



**THE CITY OF WINNIPEG**

# **TENDER**

**TENDER NO. 440-2020**

**2021-2022 REGIONAL STREET RENEWAL PROGRAM – SELKIRK AVENUE AND  
WILLIAM AVENUE PAVEMENT RENEWALS**

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## **PART B - BIDDING PROCEDURES**

### **B1. CONTRACT TITLE**

- B1.1 2021-2022 Regional Street Renewal Program – Selkirk Avenue and William Avenue Pavement Renewals

### **B2. SUBMISSION DEADLINE**

- B2.1 The Submission Deadline is 12:00 noon Winnipeg time, March 19, 2021.
- B2.2 The Contract Administrator or the Manager of Materials may extend the Submission Deadline by issuing an addendum at any time prior to the time and date specified in B2.1.

### **B3. ENQUIRIES**

- B3.1 All enquiries shall be directed to the Contract Administrator identified in D4.1.
- B3.2 If the Bidder finds errors, discrepancies or omissions in the Tender, or is unsure of the meaning or intent of any provision therein, the Bidder shall notify the Contract Administrator of the error, discrepancy or omission, or request a clarification as to the meaning or intent of the provision at least five (5) Business Days prior to the Submission Deadline.
- B3.3 Responses to enquiries which, in the sole judgment of the Contract Administrator, require a correction to or a clarification of the Tender will be provided by the Contract Administrator to all Bidders by issuing an addendum.
- B3.4 Responses to enquiries which, in the sole judgment of the Contract Administrator, do not require a correction to or a clarification of the Tender will be provided by the Contract Administrator only to the Bidder who made the enquiry.
- B3.5 The Bidder shall not be entitled to rely on any response or interpretation received pursuant to B3 unless that response or interpretation is provided by the Contract Administrator in writing.
- B3.6 Any enquiries concerning submitting through MERX should be addressed to:  
MERX Customer Support  
Phone: 1-800-964-6379  
Email: merx@merx.com

### **B4. CONFIDENTIALITY**

- B4.1 Information provided to a Bidder by the City or acquired by a Bidder by way of further enquiries or through investigation is confidential. Such information shall not be used or disclosed in any way without the prior written authorization of the Contract Administrator. The use and disclosure of the confidential information shall not apply to information which:
- (a) was known to the Bidder before receipt hereof; or
  - (b) becomes publicly known other than through the Bidder; or
  - (c) is disclosed pursuant to the requirements of a governmental authority or judicial order.
- B4.2 The Bidder shall not make any statement of fact or opinion regarding any aspect of the Tender to the media or any member of the public without the prior written authorization of the Contract Administrator.

## **B5. ADDENDA**

- B5.1 The Contract Administrator may, at any time prior to the Submission deadline, issue addenda correcting errors, discrepancies or omissions in the Tender, or clarifying the meaning or intent of any provision therein.
- B5.2 The Contract Administrator will issue each addendum at least two (2) Business Days prior to the Submission Deadline, or provide at least two (2) Business Days by extending the Submission Deadline.
- B5.3 Addenda will be available on the MERX website at [www.merx.com](http://www.merx.com).
- B5.4 The Bidder is responsible for ensuring that he/she has received all addenda and is advised to check the MERX website for addenda regularly and shortly before the Submission Deadline, as may be amended by addendum.
- B5.5 The Bidder shall acknowledge receipt of each addendum in Paragraph 10 of Form A: Bid/Proposal. Failure to acknowledge receipt of an addendum may render a Bid non-responsive.
- B5.6 Notwithstanding B3, enquiries related to an Addendum may be directed to the Contract Administrator indicated in D4.

## **B6. SUBSTITUTES**

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

- B6.6 The Contract Administrator will provide a response in writing, at least two (2) Business Days prior to the Submission Deadline, to the Bidder who requested approval of the substitute.
- B6.6.1 The Contract Administrator will issue an Addendum, disclosing the approved materials, equipment, methods and products to all potential Bidders. The Bidder requesting and obtaining the approval of a substitute shall be responsible for disseminating information regarding the approval to any person or persons he/she wishes to inform.
- B6.7 If the Contract Administrator approves a substitute as an “approved equal”, any Bidder may use the approved equal in place of the specified item.
- B6.8 If the Contract Administrator approves a substitute as an “approved alternative”, any Bidder bidding that approved alternative may base his/her Total Bid Price upon the specified item but may also indicate an alternative price based upon the approved alternative. Such alternatives will be evaluated in accordance with B17.
- B6.9 No later claim by the Contractor for an addition to the Total Bid Price because of any other changes in the Work necessitated by the use of an approved equal or an approved alternative will be considered.

## **B7. BID COMPONENTS**

- B7.1 The Bid shall consist of the following components:
- (a) Form A: Bid;
  - (b) Form B: Prices;
  - (c) Form G1: Bid Bond and Agreement to Bond.
- B7.2 All components of the Bid shall be fully completed or provided, and submitted by the Bidder no later than the Submission Deadline, with all required entries made clearly and completely.
- B7.3 The Bid shall be submitted electronically through MERX at [www.merx.com](http://www.merx.com).
- B7.3.1 Bids will **only** be accepted electronically through MERX.
- B7.4 Bidders are advised that inclusion of terms and conditions inconsistent with the Tender document, including the General Conditions, will be evaluated in accordance with B17.1(a).

## **B8. BID**

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

- B8.4 Paragraph 13 of Form A: Bid/Proposal shall be signed in accordance with the following requirements:
- (a) if the Bidder is a sole proprietor carrying on business in his/her own name, it shall be signed by the Bidder;
  - (b) if the Bidder is a partnership, it shall be signed by the partner or partners who have authority to sign for the partnership;
  - (c) if the Bidder is a corporation, it shall be signed by its duly authorized officer or officers;
  - (d) if the Bidder is carrying on business under a name other than his/her own, it shall be signed by the registered owner of the business name, or by the registered owner's authorized officials if the owner is a partnership or a corporation.
- B8.4.1 The name and official capacity of all individuals signing Form A: Bid/Proposal should be entered below such signatures.
- B8.5 If a Bid is submitted jointly by two or more persons, the word "Bidder" shall mean each and all such persons, and the undertakings, covenants and obligations of such joint Bidders in the Bid and the Contract, when awarded, shall be both joint and several.
- B9. PRICES**
- B9.1 The Bidder shall state a price in Canadian funds for each item of the Work identified on Form B: Prices.
- B9.2 The quantities listed on Form B: Prices are to be considered approximate only. The City will use said quantities for the purpose of comparing Bids.
- B9.3 The quantities for which payment will be made to the Contractor are to be determined by the Work actually performed and completed by the Contractor, to be measured as specified in the applicable Specifications.
- B9.4 Payments to Non-Resident Contractors are subject to Non-Resident Withholding Tax pursuant to the Income Tax Act (Canada).
- B9.5 The Bidder shall enter the Total Bid Price from Form B: Prices into the Total Bid Price field in MERX.
- B9.5.1 Bidders are advised that the calculation indicated in B17.4 will prevail over the Total Bid Price entered in MERX.
- B10. DISCLOSURE**
- B10.1 Various Persons provided information or services with respect to this Work. In the City's opinion, this relationship or association does not create a conflict of interest because of this full disclosure. Where applicable, additional material available as a result of contact with these Persons is listed below.
- B10.2 The Persons are: N/A
- B11. CONFLICT OF INTEREST AND GOOD FAITH**
- B11.1 Further to C3.2, Bidders, by responding to this Tender, declare that no Conflict of Interest currently exists, or is reasonably expected to exist in the future.
- B11.2 Conflict of Interest means any situation or circumstance where a Bidder or employee of the Bidder proposed for the Work has:
- (a) other commitments;
  - (b) relationships;

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

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

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

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

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

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



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

## **B12. QUALIFICATION**

B12.1 The Bidder shall:

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

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

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

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

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

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

- (a) Written confirmation of a safety and health certification meeting SAFE Work Manitoba's SAFE Work Certified Standard (e.g., COR™ and SECOR™) in the form of:
  - (i) a copy of their valid Manitoba COR certificate and Letter of Good Standing (or Manitoba equivalency) as issued under the Certificate of Recognition (COR) Program administered by the Construction Safety Association of Manitoba or by the Manitoba Heavy Construction Association's WORKSAFELY™ COR™ Program; or
  - (ii) a copy of their valid Manitoba SECOR™ certificate and Letter of Good Standing (or Manitoba equivalency) as issued under the Small Employer Certificate of Recognition Program (SECOR™) administered by the Construction Safety Association of Manitoba or by the Manitoba Heavy Construction Association's WORKSAFELY™ COR™ Program; or
- (b) a report or letter to that effect from an independent reviewer acceptable to the City. (A list of acceptable reviewers and the review template are available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/>).

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

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

### **B13. BID SECURITY**

B13.1 The Bidder shall include in its Bid Submission bid security in the form of a digital bid bond, in the amount of at least ten percent (10%) of the Total Bid Price, and agreement to bond of a company registered to conduct the business of a surety in Manitoba, in Form G1: Bid Bond and Agreement to Bond, available on The City of Winnipeg, Corporate Finance, Materials Management Division website at <https://www.winnipeg.ca/MatMgt/templates/files/eBidsecurity.pdf>.

B13.2 Bid security shall be submitted in a digital format meeting the following criteria:

- (a) The version submitted by the Bidder must have valid digital signatures and seals;
- (b) The version submitted by the Bidder must be verifiable by the City with respect to the totality and wholeness of the bond form, including: the content; all digital signatures and digital seals; with the surety company, or an approved verification service provider of the surety company.
- (c) The version submitted must be viewable, printable and storable in standard electronic file formats compatible with the City, and in a single file. Allowable formats include pdf.
- (d) The verification may be conducted by the City immediately or at any time during the life of the bond and at the discretion of the City with no requirement for passwords or fees.
- (e) The results of the verification must provide a clear, immediate and printable indication of pass or fail regarding B13.2(a).

B13.3 Bonds failing the verification process will not be considered to be valid and the bid shall be determined to be non-responsive in accordance with B17.1(a).

B13.4 Bonds passing the verification process will be treated as original and authentic.

B13.4.1 If the Bidder submits alternative bids, the bid security shall be in the amount of the specified percentage of the highest Total Bid Price submitted.

B13.5 The bid security of the successful Bidder and the next two lowest evaluated responsive and responsible Bidders will be released by the City when a Contract for the Work has been duly formed with the successful Bidder and the contract securities are furnished as provided herein. The bid securities of all other Bidders will be released when a Contract is awarded.

B13.6 The bid securities of all Bidders will be released by the City as soon as practicable following notification by the Contract Administrator to the Bidders that no award of Contract will be made pursuant to the Tender.

### **B14. OPENING OF BIDS AND RELEASE OF INFORMATION**

B14.1 Bids will not be opened publicly.

B14.2 Following the submission deadline, the names of the Bidders and their Total Bid Prices (unevaluated, and pending review and verification of conformance with requirements) will be available on the MERX website at [www.merx.com](http://www.merx.com).

B14.3 After award of Contract, the name(s) of the successful Bidder(s) and their Contract amount(s) will be available on the MERX website at [www.merx.com](http://www.merx.com).

B14.4 The Bidder is advised that any information contained in any Bid may be released if required by The Freedom of Information and Protection of Privacy Act (Manitoba), by other authorities having jurisdiction, or by law or by City policy or procedures (which may include access by members of City Council).

B14.4.1 To the extent permitted, the City shall treat as confidential information, those aspects of a Bid Submission identified by the Bidder as such in accordance with and by reference to Part 2, Section 17 or Section 18 or Section 26 of The Freedom of Information and Protection of Privacy Act (Manitoba), as amended.

**B15. IRREVOCABLE BID**

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

B15.2 The acceptance by the City of any Bid shall not release the Bids of the next two lowest evaluated responsive Bidders and these Bidders shall be bound by their Bids on such Work until a Contract for the Work has been duly formed and the contract securities have been furnished as herein provided, but any Bid shall be deemed to have lapsed unless accepted within the time period specified in Paragraph 11 of Form A: Bid/Proposal.

**B16. WITHDRAWAL OF BIDS**

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

**B17. EVALUATION OF BIDS**

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

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

B17.2 Further to B17.1(a), the Award Authority may reject a Bid as being non-responsive if the Bid is incomplete, obscure or conditional, or contains additions, deletions, alterations or other irregularities. The Award Authority may reject all or any part of any Bid, or waive technical requirements or minor informalities or irregularities, if the interests of the City so require.

B17.2.1 Any bid with an apparent imbalance between the unit prices in Part 1 and Part 2 may be determined to be non-responsive and rejected by the Award Authority in its sole discretion, acting reasonably.

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

B17.4 Further to B17.1(c), the Total Bid Price shall be the sum of the quantities multiplied by the unit prices for each item shown on Form B: Prices.

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

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

**B18. AWARD OF CONTRACT**

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

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

- B18.2.1 Without limiting the generality of B18.2, the City will have no obligation to award a Contract where:
- (a) the prices exceed the available City funds for the Work;
  - (b) the prices are materially in excess of the prices received for similar work in the past;
  - (c) the prices are materially in excess of the City's cost to perform the Work, or a significant portion thereof, with its own forces;
  - (d) only one Bid is received; or
  - (e) in the judgment of the Award Authority, the interests of the City would best be served by not awarding a Contract.
- B18.3 The Work of this Contract is contingent upon Council approval of sufficient funding in the 2022 Capital Budget. If the Capital Budget approved by Council does not include sufficient funding for the Work, the City will have no obligation to award a Contract.
- B18.4 Where an award of Contract is made by the City, the award shall be made to the qualified Bidder submitting the lowest evaluated responsive Bid, in accordance with B17.
- B18.4.1 Following the award of contract, a Bidder will be provided with information related to the evaluation of his/her Bid upon written request to the Contract Administrator.

## **PART C - GENERAL CONDITIONS**

### **C0. GENERAL CONDITIONS**

- C0.1 The *General Conditions for Construction* (Revision 2020-01-31) are applicable to the Work of the Contract.
- C0.1.1 The *General Conditions for Construction* are available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at [http://www.winnipeg.ca/matmgt/gen\\_cond.stm](http://www.winnipeg.ca/matmgt/gen_cond.stm)
- C0.2 A reference in the Tender to a section, clause or subclause with the prefix “**C**” designates a section, clause or subclause in the *General Conditions for Construction*.

## **PART D - SUPPLEMENTAL CONDITIONS**

### **GENERAL**

#### **D1. GENERAL CONDITIONS**

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

#### **D2. FORM OF CONTRACT DOCUMENTS**

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

#### **D3. SCOPE OF WORK**

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

- (a) Part 1 – City Funded Work
- (b) Part 2 – Provincially Funded Work.

