

**TOWN OF BROOKSVILLE, MS**  
**CDBG SEWER REHABILITATION PROJECT**  
**Project No. 1137-20-131-PF-01**

**ADDENDUM #1**  
**March 4, 2022**

The Contract Documents, Plans and Specifications shall be amended as set forth herein below:

**CONTRACT DOCUMENTS & SPECIFICATIONS**

The following changes are being made to the Bid Proposal:

In Section P titled *Proposal*, replace page(s) **PF-3 and PF-5** in its entirety with the attached page(s) **PF-3 and PF-5**.

This is based on the changes to the following Pay items:

Base Bid Page PF-3:

**Old Pay Item 7: Manhole Rehabilitation, Quantity 1, Unit LS**  
**New Pay Item 7: 48" Manhole Rehabilitation, Quantity 20, Unit VF**

Add Alternate No. 1 Bid Page PF-5:

**Old Pay Item 1: Manhole Rehabilitation, Quantity 1, Unit LS**  
**New Pay Item 1: 48" Manhole Rehabilitation, Quantity 20, Unit VF**

The following attached specification shall be added to the Technical Specifications:

**Section 4400 Manhole Rehabilitation**

**CONSTRUCTION PLANS:**

The following note shall be added to Sheet No. 2 of the Construction Plans:

- 15. Manholes not readily visible at locations as shown on plans shall be located and identified with methods as approved by the Engineer prior to the commencement of work. No separate cost shall be made for manhole location work.**

The following changes are made on Sheet 2:

Under the *Summary of Quantities – Base Bid*

**Change Pay Item 7 from Manhole Rehabilitation, Quantity 1, Unit LS**  
**To 48" Manhole Rehabilitation, Quantity 20, Unit VF**

Under the *Summary of Quantities – Add Alternate #1 Bid*

**Change Pay Item 1 from Manhole Rehabilitation, Quantity 1, Unit LS  
To 48” Manhole Rehabilitation, Quantity 20, Unit VF**

**QUESTIONS SUBMITTED FOR CLARITY:**

Question: What is the maximum length of pipe that will be used for a sewer line point repair before it is paid by the linear foot?

Answer: **14 ft.**

Question: Can the cost of a point repair be utilized as an initial cost for the first 14’ of sewer line replacement before it is paid by the linear foot?

Answer: **Yes. This will apply to all locations where the plans call for a linear foot of sewer line replacement to be done that is not specified as a point repair. In those cases where a point repair exceeds 14’, the linear foot price will be used for the additional length of line replacement.**

Question: Can debris from the sewer line cleaning work be deposited of at the Town’s Sewer Lagoon?

Answer: **Yes. Coordination for this disposal will be discussed during the pre-construction meeting.**

Question: Can undercut material, old clay pipe and other roadway material removed to make repairs to the underground sewer lines be disposed of or transferred to other locations to be utilized within the Town’s Limits?

Answer: **Yes. Possible locations will be discussed during the pre-construction meeting.**

Question: Will water be supplied by the Town to be utilized in the CCTV Inspection and cleaning of sewer lines prior to the installation of CIPP Liner?

Answer: **Yes. Locations to used for water supply will be discussed at the pre-construction meeting**

Question: Will point repairs be done before or after CCTV inspection and cleaning of the sewer Lines?

Answer: **Proposed Point repairs can be done prior to CCTV and cleaning. However, if any other locations requiring point repairs are identified from the CCTV inspection, they will be required to be repaired prior to the installation of the CIPP Liner.**

Question: Can MH depth info be made available as don't see the depths noted on the plans?

Answer: **Exact Depths are not available for all manholes, but recent measurements taken on several manholes associated with the proposed work show depths varying from 6' to 10'. Work associated with excavation and select backfilling beyond depths specified on bid items for sanitary sewer line replacement will be paid for at the respective unit prices specified on the bid form.**

Question: On the bid form there is a 50' quantity of 10" CIPP, however don't find it on the plans. If none is identified, can this item be removed from the bid form?

