intersection at all times. If possible, only one pedestrian crossing at an intersection is to be blocked by construction at any one time. If more than one pedestrian crossing is blocked by construction at an intersection at the same time, the Contractor shall provide flag persons to safely escort pedestrians across the intersection. The Contractor shall leave pedestrian crossing locations safe and free of equipment that may hamper pedestrians when no construction activities are being performed at a particular crossing location;

E7.1.3 Phase II – Watt Street Pavement Renewal Work

- (a) Maintain a minimum of one lane of traffic [southbound] (Stage I) and two lanes of traffic in each direction (Stage II) during their respective construction times. When no work is being performed on site, non-essential lane closures will not be permitted.
- (b) Maintain pedestrian access on the west side of Watt Street (Stage I) and the east side of Watt Street (Stage II) during their respective construction times.
- (c) Maintain a 1.5 m, concrete, clear walking path along the east side of Watt Street (Stage I) and along the west side of Watt Street (Stage II) during their respective construction times.
- (d) One barricaded pedestrian crossing in the [east-west] direction must be maintained on the north side at each of the Harbison Avenue, Bowman Avenue, and Washington Avenue intersections at all times.
- (e) At minimum, maintain local access to Union Avenue West, Martin Avenue, Harbison Avenue, Larsen Avenue, Bowman Avenue, and Washington Avenue (Stage I) during construction.
- (f) When no work is being performed in the intersection of a local street or alley and providing it is safe for vehicles, no closures in the intersection will be permitted.
- (g) Maintain three temporary bus stops (Stage II) for southbound Watt Street bus routes to the satisfaction of the Contract Administrator.

- E7.1.4 Flag persons may be necessary to maintain the flow of traffic during certain work operations. No additional payment shall be made for flag persons.
- E7.1.5 The Contractor shall not park company or private vehicles inside the barricaded work zone in a manner that blocks sightlines for vehicles and pedestrians.
- E7.1.6 Should the Contractor be unable to maintain pedestrian or vehicular access to a residence or business, he/she shall review the planned disruption with the business or residence and the Contract Administrator, and take reasonable measures to minimize the impact. The Contractor shall provide a minimum of 24 hours notification to the affected residence or business and the Contract Administrator, prior to disruption of access.
- E7.1.7 Ambulance/emergency vehicle, pedestrian, and bus access must be maintained at all times.
- E7.1.8 The Contractor shall refer to the approved staging drawings listed in E1.3 for more traffic management details.
- (a) The Contractor may propose alternative traffic management plans a minimum of five (5) days prior to the commencement for the review and approval by the Contract Administrator, the City Project Manager, and Traffic Management.

E8. REFUSE AND RECYCLING COLLECTION

- E8.1 While access to refuse and/or recycling collection vehicles is restricted, on collection day(s) the Contractor shall move all of the affected property owners refuse and/or recycling materials to a nearby common area, prior to an established time, in accordance with E8.2 to permit the normal collection vehicles to collect the materials. Immediately following recycling collection the Contractor shall return recycling receptacles to the addresses marked on the receptacles.
- E8.2 Collection Schedule:

Watt Street from Chalmers Avenue to Munroe Avenue.

<i>Collection Day(s):</i>	Friday A
<i>Collection Time:</i>	7:00 to 21:00
<i>Common Collection Area:</i>	Alleys

- E8.3 No measurement or payment will be made for the work associated with this specification.

E9. PEDESTRIAN SAFETY

- E9.1 During the project temporary snow fencing shall be installed adjacent to existing and temporary sidewalks as necessary to prevent access to the construction area and to provide separation from the excavation area. The Contractor shall be responsible for maintaining the snow fence in a proper working condition. No measurement for payment shall be made for this work.

E10. WATER OBTAINED FROM THE CITY

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

E11. SURFACE RESTORATIONS

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

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

E12. INFRASTRUCTURE SIGNS

E12.1 The Contractor shall obtain infrastructure signs from the Traffic Services Sign Shop at 421 Osborne Street. The Contractor shall mount each sign securely to a rigid backing material approved by the Contract Administrator. The Contractor shall fasten each sign to a suitable support and erect and maintain one sign at each street as directed by the Contract Administrator. When the Contract Administrator considers the Work on the street complete, the Contractor shall remove and dispose of the signs and supports. No measurement for payment will be made for performing all operations herein described and all other items incidental to the work described.

