

ORLAND PARK

INVITATION TO BID
23-044

2023 I&I Sanitary Sewer Rehabilitation

ISSUED

May 19, 2023

BID OPENING

June 7, 2023
11:00 A.M.

Office of the Village Clerk
2ND Floor
14700 S. Ravinia Ave.
Orland Park, IL 60462



ORLAND PARK

Unit Price Sheet

ITB 23-044

2023 I&I Sanitary Sewer Rehabilitation

ITEM	DESCRIPTION	QTY	UNIT	UNIT PRICE	Extended Cost
1	PRE-CONSTRUCTION SEWER CLEANING AND TELEVISIONING	7,010	FOOT	\$3.25	\$ 22,782.50
2	DYE TESTING OF EXISTING SERVICES	1	EACH	\$700.00	\$ 700.00
3	CUT PROTRUDING TAPS	3	EACH	\$200.00	\$ 600.00
4	AIR TEST AND GROUT MAINLINE JOINTS, 8"	22	EACH	\$500.00	\$ 11,000.00
5	AIR TEST AND GROUT MAINLINE JOINTS, 15"	10	EACH	\$700.00	\$ 7,000.00
6	AIR TEST AND GROUT MAINLINE JOINTS, 18"	2	EACH	\$2,000.00	\$ 4,000.00
7	CURED-IN-PLACE SEWER LINER, 8" DIAMETER	6,100	FOOT	\$35.00	\$ 213,500.00
8	CURED-IN-PLACE SEWER LINER, 15" DIAMETER	600	FOOT	\$115.00	\$ 69,000.00
9	CURED-IN-PLACE SEWER LINER, 18" DIAMETER	310	FOOT	\$125.00	\$ 38,750.00
10	INTERNAL SERVICE LATERAL REINSTATEMENT	105	EACH	\$200.00	\$ 21,000.00
11	REPAIR LATERAL LINEAR UNDERCUT	3	EACH	\$700.00	\$ 2,100.00
12	AIR TEST AND GROUT SERVICE CONNECTION, 5-FOOT	115	EACH	\$375.00	\$ 43,125.00
13	LATERAL CLEANING & TELEVISIONING	1	EACH	\$2,000.00	\$ 2,000.00
14	CLEANOUT INSTALLATION	1	EACH	\$5,000.00	\$ 5,000.00
15	ROOT CUTTING FROM CLEANOUT	1	EACH	\$1,500.00	\$ 1,500.00
16	LATERAL TELEVISIONING (PUSH CAMERA)	15	LF	\$100.00	\$ 1,500.00
17	CIPP LATERAL LINER INSTALLATION, 8" x 6", 5-FOOT SHORTY	1	EACH	\$7,500.00	\$ 7,500.00
18	ADDITIONAL CIPP LATERAL LINER, 6"	10	LF	\$150.00	\$ 1,500.00
*TOTAL COST					\$ 452,557.50

*Please enter Total Cost on Bidder Summary Sheet

Company Name: National Power Rodding Corp.

Signed: 

Title: William T. Kreidler, President

Dated: June 7, 2023

BIDDER SUMMARY SHEET
ITB # 23-044
2023 I&I Sanitary Sewer Rehabilitation

Business Name: National Power Rodding Corp.

Street Address: 2500 W Arthington St.

City, State, Zip: Chicago, IL 60612

Contact Name: Reid W. Ruprecht

Title: Vice President

Phone: 312-666-7700 Fax: 312-666-0748

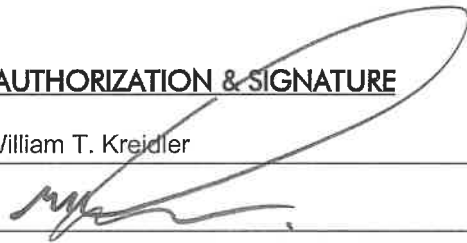
E-Mail address: office@nationalpowerrodding.com

Price Proposal

GRAND TOTAL BID PRICE \$ 452,557.50

AUTHORIZATION & SIGNATURE

Name of Authorized Signee: William T. Kreidler

Signature of Authorized Signee:  _____

Title: President Date: June 7, 2023

 ORLAND PARK
CERTIFICATE OF COMPLIANCE

Bidders shall complete this Certificate of Compliance. Failure to comply with all submission requirements may result in a determination that the Bidder is not responsible.

The undersigned William T. Kreidler,
(Enter Name of Person Making Certification)

as President
(Enter Title of Person Making Certification)

and on behalf of National Power Rodding Corp.,
(Enter Name of Business Organization)

certifies that Bidder is:

1) A BUSINESS ORGANIZATION: Yes ☒ No ☐

Federal Employer I.D. #: 36-2933140
(or Social Security # if a sole proprietor or individual)

The form of business organization of the Bidder is *(check one)*:

☐ Sole Proprietor
☐ Independent Contractor *(Individual)*
☐ Partnership
☐ LLC
☒ Corporation Illinois 08/08/1977
(State of Incorporation) (Date of Incorporation)

2) STATUS OF OWNERSHIP

Illinois Public Act 102-0265, approved August 2021, requires the Village of Orland Park to collect "Status of Ownership" information. This information is collected for reporting purposes only. Please check the following that applies to the ownership of your business and include any certifications for the categories checked with the proposal. Business ownership categories are as defined in the Business Enterprise for Minorities, Women, and Persons with Disabilities Act, 30 ILCS 575/0.01 *et seq.*

Minority-Owned ☐ Small Business ☐ [\(SBA standards\)](#)
Women-Owned ☐ Prefer not to disclose ☐
Veteran-Owned ☐ Not Applicable ☒
Disabled-Owned ☐

How are you certifying? **Certificates Attached ☐ Self-Certifying ☐**

STATUS OF OWNERSHIP FOR SUBCONTRACTORS

This information is collected for reporting purposes only. Please check the following that applies to the ownership of subcontractors.

Minority-Owned []	Small Business [] (SBA standards)
Women-Owned []	Prefer not to disclose []
Veteran-Owned []	Not Applicable [X]
Disabled-Owned []	

3) AUTHORIZED TO DO BUSINESS IN ILLINOIS: Yes [X] No []

The Bidder is authorized to do business in the State of Illinois.

4) ELIGIBLE TO ENTER INTO PUBLIC CONTRACTS: Yes [X] No []

The Bidder is eligible to enter into public contracts, and is not barred from contracting with any unit of state or local government as a result of a violation of either Section 33E-3, or 33E-4 of the Illinois Criminal Code, or of any similar offense of "bid-rigging" or "bid-rotating" of any state or of the United States.