##### **Part 1 – City Funded Work**

D3.2 Part 1 – City Funded Work shall consist of:

- (a) Pavement Reconstruction (2021)
  - (i) Selkirk Avenue from Sinclair Street to Arlington Street
- (b) Pavement Reconstruction (2022)
  - (i) Selkirk Avenue from McPhillips Street to Sinclair Street
  - (ii) William Avenue from McPhillips Street to Arlington Street

##### **Part 2 – Manitoba Hydro Funded Work**

D3.3 Part 2 – Provincially Funded Work shall consist of:

- (a) Street Lighting (2021)
  - (i) Selkirk Avenue from Sinclair Street to Arlington Street
  - (ii) Contractor Option – Selkirk Avenue from Battery Street to Sinclair Street.  
The Contractor may elect at their own discretion to advance the Street Lighting works in this section to 2021. Otherwise this work can be completed in 2022.
- (b) Street Lighting (2022)
  - (i) Selkirk Avenue from McPhillips Street to Sinclair Street
  - (ii) William Avenue from McPhillips Street to Arlington Street

D3.4 The major components of the Work are as follows:

(a) City Funded Work

- (i) Removal of existing pavement
- (ii) Removal of existing streetcar tracks and bedding (two sets of existing tracks)
- (iii) Removal of existing trolley poles or cut-off of bases below grade
- (iv) Roadway excavation
- (v) Installation of subdrains
- (vi) Compaction of sub-grade
- (vii) Installation of traffic signals underground conduit, bases and pits.
- (viii) Installation of catch basins and sewer service pipe
- (ix) Installation of water service insulation
- (x) Repairs to existing sewers and manholes
- (xi) Placement of separation fabric
- (xii) Placement of geogrid
- (xiii) Placement of sub-base and base course materials
- (xiv) Adjustment of existing pavement appurtenances
- (xv) Construction of 230mm Plain Dowelled Concrete pavement (Selkirk Avenue)
- (xvi) Construction of 180mm integral barrier curb (Selkirk Avenue)
- (xvii) Construction of 150mm Hot Mix Asphalt (William Avenue)
- (xviii) Construction of 150mm and 180mm concrete curb and gutter (William Avenue)
- (xix) Construction of sidewalks with block-outs
- (xx) Installation of paving stones
- (xxi) Renewal of existing sidewalk
- (xxii) Regrading of private walkways (paving stones and concrete)
- (xxiii) Completion of boulevard grading
- (xxiv) Installation of topsoil and sod

(b) Provincially Funded Work

- (i) Installation of streetlights and associated infrastructure

**D4. CONTRACT ADMINISTRATOR**

D4.1 The Contract Administrator is Stantec Consulting Ltd., represented by:

Scott Suderman, C.E.T., P.Eng.  
Transportation Engineer

Telephone No. 204 782 7189

Email Address Scott.Suderman@stantec.com

D4.2 At the pre-construction meeting, Scott Suderman will identify additional personnel representing the Contract Administrator and their respective roles and responsibilities for the Work.

**D5. CONTRACTOR'S SUPERVISOR**

D5.1 At the pre-construction meeting, the Contractor shall identify his/her designated supervisor and any additional personnel representing the Contractor and their respective roles and responsibilities for the Work.

D5.2 At least two (2) Business Days prior to the commencement of any Work on the site, the Contractor shall provide the Contract Administrator with a phone number where the supervisor identified in D5.1 or an alternate can be contacted twenty-four (24) hours a day to respond to an emergency.

## **D6. NOTICES**

- D6.1 Except as provided for in C22.4, all notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the Contractor shall be sent to the address or facsimile number identified by the Contractor in Paragraph 2 of Form A: Bid/Proposal.
- D6.2 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the City, except as expressly otherwise required in D6.3 or elsewhere in the Contract, shall be sent to the attention of the Contract Administrator identified in D4.
- D6.3 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications required to be submitted or returned to the City Solicitor shall be sent to the following facsimile number:
- The City of Winnipeg  
Legal Services Department  
Attn: Director of Legal Services  
Facsimile No.: 204-947-9155

## **D7. FURNISHING OF DOCUMENTS**

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

## **SUBMISSIONS**

### **D8. AUTHORITY TO CARRY ON BUSINESS**

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

### **D9. SAFE WORK PLAN**

- D9.1 The Contractor shall provide the Contract Administrator with a Safe Work Plan at least five (5) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract Documents, if applicable.
- D9.2 The Safe Work Plan shall be prepared and submitted in the format shown in the City's template which is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/safety/default.stm>
- D9.3 Notwithstanding B12.4 at any time during the term of the Contract, the City may, at its sole discretion and acting reasonably, require an updated COR Certificate or Annual Letter of good Standing. A Contractor, who fails to provide a satisfactory COR Certificate or Annual Letter of good Standing, will not be permitted to continue to perform any Work.

### **D10. INSURANCE**

- D10.1 The Contractor shall provide and maintain the following insurance coverage at all times until Total Performance unless otherwise stated below:
- (a) commercial general liability insurance, in the amount of at least five million dollars (\$5,000,000.00) inclusive, with the City, Canadian Pacific Railway Company and Manitoba



and its Ministers, officers, employees and agents added as additional insureds, including a cross-liability clause. Such liability policy to also contain contractual liability, unlicensed motor vehicle liability, non-owned automobile liability, broad form property damage cover, sudden and accidental pollution liability and products and completed operations to remain in place at all times during the performance of the Work and throughout the warranty period;

- (b) 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.
- (c) 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.
- (d) Property insurance for all equipment, tools, field office and portable toilets used by the Contractor directly or indirectly in the performance of the Work on the project that may be owned, rented, leased or borrowed.
- (e) Contractors pollution liability insurance in the amount of at least two million dollars (\$2,000,000) per occurrence and five million dollars (\$5,000,000) aggregate covering third party injury and property damage claims including clean up costs and transported cargo as a result of pollution conditions arising from the Contractor's operations and completed operations. Such policy shall name the Canadian Pacific Railway Company and the City as additional insureds and remain in place until Total Performance.

D10.2 Deductibles shall be borne by the Contractor.

D10.3 All Subcontractors performing Work on the Project shall provide the Contractor with evidence of insurance as outlined in D10.1 (a) and (c) above and (e) if they will be working in the railway right of way and be registered with Workers Compensation Board of Manitoba and maintain insurance and workers compensation coverage throughout the performance of the Work, The Contractor shall provide the Contract Administrator with evidence of same prior to the commencement of any Work.

D10.4 All policies shall be taken out with insurers duly licensed to carry on business in the Province of Manitoba.

D10.5 The Contractor shall provide the City Solicitor with a certificate(s) of insurance for the City, Canadian Pacific Railway Company and Manitoba, 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.

D10.6 The Contractor shall not cancel, materially alter, or cause each policy to lapse without providing at least thirty (30) Calendar Days prior written notice to the Contract Administrator.

## **D11. CONTRACT SECURITY**

D11.1 The Contractor shall provide and maintain the performance bond and the labour and material payment bond until the expiration of the warranty period in the form of:

- (a) a performance bond of a company registered to conduct the business of a surety in Manitoba, in the form attached to these Supplemental Conditions (Form H1: Performance Bond), in the amount of fifty percent (50%) of the Contract Price; and
- (b) a labour and material payment bond of a company registered to conduct the business of a surety in Manitoba, in the form attached to these Supplemental Conditions (Form H2: Labour and Material Payment Bond), in an amount equal to fifty percent (50%) of the Contract Price.

D11.1.1 Where the contract security is a performance bond, it may be submitted in hard copy or digital format. If submitted in digital format the contract security must meet the following criteria:

- (a) the version submitted by the Contractor must have valid digital signatures and seals;
- (b) the version submitted by the Contractor must be verifiable by the City with respect to the totality and wholeness of the bond form, including: the content; all digital signatures and digital seals; with the surety company, or an approved verification service provider of the surety company.
- (c) the version submitted must be viewable, printable and storable in standard electronic file formats compatible with the City, and in a single file. Allowable formats include pdf.
- (d) the verification may be conducted by the City immediately or at any time during the life of the bond and at the discretion of the City with no requirement for passwords or fees.
- (e) the results of the verification must provide a clear, immediate and printable indication of pass or fail regarding D11.1(b).

D11.1.2 Digital bonds failing the verification process will not be considered to be valid and may be determined to be an event of default in accordance with C18.1. If a digital bond fails the verification process, the Contractor may provide a replacement bond (in hard copy or digital format) within seven (7) Calendar Days of the City's request or within such greater period of time as the City in its discretion, exercised reasonably, allows.

D11.1.3 Digital bonds passing the verification process will be treated as original and authentic.

D11.2 The Contractor shall provide the City Solicitor with the required performance and labour and material payment bonds within seven (7) Calendar Days of notification of the award of the Contract by way of an award letter and prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract Documents, if applicable.

D11.3 The Contractor shall, as soon as practicable after entering into a contract with a Subcontractor:

- (a) give the Subcontractor written notice of the existence of the labour and material payment bond in D11.1(b); and
- (b) post a notice of the bond and/or a copy of that bond in a conspicuous location at the Site of the Work.

## **D12. SUBCONTRACTOR LIST**

D12.1 The Contractor shall provide the Contract Administrator with a complete list of the Subcontractors whom the Contractor proposes to engage (Form J: Subcontractor List) at or prior to a pre-construction meeting, or at least ten (10) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in the C4.1 for the return of the executed Contract Documents, if applicable.

## **D13. EQUIPMENT LIST**

D13.1 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 ten (10) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in the C4.1 for the return of the executed Contract Documents, if applicable.

## **D14. DETAILED WORK SCHEDULE**

D14.1 The Contractor shall provide the Contract Administrator with a detailed work schedule at least ten (10) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in the General Conditions for the return of the executed Contract Documents, as applicable.

- (a) Further to D14.1 the schedules shall be submitted for 2021 and 2022. The 2022 schedule shall be revised and resubmitted ten (10) Business Days prior to the commencement of any Work in 2022, notwithstanding any required revisions requested by the Contract Administrator during the Project.
- D14.2 The detailed work schedule shall consist of the following:
- (a) a critical path method (C.P.M.) schedule for the Work;
  - (b) a Gantt chart for the Work based on the C.P.M. schedule; and
  - (c) a daily manpower schedule for the Work
- all acceptable to the Contract Administrator.
- D14.3 Further to D14.2(a), the C.P.M. schedule shall clearly identify the start and completion dates of all of the following activities/tasks making up the Work as well as showing those activities/tasks on the critical path.
- D14.4 Further to D14.2(b), the Gantt chart shall show the time on a weekly basis, required to carry out the Work of each trade, or specification division. The time shall be on the horizontal axis, and the type of trade shall be on the vertical axis.
- D14.5 Further to D14.2(c), the daily manpower schedule shall list the daily number of individuals on each Site for each trade.

## **SCHEDULE OF WORK**

### **D15. COMMENCEMENT**

- D15.1 The Contractor shall not commence any Work until he/she is in receipt of an award letter from the Award Authority authorizing the commencement of the Work.
- D15.2 The Contractor shall not commence any Work on the Site until:
- (a) the Contract Administrator has confirmed receipt and approval of:
    - (i) evidence of authority to carry on business specified in D8;
    - (ii) evidence of the workers compensation coverage specified in C6.15;
    - (iii) the twenty-four (24) hour emergency response phone number specified in D5.2.
    - (iv) the Safe Work Plan specified in D9;
    - (v) evidence of the insurance specified in D10;
    - (vi) the contract security specified in D11;
    - (vii) the subcontractor list specified in D12;
    - (viii) the equipment list specified in D13; and
    - (ix) the detailed work schedule specified in D14.
  - (b) the Contractor has attended a pre-construction meeting with the Contract Administrator, or the Contract Administrator has waived the requirement for a pre-construction meeting.
  - (c) Watermain Renewal (by others) from Sinclair Street to Arlington Street has been completed. See D18 for further information about the watermain work.
- D15.3 The Contractor shall not commence the Work on the Selkirk Avenue from Sinclair Street to Arlington Street before July 26<sup>th</sup>, 2021. Work shall not commence on Selkirk Avenue from McPhillips Street to Sinclair Street and William Avenue from McPhillips Street to Arlington Street before May 30<sup>th</sup>, 2022, unless otherwise approved by the Contract Administrator.
- D15.4 The City intends to award this Contract by May 3, 2021.
- D15.4.1 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.

## **D16. WORKING DAYS**

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

D16.1.1 The Contract Administrator will determine daily if a Working Day has elapsed and will record his/her assessment. On a weekly basis the Contract Administrator will provide the Contractor with a record of the Working Days assessed for the preceding week. The Contractor shall sign each report signifying that he/she agrees with the Contract Administrator's determination of the Working Days assessed for the report period.

D16.1.2 Work done to restore the Site to a condition suitable for Work, shall not be considered "work" as defined in the definition of a Working Day.

D16.1.3 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.

## **D17. RESTRICTED WORK HOURS**

D17.1 Further to clause 3.10 of CW 1130, the Contractor shall require written permission forty-eight (48) hours in advance from the Contract Administrator for any work to be performed between 2000 hours and 0700 hours, or on Saturdays, Sundays, Statutory Holidays and or Civic Holidays.

## **D18. WORK BY OTHERS**

D18.1 Work by others on or near the Site will include but not necessarily be limited to:

- (a) Water and Waste Department – William Avenue Watermain Renewal from McPhillips to Lark Street is schedule in the spring of 2022.
- (b) Selkirk Watermain Renewal in the summer of 2021 – This contract will be administered by Stantec Consulting. The construction of this watermain will commence at Arlington Street and head westward to McPhillips Street. The last major component of that contract is to install the steel casing pipe and watermain under the CP tracks. Under this Contract we are seeking to optimize our road construction in front of the King Edward School. The road works can commence prior to the completion of the watermain contract, but the watermain contract must be demobilized from the section of Selkirk between Sinclair Street and Arlington Street prior to commence of the roadworks under this contract. The watermain contraction will still be performing works westwards. The proposed traffic staging between the two contracts are expected to compliments each other.
- (c) CP Rail – The Contractor is required to follow all Safety Requirements and Guidelines of CP Rail. CP Rail will provide flagging protection for the rail crossing works. The rail crossing works are limited to asphalt removal and asphalt reinstallation under this Contract. CP Rail may elect to replace their rail seals under their own forces and the Contractor is expected to coordinate with CP and the timing of these asphalt works.
- (d) City of Winnipeg Traffic Services – Provide sign clamps, provide signage for detours, replace any permanent signage, and paint lines;
- (e) City of Winnipeg Traffic Signals - Bagging/unbagging of existing signal heads. Installation of Traffic Signals poles, davits, controllers and heads.
- (f) City of Winnipeg Transit – The Contractor is expected to coordinate with Transit for the location of temporary stop locations and provide a safe and delineated area.
- (g) Manitoba Hydro – Manitoba Hydro will be relocating three timber overhead line poles on the south side of Selkirk Ave between McPhillips Street and Battery Street. They will be relocated from the middle
- (h) Manitoba Hydro Gas – Manitoba Hydro will be required to rock wrap existing gas mains and/or services during roadway excavation. The Contractor shall coordinate directly with

Manitoba Hydro gas to arrange for lowering of services or rock-wrapping during road excavation.

- (i) Manitoba Hydro Streetlights – Manitoba Hydro will activate and energizing the new streetlight plant. Manitoba Hydro will provide inspection of new street lighting hardware (to be installed by the Contractor).

