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March 9, 2022

**Lincoln Charter Township
SANITARY SEWER CLOSED CIRCUIT TELEVISION (CCTV) INSPECTION – 2022
ADDENDUM No. 1**

Notice to All Prospective Bidders

This Addendum is issued in accordance with SECTION 00 20 00 - INSTRUCTIONS TO BIDDERS, and is hereby incorporated into the Contract Documents. The CONTRACTOR is reminded to acknowledge receipt of this Addendum in SECTION 00 42 00 - PROPOSAL.

Clarifications

1. Contractor responsible for all testing and disposal of waste material. Paid for as a lump sum under pay item 7. Waste Disposal Allowance
2. Contractor responsible for payment of water obtained from hydrants for cleaning purposes. See Paragraph 3.03 in Section 31 30 00 - CLEANING AND VIDEO INSPECTION OF UNDERGROUND PIPE.
3. Where cleaning is necessary, it shall be paid for at the unit price bid per linear foot for the type of cleaning determined, Light **or** Heavy, but not both for the same section of pipe. See Paragraph 3.01 in Section 31 30 00 - CLEANING AND VIDEO INSPECTION OF UNDERGROUND PIPE.

Specifications:

1. **SECTION 00 42 00 – BID FORM** - Replace this section in its entirety with the enclosed revision (3 pages). Includes Changes to:
 - **Item 7 – Waste Disposal (Allowance)** – Change in allowance amount.
 - **ARTICLE 5 – SUBCONTRACTING LISTING** – Removed “Grading” and “Paving” line items.
2. **SECTION 01 11 00 – SUMMARY OF WORK** – Replace this section in its entirety with the enclosed revision (1 page). Includes Changes to:
 - **Paragraph 1.02 Contract Time** – New paragraph added explaining completion and anticipated start time.
 - **Paragraph 1.06 Equipment Storage and Staging** – New paragraph added.

3. **SECTION 31 30 00 - CLEANING AND VIDEO INSPECTION OF UNDERGROUND PIPE** Replace this section in its entirety with the enclosed revision (7 pages).

Includes Changes to:

- **Paragraph 3.02.B. – DISPOSAL OF WASTE MATERIAL** - Changes to testing requirements.
- **Paragraph 3.04 – EQUIPMENT STORAGE and STAGING** – New paragraph added

Respectfully submitted,

Williams & Works



David Austin, P.E.

cc: Planholders of Record

ARTICLE 1- SCHEDULE OF PRICES

For the entire Work outlined in these Contract Documents complete as specified, using equipment and materials only of the type and manufacturers where specifically named, the following unit prices:

<u>Item</u>	<u>Description</u>	<u>Est. Qty</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Total</u>
1	Traffic Control (Allowance)	1	LS	\$ 10,000.00	\$ 10,000.00
2	Light Cleaning 6"-12" Sanitary Sewer	11,175	LF	\$	\$
3	Heavy Cleaning 6"-12" Sanitary Sewer	33,525	LF	\$	\$
4	Light Cleaning 15"-24" Sanitary Sewer	1,475	LF	\$	\$
5	Heavy Cleaning 15"-24" Sanitary Sewer	4,425	LF	\$	\$
6	Cutting of Protruding Laterals	4	EA	\$	\$
7	Waste Disposal (Allowance)	1	LS	\$ 7,500.00	\$ 7,500.00
8	Televise 6"- 30" Sanitary Sewer	50,600	LF	\$	\$
TOTAL BID					\$

ARTICLE 2 - MATERIAL AND EQUIPMENT SELECTION

The Contract Documents stipulate that the Base Bid price shall include materials and equipment selected from the designated items and manufacturers listed herein. This is done to establish uniformity in bidding and to establish standards of quality for the items named.

The Base Bid is submitted on the basis of supplying the following products, selected from the items and manufacturers listed herein:

ITEM	MANUFACTURER

Failure to complete Article 2 of the Bid Form shall be considered an irregularity by the Owner. In such cases where Article 2 is not completed, the Owner shall assume the Bidder has named one of the named suppliers as given in the appropriate technical section.

