



ADDENDUM NO. 2 - TO ALL BIDDERS

Reference – INVITATION FOR BID (IFB) #2017
HOLLYWOOD SANITARY SEWER REHABILITATION PROJECT – PHASE 1

Dated: November 30, 2016
Due Date: December 8, 2016, 3:00 PM EST

Item #1: Several questions have been asked in reference to the RFP, and we have included our answers **IN BOLD ITALICS** on the ATTACHMENT of this Addendum.

Item #2: **SEE ATTACHMENT**

All other terms and conditions remain the same.

Note: This Addendum modifies the Contract Documents dated October 2016 as listed below, and is hereby incorporated into the Contract Documents. Bidder shall acknowledge receipt of this Addendum in the space provided on page 102-16 of the Bid Form (attached). Failure to do so may subject Bidder to disqualification. A signed acknowledgment of this addendum must be received by this office either prior to the due date and hour or attached to your proposal. Signature on this addendum does not constitute your signature on the original document. The original document must be signed also.

Sincerely,

Janet Haney
County of York
Management Analyst
Phone: (757) 890-3680

Name of Firm

Signature/Title

Date

Addendum No. 2 – November 30, 2016

Hollywood Gravity Sewer Rehabilitation – Phase 1
IFB No. 2017

Questions

1. Section 102, Bid Form, page 102-15. There appears to be a quantity discrepancy in Bid Items 30 and 33.

See enclosed, revised Bid Form.

2. Section 110 – Special Provisions, page 110-17. Please review information on Permacast MS 10,000 with ConShield additive and on Dinjer CMS 10K, which is submitted for product pre-approval.

Both submitted mortars are approved for use under paragraphs 1.3.A.3.b.i and 1.3.B.3.b.i. Note that epoxy coating is not required for Permacast MS 10,000 with ConShield additive.

3. Are the stainless steel manhole inserts the same thing as a rainstopper?

Rainstopper is a type of stainless steel insert.

4. Will the use of air/steam be allowed for inverting and curing the liner?

Yes.

5. Will the contractor be allowed to dispose of debris collected from cleaning operations at the treatment plant?

Contractor may dispose of dewatered debris at the Hampton Roads Sanitation District's (HRSD's) Regional Residuals Facility (RRF), located at HRSD's Nansemond plant in Suffolk. Contractor shall obtain required training and access card to utilize the RRF prior to delivering the first load of debris. Contact HRSD for more information:

Justin Carr 757-460-7050

Shawn Maxfield 757-460-7051

6. Are there and restrictions on hydrant use? And will there be a cost to use water?

See Note 39 on Sheet G2.

7. Section 812 2.1(B) calls for ridged pipe whenever bypassing flows. Ridged pipe is costly and unnecessary for small diameter pipes. Will the county allow the use of lay-flat for small diameter pipes 15" and smaller?

No. Rigid pipe shall be used for bypass pumping operations. Sewer mains larger than 10" diameter are located near an open water course and/or along a busy roadway. Bidders may wish to consider conducting pump-and-haul operations at selected locations. Bidders wishing to interrupt normal operation of the Oriana Road lift station (LS 21) shall submit request to the County's project manager, Kevin Campbell, a minimum of five (5) working days in advance of each interruption.

III. BID FORM

Bids to be opened: **3:00 p.m., December 8, 2016**
 Work to be Completed in: **240 Calendar Days (Substantial)**
270 Calendar Days (Final)
 Liquidated Damages: **\$250.00** per calendar day after time for Substantial Completion has expired.
An additional \$250.00 per calendar day after time for Final Completion has expired.
 Performance Bond: 100%
 Payment Bond: 100%
 Bid Security: 5%

To: **County of York, Virginia**
105 Service Drive
Yorktown, Virginia 23692
IFB No. 2017

A. BID PRICE

OPTION A - LUMP SUM BID (Unused)

OPTION B - COMBINATION LUMP SUM AND UNIT PRICE BID (Unused)

