

**GARY SOUTH LEVEE - CULVERT MAINTENANCE
LITTLE CALUMET RIVER BASIN DEVELOPMENT COMMISSION**

Item No.	Item	Unit	Total Quantities	Unit Cost	Total Cost
1	MOBILIZATION / DEMOBILIZATION	LS	1	_____	_____
2	CONSTRUCTION ENGINEERING	LS	1	_____	_____
3	SITE CLEARING	EA	7	_____	_____
4	EROSION CONTROL	LS	1	_____	_____
5	PIPELINE CLEANING	LFT	373	_____	_____
6	TELEWISE SEWERS	LFT	373	_____	_____
				TOTAL COST	_____

SPECIAL PROVISIONS

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SECTION 01 71 13 – MOBILIZATION AND DEMOBILIZATION

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes Mobilization and Demobilization

1.2 UNIT PRICE - MEASUREMENT AND PAYMENT

- A. Basis of Payment: LUMP SUM (LS)

PART 2 EXECUTION

2.1 Description

- A. This Section consists of all work necessary for the movement of personnel and equipment to and from the site, and for the establishment and removal of all facilities necessary to the performance of the work.
- B. All work in this Section shall be in accordance with Indiana Department of Transportation (INDOT) 2014 Standard Specifications Section 110 – Mobilization and Demobilization.

END OF SECTION

SECTION 01 71 23 – CONSTRUCTION ENGINEERING

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes Construction Engineering

1.2 UNIT PRICE - MEASUREMENT AND PAYMENT

- A. Basis of Payment: LUMP SUM (LS)

PART 2 EXECUTION

2.1 Description

- A. All work in this Section shall be in accordance with Indiana Department of Transportation (INDOT) 2014 Standard Specifications Section 105.08(b) – Construction Engineering by the Contractor, and Section 105.08(c) – Production Staking by the Contractor. Work shall include, but not be limited to the following:
1. The Contractor shall be responsible for field layout of all work including the establishment of all lines and grades necessary for proper execution of the work.
 2. The Contractor shall solicit or have in his employ a qualified Indiana registered Land Surveyor who will be responsible for establishing lines and grades necessary for proper execution of the work.
 3. Prior to the commencement of construction, the Contractor shall notify the Owner and Engineer in writing the name of the person responsible for construction engineering.
 4. The Contractor shall be responsible for the supervision of all construction engineering personnel, and for any and all errors resulting from the activities of such personnel. All such errors shall be corrected at the Contractor's expense.
 5. The Contractor shall provide assistance, including qualified helpers and equipment as may be requested by the Resident Engineer to verify that the accuracy of lines, grades, elevations and/or finished construction are in conformance with the project drawings and specifications. Minor changes in the lines may be permitted to facilitate the work, provided said changes incur no degradation of the finished work, and have met with the approval of the Resident Engineer.

END OF SECTION

SECTION 31 10 00 – SITE CLEARING

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Site Clearing
 - 2. Removing silt and debris from inlets, outlets, trash racks.
 - 3. Clear obstructions around flap gates.

1.2 UNIT PRICE - MEASUREMENT AND PAYMENT

- A. Site Clearing, silt and debris removal, clearing obstructions from each work site Basis of Payment: EACH (EA).

1.3 QUALITY ASSURANCE

- A. Conform to applicable codes and environmental requirements for disposal of debris.

PART 2 EXECUTION

2.1 GENERAL

- A. Continuously clean-up and remove waste materials from Site. Do not allow materials to accumulate on Site.
- B. Do not burn or bury materials on Site. Leave Site in clean condition.

2.2 DEBRIS REMOVAL

- A. Remove silt and debris from drainage structures including gatewells, headwalls, flapgates and sluice gates as noted on the drawings. Following removal of debris, operate and exercise flap gates to insure proper operation (engineer to witness).
- B. Clean pipes, manholes and/or gatewells to remove all sit and/or sediment. It may be necessary to construct a temporary coffer dam with sandbags at the ends of each headwall in order to remove water & ensure proper cleaning & inspection. Engineer to be notified 48 hours prior to dam construction. Dam must be removed by the end of each working day.
- C. Clear any debris around inlet trash racks.

END OF SECTION

SECTION 31 25 13 – EROSION CONTROL

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes Erosion and Sedimentation Control.
- B. Indiana Rule 5 (327 IAC 15-5, Rule 5) – Storm Water Runoff Associated with Construction Activities.

1.2 UNIT PRICE - MEASUREMENT AND PAYMENT

- A. Basis of Payment: LUMP SUM (LS)
- B. Includes all materials and labor for installation and maintenance of erosion control.

1.3 SUBMITTALS

Not Required.

1.4 QUALITY ASSURANCE

- A. All work shall comply with all federal, State, and local laws and regulation, and with Indiana Department of Transportation (INDOT) Standard Specifications Section 205 – Temporary Erosion and Sediment Control. The Contractor's designated individual shall be responsible for installation, inspection, and maintenance of these measures.

PART 2 PRODUCTS

- A. Products used shall comply with Indiana Department of Transportation (INDOT) Standard Specifications Section 205 – Temporary Erosion and Sediment Control.
- B. Geotextile for Silt Fence shall be in accordance with Indiana Department of Transportation (INDOT) Standard Specifications Section 918.04 – Geotextile for Silt Fence.

PART 3 EXECUTION

3.1 Description

- A. All work in this Section shall be in accordance with Indiana Department of Transportation (INDOT) Standard Specifications Section 205 – Erosion and Sedimentation control, and as noted herein.
- B. Erosion and sedimentation control measures shall be installed as shown on the drawings, and shall be maintained throughout the duration of the project. Contractor is responsible for implementing and maintaining a complete erosion and sedimentation control system.

