



City of Milton

Purchasing Department

ITB 2021.02 Cured In Place Pipe

ADDENDUM #1

March 4, 2021

1. Could the Owner/Engineer please clarify if this CIPP rehab bid is for storm or sanitary or for both the assets? The measurement and payment section is giving conflicting information. **The contract is for both sewer and storm drain.**
2. If the city plans to rehab storm pipe as well using these said contract pricing, where are the pay items for cleaning storm pipeline segments? Bid items 27 to 30 are for sanitary pipeline. **Items 27 through 30 shall be Main Line cleaning for sewer and storm drain.**
3. In regards to sanitary pipe cleaning bid items 27-30, could the Owner/Engineer please clarify if any of the cleaning will involve tuberculation removal? If yes, then please add pay items for Tuberculation removal per pipe size range? **No, it does involve tuberculation.**
4. In regards to storm pipe cleaning, could the Owner/Engineer please clarify if they anticipate any barnacle removal? If yes, then please add pay items for barnacle removal per pipe size range? **No, it does not include barnacle removal.**
5. In regards to Bid Item 32 thru 35, the measurement and payment says "The unit price bid for these items shall be once per work order location requiring bypassing regardless of the number of setups and regardless if the cleaning and lining is performed at separate times", this statement is fair when the Work Order is for one location which requires one bypass setup. The same statement will undermine the contractor and open to huge financial risk, if in case there is one Work Order which has multiple locations with multiple segments needing bypass. Could the Owner/Engineer please consider re wording it to "to be paid per setup"? **The work order will be for one location.**
6. In reference to protruding laterals removal, the specs mention "The service shall be trimmed in a manner that will not damage the service beyond the main and will not create a condition allowing groundwater infiltration at that service connection", if in case the laterals are already leaking will the contractor be required to grout the lateral connection? If yes, as this is unknow please add a pay item for grouting lateral on as needed basis. **You will not be responsible for any leaks Pryor to any work being done.**
7. In reference to Bid Item 49 - Maintenance of Traffic, under measurement and payment each day is defined by as 24 hrs., Could the Owner/Engineer please clarify if the contractor needs traffic control measures during normal working hours (8-12

hrs) and does not needs traffic control for full 24 hrs, how will he be compensated by the day or by the hour? **As long as the road can be reopened to normal flow of traffic, traffic control will only be needed during working hours.**

- 8. Could the Owner/Engineer please share previous detailed bid tabulations of similar project scope? **This is the first contract for this type of work do not have any bid tabs of previous work history.**
- 9. Could the Owner/Engineer please share a summary of purchase orders history released in pervious year annual contract of similar scope? **Same answer as question number 8.**
- 10. Can I request the previous bid tabulations for this subject bid? **Same answer as question number 8.**
- 11. Can we get a copy of the two additional sections referenced in the bid language?
 - a. **Section 28.A** for Bid Item 1 TV Inspection states... *“All video work shall be performed in accordance with Section 02651 Television Inspection, included herein. The unit price bid for this item shall include all reporting and video recording requirements.”* I cannot find this section within the actual bid documents.
Section 02651 information is attached.
 - b. **Section 28.B** for Bid Items 2 through 26 it states... *“All mainline cleaning work shall be performed in accordance with Section 02760 Cleaning of Sewers, included herein.”* Same as above, I cannot find this section within the actual bid documents and there are no supplemental attachments in the link.
Section 02760 information is attached.

End of Addendum #1

The information given in this addendum is in addition to or supersedes conflicting information in the invitation to bid and is hereby made a part of the request.

Bidders are hereby notified that they shall make any necessary adjustments in their estimates as a result of this Amendment. It will be construed that each bidder's proposal is submitted with full knowledge of all modifications and supplemental data specified herein.

BIDDERS MUST SIGN THE AMENDMENT AND SUBMIT IT WITH THEIR BID.

ACKNOWLEDGEMENT:

I hereby certify that I have received the above addendum:

Signature

Date

**THIS ACKNOWLEDGEMENT MUST BE RETURNED
WITH BID/PROPOSAL PACKAGE.**

Section 02651 - Television Inspection

PART 1: General

1.1 *Description* – Provide all labor, materials, tools, equipment and incidentals as shown, specified, and required to perform television (TV) inspection of existing, new and rehabilitated piping including sewer mains and sewer lateral connections.