5) SEXUAL HARASSMENT POLICY COMPLIANT: Yes [X] No []

Please be advised that Public Act 87-1257, effective July 1, 1993, 775 ILCS 5/2-105 (A) has been amended to provide that every party to a public contract must have a written sexual harassment policy in place in full compliance with 775 ILCS 5/2-105 (A) (4) and includes, at a minimum, the following information:

(I) the illegality of sexual harassment; (II) the definition of sexual harassment under State law; (III) a description of sexual harassment, utilizing examples; (IV) the vendor's internal complaint process including penalties; (V) the legal recourse, investigative and complaint process available through the Department of Human Rights (the "Department") and the Human Rights Commission (the "Commission"); (VI) directions on how to contact the Department and Commission; and (VII) protection against retaliation as provided by Section 6-101 of the Act. (Illinois Human Rights Act). (emphasis added). Pursuant to 775 ILCS 5/1-103 (M) (2002), a "public contract" includes "...every contract to which the State, any of its political subdivisions or any municipal corporation is a party."

6) EQUAL EMPLOYMENT OPPORTUNITY COMPLIANT: Yes [X] No []

During the performance of this Project, Bidder agrees to comply with the "Illinois Human Rights Act", 775 ILCS Title 5 and the Rules and Regulations of the Illinois Department of Human Rights published at 44 Illinois Administrative Code Section 750, et seq.

The Bidder shall:

(I) not discriminate against any employee or applicant for employment because of race, color,

religion, sex, marital status, national origin or ancestry, age, or physical or mental handicap unrelated to ability, or an unfavorable discharge from military service; (II) examine all job classifications to determine if minority persons or women are underutilized and will take appropriate affirmative action to rectify any such underutilization; (III) ensure all solicitations or advertisements for employees placed by it or on its behalf, it will state that all applicants will be afforded equal opportunity without discrimination because of race, color, religion, sex, marital status, national origin or ancestry, age, or physical or mental handicap unrelated to ability, or an unfavorable discharge from military service; (IV) send to each labor organization or representative of workers with which it has or is bound by a collective bargaining or other agreement or understanding, a notice advising such labor organization or representative of the Vendor's obligations under the Illinois Human Rights Act and Department's Rules and Regulations for Public Contract; (V) submit reports as required by the Department's Rules and Regulations for Public Contracts, furnish all relevant information as may from time to time be requested by the Department or the contracting agency, and in all respects comply with the Illinois Human Rights Act and Department's Rules and Regulations for Public Contracts; (VI) permit access to all relevant books, records, accounts and work sites by personnel of the contracting agency and Department for purposes of investigation to ascertain compliance with the Illinois Human Rights Act and Department's Rules and Regulations for Public Contracts; and (VII) include verbatim or by reference the provisions of this Equal Employment Opportunity Clause in every subcontract it awards under which any portion of this Agreement obligations are undertaken or assumed, so that such provisions will be binding upon such subcontractor.

In the same manner as the other provisions of this Agreement, the Bidder will be liable for compliance with applicable provisions of this clause by such subcontractors; and further it will promptly notify the contracting agency and the Department in the event any subcontractor fails or refuses to comply therewith. In addition, the Bidder will not utilize any subcontractor declared by the Illinois Human Rights Department to be ineligible for contracts or subcontracts with the State of Illinois or any of its political subdivisions or municipal corporations.

"Subcontract" means any agreement, arrangement or understanding, written or otherwise, between the Bidder and any person under which any portion of the Bidder's obligations under one or more public contracts is performed, undertaken or assumed; the term "subcontract", however, shall not include any agreement, arrangement or understanding in which the parties stand in the relationship of an employer and an employee, or between a Bidder or other organization and its customers.

In the event of the Bidder's noncompliance with any provision of this Equal Employment Opportunity Clause, the Illinois Human Right Act, or the Rules and Regulations for Public Contracts of the Department of Human Rights the Bidder may be declared non-responsible and therefore ineligible for future contracts or subcontracts with the State of Illinois or any of its political subdivisions or municipal corporations, and this agreement may be canceled or avoided in whole or in part, and such other sanctions or penalties may be imposed or remedies involved as provided by statute or regulation.

7) PREVAILING WAGE COMPLIANCE: Yes ☒ No ☐

In the manner and to the extent required by law, this bid is subject to the Illinois Prevailing Wage Act and to all laws governing the payment of wages to laborers, workers and mechanics of a Bidder or any subcontractor of a Bidder bound to this agreement who is performing services covered by this contract. If awarded the Contract, per 820 ILCS 130 et seq. as amended,

Bidder shall pay not less than the prevailing hourly rate of wages, the generally prevailing rate of hourly wages for legal holiday and overtime work, and the prevailing hourly rate for welfare and other benefits as determined by the Illinois Department of Labor or the Village and as set forth in the schedule of prevailing wages for this contract to all laborers, workers and mechanics performing work under this contract (available at <https://www2.illinois.gov/idol/Laws-Rules/CONMED/Pages/Rates.aspx>).

The undersigned Bidder further stipulates and certifies that it has maintained a satisfactory record of Prevailing Wage Act compliance with no significant Prevailing Wage Act violations for the past three (3) years.

Certified Payroll. The Illinois Prevailing Wage Act requires any contractor and each subcontractor who participates in public works to file with the Illinois Department of Labor (IDOL) certified payroll for those calendar months during which work on a public works project has occurred. The Act requires certified payroll to be filed with IDOL no later than the 15th day of each calendar month for the immediately preceding month through the Illinois Prevailing Wage Portal—an electronic database IDOL has established for collecting and retaining certified payroll. The Portal may be accessed using this link: <https://www2.illinois.gov/idol/Laws-Rules/CONMED/Pages/certifiedtranscriptofpayroll.aspx>. The Village reserves the right to withhold payment due to Contractor until Contractor and its subcontractors display compliance with this provision of the Act.

8) PARTICIPATION IN APPRENTICESHIP AND TRAINING PROGRAM: Yes [☒] No [☐]

Bidder participates in apprenticeship and training programs applicable to the work to be performed on the project, which are approved by and registered with the United States Department of Labor's Office of Apprenticeship.

Name of A&T Program: Chicagoland Laborers' District Council Labor Training & Apprenticeship Fund

Brief Description of Program: _____

Chicagoland Laborers' District Council Labor Training & Apprenticeship Fund

9) TAX COMPLIANT: Yes [☒] No [☐]

Bidder is current in the payment of any tax administered by the Illinois Department of Revenue, or if it is not: (a) it is contesting its liability for the tax or the amount of tax in accordance with procedures established by the appropriate Revenue Act; or (b) it has entered into an agreement with the Department of Revenue for payment of all taxes due and is currently in compliance with that agreement.

AUTHORIZATION & SIGNATURE:

I certify that I am authorized to execute this Certificate of Compliance on behalf of the Bidder

set forth on the Bidder Summary Sheet, that I have personal knowledge of all the information set forth herein and that all statements, representations, that the bid is genuine and not collusive, and information provided in or with this Certificate are true and accurate.

The undersigned, having become familiar with the Project specified in this bid, proposes to provide and furnish all of the labor, materials, necessary tools, expendable equipment and all utility and transportation services necessary to perform and complete in a workmanlike manner all of the work required for the Project.