D18.2 Further to D18.1 the Contractor shall cooperate and coordinate all activities with all parties performing required Work by Others. The Contractor must include the Work by Others identified in D17.1 in their construction schedule as per D14 and accommodate the necessary area on site required for the Work by Others.

D18.3 The Contractor's attention is directed to the fact that other Contractors, the personnel of Utilities and the staff of the City may be working within the project limits, approach roadways, adjacent roadways or rights-of-way. The activities of these agencies may coincide with the Contractor's execution of the Work, and it will be the Contractor's responsibility to co-operate to the fullest extent with the other personnel working in the area, and such co-operation is an obligation of the Contractor under the terms of the Contract.

## D19. SEQUENCE OF WORK

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

D19.1.1 The Work shall be divided into two phases. Each Phase shall be subdivided into stages. Stages are further subdivided into major items of work.

D19.1.2 **Phase I (2021)** – Phase 1 shall consist of the Works completed in the year 2021 which includes the reconstruction of Selkirk Avenue from Sinclair Street to Arlington Street. As part of this phase, the contractor will have the option of installing street lighting on Selkirk Avenue from Battery Street to Sinclair Street.

(a) **Stage I – Westbound Lanes and Sidewalk**

- (i) Pavement Removal;
- (ii) Removal of trolley pole light bases;
- (iii) Excavate/Remove north streetcar bedding;
- (iv) Underground works;
- (v) North side streetlight installations;
- (vi) Mainline paving in westbound lanes including integral curb;
- (vii) Sidewalks with block-outs.

(b) **Stage II – Eastbound Lanes and Sidewalk**

- (i) Concrete Pavement Removal;
- (ii) Excavate/remove south streetcar rail and bedding;
- (iii) Underground works;
- (iv) South side streetlight installations;
- (v) Mainline paving in westbound lanes including integral curb;
- (vi) Sidewalk with block-out.

(c) **Stage III (Optional for Contractor to Advance this Stage) – Street Lighting from Sinclair Street to Battery Street**

- (i) Removal of trolley poles;
- (ii) Streetlight installations.

D19.1.3 Immediately following the completion of the concrete works of Phase I, the Contractor shall clean up the Site and remove all plant, surplus material, waste and debris, other than that left by the City or other Contractors.

D19.1.4 **Phase II (2022)** – Phase 2 shall consist of the Works completed in 2022 which includes Selkirk Avenue from McPhillips Street to Sinclair Street and William Avenue from McPhillips Street to Arlington Street.

**Selkirk Avenue – Sinclair Street to Battery Street** - Will be closed to through traffic the duration of construction, the Contractor is responsible for developing their own sequence of work to suit.

**Selkirk Avenue – Battery Street to McPhillips Street**

- (a) **Stage I** – Eastbound Lane and Sidewalk
  - (i) Pavement Removal
  - (ii) Excavate/Remove south streetcar bedding
  - (iii) Underground works
  - (iv) Mainline paving with integral curb
  - (v) Sidewalk with blockouts
- (b) **Stage II** – Westbound Lane and Sidewalk
  - (i) Pavement Removal
  - (ii) Removal of trolley pole light bases
  - (iii) Excavate/Remove south streetcar bedding
  - (iv) Underground works
  - (v) Mainline paving with integral curb
  - (vi) North side street light installation
  - (vii) Sidewalk with blockouts

**William Avenue – Arlington Street to McPhillips Street**

- (a) **Stage I** – Westbound Lanes and Sidewalk
  - (i) Pavement Removal;
  - (ii) Excavation
  - (iii) Underground works
  - (iv) Subdrain installation
  - (v) Base construction
  - (vi) Concrete curb and gutter
  - (vii) Mainline paving in gutter lane (lower binder course only)
  - (viii) Temporary asphalt ramping
  - (ix) Tie-in paving
  - (x) Sidewalks with block-outs
- (b) **Stage II** – Eastbound Lanes
  - (i) Pavement Removal
  - (ii) South side street light installation
  - (iii) Excavation
  - (iv) Underground works
  - (v) Subdrain installation
  - (vi) Base construction
  - (vii) Concrete curb and gutter
  - (viii) Sawcut and apply tack coat to longitudinal joint
  - (ix) Mainline paving (lower binder course only)
  - (x) Temporary asphalt ramping
  - (xi) Tie-in paving

- (xii) Sidewalks with block-outs
- (c) **Stage III** – Final Lift Asphalt Paving

**D20. CRITICAL STAGES**

- D20.1 The Contractor shall achieve Critical Stages of the Work in accordance with the following requirements:
- (a) Critical Stage 1 – Phase 1 – Completion of Selkirk Avenue between Sinclair Street and Arlington Street within **40 Working Days** of the commencement of the Works as specified in D15.
- D20.2 When the Contractor considers the Work associated with Critical Stage 1 to be completed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Completion. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be re-inspected.
- D20.3 The date on which the Critical Stage 1 Work has been accepted by the Contract Administrator as being completed to the requirements of the Contract is the date on which completion of Critical Stage 1 has been achieved.

**D21. SUBSTANTIAL PERFORMANCE**

- D21.1 The Contractor shall achieve Substantial Performance within one hundred and twenty five (125) Working Days of the commencement of the Work as specified in D15. The total Working Days includes forty (40) Working Days to complete the work described in Phase I (2021) and eighty five (85) Working Days to complete the work described in Phase II (2022), specified in D19.
- D21.2 When the Contractor considers the Work to be substantially performed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Substantial Performance. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be re-inspected.
- D21.3 The date on which the Work has been certified by the Contract Administrator as being substantially performed to the requirements of the Contract through the issue of a certificate of Substantial Performance is the date on which Substantial Performance has been achieved.

**D22. TOTAL PERFORMANCE**

- D22.1 The Contractor shall achieve Total Performance within one hundred and thirty (130) Working Days of the commencement of the Work as specified in D15. The total Working Days includes forty (40) Working Days to complete the work described in Phase I (2021) and ninety (90) Working Days to complete the work described in Phase II (2022), specified in D19. There shall
- D22.2 When the Contractor or the Contract Administrator considers the Work to be totally performed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Total Performance. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be re-inspected.
- D22.3 The date on which the Work has been certified by the Contract Administrator as being totally performed to the requirements of the Contract through the issue of a certificate of Total Performance is the date on which Total Performance has been achieved.

## **D23. LIQUIDATED DAMAGES**

- D23.1 If the Contractor fails to achieve Critical 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 1 listed in D20.1(a) – Two Thousand Three Hundred dollars (\$2,300);
  - (b) Substantial Performance – Five Thousand dollars (\$5,000);
  - (c) Total Performance – Three Thousand dollars (\$3,000);
- D23.2 The amounts specified for liquidated damages in D23.1 are based on a genuine pre-estimate of the City's losses in the event that the Contractor does not achieve critical stages, Substantial Performance or Total Performance by the days fixed herein for same.
- D23.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

## **D24. COVID-19 SCHEDULE DELAYS**

- D24.1 The City acknowledges that the schedule for this Contract may be impacted by the COVID-19 pandemic. Commencement and progress of the Work shall be performed by the Contractor with due consideration to the health and safety of workers and the public, directives from health authorities and various levels of government and in close consultation with the Contract Administrator.
- D24.2 If the Contractor is delayed in the performance of the Work by reason of the COVID-19 pandemic, the Work schedule may be adjusted by a period of time equal to the time lost due to such delay and costs related to such delay will be determined as identified herein.
- D24.3 A minimum of seven (7) Calendar Days prior to the commencement of Work, the Contractor shall declare whether COVID-19 will affect the start date. The Contractor shall provide sufficient evidence that the delay is directly related to COVID-19, including but not limited to evidence related to availability of staff, availability of Material or work by others.
- D24.4 For any delay related to COVID-19 and identified after Work has commenced, the Contractor shall within seven (7) Calendar Days of becoming aware of the anticipated delay declare the additional delay and shall provide sufficient evidence as indicated in D24.3. Failure to provide this notice will result in no additional time delays being considered by the City.
- D24.5 The Work schedule, including the durations identified in D20 to D22 where applicable, will be adjusted to reflect delays accepted by the Contract Administrator. No additional payment will be made for adjustment of schedules except where seasonal work, not previously identified in the Contract, is carried over to the following construction season.
- D24.6 Where Work not previously identified is being carried over solely as a result of delays related to COVID-19, as confirmed by the Contract Administrator, the cost of temporary works to maintain the Work in a safe manner until Work recommences, will be considered by the Contract Administrator. Where the Work is carried over only partially due to COVID-19, a partial consideration of the cost of temporary works will be considered by the Contract Administrator.
- D24.7 Any time or cost implications as a result of COVID-19 and in accordance with the above, as confirmed by the Contract Administrator, shall be documented in accordance with C7.

## **D25. SCHEDULED MAINTENANCE**

- D25.1 The Contractor shall perform the following scheduled maintenance in the manner and within the time periods required by the Specifications:
- (a) Sodding as specified in CW 3250;



- D25.2 Determination of Substantial Performance and Total Performance shall be exclusive of scheduled maintenance identified herein. All scheduled maintenance shall be completed prior to the expiration of the warranty period. Where the scheduled maintenance cannot be completed during the warranty period, the warranty period shall be extended for such period of time as it takes the Contractor to complete the scheduled maintenance.

## **CONTROL OF WORK**

### **D26. JOB MEETINGS**

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

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

- D27.1 Further to C6.26, the Contractor shall be the Prime Contractor and shall serve as, and have the duties of the Prime Contractor in accordance with The Workplace Safety and Health Act (Manitoba), as follows:

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

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

## **MEASUREMENT AND PAYMENT**

### **D29. PAYMENT**

- D29.1 Further to C12, the City may at its option pay the Contractor by direct deposit to the Contractor's banking institution.
- D29.2 Further to C12.10, if a Contractor enters into a subcontract for Phase I (2021) and a separate subcontract for Phase II (2022), this may permit release, by the City, of the value of the holdback with respect to the subcontract for Phase I works in accordance with The Builders' Liens Act, such as Section 25.

## **WARRANTY**

### **D30. WARRANTY**

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

## THIRD PARTY AGREEMENTS

### D31. FUNDING AND/OR CONTRIBUTION AGREEMENT OBLIGATIONS

D31.1 Funding for the Work of the Contract is being provided to the City of Winnipeg by the Government of Manitoba and/or the Government of Canada and accordingly, as required by the applicable funding agreements, the following terms and conditions shall apply.

D31.2 For the purposes of D31:

- (a) **“Government of Canada”** includes the authorized officials, auditors, and representatives of the Government of Canada; and
- (b) **“Government of Manitoba”** includes the authorized officials, auditors, and representatives of the Government of Manitoba.

D31.3 Indemnification By Contractor

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

D31.4 Records Retention and Audits

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

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

D31.5 Other Obligations

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

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

- D31.5.3 The Contractor shall comply with all applicable legislation and standards, whether federal, provincial, or municipal, including (without limitation) labour, environmental, and human rights laws, in the course of providing the Work.
- D31.5.4 The Contractor shall properly account for the Work provided under this Contract and payment received in this respect, prepared in accordance with generally accepted accounting principles in effect in Canada, including those principles and standards approved or recommended from time-to-time by the Chartered Professional Accountants of Canada or the Public Sector Accounting Board, as applicable, applied on a consistent basis.
- D31.5.5 The Contractor represents and warrants that no current or former public servant or public office holder, to whom the Value and Ethics Code for the Public Sector, the Policy on Conflict of Interest and Post Employment, or the Conflict of Interest Act applies, shall derive direct benefit from this Contract, including any employment, payments, or gifts, unless the provision or receipt of such benefits is in compliance with such codes and the legislation.
- D31.5.6 The Contractor represents and warrants that no member of the House of Commons or of the Senate of Canada or of the Legislative Assembly of Manitoba is a shareholder, director or officer of the Contractor or of a Subcontractor, and that no such member is entitled to any benefits arising from this Contract or from a contract with the Contractor or a Subcontractor concerning the Work.

**FORM H1: PERFORMANCE BOND**  
(See D11)

KNOW ALL MEN BY THESE PRESENTS THAT

\_\_\_\_\_ ,  
(hereinafter called the "Principal"), and

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

\_\_\_\_\_ dollars (\$\_\_\_\_\_.)

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

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

TENDER NO. 440-2020

2021-2022 Regional Street Renewal Program – Selkirk Avenue and William Avenue Pavement Renewals which is by reference made part hereof and is hereinafter referred to as the "Contract".

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

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

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

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

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

\_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

**SIGNED AND SEALED**  
in the presence of:

\_\_\_\_\_  
(Witness as to Principal if no seal)

\_\_\_\_\_  
(Name of Principal)

Per: \_\_\_\_\_ (Seal)

Per: \_\_\_\_\_

\_\_\_\_\_  
(Name of Surety)

By: \_\_\_\_\_ (Seal)  
(Attorney-in-Fact)

**FORM H2: LABOUR AND MATERIAL PAYMENT BOND**  
(See D11)

KNOW ALL MEN BY THESE PRESENTS THAT

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

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

\_\_\_\_\_ dollars (\$\_\_\_\_\_)

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

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

TENDER NO. 440-2020

2021-2022 Regional Street Renewal Program – Selkirk Avenue and William Avenue Pavement Renewals

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

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

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

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

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

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

\_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

SIGNED AND SEALED  
in the presence of:

\_\_\_\_\_  
(Witness as to Principal if no seal)

\_\_\_\_\_  
(Name of Principal)

Per: \_\_\_\_\_ (Seal)

Per: \_\_\_\_\_

\_\_\_\_\_  
(Name of Surety)

By: \_\_\_\_\_ (Seal)  
(Attorney-in-Fact)

**FORM J: SUBCONTRACTOR LIST**  
(See D12)

2021-2022 Regional Street Renewal Program – Selkirk Avenue and William Avenue Pavement Renewals

<u>Portion of the Work</u>	<u>Name</u>	<u>Address</u>
<b>SURFACE WORKS</b>		
<i>Supply of Materials</i>		
Base Course and Sub-Base Course		
Paving Stones		
Concrete		
Asphalt		
Topsoil/Sod		
<i>Installation/Construction</i>		
Excavation		
Base Works		
Concrete		
Asphalt		
Landscaping		
Streetlight Works		
Signals Works - Conduits, anchor bolts, concrete for bases		
<b>UNDERGROUND WORKS</b>		
<i>Supply of Materials</i>		
Precast Concrete Catchbasins, Catch Pits and Manhole Risers		
Sewer Pipe and Hydrants		
Frames/Covers		
<i>Installation/Construction</i>		
Catchbasins and Connections		
Sewer Televising		
Subdrains		
Sewer Repairs		
<b>MISCELLANEOUS</b>		
<b>OTHERS:</b>		



**FORM K: EQUIPMENT**  
(See D12)

2019-2023 Stafford/Taylor/Corydon Pavement Renewals – Tender 1 2020-2021

<p><b>1. Category/type: Concrete Slip-Form Paver</b></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><b>2. Category/type: Asphalt Paver</b></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><b>3. Category/type: Road Excavator</b></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)