1.2 *Definitions* –

1.2.1 *Pre-Construction Inspection* – TV inspection of sewers and storm drains to ascertain that the condition of the pipe meets acceptable standards for the proposed rehabilitation.

1.2.2 *Post-Construction Inspection* – TV inspection of repaired or rehabilitated sewer mains and storm drains.

1.3 *Requirements* – The Contractor shall be aware that this Contract requires work in active sewers and shall follow all federal, state and local requirements for safety in confined spaces.

1.4 *Performance Requirements* –

1.4.1 Inspection shall be performed by a National Association of Sewer Service Companies (NASSCO) Pipeline Assessment Certification Program (PACP) certified operator and shall meet the coding and reporting standards and guidelines as set by PACP. All report annotations, pipe conditions and pipe defects shall be identified properly using PACP codes as defined by PACP, and severity ratings shall be calculated according to PACP.

1.4.2 Quality of inspection recording shall be acceptable to CITY when viewed on a standard computer monitor.

1.5 *Submittals* –

1.5.1 CCTV equipment, including make, model, age of video systems and tractors, and documentation that CCTV software is PACP v4.2 -certified.

1.6 *Reference Standards* – NASSCO prepared Pipeline Assessment and Certification Program, Second Edition Reference Manual, 2001. This manual includes a standard TV inspection form and sewer condition codes.

PART 2: Products

2.1 *Television Equipment* –

2.1.1 *Closed Circuit TV Equipment* – Select and use closed-circuit television equipment that will produce a color recording. The camera and video system components shall have the following properties:

2.1.1.1 Equipped with footage counter accurate to two tenths of a foot that displays on the TV monitor the exact distance of the camera from the starting point of the recording.

2.1.1.2 Lighting system that allows the features and condition of the pipe to be clearly seen. Lighting shall not cause shadows or loss of color within the field of view of the camera.

2.1.1.3 Capable of operating in 100 percent humidity conditions.

2.1.1.4 Capable of producing a minimum 470 lines of vertical resolution color video picture. Picture quality and definition shall be to the satisfaction of the Engineer.

2.1.2 *Pipe Inspection Camera* – The pipe inspection camera and video components shall have the following additional properties:

2.1.2.1 Capable of producing a video recording using a pan-and-tilt, radial viewing, pipe inspection camera that pans ± 275 degrees and rotates 360 degrees.

2.1.2.2 Camera height adjustment so that the camera lens is always centered at one-half The inside diameter, or higher, in the pipe being televised.

2.1.2.3 Include a reflector in front of the camera if necessary to provide acceptable video image quality in large diameter pipe.

2.1.3 *TV Studio* – TV studio is to be contained in an enclosed truck, trailer or van. It shall have room and seating for the operator and the City Employee and also room for at least one standing visitor with the doors closed. The studio shall have air conditioning and heating.

Normal operation of all equipment, including the TV camera, monitor, and winches is to be from a control panel in the studio.

2.1.4 *Recording* – All recordings are to be in digital format.

2.1.4.1 *Image Capture* – Digitized picture images shall be stored and be exportable as JPEG formats.

2.1.4.2 *Video Capture* – Full time live video and audio files shall be captured for each pipe segment and lateral inspected. The files shall be delivered in MPEG format on a USB 2.0 external hard drive and viewable at real time and fast forward speeds on an external personal computer that utilizes MicroSoft Media Player, version 9.0. Alternate digital formats will not be accepted unless approved by the CITY in advance of submittal. The video shall have a minimum resolution of 640 pixels (x) by 480 pixels (y) and an encoded frame rate of 29.97 frames per second. System shall perform an automatic disk image/file naming structure to allow saved video/data sections to be “Burned” to digital format. It shall have the capability of “burning” a minimum of 120 minutes of recording to the DVDR media. The video recording shall be free of electrical interference and shall produce a clear and stable image. The audio recording shall be sufficiently free of background and electrical noise as to produce an oral report that is clear and discernable. The digital recordings and inspection data shall be cross-referenced to allow instant access to any point of interest within the digital recording.