WATER MAIN WORKS

E13. PROVISIONAL ITEMS

E13.1 The Provisional Items listed in the Form B Prices are part of the Contract.

E13.2 The Contractor shall not perform Work included in Provisional Items without prior authorization from the Contract Administrator. All work included in the Provisional Items will be carried out within the construction areas shown on the Drawings.

E13.3 Notwithstanding C7, the City reserves the right to diminish all or any portion of the Items of Work listed in the Provisional Items and no claim shall be made for damages on grounds of loss of anticipated profit or for any other reason.

E14. TEMPORARY SURFACE RESTORATIONS

E14.1 Further to clause 3.3 of CW 1130, the Contractor shall temporarily restore surfaces as follows:

- (a) Backfill and level boulevards and grassed areas to match existing surface elevations;
- (b) Cap excavations in street pavement with a 100 mm thick layer of "Concrete for Temporary Restoration of Utility Pavement Cuts" as specified in CW 3310;
- (c) Cap excavations in sidewalk pavement with 50 mm thick layer of "Concrete for Temporary Restoration of Utility Pavement Cuts" as specified in CW 3310;
- (d) Insulate temporary concrete where required during 24hr curing period;
- (e) Where curb has been removed as part of the pavement cut pour temporary curb using "Concrete for Temporary Restoration of Utility Pavement Cuts" as specified in CW 3310.
- (f) Remove all temporary pavements prior to permanent restorations.

E14.2 The Contractor shall monitor and maintain temporarily restored surfaces as required until permanent restoration is complete.

E14.3 If, in the opinion of the Contract Administrator, temporarily restored surfaces are not being adequately maintained or were not properly constructed and pose a danger to the public, maintenance or reconstruction will be done by the City forces with no advance notification the Contractor.

E14.4 All costs associated with the maintenance or reconstruction of temporary pavement incurred by the City shall be deducted from future payments to the Contractor.

E14.5 Temporary surface restorations shall be measured on an area basis and paid for at the contract unit price for "Temporary Surface Restorations", "a) street pavement" or "b) sidewalk". The area to be paid for shall be the total number of square metres of street pavement or sidewalk temporarily restored, accepted and measured by the Contract Administrator.

- E14.6 No measurement or payment will be made for the temporary restoration of barrier or lip curb.
- E14.7 No measurement or payment will be made for the temporary restorations of boulevards and grassed areas.
- E14.8 No measurement or payment will be made for the removal of temporary pavement prior to permanent restoration.

E15. CONNECTING TO EXISTING WATER SERVICES

- E15.1 This specification shall amend clause 4.22 of CW 2110.
- E15.2 Connecting to existing lead water services will be measured and paid for in accordance with Clause 4.13 of CW 2110, "Connecting Existing Copper Water Services to New Watermain" for each connection made, regardless of the material of the existing water service being connected to. Connecting to existing lead water services will not be included in the installation of a curb stop.

E16. WORK PRACTICES ON ASBESTOS-CEMENT PIPE

- E16.1 Further to C6.26(d), the Contractor's attention is directed to the possible health dangers associated with working with asbestos cement pipe and all work associated with the existing AC water mains shall conform to the following publications:
 - E16.1.1 "Work Practices for Asbestos-Cement Pipe", AWWA No. M16, published by the American Water Works Association.
 - E16.1.2 "Recommended Work Practices for AC Pipe", 1977, published by the AC Pipe Producers Association.
- E16.2 The Contractor shall state in the "job specific safe work plan" the proposed procedure for working on AC Pipe. Contractor shall also provide proof of asbestos handling training or certification.

SURFACE WORKS

E17. SUPPLY AND INSTALLATION OF MMA MARKINGS

DESCRIPTION

- E17.1 This specification covers the supply and installation of Methyl Methacrylate Area (MMA) Marking with Anti-Skid in concrete sidewalk for Watt Street from Chalmers Avenue to Munroe Avenue.

