Winnipeg

Corporate Finance Department
*Purchasing Division*

# 30-2026 ADDENDUM 1

# 2026 REGIONAL STREET RENEWAL PROGRAM- ST. MARY'S ROAD FROM FERMOR AV TO ARDEN AV

ISSUED: March 13, 2026
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**URGENT**

**PLEASE FORWARD THIS DOCUMENT TO WHOEVER IS IN POSSESSION OF THE BID/PROPOSAL**

**THIS ADDENDUM SHALL BE INCORPORATED INTO THE BID/PROPOSAL AND SHALL FORM A PART OF THE CONTRACT DOCUMENTS**

Template Version: Addendum 2026-02-03

**Please note the following and attached changes, corrections, additions, deletions, information and/or instructions in connection with the Bid/Proposal, and be governed accordingly. Failure to acknowledge receipt of this Addendum in Paragraph 10 of Form A: Bid/Proposal may render your Bid/Proposal non-responsive.**

## FORM B: PRICES

Replace: 30-2026 Form B: Prices with 30-2026 Addendum 1 - Form B: Prices. The following is a summary of changes incorporated in the replacement Bid/Proposal Submission:

Form B(R1): Updated undergrounds throughout including catch basin lead and manhole repairs.

Page numbering on some forms may be changed as a result.

## PART B – BIDDING PROCEDURES

Revise: B2.1 to read: The Submission Deadline is 12:00 noon Winnipeg time, March 25, 2026.

## PART D – SUPPLEMENTAL CONDITIONS

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

(a) Complete Stage 1 (Northbound St. Mary's Road) between Abinojii Mikanah and St. Vital Road, including all asphalt tie-ins and boulevard restoration within **twenty (20)** consecutive Working Days of the commencement of Stage 1.

Revise: D20.1 to read: The Contractor shall achieve Substantial Performance within **eighty five (85)** consecutive Working Days of the commencement of the Work as specified in D14.

Revise: D21.1 to read: The Contractor shall achieve Total Performance within **ninety (90)** consecutive Working Days of the commencement of the Work as specified in D14.

## PART E – SPECIFICATIONS

Add: **E27. WORKING IN CLOSE PROXIMITY TO A FEEDER MAIN**

E27.1 Proposed works have required excavation in proximity to existing feeder main. Prior to any construction, exploratory excavations at the existing 600mm St Vital Feeder Main are to be completed in accordance with E28 to confirm depth and location of the feeder main

for any location where works are to be completed within close proximity to the existing feeder main.

E27.2 Close proximity will include any excavation within five (5) metres of the existing feeder main location shown on the drawings.

E27.3 Granular material, construction material, soil or other material, shall not be stockpiled on the feeder main or within five (5) metres of centreline of the feeder main.

E27.4 Stage construction such that the feeder main is not subjected to significant asymmetrical loading at any time.

E27.5 Where work is in close proximity to the feeder main, utilize construction practices and procedures that do no impart excessive vibration loads on the feeder main or that would cause the settlement of the subgrade below the feeder main.

E27.6 Concrete demolition and removal within five (5) metres horizontally of the feeder main shall be completed by saw cutting and removal, or use of hand held jack hammers. Use of machine mounted concrete breakers within five (5) metres of a feeder main shall not be permitted.

E27.7 Construction and demolition equipment shall not travel along, or park on either side of the feeder main within a lateral distance of three (3) metres from the centerline of the feeder main.

E27.8 Vibratory equipment will not be permitted over or within three (3) metres of the centreline of the feeder main.

E27.9 Where there is less than 1.6 metres of cover over the feeder main, utilize only smooth edged excavation buckets, soft digging / vacuum excavation methods, or hand excavation techniques.

**Add: E28. EXPLORATORY EXCAVATIONS AT A FEEDER MAIN**

E28.1 Concrete demolition and removal to be in accordance with E27.6.

E28.2 Exploratory excavations deeper than one (1) metre shall be done using vacuum excavation methods to minimize the potential for any damage to the feeder main. The purpose of exploratory excavations at feeder main is to determine the excavation method to be used to install new water main infrastructure within close proximity, as defined in E27.2, to the existing feeder main.

E28.3 Depending on the depth of the excavation required to install the works in relation to the existing feeder main, the following excavation methods shall be implemented for any excavation deemed close proximity in accordance with E27.2:

(a) Where the excavation elevation is higher than one (1) metre above the crown elevation of the feeder main, excavations by normal methods with a backhoe/excavator will be permitted.