ACKNOWLEDGED AND AGREED TO:



Signature of Authorized Officer

William T. Kreidler

Name of Authorized Officer

President

Title

June 7, 2023

Date

REFERENCES

Provide three (3) references for which your organization has performed similar work.

Bidder's Name: National Power Rodding Corp.
(Enter Name of Business Organization)

- | | |
|-----------------|---------------------|
| 1. ORGANIZATION | <u>SEE ATTACHED</u> |
| ADDRESS | <u></u> |
| PHONE NUMBER | <u></u> |
| CONTACT PERSON | <u></u> |
| YEAR OF PROJECT | <u></u> |
| | |
| 2. ORGANIZATION | <u></u> |
| ADDRESS | <u></u> |
| PHONE NUMBER | <u></u> |
| CONTACT PERSON | <u></u> |
| YEAR OF PROJECT | <u></u> |
| | |
| 3. ORGANIZATION | <u></u> |
| ADDRESS | <u></u> |
| PHONE NUMBER | <u></u> |
| CONTACT PERSON | <u></u> |
| YEAR OF PROJECT | <u></u> |



CARYLON CORPORATION

A Carylon Company

National Power Rodding Corp

A Carylon Company

CIPP Experience Summary Table (References and Experience)

Work Location (City/Town)	State	System Owner	Engineer/Client (Contact)	Project Description	Size	Completion Date	Feetage	Project Value	Status
Metropolitan Water Reclamation District of Greater Chicago	IL	Metropolitan Water Reclamation District of Greater Chicago	Frederick Wu, P.E., 312-751-4025 (WuF@mmwd.org) 100 E. Erie Chicago, IL 60611	Television Inspection and Recording of Sewers and Manholes (Included UV lining of 339 LF of 24" pipe)	24"	Oct-21	339	2,571,720.00	3_Complete
City of East Chicago	IN	City of East Chicago	Shawn H. Strange, P.E., 317-216-7705 (sstrange@firstgroupengineering.com) 5925 Lakeside Blvd. Indianapolis, IN 46278	Roxanna Neighborhood Storm and Sanitary Sewer Lining Improvements (396 LF of 15", 203 LF of 15" and 139 LF of 18") (UV Lining)	15 & 18	Mar-22	738	2,678,152.75	3_Complete
City of Naperville	IL	Naperville Township Road District	David Bohac, 630-271-0770 (DaveBohac@ecivil.com) Engineering W. 33N Aurora Rd. Naperville, IL 60563	Book Road Culvert Lining (48 LF of UV Lining)	30"	Jun-22	1	21,560.00	3_Complete
City of East Chicago	IN	City of East Chicago	Shawn H. Strange, P.E., 317-216-7705 (sstrange@firstgroupengineering.com) 5925 Lakeside Blvd. Indianapolis, IN 46278	Roxanna Neighborhood Storm and Sanitary Sewer Lining Improvements (10,565 LF of 10" to 18" Sanitary Sewer Lines and 4771 LF of 6" to 18" Storm Sewer Lines) (Steam Lining)	6" to 18"	Aug-22	15,336	1,003,615.00	3_Complete
Village of Lansing	IL	Village of Lansing	Joseph Sullivan, P.M., 630-346-2877 (joe.sullivan@reind.com) 10045 W Lincoln Highway Frankfort, IL 60423	2021 Sanitary Sewer Cured In Place Pipelining (4225 LF of 8", 10" & 15") (Steam Lining)	8", 10" & 15"	May-22	4,225	280,455.00	3_Complete
City of Naperville	IL	City of Naperville	Bryn Wildman, 630-420-6720 (wildman@naperville.il.us) 400 South Eagle Street Naperville, IL 60568	T10 McDowell Trunk Sewer Phase 1 (4236 LF of 24" & 27") (Steam Lining)	24" * 27"	Oct-22	4,236	1,435,192.00	3_Complete
Village of Libertyville	IL	Village of Libertyville	Fred Chung, P.M., 847-247-5435 (fchung@libertyville.com) 118 West Cook Avenue Libertyville, IL 60048	2022 Sanitary & Storm Sewer Cleaning Televising and Lining Project (1250 LF of 18" & 24") (UV Lining)	18" & 24"	Aug-22	1,260	409,047.50	3_Complete
Village of Evergreen Park	IL	Village of Evergreen Park	Timothy Klass, P.E., 630-878-1819 (tklass@novotnyengineering.com) 545 Plainfield Rd., Suite A Willowbrook, IL 60527	2022 CDBG Sewer Lining Program (7856 LF of 10"-18") (Steam Lining)	10"-18"	Nov-22	7,856	370,960.00	3_Complete
City of Lockport	IL	City of Lockport	City of Lockport Engineering Dept 222 E. Ninth St. Lockport, IL 60441 815-838-0549	2022 Sanitary Sewer Rehabilitation (2,584 LF of 8"-12") (Steam Lining)	8"-12"	Aug-22	2,584	189,939.00	3_Complete
City of Naperville	IL	City of Naperville	Tony Conn, 630-305-5537 (conn@naperville.il.us) 400 S Eagle St. Naperville, IL 60566	T10 McDowell Truck Sewer Phase 1 (370 LF of 24" & 3866 LF of 27") (UV Lining)	24" & 27"	Oct-22	4,236	899,972.00	3_Complete
Village of Elburn	IL	Village of Elburn	Christopher Walton, 630-466-6771 (cwalton@eeelweb.com) 52 Wheeler Rd. Sugar Grove, IL 60554	2022 Sewer Lining Project (9845 LF of 8" & 688 LF of 18") (Steam Lining)	8" & 18"	Sep-22	10,533	517,777.00	3_Complete