OPTION C - UNIT PRICE BID

In compliance with the Bid Documents, titled **Hollywood Sanitary Sewer Rehabilitation – Phase 1, which incorporates the HRPDC Regional Construction Standards, Fifth Edition as amended for the Project, including** all Addenda issued to date all of which are part of this Bid, the undersigned hereby proposes to furnish all items including materials, supervision, labor, and equipment in strict accordance with said Contract Documents for the sum of:

NO.	ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
1	Mobilization, Complete (up to 5% of total price of all other base bid items)	LS	1		
2	Construction Entrance	EA	4		
3	Inlet Protection	EA	5		
4	Silt Fence	LF	2,500		
5	Tree Protection	LF	200		
6	Undercut Excavation with Bedding Backfill as Directed by Owner	CY	100		

7	Select Material, Type II – Sand as Directed by Owner, Complete-in-Place	Ton	2,500		
8	Select Material, Type II – Stone as Directed by Owner, Complete-in-Place	Ton	2,500		
9	Miscellaneous Unclassified Excavation as Directed by Owner	CY	100		
10	Aggregate Base Material, Complete-in-Place	Ton	800		
11	Prime Coat Prior to Reconstruction, Complete-in-Place	SY	500		
12	Reconstructed Asphalt Pavement, Complete-in-Place	SY	2,500		
13	Concrete Driveway Restoration at Main Line or Lateral Crossing, Complete-in-Place	SY	100		
14	Exposed Aggregate Concrete Driveway Restoration at Main Line or Lateral Crossing, Complete-in-Place	SY	100		
15	Asphalt Driveway Restoration at Main Line or Lateral Crossing, Complete-in-Place	SY	500		
16	Aggregate Driveway Restoration, Complete-in-Place	Ton	50		
17	4" PVC Gravity Sewer Lateral Replacement, Installed Complete-in-Place	LF	180		
18	6" PVC Gravity Sewer Lateral Replacement, Installed Complete-in-Place	LF	60		
19	4" PVC Gravity Sewer Lateral Cleanout Assembly, Installed Complete-in-Place	Each	85		
20	6" PVC Gravity Sewer Lateral Cleanout Assembly, Installed Complete-in-Place	Each	5		
21	6' x 4" Gravity Sewer Lateral CIPP T-Liner, Installed Complete-in-Place	Each	110		
22	4" CIPP T-Liner Additional Length, Installed Complete-in-Place	LF	1,500		
23	6' x 4" Gravity Sewer Lateral CIPP Tube Liner, Installed Complete-in-Place	Each	5		
24	4" CIPP Tube Liner Additional Length, Installed Complete-in-Place	LF	80		
25	6' x 6" Gravity Sewer Lateral CIPP Tube Liner, Installed Complete-in-Place	Each	24		
26	6" CIPP Tube Liner Additional Length, Installed Complete-in-Place	LF	800		
27	6' x 8" Gravity Sewer Lateral CIPP Tube Liner, Installed Complete-in-Place	EA	1		

