

ADDENDUM 1**Project: 585900 CTH EE CULVERT REHABILITATION****Opening: 02/25/2025 10:00 AM**

To All Bidders:

The following changes and/or modifications have been made for the subject project:

1. Replace Special Provision for **Cured in Place Pipe Liner, Item SPV.0090.01** with **UV GRP CIPP Liner, 64 x 43-Inch Arch Pipe, Item SPV.0090.01.**
2. Update bid form to reflect bid item change to **SPV.0090.01 UV GRP CIPP Liner, 64 x 43-Inch Arch Pipe.**

This Addendum was prepared under the direction of Outagamie County.



Michael Morman, P.E.
Assistant Highway Engineer
February 17, 2025

BID FORM – REVISED

PROJECT IDENTIFICATION:

**Project 585900
CTH EE Culvert Rehabilitation
CTH EE
Outagamie County**

THIS BID IS SUBMITTED TO:

**Outagamie County Highway Department
Michael Morman, Assistant Highway Engineer
1313 Holland Road
Appleton, WI 54911**

1. The undersigned BIDDER proposes and agrees, if this Bid is accepted, to enter into an agreement with OWNER in the form included in the Contract Documents to perform and furnish all Work as specified or indicated in the Contract Documents for the Bid Price and within the Bid Times indicated in this Bid and in accordance with the other terms and conditions of the Contract Documents.

2. BIDDER accepts all of the terms and conditions of the Advertisement or Invitation to Bid and Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 90 days after the date of bid opening. BIDDER will sign and deliver the required number of counterparts of the Agreement with the Bonds and other documents required by the Bidding Requirements within ten (10) days after the date of OWNER's Notice of Award.

3. In submitting this Bid, BIDDER represents, as more fully set forth in the Agreement, that:

- (a) BIDDER has examined copies of all the bidding documents and of the following Addenda, receipt of all which is hereby acknowledged:

Addendum Number

Date of Addendum

- (b) BIDDER has visited the site and become familiar with and is satisfied as to the general, local and site conditions that may affect cost, progress, performance and furnishing of the Work;
- (c) BIDDER is familiar with and is satisfied as to all federal, state and local laws and regulations that may affect cost, progress, performance and furnishing of the Work.
- (d) BIDDER is aware of the general nature of Work to be performed by OWNER and others at the site that relates to Work for which this Bid is submitted as indicated in the Contract Documents.
- (e) BIDDER has correlated the information known to BIDDER, information and observations obtained from visits to the site, reports and drawings identified in the bidding documents and all additional examinations, investigations, explorations, tests, studies and data with the bidding documents.
- (f) BIDDER has given OWNER written notice of all conflicts, errors or discrepancies that BIDDER has discovered in the bidding documents and the written resolution thereof by OWNER is acceptable to

BIDDER, and the bidding documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work for which this Bid is submitted.

- (g) This Bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; BIDDER has not directly or indirectly induced or solicited any other BIDDER to submit a false or sham Bid; BIDDER has not solicited or induced any person, firm or corporation to refrain from bidding; and BIDDER has not sought by collusion to obtain for itself any advantage over any other BIDDER or over OWNER.

4. BIDDER will complete the Work in accordance with the bidding documents for the following prices:

Project 585900 CTH EE Culvert Rehabilitation CTH EE Outagamie County					
Item	Unit	Item Description	Quantity	Unit Price	Total
SPV.0090.01	L.F.	UV GRP CIPP Liner, 64" x 43" Arch Pipe	82		
619.1000	Each	Mobilization	1		
			TOTAL		
SPECIAL CONDITIONS (Describe any pertinent site-specific requirements or efforts being requested by Outagamie County. Attach additional pages if necessary.)					

BIDDER acknowledges that unit quantities contained in some parts of the proposal are not guaranteed and final payment will be based on actual quantities determined as provided in the contract documents.

5. BIDDER agrees that the Work will be substantially complete and completed and ready for final payment in accordance with the Special Provisions on or before the dates or within the number of calendar days indicated in the Agreement. BIDDER accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the Work within the times specified in the contract documents.

6. The following documents are either attached hereto or previously submitted and made a condition of this Bid:

- (a) Required Bid Security in the form of (Bond) (Certified Check) attached hereto in the amount of at least ten percent (10%) of the maximum bid price.
- (b) A tabulation of Subcontractors, Suppliers and other persons and organizations required to be identified in this Bid.