PART 3: Execution

3.1 *Television Inspection* –

3.1.1 Prior to TV inspection, clean sewer lines, storm drain, and manholes. Re-clean any sewer line or manhole found to be dirty during the TV inspection process.

3.1.2 Perform Post-construction Inspections of cured-in-place mainline liners no sooner than 30 days after the completion of the lining work.

3.1.3 Televiser the sewer and storm drain line to document the condition of the line. Notify the CITY 48 hours in advance of any TV inspection so that the CITY may observe inspection operations. Provide a color recording showing the completed Work.

3.1.4 For mainline sewer and storm drain inspections, inspections shall be from center of the starting manhole

to

the center of the ending manhole. Record the condition of the entire circumference of the pipe penetration. Measure distances along the pipe from the center of the upstream manhole.

3.1.5 Prior to recording the location of defects, construction features and service connections, remove slack in the cable of the television inspection camera to ensure metering device is designating proper footage. Check accuracy of the measurement meters daily by use of a walking meter, roll-a-tape, or other suitable device.

3.1.6 Perform the preset before starting to record the inspection (i.e. the counter should not suddenly reset or jump during the recording). If a preset point on the CCTV cable is used to set the counter, Contractor shall back up the camera after setting the preset and record the entry to the pipe.

3.1.7 Center the camera in the middle of the pipe.

3.1.8 Move the camera through the line (in the downstream direction whenever possible) at a uniform rate not to exceed 30 feet per minute.

3.1.9 Stop at every joint for three seconds. When infiltration or other defects are evident, use pan and tilt to document pipe condition. Stop elsewhere when necessary to ensure proper documentation of the sewer's condition.

3.1.10 Stop at every lateral connection. Center the camera so that the lighting and the pan and tilt view can be used to inspect as far into the lateral connection as possible. Pan the circumference of the tap, recording all defects found in the service connection. Where lateral flow is observed, observe flows from service connections for approximately two

minutes to ascertain if the flow is sanitary or extraneous flow. The video recording may be paused during observation. Record results of the flow observed on video recording and inspection logs.

3.1.11 Capture color still shots of video recordings for all defects encountered.

3.1.12 Use manual winches, power winches, TV cable, and powered rewinds or other devices that do not obstruct the camera view or interfere with proper documentation of the sewer and storm drain conditions to move the camera through the sewer and storm drain lines.

3.1.13 TV inspection recordings shall be continuous for each pipe segment.

3.1.14 Adjust light levels, clean fouled or fogged lens, and allow vapor to dissipate from camera lights in order to produce acceptable recordings. All TV inspection recordings that do not meet the specified requirements shall be retelevised at no additional cost to the Owner.

3.2 *Flow Control* –

3.2.1 Adequately control the flow in the section being televised. Plugging or bypassing of the flows may be used to accomplish this. Recordings made where the depths of wastewater flow shown below are exceeded will be rejected:

Flow Control During Television Inspection

Pipe Diameter (Inches) 6-10 / Depth of Flow (% of Pipe Diameter) 10

Pipe Diameter (Inches) 12-24 / Depth of Flow (% of Pipe Diameter) 15

Pipe Diameter (Inches) Over 24 / Depth of Flow (% of Pipe Diameter) 20

3.2.2 Whenever flows in a sewer line or storm drain are blocked, plugged, pumped, or bypassed, take sufficient precautions to protect the sewer and storm drain lines from damage that might be inflicted by excess water surcharging. Further, take precautions to ensure that sewer flow control operations do not cause flooding or damage to public or private property being served by the sewers or storm drain involved. No overflows are permitted. The Contractor is responsible for all damages.

3.2.3 Contractor is responsible for all damages to Contractor owned and operated equipment, Owner facilities, and privately owned facilities caused by malfunction of plugs, pumps or other Contractor equipment. In the event of a failure or malfunction of Contractor equipment, Contractor is responsible for all work necessary to restore facilities to preconstruction condition including but not limited to excavation and restoration of sewer lines and roadways required to retrieve malfunctioning or stuck cameras, plugs and hoses.

3.2.4 It is anticipated that portions of the sanitary sewer are bowed or bellied and as a result the camera will be submerged. Wherever the camera encounters a submerged condition, or where the wastewater flow depth exceeds the maximum allowable, reduce the flow depth to an acceptable level by performing the survey TV inspection during minimum flow hours, or by pulling a camera with swab, high-velocity jet nozzle or other acceptable dewatering device. Recordings made while floating the camera are not acceptable unless approved by Engineer.