(b) Where part of the excavation elevation is located within one (1) metre of the crown elevation of the feeder main, excavation using a backhoe/excavator will be permitted to a depth of one (1) metre above the crown of the feeder main. Excavation below this depth must be soft digging / vacuum excavation methods only.

(c) Where part of the excavation elevation is located below the crown elevation of the feeder main but higher than the invert elevation of the feeder main, a higher standard of care is required to minimize the impact on the feeder main. Excavation using a backhoe/excavator will be permitted to a depth of one (1) metre above the crown of the feeder main. Excavation below this depth must be by soft digging / vacuum

excavation methods only. Shoring and bracing may be required to minimize the loss of soil or bedding material from around the feeder main.

(d) Where part of the excavation elevation is located below the invert elevation of the feeder main, a very high standard of care is required to minimize the impact on the feeder main pipe. The excavation must be completed as described in E28.3(c), however, engineered shoring may be required in the excavation shaft to minimize the disruption to the feeder main. Engineered Shoring will be required if excavation is within a 1:1 slope from the springline of the feeder main, or based on existing soil conditions found during the exploratory excavation there is potential that excavation will impact bedding material under the feeder main. If required, Engineered Shoring must comply with E29.

E28.4 Backfill for excavations within close proximity to the feeder main to be done in accordance with CW 2030, using Class 2 backfill. Flood tamping is not permitted in a zone within 2.5m (horizontal offset) from the edge of the feeder main. Granular backfill shall be placed and mechanically compacted in maximum 300mm thick lifts. Mechanical compaction equipment is limited to walk behind vibratory compactors only. Compaction using a backhoe / excavator bucket is not permitted due to the potential for over-compaction and vibration.

E28.5 Exploratory excavations of the feeder main for excavations in close proximity shall be measured on a unit basis per exploratory excavation required and paid for at the Contract Unit Price of “Exploratory Excavation at Feeder Main” in Form B of the Bid Submission..

**Add: E29. ENGINEERED SHORING**

E29.1 The type, strength and amount of shoring and bracing shall be such as the nature of the ground and site conditions may require to protect the feeder main from loss of bedding material below the pipe springline.

E29.2 All material used for shoring construction shall be in a like-new condition, and shoring and bracing shall be so space and dimensioned as to prevent caving, loss of ground, surface settlement, or squeezing of the soil beyond the neat lines of the excavation. Shoring material shall be free from defects that might impair its strength or suitability for the Work.

E29.3 Prepare design calculations as required to facilitate review of the submission for conformance with the Contract Documents.

E29.4 Submit Shop Drawings and design calculations for the shoring/excavation system designed and sealed by a Professional Engineer registered and licensed to practice in the Province of Manitoba, and experienced in the structural design of shoring systems. The designer of the shoring system shall inspect the system during construction and certify, in writing to the Contract Administrator, that construction is in conformance with the approved design.

E29.4 Shoring and bracing shall be removed in stages while backfilling the excavation.

E29.6 All work associated with the design and provision of engineered shoring to protect the feeder main shall be measured on a unit basis per excavation requiring engineered shoring and bracing, and paid for at the Contract Unit Price of “Engineered Shoring” in Form B of the Bid Submission. Requirement for engineered shoring will be determined by the Contract Administrator based on the findings of the “Exploratory Excavations at a Feeder Main” completed by the Contractor in accordance with E28.

**Add: E30. CURED-IN-PLACE-PIPE (CIPP)**

DESCRIPTION

E30.1 This specification covers the supply and installation of trenchless point repairs (TPR) using cured-in-place pipe (CIPP).

E30.2 Definitions

(a) Minimum material requirements for CIPP shall conform to ASTM D5813 “Standard Specification for Cured-In-Place Thermosetting Resin Sewer Pipe” and the supplemental requirements noted herein.

(b) Reinforced CIPP liners shall be considered any CIPP liner constructed from either a carbon fibre or glass fibre reinforced felt.

E30.3 Submittals

E30.3.1 Provide the required submittals for review by the Contract Administrator a minimum of ten (10) Business Days prior to starting lining operations. TPR designs and shop drawings shall include the following information and shall be sealed and signed by a Professional Engineer licensed to practice in the Province of Manitoba.