7. Communications concerning this Bid shall be addressed to the address of BIDDER indicated below.

8. Terms used in this Bid which are defined in the General Conditions or Instructions will have the meanings indicated in the General Conditions or Instructions.

SUBMITTED on _____

Contractor License No. _____

If BIDDER is:

An Individual

By _____ (SEAL)
(Individual's Name)

doing business as _____

Business address _____

Phone No. _____

A Partnership

By _____ (SEAL)
(Firm Name)

(General Partner)

Business Address _____

Phone No. _____

A Corporation

By _____
(Corporation)

(State of Incorporation)

By _____
(Name of Person Authorized to Sign)

(Title)

(Corporate Seal)

Attest _____
(Secretary)

Business Address _____

Phone No. _____

A Joint Venture

By _____
(Name)

(Address)

By _____
(Name)

(Address)

(Each joint venturer must sign. The manner of signing for each individual, partnership and corporation that is a party to the joint venture should be in the manner indicated above.)

SUBCONTRACTOR LIST

Contractor shall list all subcontractors including the name, address, phone number, contact person, description of work and estimated dollar value of work.

Subcontractor

Name: _____

Address: _____

Contact: _____ Phone: (____) _____

Description: _____ Amount: \$ _____

Subcontractor

Name: _____

Address: _____

Contact: _____ Phone: (____) _____

Description: _____ Amount: \$ _____

Subcontractor

Name: _____

Address: _____

Contact: _____ Phone: (____) _____

Description: _____ Amount: \$ _____

Subcontractor

Name: _____

Address: _____

Contact: _____ Phone: (____) _____

Description: _____ Amount: \$ _____

The OWNER reserves the right to accept or reject any subcontractor.

Revise the following Special Provision as follows:

11. UV GRP CIPP Liner, 64 x 43-Inch Arch Pipe, Item SPV.0090.01

A Description

This special provision describes furnishing, preparing, installing, and verifying ultraviolet (UV) glass reinforced plastic (GRP) cured-in-place-pipe (CIPP) liners for storm sewer or culvert pipe that when cured provides a structurally sound, smooth, joint less and watertight pipe.

A.1 Referenced Documents

The following documents form a part of this specification to the extent stated herein:

- ASTM F2019 Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Pulled in Place Installation of Glass Reinforced Plastic (GRP) Cured-in-Place Resin Pipe (CIPP)
- ASTM F1216 Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Inversion and Curing of a Resin-Impregnated Tube
- ASTM F1743 Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Pull In and Inflate and Curing of a Resin-Impregnated Tube.
- ASTM D543 Test Method for Resistance of Plastics to Chemical Reagents
- ASTM D578 Standard Specification Glass Fiber Strands
- ASTM D638 Standard Test Method for Tensile Properties of Plastics
- ASTM D790 Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials
- ASTM D2122 Standard 1 Test Method for Determining Dimensions of Thermoplastic Pipe and Fittings
- ASTM D3567 Standard Practice for Determining Dimensions of "Fiberglass" (Glass- Fiber Reinforced Thermosetting Resin) Pipe and Fittings
- ASTM D5813 Standard Specification for Cured-in Place Thermosetting Resin Sewer Pipe

B Materials

B.1 General

Provide a UV cured GRP system adhering to ASTM F2019 that has a minimum 500,000 linear feet or 1000 lined sections of successful installations in the United States and that has been continuously available and in service for a minimum of 5 years.

Allow the engineer to inspect all liner to be installed under this work at the manufacturer's plant(s) and wet-out facility for compliance with these specifications if requested. Require the wet-out facility's cooperation in these inspections.

B.2 Glass Fiber Tube

Furnish a flexible fiber glass tube meeting the requirements of ASTM F2019 as appropriate that when installed, will tightly fit the internal circumference and length of the original pipe. Provide a glass fiber tube that is homogeneous throughout, uniform in color, free of cracks, holes, foreign materials, blisters, and deleterious faults. Inspect glass fiber tube for defects at time of manufacturer and prior to installation.

Fabricate any seams in the tube stronger than the unseamed material. Do not utilize overlapped layers of the tube in longitudinal seams that cause lumps in the final product. Do not form joints perpendicular to the long axis. The tube shall be homogeneous across the entire wall thickness containing no intermediate or encapsulated elastomeric layers. No material included in the tube may cause delamination in the cured CIPP.