City of St. Charles	IL	City of St. Charles	Christopher Walton, 630-466-6771 (cwalton@seweb.com) 52 Wheeler Rd. Sugar Grove, IL 60554	2022 Sewer Lining Project (4172 LF of 8", 1162 LF of 12" & 2749 LF of 15" of sanitary sewer, 70 LF of 10", 71 LF of 12", 145 LF of 15", & 140 LF of 24") (Steam Lining)	8"-24"	Oct-22	8,509	\$	518,330.10	3_Complete
Village of Shorewood	IL	Village of Shorewood	Bryan Weich, 815-770-2850 (bweich@dbbel.com) 10221 W 159th St, Suite 201 Lockport, IL 60441	Basin S Sewer Rehabilitation (885 LF of 8", 170 LF of 12", 202 LF of 15" & 122 LF of 24")	8"-24"	Dec-22	1,379	\$	387,352.38	3_Complete
City of Palos Heights	IL	City of Palos Heights	Adam Jasinski, 708-381-1800 (kjanlas@palosheights.org) 7007 W College Dr. Palos Heights, IL 60463	2022 Sewer Rehabilitation Program (6050 LF of 8"-18")	8" & 18"		6,050		\$173,370.55	1_Active
City of McHenry	IL	City of McHenry	Greg Gruen, 815-363-2100 (ggruen@cityofmchenry.org) 1415 Industrial Drive McHenry, IL 60050	2022 Sewer Lining Project (2162 LF of 8")	8"		2,162		\$298,303.10	3_Complete
Village of Lemont	IL	Village of Lemont	(bhill@novainyengineering.com) 545 Plainfield Rd, Suite A Willowbrook, IL 60527	2022 Sanitary Sewer Lining (2018 LF of 8" & 12")	8" & 12"	Jan-23	2,016		\$59,353.00	3_Complete
Village of Morton	IL	Village of Morton	2022 Sanitary Sewer Lining (2022) (355 LF of 8" & 12")		8"		344	\$	41,550.00	2_Pending
City of East Chicago	IN	City of East Chicago	Shawn H. Strange, P.E., 317-215-7705 (sstrange@firstgroupengineering.com) 5925 Lakeside Blvd. Indianapolis, IN 46278	2022 Roxanna Neighborhood Storm & Sanitary Pipe Lining- Stage 2 (3231 LF of 18"-24" Sanitary, 6407 LF of 8"-42" Storm)	6", 8", 10", 12", 15", 18", 21", 24", 30", 36" and 42"		9,638	\$	5,090,248.35	1_Active
Metropolitan Water Reclamation District of Greater Chicago	IL	Metropolitan Water Reclamation District of Greater Chicago	Frederick Wu, P.E., 312-751-4025 (WuF@mwr.org) Erie Chicago, IL 60611	Television Inspection and Recording of Sewers and Manholes (Included UV lining of 1689 LF of 24" pipe)	24"	Dec-22	1,889	\$	236,460.00	3_Complete
Village of Lake	IL	Village of Lake	2022 Sanitary Sewer Lining (2022) (355 LF of 8" & 12")		8" & 12"		2,016	\$	130,700.00	2_Pending
TOTAL							71,460.00	\$	12,152,518.68	



CARYLON CORPORATION

A Carylon Company
Ace Pipe Cleaning, Inc
A Carylon Company

CIPP Experience Summary Table (References and Experience)

Work Location (City/Town)	State	System Owner	Engineer/Client (Contractor)	Project Description	Size	Completion Date	Footage	Project Value	Status
Columbia	MO	City of Columbia	City of Columbia Nate Runyan: (573) 441-5482 Nathan.Runyan@comco.gov	Purchase Order #8	8"-12"	2021-2022	41,000	\$ 1,600,000.00	1_Active
Lebanon	MO	City of Lebanon, MO	City of Lebanon, MO Eric Mark (417) 598-5050	SS Collection System Rehab FY2021	8"	2022	10,150	\$ 265,000.00	1_Active
Nixa	MO	City of Nixa, MO	City of Nixa, MO Jason Ramos (417) 300-7120	2021 Sewer Rehab	8"	2022	1,800	\$ 40,000.00	1_Active
Aurora	MO	City of Aurora, MO	City of Aurora, MO Orvil Maples (417) 678-3050	2021 CIPP Rehab	8"	2020	1,600	\$ 50,000.00	1_Active
Purdy	MO	City of Purdy, MO	City of Purdy, MO Lonnie Lowery (417) 565-4661	2021 Sewer Rehab	8"-10"	2020	2,500	\$ 75,000.00	1_Active
Columbia	MO	City of Columbia	City of Columbia Nate Runyan: (573) 441-5482 Nathan.Runyan@comco.gov	2020-2021 Sewer Rehabilitation Toolbox	8"-21"	2020	84,000	\$ 2,520,000.00	3_Complete
Ankeny	IA	John Deere, Inc	John Killips GHD (314) 435-2804	Process Sewer Lining	8"-24"	2020-2021	4,800	\$ 475,000.00	3_Complete
Joplin	MO	City of Joplin, MO	City of Joplin Chris Parker (417) 624-0620	2020-2021 Sewer Rehabilitation Toolbox	8" & 10"	2020	13,000	\$ 325,000.00	3_Complete
Columbia	MO	City of Columbia	City of Columbia Nate Runyan: (573) 441-5482 Nathan.Runyan@comco.gov	FY2019 Sewer Rehabilitation	8"-21"	2018-2019	58,000	\$ 1,350,000.00	3_Complete
Columbia	MO	City of Columbia	City of Columbia Nate Runyan: (573) 441-5482 Nathan.Runyan@comco.gov	FY2018 Sewer Rehabilitation	8"-21"	2017-2018	52,000	\$ 1,650,000.00	3_Complete
Columbia	MO	City of Columbia	City of Columbia Nate Runyan: (573) 441-5482 Nathan.Runyan@comco.gov	FY2017 Sewer Rehabilitation	8"-21"	2016-2017	41,000	\$ 1,260,000.00	3_Complete
Columbia	MO	City of Columbia	City of Columbia Nate Runyan: (573) 441-5482 Nathan.Runyan@comco.gov	FY2016 Sewer Rehabilitation	8"-21"	2015-2016	28,000	\$ 860,000.00	3_Complete
Columbia	MO	City of Columbia	City of Columbia Nate Runyan: (573) 441-5482 Nathan.Runyan@comco.gov	FY2015 Sewer Rehabilitation	8"-21"	2014-2015	53,000	\$ 1,750,000.00	3_Complete
Baxter Springs	KS	City of Baxter Springs, KS	City of Baxter Springs Matt Bittle (620) 762-3330	FY2019 Sewer Rehabilitation	8"	2020	3,333	\$ 80,000.00	3_Complete
Purdy	MO	City of Purdy, MO	City of Purdy, MO Lonnie Lowery (417) 565-4661	2019 Sewer Rehab	8"	2020	1,160	\$ 35,000.00	3_Complete
Webb City	MO	City of Webb City, MO	City of Webb City, MO William Runkle (417) 435-4140	2020 CIPP Rehab	8"	2020	7,800	\$ 215,000.00	3_Complete
Joplin	MO	City of Joplin, MO	City of Joplin Chris Parker (417) 624-0620	2018-2019 Sewer Rehabilitation Toolbox	8"	2020	8,250	\$ 205,000.00	3_Complete