3.3 *Passage of TV Camera* – If during TV inspection of a pipe segment the camera is unable to pass an obstruction even though flow is unobstructed, televise the pipe segment from the opposite direction in order to obtain a complete recording of the line. Measure the distance between the manholes (centerline to centerline) with a tape or wheel to accurately determine the total length of the manhole segment.

3.4 *Inspection Deliverables* –

3.4.1 *Written Inspection Reports* – Provide printed location records to clearly identify the location of each defect, or lateral connection, in relation to adjacent manholes, using a standard stationing system zeroed on the upstream manhole. Record all information requested using proper NASSCO PACP defect codes. The reports shall include at least the minimum amount of information required by PACP, including required PACP header information. Color still shot images of all defects encountered shall be included with each pipe segment.

3.4.2 *Electronic Inspection Reports* –

3.4.2.1 Provide a NASSCO PACP v4.2 certified database listing all PACP required data

fields for each pipe segment. The provided database shall be in “.mdb” format with no password protection on the file.

3.4.2.2 For each type of CCTV deliverable (Pre-Construction, Post-Construction, Warranty), provide a single database containing all the inspections for the Project.

3.4.2.3 Post Construction deliverables will contain a single inspection for each asset, inspected upon completion of all non-warranty Work on the asset.

3.4.2.3.1 Submit two inspection records for a single asset only if the asset cannot be completely inspected from one side due to the physical condition of the pipe.

Properly use the PACP “MSA” coding for each such inspection record.

3.4.3 *Inspection Recordings –*

3.4.3.1 Provide digital inspection recordings for all recordings, unless otherwise specified in paragraph 3.4.4.

3.4.3.2 Recording shall be of a quality sufficient for Engineer to evaluate the condition of the sewer or storm drain, locate the service connections, and verify cleaning. If CITY determines that the quality is not sufficient, re-televised the sewer or storm drain segment and provide a new recording and report at no additional compensation. Camera distortions, inadequate lighting, dirty lens, or blurred/hazy picture will be cause for rejection. Payment for televised inspection will not be made until CITY approves the recordings and reports.

3.4.3.3 Only pipe segments from the same Project shall be included on a given hard drive. Multiple deliverable types may be included on a given hard drive, but the files must be organized in individual project folders. TV Inspection recordings shall not be edited.

3.4.3.4 Digital recordings: Each pipe segment must be its own electronic file. Electronic recording file must allow snap scrolling to allow easy and quick access of the entire recording.

3.4.3.5 Each hard drive must have a file index whose name contains the pipe segment reference number.

3.4.3.6 Maintain a master copy of all recordings and Inspection Reports for two years after delivery of reports and recordings.

3.4.3.7 Label each hard drive with the following information:

3.4.3.7.1 File Number

3.4.3.7.2 Contractor’s Name

3.4.3.7.3 Project Name

3.4.3.7.4 Contract Number

3.4.3.7.5 Drawing Number

3.4.3.7.6 Inspection Type: Post Cleaning, Repair

3.4.3.7.7 Date Televised

3.4.3.7.8 Pipe Segment Asset Identification Number

3.4.4 *Inspection –* Inspection deliverables for different types of inspections are defined below:

3.4.4.1 *Pre-Construction Inspection –* One copy on a USB 2.0 external hard drive of PACP formatted database including, but not limited to, digital inspection recordings, defect call-out tables, defect snapshots, notes fields and asset condition reports.

3.4.4.2 *Post-Construction Inspection –*

3.4.4.2.1 Two copies of Written Inspection Reports in bound report with project name on binder spine. Reports to be filed in ascending order by upper manhole number.

3.4.4.2.2 One copy on a USB 2.0 external hard drive of the PACP formatted database including, but not limited to, digital inspection recordings, defect call-out tables, defect snapshots, notes fields and asset condition reports.