Utilize an outer and inner film to ensure that the liner remains intact during the insertion process and to protect the resin at all times during the installation and curing process from water and debris contamination, and resin migration. Provide film materials that are both impervious to airborne styrene, with the outer material also having UV blocking characteristics.

Conduct tube wet out in an indoor environmentally controlled manufacturing setting with a quality management system registered according to and conforming with the current ISO 9001 standard or having implemented a quality system similar to that in the ISO 9001 requirements. Ensure that proper materials and amounts are used in the resin saturation process and in liner shipping and storage.

No onsite wet out will be allowed. The engineer may inspect the wet out facility at the manufacturer's plant(s) for compliance with these specifications. Fully impregnate the glass fiber tube with the appropriate resin using system under manufacturer quality-controlled conditions. Minimize air entrapment to the lowest possible amount. No dry or unsaturated layers shall be evident.

Provide a wet out tube that when compressed at installation pressures will meet or exceed the design thickness. Construct the tube to withstand installation pressures and curing temperatures, have sufficient strength to bridge missing pipe, stretch to fit irregular pipe sections, and invert smoothly around bends.

Mark the tube for distance at regular intervals along its entire length, not to exceed 5 feet. Include the manufacturers name or identifying symbol.

The liner should be seamless in its cured state to ensure homogenous physical properties around the circumference of the cured liner. The wall color of the interior pipe surface of CIPP after installation shall be a light reflective color so that a clear detailed examination with closed circuit television inspection equipment may be made.

Obtain compound samples and prepare test specimens according to the latest applicable ASTM standards from the manufacturer if directed by the engineer.

B.3 Resin

Furnish a corrosion resistant polyester, vinyl ester, or orthothalic (either ppg or npg grade) and catalyst resin system, compatible with the installation process, that when properly cured within the tube creates a composite that meets the requirements of ASTM F1216, ASTM D5813, and ASTM F2019, the physical properties in Table 1, and those requirements which are to be utilized in the structural design of the CIPP for this project. Resins created from recycled materials are not allowed.

Table 1 CIPP Minimum Physical Properties

Flexural Modulus (minimum)	725,000 psi
Flexural Strength (minimum)	15,000 psi
Long term E-modulus	675,000 psi
Long term tensile bending strength	13,500 psi

Use resin requiring a UV light to cure the liner. A photo-initiator system must be added to the resin prior to the impregnation. The photo-initiator system shall be tuned to the UV-curing equipment used or vice-versa. The liquid UV resin shall saturate the tube and produce a properly cured liner, which is resistant to abrasion due to solids, grit, and sand.

B.4 Structural Requirements

A minimum of 14 days prior to delivery of the liner materials, submit design calculations prepared by an engineer licensed in the State of Wisconsin that meet the requirements of the manufacturer and that are designed as suggested by ASTM F2019, Appendix X1. The designer may use ASTM F1216, Appendix XI as modified in ASTM F2019 X1.1.2 for each pipe segment with less than 10% ovality. If the ovality is 10% or greater, use either the ASCE or the WRc Sewerage Rehabilitation Manual, Type II Design, Section 5.3.2.iii for non-round pipe. Assume the fully deteriorated condition and assume no bonding to the original pipe wall for the CIPP design. Verify the Long-Term Flexural Modulus used in design by independent testing and provide documentation to the Department per Section B.5.1. Do not exceed 50% of the short-term values for the Long-Term Modulus in design. CIPP thickness shall not be less than that which is computed from the design requirements in the table below, for resin systems with physical properties shown.

Table 2 - CIPP Design Criteria

Design Variable	Value
Storm Sewer Inside Diameter	64" x 43" arch pipe
Live Load: Ws	Follow AASHTO LRFD Bridge Design Specifications (AASHTO, 2012) Article 3.6.1.2.6
Storm Sewer Deflection/Ovality:	2% minimum. To be verified by liner designer.
Modulus of Soil Reaction E's	Follow AASHTO LRFD Bridge Design Specifications (AASHTO, 2012) Article 12.12.3.5.1
Long-term Modulus of Elasticity of CIPP Liner: E _L	362,500 psi minimum, 50% of initial value in ASTM F2019. Actual value per the manufacturer can be used. Provide supporting data verified by independent testing.
Factor of Safety: N	2
Flexural Strength	15,000 psi Actual value per the manufacturer can be used. Provide supporting data verified by independent testing

B.5 Experience and Quality Control

B.5.1 Experience

Demonstrate a minimum of five (5) years experience in the installation of cured in place liners by the installation contractor with at least 5 projects in that time totaling over 50,000 feet of installed liner. The installing contractor must be trained and certified by the UV GRP manufacturer and have documented experience with a fiberglass UV cured liner.