Answer: **250' of 10" VCP is identified on Sheet 6 on S. Oliver Street between MH 125A and MH 125 for CIPP Lining. The 50' mentioned is included as a bid item in Add Alternate No. 1 in the event more 10" pipe is identified during CCTV inspection work. This item will remain on the Bid Form.**

Question: In section 3.4.6 of the CIPP specifications it mentions compensation for service connection sealing at the unit price in the proposal. With no unit price in the proposal, will these not be a work item? They are very seldom used especially in good soil conditions and the existing pipe at or above the water table.

Answer: **The cost for service line connection sealing shall be included in the pay item price for the sanitary sewer service line reinstatement. The condition of existing sewer taps will be observed during CCTV inspection and, if applicable, any connection sealing requirements will be identified at that time.**

Question: What will Manhole Rehabilitation Work consist of?

Answer: **See attached Specification for Manhole Rehabilitation.**

**NOTE: Bidders shall acknowledge receipt of this addendum on Page P-1 of the Bid Proposal.**



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Calvin Dean, P.E., Principal  
Crown Engineering, PLLC

Date: March 4, 2022

BIDDER agrees to perform all the work described in the CONTRACT DOCUMENTS and the CONTRACT DRAWINGS within ninety (90) calendar days for the following proposal:

### BASE BID

Item No.	Description	Quantity	Units	Unit Price	Total
1	Mobilization	1	LS		
2	Removal of Structures and Obstructions (all types)(all depths)	1	LS		
3	Traffic Control	1	LS		
4	CCTV Inspection and Cleaning of Sanitary Sewer Line 6"-12" Diameter	5100	LF		
5	Post-Lining CCTV Inspection	5100	LF		
6	Field Testing (Compaction, Density Tests, etc.)	1	LS		
7	48" Manhole Rehabilitation	20	VF		
8	Trim Protruding 4" Tap	5	EACH		
9	8" Line Point Repair (6'-8' Depth)	25	EACH		
10	New 8" Cure-in-Place- Pipe (CIPP) Liner	4350	LF		
11	New 10" Cure-in-Place- Pipe (CIPP) Liner	250	LF		
12	New 8" PVC (SDR-26) Sanitary Sewer (Includes bedding material) (0-8' Deep) (Complete-in-Place)	200	LF		

## ADD ALTERNATE #1 BID

Item No.	Description	Quantity	Units	Unit Price	Total
1	48" Manhole Rehabilitation	20	VF		
2	8" Line Point Repair (6'-8' Depth)	3	EACH		
3	New 8" Cure-in-Place- Pipe (CIPP) Liner	450	LF		
4	New 10" Cure-in-Place- Pipe (CIPP) Liner	50	LF		
5	New 8" PVC (SDR-26) Sanitary Sewer (Includes bedding material) (0-8' Deep) (Complete-in-Place)	100	LF		
6	New 10" PVC (SDR-26) Sanitary Sewer (Includes bedding material) (0-8' Deep) (Complete-in-Place)	50	LF		
7	4" or 6" Sanitary Sewer Service Line Reinstatement	10	EACH		
8	Excavation	50	CY		
9	Select Backfill (Offsite) (Compacted & In-Place)	75	CY		
10	Clay Gravel (Compacted & In-Place)	30	CY		
11	4" Asphaltic Roadway Repair	25	TN		
<b>TOTAL ADD ALTERNATE #1 BID</b>					

## SECTION 4400

### MANHOLE REHABILITATION

**4400.1 DESCRIPTION:** This item shall govern rehabilitation of manholes complete and in place and the materials used therein, including cleaning, interior surface restoration, priming the prepared surface and coating (including bench and invert of the manhole).

**4400.2 REFERENCED STANDARDS:** Reference standards cited in this Specification refer to the current reference standard.