2019-2023 Stafford/Taylor/Corydon Pavement Renewals – Tender 1 2020-2021

<p><b>4. Category/type: Road Excavator</b></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><b>5. Category/type: Motor Grader</b></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><b>6. Category/type: Crawler Tractor</b></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)

2019-2023 Stafford/Taylor/Corydon Pavement Renewals – Tender 1 2020-2021

<p><b>7. Category/type: Padfoot Roller</b></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><b>8. Category/type: Steel Drum Roller</b></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 B6. In every instance where a brand name or design specification is used, the City will also consider approved equals and/or approved alternatives in accordance with B6.
- E1.4 The following are applicable to the Work:

<u>Specification No.</u>	<u>Specification Title</u>
	Table of Contents
CW 3110	Sub-Grade, Sub-Base and Base Course Construction
CW 3130	Supply and Installation of Geotextile Fabrics
CW 3235	Supply and Installation of Geogrid
CW 3230	Full-Depth Patching of Existing Slabs and Joints
CW 3235	Renewal of Existing Miscellaneous Concrete Slabs
CW 3240	Renewal of Existing Curbs
CW 3450	Planing of Pavement
CW 3326	Detectable Warning Tiles
CW 3310	Portland Cement Concrete Pavement Works
CW 3325	Portland Cement Concrete Sidewalk
CW 3335	Installation of Interlocking Pavement Stones on a Lean Concrete Base
CW 3410	Asphaltic Concrete Pavement Works
CW 3250	Joint and Crack Maintenance
CW 2130	Gravity Sewers
CW 3210	Adjustment of Pavement and Boulevard Structures
CW 3510	Sodding
CW 2145	Sewer and Manhole Inspection

<u>Drawing No.</u>	<u>Drawing Name/Title</u>	<u>Drawing (Original) Sheet Size</u>
P-3533-1	Cover Sheet	A1
P-3533-2	SELKIRK AVENUE – HORIZONTAL GEOMETRY – STA 1+730 TO STA 2+770	A1
P-3533-3	SELKIRK AVENUE – CONCRETE PAVEMENT JOINT LAYOUT	A1
P-3533-4	SELKIRK AVENUE – CONCRETE PAVEMENT JOINT LAYOUT	A1
P-3533-5	SELKIRK AVENUE – McPHILLIPS ST TO STA 1+090	A1
P-3533-6	SELKIRK AVENUE – STA 1+090 TO STA 1+200	A1
P-3533-7	SELKIRK AVENUE – STA 1+200 TO STA 1+325	A1
P-3533-8	SELKIRK AVENUE – STA 1+325 TO STA 1+450	A1

<u>Drawing No.</u>	<u>Drawing Name/Title</u>	<u>Drawing (Original) Sheet Size</u>
P-3533-9	SELKIRK AVENUE – STA 1+450 TO STA 1+575	A1
P-3533-10	SELKIRK AVENUE – STA 1+575 TO STA 1+695	A1
P-3533-11	SELKIRK AVENUE – STA 1+695 TO STA 1+805	A1
P-3533-12	SELKIRK AVENUE – STA 1+805 TO STA 1+930	A1
P-3533-13	SELKIRK AVENUE – STA 1+930 TO ARLINGTON STREET	A1
P-3533-14	SELKIRK AVENUE – UNDERGROUND INFRASTRUCTURE – McPHILLIPS STREET TO STA 1+250	A1
P-3533-15	SELKIRK AVENUE – UNDERGROUND INFRASTRUCTURE – STA 1+250 TO STA 1+570	A1
P-3533-16	SELKIRK AVENUE – UNDERGROUND INFRASTRUCTURE – STA 1+570 TO STA 1+880	A1
P-3533-17	SELKIRK AVENUE – UNDERGROUND INFRASTRUCTURE – STA 1+880 TO ARLINGTON STREET	A1
P-3534-1	WILLIAM AVENUE – HORIZONTAL GEOMETRY – MCPHILLIPS ST TO ARLINGTON ST	A1
P-3534-2	WILLIAM AVENUE – MCPHILLIPS STREET TO STA 1+100	A1
P-3534-3	WILLIAM AVENUE – STA 1+100 TO STA 1+225	A1
P-3534-4	WILLIAM AVENUE – STA 1+225 TO STA 1+325	A1
P-3534-5	WILLIAM AVENUE – STA 1+325 TO ARLINGTON STREET	A1
P-3534-6	WILLIAM AVENUE – UNDERGROUND INFRASTRUCTURE – McPHILLIPS STREET TO STA 1+275	A1
P-3534-7	WILLIAM AVENUE – UNDERGROUND INFRASTRUCTURE – STA 1+275 TO ARLINGTON STREET	A1
P-3534-8	SELKIRK AVENUE AND WILLIAM AVENUE – MISCELLANEOUS DETAILS	A1
P-3533-18	SELKIRK AVENUE – McPHILLIPS STREET TO ARLINGTON STREET – 2021 CONSTRUCTION – STAGES 1 TO 4	A1
P-3533-19	SELKIRK AVENUE – McPHILLIPS STREET TO ARLINGTON STREET – 2022 CONSTRUCTION ZONE 1 – STAGES 1 & 2	A1
P-3533-20	SELKIRK AVENUE – McPHILLIPS STREET TO ARLINGTON STREET – 2022 CONSTRUCTION ZONE 2	A1
P-3534-9	WILLIAM AVENUE – McPHILLIPS STREET TO ARLINGTON STREET – CONSTRUCTION STAGING	A1
S-1126	TRAFFIC SIGNALS – SELKIRK AVENUE AND SINCLAIR STREET	A1
S-1172	TRAFFIC SIGNALS – McPHILLIPS STREET AND WILLIAM AVENUE	A1
1-04707-DE-50000-0539	STREETLIGHTING - WILLIAM AVENUE	A1
1-04707-DE-50000-0544	STREETLIGHTING – SELKIRK AVENUE	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 B9, B17, 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, a height of 2.4m 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 drafting table, table 3x12m, one stool 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.
    - (i) The Contractor shall supply one refrigerator and one microwave.
    - (j) The Contractor shall supply a water cooler and stocked water supply.
    - (k) The building shall be furnished with a high-speed internet connection for use by the Contract Administrator including all related hardware and software to enable e-mail communications for the duration of the contract. The internet shall be capable of running a minimum of four laptops on an internet connection simultaneously
- 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 Substantial 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 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 Maintain the minimum traffic lanes open during each respective phase during their respective construction times, including during paving and milling operations as follows. When no work is being performed on site, non-essential lane closures will not be permitted.

- (a) Selkirk Avenue (Phase I – 2020)
- (i) Maintain a minimum of one lane of traffic westbound for the duration of Phase I between Sinclair Street and Arlington Street.
  - (ii) Should the Contractor exercise their option to install street lighting on Selkirk Avenue from Battery Street to Sinclair Street in the 2021 construction season as part of the Phase I work, the Contractor shall maintain a minimum of one lane of traffic eastbound and one lane of traffic westbound between Battery Street and Sinclair Street for the duration of the construction work.
- (b) Selkirk Avenue (Phase II – 2022)
- (i) A full road closure in both directions will be permitted from Battery Street to Sinclair Street while the work is underway.
  - (ii) The Contractor shall maintain a minimum of one lane of traffic eastbound from McPhillips Street to Battery Street while the work is underway.
  - (iii) Two-way Transit only access is required from McPhillips Street to access the Transit Loop. This Transit loop can be temporarily closed for concrete paving operations and curing.
- (c) William Avenue (Phase II – 2022)
- (i) Maintain a minimum of one lane of traffic eastbound for the duration of construction, including during paving and milling operations.

E7.1.2 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.

E7.1.3 Ambulance/emergency vehicle access must be maintained at all times.

E7.1.4 Pedestrians shall be maintained on one side of the street at all times.

E7.1.5 The pedestrian corridor at Selkirk and Sinclair shall be maintained at all times.

## **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:

**Selkirk Avenue and William Avenue.**

*Collection Day(s):* **Varies depending on street**

*Collection Time:*

*Common Collection Area:* **Back lane**

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

## **E9. PEDESTRIAN SAFETY**

E9.1 During the project, a temporary snow fence shall be installed adjacent to all open excavations and construction activities as directed by the Contract Administrator. The intent of this snow fencing is to keep students and the public away from all open excavations, especially in front of King Edward School if construction occurs during school times. The snow fence provides the public with a safe and delineated walking space protected from construction activities and the excavation drop off. The Contractor shall be responsible for maintaining the snow fence in a proper working condition. If lengths of rebar are to be used to secure the snow fence, the ends of all bars shall be protected with appropriate rebar end caps. No additional measurement or payment shall be made for installation and maintenance of temporary snow fencing.

E9.2 For the most part on Selkirk Ave, the road is being narrowed and the edge of road excavation will be inside the edge of existing curb. If the Contractor chooses to remove the existing sidewalk at the same time as the roadway pavement, this should provide Canada Post with sufficient space so as to allow the carrier to walk on a granular surface providing uninterrupted service to residents. No additional measurement or payment will be made for the installation and maintenance of a granular walking surface.

E9.3 Where there are drop offs from new curb ramps prior to the installation of the middle and final lifts of asphalt, the Contractor shall install and maintain asphalt ramps. These shall be measured and paid for under the contract unit price for "Asphalt Tie-ins and Approaches".

E9.4 Where temporary granular ramps are required to maintain pedestrian accessibility, the granular shall be paid for under base course.

## **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

### **E13. TIE BARS FOR LONGITUDINAL JOINTS IN PLAIN DOWELLED CONCRETE**

#### DESCRIPTION

- E13.1 Further to CW 3230 and CW 3310, this specification covers the Tie Bar requirements installed in Plain Dowelled concrete on longitudinal joints

#### CONSTRUCTION METHODS

- E13.2 20M x 760mm Tie Bars shall be installed on Longitudinal joints as per CW 3310 and spaced at 0.500m OC intervals.

#### MEASUREMENT AND PAYMENT

- E13.3 No additional measurement and payment shall be made for 20M installed on longitudinal joints except where they are drilled into existing concrete in which case measurement and payment shall be in accordance with CW 3230.

### **E14. PORTLAND CEMENT CONCRETE SIDEWALK WITH BLOCK OUTS FOR INDICATOR SURFACES**

#### DESCRIPTION

- E14.1 This specification shall supplement CW 3325-R5 "Portland Cement Concrete Sidewalks".

#### CONSTRUCTION METHODS

- E14.2 Add the following to section 9 :

- E14.2.1 As shown on the drawings and as directed by the Contract Administrator, construct sidewalk with block outs and/or monolithic curb and sidewalk with block outs, to allow for the installation of indicator surfaces.
- E14.2.2 Verify dimensions of paving stones (indicator surface) prior to construction of the block-outs. Gaps between paving stones and concrete pavement shall not exceed five (5) millimetres.
- E14.2.3 Concrete curbs for monolithic curb and sidewalk with block outs shall be constructed in accordance with CW 3240.

#### MEASUREMENT AND PAYMENT

- E14.3 Add the following to section 12 :

- E14.3.1 Construction of concrete sidewalks with block outs for indicator surfaces will be measured on surface area basis. The surface area to be paid for shall be the number of square metres constructed in accordance with this specification and accepted by the Contract Administrator, as computed by measurements made by the Contract Administrator.

#### BASIS OF PAYMENT

- E14.4 Add the following to section 13 :

- E14.4.1 Construction of concrete sidewalks with block outs for indicator surfaces will be paid for at the Contract Unit Price per square meter for the "Items of Work" listed here below, measured as specified herein, which price shall be payment in full for supplying all materials and for performing all operations herein described and all other items incidental to the work included in this specification.
- E14.4.2 Items of Work:
- (a) 100 mm Sidewalk with Block Outs

- E14.4.3 Concrete thickness greater than the specified sidewalk thickness as a result of shaping the base material to accommodate the block outs is incidental to the listed Items of Work.

## **E15. PAVING STONES FOR INDICATOR SURFACES**

### DESCRIPTION

- E15.1 This specification shall supplement CW 3330-R5 "Installation of Interlocking Paving Stones"

### MATERIALS

- E15.2 Add the following to section 5 :

- E15.2.1 Paving Stones for indicator surfaces shall be :

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

Endicott Clay Paver(92mm X 57mm X 194mm)- Dark Ironspot  
<https://endicott.com/>

Yankee Hill Brick (92mm X 57mm X 194mm)- Dark Ironspot  
<http://yankeehillbrick.com/>

### CONSTRUCTION METHODS

- E15.3 Add the following to section 9.2 "Preparation of Sub-grade, Sub-base and Sand-base" :

- E15.3.1 Preparation of Sand-Base for Paving Stones in Sidewalk Block Outs.

- E15.3.2 Place a 15mm layer of bedding sand in the blocked out sidewalk areas.

- E15.3.3 The bedding sand shall be spread and levelled so that the paving stones when installed are 5 mm higher than the finished grade.

- E15.3.4 No more sand shall be spread than can be covered in with paving stone on the same day.

- E15.3.5 The bedding sand shall not be compacted or disturbed prior to laying the paving stones.

- E15.4 Add the following to section 9.3 "Installation of Paving Stones" :

- E15.4.1 For indicator surface paving stones, commence installation of paving stones against the long edge of the block out to obtain the straightest possible course of installation.

### MEASUREMENT AND PAYMENT

- E15.5 Add the following to section 12 :

- E15.6 Supply and Installation of Paving Stones for Indicator Surfaces

- E15.6.1 Paving stones for indicator surfaces will be measured on surface area basis. The surface area to be paid for shall be the number of square metres constructed in accordance with this specification and accepted by the Contract Administrator, as computed by measurements made by the contract Administrator.

### BASIS OF PAYMENT

- E15.7 Add the following to section 13 :

- E15.7.1 The supply and installation of paving stones for indicator surfaces will be paid for at the Contract Unit Price per square meter for "Paving Stone Indicator Surface", measured as specified herein, which price shall be payment in full for supplying all materials and for

performing all operations herein described and all other items incidental to the work included in this specification.

- E15.7.2 Concrete thickness greater than the specified sidewalk thickness as a result of shaping the base material to accommodate the block outs is incidental to the listed Items of Work.

## **E16. SUPPLY AND INSTALL WATERMAIN AND WATER SERVICE INSULATION**

### DESCRIPTION

- E16.1 Notwithstanding 3.12 of CW 2110, this specification covers the supply and installation of insulation in roadway excavations over watermains and water services.

- E16.2 Referenced Standard Construction Specifications

(a) CW 2030 – Excavation Bedding and Backfill

(b) CW 3110 – Sub –grade, Sub-base and Base Course Construction

- E16.3 Referenced Standard Details

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

### MATERIALS

- E16.4 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"

- E16.5 Sand Bedding :

(a) In accordance with CW 2030

### CONSTRUCTION METHODS

- E16.6 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.

- E16.7 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.

- E16.8 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.

- E16.9 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.

- E16.10 Take appropriate measures to ensure panels are not displaced when installing geotextiles and during backfilling operations.

## MEASUREMENT AND PAYMENT

- E16.11 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 E16.6 will not be measured for payment and will be included in the payment for "Watermain and Water Service Insulation".