ARTICLE 3-MATERIAL AND EQUIPMENT ALTERNATES

The Contract Documents stipulate that the Base Bid price shall include materials and equipment selected from the designated items and manufacturers listed therein. This is done to establish uniformity in bidding and to establish standards of quality for the items named.

If the BIDDER wishes to quote alternate items for consideration by the OWNER, he may do so under this Article. A complete description of the item and the proposed price differential are to be provided. Unless approved at the time of award, substitutions, where items are specifically named, will be considered only in accordance with the terms set forth in the General Conditions.

Item No.	Description	Add/Deduct Amount (Dollars)

ARTICLE 4-TIME ALTERNATE

If BIDDER takes exception to the time(s) stipulated in Article 3 - Contract Time of the Agreement, he is requested to stipulate below his proposed time for performance of the Work. Time will be given consideration in evaluating bids.

ARTICLE 5-SUBCONTRACTOR LISTING

Bid is submitted on the basis of the use of the following Subcontractors:

Work Item	Firm	City
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Please note if work is to be performed by BIDDER. Failure to list Subcontractors with the Bid waives BIDDER'S rights to a change in Contract Time or Price or withdrawal of Bid and Bid Security; in the event OWNER has reasonable objection to any Subcontractor.

OWNER shall have the right to reject any Subcontractor for reasonable cause. If Subcontractors are not identified in the Bid, the BIDDER/CONTRACTOR shall engage a Subcontractor acceptable to OWNER and waives the right to withdraw Bid and Bid Security, and further, waives right to a change in Contract Time or Price due to failure to list.

GENERAL

- 1.01 **Summary of Work** - The work consists of the closed circuit television (CCTV) inspection of approximately 50,600 l.f. of sanitary sewer in Lincoln Charter Township, Michigan 49127. Works included Heavy and Light cleaning of the sewers, disposal of any collected waste material, digital recording of the conditions and preparation of reports in compliance with the current NASSCO Pipe Condition Assessment Using CCTV Performance Specification Guideline, October 2014.
- 1.02 **Contract Time** – The Agreement calls for completion within 60 days of issuance of the Notice to Proceed. The OWNER intends to start the work as soon as possible.
- 1.03 **CCTV Area** - The area to be cleaned and televised are shown on the attached graphic. Work will be performed on the following streets:

Anna Dr	Glen Orchard Dr	Lane Ct	S Cleveland Ave
Arcadia	Glenlord Rd	Lincoln Ave	Southfield
Blenheim	Gordon Rd	Loren Path	Venus
Brookfield Dr	Green Acre Dr	Meadow Ln	Victoria Ct
Country Knoll Pl	Greenfield Ave	Michelle Dr	Washington
Edison Dr	Harmony Ln	Old Farm Ln	Wilson Rd
Frank Ct	Jewell	Paulmar Ave	Windermere
Fruitwood Dr	Knox	Red Arrow Hwy	Woodland Ln
Fulton	Kristine St	Reinhardt Dr	
Glen Haven Rd	Lake Pines Dr	Roberts Dr	

- 1.04 **CCTV – Number of Pipes and Pipe Lengths** - There are approximately 187 pipe sections to be inspected. The estimated lengths and line sizes are as follows:
- 8 inch - 34,000 ft.
 - 10 inch - 8,300 ft.
 - 12 inch - 2,410 ft.
 - 15 inch - 5,890 ft.
- 50,600 ft.
- 1.05 **Waste Disposal** - CONTRACTOR is responsible for the testing and disposal of any waste materials collected during the cleaning process. See Paragraph 3.02 in Section 31 01 30 – CLEANING AND VIDEO INSPECTION OF UNDERGROUND PIPES.
- 1.06 **Equipment Storage and Staging** - See Paragraph 3.04 in Section 31 01 30 – CLEANING AND VIDEO INSPECTION OF UNDERGROUND PIPES.
- 1.07 **Water Supply** Water for use in the CCTV process in Lincoln Township can be obtained from hydrants using meters provided by the Township. See Paragraph 3.03 in Section 31 01 30 – CLEANING AND VIDEO INSPECTION OF UNDERGROUND PIPES.
- 1.08 **Project Location Map**
- A. Project Location Map and Inspection Areas Map (2 pages)