GENERAL

- E17.2 Drawings and Manuals
 - (a) Drawings: P-3521-04 to P-3521-10;
 - (b) Attached Manual: Appendix 'B' – Applicable Instructions – MMAX Corundum Area Markings
- E17.3 Material
 - (a) CycleGrip® MMAX kit – includes CycleGrip® MMAX Resin (black), CycleGrip® MMAX Aggregate and Catalyst
- E17.4 Source
 - (a) ENNIS-FLINT
Available from:

ENNIS-FLINT

Attention: Deryk Upton

Ph: 604-315-8765

Email: dupton@ennisflint.com

Web: www.ennisflint.com

CONSTRUCTION METHOD

- E17.5 Where the MMA Markings is to be placed, the surface of the concrete sidewalk must be texture grooved to a width of 0.3m and a depth of 1.25mm(min) to 2.5mm(max). Note: The use of grooving equipment with gang stacked diamond cutting blades is required for texturing concrete sidewalk surfaces.
- E17.6 Prepare the concrete sidewalk surface in accordance with Manufacturer's application instructions and MMA Area Markings specification (attached).

MEASUREMENT AND PAYMENT

- E17.7 Supply and installation of MMA marking with anti-skid will be measured on a length basis and paid for at the Contract Unit Price per metre for "Supply and Installation of MMA Marking with Anti-Skid". The length to be paid for will be the total number of metres of MMA marking with anti-skid supplied and installed in accordance with this specification, accepted and measured by the Contract Administrator.
- E17.8 Grooving and preparation of concrete sidewalk for MMA marking with anti-skid shall be included in the cost for "Supply and Installation of MMA Marking with Anti-Skid" and no separate measurement and payment will be made.

E18. SUPPLY AND INSTALL FEEDER MAIN, WATERMAIN AND WATER SERVICE INSULATION

DESCRIPTION

- E18.1 Notwithstanding 3.12 of CW 2110, this specification covers the supply and installation of insulation in roadway excavations over feeder mains, watermains and water services.
- E18.2 Referenced Standard Construction Specifications
- (a) CW 2030 – Excavation Bedding and Backfill
 - (b) CW 3110 – Sub –grade, Sub-base and Base Course Construction
- E18.3 Referenced Standard Details
- (a) SD-018 - Watermain and Water Service Insulation

MATERIALS

- E18.4 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"
- E18.5 Sand Bedding :
- (a) In accordance with CW 2030

CONSTRUCTION METHODS

- E18.6 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.
- E18.7 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.
- E18.8 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.
- E18.9 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.
- E18.10 Take appropriate measures to ensure panels are not displaced when installing geotextiles and during backfilling operations.

MEASUREMENT AND PAYMENT

- E18.11 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 E18.6 will not be measured for payment and will be included in the payment for "Watermain and Water Service Insulation".

E19. OPERATING CONSTRAINTS FOR WORK IN CLOSE PROXIMITY TO CRITICAL WATER INFRASTRUCTURE

DESCRIPTION

- E19.1 This Section details operating constraints for all work to be carried out in close proximity to the City feeder mains and other critical water infrastructure. Close proximity shall be deemed to be any construction activity within a 5 m horizontal offset from the centreline of the feeder main/water main, within 5 m of valve chambers and other appurtenances, and any other infrastructure identified below.
- E19.2 The following shall be considered critical pipelines and water infrastructure for this project:
- (a) Chalmers Feeder Main:
- (i) The feeder main runs east-west within the Chalmers Avenue right of way as shown on the Drawings.

GENERAL CONSIDERATIONS FOR WORK IN CLOSE PROXIMITY TO CRITICAL WATER INFRASTRUCTURE:

- E19.3 Feeder mains and large diameter water mains are a critical component of the City of Winnipeg Regional Water Supply System and work in close proximity to feeder mains shall be undertaken with an abundance of caution. Large diameter feeder main and water mains cannot typically be taken out of service for extended periods to facilitate construction and inadvertent damage caused to the pipe would likely have catastrophic consequences.

- E19.4 Work around critical water infrastructure shall be planned and implemented to minimize the time period that work is carried out in close proximity to the pipe 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.
- E19.5 Large diameter pressure pipe generally has limited ability to withstand increased earth and live loading. Therefore, every precaution must be undertaken to ensure that applied loading during all phases of construction is within accepted loading parameters. PCCP typically fails in a non-ductile mode with the potential to cause extensive consequential damage to infrastructure if failure should occur. All large diameter feeder mains/water mains have the potential to cause extensive flooding.
- E19.6 Construction in close proximity to critical infrastructure shall not commence until both the equipment and construction method statements have been submitted, reviewed, and accepted by the Contract Administrator.