28	8" CIPP Tube Liner Additional Length, Installed Complete-in-Place	LF	68		
29	Heavy Cleaning, Gravity Sanitary Sewer	LF	1,000		
30	8" Gravity Sanitary Sewer CIPP Lining for Partially Deteriorated Host Pipe, Installed Complete-in-Place	LF	7,400		
31	10" Gravity Sanitary Sewer CIPP Lining for Partially Deteriorated Host Pipe, Installed Complete-in-Place	LF	490		
32	12" Gravity Sanitary Sewer CIPP Lining for Partially Deteriorated Host Pipe, Installed Complete-in-Place	LF	960		
33	15" Gravity Sanitary Sewer CIPP Lining for Partially Deteriorated Host Pipe, Installed Complete-in-Place	LF	1,150		
34	10' x 8" Gravity Sanitary Sewer Point Repair incl. Replace Tap, Installed Complete-in-Place	Each	1		
35	8" C900 Gravity Sanitary Sewer Main, Installed Complete-in-Place	LF	890		
36	PVC Gravity Sewer Lateral Internal Drop Assembly, Installed Complete-in-Place	Each	10		
37	8" PVC Gravity Sewer Main Internal Drop Assembly, Installed Complete-in-Place	Each	1		
38	Raised Manhole Frame and Cover, Installed Complete-in-Place	Each	1		
39	Replace Manhole Frame and Cover with Watertight Manhole Frame and Cover, Complete-In-Place	Each	2		
40	Replacement Manhole Frame and Cover, Installed Complete-in-Place	Each	38		
41	Stainless Steel Manhole Insert, Installed Complete-in-Place	Each	52		
42	Manhole Chimney Interior Urethane Seal, Installed Complete-in-Place	Each	54		
43	Parge Manhole Exterior and Apply Cement Layer, Installed Complete-in-Place	Each	1		
44	4' Sanitary Sewer Manhole Abandonment, Complete	Each	2		
45	4' Sanitary Sewer Manhole up to 4' Deep Rehabilitated with Epoxy Coating, Complete-in-Place	Each	54		
46	4' Sanitary Sewer Manhole Extra Depth Rehabilitated with Epoxy Coating, Complete-in-Place	VLF	200		

Project Manual Addendum Items

8. Section 110 – Special Provisions, Page 110-17: ADD

1.3.A.4. Mainstay

a. New manhole

i. Mainstay DS-5 100% Solids Epoxy Coating

b. Existing manhole

i. Mainstay ML-72 Sprayable Microsilica Restoration Mortar

ii. Mainstay DS-5 100% Solids Epoxy Coating

9. Section 110 – Special Provisions, Page 110-18: ADD

1.3.B.4. Mainstay

a. New manhole

i. Mainstay DS-5 100% Solids Epoxy Coating

b. Existing manhole

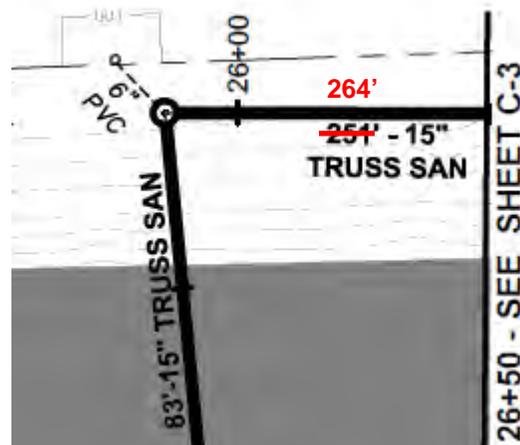
i. Mainstay ML-72 Sprayable Microsilica Restoration Mortar

ii. Mainstay DS-5 100% Solids Epoxy Coating

10. Section 02956, Sewer Service Lateral Rehabilitation by CIPP Liner: DELETE in entirety and REPLACE with the enclosed specification.

Drawing Addendum Items

11. Sheet C2: DELETE length on callout for pipe at Sta. 26+00 of PS 24 – Alignment ‘A’ and REPLACE with the following:



End of Addendum No. 2

SECTION 02956

SEWER SERVICE LATERAL REHABILITATION BY CIPP LINER

I. GENERAL

1.1 SUMMARY

It is the intent of this specification to provide materials and a standard practice for installing a cured-in-place pipe (**CIPP**) to renew a sewer service lateral that connects *either* to a main pipe rehabilitated by CIPP (*“mainline”*) or directly to a manhole.