*** END OF SECTION ***

PART 1 - GENERAL

1.01 DESCRIPTION

- A. All work shall be carried out in compliance with the current NASSCO Pipe Condition Assessment Using CCTV Performance Specification Guideline, October 2014.
- B. The work covered by this section of the specifications consists furnishing all plant, labor, equipment, and materials in connection with the cleaning and closed circuit television (CCTV) inspection of underground piping.
- C. All work shall be carried on in a neat and professional manor with traffic interference as allowed by the ENGINEER.
- D. **CERIFICATION REQUIRED:** The work must be completed by certified National Association of Sewer Service Companies (NASSCO) and Pipeline Assessment and Certification Program (PACP) trained operator(s) using established PACP coding and observations.

1.02 JOB CONDITIONS

- A. Maintain existing underground piping system operational.
- B. Maintain or detour vehicular traffic as necessary in compliance with regulatory traffic requirements.

PART 2 – PRODUCTS

2.01 EQUIPMENT:

- A. Underground Piping Cleaning Equipment:
 - 1. **Hydraulically Propelled Equipment:** The equipment used shall be of a movable dam type and be constructed in such a way that a portion of the dam may be collapsed at any time during the cleaning operation to protect against flooding of the sewer. The movable dam shall be equal in diameter to the pipe being cleaned and shall provide a flexible scraper around the outer periphery to ensure removal of grease. If sewer cleaning balls or other equipment which cannot be collapsed is used, special precautions to prevent flooding of the sewers and public or private property shall be taken.
 - 2. **High-Velocity Jet (Hydrocleaning) Equipment:** All high-velocity sewer cleaning equipment shall be constructed for ease and safety of operation. The equipment shall have a selection of two or more high-velocity nozzles. The nozzles shall be capable of producing a scouring action from 15 to 45 degrees in all size lines designated to be cleaned. Equipment shall also include a high-velocity gun for washing and scouring manhole walls and floor. The gun shall be capable of producing flows from a fine spray to a solid stream. The equipment shall carry its own water tank, auxiliary engines, pumps and hydraulically driven hose reel. The NASSCO Jetter Code of Practice shall be consulted as a guide for the selection of different type nozzles and recommended pressure applications for various cleaning requirements.
 - 3. **Mechanically Powered Equipment:** Bucket machines shall be in pairs with sufficient power to perform the work in an efficient manner. Machines shall be belt operated or have an overload device. Machines with direct drive that could cause damage to the pipe will not be allowed. A power rodding machine shall be either a sectional or continuous rod type capable of holding a minimum of 750 feet of rod. The rod shall be specifically heat treated steel. To ensure safe operation, the machine shall be fully enclosed and have an automatic safety clutch or relief valve.
- B. Video Camera:
 - 1. Shall be specifically designed and constructed for the required video inspection and shall be capable of operating under 100% humidity conditions.
 - 2. Shall have pan, tilt and rotate capabilities for viewing into lateral connections, at joints, and manholes.
 - 3. Shall be capable of producing quality picture and sound.