Lebanon	MO	City of Lebanon, MO Eric Mork (417) 588-0090	City of Lebanon, MO Eric Mork (417) 588-0090	SS Collection System Rehab FY2020	8"	2020	10,150	\$	265,000.00	3_Complete
Aurora	MO	City of Aurora, MO Orvil Maples (417) 678-3050	City of Aurora, MO Orvil Maples (417) 678-3050	2020 CIPP Rehab	8"	2020	7,500	\$	150,000.00	3_Complete
Joplin	MO	City of Joplin Chris Parker (417) 624-0820	City of Joplin Chris Parker (417) 624-0820	2018-2019 Sewer Rehabilitation Toolbox	8" & 10"	2019	5,350	\$	150,000.00	3_Complete
Joplin	MO	City of Joplin Chris Parker (417) 624-0820	City of Joplin Chris Parker (417) 624-0820	2018-2019 Sewer Rehabilitation Toolbox	8"	2019	5,550	\$	95,000.00	3_Complete
Carl Junction	MO	City of Carl Junction Steve Lawver (417) 291-3850	City of Carl Junction Steve Lawver (417) 291-3850	2018-2019 Evaluation & Rehabilitation of WWCS	8" - 12"	2019	7,500	\$	240,000.00	3_Complete
Baxter Springs	KS	City of Baxter Springs Jimmy Morton (620) 762-3330	City of Baxter Springs Jimmy Morton (620) 762-3330	FY2018 Sewer Rehabilitation	8"	2019	2,200	\$	59,000.00	3_Complete
Joplin	MO	City of Joplin Chris Parker (417) 624-0820	City of Joplin Chris Parker (417) 624-0820	2018-2019 Sewer Rehabilitation Toolbox	8" & 10"	2019	9,250	\$	215,000.00	3_Complete
Boone County	MO	BCRSD Virgil Faman (673) 441-0082	Boone County Regional Sewer District (673) 441-0082	Gaslight Acres	8"	2019	1,100	\$	35,000.00	3_Complete
Aurora	MO	City of Aurora, MO Orvil Maples (417) 678-3050	City of Aurora, MO Orvil Maples (417) 678-3050	McNatt Lift Station	8"	2019	3,780	\$	90,000.00	3_Complete
Columbia	MO	City of Columbia Nate Runyan: (573) 441-5482 Nathan.Runyan@comc.gov	City of Columbia Nate Runyan: (573) 441-5482 Nathan.Runyan@comc.gov	FY2021 Storm Sewer Rehabilitation	18"-36"	2021-2022	1,750	\$	550,000.00	3_Complete
Republic	MO	City of Republic Jason Ramos: (417) 300-7120 jramos@nixa.com	City of Republic Jason Ramos: (417) 300-7120 jramos@nixa.com	Soldt State Circuite 2021	8	2021	1,500	\$	80,000.00	3_Complete
						TOTAL	539,833.00	\$	23,634,000.00	



CARYLON CORPORATION

A Carylon Company
Bio-Nomic Services, Inc
A Carylon Company

CIPP Experience Summary Table (References and Experience)

Works Location (City/Town)	State	System Owner	Engineer/Client Contact(s)	Project Description	Size	Completion Dates	Feetage	Project Value	STATUS	
Marion	NC	Town of Marion	ARCADIS - Jim Shelton	Baxter Marion Remaining Exterior Sewer Rehab	8-12"	2022	1132	\$614,216.00	1_Active	
Sullivan's Island	SC	Sullivan's Island	Greg Gress ggress@sullivanisland.gov	CIPP Lining in Sullivan's Island	8-10"	2022	7471	\$332,600.00	1_Active	
City of Jacksonville	NC	City of Jacksonville	Sullivan's Island Water and Sewer Department	Triangle Plaza, Northwoods, Center St and Western Blvd CIPP Lining	8-18"	2022	7,300	\$454,106.00	1_Active	
City of Mooreville	NC	Town of Mooreville	Mike Koury Town Of Mooreville Construction Inspector/Coordinator 980.722.8249	2020 Sewer Rehab Project	8-12"	2021	14865	\$848,199.00	1_Active	
City of Lowell	NC	City of Lowell	Melissa Simmering Withers Ravenel msimmering@withersravenel.com	West First Street Sewer Rehab/Replacement Project	8-12"	2021	4207	\$859,887.06	1_Active	
Kinston	NC	City of Kinston	City of Kinston	East Washington St. Sewer Rehab	8"	2021	700	\$118,000.00	3_Complete	
Wrightsville Beach	NC	Town of Wrightsville Beach	Carolina Civilworks	South Harbor Stormwater	12-18"	2021	634	\$60,592.00	3_Complete	
Wilmington	NC	CFPUA	Carolina Civilworks	CFPUA Emergency Lining	12"	2021	115	\$23,765.00	3_Complete	
Marion	NC	Town of Marion	ARCADIS - Jim Shelton	Christmas 2020 Shutdown Project	12"	2021	268	\$148,232.00	3_Complete	
Marion	NC	Town of Marion	ARCADIS - Jim Shelton	Force Main Rehabilitation	10"	2020	780	\$409,344.00	3_Complete	
Georgetown	SC	Georgetown County Water and Sewer District	Matt Lowenbach Engineering/GIS Specialist matl@gowsd.com	GWSD FY2021 CIPP Project	8-10"	2021	19,000'	\$490,000.00	3_Complete	
Atlanta	Ga	MDS	Renae Group	Mainline Lining	36" and 12"	2021	2803	\$338,000.00	3_Complete	
Louisville	KY	John Deere	Work for ACE			2021	280	\$27,080.00	3_Complete	
	IA		PipeView Technologies Meradith Sullivan www.pipeviewtech.com			2021	1199	\$87,897.00	3_Complete	
Wilmington	NC	Chem-Serv Terminal	Chem-Serv Terminal (757) 544 0784	Emergency Lining	12'	2021	1411'	\$314,000.00	3_Complete	
Charlotte	NC	City of Charlotte	Mike Roberts J.O Fowle Grading Co., LLC mr@jofowle.com	Point Repairs for Storm System at Davis Lake	15-24" CIPPR	2021	15'	\$89,600.00	3_Complete	
Warrior	AL	ALDOT	ALDOT	Mainline Lining	36"	2021	532	\$	30,000.00	3_Complete
Aiken	SC	City of Aiken	ARCADIS - Jim Shelton	Sand River Basin Sewer Rehabilitation (CIPPR and CIPPL)	6" to 24"	2020	7,070	\$	175,000.00	3_Complete
Berkeley County	SC	Berkeley County Water & Sanitation	Mark A. Waters - Engineering Field Coordinator (843-719-2312) Tommy Harris (843-719-2331) Kirk Young BGJWSC	FY19 CIPP Project	8"-42"	2020	21,500.00	\$	1,697,899.00	3_Complete
Brunswick	Ga	Brunswick Glynn Joint Water Sewer Commission	2909 Newcasile St. Brunswick, Ga 31520	3509 Frederica	6" Service	2020	54'	\$	14,900.00	3_Complete
Martin	SC	Archroma Plant	Archroma U.S., INC 788 Chert Quarry Rd Martin, SC 29836 Chris Lane	Cooling Line CIPPR	12" CIPPR 10" CIPPL	2020	79	\$	20,000.00	3_Complete
Martin	SC	Archroma Plant	Archroma U.S., INC 788 Chert Quarry Rd Martin, SC 29836 Chris Lane	CIPP Point Repairs	15" CIPPR	2020	20	\$	21,500.00	3_Complea