Provide an experienced inspector or supervisor to oversee the installation of the CIPP liner, who has at least three (3) years experience with cured in place pipe liner installation having previously supervised a minimum of 50,000 linear feet of CIPP lining using a similar resin and flexible tube and using the specific method of installation and curing proposed.

If the contractor does not have 50,000 linear feet of CIPP lining experience with the UV curing system being used, then a manufacturer's onsite representative must be present during installations of the CIPP system until such time the Department is confident in the contractor's ability. The contractor is to provide the engineer with the manufacturer representative's work experience for approval. Do not begin prior to the engineer's approval of the manufacturer's onsite representative.

Provide five (5) references of completed projects of similar installations by the contractor.

B.5.2 Installation and Quality Control Plan

Furnish a detailed installation and quality control plan, to be discussed at the preconstruction meeting outlining measures to assure the quality requirements of the contract are met including but not limited to;

- A summary table of CIPP material properties, including short-term flexural modulus of elasticity, 50-year flexural modulus of elasticity, short-term flexural strength (bending stress), 50-year flexural strength (bending stress), and chemical resistance.
- Manufacturer's product certifications and available standard written warranty for materials used in the liner system including documentation of testing to confirm a minimum 50-year design life for the liner, adherence to applicable ASTM standards and safety data sheets.
- Manufacturer's product literature, and application and installation requirements for materials used in the liner including
 - o Liner and resin/catalyst type including, manufacturer, product names and mixing ratios, the location of the facility where each was manufactured, and a list of appurtenant materials and accessories to be furnished.
 - o Maximum, minimum and ideal installation temperatures
 - o Minimum pressure required to hold tube tight to the host conduit and maximum pressure so not damage the tube
 - o Curing times
 - o Maximum pulling forces as applicable
- Independent third-party certified laboratory test reports demonstrating that the exact resin/liner combination to be used for this project meets the requirements for initial structural properties and chemical resistance (performed according to ASTM F1216).
- Independent third-party certified laboratory test reports demonstrating that the exact resin and liner to be used for this project has been tested for long-term flexural modulus of elasticity and long-term flexural strength (i.e. 10,000 hour creep testing performed according to ASTM 2990 or DIN 761 for design conditions applicable to this project). When filled resins are proposed, complementary data of the same data for unfilled resin shall also be provided. If the data submitted is not for the exact liner to be used on this project, submit a detailed description of the physical properties of both the liner used in the test and the liner to be used for this project to

demonstrate that the two liners are comparable in terms of physical properties

- Perform testing for 10,000 hours under test conditions and loadings described below. The data points from 1,000 hours to 10,000 hours, or such other time period as determined by the engineer based on the curve or slope of the plotted data, of the long-term flexural modulus shall be extrapolated using a log-log scale linear regression analysis to determine the minimum service life performance of the resin-tube.

Testing shall be conducted at:

- o Temperature 21°C to 25°C
- o Relative humidity: 50% minimum
- o Load: Load shall be calculated at 0.25% of the short-term E-modulus as tested per ASTM D790 or ISO 178, or as approved by engineer.
- Wet out quality management ensuring that proper materials and amounts are used in the resin saturation process and in liner shipping and storage. At a minimum, the quality control documentation shall include resin lot numbers, volumes of resin, catalyst, enhancers, date of wet-out, storage / transportation controls, and quality assurance procedures.
- Method of installation.
- Proposed quality controls checks that will be performed and in place by the contractor during installation.
- Method of curing and monitoring including:
 - o Curing speed
 - o Light source size and wattage
 - o Inner air pressure
 - o Curing temperatures

These parameters are to be controlled and documented during installation and curing and provided to the engineer including date and time and length of installed liner.