(i) TPR thickness computations including all specified design checks identified in E30.4. Identify design assumptions based on a review of the Sewer Maintenance Inspection that differ from the information provided in the Specifications for the existing sewer design conditions.
(ii) Name and manufacturer of the resin and felt tube proposed for each TPR.
(iii) Means of liner installation and curing method (e.g. air/steam, water, air/UV).
(iv) A full curing protocol; time, temperature and pressures (minimum and maximum) in the case of hot water or steam cures and time, rate of travel of the UV light train, pressures (minimum and maximum), and amount of lamps in operation in the case of UV cures.
(v) TPR material properties used for design.
(vi) Other information that may reasonably be required by the Contract Administrator to confirm the TPR design proposed conforms to the specified requirements and design intent.
(vii) Details of the wet-out procedure for TPR.
(viii) Styrene management plan with sufficient details on regulatory compliance considerations for discharge based on the Contractor’s proposed resin selection, curing method, and discharge location for steam condensate or cure water, first flush, etc., and the means, methods and techniques employed to mitigate styrene levels to within acceptable limits for the site-specific application, including resin selection to eliminate or mitigate styrene levels, cure considerations to mitigate excessive styrene volatilization, and handling considerations, post cure to mitigate levels discharged to aquatic or other environments that may be deleteriously impacted by excessive styrene levels.

E30.4 Design of CIPP Liners

E30.4.1 Design Objectives

(i) Maximizing the structural enhancement of the sewer by installing a close-fit TPR.
(ii) Maximise the internal diameter of the rehabilitated sewer with as little impact on the hydraulic capacity of the sewer as possible.
(iii) Reducing infiltration and exfiltration.
(iv) Preventing root intrusion.
(v) Providing sufficient chemical resistance to prevent further sewer pipe degradation related to the conveyance of sewage.

(vi) Minimizing sewer service disruption during rehabilitation.
(vii) Minimizing the time required to complete the sewer rehabilitation.
(viii) Minimizing disturbance to pavements and boulevards.
(ix) Minimizing disruption to vehicular and pedestrian traffic.
(x) Minimizing the impact of construction on commercial, industrial, and institutional facilities.
(xi) Providing a smooth transition between the TPR and the host pipe to prevent the build-up of solids and minimize wear on the repair due to routine sewer cleaning and other maintenance activities.
(xii) Filling any existing voids outside the sewer at the point of repair.
(xiii) Select a CIPP product and construction approach for rehabilitation with the intent towards maximizing the achievement of these design objectives.

E30.4.2 General

(i) Chemical and mechanical properties of the liner based on the waste stream to establish and minimum design life of 50 years.
(ii) Size CIPP in accordance with the design objectives to provide a close-fit to the host pipe with no annulus except for the maximum allowable diametric shrinkage due to curing permitted in ASTM D5813.
(iii) Design features of TPR shall include:
- Design TPR as a gravity pipe in a fully deteriorated pipe condition and the depth of cover calculated based on the specific location of the repair in the sewer.
- Tapered end sections to promote a smooth transition from the repair to the host pipe.
- A means to facilitate flow through by-pass of existing dry weather flow during the course of the repair.

(iv) Long-term values for flexural modulus of elasticity and flexural strength will be considered to be the projected value at 50 years of a continuous application of the design load based on the specific resin and felt composite as established by ASTM D2990 based on an applied stress level of 25% of the yield strength of the liner and approved for use in the pre-qualification process. The Contractor shall provide supporting long term test data conforming to ASTM D2990 for any resin and felt composites not approved for use in the prequalification process.
(v) The Contractor shall also provide short term test data on the modulus of elasticity and flexural strength of the in place composite structure conforming to ASTM D790 for any resin and felt composites not approved for use in the prequalification process.

E30.4.3 Minimum Loading Assumptions:

(i) Unless otherwise specified, the groundwater table shall be assumed to be 2.0 m below the existing ground surface.
(ii) Calculate soil loads based on saturated soil unit weight of 18.85 kN/$m^3$ (1922 kg/$m^3$).
(iii) The following live loads shall be included in the design:
- The applied soil pressures from an AASHTO HS 25 design truck unless a higher or lower value is indicated in the contract specifications shall be estimated and utilized in the design of the CIPP liner. Applied soil pressures from AASHTO design truck loads shall be estimated in accordance with AASHTO LRFD Bridge Design Specifications, Seventh Edition (2014).