Charlotte	NC	New Barn Station Development	Baker AR, LLC 18717 The Commons Blvd Cornelius, NC 28031	Pipe Rehabilitation @ New Barn Station	15'-24" CIPPR	2020	12	\$	11,500.00	3_Complete
Brunswick	Ga	Brunswick Glynn Joint Water Sewer Commission	Kirk Young BGJWSC 2908 Newcastle St. Brunswick, Ga 31520	CIPPR for BGJWSC	8" CIPPR	2020	4	\$	6,440.00	3_Complete
Charlotte	NC	Charlotte Mecklenburg Utility	Carolina's Contracting, LLC Scott Jones 704.962.1931	15'-18" CIPPR and Lining	15'-18"	2020	399	\$	34,166.00	3_Complete

Lincoln	NC	Duke Energy, Lincoln Ct Plant	Michael Wise Duke Energy 317 Elm Rd Blacksburg, SC 29702	Pipeline Repair at Lincoln CT Plant (Duke Energy)	8"	2020	4	\$	8,000.00	3_Complete
Marlin	SC	Archroma Plant	Fluor Corp 788 Chert Quarry Rd Marlin, SC 29836 Mark Freeman	15" CIPP Lining	15"	2020	135	\$	18,475.00	3_Complete
Athens	GA	Athens GA	G.P.'s Enterprises, Inc Minton O'Neal 1500 Hwy 124 Auburn, GA 30011	Storm Sewer Pipe Repairs - Georgia DOT Projects	18"	2020	4	\$	3,950.00	3_Complete
Cornelius	NC	Charlotte Mecklenburg Utility	Finley Properties 1100 Country Club Rd Ext Wilkesboro, NC 28598	Miscellaneous Repairs @ Antiquity Development	15"-24" CIPPR	2020	88	\$	57,000.00	3_Complete
Clearwater	FL	City of Clearwater	Granite Construction Rick Cooper 2531 Jewett Ln Sanford, FL 32773	Misc Sewer Rehab Services for Clearwater Florida	CIPPR, LCR, and MTH	2020	20	\$	7,500.00	3_Complete
Multiple Locations	FL	Multiple	Granite Construction Tommy Robertson 2531 Jewett Ln Sanford, FL 32771	Misc Sewer Rehab Services - Yearly	MTH and LCR	2020	12	\$	87,007.00	3_Complete
Cary	NC	City of Cary	Granite Inliner Cody Beal 704.685.4326	Pipeline Repair for Granite Inliner	CIPPR	2020	4	\$	6,700.00	3_Complete
Greenville	SC	Greenville Airport	Greenville-Spartanburg Airport District 1850 GSP Drive, Bldg 1 Greer, SC 29651	CIPP Lining of 8" Sanitary Sewer Line from MH49 to MH48, Greenville-Spartanburg Airport District	8"	2020	300	\$	22,750.00	3_Complete
Greenville	SC	Greenville Airport	Greenville-Spartanburg Airport District 1850 GSP Drive, Bldg 1 Greer, SC 29652	CIPP Lining of 8" Sanitary Sewer Line from MH49 to MH48, Greenville-Spartanburg Airport District	8"	2020	160	\$	17,500.00	3_Complete
Charlotte	NC	Riverbend Apts	Hoopaugh Grading Co, LLC 303 Forsyth Hall Dr Charlotte, NC 28273 Tim Davis	Pipe Rehabilitation @ Riverbend Apartments	15"	2020	4	\$	4,500.00	3_Complete
Charlotte	NC	Iron Head Construction	Iron Head Construction 220 Border Dr Charlotte, NC 28208 Joe Kozlowski	Cap Rock Cityscape	12"-15"	2020	24	\$	17,750.00	3_Complete
Orlando	FL	Orange County Library System	Brian Dornbush Orange County Library System Facilities and Ops Manager	Pipeline Investigation and repair of Orange County Library	8"	2020	68	\$	27,300.00	3_Complete
Cornelius	NC	Provident Land Services	Provident Land Services 6707 Fairview Rd, Ste B Charlotte, NC 28210	Storm Sewer Pipe Rehabilitation @ Bailey Springs in Cornelius, NC	15"-18"	2020	44	\$	29,862.50	3_Complete
Pineville	NC	RBC Utilities	RBC Utilities 4381 Charlotte Hwy, Ste 101 Lake Wylie, SC Bill Cummings	Carolina Village, Pineville, NC - CIPP Point Repair	15"	2020	4	\$	3,250.00	3_Complete
Waxhaw	NC	RBC Utilities	RBC Utilities 4381 Charlotte Hwy, Ste 101 Lake Wylie, SC Bill Cummings	Kensington, Waxhaw, NC - CIPP Point Repair	15"	2020	4	\$	3,250.00	3_Complete
Abingdon	VA	Washington County Service Authority	Washington County Service Authority 25122 Regal Dr Arlington, VA 24211 Randall Mitchell	WCSA	10"	2020	4	\$	5,000.00	3_Complete
CAMDEN	NJ	American Water	American Water	Mainline lining, including oval pipe	8"	2020	767	\$	148,794.00	3_Complete
Wilmington	NC	Cape Fear Public Utility Authority	Cape Fear Public Utility Authority	Carolina Place Sewer Rehab	6'-8"	2020	2,284	\$	495,320.00	3_Complete
Brunswick	GA	Brunswick-Glynn Joint Water and Sewer Commission	Kirk Young BGJWSC 2909 Newcastle St Brunswick, GA 31520	10" Section on Mansfield for BGJWSC	10"	2020	455	\$	39,620.00	3_Complete
Seneca	NC	Duke Energy, Roxboro Plant	Alan Saine, PE, GISP Duke Energy 400 S Tryon St Charlotte, NC 28202	Pipeline Repair at Roxboro Power Plant (Duke Energy)	18"	2019	137	\$	78,575.00	3_Complete
Cornelius	NC	Charlotte Mecklenburg Utility	Finley Properties 1100 Country Club Rd Ext Wilkesboro, NC 28597	Miscellaneous Repairs @ Antiquity Development	15"-24" CIPPR	2019	64	\$	42,800.00	3_Complete