1.2 GENERAL

- A. The service lateral reconstruction from the mainline *or manhole* connection to the public cleanout (or public wye for a dual-service connection) shall be accomplished using a translucent inversion bladder, a non-woven fabric tube of particular length that includes *either* a molded hydrophilic compression gasket seal *or bead of hydrophilic sealant* at each end of the tube, a non-woven fabric tee sized for the internal diameter of the sewer main to which the lateral is connected that includes *either* a molded hydrophilic compression gasket seal *or bead of hydrophilic sealant* at each end of the tee *the lateral-to-mainline connection*, and a thermo-set resin with physical/chemical properties appropriate for the application. ~~The use of hydrophilic paste/caulk shall be prohibited.~~
- B. The tube is positioned inside ~~of a translucent~~ *an* inversion bladder forming a liner/bladder assembly. The tube shall be impregnated with resin under a controlled vacuum within the ~~translucent~~ bladder. The liner/bladder assembly is then inserted into a mobile air-inversion device (*“device”*). The mobile air-inversion device shall include a camera port for *verifying positioning of the device prior to inverting the liner/bladder assembly, for* inspecting the resin saturated tube inflated in the pipe before the resin is cured, and for visually verifying the liner has been fully deployed and the end is open. *Alternatively, a camera shall be attached to the device to verify positioning of the device prior to inverting the liner/bladder assembly, and a camera shall be inserted into the lateral to verify proper and full inversion of the liner/bladder assembly before the resin is cured.* Access to an upstream end of the service lateral shall be accomplished by using an existing cleanout or by installing a new cleanout ~~by vacuum excavation.~~
- C. The mobile air-inversion device shall be aligned with the access opening in the service lateral pipe (manhole, excavated pit, inside cleanout, or outside cleanout). The mobile air-inversion device shall be properly positioned; the liner/bladder assembly shall be inverted into the lateral pipe under controlled air pressure. The liner/bladder assembly shall include a hold back rope for controlling the speed of inversion and protecting plumbing fixture traps in the building by ensuring a positive pressure is not created in the service lateral pipe. The inversion shall be complete when the liner is fully extended within the lateral pipe, with the bladder extending

beyond the open end of the liner tube, and with the compression gaskets / *hydrophilic sealant* positioned between the host pipe and the liner.

- D. Verification of installation shall be completed by inserting a lateral camera into a camera port and continuing through the bladder, under pressure, providing visual inspection of the inflated liner tube prior to curing the resin. The inspection process shall verify that the liner is properly positioned in the pipe and that the tube has been fully deployed with the end open. The resin-impregnated tube shall ~~ure~~ **be cured** per manufacturer's recommendation. The inflation bladder shall then be reverted from the cured tube, and the mobile launching device shall be removed.

1.3 FLOW CONTROL

Flow control from the lateral shall follow the manufacturer's recommended methods. Any bypassing in the main line shall follow Section 812 – Bypass Pumping.

1.4 CONTRACTOR EXPERIENCE:

The Contractor shall be certified by the product's manufacturer and have a minimum experience of rehabilitating 250 laterals and **installing** 2,500 LF of lateral CIPP **using the proposed product. The Contractor or Subcontractor contracted to perform the work shall have a minimum of five (5) years of continuous experience installing CIPP lateral lining in pipe of similar size, length, and configuration as proposed in this project. The on-site Superintendent of the lateral lining Contractor or Subcontractor contracted to perform the work shall have installed a minimum of 100 CIPP laterals of like condition for this geographic area and have a minimum of five (5) years of CIPP industry experience.**

1.5 PRODUCT EXPERIENCE

The product experience shall be minimum of 250 lateral rehabilitations and 2,500 LF of lateral CIPP.

1.6 SUBMITTALS

After the award of the Project contract, the Contractor shall submit the items listed below for review and approval. These items may be submitted prior to the notice to proceed for review and approval.

- A. Manufacturer's published literature and published data for the proposed cured-in-place lateral liner system.
- B. Manufacturer's published literature and published data for the proposed hydrophilic gaskets ~~and~~ **or hydrophilic sealant to include test data documenting creation of a water-tight seal at both ends of the CIPP lateral liner system for pressures up to 20 psi. simulating hydration/dehydration conditions for a minimum period of 10,000 hours and the test results must be successfully demonstrate and document long term performance without deterioration,**

~~loss of material, flexibility, and expansion of the gasket during repeated cycles of hydration and dehydration.~~