## E17. SIDEWALK EXPANSION JOINTS

### DESCRIPTION

- E17.1 Further to CW 3325 - R5, this specification covers the supply and installation of expansion joints to be constructed within concrete sidewalk.

### MATERIALS

- E17.2 Fiber Joint Filler
- E17.2.1 Fibre joint filler shall be rot-proof and of the preformed, non-extruding, resilient type made with a bituminous fibre such as Flexcell and shall conform to the requirements of ASTM D1751 or equal as accepted by the Contract Administrator, in accordance with B6, "Substitutes".
- E17.3 Reinforcing Steel
- E17.3.1 300mm long 10M smooth, epoxy coated steel dowels, 300 MPa yield strength.

### CONSTRUCTION METHODS

- E17.4 Expansion joints shall be constructed and installed as indicated in the Contract Documents or directed by the Contract Administrator.
- E17.5 The fiber joint filler shall extend the full width and depth of the sidewalk. Any excess material shall be trimmed to match the surface of the concrete.
- E17.6 Two dowels shall be installed at each expansion joint.
- E17.7 The dowels shall be drilled through the fiber joint filler and are to be coated with asphaltic cut-back.

### MEASUREMENT AND PAYMENT

- E17.8 No measurement or payment will be made for performing the supply of materials and the operations herein described and shall be considered incidental to installation of concrete sidewalk, for up to twelve (12) isolations joint locations.

## E18. WORKING IN CLOSE PROXIMITY TO GAS INFRASTRUCTURE

### DESCRIPTION

- E18.1 While working in close proximity to gas infrastructure, all procedures and precautions outlined in the Appendix 'C' - *Safe Excavation & Safety Watch Guideline* manual, as well as any supplemental direction from Manitoba Hydro, must be adhered to. Ensure that all locates and clearances are current and have been received and understood prior to construction.

## MEASUREMENT AND PAYMENT

- E18.2 Hydro excavation to locate and verify gas infrastructure as typically required by Manitoba Hydro will be considered incidental to the Work.
- E18.3 Any costs associated performing Safety Watches will be considered incidental to the Work.

## **E19. EXISTING STREETCAR BEDDING REMOVAL**

### DESCRIPTION

- E19.1 This specification covers the removal of existing street car track bedding on Selkirk Avenue within the project limits.
- E19.2 Evidence of steel rails were noted during site investigations while completing the design, the exact limits of the steel rails is unknown.
- E19.3 The term Street Car Track Bedding shall include concrete bedding, wooden ties, and any other track bedding materials, for the street car tracks previously located down Selkirk Avenue. The concrete bedding is estimated to be approximately 2.7 metres wide by 0.45 metres thick. There are two sets if existing tracks.

### CONSTRUCTION METHODS

- E19.4 Remove the existing concrete bedding, wooden ties and any other materials, by demolishing, loading, hauling, and disposing of the removed track bedding material.
- E19.5 Ensure that Manitoba Hydro requirements for working in close proximity to Gas infrastructure including transverse service connections are adhered to.
  - E19.5.1 When individual transverse gas services are within the 0.200m from the bottom of the streetcar tracks and bedding, additional efforts to remove the streetcar tracks and bedding will not be considered incidental.
- E19.6 Dispose of the removed material as per CW 1130.

### MEASUREMENT AND PAYMENT

- E19.7 Removal of existing Street Car Track Bedding shall be measured on cubic meter basis and paid for at the Contract Unit Price for "Removal of Existing Street Car Track Bedding". The volume paid shall be the total number of cubic meters of existing street car track bedding removed as measured and accepted by the Contract Administrator.
  - E19.7.1 Removal of material below the concrete bedding required to achieve subgrade elevation will not be considered street car track bedding and shall be paid for as Excavation.
  - E19.7.2 Removal of the existing pavement on top of wooden ties and bedding will not be considered street car track bedding and shall be paid for as Pavement Removal.
- E19.8 Removal of existing Street Car Track Rails shall be measured on lineal meter basis and paid for at the Contract Unit Price for "Removal of Existing Street Car Track Rails". The length paid shall be the total number of lineal meters of existing street car track rail removed as measured and accepted by the Contract Administrator.

## **E20. VALVE CLEANING**

### DESCRIPTION

- E20.1 General
  - E20.1.1 This specification covers the cleaning of existing valves on site before the start of construction.

## CONSTRUCTION METHODS

### E20.2 Valve Cleaning

- E20.2.1 Open valves to visually inspect the current condition.
- E20.2.2 Use necessary equipment to clean dirt and debris from any valves that cannot be operated or where a valve box extension cannot be installed.
- E20.2.3 Prepare a list of deficient items found and provide to the Contract Administrator.

## MEASUREMENT AND PAYMENT

- E20.3 Valve cleaning will be measured on a unit basis and paid for at the Contract Unit Price per item for "Valve Cleaning". The number to be paid for shall be the total number of valves cleaned in accordance with this Specification and accepted by the Contract Administrator.

## E21. REINSTATING PRIVATE WALKS

### DESCRIPTION

- E21.1 Further to CW 3325 – R5 and CW 3330 – R5 this specification covers the reinstatement of private walks following regrading of private property.
- E21.2 Vertical geometry improvements will require regrading into private property necessitating renewal of existing private walks to meet the requirements of the 2018 City of Winnipeg Accessibility Standards.

### CONSTRUCTION METHODS

- E21.3 Private lots will be regraded as directed by the Contractor Administrator.
- E21.4 Renewal limits for private walks will be provided by the Contract Administrator.
- E21.5 Private walks are to be reinstated using the same materials as the existing walks (ie. Concrete or paving stones).
  - E21.5.1 Concrete private walks are to be installed as per CW 3325 – R5.
  - E21.5.2 Paving Stone private walks are to be installed as per CW 3330 – R5.
    - (a) Existing paving stones are to be carefully removed and stockpiled for reinstallation
    - (b) Where the pre-existing paving stones cannot be salvaged or are damaged, the Contractor is to supply new pavers that match the existing pavers in shape and colour.

### MEASUREMENT AND PAYMENT

- E21.6 Supply and Installation of concrete sidewalk with block outs for paving stones will be measured on an area basis and paid for at the Contract Unit Prices under the item for "Private Walks". The area to be paid for shall be the total number of square metres formed and placed in accordance with this Specification and as measured and accepted by the Contract Administrator.
- E21.7 Regrading of private property will be paid as per CW 3110 – R19.

## E22. INSTALLATION OF STREET LIGHTING AND ASSOCIATED WORKS

### E22.1 DEFINITIONS

LIMITS OF APPROACH means the shortest distance that is permissible between live high voltage (>750 volts) conductors or apparatus and any part of a worker's body, material or tools being handled, or equipment operated.



**MANITOBA HYDRO CENTRAL STORES** means Manitoba Hydro's Waverley Service and Reclaim Centre - 1840 Chevrier Blvd - Winnipeg, Manitoba

**OVERHEAD FEED** means an electrical supply via an overhead conductor connected between streetlight standards. Typically strung between standards on a temporary basis.

**OVERHEAD SOURCE** means an electrical supply from Manitoba Hydro's system. (Typically, an overhead conductor from a wooden distribution pole or a DIP/RISER located on a wooden distribution pole.)

**RECLAIM** material means existing material that has been removed from Manitoba Hydro's system and to be returned to Manitoba Hydro.

**SCRAP** material means existing material that has been removed from Manitoba Hydro's system and to be recycled/disposed of by the Contractor.

**SURPLUS** material means new material that has been requisitioned by the Contractor and not incorporated into the work at the end of the Contract.

**WORK CLEARANCE** means an ELECTRICAL AND/OR NATURAL GAS FACILITIES LOCATE form (see SAMPLE ONLY included as Appendix E) issued by each of Manitoba Hydro's Customer Service Centre (CSC) affected to permit work to commence (Permit to work).

## E22.2 DESCRIPTION

E22.2.1 The work shall consist of the supply of all supervision, labour, materials (except as indicated under MATERIAL SUPPLIED BY MANITOBA HYDRO below) insurance, tools, backfill and equipment (and their maintenance), transportation, fuel, oil, meals and lodging, mobilization and de-mobilization, and warranty of workmanship as required to install and remove temporary Overhead Feeds, remove existing street light poles as required, install new street light poles and associated underground cables/conduits, all in accordance with the requirements specified in the tender documents.

## E22.3 WORK LOCATIONS

E22.3.1 The proposed street light installation and removals are shown on construction drawings and are as follows:  
(a) William Ave

### COORDINATION OF WORK

E22.3.2 The Contractor shall provide a minimum of ten (10) working days notice to Manitoba Hydro prior to the start of construction. The work shall be conducted and coordinated with Manitoba Hydro in a manner to ensure street lighting is maintained at all times for the duration of the work. The construction drawings provide the Proposed Sequence of Construction.

E22.3.3 The Contractor shall obtain Work Clearance from Manitoba Hydro's Customer Service Centre(s) (CSC) affected prior to the work commencing. No additional compensation shall be paid to the Contractor for delays obtaining Work Clearance for any reason.

E22.3.4 Manitoba Hydro's CSC will provide the Limits of Approach applicable to the Contractor on the Work Clearance form.

## E22.4 ORIENTATION

E22.4.1 Prior to the commencement of the proposed work, the Contractor's crew foremen, electricians, and other key personnel shall attend one (1) day of orientation provided by Manitoba Hydro for various operations such as cable handling, cable splicing/termination, installation of street light poles, concrete bases, luminaires and various other construction

standards and procedures. The Contractor will be responsible for all costs associated with personnel salaries, travel, sustenance and overheads, etc., during training.

## E22.5 PRE-CONSTRUCTION MEETING

E22.5.1 Prior to the commencement of the work, the Contractor shall attend a pre-construction meeting with Manitoba Hydro. The agenda for this meeting shall include but not be limited to the following:

- (a) Reference the Contractor's Safe work Procedures;
- (b) Prime Contractor;
- (c) materials;
- (d) sequence of construction;
- (e) communication plan;
- (f) any training requirements & qualifications;
- (g) Drawing and Project review;
- (h) a review of the Contractor's proposed work schedule; and
- (i) any and all other topics of clarification that the Contractor and the Contract Administrator may wish to discuss.

E22.5.2 The Contractor's cost to attend this pre-construction meeting shall be incorporated into the unit prices for the work.

## E22.6 QUALIFICATIONS AND CERTIFICATION

E22.6.1 The Contractor's Crew Foreman, installers and other key Contractor's Personnel shall possess the necessary certification, licensing, training, experience and familiarity with safety rules, procedures and hazards relating to the work. Journeyman Power Line Technician (PLT), Journeyman Lineman, Journeyman Cableman or Journeyman Electricians shall be required to perform portions of this work.

E22.6.2 Journeyman Power Line Technician (PLT), Journeyman Cableman and Journeyman Lineman are also required to possess a "Limited Specialized Trade Licence – 'M-P' Licence – Power Line" issued by the Province of Manitoba.

E22.6.3 Office of the Fire Commissioner Bulletin OFC 18 – 002 dated May 23, 2018 regarding Electrician Licenses discusses the requirements for a "Limited Specialized Trade Licence – 'M-P' Licence – Power Line".

For more information contact:  
Office of the Fire Commissioner  
500-401 York Avenue  
Winnipeg, Manitoba R3C 0P8  
Tel. 204-945-3373  
Fax 204-948-2089  
Toll Free: 1-800-282-8069  
[firecomm@gov.mb.ca](mailto:firecomm@gov.mb.ca)

E22.6.4 Licensed Journeyman Electricians or Journeyman PLT or Journeyman Cableman or Journeyman Lineman ARE REQUIRED for all cable handling operations included but not limited to: disconnecting cables in the handhole, installation and removal of temporary overhead feeds, installation and connection of ground rods, streetlight cable splices, termination of streetlight cables in handholds and at luminaires. The Contractor shall employ sufficient qualified personnel on its crews to conform to the Electrician's Licensing Act. The Contractor shall be prepared to provide proof of licences to Manitoba Hydro upon request.

E22.6.5 The Contractor shall assess the hazards associated with the work and have documented Safe work Procedures to perform the work. It is the Contractor's responsibility to train employees on these procedures. The Contractor shall be prepared to provide proof of training to Manitoba Hydro upon request.

E22.7 REFERENCED STANDARD CONSTRUCTION SPECIFICATIONS

E22.7.1 In addition to these Specifications, the work to be performed by the Contractor relative to the installation and/or replacement of street lighting poles, concrete bases and associated cabling shall be in accordance with the following:

- (a) Manitoba Hydro 66kV and Below Standards;
- (b) CSA C22.3 No. 7 (latest edition);
- (c) Canadian Electrical Code (CEC) Part 1 (latest edition); and
- (d) Any other applicable codes
- (e) (collectively, the "Standards")

E22.7.2 Revisions and updates to the Manitoba Hydro 66kV and Below Standards are issued periodically and the latest issued version of the Standard will apply. For the convenience of the Contractor for bidding purposes, excerpts of the Manitoba Hydro 66kV and Below Standards have been included as Appendix B.

E22.7.3 In some cases, Municipal, Provincial or Federal laws or this Technical Specification may be more stringent than the CSA Standards. Whenever conflict exists, the Contractor shall comply with the most stringent requirements applicable at the place of the work.

E22.8 TOOLS, EQUIPMENT AND MATERIALS

E22.8.1 The Contractor shall be required to provide all tools and equipment required for performing the specified tasks. Equipment shall be in good operating condition, shall be properly maintained using original equipment manufacturer replacement parts and shall be provided with letters of testing/inspection from the manufacturer when requested. Where the equipment is provided as a kit with multiple parts and tools, the kit shall be complete with all parts required to perform the designed task. Contractor fabricated tools or equipment will not be accepted for use.

E22.8.2 The Contractor shall obtain the following specific Electrical Equipment including but not limited to:

- (a) Compression tool or tools and associated dies to perform compressions to a maximum size of 1/0 Al (MD-6 compression tools shall not be used).
- (b) Approved compression tools are:

Manufacture	Type	Model No.	Range
Burndy	In-line, battery	PATMD68-14V	350 Kcmil AL
Cembre	In-line, battery	B54Y (06V081E)	4/0 AWG AL
Burndy	Pistol, battery	BUR PAT60018V	350 Kcmil AL

E22.8.3 Dies shall be of the type shown in Standard CD210-21 and CD 210-24 only, must have identical markings, and compression tool die must match die number stamped on connector.

- (a) Modiewark Model #4444 or Fluke 1AC-II Volt Alert potential Indicator
- (b) Voltage meter – Fluke model #T3C
- (c) Insulated wire cutters – used for cutting cable ends square.

E22.8.4 Alternative equipment manufacturers may be considered upon request by the Contractor and shall be approved for use by Manitoba Hydro prior to use.

E22.8.5 Manitoba Hydro may reject any tools or equipment that do not appear to be in good condition or fail to successfully provide the required function.