SUBMITTALS

- E19.7 Submit proposed construction equipment specifications to the Contract Administrator for review a minimum of five (5) Business Days prior to construction. The equipment submission shall include:
- (a) Equipment operating and payload weights;
 - (b) equipment dimensions, including: wheel or track base, track length or axle spacing, track widths or wheel configurations; and,
 - (c) load distributions in the intended operating configuration.
- E19.8 Submit a construction method statement to the Contract Administrator a minimum of five (5) business days prior to construction. The construction method statement shall contain the following minimum information:
- (a) proposed construction plan including excavation locations, haul routes, excavation equipment locations, and loading positions;
 - (b) excavation plans, including shoring designs, for excavations occurring in close proximity to feeder mains (within 5 m horizontal of the pipe's centerline) where the excavation to be extended below the top of the feeder mains embedment zone (150 mm above the pipe);
 - (c) trenchless construction methodology for feeder main crossings, including: installation methods, means of grade control, means of confirming clear separation between the new LDS and existing feeder main; and
 - (d) any other pertinent information required to accurately describe the construction activities in close proximity to the feeder main and permit the Contract Administrator to review the proposed construction plans.
- E19.9 Incomplete or partial submissions will not be reviewed and will be returned to the Contractor for re-submission.
- E19.10 Allow five (5) Business Days for review by the Contract Administrator.

FEEDER MAIN OPERATIONAL LIMITATIONS

- E19.11 Feeder main shutdowns are scheduled based on a number of factors including water demand, weather, reservoir operation, routine maintenance and repair work within the regional distribution system, and other factors. If feeder main shutdowns are required, the City shall endeavour to make requested time periods available to the Contractor to schedule his/her work requiring removal of the feeder main from service, without limiting the City's control over the operation of the feeder main to complete other work, maintain adequate water supply and storage of water and maintain the integrity of the infrastructure. The City shall reserve the right to cancel and/or delay these schedule dates at any time, due to any circumstances that could adversely affect the feeder main or water supply including, but not limited to, high water

demand, abnormal weather, failures of related water system components and/or security concerns.

E19.12 Scheduling Restrictions:

- (a) Temporary feeder main shutdowns are typically limited to off-peak demand seasons (September 15th to May 15th) and low demand hours including evenings or other low demand periods.

E19.13 The Contractor shall provide Notice to the Contract Administrator in writing, a minimum of fifteen (15) Business Days prior to requiring the shutdown. The City will endeavour to schedule the shutdown as requested.

FEEDER MAIN COVER

E19.14 The Chalmers Feeder Main has limited cover for the length of this project ranging from 1.0 metres to approximately 1.5 metres below finish centerline grade of proposed street.

PRE-WORK, PLANNING, AND GENERAL EXECUTION

E19.15 No work shall commence in close proximity to feeder mains, chambers, and critical infrastructure until the equipment specifications and construction method statement have been submitted and accepted, and feeder main locations have been clearly delineated in the field. Work over feeder mains shall only be carried out with equipment that has been reviewed and quantified in terms of its loading implications on the pipe.

E19.15.1 Contact the City of Winnipeg Water and Waste Department, Construction Services Coordinator prior to construction.

E19.16 Locate feeder mains and water mains and confirm their position horizontally and vertically at the proposed following locations prior to undertaking work in close proximity to the identified feeder mains. Note, exact locations to be identified in the field. Deviations from the elevations noted on the Drawings shall be reported to Contract Administrator for review prior to proceeding with work:

- (a) Chalmers Feeder Main:
 - (i) Watt Street Intersection

E19.17 Visually delineate all critical infrastructure identified herein on Site by use of paint, staking/flagging, construction fencing, snow fencing, or other suitable methods.

E19.18 Only utilize construction practices and procedures that do not impart excessive vibratory loads on feeder mains and chambers or that would cause settlement of the subgrade below feeder mains and critical pipelines.

E19.19 Where the existing road structure must be removed, crossing of critical infrastructure shall be prohibited from the time the existing roadway structure is removed until the completion of granular base construction. At all times prior to completion of final paving; reduce equipment speeds to levels that minimize the effects of impact loading to the critical infrastructure.