- Product sampling, liner thickness compliance, and notification/resolution of observed liner defects and/or wrinkling observed by the contractor during post lining televising operations.
- Defined responsibilities, as assigned to specific contractor's personnel, for assuring that all the quality assurances are met.
- An outline of specific repair or replacement procedures for potential defects that may occur in the installed CIPP. Provide recommended repair/replacement procedures per the CIPP system manufacturer.
- Bypass flow plan if required.
- An odor control plan that will show project specific odors will be minimized at the project site and surrounding area.

B.6 Quality and Inspection Report

Submit a report of the inspection and quality activities performed during and after lining. Inspect pipes with a color pan and tilt, 360° rotating head camera specifically designed and constructed for sewer inspection. Provide pre and post lining video inspection files upon completion of the lining. Format files for viewing on a standard PC without additional media software. Perform video work in accordance with NASSCO PACP standards or engineer approved equal.

B.7 Cured Liner Properties

B.7.1 Color

Provide a tube where the cured interior pipe surface after installation is a light reflective color so that a clear, detailed examination with closed circuit television inspection can be made.

B.7.2 Chemical Resistance

Provide a chemically resistance tube. Evaluate the inner surface of the cured resin/fiberglass liner matrix in a laminate for qualification testing of long term chemical exposure to a variety of chemical effluents in a manner consistent with 6.4.1 and 6.4.2 of ASTM D5813.

Provide samples of tube and resin similar to that proposed for actual construction. It is required that CIPP samples with and without plastic coating meets these chemical testing requirements.

B.7.3 Hydraulic Capacity

Maintain the overall hydraulic profile as large as possible with the CIPP having a minimum of the full flow capacity of the original pipe before rehabilitation. Calculated capacities may be derived using a commonly accepted roughness coefficient for the existing pipe material taking into consideration its age and condition.

C Construction

C.1 General

No change of material, design values, or procedures as developed before bidding the contract may be made during the course of the work without the prior written approval of the engineer.

Coordinate with the engineer to field verify pipe lining locations and lengths before beginning work. The department will locate and designate all right of way areas open and accessible for the work and provide rights of access to these points. If a shoulder must be closed to traffic because of the work, institute the actions necessary to do this upon concurrence of the Department for the mutually agreed time period.

Bypass pumping or flow division is the responsibility of the contractor. If dewatering/bypass operations are required from one pipe structure to another pipe structure or from the upstream to downstream end of a culvert and the bypass flow is not transporting sediments (sand, silt, and clay particles) from a tributary work site area, bypass pumping operations will be allowed provided that the department has been made aware of and approves operation. When pumping bypass flows, the discharge location will need to be stable and not produce any erosion from the discharge velocity that would cause release of sediment downstream. If dewatering operations require pumping of water containing sediments (sand, silt, and clay particles), the discharge will not be allowed to leave the work site or discharge to a storm water conveyance system without sediment removal treatment. Refer to WDNR Technical Standards for Dewatering as applicable.

https://dnr.wisconsin.gov/topic/Stormwater/standards/const_standards.html

C.2 Handling and Storage

Take care in shipping, handling and storage to avoid damaging the liner. Store liner as recommended by manufacturer and as approved by the engineer. Avoid exposure to light prior to installation. Any liner damaged in shipment, storage, or installation shall be replaced as directed by the Engineer at no additional cost.

C.3 Accessibility of Water

This site is urban and without access to public waters systems. Supply water for cleaning the host pipe or other processes.

C.4 Cleaning Existing Conduits

Remove internal debris from the existing pipeline including any roots and protruding connections. Clean the pipes with hydraulically powered equipment, high-velocity jet cleaners, or mechanically powered equipment capable of sufficiently cleaning and clearing the existing pipe. Use precautions during the cleaning operations to prevent additional damage to the existing pipe. Properly dispose of all sediment removed from the cleaning process.

C.5 Inspection of Pipeline

Inspect the interior of the pipeline carefully to determine the location of any conditions which may prevent proper installation of CIPP into the pipelines, note these so that these conditions can be corrected. Keep a digital video and suitable log for later reference by the Department.

C.6 Repair Techniques & Material Installation

Fill any voids in the host pipe that cannot be bridged prior to the installation of the CIPP liner. Small gaps and offsets in the pipe culvert joints can be bridged by the CIPP liner. Repair significant gaps and offsets and stop water infiltration that may impact CIPP curing.