#### E22.9 MATERIAL SUPPLIED BY MANITOBA HYDRO

E22.9.1 Manitoba Hydro shall supply all street light poles, concrete bases, breakaway bases, luminaires, street light arms, ground rods, compression sleeves, grommets, nuts, electrical cables, conduits, relays, cable guards, Gel-caps and all other materials noted in the Standards. The Contractor shall sign receipts indicating the location on which the materials are to be used. The material shall be picked up by the contractor from the following locations:

E22.9.2 Manitoba Hydro Central Stores (contact personnel will be provided to the successful contractor).

E22.9.3 Materials requested will be supplied to the Contractor by Manitoba Hydro upon presentation of Manitoba Hydro's Stores Material Order Form. The Contractor shall assume all responsibilities for the loading, unloading, transportation, proper handling, secure storage and working of the materials and shall make replacements at its own expense in case any material is damaged, stolen or lost due to improper handling, storage or poor workmanship.

E22.9.4 The Contractor shall, at the time of materials release, check and confirm the quantity of materials. Shortages, discrepancies, or damages to materials shall be immediately reported in writing to Manitoba Hydro.

E22.9.5 After commencing performance of the work, the Contractor shall continually monitor all material required for the timely completion of the work and shall report additional material requirements to Manitoba Hydro a minimum of 72 hours prior to materials being required to perform the work. No additional compensation shall be paid as a result of delays due to material shortages where additional material requirements were not reported a minimum of 72 hours prior to being required for the work on an active project.

#### E22.10 MATERIAL SUPPLIED BY CONTRACTOR

E22.10.1 The Contractor shall be responsible to furnish gravel, sand, ¾" down limestone, ¼" down limestone, protective hose (i.e. typically 2" fire hose), duct seal and pit-run material for backfilling around street light poles and around cables as per the Standards. The cost of furnishing the above listed materials shall be incorporated into the unit prices for the work.

#### E22.11 SURPLUS, RECLAIM AND SCRAP MATERIAL

E22.11.1 Upon completion of the work, the Contractor shall, at its own expense, deliver to Manitoba Hydro Central Stores, all Surplus materials furnished by Manitoba Hydro and not used in the work, regardless of the location of said material at that time.

E22.11.2 In addition, the Contractor shall, at its own expense, deliver to Manitoba Hydro Central Stores all Reclaim materials from the work specifically HPS luminaires. Manitoba Hydro shall be responsible for the proper disposal of Reclaim HPS luminaires. The HPS bulb shall remain installed and unbroken in the Reclaim luminaire. The Contractor shall handle the Reclaim luminaires with care and shall avoid breaking the bulb or refractor.

E22.11.3 Manitoba Hydro's preference is to recycle as much Scrap Material as practicable. The Contractor is responsible to remove the Scrap Material, transport to the recycler or Manitoba Hydro approved disposal site, pay for any disposal fees and may retain any recycling value.

#### E22.12 DE-ENERGIZATION AND LOCKOUT

E22.12.1 **Manitoba Hydro** - Where a standard is supplied from an Overhead Source, Manitoba Hydro's staff shall be responsible to disconnect and isolate the street light standard or standards between the standard and Overhead Source. Some street light standards may be temporarily fed from an Overhead Source. This Overhead Source shall be disconnected

and removed by Manitoba Hydro staff prior to commencing with the work. The streetlight circuits will not be Locked Out by Manitoba Hydro.

E22.12.2 **The Contractor** - The Contractor shall assess the hazards associated with the work and employ its own Safe Work Procedure for the work to be performed. The Contractor's Safe Work Procedure shall include provisions that the street light circuits will not be Locked Out by Manitoba Hydro. The Contractor's Safe Work Procedure shall achieve Lock Out or techniques equivalent to Lock Out.

E22.12.3 The Contractor shall complete a job planning form (an example is included as Appendix F) on a daily basis before any work commences and provide Manitoba Hydro with copies of the job plans if requested.

#### E22.13 TEMPORARY OVERHEAD FEEDS

E22.13.1 Manitoba Hydro in consultation with the Contractor will determine if temporary lighting will be provided by the existing street lights or from the new street lights.

E22.13.2 When using the existing poles for temporary lighting, Manitoba Hydro shall remove an Overhead Source in accordance with DE-ENERGIZATION AND LOCKOUT section above, prior to the Contractor installing a #4 duplex overhead conductor between the existing poles. The #4 duplex overhead conductor will normally be attached to the tenon of the davit arm near the luminaire with a pre-form grip. Older poles may require a spool insulator be attached to the pole using a pre-form grip to support the #4 duplex overhead conductor. A short length of 2C/#12 copper conductor is connected to the terminals of the luminaire brought out and connected to the #4 duplex overhead conductor. The final span to the Overhead Source shall be installed by Manitoba Hydro.

E22.13.3 When using the new poles for temporary lighting, the Contractor shall install the new bases, poles and #4 duplex overhead conductor. The #4 duplex overhead conductor will be attached to the tenon of the davit arm near the luminaire with a pre-form grip. A short length of 2C/#12 copper conductor is connected to the terminals of the luminaire brought out and connected to the #4 duplex overhead conductor. The final span to the Overhead Source shall be installed by Manitoba Hydro.

E22.13.4 All material used to provide the temporary overhead feed shall be returned to Manitoba Hydro. Care shall be taken to coil and tag Reclaim conductor for reuse. If used, insulators shall be handled carefully to prevent breakage.

#### E22.14 SAFE EXCAVATION

E22.14.1 The work shall be performed in accordance with the requirements of Manitoba Hydro's Safe Excavation and Safety Watch Guidelines (latest revision) included as Appendix C and Manitoba Workplace Safety and Health Regulation 217 latest revision.

#### E22.15 SAFE HANDLING

E22.15.1 The Contractor shall apply handling techniques in accordance with Manitoba Workplace Health and Safety Regulation 217 (latest revision).

#### E22.16 ELECTRIC CABLES AND CONDUITS

- (a) The Contractor shall use diligent care and proper equipment in handling of all cables, so as not to injure the jacket and avoid gouging, kinking, scratching or abrading the cables. If any material is damaged to any extent, the Contractor shall repair the damages at its own expense, in a manner approved by Manitoba Hydro or will be charged the full cost of the damaged items.
- (b) Cable reels shall not be dropped and must be handled and placed/stored in an upright position at all times and shall not be laid flat for any purpose or reason. Cable reels shall be adequately supported on hard surface to prevent the reel from sinking into the ground that can cause undue stress on the cables. Cable reels should be inspected for damages prior to use. If a

cable reel is found to be defective, such defect shall be reported immediately to Manitoba Hydro.

- (c) The Contractor shall place all material and string the cables in such a manner as to cause the least interference with normal use of the land, street or roadway. All material shall be unloaded in a manner to preserve its condition, prevent loss and/or theft and permit easy access for Manitoba Hydro's inspection.
- (d) The Contractor shall provide Manitoba Hydro's inspector sufficient opportunity, in the sole discretion of Manitoba Hydro, to inspect the work.

#### E22.17 PRECAST CONCRETE BASES

- E22.17.1 The Contractor shall handle, store, transport and unload the precast concrete bases in a manner to prevent damage to the threaded bolts and conduit casing.
- E22.17.2 Precast Concrete Bases are extremely heavy. Approximate weight of pre-cast concrete bases are found in the Standards. The Contractor shall only use equipment rated for such weight.

#### E22.18 STREET LIGHT POLES AND ARMS

- E22.18.1 The Contractor shall handle, store, transport, and provide proper load securement for the poles and arms in a manner to prevent damage.

#### E22.19 LUMINAIRES

- E22.19.1 The Contractor shall handle, store, transport and unload the luminaires in their original packaging and in a manner to prevent damage.

#### E22.20 SMALL MATERIAL

- E22.20.1 Photo electric cells, shorting caps, shims, nut covers and associated supplies shall be kept in a suitable warehouse provided by the Contractor at its own expense. Photo electric cells shall be transported and stored in such a manner as to prevent breakage.

#### E22.21 CARE OF MATERIALS

- E22.21.1 The Contractor shall assume all responsibilities of all the materials and shall replace, at its own expense, any materials damaged, stolen or lost due to improper handling or poor workmanship.

#### E22.22 WIRE AND CABLE REEL STORAGE

- E22.22.1 Cable reels shall be stored with the flanges upright and resting on a hard surface. At temporary storage sites where the soil may be soft, preservative-treated plywood sheets may be used to keep the flanges from sinking into the ground.
- E22.22.2 If cable reels must be pancaked or stored on their side in vertical racks, do not lift the reel by the top flange. Spacers (two 2 X 4s placed wide side up) should be placed under the bottom flange and between the reels in order to create a space to insert the forks and lift the reels without damaging the cable.

#### E22.23 REEL HANDLING

- E22.23.1 When off-loading reels from a truck, reels shall be lowered using a hydraulic gate, hoist or forklift truck. When a reel is rolled from one point to another, care must be taken to see that the reel does not straddle objects such as rocks, pipes, curbs or wooden blocks which could damage the cable or protective covering. A reel should always be rolled on hard surfaces to avoid sinkage and in the opposite direction to the cable wraps to ensure that the reel is rolled in such a direction as to tighten the cable on the reel.
- E22.23.2 When using a hoist, install a mandrel through the reel arbour hole and attach a sling. Use a spreader bar approximately 6 inches longer than the overall reel width placed between the

sling ends just above the reel flanges. This will prevent bending of the reel flanges and damage to the cable.

E22.23.3 If a forklift is used to move a reel, the reel is to be approached from the flange side. Position the forks such that the reel is lifted by both reel flanges. The lift forks shall not contact the cable.

E22.23.4 Returnable reels shall be returned promptly to Manitoba Hydro Central Stores and in no case later than three (3) days after the completion of the work unless otherwise mutually agreed between the Contractor and Manitoba Hydro.

#### E22.24 PRESSURIZED WATER/VACUUM EXCAVATION

E22.24.1 Pressurized water/vacuum excavation (PW/VE) shall be used to daylight all buried utilities and structures where excavation by other mechanical means would be expected to provide a physical risk to that utility or structure.

E22.24.2 The work shall be performed in accordance with the requirements of Manitoba Hydro's Safe Excavation and Safety Watch Guidelines (latest revision) included as Appendix C.

#### E22.25 REMOVAL STREET LIGHT POLE FROM EXISTING BASE

E22.25.1 This shall include all work required to remove a street light pole from an existing base as set forth in this Technical Specification. The pole may be on an existing precast concrete base, steel power installed screw base or poured in place concrete base.

E22.25.2 The Contractor shall furnish all labour, supplies and materials (except as indicated in the Section "MATERIAL SUPPLIED BY MANITOBA HYDRO") necessary for the removal of the street light pole from the existing base. Care shall be taken to preserve the luminaire. The luminaire shall be reinstalled on the new street light pole or returned to Manitoba Hydro's stores as instructed by the Manitoba Hydro.

E22.25.3 The Contractor shall be responsible to transport all Surplus and Reclaim materials to Manitoba Hydro Central Stores and transport and dispose of all Scrap material as set forth in this Specification.

#### E22.26 REMOVAL OF BASE AND DIRECT BURIED STREET LIGHT POLE

E22.26.1 This shall include all excavation, whether by auger, pressurized water/vacuum excavation, by hand, or by other methods which may be necessary to remove a base or direct buried street light pole. The base may be poured in place concrete, steel power installed or precast concrete.

E22.26.2 The Contractor shall be responsible to transport all Surplus and Reclaim materials to Manitoba Hydro Central Stores and transport and dispose of all Scrap material as set forth in this Specification.

E22.26.3 The Contractor is responsible to supply all backfill material as specified in the Standards and carry out all backfill, compacting and leveling of all excavations and voids for removed bases and direct buried street light poles so as to be ready for top soil and seed or sod or as directed by Manitoba Hydro.

#### E22.27 INSTALLATION OF FOUNDATION - CONCRETE BASE

E22.27.1 This shall include all excavation, whether by auger, pressurized water/vacuum excavation, by hand, or by other methods which may be necessary to replace or install a concrete base as set forth in this Specification.

E22.27.2 The Contractor shall furnish all labour, supplies and material (except as indicated in the Section "MATERIAL SUPPLIED BY MANITOBA HYDRO") necessary to install a new or replace a concrete base. Excavation for the precast concrete base shall be to a diameter and depth specified in Standard CD 300-6. All excess material is to be removed by the Contractor.

- E22.27.3 The concrete base shall be set on a bed of  $\frac{3}{4}$ " down limestone. The concrete base backfill material shall be compacted in lifts no more than 150 mm. Backfill material shall be  $\frac{3}{4}$ " down limestone. Compacting of backfill material shall be done using a hydraulic tamper. Alternative tamping methods shall be approved by Manitoba Hydro. Underground cables entering the concrete base shall be protected by a length of protective hose supplied by the Contractor and a layer of sand surrounding the cables to protect it from the limestone. The concrete base shall be installed level in all 4 directions. Final grade must be established prior to installing the concrete bases.
- E22.27.4 The completed backfill shall be at least equal in compaction to undisturbed soil, as required by the Municipal authorities or elsewhere in this Specification. The Contractor shall level all excavations.
- E22.27.5 Should settlement occur in the excavation and cause a depression in the surface, the Contractor shall repair the surface. Placing of additional backfill material due to settlement shall be at the Contractor's expense.
- E22.27.6 The concrete base shall be oriented in the proper direction to allow the easy entrance of the underground cables into the plastic pipe preinstalled in the concrete base. Care shall be taken to prevent damage to the insulation or jacket of the conductors. The cable shall be left long enough to extend one (1) metre beyond the top of the hand hole.
- E22.28 BASE MOUNTED STREET LIGHT POLES**
- E22.28.1 This shall include all work required to install the street light pole on the concrete base as set forth in this Specification.
- E22.28.2 The Contractor shall furnish all labour, supplies and material (except as indicated in the Section "MATERIAL SUPPLIED BY MANITOBA HYDRO") necessary for the installation of the pole (straight shaft or davit) on the concrete base.
- E22.28.3 Unless otherwise specified on the construction drawings, the Contractor shall orient the poles so that the hand hole is on the left side of the pole when viewed from the road. A worker should be able to see oncoming traffic when working in the hand hole.
- E22.28.4 The Contractor shall level the street light pole in all 4 directions. Leveling shims may be used.
- E22.28.5 Tightening of bolts shall be performed in a manner that brings the surfaces up evenly. All nuts shall be tightened and torqued in accordance with Standard CD 300-9. The Contractor shall install the nut covers included with the pole.
- E22.28.6 Unless otherwise specified, excess underground cable and 2C-12 wire shall be left inside the hand hole with the hand hole cover loosely installed.
- E22.28.7 Existing street light poles may have street signs attached. The Contractor shall remove the signs from the existing pole and temporarily reattach the signs to the new pole. The Contractor shall notify Manitoba Hydro of the location where the signs have been removed.
- E22.29 LUMINAIRES AND ASSOCIATED WIRING**
- E22.29.1 The Contractor shall furnish labour, supplies and material (except as indicated in the Section "MATERIAL SUPPLIED BY MANITOBA HYDRO") necessary to install the luminaire and associated wiring. Unless otherwise specified, the luminaire shall be installed with a tilt of zero (0) degrees. The Contractor shall install a length of 2 conductor No. 12 gauge (2C-12) wire from the terminals of the luminaire, through the arm (if applicable), down the pole to the hand hole. One (1) metre of 2C-12 wire shall be left at the hand hole. Impact equipment (air or electric) shall not be used to tighten luminaire mounting bolts. The Contractor shall be liable for damage due to over tightening.
- E22.29.2 The Contractor shall verify the luminaire voltage matches the source voltage as shown on the construction drawings. If luminaire voltage does not match the source voltage, the Contractor shall re-wire the luminaire in accordance with the wiring diagram provided.  
NOTE: Not applicable for LED luminaires.