- C. All existing limestone trails shall be watered during hauling and grading operations to minimize dust.

- D. The Contractor shall be responsible for providing erosion and sediment control measures in accordance with Federal, State, and local laws and regulations. The erosion and sediment controls selected and maintained by the Contractor shall be such that water quality standards are not violated as a result of the Contractor's construction activities. The area of bare soil exposed at any one time by construction operations should be kept to a minimum. Areas stripped (unclassified excavation) for aggregate shall receive the aggregate section by the end of the same working day. The Contractor shall construct or install temporary and permanent erosion and sediment control best management practices (BMPs). BMPs may include, but not be limited to, construction entrances, vegetation cover, slope stabilization, silt fences, sediment traps, inlet and outfall protection, and sedimentation basins. The Contractor's best management practices shall also be in accordance with the State of Indiana National Pollutant Discharge Elimination System (NPDES) Storm Water Pollution Prevention requirements. Any temporary measures shall be removed after the area has been stabilized.

END OF SECTION

SECTION 33 01 30 – OPERATION AND MAINTENANCE OF UTILITIES

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Cleaning of pipelines.
 - 2. TV inspection of sewer pipelines.
 - 3. Audio-video taping of pipeline interior.

1.2 UNIT PRICE - MEASUREMENT AND PAYMENT

- A. Cleaning of pipelines :
 - 1. Basis of Measurement: LINEAR FOOT (LFT).
 - 2. Basis of Payment: Includes removal and disposal of all silt, dirt, and debris from pipelines.
- B. TV Inspection of Sewer Pipelines:
 - 1. Basis of Measurement: LINEAR FOOT (LFT).
 - 2. Basis of Payment: Includes cofferdam installation, pumping, TV inspection, and audio-video taping of pipeline.

1.3 SUBMITTALS

- A. Completed DVDs, identified by location stationing, Project name, and manhole numbers.
- B. DVD's become property of Owner.
- C. Television inspection logs for each section of sewer line for Work performed. Include following as minimum information: stationing and location of lateral services, wyes or tees, clock references, pipe joints, infiltration/inflow defects, cracks, leaks, offset joints, and other information required to assess condition of sewer.

1.4 QUALITY ASSURANCE

- A. Use cameras with video output capable of producing minimum of 600 lines of horizontal resolution at center; optimum imagery with minimum illumination; and meet requirements of EIA Standard Video Signal.
- B. Applicator: Company specializing in performing Work of this Section.

1.5 COORDINATION

- A. Coordinate Work with Engineer.

PART 2 PRODUCTS

2.1 Video Files

- A. A flash drive or any other method of electronic delivery containing all video files.
- B. Audio track containing simultaneously recorded narrative commentary and evaluations of electrographer describing in detail condition of pipeline interior.

PART 3 EXECUTION

3.1 GENERAL

- A. Furnish materials, labor, equipment, power and maintenance to implement a cofferdam as required for time required to complete the work.
- B. The Contractor shall furnish and maintain, in good condition, all cleaning and televising equipment necessary for proper execution of the work.
- C. Maintaining Flow: It will be the responsibility of the Contractor, throughout the tenure of this contract, to provide and maintain sufficient flow at all times to pass any flash of storm flow of drainage ditches and prevent any backwater flooding due to obstruction caused by cleaning or CCTV equipment.
- D. Retrieval of Materials and Equipment: It shall be the Contractor's responsibility to remove materials and equipment that has been lodged in the sewer from cleaning, television inspection, or point repair excavations.
- E. Work Schedule. This schedule shall outline the sequence in which the Contractor proposes to conduct his operations and shall be approved by the Engineer before work is started. The level of detail of activities shall provide clear, concise communication of the plan of work. At a minimum, activities showing initial mobilization, start-up, and cleaning and televising shall be included. Original and updated schedules must be provided to the Engineer in writing.
- F. The Engineer may require additional updates to the schedule as changes occur. These additional updates will be submitted to the project manager within 24 hours of the request. Changes to the schedule are subject to approval of the Engineer.

3.2 SEWER CLEANING

- A. The Contractor shall provide equipment that is specifically designed and constructed for sewer cleaning. Solids and debris resulting from the cleaning operation shall be collected and removed from the site.
- B. The Contractor shall use the manufacturer's recommended size tools for the various size pipes. Equipment recommended by the manufacturer to protect the structure and pipe, such as pull-in slant jack rollers and roller and yoke assembly, roller manhole jacks, etc. shall be utilized.

C. The Contractor shall dispose of all debris and material off site.

1.1 TV CAMERA SYSTEM

A. Closed-circuit TV Camera System:

1. Use cameras specifically designed and constructed for closed-circuit sewer line inspection. Utilize camera equipment with pan and tilt capability to view each lateral connection at multiple angles.
2. Utilize camera capable of moving both upstream and downstream; minimum 1000 feet horizontal distance with one setup; direct-reading cable position meter.

1.2 FIELD QUALITY CONTROL

A. Pipeline Inspection:

1. Audio-video tape sections of pipeline between structures or outlets designated.
2. Identify and record locations of flat grades, dips, deflected joints, open joints, broken pipe, protrusions into pipeline, and points of infiltration.
3. Locate and record service connections.
4. Record locations of pipeline defects and connection horizontal distance, in feet, and direction from manholes.
5. Video with pipe section plugged as to view 100 percent of inside pipe diameter, use flow control methods as specified for bypass pumping system, to eliminate surcharging and reduce flow rate.

END OF SECTION