- C. Independent test report showing that the physical properties of the proposed CIPP system meet the requirements of these specifications and the requirements published in the manufacturer's literature. These results must be for field installations in the United States of the same resin system and tube materials proposed for the actual installation.
- D. Written verification confirming that the Contractor is licensed and/or certified by the liner process manufacturer.
- E. The manufacturer's certification that the proposed CIPP lateral liner system for the project meets the requirements of these specifications and will meet or exceed the physical properties given in the manufacturer's published literature submitted as required by Part A of this subsection.
- F. Calculations supporting recommended liner thicknesses. Design data and specification sheets listing all parameters used in the CIPP liner design and thickness calculations based on ASTM F1216, assuming a fully deteriorated gravity pipe condition *for laterals and partially deteriorated gravity pipe condition for lined sewer mains*. The calculations shall be sealed by a registered Professional Engineer *licensed in the Commonwealth of Virginia*. The data shall include both the sealed calculated thicknesses and the thicknesses proposed to be installed.
- G. Two complete sets of video inspection DVDs from each of the television inspections performed (Pre- and Post-Installation *Closed-Circuit Television [CCTV]* Inspection), to ~~NAASCO~~ *NAASCO* LACP standards.
- H. *Long-term creep test data confirming the resin system's 50-year design life in accordance with ASTM D2990.*

II. PRODUCTS

2.1 ACCURACY OF THE PLANS

To the greatest practical extent, the plans accurately depict the details of the work, including the locations and numbers of all manholes, etc. However, the Contractor shall determine the locations of all structures and verify all dimensions, including service lateral length, existing fittings and/or bends in the lateral, and diameter of the lateral. The Contractor shall also be aware that minor variations in pipe diameter and circumference will occur, that it is not intended that such minor variations from the standard four-inch (4"), *six-inch (6")*, or *eight-inch (8")* lateral be indicated on the plans, and that such variations will not be considered as grounds for additional claims for compensation.

2.2 MATERIAL

- A. Tube – *"Tube" refers to both the lateral liner and, for laterals connecting directly to a sewer main, the tee section within the sewer main.* The fabric tube shall consist of flexible needle

punched felt, knitted tube or an equivalent non-woven material. The tube may be reinforced by incorporating scrim or fiberglass strands to limit length stretch and improve structural properties. The tube shall be a butt seam constructed by longitudinal stitching and thermal tape seal bonding producing a uniform wall thickness with no intermediate layers. The tube shall be capable of conforming to bends, offset joints, bells, and disfigured pipe sections **and fittings**. A hydrophilic O-ring shall be positioned at each end of the liner tube providing a leak free compression gasket seal compatible with all piping materials. ***The length shall be a distance to effectively span from the lateral connection at the mainline or manhole to the desired termination location in the service lateral pipe. For the purpose of this specification, the termination point shall be a distance within 18” downstream of either the public wye for a dual service connection or the fitting connecting the private lateral to the public lateral. When required, an overlap method shall be performed with a pull-in-process installation from a cleanout or access point toward the mainline or manhole. The lateral liner must provide a watertight seal at the mainline, a structural repair of the lateral over the specified length, and a watertight seal at the terminating end. The installer shall verify the lengths in the field before impregnation of the resin.***

- B. Gasket Seals – The gaskets to seal the liner shall be hydrophilic and shall have a minimum of a 180% increase in thickness over 416 days per 100-Hour Insignia Test. The mainline connection shall include a seamless molded flange shaped end seal gasket attached to the main liner by use of stainless steel snaps. The lateral tube shall include an O-ring gasket attached six inches (6”) from the upstream terminating end of the lateral tube.
- C. ***Hydrophilic Sealant – The liner sealant shall be a single-component hydrophilic, elastic material and shall have a minimum of a 100% increase in thickness in the presence of water. The sealant shall be either protected by backing rings or semi-cured (minimum 12 hours at 80°F, or 24 hours at 70°F) to prevent loss of material during lateral liner positioning and installation. Sealant bead shall be continuous ½” wide by ½” thick applied at the lateral-to-main connection interface and at the terminating end of the lateral liner. The sealant shall be fully cured within 20 days and exhibit the following properties:***