E22.29.3 As specified on the construction drawings, the luminaire will require either a photo electric cell (PEC) or shorting cap installed. When installing the PEC the eye shall be oriented north. The Contractor shall also install the appropriate wattage bulb in the luminaire.  
NOTE: Bulb installation not applicable for LED luminaires.

#### E22.30 BREAK AWAY BASES

E22.30.1 Break away bases shall be installed in accordance with Standard CD 300-10. The height of the concrete base above grade shall not exceed 50mm. The surface of the concrete base shall be flat and level. A reaction plate shall be installed between the concrete base and the break-away base.

E22.30.2 The Contractor shall torque the couplers in accordance with Standard CD 300-10. Impact tools shall not be used to tighten or torque couplers or nuts associated with a break away base.

#### E22.31 SPLICING/CONNECTING CABLES

E22.31.1 The electric cable shall be spliced/terminated as per Standards CD 215-12, CD 215-13, CD 310-1, CD 310-4, CD 310-9 and CD 310-10 with the exception that the Contractor will use a GELCAP-SL-2/0 splice kit (See Appendix D). Termination in the hand hole may include the installation of an inline fuse holder.

E22.31.2 The Contractor shall furnish all labour, supplies and material (except as indicated in the Section "MATERIAL SUPPLIED BY MANITOBA HYDRO") necessary to splice/terminate the street light conductor(s).

#### E22.32 EXCAVATION

E22.32.1 The Contractor shall furnish all labour, supplies and material (except as indicated in the Section "MATERIAL SUPPLIED BY MANITOBA HYDRO") necessary for the completion and maintenance of grade and line of the street light cables and conduit including water control if found to be necessary. The trench shall be graded to conform to the street light cables and conduit so that the street light cables and conduit rest firmly on a smooth surface throughout its length. All stones or other objects which, in the opinion of Manitoba Hydro might damage the street light cable jacket and conduit shall be removed. Where the presence of rock or other condition prevent a satisfactory bed for the cables, 150 mm of well-tamped, clean soil or ¼" down crushed limestone shall be placed in the bottom of the trench. In this case, the spoil bank from trenching operations shall not be allowed to fall into the trench or mix with the soil to be used in backfilling the trench. Loose debris or foreign matter and the spoil bank shall be placed so as not to hinder drainage, damage property, or obstruct traffic.

E22.32.2 Trenches shall be dug to such a depth that will provide a minimum cover of 600 mm from final grade in sodded areas and 1000 mm in roadways in accordance with Standard CD 305-1.

#### E22.33 LAYING CABLES

E22.33.1 Cables are to be lowered in the trench in an orderly fashion so as to maintain a consistent path and straight alignment. All cables shall be lowered in a continuous run (NO SPLICING) and in accordance with the construction drawings; and shall maintain the necessary separation, where required. All cables shall be of continuous runs and capped and sealed if they are not being installed in the pole at that time. Cables shall not be dragged over paved surfaces.

E22.33.2 Once a cable is cut its ends must be sealed immediately with an approved and appropriately sized, heat shrink or cold shrink sealing cap to prevent moisture ingress unless the cable is being installed in the pole at that time.

E22.33.3 During the removal of the cable, the reels shall be placed on jacks, stands or trailers with a bar through the arbour holes which will allow the reel to be turned easily, and the cable to be paid out. Cables can be paid out from the bottom or the top of the reel. Cable in coils

shall be handled in a similar manner. This can be achieved by supporting the coil in a vertical plane and rotating it by hand as the cable is carefully uncoiled. The cable shall never be pulled over the flange of a reel, or pulled off the side of a coil, since this will introduce a twist in the cable.

E22.33.4 During installation, under no circumstance is the cable to be subjected to a bending radius tighter than that detailed in the Standards.

E22.33.5 Where specified in the Standards or on the construction drawings, the Contractor shall install the street light cable in a conduit.

#### E22.34 INSTALLING CONDUIT AND CABLE BY BORING (HORIZONTAL DIRECTIONAL DRILLING)

E22.34.1 The Contractor shall dig the approaches and openings necessary to install boring equipment, and the boring equipment used shall be of such a nature as to minimize the opening size required. The boring equipment shall produce a straight hole without unnecessary dips or bends. The bore hole shall be only slightly larger than the outside diameter of the conduits or cables to minimize possible settlement. Cables and conduits shall be pulled in with pulling eyes or using a kellum grip in a manner so as to guard against damage.

E22.34.2 During construction as the drill bit crosses each existing facility a lookout shall be assigned by the Contractor to visually confirm the drill bit is maintaining a minimum 300 mm clearance from the existing facility all in accordance with Manitoba Hydro Safe Excavation and Safety Watch Guidelines (latest revision) included as Appendix C. Maximum pulling tensions on any streetlight cable shall be limited to 2.9 kN/0.65 kips.

E22.34.3 Drilling fluids and associated waste materials shall be disposed of in a manner that minimizes environmental effects.

E22.34.4 The Contractor shall properly compact the backfill material and will be responsible for placing additional material should settlement occur for the duration of the warranty period.

#### E22.35 BURIED UTILITY CROSSINGS

E22.35.1 All buried obstructions are not necessarily shown on the reference drawings and the locations of those indicated are approximate only.

E22.35.2 The Contractor shall determine the location of all buried obstructions and shall notify the appropriate authorities and obtain all necessary permits prior to excavation, trenching and directional drilling near or across such obstructions. All buried obstructions where the new buried cable route crosses other utilities including but not limited to gas, water, sewer, telephone and electric lines shall be exposed as per each utilities guidelines by the Contractor, including the use of Pressurized Water/Vacuum Equipment (PW/VE) where necessary. Should any damage occur to such lines during the course of the work, the Contractor shall be responsible for the damage and the costs of repairs to buried obstructions caused by its operations and shall fully indemnify the City of Winnipeg and Manitoba Hydro from and against all claims arising out of such damage. Manitoba Hydro Safe Excavation and Safety Watch Guidelines (latest revision) included as Appendix C shall be followed when crossing natural gas pipelines and electrical cables by the directional boring method.

E22.35.3 The PW/VE technique, used to expose underground plant in certain conditions, must be performed in accordance with each utility's requirements, including but not limited to Manitoba Hydro, Manitoba Telecom Services, Shaw Cable, etc. PW/VE costs that the Contractor will incur during the work must be factored into the Contractor's bid prices. The Contractor shall not be entitled to extra compensation for the use of PW/VE on the work.

E22.35.4 The Contractor shall be responsible to supply all backfill material and carry out all backfill, compacting and leveling of all excavations so as to be ready for topsoil and seed or sod or as directed by Manitoba Hydro.

## E22.36 BENDING CABLES/CONDUITS AND INSTALLATION INTO STANDARDS

- E22.36.1 It is desired to reduce to a minimum the required number of bends and to lay the cables/conduits to conform to the contour of the ground and maintain a normal covering. This shall be accomplished by cutting the trench slightly deeper in approaches to road crossings and drainage ditches. It is intended that the Contractor shall eliminate unnecessary bending by operating the trenching machine at various depths rather than by finishing grading the trench by hand whenever practical.
- E22.36.2 Sharp bends of the cables/conduits shall be avoided at all times. All bends shall meet the requirements set out in this Specification. If excessive bending was exerted on any cable, the cable shall be replaced at the Contractor's cost. During installation, under no circumstance is the cable to be subjected to a bending radius tighter than that detailed in the Standards. At street light poles the Contractor shall install the ends of the cables into the plastic pipe preinstalled in the concrete base. Care shall be taken to prevent damage to the insulation or jacket of the conductors. Underground cables entering the concrete base shall be protected by a length of protective hose supplied by the Contractor and by a layer of sand surrounding the cables to protect it from the limestone. The cable shall be left long enough to extend one (1) metre beyond the hand hole. The street light cable in the trench shall be installed in conduit for mechanical protection and the ends sealed with duct seal supplied by the Contractor. Care shall be taken to prevent damaging the cable where it exits the conduit. The conduit shall only be installed into the concrete base if conduit sizes make it practicable.
- E22.36.3 Unless otherwise directed, excess underground cable and 2C-12 wire shall be left inside the hand hole with the hand hole cover loosely installed.

## E22.37 BACKFILL

- E22.37.1 All backfilling material within 300 mm of the cables/conduits shall be clean, free of sod, vegetation, organic material, stones or other debris, and of a consistency as to not create significant voids or air spaces around the cables/conduits. Other backfilling material shall be free of stones greater than 150 mm on their maximum dimension. Where cinders or very acid soil are encountered or where gravel or incompressible fill is required by Municipal authorities, ¼" down crushed limestone shall be placed all around the cables for a depth of at least 300 mm. The completed backfill shall be at least equal in compaction to undisturbed soil or as directed by Manitoba Hydro. Backfill material is to be placed and compacted in lifts not exceeding 300 mm. All excess material is to be removed by the Contractor.
- E22.37.2 Tamping or flushing methods must be used where necessary to give the required compaction. Where tamping is used, hand tampers shall be used to at least 300 mm above the cable before machine tamping may be used. The Contractor shall level all excavations so as to be ready for topsoil and seed or sod or as directed by the Manitoba Hydro. Should settlement occur in the excavation and cause a depression in the surface, the Contractor shall repair the surface to the satisfaction of the Manitoba Hydro at the Contractor's cost.
- E22.37.3 Excavations remaining where poles have been removed shall be backfilled with spoil, pit run gravel or ¾" down limestone and compacted in lifts of 150mm as directed by Manitoba Hydro. The top 300 mm of the excavation shall be backfilled with topsoil.
- E22.37.4 Excavations remaining where utility crossings have been exposed shall be backfilled with sand or clean spoil and compacted in lifts of 150mm. The top 300 mm of the excavation shall be backfilled with topsoil.
- E22.37.5 Backfill of all excavations shall be in accordance with City of Winnipeg Standard Construction Specification CW 2030 (latest revision), to the satisfaction of the authority having jurisdiction and Manitoba Hydro.

## E22.38 DEFECTIVE WORK & WARRANTY

- E22.38.1 If any portion of the work fails to comply with the requirements of this Specification, fails within the Warranty period, or if the final tests prove or indicate the existence of any fault or

defect in the work, or any part thereof, Manitoba Hydro may forthwith re-execute or make good the faulty or defective work or alter the same to make it comply with requirements of the Specification at the Contractor's expense. Manitoba Hydro shall give the Contractor notice together with particulars of such failure, fault or defect, Manitoba Hydro's cost to re-execute or make good the faulty or defective work and the Cost shall be deducted from the Contract.

E22.38.2 At the completion of the work for each location, Manitoba Hydro shall prepare and issue a Network Commissioning Report, a sample of which is included as Appendix G, to the Contractor. The Network Commissioning Report shall be dated indicating the commencement of the Warranty period for the work performed at the location.

#### E22.39 AS-BUILT DRAWING

E22.39.1 The Contractor shall provide an as-built drawing or mark-up drawing to Manitoba Hydro which accurately displays the "as-built" location of the buried street light cables, conduits and street light poles.

#### E22.40 MEASUREMENT AND PAYMENT

E22.40.1 Removal of 25' to 35' street light pole and precast, poured in place concrete, steel power installed base or direct buried including davit arm, luminaire and appurtenances

- (a) This pay item will be measured on a unit basis and paid for at the Contract Unit Price per unit for "Removal of 25' to 35' street light pole and precast, poured in place concrete, steel power installed base or direct buried including davit arm, luminaire and appurtenances". The number of units to be paid for at the Contract Unit Price shall be verified and accepted by Manitoba Hydro. The Price shall be payment in full for performing all operations herein described including removal of the pole, base, luminaire, appurtenances, use of pressurized water/vacuum excavation, transportation of Reclaim, Surplus and Scrap material, payment of associated disposal fees and all other items incidental to the work included in the Specification.

E22.40.2 Removal of 45' street light pole and precast, poured in place concrete, steel power installed base or direct buried including davit arm, luminaire and appurtenances

- (a) This pay item will be measured on a unit basis and paid for at the Contract Unit Price per unit for "Removal of 45' street light pole and precast, poured in place concrete, steel power installed base or direct buried including davit arm, luminaire and appurtenances". The number of units to be paid for at the Contract Unit Price shall be verified and accepted by Manitoba Hydro. The Price shall be payment in full for performing all operations herein described including removal of the pole, base, luminaire, appurtenances, use of pressurized water/vacuum excavation, transportation of Reclaim, Surplus and Scrap material, payment of associated disposal fees and all other items incidental to the work included in the Specification.

E22.40.3 Installation of Conduit and #4 AL C/N or 1/0 AL Triplex Streetlight Cable in Conduit by Open Trench Method

- (a) This pay item will be measured on a linear metre basis and paid for at the Contract Unit Price per linear metre for "Installation of Conduit and #4 AL C/N or 1/0 AL Triplex streetlight cable in Conduit by open trench method." The number of meters to be paid for at the Contract Unit Price shall be measured and accepted by Manitoba Hydro. The Price shall be payment in full for performing all operations herein described including installation of the conduit, pulling cable into the conduit, backfilling the trench, buried utility crossings, use of pressurized water/vacuum excavation and all other items incidental to the work included in the Specification.