(iv) Unless otherwise specified, applied soil pressures at depth caused by superimposed surface loads shall be calculated using the Boussinesq solution for distribution of stresses from surface point loads.

E30.4.4 Hydraulic Design Checks

(i) Perform a design check to confirm that the full flow hydraulic capacity of the TPR will be equal to or greater than the existing sewer. Use “Manning’s” formula with assumed ‘n’ value of 0.012 for the TPR and 0.014 for the existing sewer. Report any sewers showing a decrease in post lining flow capacity from existing conditions.

E30.4.5 TPR Design – Minimum Design Assumptions

(i) An enhancement factor (K) of 7, assuming a close fit with the host pipe.
(ii) Minimum factor of safety (N) of 2 for restrained buckling analysis.
(iii) Modulus of soil reaction (E’s) will be assumed to be 6900 kPa unless otherwise specified.
(iv) The following minimum values for ovality of the existing sewer shall be used unless otherwise specified or as determined from observation of the maintenance inspection:
- Fully deteriorated design – 2%

E30.4.6 TPR Design – Fully Deteriorated Condition

(i) Design TPR for fully deteriorated pipe condition in accordance with Appendix X1 of ASTM F1216 and the following minimum design checks (except where noted otherwise):
- Determine wall thickness by restrained buckling analysis.
- Check minimum wall thickness requirements.

(ii) Applied external loads shall be estimated in accordance with Appendix X1 of ASTM F1216.

MATERIALS

E30.5 Non-Reinforced TPR Products

E30.5.1 Non-Reinforced TPR products shall conform to the requirements of ASTM F1216 and D5813.

E30.6 Reinforced CIPP Products

E30.6.1 Reinforced TPR products shall conform to the requirements of ASTM F2019 and D5813. Notwithstanding ATSM F2019, the fabric tube may be reinforced with either glass or carbon fibres, as required to achieve the desired short and long term material properties.

E30.6.2 Reinforced TPR systems utilizing UV curing methods may be utilized.

CONSTRUCTION METHODS

E30.7 Verification dimensional requirements of each sewer to be rehabilitated

E30.8 Sewer Cleaning

E30.8.1 Remove loose debris, solid debris, roots, and grease in accordance with CW 2140 in order to adequately prepare the sewer for lining.

E30.8.2 Complete Pre-Lining Inspection in accordance with E31.

E30.9 Installation of TPR

E30.9.1 Install and cure TPR in accordance with manufacturer’s installation instructions.

E30.9.2 TPR shall be cured by hot water, steam, or UV light sources.

E30.9.3 Carry out workmanship in accordance with ASTM D5813.

E30.9.4 Extend limits of TPR a minimum of 500 millimetres in each direction beyond the limits of the defect to be repaired.

E30.9.5 Ensure termination points of TPR provide a smooth and uniform flow transition to the host pipe for the full circumference of the repair.

E30.10 Styrene Management

E30.10.1 Under no circumstances shall cure water or condensate containing styrene be discharged downstream in the land drainage sewer or any other direct connection to surficial drainage courses or facilities.

E30.10.2 The Contractor shall develop and implement a styrene management plan for each site that could reasonably be impacted by planned or inadvertent discharge of styrene into the land drainage system, based on the site-specific conditions for the TPR installation and boundary conditions at that site.

E30.3.3 The Contractor shall submit a Styrene Management Plan(s) in accordance with E30.3.1 (viii) prior to installation.

E30.3.4 Irrespective of the need for a styrene management plan, the Contractor shall not discharge styrene laden waters to a water course, land drainage sewer, or other surface drainage feature.

E30.3.5 The Contractor's Styrene Management Plan shall include at least one of the following methods of control:

(a) Use of styrene free resins;
(b) Use of on-site treatment systems where hot water curing methods are utilized;
(c) 100% condensate capture and off-site disposal to the WWS system; or
(d) On-site monitoring to verify no residual styrene is discharged to the environment where UV curing methods are used.

E30.3.6 The Contractor shall be responsible to undertake sufficient monitoring to confirm and demonstrate that discharge levels are consistent with the Styrene Management Plan's stated discharge limit objectives. Provide a report on styrene monitoring results upon completion of the liner installation.

E30.11 Quality Control Records

E30.11.1 Maintain the following Quality Control records of the work and provide to the Contract Administrator after completion of the work.