E19.20 Only equipment and construction practices stipulated in the accepted construction method statement and the supplemental requirements noted herein may be utilized in close proximity to feeder mains, chambers, and other critical infrastructure identified herein.

E19.21 Construction operations should be staged in such a manner as to limit multiple construction loads at one time, (e.g., offset crossings sufficiently from each other, rollers should remain a sufficient distance behind spreaders to limit loads. A reasonable offset distance is 3 m between loads).

E19.22 Granular material, construction material, soil, and/or other material shall not be stockpiled on the pipelines or within 5 m of any feeder main, valve chamber, or other critical infrastructure identified herein.

- E19.23 The Contractor shall ensure that all crew members understand and observe the requirements of working near feeder mains, valve chambers, and critical infrastructure. Prior to commencement of on-Site work, the Contractor shall jointly conduct an orientation meeting with the Contract Administrator, all superintendents, foreman, and heavy equipment operators to make all workers on the Site fully cognizant of the limitations of altered loading on, the ramifications of inadvertent damage to, and the constraints associated with work in close proximity to feeder mains and critical pipelines. New personnel introduced after commencement of the Project need to be formally orientated as outlined herein. It is recommended that restrictions associated with the crossing, consistent with the Contractor's submitted method statement be posted on Site and near the crossing.

DEMOLITION, EXCAVATION, AND SHORING

- E19.24 Use of pneumatic concrete breakers within 3 m of a feeder main, valve chamber, or critical pipeline is prohibited. Pavement shall be full depth sawcut and carefully removed. Use of hand held jackhammers for pavement removal will be allowed.
- E19.25 Offset excavation equipment a minimum of 3 m from the centerline of critical pipelines when undertaking excavations where there is less than 2.4 m of earth cover over the pipeline.
- E19.26 Excavation:
- (a) Utilize only smooth edged excavation buckets, soft excavation, or hand excavation techniques where there is less than 1.5 m of earth cover over the pipeline.
 - (b) Where there is less than 1.0 m of soil cover above the pipeline, provide full time supervision and complete the excavation utilizing hand excavation, soft excavation methods, or machine excavation. Where machine excavation is to be used the crown of the pipeline must be exposed (or suitable located) using hand or soft excavation methods a minimum of every 1.8 m.
 - (c) Where there is less than 0.5 m of soil cover above the pipeline, provide full time supervision and complete the excavation utilizing hand excavation or soft excavation methods only.
- E19.27 Equipment should not be allowed to operate while positioned directly over a feeder main or critical pipeline except were permitted herein, outlined in the reviewed and accepted construction method statement.
- E19.28 Excavations within 3 m of the outside edge of a feeder main (hydrovac holes for confirming trenchless installations excluded) and which extend below obvert of the feeder main shall utilize shoring methods that precludes the movement of native in-situ soils (i.e. a tight shoring system).
- E19.29 Excavation and base placement for sidewalks and approaches shall be completed shall be completed remotely with limitations as specified herein.

UNDERGROUND CONSTRUCTION AND TRENCHLESS PIPE INSTALLATION

- E19.30 Where removing existing catch basins are noted on the Drawings, expose feeder main where catch basin is closer than 3 metres from Feeder Main. Where Contract Administrator determines removal of catch basin may undermine pipe foundation, remove catch basin to the to of the feeder main and abandon catch basin in place.
- E19.31 Where excavation is required within the feeder main's embedment zone, the Contractor shall take steps to ensure the granular embedment material surrounding the feeder main remains stable during the work and the feeder main outside of the excavation is not undermined.

FEEDER MAIN INSULATION

- E19.32 Insulate feeder mains where specified on the drawings in accordance with CW2110, SD018 and as shown on the Drawings.
- E19.33 Materials:

- (a) High Strength Rigid insulation for below grade: to CAN/ULC S701, Type 4, Styrofoam HI 40 by Dow Chemical, Foamular 400 by Owens Corning, or approved equal in accordance with B6.
- (b) Rigid insulation shall be installed with the top of the insulation flush with the top of the subgrade.
- (c) Rigid insulation sheets shall be installed in a staggered pattern to maximise joint overlap.