E22.40.4 Installation of 50 mm Conduit by Boring Method complete with Cable Insertion (#4 AL C/N or 1/0 AL Triplex)

- (a) This pay item will be measured on a linear metre basis and paid for at the Contract Unit Price per linear metre for "Installation of 50 mm conduit or conduits by boring method complete with cable insertion (#4 AL C/N or 1/0 AL Triplex)." The number of meters to be paid for at the Contract Unit Price shall be measured and accepted by Manitoba Hydro. The Price shall be payment in full for performing all operations herein described including installation of 50mm conduit or conduits by boring method, inserting the #4 AL C/N or 1/0 AL Triplex streetlight cable into the conduit(s), buried utility crossings, use of pressurized water/vacuum excavation and all other items incidental to the work included in the Specification.
- E22.40.5 Installation of cable (#4 AL C/N or 1/0 AL Triplex) by boring method.
- (a) This pay item will be measured on a linear metre basis and paid for at the Contract Unit Price per linear metre for "Installation of cable(s) (#4 AL C/N or 1/0 AL Triplex) by boring method." The number of meters to be paid for at the Contract Unit Price shall be measured and accepted by Manitoba Hydro. The Price shall be payment in full for performing all operations herein described including installation of the cable or cables by boring method, buried utility crossings, use of pressurized water/vacuum excavation and all other items incidental to the work included in the Specification.
- E22.40.6 Installation of 25'/35' Pole, Davit Arm and Precast Concrete Base Including Luminaire and Appurtenances
- (a) This pay item will be measured on a unit basis and paid for at the Contract Unit Price per unit for "Installation of 25'/35' pole, davit arm and precast concrete base including luminaire and appurtenances." The number of units to be paid for at the Contract Unit Price shall be verified and accepted by Manitoba Hydro. The Price shall be payment in full for performing all operations herein described including installation of the pole, davit arm, base, luminaire, appurtenances, placing the cable(s) into the base, use of pressurized water/vacuum excavation and all other items incidental to the work included in the Specification.
- E22.40.7 Installation of 45' Pole, Davit Arm and Precast Concrete Base Including Luminaire and Appurtenances
- (a) This pay item will be measured on a unit basis and paid for at the Contract Unit Price per unit for "Installation of 45' pole, davit arm and precast concrete base including luminaire and appurtenances." The number of units to be paid for at the Contract Unit Price shall be verified and accepted by Manitoba Hydro. The Price shall be payment in full for performing all operations herein described including installation of the pole, davit arm, base, luminaire, appurtenances, placing the cable(s) into the base, use of pressurized water/vacuum excavation and all other items incidental to the work included in the Specification.
- E22.40.8 Installation of One (1) 10' Ground Rod at Every Third Street Light, at the End of a Street Light Circuit or Anywhere Else as Shown on the Design Drawings. Trench #4 Ground Wire up to 1 m From Rod Location to New Street Light and Connect (Hammerlock) to Top of Ground Rod
- (a) This pay item will be measured on a unit basis and paid for at the Contract Unit Price per unit for "Installation of one (1) 10' ground rod at every third street light, at the end of a street light circuit or anywhere else as shown on the design drawings. Trench #4 ground wire up to 1 m from rod location to new street light and connect (hammerlock) to top of the ground rod." The number of units to be paid for at the Contract Unit Price shall be verified and accepted by Manitoba Hydro. The Price shall be payment in full for performing all operations herein described including install one (1) 10' ground rod, trench the #4 ground wire to the new streetlight pole, connect

(hammerlock) ground wire to rod and all other items incidental to the work included in the Specification.

- E22.40.9 Installation of Lower 3 m of Cable Guard, Ground Lug, Cable Up Pole, and First 3 M Section of Ground Rod Per Standard CD 315-5
- (a) This pay item will be measured on a unit basis and paid for at the Contract Unit Price per unit for "Install/lower 3 m of Cable Guard, ground lug, cable up pole, and first 3 m section of ground rod per Standard CD 315-5". The number of units to be paid for at the Contract Unit Price shall be verified and accepted by Manitoba Hydro. The Price shall be payment in full for performing all operations herein described including installing the lower section of cable guard, ground lug, ground rod, coiling cable(s) up the pole and all other items incidental to the work included in the Specification.
- E22.40.10 Installation and Connection of Externally-Mounted Relay and PEC Per Standards CD 315-12 and CD 315-13
- (a) This pay item will be measured on a unit basis and paid for at the Contract Unit Price per unit for "Installation and connection of externally-mounted relay and PEC per Standards CD 315-12 and CD 315-13". The number of units to be paid for at the Contract Unit Price shall be verified and accepted by Manitoba Hydro. The Price shall be payment in full for performing all operations herein described including mounting the relay, PEC, wiring as per the schematic and all other items incidental to the work included in the Specification.
- E22.40.11 Termination of 2/C #12 Copper Conductor to Street Light Cables Per Standard CD310-4, CD310-9 or CD310-10
- (a) This pay item will be measured on a unit basis and paid for at the Contract Unit Price per unit for "Terminate 2/C #12 copper conductor to street light cables per Standard CD310-4, CD310-9 or CD310-10". The number of units to be paid for at the Contract Unit Price shall be verified and accepted by Manitoba Hydro. The Price shall be payment in full for performing all operations herein described including connection of the 2/C # 12 copper conductor to the #4 C/N or 1/0 Al Triplex cable(s) using a GELCAP-SL-2/0 splice kit and all other items incidental to the work included in the Specification.
- E22.40.12 Splicing #4 AL C/N or 2 Single Conductor Street Light Cables
- (a) This pay item will be measured on a unit basis and paid for at the Contract Unit Price per unit for "Splicing #4 Al C/N or 2 single conductor street light cables". The number of units to be paid for at the Contract Unit Price shall be verified and accepted by Manitoba Hydro. The Price shall be payment in full for performing all operations herein described including splicing the #4 AL C/N or 2 single conductor cables in accordance with Standard CD 215-12 and CD 215-13 and all other items incidental to the work included in the Specification.
- E22.40.13 Splicing 1/0 AL Triplex Cable or 3 Single Conductor Street Light Cables
- (a) This pay item will be measured on a unit basis and paid for at the Contract Unit Price per unit for "Splicing 1/0 AL triplex cable or 3 single conductor street light cables". The number of units to be paid for at the Contract Unit Price shall be verified and accepted by Manitoba Hydro. The Price shall be payment in full for performing all operations herein described including splicing the 1/0 Al triplex cable or set of 3 single conductor cables in accordance with Standard CD 215-12 and CD 215-13 and all other items incidental to the work included in the Specification.
- E22.40.14 Installation of Break-Away Base and Reaction Plate on Base-Mounted Poles up to 35'

- (a) This pay item will be measured on a unit basis and paid for at the Contract Unit Price per unit for "Installation of break-away base and reaction plate on base mounted poles up to 35". The number of units to be paid for at the Contract Unit Price shall be verified and accepted by Manitoba Hydro. The Price shall be payment in full for performing all operations herein described including installation of the reaction plate, break-away base and all other items incidental to the work included in the Specification.
- E22.40.15 Installation of Overhead Span of #4 Duplex Between New or Existing Streetlight Poles and Connect Luminaire to Provide Temporary Overhead Feed
- (a) This pay item will be measured on per span basis and paid for at the Contract Unit Price per span for "Installation of Overhead Span of #4 duplex Between New or Existing Streetlight Poles and Connect Luminaire to Provide Temporary Overhead Feed". The number of units to be paid for at the Contract Unit Price shall be verified and accepted by Manitoba Hydro. The Price shall be payment in full for performing all operations herein described including attachment of the #4 duplex overhead conductor using a perform grip (c/w spool insulator(s) to davit arm if necessary), sagging conductor, connection of luminaire using 2C#12 copper conductor and all other items incidental to the work included in the Specification.
- E22.40.16 Removal of Overhead Span of #4 Duplex Between New or Existing Streetlight Poles to Remove Temporary Overhead Feed
- (a) This pay item will be measured on a per span basis and paid for at the Contract Unit Price per span for "Removal of Overhead Span of #4 duplex Between New or Existing Streetlight Poles to Remove Temporary Overhead Feed". The number of units to be paid for at the Contract Unit Price shall be verified and accepted by the Manitoba Hydro. The Price shall be payment in full for performing all operations herein described including removal of the #4 duplex overhead conductor, spool insulator(s) and all other items incidental to the work included in the Specification.
- E22.40.17 Expose Underground Cable Entrance of Existing Streetlight Pole and Install New Streetlight Cable(s).
- (a) This pay item will be measured on a unit basis and paid for at the Contract Unit Price per unit for "Expose Underground Cable Entrance of Existing Streetlight Pole and Install New Streetlight Cable(s)". The number of units to be paid for at the Contract Unit Price shall be verified and accepted by Manitoba Hydro. The Price shall be payment in full for performing all operations herein described including excavation and exposure of the underground cable entrance by any means necessary including use of pressurized water/vacuum excavation, installation of the new streetlight cables(s), backfill, compaction and all other items incidental to the work included in the Specification.

## **E23. CONCRETE RETAINING CURBS AT BACK OF SIDEWALK**

### DESCRIPTION

#### E23.1 General

**E23.1.1** Further to CW 3325 and CW 3310, this specification will cover the installation of concrete sidewalk containing block outs for interlocking stone pavers.

#### E23.1.2 Referenced Standard Construction Specifications

- (a) CW 3325 – Portland Cement Concrete Sidewalk
- (b) CW 3310 – Portland Cement Concrete Pavement Works

## MATERIALS

**E23.2** Concrete mix design shall comply with CW 3310

**E23.2.1** All other materials as per CW 3310.

## CONSTRUCTION METHODS

**E23.3** Construction as per Contract Drawings and as per CW 3310 and CW3325.

E23.4 Height, width and length of retaining curbs at the back of the sidewalk to be constructed as per the Drawings. All forming and reinforcing steel is incidental to the unit bid price Bid for this specification.

E23.5 Any thickened edges of sidewalk will be incidental to the unit bid price Bid for the concrete sidewalk.

E23.6 Retaining curb concrete shall have a smooth face finish.

E23.7 Curing compound is to be applied to all exposed surfaces, and promptly following stripping of forms.

E23.8 Bonding agent is to be applied to bearing surfaces prior to placement of retaining curbs and is incidental to the unit bid price.

E23.9 Free draining granular backfill will be placed behind the retaining curb up to 200mm below lip of curb shall be incidental to the unit bid price. Final surface such as boulevard grading or asphalt shall be paid for at the corresponding unit bid price.

## MEASUREMENT AND PAYMENT

E23.10 Supply and Installation of concrete retaining curbs up to 200mm tall at the back of sidewalk will be measured on a per metre basis and paid for at the Contract Unit Price for "Construction of Retaining Curb (Up To 200 mm ht Separate)". The length to be paid for shall be the total number of linear metres formed and placed in accordance with this Specification and as measured and accepted by the Contract Administrator.

E23.11 Supply and Installation of concrete retaining curbs 200 to 400mm tall at the back of sidewalk will be measured on a per metre basis and paid for at the Contract Unit Price for "Construction of Retaining Curb (200 to 400mm ht Separate)". The length to be paid for shall be the total number of linear metres formed and placed in accordance with this Specification and as measured and accepted by the Contract Administrator.

## **E24. CATCH BASIN OUTFLOW RESTRICTORS**

### DESCRIPTION

E24.1 Further to CW 2130, this specification covers the supply and installation of sewer service outlet restrictors.

### MATERIALS AND CONSTRUCTION METHODS

E24.2 Restrictors are to be installed as per the Contract Drawings and SD-025B.

### MEASUREMENT AND PAYMENT

E24.3 Supply and Installation of sewer service restrictors will be measure for each location and paid for at the Contract Unit Price for "Supply and Install Sewer Service Outlet Restrictor" as per the corresponding reduced diameter. The units will be paid for each unit supplied and placed in accordance with this Specification and as measured and accepted by the Contract Administrator.



## **E25. WORKING IN PROXIMITY TO MANITOBA HYDRO OVERHEAD TRANSMISSION LINES**

### DESCRIPTION

- E25.1 Contractor is responsible to meet with Manitoba Hydro at the onset of the Selkirk Avenue 2022 Works to verify the working restrictions, equipment and material storage, location of any site trailers and clearance requirements related to the transmission lines on Selkirk Avenue from McPhillips to the CP Rail.
- E25.2 The Contractor shall organize all safety watches that may be required.

### MEASUREMENT AND PAYMENT

- E25.3 Manitoba Hydro safety watches and precautions required for working in proximity to Manitoba Hydro Overhead transmission lines shall not be measured or paid and will be considered incidental to the Work.

## **E26. WORKING NEAR RAIL**

### E26.1 General Requirements

- E26.1.1 The Contractor shall be responsible to meet all railway company, Canadian Pacific Railway (CP), constraints, requirements, and safety measures.
- E26.1.2 Prior to commencement of roadworks within the Rail right-of-way the Contractor is responsible to coordinate a kick-off meeting with CP to determine limits of Work Foul of Track.

### E26.2 Description of Work

- E26.2.1 The Contractor will be responsible to tie into the railway crossing with required resurfacing roadworks. The intended detailed railway crossing shall be City of Winnipeg SD-231A.
- E26.2.2 All sections of Appendix 'H' covering railway requirements apply.

### E26.3 CP Requirements

- E26.3.1 CP requirements are included in Appendix 'H'. The Contractor is advised that the requirements are applicable to all of the Contractor's personnel and equipment crossing CP tracks and property.

### E26.4 Railway Flagging Costs

- E26.4.1 The railway company will provide a Protecting Foreman for the protection of the railway's plant and equipment and no cost shall be borne by the Contractor. No measurement for payment will be made for performing all operations herein described and all other items incidental to the Work described.
- E26.4.2 The Contractor shall coordinate work so as to limit operations requiring railway flagging, to minimize these costs to the project to the satisfaction of the Contract Administrator. Railway flagging costs identified by the Contract Administrator to be a result of poor coordination shall be borne by the Contractor.

### E26.5 Working Within the Rail Right-of-Way

- E26.5.1 The Contractor shall minimize the time working within the rail right-of-way. The Contractor shall only enter the right of way for;
- (a) Construction of the pavement and related works adjacent to the rail only if required and;
  - (b) Working with CP within the right-of-way;

- E26.6 Work by the Contractor that requires flagging protection by CP shall be performed through consecutive working days in a continuous operation, such that flagging protection can be provided for a single distinct time period.

**E26.7 Measurement and Payment**

E26.7.1 Working Near Rail will be considered incidental to the Work. No measurement and payment will be made within this section.

**E27. ASPHALT CONCRETE WORKS**

CONSTRUCTION METHODS

E27.1 Further to CW 3410, Section 9.3.2 (b) shall be revised to include the following:

The Contractor shall provide a clean vertical joint and apply an even distribution of tack coat for all Cold Longitudinal Joints on this contract, prior to paving the adjacent lane.

**E28. MANHOLE BENCHING REPAIRS**

CONSTRUCTION METHODS

E28.1 Repair of Concrete Benching shall be with a fast hardening high strength concrete repairing compound designed for underwater use.

MATERIALS

E28.2 Approved Products: Dure-Crete by CC Chemicals or approved equal in accordance with B6

MEASUREMENT AND PAYMENT

E28.3 Repair of concrete manhole benching will be measured on a unit basis and paid for at the Contract Unit Price for "Repair of Concrete Benching (up to 0.5m<sup>3</sup>)". Payment for concrete manhole benching repair shall include all required materials and labour to complete the repair of the manhole benching identified by the Contract Administrator up to 0.5m<sup>3</sup> of grout. Number of units to be paid for will be the total number of repairs completed in accordance with this specification, accepted and measured by the Contract Administrator.

# **APPENDIX 'A'**

# **GEOTECHNICAL REPORT**

## **APPENDIX 'B'**

# **ELECTRICAL STANDARDS (2020 STREETLIGHT INSTALLATIONS)**

# **APPENDIX 'C'**

## **SAFE EXCAVATION & SAFETY WATCH GUIDELINES**

# **APPENDIX 'D'**

## **GELCAP KIT**

# **APPENDIX 'E'**

## **ELECTRIC GAS LOCATE**

# **APPENDIX 'F'**

## **SAMPLE JOB PLAN**



# **APPENDIX 'G'**

## **NETWORK COMMISSIONING REPORT**

# **APPENDIX 'H'**

## **CP RAIL SAFETY REQUIRMENTS**