(a) Means of curing liners.
(b) Continuous log of pressure maintained in the liner during the curing period.
(c) Continuous log of temperature at boiler in and out and at all thermistors placed between the host pipe and the liner at all manholes during the initial cure, cure, and cool down periods.
(d) For UV cures, monitoring shall also include the rate of travel of the UV assembly and the amount of lamps in operation during the curing process.

E30.12 CIPP Samples for Quality Assurance Purposes

E30.12.1 The Contractor shall provide the following samples from each TPR:

(a) Plate sample in accordance with 0.

E30.12.2 The Contract Administrator will coordinate and pay for CIPP sample testing to confirm the CIPP flexural strength, flexural modulus and thickness in accordance with the requirements of ASTM D5813, D790, and ASTM D3567.

E30.12.3 The Contract Administrator will review CIPP liner thickness results taken from test plates on a case-by-case basis.

E30.12.4 Test Plate Samples

(a) Produce and provide to the Contract Administrator test plate samples of each TPR installed.
(b) Test plate samples shall be produced from a full thickness portion of the liner (where possible), shall contain the same resin and hardener ratios and volumes used in the TPR liner wet-out. Ensure the test plate is clamped as close to the final installation thickness of the TPR liner as possible.
(c) For unreinforced liners, the minimum dimension of test plate sample shall be sized such that a minimum of 5 test specimens can be cut, with a minimum 16:1 span to depth (liner thickness) ratio in accordance with ASTM D790. Test plate sample size provided shall account for requirement to remove any damaged or untestable edge from the plate sample
(d) For reinforced liners, the minimum dimension of test plate sample shall be sized such that a minimum of 5 test specimens can be cut, with a minimum 40:1 span to depth (liner thickness) ratio in as recommended in ASTM D790. Test plate sample size provided shall account for requirement to remove any damaged or untestable edge from the plate sample. Circumferential reinforcing fibres shall be orientated in the long dimension of the test plate sample and shall be clearly marked by the Contractor. Confirm the required test plate size for reinforced liners with the Contract Administrator prior to the CIPP installation.
(e) Prepare test plate samples on-site from the actual TPR and cure in the following manner:
    (i) For the full duration and comparable temperature as the liner being installed

E30.13 Post Construction Design Review for Total Performance

E30.13.1 The Contract Administrator will perform a post-construction design review to confirm that the completed TPR meets the 50 year design life structural requirements prior to issuance of Total Performance. The design review will utilize the measured values for flexural strength, flexural modulus, and TPR thickness from the test plate.

E30.13.2 TPR strength values will be further reduced to account for creep based on the creep reduction values recommended in the pre-qualification submissions to assess the suitability of the liner to meet the 50 year design life requirement. The use of full enhancement factors in this analysis will be limited to liners that are confirmed by visual classification to be close-fit liners based on the post-lining sewer inspection.

E30.13.3 The Contract Administrator will advise of any discrepancies between the constructed TPR and the design requirements.

E30.13.4 Defects in TPR liners will be reviewed on a case by case basis by the Contract Administrator. The Contract Administrator will consult with the Contractor and taking into account the condition of the host pipe prior to lining, the TPR installation conditions, and the long term use of the sewer to assess the structural and performance ramifications of the defects.

E30.13.5 The Contractor shall:

(a) Perform necessary remedial measures to confirm that a TPR deemed as structurally deficient will comply with the 50 year design life requirement such as confirmation of actual ovality, determination of a more representative groundwater elevation locally through monitoring, and supplemental strength testing and thickness measurements.
(b) Install a supplemental TPR of the required thickness to structurally enhance the installed TPR if supplemental testing fails to confirm the TPR will meet the 50 year design life requirement.
(c) Review remedial action with the Contract Administrator prior to implementation.
(d) Perform further testing, monitoring and calculations and install structural enhancements at own cost.

MEASUREMENT AND PAYMENT

E30.14 Sewer Cleaning

E30.14.1 Any sewer cleaning, solid debris cutting, grease or root cutting required to facilitate the installation of the TPR will be considered incidental to the TPR installation and will not be measured for payment. No separate payment shall be made.

E30.15 TPR Installation

E30.15.1 TPR installation will be measured on a length basis for each size and paid for at the Contract Unit Price for “Trenchless Point Repair (CIPP)”. Length to be paid for will be the total length of TPR supplied and installed in accordance with this specification, accepted and measured by the Contract Administrator.

