



Request for Bids for Sewer Infrastructure Maintenance Services

The City of Allegan is accepting sealed bids for CIPP sanitary sewer lining, chemical joint grouting, sewer cleaning and televising services. This will be a multi-year contract (beginning in April 2018 –December 31, 2021) with projects scheduled annually to complete the City's CIP program.

Sealed bids will be accepted up to the bid opening at 11:00 am on April 3, 2018 at Allegan City Hall, 112 Locust Street, Allegan, MI 49010.

Please call Aaron Haskin at 269-686-1115 for bidding information. The City reserves the right to reject any or all bids and the award the contract in the City's best interest, and the City may select a bidder other than the lowest bidder in accordance with the terms stated in this notice.



March, 2018

RE: Request for Bids for Sewer Infrastructure Maintenance Services

The City of Allegan is accepting sealed bids for CIPP sanitary sewer lining, chemical joint grouting and cleaning and televising services. This will be a multi-year contract (beginning in April 2018 –December 31, 2021) with projects scheduled annually to complete the City’s CIP program. Please include an option of extending the contract for an additional 2 years.

In the next 3 years the City’s CIP includes 7,377 feet of CIPP lining, 450 feet of chemical grouting and yearly cleaning and televising portions of the sanitary system.

CIPP Lining:

- see attached technical specifications
- Shall include all labor, equipment, materials, pre-sewer cleaning, video inspection (pre and post), and all lateral reinstatements after lining
- The City can provide by-pass pumping and traffic control as needed

Chemical Joint Grouting:

- This includes 450 feet of clay pipe with joint spacing at 6 feet. The pipe has water infiltration at several joints. Work shall include cleaning, video inspection, testing of each joint and grouting where necessary.

Cleaning and Televising:

- The City has budgeted to clean and inspect a portion of the sanitary sewer system each year. The areas of cleaning and televising will be selected annually by the City of Allegan. The inspection shall include cleaning all debris and roots from the pipes and a condition rating of the pipe and manholes. Videos shall be provided to the City after the inspection is completed.

Sealed bids will be accepted up to the bid opening at 11:00 am on April 3, 2018 at Allegan City Hall, 112 Locust Street, Allegan, MI 49010. Please provide pricing on the following page.

Before the project begins the City will require a copy of the contractors insurance with the City of Allegan listed as an additionally insured and a bond in the amount of the project.



City of Allegan
Department of Public Works
112 Locust Street, Allegan, MI 49010
Phone: 269.673.5511x221

Please call Aaron Haskin at 269-686-1115 for additional bidding information. The City reserves the right to reject any or all bids and the award the contract in the City's best interest, and the City may select a bidder other than the lowest bidder in accordance with the terms stated in this notice. This contract can be terminated by either party with a 30 day written notice.

Bid Pricing – please note if there will be an increase in pricing over the 3 year contract

CIPP Lining:

<u>Item</u>	<u>Price</u>
8 inch CIPP	_____ /ft
18 inch CIPP	_____ /ft
Lateral Reinstatements	_____ /each

Chemical Grouting:

18 inch Pipe with
Joints every 6 ft _____ /linear feet of pipe or by the joint

Sanitary Sewer Cleaning and Televising with Condition Rating:

8 inch pipe	_____ /ft
10 inch pipe	_____ /ft
12 inch pipe	_____ /ft
18 inch pipe	_____ /ft

1 SCOPE

This specification covers the general and specific requirements for trenchless (no dig) sewer rehabilitation by the installation of a cured-in-place pipe (CIPP) liner. The CIPP installation work required is defined to include all of the cleaning & preparation of existing sewer, video inspection and video tape records, bypass pumping, insertion and curing of CIPP liner, design and engineering required for CIPP liner, labor, materials and equipment, lateral locating and re-instatement, safety equipment, procedures & traffic control, supervision, any other work incidental to the installation of the CIPP liner.

2 REFERENCED DOCUMENTS

ASTM F 1216 - Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Inversion of a Resin-Impregnated Tube.

3 DESCRIPTION OF THE REHABILITATION PROCESS

Following preparation of the section of the existing sewer to be rehabilitated, a felt tube uniformly impregnated with resin and shall be inverted into the existing sewer over its entire length by using a head of water or steam. Once inversion is complete, the resin impregnated tube shall be cured by heating and re-circulating water or steam to form a rigid liner. The liner shall be placed directly and uniformly against the interior surface of the existing sewer. When necessary in the rehabilitation process, existing flow is to be controlled or diverted via by-passing around the section being rehabilitated.

Immediately following the cure, required service laterals are to be re-instated into the CIPP liner, by remote, internal to the pipe means, without excavation.

The CIPP rehabilitation process shall make use of curing and lateral re-instatement processes to minimize down-time on the sewer.

Maximum flow down-time in any section shall not exceed 12 hours.

Maximum out of service time for any service lateral shall not exceed 24 hours.

On completion of the rehabilitation, a video inspection tape shall be provided to the City's representative.

4 LINER MATERIAL

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The liner material shall have the following minimum characteristics:

4.1 Engineering Properties of Lining

Flexural Modulus, exceeds 250,000 psi ASTM D 790

Flexural Strength, exceeds 4,500 psi ASTM D 790

4.2 Corrosion

The finished CIPP liner shall be fully resistant to all chemicals and agents normally found in municipal sewage.