<i>Property</i>	<i>Value</i>
<i>Hardness (Shore A)</i>	<i>≥ 45</i>
<i>Tensile Strength (MPa)</i>	<i>≥ 4</i>
<i>Elongation (%)</i>	<i>≥ 850</i>
<i>Specific Gravity</i>	<i>≥ 1.25</i>
<i>Volume Expansion (%)</i>	<i>≥ 100</i>
<i>Mass Change (%)</i>	<i>≤ 5.0</i>

- D. The bladder shall be translucent to enable visual inspection of resin during saturation under a controlled vacuum and inspection of the liner once inflated in the pipe prior to curing of the resin.

- E. Liner/Bladder Assembly – The tube positioned within the translucent bladder shall form a liner/bladder assembly engineered for inserting the liner tube and bladder simultaneously from a single access point maintaining inflation pressure from the initial inversion of the liner tube until the resin is cured.
- F. Resin – The thermo-set resin system shall be polyester or epoxy with proper catalysts as designed for the specific application. ***Use of resin cured with ultraviolet light is prohibited.***
- G. Design Considerations – The design of the cured-in-place lateral liner shall use constraints provided in Table 200-5.21.1, Table 200-5.21.2, Table 200-5.21.3, and Table 200-5.21.4. Structural strength design calculations as per ASTM F1216-09, appendix X1.1.2.
- H. Minimum Structural Properties – ***No CIPP reconstruction technology will be allowed that requires bonding to the existing pipe for any part of its structural strength.***
 - 1. Flexural Strength (ASTM D790) = 4,500 psi
 - 2. Flexural Modulus (ASTM D790) = ~~350,000~~ **250,000** psi
- I. Chemical Resistance – The cured tube shall meet minimum ***test*** standards described in ASTM F1216-09, appendix X2.

2.3 APPROVED MANUFACTURERS

- A. LMK Technologies (1779 Chessie Lane, Ottawa, IL 61350)
- B. ***BLD Services, LLC (2424 Tyler Street, Kenner, LA 70062)***
- C. Or approved equal.

2.4 DEFECTIVE WORK

Any defects which, in the judgment of the Owner, will affect the integrity or strength of the lining, shall be repaired or the liner replaced at the Contractor's expense. Obtain approval of the Owner for method of repair, which may require field or workshop demonstration.

2.5 FINAL ACCEPTANCE

Upon completion and before acceptance by the Owner, the Contractor shall re-inspect the rehabilitated lateral by the use of ~~closed-circuit TV~~ **CCTV** cameras and shall submit color CDs or DVDs of the rehabilitated pipeline to the Owner for approval/acceptance of the Work in accordance with Section 811 - Television Inspection.

2.6 SPECIAL WARRANTY

The Contractor shall provide an unconditional ~~ten~~ **five (5)** year written warranty from the date of completion for materials, workmanship, resistance against deterioration, failure to maintain an infiltration free surface or pipe/wall interface, or other lining failures. All defects ***in materials and/or workmanship*** discovered within this period, as determined by the Owner, shall be repaired or replaced in a satisfactory manner, and within a reasonable timeframe, at no cost to the Owner.

III. EXECUTION

3.1 INSTALLATION RECOMMENDATIONS

ASTM F1216-09: Standard Practice for the Installation of Cured In-Place Pipe by Inversion Lining