E30.15.2 TPR lengths will be measured by the post lining CCTV inspection. TPRs installed beyond the limits identified by the Contract Administrator during review of the pre-lining video shall not be measured for payment.

E30.15.3 Eighty (80) percent of the payment will be made upon satisfactory completion of the TPR installation work. The remaining twenty (20) percent of the payment will be made upon confirmation of the TPR strength and delivery and acceptance of all required submissions, shop drawings, and reports.

E30.15.4 Where TPRs are improperly installed due to negligence on the part of the Contractor, payment for the TPR will be withheld until the identified issues have been rectified.

E30.16 Quality Control Records

E30.16.1 Preparation of quality control records shall be considered incidental to the TPR installation and will not be measured for payment. No separate payment shall be made.

E30.17 Test Samples

E30.17.1 All work and materials required for the preparation of TPR test samples shall be considered incidental to the TPR installation and will not be measured for payment. No separate payment shall be made.

E30.18 Styrene Management

E30.18.1 All work and materials required for the management of styrene will be considered incidental to the TPR installation and will not be measured for payment. No separate payment shall be made.

**Add: E31. TPR SEWER INSPECTIONS**

DESCRIPTION

E31.1 This Specification describes the requirements for CCTV inspections required to facilitate the specified TPR work.

E31.1.1 This specification amends and supplements Specification CW 2145.

E31.1.2 Perform the following sewer inspections in accordance with CW 2145 in the presence of the Contract Administrator.

(a) Pre-Lining Inspection:

(i) Perform after sewer cleaning and preparation in accordance with E30.8.
(ii) The Pre-Lining Inspection shall confirm:
- Necessary cleaning and pipe preparation work have been satisfactorily completed to allow for installation of the TPR.
- Condition of the sewer pipe is consistent with the design conditions and Specifications. The Contractor shall advise the Contract Administrator of any condition that is contrary to the design conditions or assumptions made that may affect either long or short term performance of the liner prior to commencing lining.

(iii) No coding of the submission will be required.

(b) Post-Lining Inspection:
(i) Perform immediately following installation of the TPR and while flow control measures are in place.
(ii) Perform Post-Lining Inspection where Regional Street lane closures are required within 24 hours of completing the installation of the TPR.
(iii) Intent is to confirm fit and finish of the TPR.
(iv) Post-Lining inspection shall be submitted within fifteen (15) Business Days of completion of the liner installation.
(v) Full coding required.

E31.1.3 Submit all inspection videos to the Contractor Administrator for review in accordance with CW 2145 and as specified herein.

E31.2 Sewer Inspection Reports

E31.2.1 Provide the Contract Administrator with the following sewer inspection reports prepared in accordance with CW 2145.

(a) Pre and post-lining inspection and reports before Total Performance of Work.

MEASUREMENT AND PAYMENT

E31.3 Verification of Sewer Dimensions:

E31.4 Sewer inspections will be measured and paid for in accordance with CW 2145 except as modified herein:

(a) Pre-Lining Inspection will be considered incidental to the TPR installation and will not be measured for payment. No separate payment shall be made.
(b) The total length of Post-Lining Inspection to be paid shall be the total length of sewer inspected to the satisfaction of the Contract Administrator. The length to be manhole to manhole and will be measured and paid for in accordance with “Sewer Inspection”. Where partial or incomplete inspections are submitted, the length of sewer inspected will be the length recorded by

the Contractors calibrated inspection equipment or as determined by the Contract Administrator.

E31.5 Sewer Inspection Reports

(a) Sewer inspection reports measured and paid for in accordance with CW 2145.

**Add: E32. EXCAVATION FOR SERVICE PIPE ACCESS**

DESCRIPTION

E32.1 This Specification shall cover excavations, shoring, and modifications as required for service pipe access to facilitate the proposed service pipe TPR work.

E32.2 Submittals

E32.2.1 A work plan shall be provided for each excavation to facilitate liner installation. Work plans are not required where excavations are not required. The work plan shall include the following:

(a) Limits of excavation (width, length, depth);
(b) means of shoring the excavation;
(c) services to be disrupted. Means of maintaining or otherwise dealing with service flows;
(d) other information required to describe the work.