4.3 Impregnation Tube

The tube shall be used as the carrier for the resin, and shall be suitable for inversion into the sewer using a water head. The tube shall have minimum burst strength of 30 psi.

4.4 Resin

The resin shall meet the requirements of ASTM F 1216, in its most up to date version.

Allowed resins shall be polyester or vinyl ester that meets the conditions listed above. CIPP is the only method considered acceptable. Fold-N-Form or Deform and Reform shall not be considered as acceptable for this project.

5 INSTALLATION PROCEDURES

5.1 Safety

The installation and all related work shall comply with the requirements of the MIOSHA and the City's confined space entry procedures.

5.2 Traffic Control

Traffic control shall be provided when necessary and be in conformance with the MDOT "Traffic Control Manual for Roadway Work Operations".

5.3 Preparation of existing sewer

The sewer to be rehabilitated shall be prepared in accordance with the requirements for CIPP installation. Debris, grease and other deposits shall be removed as required. Any obstructions remaining after flushing and cleaning are to be removed without damaging the existing sewer walls. All roots are to be removed. Any calcite build up in the existing sewer is to be removed by means that do not damage the existing sewer walls. Where necessary, calcite and other deposits shall be removed using TV monitored robotic cutting/reaming equipment.

Where existing service laterals protrude into the sewer (protruding laterals), these protrusions are to be removed without damage to the lateral or sewer pipe wall. Flail type equipment is not permitted for the removal of protruding laterals. Lateral protrusions greater than 1/4" are not permitted.

The prepared sewer shall be videotaped and the video reviewed and approved by the engineer before insertion of the lining. CCTV inspection shall be in accordance with the City's contract requirements.

5.4 Advice to Residents

Residents who may be affected by the rehabilitation process shall be advised in writing concerning the nature and duration of any interruption in sewer service the day before any interruption. When the interruption is ended, residents are to be advised either verbally, or in writing immediately. During the course of the rehabilitation and any associated service interruption, the residents shall be kept regularly informed regarding any matters that affect them.

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5.5 Insertion & Curing

The curing process shall be monitored by qualified personnel and written records (including boiler monitor graph) shall be maintained throughout the curing process.

These records shall be forwarded to the City upon completion of the installation of each liner.

The CIPP shall be inserted and cured in accordance with the parameters and procedures of ASTM F1216 Section 7. Records describing the cure process, including water / steam temperatures, lining temperatures and internal pressures shall be maintained for the curing process.

Readings shall be made and recorded at 30 minute intervals of:

Boiler: Temperature In

Boiler: Temperature Out

Liner external surface temperatures at manholes measured using thermocouples
The time required for the cure shall be determined by the temperature monitoring and shall be adjusted to suit the lengths, diameter, thickness, field conditions and ambient temperature applicable to each lining section.

5.6 Lateral Re-instatement

Where service lateral flow has been interrupted, re-instatement of the lateral shall proceed urgently and with all possible speed to restore service lateral flow. Laterals may be re-instated using an initial opening sufficient to restore flow followed by completion to full re-instatement to **100%** open within 24 hours. **All lateral reinstatements must be brushed to remove any and all rough edges or burrs.** Lateral re-instatement is to be made internally with appropriate remotely operated equipment. No excavation of laterals will be allowed without the written approval of the engineer. Restored lateral openings are to be cut neatly to full size without over-cutting. Cuts shall be smooth and without residual material left around the lateral or its opening. No ragged edges or attached material shall be allowed.

5.7 Video Inspection

Video inspection shall include an inspection after preparation, immediately prior to insertion of the liner and an inspection at the completion of the rehabilitation. Video tape records of these inspections shall be available to the City.

Video equipment shall be color and include the capability to view all surface areas of the pipe ("pan & tilt" capability). When required, pipe flow and visibility shall be controlled so that video inspection produces complete visual coverage of the circumference sufficient to properly access conditions and features.

5.8 Manhole Termination

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The liner termination at manholes shall be neat and free of obstructions. If the liner fails to make a water-tight seal at the manhole, a seal shall be applied at this point. Sealing process shall use a material compatible with the liner pipe.

6 DURATION OF WORK

The work shall commence no later than: 7:00 am

The work shall be completed by: 7:00 pm

17 INSPECTION, TESTING AND ACCEPTANCE

The City shall be provided full access to all stages of the rehabilitation process. The City shall be notified a minimum of 48 hours in advance prior to Wet Out and have the opportunity to be present.

All process records shall be available for inspection by the City and copies shall be provided.

8 Acceptance

The installation shall be inspected by close circuit television if direct visual inspection is not possible. Variation from true line and grade may be inherent because of the condition of the original piping. All service connections shall be accounted for and be unobstructed.

The liner shall be visually inspected (at the manholes and on the video) for its fit to the inside surface of the existing sewer.

9 GUARANTEE

All materials and workmanship shall be free from defects and guaranteed for two years after acceptance of the installation.

10 CHANGES AND/OR CONTRACT MODIFICATIONS

The City reserves the right to increase or decrease quantities, make any changes necessary after pre-lining video inspection, or any negotiated extension thereof. Price adjustments due to any of the foregoing changes shall be negotiated and mutually agreed upon by the Contractor and the City.