Orlando	FL	City of Orlando	Granite Construction Tommy Robertson 2531 Jewett Ln Sanford, FL 32771	Misc. Sectional Repairs in Central Florida	Assorted CIPPR and LCRs	2019	63	\$	22,750.00	3_Complete
Deltona	FL	City of Deltona	Granite Construction Tommy Robertson 2531 Jewett Ln Sanford, FL 32772	City of Deltona Lateral Lining	MTHs	2019	143	\$	23,704.00	3_Complete
Clearwater	FL	City of Clearwater	Granite Construction Rick Cooper 2531 Jewett Ln Sanford, FL 32773	Misc. Sewer Rehab Services for Clearwater Florida	CIPPR, LCR, and MTH	2019	54	\$	5,250.00	3_Complete
Cary	NC	City of Cary	Granite Inliner Cody Beal 704-685-4326	Pipeline Repair for Granite Inliner	18" CIPPR	2019	4	\$	5,850.00	3_Complete
Fort Mill	SC	Regions of Bretagne	MI Homes of Charlotte, LLC 5350 77 Center Dr, Ste 100 Charlotte, NC 28217 Jeremia Murphy	Various CIPPRs	15"-24"	2019	108	\$	81,150.00	3_Complete
Monroe	NC	City of Monroe	Steven Horvath Water Resources Dept 2401 Walkup Ave Monroe, NC 28110	CIPP Point Repair - Walkup Ave	8"	2019	4	\$	5,000.00	3_Complete
Ladson	SC	Berkeley County Water & Sanitation	Mark A. Waters - Engineering Field Coordinator (843-719-2312) Tommy Harris (843-719-2331)	Emergency Repair	21"	2019	4	\$	8,000.00	3_Complete
Waxhaw	NC	RBC Utilities	RBC Utilities 4381 Charlotte Hwy, Ste 101 Lake Wylie, SC Bill Cummings	Inverness - CIPP Point Repairs	15"-24"	2019	212	\$	139,050.00	3_Complete
Cornelius	NC	RBC Utilities	RBC Utilities 4381 Charlotte Hwy, Ste 101 Lake Wylie, SC Bill Cummings	Washam Park Dr	18"	2019	4	\$	2,700.00	3_Complete
Cornelius	NC	South Creek Construction	South Creek Construction Eduardo Dorta 18511 Starcreek Dr Cornelius, NC 28031	Cleaning, CCTV, and Pipe Rehabilitation @ Bailey's Glen Development, Cornelius, NC	15-24"	2019	76	\$	54,790.00	3_Complete
Berkeley County	SC	Berkeley County Water & Sanitation	Mark A. Waters - Engineering Field Coordinator (843-719-2312) Tommy Harris (843-719-2331)	9.134' of 8" Mainline CIPP installed 192 MTHs (up to 40') installed	192	2018	9,150			3_Complete
South Berkeley County	SC	Berkeley County Water & Sanitation	Mark Waters - Berkeley County Water & Sanitation 212 Oakley Plantation Monocks Drive Corner, SC 29461 843- 719-2312	Installation of 8-10" MTM Lining		2018	9,150			3_Complete
Charlotte	NC	Charlotte Mecklenburg Utility	704-722-0792	Installed 11 CIPPRs in various locations	11					3_Complete
Charlotte	NC	NC-DOT	704-535-2525	Installed 6 15" CIPPRs	6					3_Complete
Charlotte	NC	City of Charlotte	Reynolds Inliner LLC Phone: 704-504-8464	Installed 17 CIPPRs in various locations	17					3_Complete
Wadesboro	NC	Town of Wadesboro	704-694-5173	Installed 3 12" CIPP in various locations	3					3_Complete

TOTAL	94,962.00	\$	9,701,200.55
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CIPP Experience Summary Table (References and Experience)

Work Location (City/Town)	State	System Owner	Engineer/Client Contact(s)	Project Description	Size	Completion Date	Footage	Project Value	Status
Natick	MA	Natick Sewer Department	Bob Pickering(Haley and Ward)-617-903-5856	Natick Sewer Sylem Rehab-Phase 1	8"-24"	2020/2021	25,000	\$ 950,000.00	1_Active
Pittsfield	MA	Pittsfield Public works	Mark Daubert	Pittsfield CIPP Lining/Grounding	8"-12"	2020/2021	8,000	\$ 150,000.00	1_Active
Boston	MA	Boston Water & Sewer	Peter Salvatore-617-989-7000	CMOM Rehab	8"-20"	2020/2021	30,000	\$ 1,000,000.00	1_Active
Mohawk	NY	Village of Mohawk	Emily Procopio 315-447-1631	Mohawk NY - Sewer Rehab	8"-18"	2021	30,000	\$ 1,500,000.00	1_Active
Boston	MA	Boston Water & Sewer	Peter Salvatore-617-989-7000	CMOM Rehab	8"-20"	2021	21,000	\$ 900,000.00	1_Active
Rockport	MA	Town of Rockport			8"-18"	2021	8,000	\$ 300,000.00	1_Active
Medford	MA	Town of Medford			8"	2021	2,100	\$ 70,000.00	1_Active
Everett	MA	City of Everett, MA			8"-15"	2021	19,000	\$ 625,000.00	1_Active
New Haven	CT	Greater New Haven Sewer Authority	Mario Riccozi 203-466-5280		8"-36"	2021	23,000	\$ 1,300,000.00	1_Active
Somerset	MA	Town of Somerset			8"-10"	2021	3,500	\$ 155,000.00	1_Active
Swampscott	MA	Town of Swampscott			8"-12"	2021	15,000	\$ 450,000.00	1_Active
Peabody	MA	Town of Peabody			8"-24"	2021	2,800	\$ 175,000.00	1_Active
Lewiston	ME	Town of Lewiston			8"-24"	2021	30,000	\$ 1,300,000.00	1_Active
Cambridge	MA	City of Cambridge Water and Sewer	Eric Breen- 857 233 8960		8"-15"	2021	15,000	\$ 850,000.00	1_Active
Middletown	RI	Town of Middletown RI	Warren Hall(401-418-0413)		18"-24"	2021	1,850	\$ 500,000.00	1_Active
Hopkdale	MA	Town of Hopkdale	Nathan Michaels 978-532-1900	Sewer Rehab	8"-18"	2021	4,300	\$ 125,000.00	1_Active
		Various Locations		CIPPI Linings	8"-18"	2021	20,000	\$ 350,000.00	2_Pending
		Various Locations		CIPPI Linings	18"-48"	2021	2,800	\$ 350,000.00	2_Pending
		Various Locations		CIPPI Linings	8"-36"	2021	123,000	\$ 5,500,000.00	3_Breakdown
Cambridge	MA	City of Cambridge Water and Sewer	Eric Breen- 857 233 8960	Various CIPP Lining	8"-15"	2021	10,500	\$ 450,000.00	3_Complete
Marion	MA	Town Marion	Paul Greco-978-532-1900	Year 2 Sewer Rehab	8"-12"	2021	4,000	\$ 160,000.00	3_Complete
Revere	MA	City of Revere	Steve Callahan(CDM)-617-462-8719	Phase 10 Sewer Rehab	8"-12"	2021	21,000	\$ 800,000.00	3_Complete
Arlington	MA	Town of Arlington	Jamie Craig 978-532-1900	Town of Arlington - Sewer Rehab	8"-18"	2021	2,100	\$ 100,000.00	3_Complete
Winchester	MA	Town of Winchester	Paul Greco-978-532-1900	Town of Inchester - Sewer Rehab	6"-15"	2021	15,000	\$ 600,000.00	3_Complete
Middletown	RI	Town of Middletown RI	Warren Hall(401-418-0413)	Red Road Paving	8"	2021	21,000	\$ 75,000.00	3_Complete
Everett	MA	City of Everett, MA	Ernest Lavetierrie 617-590-7187	Sewer System Maintenance	8"	2021	4,000	\$ 100,000.00	3_Complete
West Seneca	NY	West Seneca	James Hunt	2019 Phase 6 Sanitary Sewer Rehabilitation	8"-15"	2020	10,000	\$ 350,000.00	3_Complete
				Cured In Place pipe lining of 850 LF of 24" Sewer	24"	2020	850	\$ 140,000.00	3_Complete
				2020 Sewer System Infiltration Rehab-Weymouth	8"-12"	2020	12,000	\$ 270,000.00	3_Complete
				Dedham Sewer Rehab	8"-15"	2020	6,000	\$ 180,000.00	3_Complete
				Salem MA Sewer Rehab	8"-18"	2020	2,500	\$ 162,500.00	3_Complete
				Adams Sewer Rehab	10"	2020	500	\$ 50,000.00	3_Complete
				Coddington HWY Sewer Rehab	12"	2020	2,000	\$ 75,000.00	3_Complete
				Stoughton Sewer Rehab	8"-15"	2020	8,000	\$ 264,000.00	3_Complete
				Albany-Shaker Road Sanitary Sewer Rehabilitation	16"	2020	1,000	\$ 100,000.00	3_Complete
				Fort Plain-Sanitary Sewer Rehab	6'-2'1"	2020	1,500	\$ 350,000.00	3_Complete
				Everett MA	8"-48"	2020	5,500	\$ 760,000.00	3_Complete
				Middletown CT	8"	2020	3,000	\$ 100,000.00	3_Complete
				Revere(Beachmont)	10"-21"	2020	3,000	\$ 60,000.00	3_Complete
				Danvers MA	8"	2020	7,000	\$ 170,000.00	3_Complete
				Belmont	8"-10"	2020	3,400	\$ 100,000.00	3_Complete
				Milton MA	8"-18"	2020	12,000	\$ 361,000.00	3_Complete
				Saugus MA	8"-12"	2020	8,000	\$ 353,600.00	3_Complete
				Hartford CT	8"-1'2"	2020	8,000	\$ 175,000.00	3_Complete
				Newport Naval Base	8"-12"	2020	2,000	\$ 70,000.00	3_Complete
				Burlington DPW	8"-20"	2020	5,500	\$ 238,000.00	3_Complete
				Woburn MA	8"-24"	2020	30,000	\$ 1,000,000.00	3_Complete
				Woburn MA	8"-18"	2020	63,000	\$ 2,175,000.00	3_Complete
				Illion NY	8"-21"	2020	21,000	\$ 617,000.00	3_Complete
				GHD-Ed Bradluehr 716-242-6925	15"	2020	350	\$ 50,000.00	3_Complete
Buffalo NY	NY	Buffalo Sewer Authority	Sol Lo Tierno	Buffalo NY-Main Street Sewer Rehab		2020			3_Complete
Somerville	MA	Saomerville Public Works	Paul Hoye(Weston and Sampson)	Somerville MA CIPP Rehab	8"-36"	2020	8,500	\$ 950,000.00	3_Complete