PART 3 - EXECUTION

- 3.01 PREPARATORY CLEANING: All underground utilities shall be cleaned by rodding, high velocity water jet, or other approved means to provide an unobstructed view of the pipe interior. The maximum pressure used when cleaning a sewer shall be 1500 psi. Preparatory cleaning shall include the entrapment and removal of all debris (gravel, sand, etc.,) resulting from the cleaning operation. The CONTRACTOR shall immediately notify the ENGINEER if the cleaning operations cause a failure of a pipe or if there is evidence of pipe deterioration.
- A. LIGHT CLEANING – Includes removal of Deposits (D) of up to 25% of pipe depth, except Attached Encrusted (DAE) or Hard Compacted (DSC) Deposits as defined by the NASSCO PACP Operation & Maintenance (O&M) codes.
- B. HEAVY CLEANING – Includes removal of Deposits (D) of over 25% of pipe depth, Attached Encrusted (DAE) or Hard/Compacted (DSC) Deposits as defined by the NASSCO PACP Operation & Maintenance (O&M) codes, all root removal, intruding tap removal, and removing obstructions foreign to the collection system.
- 3.02 DISPOSAL OF WASTE MATERIAL:
- A. Disposal of the debris and other waste material shall be to the following landfill:
- Orchard Hill Sanitary Landfill
3290 Hennessey Road
Watervilet, MI 49098
(269) 463-5588
- Lincoln Charter Township will file a Generator's Waste Profile Worksheet with the Landfill.
- B. Required Testing: The CONTRACTOR shall perform all tests required by this facility in order to dispose of the waste material including, but not limited to the following tests:
- Paint Filer Test
 - TENORM Radium 226 & 228, lead 210
 - TCLP Michigan Metals (10 Metal Test)
 - PFAS (full panel)
- CONTRACTOR shall present the results to the OWNER and the Landfill prior to disposal:
- 3.03 WATER SUPPLY: Water for use in the CCTV process in Lincoln Township can be obtained from hydrants using meters obtained from the City of St. Joseph.
- Lincoln Township will obtain and provide the meters.
 - The anticipated need per truck fill will be approximately 1,500 to 2,000 gallons except when continuous jetting is required in difficult areas, then a direct connection will be made. CONTRACTOR to notify OWNER if the anticipated need exceeds this amount.
 - CONTRACTOR will provide the necessary backflow prevention connections.
 - There are no known restricted hydrants within the service area.
- 3.04 EQUIPMENT STORAGE and STAGING – Some equipment and waste container materials may be staged at the OWNER'S DPW facility located at 1805 W. Marquette Woods Rd., Stevensville, MI 49127. CONTRACTOR must coordinate access with OWNER.
- 3.05 INTERNAL INSPECTION: Shall be conducted with a closed circuit television system. The CONTRACTOR shall control the internal inspection procedure so that the camera speed does not exceed 0.5 feet per second, unless otherwise approved by the ENGINEER. Internal inspection shall commence and terminate in an identifiable reference point such as a manhole structure such that the entire pipe footage between structures is inspected and recorded in a DVD format. Steam, fog or other vaporous gases shall be vented by some acceptable means in order to maintain visual continuity. If damage is discovered where a pipe

failure is present or impending, the CONTRACTOR shall immediately notify the ENGINEER. The location, and failure description shall be immediately documented for emergency repair by the OWNER.

- 3.06 The depth of flow at the time of internal inspection shall not exceed the depths stated below. The video inspection device shall be elevated above the water line.

Pipe size	Maximum depth of Flow
8"	1.25" or 15% of pipe diameter
10"	2.5" or 15% of pipe diameter
12"	2.38 or 20% of pipe diameter
15"	3" or 20% of pipe diameter
21"	4.25" or 20% of pipe diameter
24"	4.75" or 20% of pipe diameter
27"	6.75" or 25% of pipe diameter
30" and larger	7.5" or 25% of pipe diameter