1. AASHTO – American Association of State Highway and Transportation Officials:
  - a. M306: Standard Specification for Drainage, Sewer, Utility, and Related Castings.
2. ASTM – American Society for Testing and Materials:
  - a. A536: Standard Specification for Ductile Iron Castings.
  - b. C478: Standard Specification for Circular Precast Reinforced Concrete Manhole Sections.
  - c. D638: Test Method for Tensile Properties of Plastics.
  - d. D648: Standard Test Method for Deflection Temperature of Plastics under Flexural Load in the Edgewise Position.
  - e. D790: Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.
  - f. ASTM D695 – Compressive Strength of Rigid Plastics
  - g. D1505: Standard Test Method for Density of Plastics by the Density-Gradient Technique.
  - h. D1693: Standard Test Method for Environmental Stress-Cracking of Ethylene Plastics.
  - i. ASTM C 109 – Standard Test Method for Compressive Strength of Hydraulic Cement
  - j. Mortars (Using 2-in. or [50-mm] Cube Specimens)
  - k. ASTM C 293 - Standard Test Method for Flexural Strength of Concrete (Using Simple Beam with Center-Point Loading)
  - l. ASTM C 490 - Standard Practice for Use of Apparatus for the Determination of Length Change of Hardened Cement Paste, Mortar, and Concrete
  - m. ASTM C 496 – Standard Test Method for Splitting Tensile Strength of Cylindrical Concrete Specimens
  - n. ASTM C 882 – Standard Test Method for Bond Strength of Epoxy-Resin Systems Used
  - o. With Concrete By Slant Shear
  - p. ASTM C 1140 - Standard Practice for Preparing and Testing Specimens from Shortcrete Test Panels.

**4400.3 SUBMITTALS:** Contractor shall submit manufacturer's product data, instructions, recommendations, shop drawings, and certifications. All submittals shall be in accordance with Engineer's requirements and submittals shall be approved by the Engineer prior to delivery.

1. Submit proposed methods, equipment, materials and sequence of operations for sewer construction.
2. Plan operations so as to minimize disruption of utilities to occupied facilities or adjacent property.
3. Submit test reports.
4. Submit pre and post construction videos.
5. Manufacturer shall certify that Applicator has been trained and approved in the handling, mixing and application of the products to be used.
7. Equipment to be used for applying the products by the Applicator shall be certified and approved by the Manufacturer.
8. Only manhole rehabilitation products approved by the Engineer shall be used.
9. The Contractor shall submit descriptive information including technical data sheets and ASTM test results on each product proposed indicating that the product conforms to and it is suitable for its intended use per these specifications.

**4400.4 MATERIALS:**

1. Concrete: Concrete shall conform to Section 3300 - Cast in Place Concrete.
2. Mortar shall be composed of one part Portland Cement, one part masonry cement (or ¼ part hydrated lime) and masonry sand equal to 2-1/2 to 3 times the sum of the volumes of the cements and lime used.
3. Unless otherwise specified, all grouting shall be done with non-shrinking grout.
  - a. Non-shrinking grout shall be furnished factory premixed so only water is added at the job site.
  - b. Grout shall be mixed in a mechanical mixer.
  - c. No more water shall be used than is necessary to produce a flowable grout.
  - d. All proportioning and mixing of the components shall be in accordance with manufacturer's recommendations.
4. Replacement brick for manhole repair work courses shall be of first quality, sound, kiln fired, new unbroken brick.
5. For rehabilitation of existing manholes; first, apply a combination of cementitious coatings followed by an approved epoxy coating.
6. Spray on Epoxy Coating.
  - a. Seamless manhole formed in place, within existing manhole extending from channel to frame.
  - b. Two or three part epoxy coating.
  - c. Existing wall preparation: Follow manufacturer's recommendations.
  - d. Thickness: min. 200 mil. Shall be structurally independent of existing manhole structure or sufficient to form protective barrier when used with Cementitious Manhole Restoration.