- A. Coordination – The Contractor shall be responsible to coordinate with the parcel owners/tenants prior, during, and immediately after worked performed. Any parcel owners not wanting to participate shall be reported to the Owner immediately.
- B. Transport – All materials shall be transported and stored per manufacturer’s recommendation. Liner materials shall be labeled and identified with the minimum information:
 - 1. Upstream manhole identification number of the mainline to which the service lateral connects.
 - 2. Downstream manhole identification number of the mainline to which the service lateral connects.
 - 3. Parcel(s) address of the intended lateral ***in which*** the liner shall be installed.
 - 4. Liner material.
 - 5. Resin type to be induced into the liner.
- C. Accessing the Pipe – Should a cleanout not exist or the lateral does not directly connect to a manhole, then the Installer shall excavate an access pit or install a cleanout providing access to the lateral pipe per the Owner’s standards.
- D. Cleaning and Inspection – All roots and debris shall be removed from the pipe per manufacturer’s recommendation and a CCTV inspection shall be performed documenting length, diameter and pipe defects as per NASSCO LACP Standards.
- E. Sizing – The tube shall be cut to the appropriate length and inserted within the translucent bladder.
- F. Resin-Impregnated Tube – The tube in good condition shall be impregnated with resin under a controlled vacuum with the appropriate thermo-set resin designed for the pipe and its intended use. All resin shall be contained within the translucent bladder during vacuum impregnation. The Installer shall ensure that no public property is exposed to contamination by liquid resin compounds or components.
- G. Liner Insertion – The resin-impregnated tube within the inflation bladder is inserted into the mobile launching device and positioned at the cleanout, or pipe opening.

- H. Inversion – The liner/bladder assembly shall be inverted out of the mobile launching device by controlled air pressure. At no time shall the air pressure be removed causing interruption to inflation and pressing of the tube. The inversion shall be complete when the tube is fully deployed and the bladder is extending beyond the liner tube keeping the end of the liner open. The tube shall be held tightly against the wall of the host pipe under pressure until the cure is complete in accordance with ASTM F1216-09 Sections 7.4.2 and 7.4.3: Using Air Pressure. The inversion air pressure shall be adjusted to be of sufficient pressure to cause the impregnated tube to invert from point of inversion to point of termination and hold the tube tight to the pipe wall, producing dimples at side connections and joints. Care shall be taken during the inversion so as not to overstress the woven and nonwoven materials.
- I. Curing – The liner is chemically cured at ambient temperatures or by a suitable heat source per manufacturer’s recommendation. The heating equipment shall be capable of delivering a mixture of steam and air throughout the liner bladder assembly to uniformly raise the temperature above the temperature required to cure the resin. The curing of the CIPP shall follow manufacturer’s recommendation. The heat source temperatures shall be monitored and logged during the cure and cool down cycles. The manufacturer’s recommended cure schedule shall be submitted.
- J. CIPP Processing – Curing shall be done without pressure interruption with air or a mixture of air and steam for the proper duration of time per the resin manufacturer’s recommendations.
- K. Recovery – The bladder is reverted back into the launching device and removed from the manhole, cleanout, or access pit. No barriers, coatings, or any material other than the cured tube/resin composite is to be left in the host pipe. The liner shall be leak-free with each end sealed to the host pipe by means of swelling compression gaskets.
- L. Trimming – Any tube protruding into the main pipe shall be robotically trimmed flush.
- M. ***Finish – The finished CIPP shall be a watertight connection seal at the mainline, extend continuously over the entire length of the service lateral, and be free of dry spots, lifts, and delamination. This continuous one-piece structural pipe-within-a-pipe shall not inhibit the CCTV post inspection of the main or service lateral pipes.***
- N. Post Inspection – A second CCTV inspection shall be performed documenting liner placement and condition. The owner shall receive a video recording and a written report certified by NASSCO LACP documenting inspection of the CIPP.
- O. Reinstatement of Service – Any side connections shall be reinstated and returned to service, unless otherwise directed by the owner.
- P. Damage in the Field – Any damage or deterioration that occurs during work in the field shall be repaired to equal or better condition by the Contractor with no additional cost to the Owner. Such items include but are not limited to: manhole, mainline, existing service lateral or fittings, clean-outs, roadways, curbing, landscape, or private property shall be repaired to equal or better condition with no additional cost to the Owner.

3.2 CLEAN-UP

The site shall be left clean and the property returned to pre-project condition.

3.3 PAYMENT

Payment for the Work shall be in accordance with the Contract bid price and Section 01151, "Measurement and Payment."

END OF SECTION 02956