- 3.07 VERTICAL DEVIATIONS (pipe sags and bellies): In these situations where there are vertical deviations in the grade of the utility being inspected and when such deviations result in a depth of flow precluding the effective televising, the contractor shall lower the depth of low to the extent possible an internally inspect as much of the pipe as possible.
- 3.08 DEFECTS: Defects to be noted during the internal inspection include all structural defects such as cracks, open or offset joints, dips, protruding joint materials, root intrusion, growth, sources of infiltration/inflow, protruding service lead connections, solids deposition or any other irregularities. Defects noted shall be included in the Inspection Journal.
- 3.09 FLOW CONTROL: When a sewer is being inspected, and the flow depth exceeds the limits specified, the contractor shall make provisions to work within the acceptable ranges. This could include, by-pass pumping, temporary back-ups, or performing the work during low-flow periods. Regardless of the method used, the CONTRACTOR shall be responsible for the safe, lawful conveyance of the utility.
- A. PLUGGING OR BLOCKING: A sewer line plug shall be inserted into the line at a manhole upstream of the segment to be investigated. The plug may be designed to permit flow depths within the specified range if by-pass pumping is not provided. Provisions shall be made for immediate removal should excessive flow rates necessitate more pipe capacity. Following completion of the investigation, plugs shall be removed.
- B. BY-PASS PUMPING: When pumping is required to control the depth of flow, the contractor shall supply all labor and equipment including but not limited to: pumps, pipes, driveway crossing pipes, headers, etc., to divert the flow around the section in such work is to be performed.
1. Pump capacity: shall be of sufficient size to pump the peak daily flow. Normally, by-pass pumping will not be permitted during rain events or periods immediately following an intense rainfall.
 2. Conduits: Shall be in good condition with no leakage occurring at joints.
 3. Continuous Pumping: If continuous (24 hour) pumping is required, the following condition shall be met:
 - a. Supervision: The contractor shall be responsible for supervision, coordination, fueling and control of the operation.
 - b. Noise: Pumps and equipment to provide power to them shall be in good operating condition so that noise levels within their design parameters are reasonable. Excessively loud equipment, as determined by ENGINEER shall be promptly replaced.

SECTION 31 01 30 CLEANING AND VIDEO INSPECTION OF UNDERGROUND PIPE – ADDENDUM NO.1

- C. FLOW CONTROL PRECAUTIONS: During inspection, the contractor shall be responsible for any and all protective measures, to ensure the flow operations do not cause flooding, sewer backups or damage to public or private property.
 - D. RESPONSIBILITY: The contractor shall be responsible for any damages which result from flow control operations.
- 3.10 SEWER COLLAPSE: If during the course of the work, a pipe shall collapse the contractor shall immediately notify the Engineer, and assist with labor and equipment, the ENGINEER in coordinating the measures necessary to mitigate the pipe failure.
- 3.11 INTERNAL INSPECTION RECORDS: The inspection journal shall include:
- A. Written Records: The contractor shall furnish to the ENGINEER one original and one copy of the inspection journal.
 - B. Journal entries: Shall include:
 1. Date
 2. Employees names and duties performed
 3. Utility segment locations cross referenced to map and street intersections or street addresses
 4. Utility type: Sanitary sewer, Storm Sewer, Combined Sewer, Underdrain, etc.
 5. Pipe length, material, diameter.
 6. Manhole identification labels.
 7. Distance from entry point.
 8. Direction of camera travel.
 9. Description and location of defect(s) observed.
 10. Service leads size and location relative to entry point
 11. Termination point.
 - C. GIS Deliverables – the CCTV GIS deliverables will be provided directly to Williams & Works and shall comply with the Lincoln Charter Township CCTV Deliverables Guidelines attached to this specification. (2 pages)
- 3.12 ELECTRONIC RECORD: A video recording of each segment televised shall be furnished to ENGINEER. Said documentation shall be the property of the OWNER. Each video shall be complete with audio recording of the operator's comments as camera progresses. A digital display noting the distance from the entry point shall be present on a real time display. Video media shall be provided in an external flash drive (2 copies). Labels shall be affixed to video media identifying material contained.
- 3.13 MEASUREMENT & PAYMENT: All measurements shall be as specified or made by conventional means with accuracies consistent with field conditions and common practice. Should a discrepancy in measurement exist which is greater than 10%, the item in question shall be re-measured by both the Contractor and the Owner's Representative for verification. Payment shall be at the unit or lump sum prices bid in the contract proposal for each item of work
- A. Traffic Control – Will be paid for as a lump sum allowance as indicated on the Bid Form.
 - B. Sewer Line Cleaning – where necessary, shall be paid for at the unit price bid per linear foot for the type of cleaning determined (Light or Heavy). Measurement of the actual number of feet cleaned shall be made from the center of the manholes. Verification of adequate cleaning by pulling a double squeegee thru each manhole section as evidence of adequate cleaning shall be paid for at the unit price bid per linear foot of each size pipe. Measurement of the actual number of feet squeegeed shall be made from the center of the manholes.