- e. Min. Tensile Strength – 7,000 psi (ASTM D638-86)
- f. Min. Flexural Strength - 10,000 psi (ASTM D790-86)
- g. Min. Compressive Strength 12,000 psi (ASTM D695-85)

**4400.5 CONSTRUCTION:** Proper surface preparation procedures must be followed to ensure adequate bond strength to any surface to be coated.

1. Applicator shall inspect all surfaces specified to receive a liner prior to surface preparation.
2. Applicator shall notify Engineer of any noticeable disparity in the surfaces which may interfere with the proper preparation or application of the repair mortar and/or liner(s).
3. All contaminants including: all oils, grease, incompatible existing coatings, waxes, form release, curing compounds, efflorescence, sealers, salts, or other contaminants shall be removed.
4. Surface preparation methods(s) should be based upon the conditions of the substrate and the requirements of the liner to be applied. Concrete or brick manholes that are not sound or that are damaged shall be repaired as required.
5. High pressure cleaning with a minimum of 3,500 psi shall be used to clean and free all foreign material within the manhole.
6. Detergent water and cleaning or muratic acid shall be used when grease and oil are present.
7. All materials resulting from the cleaning of the manhole shall be removed prior to application of coating.
8. Surface to receive epoxy coating shall be cleaned and abraded to produce a sound surface with adequate profile and porosity to provide a strong bond between the protective coating and substrate.
9. Active water infiltration shall be stopped by using a cementitious water plug or hydroactive grout which is compatible with the specified coating.
10. Prepared surfaces should be tested after cleaning and repair but prior to application of the coating, if a specific pH or moisture content of the concrete is required according to manufacturer's recommendations.
11. Protective-coating materials are to be handled according to their material safety data sheets. Materials are to be kept dry, protected from weather and stored under cover.
12. Repair/under-coat materials must be accepted and approved by the protective coating

manufacturer for compatibility with the specified liner and shall be used to fill voids, structurally reinforce and/or rebuild surfaces, etc. as determined necessary by the engineer and liner applicator.

13. Application procedures shall conform to the recommendations of the liner manufacturer, including material handling, mixing, environmental controls during application, safety, and equipment.
14. The coating application equipment shall be specifically designed to accurately apply the specified liner materials and shall be regularly maintained and proper working order.
15. The coating material must be applied by a Certified Applicator of the liner manufacturer.
16. The coating shall be applied to minimum thickness by the Engineer or as specified manufacturer's recommendations.
17. Manhole coating shall be applied throughout the entire vertical length of manhole from the bench to the bottom of the casting.

**4400.6 TESTING:** Contractor maybe required perform testing for manhole rehabilitation

1. Visually verify the absence of leaks.
2. Contractor maybe required to perform either a hydrostatic test or vacuum test on every manhole that is rehabilitated.
3. Every manhole that is rehabilitated shall be inspected using high-voltage holiday detection equipment.
4. After abrading and cleaning, additional protective coating material shall be applied to the repair area.
5. All touch-up repair procedures shall follow the protective coating manufacturer's recommendations.
6. If a manhole fails to pass one of the above tests, it shall be repaired in accordance with the manufacturer's recommendation and re-tested. It shall not be accepted until it passes all tests.
7. All repairs and re-testing shall be at no additional cost to the Owner.

**4400.7 MEASUREMENT:** Manhole Rehabilitation shall be measured by vertical feet of manhole depth. The bench area of the manhole or manhole structure is considered to be inclusive to the measurement of the rehabilitated manhole or manhole structure, and, shall be included in the work.

**4400.8 PAYMENT:** This item shall be paid for by the vertical foot of depth for the unit price bid for "Manhole Rehabilitation." Payment shall be full compensation for materials, labor, equipment, tools, testing, and any incidentals necessary to complete the work including the bench, invert, and all interior surfaces of the manhole.