E19.34 Insulation for the Chalmers Feeder Main shall conform to SD-018 and the following requirement:

- (a) Thickness: 100 mm
- (b) Width: 3.0 m

SUBGRADE CONSTRUCTION

- E19.35 Subgrade and backfill compaction within 3 metres (horizontal) of a critical pipeline or valve chamber shall be limited to non-vibratory methods only. Small walk behind vibratory packers will be permitted.
- E19.36 Subgrade, sub-base and base course 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.
- E19.37 Subgrade conditions should be inspected by personnel with competent geotechnical experience (e.g. ability to adequately visually classify soils and competency of subgrade, subbase, and base course materials). In the event of encountering unsuitable subgrade materials above the feeder main, proposed design revisions shall be submitted to this office for review to obtain approval from the Water and Waste Department relative to any change in conditions.
- E19.38 Fill material shall not be dumped directly on pipelines but shall be stockpiled outside the limits noted in these recommendations and shall be carefully bladed in-place.
- E19.39 Only use compaction equipment approved by the contract administrator to compact fill materials above critical pipelines. Compaction of fill materials shall be completed using static methods only, no vibratory compaction will be allowed within the limits noted in these recommendations.
- E19.40 Construction operations shall be staged to minimize the time period between excavation to subgrade and placement of granular subbase materials. Should bare subgrade be left overnight, measures shall be implemented to protect the subgrade against inadvertent travel over it and to minimize the impact of wet weather.

SUBBASE AND BASE COURSE CONSTRUCTION

- E19.41 Subbase or base course materials shall not be dumped directly on pipelines but shall be stockpiled outside limits noted in these recommendations and shall be carefully bladed in-place.
- E19.42 Subbase compaction within 3 m horizontal of the centreline of a critical pipeline 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.

PAVING

- E19.43 When constructing asphalt pavements only non-vibratory compaction should be used within 3 m (horizontal) of the center of critical pipelines.

CHALMERS FEEDER MAIN INSPECTION

- E19.44 The Contractor shall support third party inspections of the Chalmers Feeder Main throughout completion of the work. The intention is to inspect the feeder main across the intersection in stages after completion of the subgrade excavation.

- E19.45 The pipeline shall be exposed as specified herein using soft dig or hand excavation methods down to springline of the pipe. The excavation shall be completed in such a manner as to permit inspection by third party staff.
- E19.46 The Contractor is responsible for any shoring required to complete the inspection.
- E19.47 The Contractor shall have means of washing off the exterior of the pipe using a pressure washer or similar.
- E19.48 The Contractor shall have provisions on site to repair cracking in the feeder main's mortar coating or grout diaphragms. This shall include but is not limited to the use of Type HS cement mortar products.
- E19.49 Upon completion of the inspection, the Contractor shall replace any of the pipeline's bedding that was damaged or disturbed as part of the inspection (below springline). Above springline, the Contractor shall place and compact Bedding Sand up to the top of the sub grade. Compaction shall be completed using small hand held/walk behind packers in such a manner as to preclude damage to the pipeline.

E20. HYDRO EXCAVATION

DESCRIPTION

E20.1 General

- (a) This specification shall cover the removal of earthen material immediately adjacent to the 200 MP Gas Main crossing Munroe Avenue and the Chalmers Feeder Main crossing Watt Street by means of high pressure water spray, and the recovery of evacuated material by vacuum type means or equivalent method as approved by the Contract Administrator.
- (b) Expose the 200 MP Gas Main and the Chalmers Feeder Main to confirm their position horizontally and vertically at the locations identified on the Drawings as directed by the Contract Administrator prior to undertaking work in close proximity to the utilities.
- (c) The excavation shall be completed in accordance with Manitoba Hydro and Water and Waste Department requirements.

E20.2 Equipment

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

CONSTRUCTION METHODS

E20.3 Hydro-Removal of Earthen Material

- (a) Earthen material adjacent to utility entity shall be sprayed with high pressure water so as to remove all such material identified by the Contract Administrator.

E20.4 Recovery of Excavated Material

- (a) The recovery of excavated material shall be done using vacuum type method, or other type method as approved by the Contract Administrator.
- (b) The recovery of material shall follow immediately behind the excavation, to avoid excavated areas from filling with excavated material.
- (c) The use of mechanical sweepers will not be allowed.
- (d) Dispose of material in accordance with Section 3.4 of CW 1130.

E20.5 Backfill of Hydro Excavated Hole

- (a) The Contractor shall be responsible for the backfill of the hydro excavated hole upon the completion of the Work described herein, to the approval of the Contract Administrator.