SECTION 31 01 30 CLEANING AND VIDEO INSPECTION OF UNDERGROUND PIPE – ADDENDUM NO.1

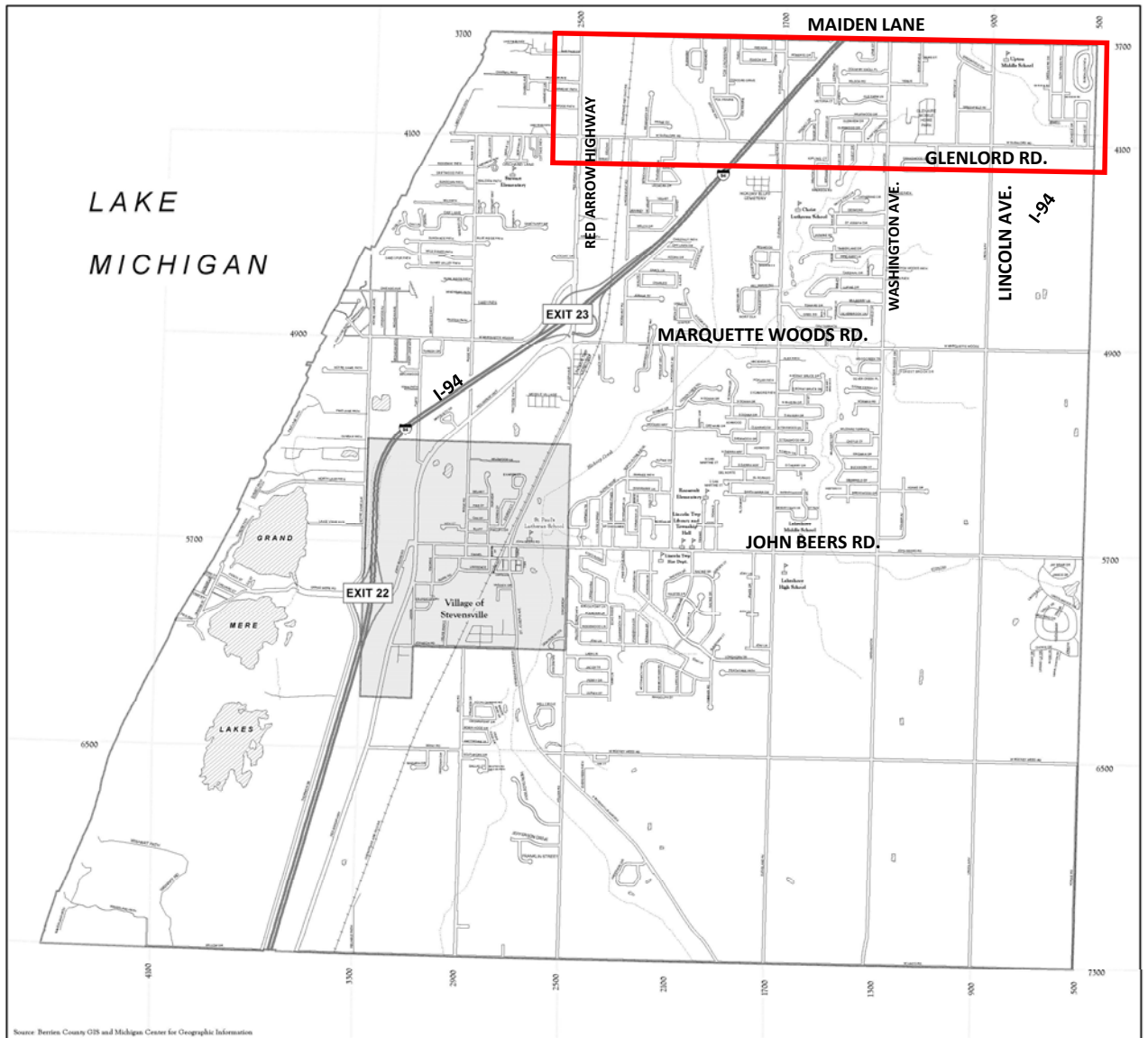
- C. Cutting of protruding Laterals – Shall be counted and paid for each protruding lateral that is removed in order to perform the CCTV operation.
- D. Plugging or Blocking - of the sewer flow - Shall be considered incidental to the work and shall not be considered for payment.
- E. Pumping and Bypassing of sewer flows - Shall be considered incidental to the work and shall not be considered for payment.
- F. Waste Disposal – Will be paid for as a lump sum allowance as indicated on the Bid Form. Amount to be paid after receipt of that all materials have been tested and delivered to the landfill.
- G. Televis 6”- 30” Sanitary Sewer - Shall be paid for at the unit price bid per linear foot of pipe. Measurement of the actual number of feet inspected shall be made from the wall of the manhole.