+ + END OF SECTION + +

SECTION 02760

CLEANING OF

SEWERS

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Provide all labor, materials, tools, equipment, and incidentals as shown, specified, and required to clean the pipelines.
- B. The cleaning Work required includes, but is not limited to, the following:
 - 1. Field locating all manholes or inlets along the sewer or storm drain reaches to be cleaned.
 - 2. Cleaning of existing sanitary sewers or storm drain.
 - 3. Cutting of roots, grease, intruding sealing ring material and objects wedged in pipe joints from existing sanitary sewers or storm drain.
 - 4. Removal of debris from the sewers and storm drains.
 - 5. Disposal of waste and sediment.
 - 6. Cleaning up as the Work progresses and after the completion of all Work activities.
 - 7. All other Work required for the complete and satisfactory cleaning of the pipelines.

1.2 DEFINITIONS

- A. Normal cleaning – cleaning accomplished using water jets to scour and remove debris, grease, etc. from pipe, manholes or inlets in 1 to 3 complete passes of the nozzle.
- B. Root cutting and grease cutting – removal of roots larger than fine roots (as defined by PACP), hardened grease and intruding sealing ring material using cutting device.
- C. Heavy cleaning – cleaning accomplished using water jets to scour and remove debris, grease, etc. from pipe in 4 to 8 complete passes of the nozzle.

1.3 RELATED SECTIONS

- A. Section 02651, Television Inspection.

1.4 GENERAL PRECAUTIONS

- A. This Contract requires work in active sewers and storm drains. Adhere to all federal, state, and local requirements for safety in confined spaces.
- B. Take precautions to protect sewer mains, storm drains, laterals and manholes from damage that might be inflicted by the improper selection of the cleaning process or improper use of the equipment.
- C. When using hydraulically propelled devices, take precautions to ensure that the water pressure created does not cause damage or flooding to public or private property.
- D. Do not surcharge the sewer or storm drain beyond the elevation that could cause overflow of sewage into area waterways, homes, or buildings or onto the ground.

- E. Some of the manholes accessing sections of the sewer and storm drains included in this work are located outside the right-of-way. For Work located outside the right-of-way, Limits of Construction will be provided on maps. Do not encroach on lands outside the designated Limits of Construction at any time during the Work.
- F. Restore or repair any facility, public or private, which is damaged by CONTRACTOR actions at no cost to OWNER.

1.5 SUBMITTALS

- A. Specifications of the sewer and storm drain cleaning equipment, including performance data on pump, hose diameter and length, tank capacity, and intended nozzles and root cutters, to be used on the job. Provide a chart that shows hose length and diameter versus volume and pressure.
- B. Specifications on the equipment to be used to remove sediment and debris at the downstream manhole of each reach to be cleaned.

1.6 QUALIFICATIONS

- A. CONTRACTOR shall have experience in the cleaning of sewers and storm drains. Documentation of experience shall be furnished to the CITY upon request.

PART 2 - PRODUCTS

2.1 MAINLINE SEWER CLEANING EQUIPMENT

- A. Sewer cleaning equipment shall consist of truck-mounted, high velocity hydro-cleaning equipment. The equipment shall be provided with a minimum of 500 feet of one-inch inner diameter high-pressure hose with a selection of high velocity nozzles, as required for the cleaning operation. The various nozzles shall produce a scouring action from 10 to 45 degrees in all size sewers to be cleaned. Use nozzles matched to the pumps and the site-specific cleaning requirements. Mount all nozzles with skids. A tiger tail or boot or downhole roller is required. A pressure gauge shall show operating pressure and a flow meter shall show flow rate. A table to translate shown pressures to delivery pressure shall accompany each cleaner unit.
- B. The pumps shall be capable of delivering a minimum 60 gpm at 2,000 psi at the nozzle head. A relief valve shall regulate pressure to the nozzle. The unit shall carry its own water tank, minimum of 1,000 gallons, auxiliary engines and pumps, and a hydraulically-driven hose reel.
- C. All controls shall be located so that the equipment can be operated above ground.
- D. Include appropriate adaptors, hoses and nozzles for cleaning laterals from mainline sewer.

2.2 VACUUM EQUIPMENT

- A. Provide equipment capable of removing all sand, dirt, rocks, roots, and other debris from the sewer and manhole.
- B. Provide screens to prevent scoured debris from migrating downstream of the limits of the Work.

++ END OF SECTION ++