MEASUREMENT AND PAYMENT

- E20.6** Hydro Excavation of earthen material will be measured on an hourly basis and paid for at the Contract Unit Price per hour for "Hydro Excavation". The hours to be paid for will be the total number of hours of Hydro Excavation in accordance with this specification, accepted and measured by the Contract Administrator. Travel to and from the Site will not be accounted for in the payment of this item.

E21. SOFT EXCAVATION TO EXPOSE UNDERGROUND UTILITIES

DESCRIPTION

- E21.1** This specification covers the soft excavation to expose underground utilities to determine the depth of the underground utility and whether it will interfere with the installation of proposed Works on site.
- E21.2** These underground utilities include, but are not limited to, Manitoba Hydro cables, MTS cables, CPR, existing sewers, and existing watermains.

MATERIALS

E21.3 Backfill Material

- (a) Backfill material for backfill of shafts after hydro-excavation has been completed shall consist of sand as per City of Winnipeg Standard Construction Specification CW 2030.

CONSTRUCTION METHODS

- E21.3.2** Prior to commencement of any construction works adjacent to underground utilities, the Contractor shall use soft digging or hand excavation to expose the underground utilities.
- E21.3.3** Once the elevation of the top of the pipe or duct has been determined the resulting excavation shall be backfilled with bedding sand to the elevation of the existing ground.

MEASUREMENT AND PAYMENT

- E21.4** Soft excavation to expose underground utilities will be considered incidental to the Work. No measurement and payment will be made within this section.

E22. LINE PAINTING IN PARKING LOTS

DESCRIPTION

E22.1 General

- E22.1.1** This specification covers all operations relating to the supply and installation of line painting in asphalt parking lots, as noted on the Drawings.
- E22.1.2** The Work to be done by the Contractor under this Specification shall include furnishing of all superintendence, overhead, labor, materials, equipment, tools, supplies, and all things necessary for and incidental to the satisfactory performance and completion of all Works as hereinafter specified.

MATERIALS

- E22.2** Line painting shall conform to City of Winnipeg specifications for line painting on asphalt surfaces.

- (a) CGSBB1-GP-74 M, alkyd traffic paint
- (b) CGSB 1-GP-12C, Yellow 505-308 for parking lot painting

SUBMITTALS

- E22.3 Prior to construction the Contractor shall submit material data sheets for the proposed product to be supplied to the Contract Administrator.

CONSTRUCTION METHODS

E22.4 Surface Preparation

- E22.4.1 Surface Preparation to be in accordance with the Manufacturer's instructions.
- E22.4.2 Before commencement of any Work, the Contractor shall consult with the Contract Administrator to confirm the paint locations shown on the Drawings.
- E22.4.3 Pavement surface to be dry, free from ponded water, frost, ice, dust, oil, grease and other foreign materials.
- E22.4.4 Paint lines to be of uniform colour and density with sharp edges.

E22.5 Paint Mixing

- E22.5.1 Mix paint in accordance with Manufacturer's instructions.

E22.6 Installation of Paint Lines

- E22.6.1 Install paint lines in accordance with Manufacturer's instructions.

MEASUREMENT AND PAYMENT

E22.7 Line Painting in Parking Lots

- E22.7.1 Supply and installation of line painting in asphalt parking lots will be measured on a length basis and paid for at the Contract Unit Price for "Line Painting in Parking Lots", supplied and installed in accordance with this Specification and accepted and measured by the Contract Administrator.

E23. LANDSCAPING CURB

DESCRIPTION

- E23.1 This specification shall cover the supply and installation of concrete landscaping curb, as noted on the Drawings or as directed by the Contract Administrator.

MATERIAL & CONSTRUCTION METHOD

- E23.2 Supply and install curb in accordance with CW 3310 – Portland Cement Concrete Pavement Works.
- E23.3 Construct 150 mm reveal concrete landscaping curb integral with the monolithic curb and sidewalk.

MEASUREMENT AND PAYMENT

- E23.4 Supply and installation of concrete landscaping curb will be measured on a length basis and paid for at the Contract Unit Price for "Landscaping Curb (150 mm reveal ht)", supplied and installed in accordance with the Specification and accepted and measured by the Contract Administrator.