It should be noted that if reverse setups (a situation that arises when the television camera cannot pass through the manhole section, making it necessary to reverse the positions of the television equipment and enter the sewer from the opposite direction) are required during television inspection, the per foot cost of television inspection will be paid for the actual footage between the manholes involved. Measurement of the actual number of feet inspected shall be made from the wall of the manhole to the point where the survey was abandoned from each direction.

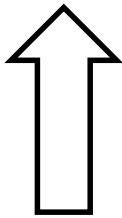
3.14 ATTACHMENTS

- A. Lincoln Charter Township CCTV Deliverables Requirements (2 pages)

END OF SECTION



Source: Berrien County GIS and Michigan Center for Geographic Information

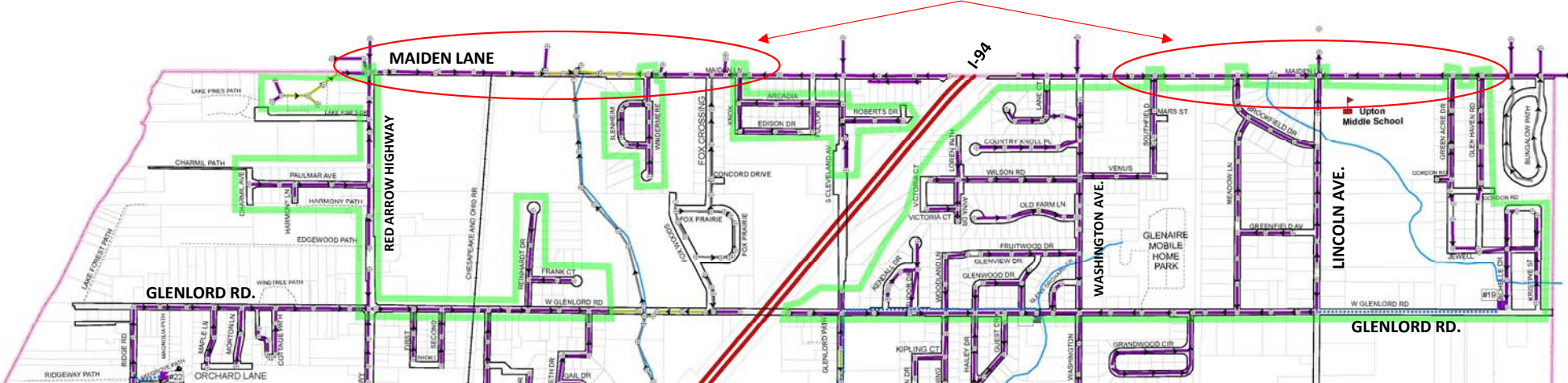


LOCATION MAP

General Inspection Area

**LINCOLN CHARTER TOWNSHIP
SANITARY SEWER
CLOSED CIRCUIT TELEVISION (CCTV) INSPECTION
2022**

Note: Inspection will require access to 8 manholes at intersections with Maiden Lane, but no lines on Maiden Lane are included in the inspection.



**LINCOLN CHARTER TOWNSHIP
SANITARY SEWER
CLOSED CIRCUIT TELEVISION (CCTV) INSPECTION
2022**

Inspection Areas