C.7 Installation

C.7.1 Installation of Glass Fiber Tubing

Use a constant tension winch, as specified by the liner manufacturer, to pull the glass fiber liner into position in the pipe. Provide a longitudinal fiberglass reinforcement band which runs the entire length of the liner ensuring that the pulling force is transferred to the band and not the fiberglass liner. Pull the liner keeping the force below the system recommendation for the tubing installed. Provide end plugs to cap each end of the glass fiber liner to prepare for pressurizing the liner. Secure the end caps to prevent them from being expelled due to pressure. Use liner restraints in manholes.

Use a slip sheet/gliding foil on the bottom one third to one half of the pipe prior to liner insertion (if it is not already part of the manufactured outer film of the liner), for the purpose of protecting the liner during insertion and reduce the drag, or as recommend by the liner manufacturer.

C.7.2 Curing Liner

Cure the glass fiber liner with UV light sources at a constant inner pressure. Hold the liner tight to the host pipe per the manufacturer's recommended equipment and methods. Do not release liner inner pressure until liner reaches curing parameters specified by the manufacturer.

Assemble the UV light sources according to the manufacturer's specifications for the liner diameter. Draw a multi-lamp ultraviolet light curing assembly fitted with CCTV equipment through the pipe while the tube is expanded under pressure. Verify that the liner is properly fitted to the host pipe without any wrinkles or fins that should be avoidable given the current cross-sectional configuration (geometry) of the host pipe. Correct defects before proceeding on to the UV-light curing process. Take care not to damage the liner or inner film material when inserting the curing equipment.

Use curing speeds as recommended by the manufacturer and determined by contractor based on various site specific field conditions. The optimal curing speed, or travel speed of the energized UV light sources, is determined for each length of liner based on liner diameter, liner thickness, and exothermic reaction temperature. Use infrared sensors during the curing process to record curing data that will be submitted to the engineer with a post CCTV inspection. Monitor and control the parameters stated in the quality control plan, giving the engineer a record of the curing parameters over every segment of the entire length of the liner.

Remove the inner film material if the liner is manufactured with a removable inner film as recommended by the manufacturer after curing and discard.

Once cured, the cured-in-place pipe should be continuous and tight fitting. Cut the pipe liner neatly and smoothly at each end of the host pipe to prevent snagging and collection of debris. Capture and dispose of chips generated during trimming the liner. Do not let this material enter waterways.

C.8 Quality Control and Testing

Prepare cured liner samples and test physical properties in accordance with ASTM F2019, Section 7. Test for conformance with the manufacturer's final CIPP design values and the CIPP Design Criteria requirement of this special provision including flexural properties listed.

Provide documentation of quality checks performed according to this part and as described in the project quality control plan.

C.9 Workmanship and Inspection

Perform an initial visual and final television inspection to document the as-built condition after the completion of the liner installation. Inspect the CIPP in accordance with ASTM F2019, Section 7.3 and this part. Provide copies of as-built inspection documentation to the engineer in digital format that can be read without specialized software.

Provide a finished liner that is continuous over the entire length of the conduit section and that tightly conforms to the walls of the existing (host) conduit pipe that is homogeneous throughout and free of any dry spots, lifts, delaminations, wrinkles, protrusions, holes, cracks, foreign material, blisters, or other deleterious faults or defects, which in the opinion of the engineer, will affect the liner's structural integrity, hydraulic performance, future maintenance access, and overall liner performance. Provide a finished liner with no visible gaps or annular space between the finished liner and the existing (host) pipe at the manhole, sewer service connection, or other exposed points within the finished lined section. Where the CIPP does not meet the requirements of Section 7 of ASTM F2019 or this specification, the affected portions of the CIPP shall be removed and replaced with an acceptable repair as specified in 6.2 of ATSM Specification D5813 as approved by the engineer. Any excavation or restoration necessary is incidental with no additional payment.

Upon acceptance of the installation work and testing, restore the project area affected by the operations to its original condition.

D Measurement

The department will pay for UV GRP CIPP 64 x 43-Inch by the linear foot, acceptably completed.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.01	UV GRP CIPP Liner, 64 x 43-Inch Arch Pipe	LF

Payment is full compensation for furnishing all labor, tools, equipment, materials, testing, reports and incidentals, including any required bypass pumping or flow diversion, cleaning of the host pipe, gap, void and offset repair in the host pipe, and disposal of wastes including curing or cleaning water necessary to complete the contract work according to the above stated specifications.