E32.2.2 Shop Drawings for excavation shoring (where required) shall be prepared and submitted a minimum of five (5) Business Days prior to undertaking the excavation and shoring installation. Where required by Workplace Safety and Health regulation, shoring Shop Drawings shall be sealed by a Professional Engineer, registered in the Province of Manitoba, experienced in the design of excavation shoring systems.

E32.3 Shoring Design

E32.3.1 Shoring shall be provided for excavations in accordance with CW 2030.

E32.3.2 Excavation shoring shall be designed to accommodate the installation of the selected rehabilitation technology.

E32.3.3 All shoring systems shall comply with Manitoba Workplace Safety and Health requirements.

MATERIALS

E32.4 All materials shall conform to City of Winnipeg Standard Construction Specifications.

CONSTRUCTION METHODS

E32.5 Service Pipe Modifications to Facilitate Liner Installation

E32.5.1 If required to complete the work, the Contractor may choose to excavate to permit access to the existing sewer services.

(a) The Contractor may remove a portion of the service pipe for access to complete the proposed TPR.
(b) Where removal of existing service pipe is required to facilitate pipeline access, the contractor shall remove service pipe sections at existing pipe joints as required for service pipe access.

E32.5.2 All service pipe removal and replacement works shall conform to CW2130.

E32.6 Excavation

E32.6.1 The Contractor is responsible for locating the existing sewer and all other buried utilities and shall take all steps to locate the existing sewer prior to excavation and installation of shoring.

E32.6.2 Carefully excavate to expose existing pipelines.

E32.6.3 Only smooth-edged buckets may be utilized for excavations within 1.5 m of the existing sewer service.

E32.6.4 The existing sewer service pipes shall be located prior to proceeding with excavations within 1.0 m of the pipe. Final excavation (within 300 mm of the pipe wall) shall be completed using soft dig or hand excavation methods to prevent damage to the pipe.

E32.6.5 Excavation within 1.5m of the outside edge of the existing 600mm diameter LDS shall not be permitted.

E32.6.6 Excess excavation materials shall be disposed of off site.

E32.6.7 Any services severed during excavation and shoring installation must be rerouted or otherwise bypassed.

E32.7 Shoring Installation

E32.7.1 Locate the extents of the existing sewer service prior to excavation and installing shoring using soft dig methods. Please note the wall thicknesses and outside diameter of the existing trunk sewers are unknown.

E32.7.2 Construction Vibrations

(a) The Contractor shall use means and methods that will limit vibrations at locations adjacent to utilities and structures.

E32.8 Demolition

E32.8.1 Carefully remove, expose, and demolish existing sewer service as required. The use of pneumatic breakers is prohibited. Final opening in the existing sewer service shall be neatly cut square to the existing pipe.

E32.9 Shoring Removal

E32.9.1 Shoring systems shall be completely removed upon completion of the works.

E32.9.2 Care shall be taken to remove the shoring system and backfill the trench in such a way as to not create voids. If the shoring system requires removal after backfill is in place, resulting voids shall be filled with flowable cement slurry.

E32.10 Backfill

E32.10.1 Backfill within 1.0 m of existing and proposed pavements shall be completed to CW 2030, Class 1 standards. Granular Class 2 backfill shall extend to the underside of the stabilized fill.

E32.10.2 Backfilling with frozen materials will not be permitted.

MEASUREMENT AND PAYMENT

E32.11 Pipeline Access

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|---|---|
| E32.11.1 | Pipeline access will be paid on a Lump Sum basis for each identified asset at the Contract Lump Sum Price for “Service Pipe Access” as listed in the Form B: Prices. |
| E32.11.2 | Payment for “Service Pipe Access” shall include all costs associated with providing access to the service pipe to accommodate sewer service TPR, including but not limited to: excavations, shoring, demolition, new service pipe installations including couplings require to reconnect to existing service pipes, backfill, and all other materials, labour, and equipment required to complete the work as specified. |

## DRAWINGS

Add: 30-2026_Addendum_1 Drawing_S-1651-R0

30-2026_Addendum_1 Drawing_S-1671-R0

Replace: 30-2026 _Drawing_P-3598-02-R0 with 30-2026 _Addendum_1 Drawing_P-3598-02-R1

30-2026 _Drawing_P-3598-03-R0 with 30-2026 _Addendum_1 Drawing_P-3598-03-R1

30-2026 _Drawing_P-3598-04-R0 with 30-2026 _Addendum_1 Drawing_P-3598-04-R1

30-2026 _Drawing_P-3598-05-R0 with 30-2026 _Addendum_1 Drawing_P-3598-05-R1

30-2026 _Drawing_P-3598-06-R0 with 30-2026 _Addendum_1 Drawing_P-3598-06-R1

30-2026 _Drawing_P-3598-07-R0 with 30-2026 _Addendum_1 Drawing_P-3598-07-R1

30-2026 _Drawing_P-3598-08-R0 with 30-2026 _Addendum_1 Drawing_P-3598-08-R1

30-2026 _Drawing_P-3598-09-R0 with 30-2026 _Addendum_1 Drawing_P-3598-09-R1

30-2026 _Drawing_P-3598-10-R0 with 30-2026 _Addendum_1 Drawing_P-3598-10-R1

30-2026 _Drawing_P-3598-11-R0 with 30-2026 _Addendum_1 Drawing_P-3598-11-R1

30-2026 _Drawing_P-3598-12-R0 with 30-2026 _Addendum_1 Drawing_P-3598-12-R1

30-2026 _Drawing_P-3598-13-R0 with 30-2026 _Addendum_1 Drawing_P-3598-13-R1

30-2026 _Drawing_P-3598-14-R0 with 30-2026 _Addendum_1 Drawing_P-3598-14-R1

30-2026 _Drawing_P-3598-15-R0 with 30-2026 _Addendum_1 Drawing_P-3598-15-R1

30-2026 _Drawing_P-3598-16-R0 with 30-2026 _Addendum_1 Drawing_P-3598-16-R1

30-2026 _Drawing_P-3598-17-R0 with 30-2026 _Addendum_1 Drawing_P-3598-17-R1

30-2026 _Drawing_P-3598-18-R0 with 30-2026 _Addendum_1 Drawing_P-3598-18-R1

30-2026 _Drawing_P-3598-19-R0 with 30-2026 _Addendum_1 Drawing_P-3598-19-R1

30-2026 _Drawing_P-3598-20-R0 with 30-2026 _Addendum_1 Drawing_P-3598-20-R1

30-2026 _Drawing_P-3598-21-R0 with 30-2026 _Addendum_1 Drawing_P-3598-21-R1

30-2026 _Figure-1-R0 with 30-2026 _Addendum_1 Figure-1-R1

30-2026 _Figure-2-R0 with 30-2026 _Addendum_1 Figure-2-R1

30-2026 _Figure-3-R0 with 30-2026 _Addendum_1 Figure-3-R1

30-2026 _Figure-4-R0 with 30-2026 _Addendum_1 Figure-4-R1

30-2026 _Figure-5-R0 with 30-2026 _Addendum_1 Figure-5-R1

30-2026 _Figure-6-R0 with 30-2026 _Addendum_1 Figure-6-R1

30-2026 _Figure-7-R0 with 30-2026 _Addendum_1 Figure-7-R1

30-2026 _Figure-8-R0 with 30-2026 _Addendum_1 Figure-8-R1

30-2026 _Figure-9-R0 with 30-2026 _Addendum_1 Figure-9-R1

30-2026 _Figure-10-R0 with 30-2026 _Addendum_1 Figure-10-R1

30-2026 _Figure-11-R0 with 30-2026 _Addendum_1 Figure-11-R1

30-2026 _Figure-12-R0 with 30-2026 _Addendum_1 Figure-12-R1

30-2026 _Figure-13-R0 with 30-2026 _Addendum_1 Figure-13-R1

30-2026 _Figure-14-R0 with 30-2026 _Addendum_1 Figure-14-R1

30-2026 _Figure-15-R0 with 30-2026 _Addendum_1 Figure-15-R1

30-2026 _Figure-16-R0 with 30-2026 _Addendum_1 Figure-16-R1

30-2026 _Figure-17-R0 with 30-2026 _Addendum_1 Figure-17-R1

30-2026 _Figure-18-R0 with 30-2026 _Addendum_1 Figure-18-R1

30-2026 _Figure-19-R0 with 30-2026 _Addendum_1 Figure-19-R1

30-2026 _Figure-20-R0 with 30-2026 _Addendum_1 Figure-20-R1

30-2026 _Figure-21-R0 with 30-2026 _Addendum_1 Figure-21-R1