Tonawanda	NY	Cambridge Sewer Sept	?	Eric Breen- 857 233 8860	Tonawanda Sewer Rehab	8"-7"	2020	18,000	\$	530,000.00	3 Complete
Cambridge	MA	Naticket DPW	?	Bob Drake- 401-595-0738	Cambridge Year 2	8"-18"	2020	25,000	\$	400,000.00	3 Complete
Naticket	MA	Town of Wareham, MA	?	Jeff Bellino- 413-522-3194	Naticket MA Sanitary Sewer Rehab	8"-12"	2020	13,000	\$	415,000.00	3 Complete
Wareham	MA	Franklin Pierce University	?	Karl Schrantz(OBG)-315-966-6951	Wareham CIPP	8"-12"	2020	1,800	\$	500,000.00	3 Complete
Franklin Pierce	NH	Sanitary Sewer Mainline Rehab-Phase 7	?	Steve Dempsey-Sewer Supervisor(Hingham)-781-603-8642	Private Inflow Rehab-2,000 LF of 12" CIPP	8"	2020	2,500	\$	100,000.00	3 Complete
Oneida County(001-9)	NY	Town of Hingham	?	Emily Sadoway-978 979 6022-Weston and Sampson Engineers	Sanitary Sewer System Rehab	8"-15"	2019	600	\$	27,000.00	3 Complete
Hingham MA	MA	City of Wakefield	?	Joseph Sasio, PE-Suburban Consulting Engineers-973 398 1776	1800 LF of 8" CIPP-700 LF of 12" CIPP	8"-12"	2019	2,500	\$	125,000.00	3 Complete
Wakefield	MA	Town of Glen Ridge NJ	?	Dan Rooney 315-956-6359	Sewer System Infiltration Rehab-Year 2	6"-15"	2019	6,000	\$	270,000.00	3 Complete
Glen Ridge	NJ	Town of Cicero NY	?	Karl Schrantz(OBG)-315-966-6951	Pipe Lining Project 2019	8"-10"	2019	3,000	\$	90,000.00	3 Complete
Cicero NY	NY	Town of Whitestown NY	?	Jeff Bellino- 413-522-3194	Private Inflow Rehab-2,000 LF of 12" CIPP	8"-10"	2019	3,200	\$	96,000.00	3 Complete
Whitestown	NY	Oneida County	?	Eric Breen- 857 233 8860	5000 LF OF CIPP Lining	8"-12"	2019	10,000	\$	185,000.00	3 Complete
Oneida County	NY	Franklin Pierce University	?	MDR Construction-Leah Schneider 978-851-0999	2000' of 8" CIPP lining	8"	2019	2,000	\$	84,000.00	3 Complete
Franklin Pierce	NH	City of Cambridge Water and Sewer	?	Stephanie Wurz-Assistant Engineer 315-792-0152	580 LF of CIPP Lining	12"	2019	580	\$	24,360.00	3 Complete
Cambridge	MA	City of Medford Sewer and Sewer Department	?	Brian Olin-315-589-7884	600 LF of 12" CIPP Lining	12"	2019	600	\$	30,000.00	3 Complete
Medford	MA	City of Utica NY	?	Rolando Moreno(DPW Director): 715-998-0996	645 LF OF 10" CIPP Lining	10"	2019	545	\$	29,975.00	3 Complete
Utica NY	NY	City of Lowville NY	?	Stephen Nadeau(Town Engineer):761-455-7550	1/1 Removal 2019	8"-12"	2019	12,000	\$	396,000.00	3 Complete
Lowville NY	NY	City of Lockport NY	?	Ryan Paul-Environmental Partners-508-863-3484	CIPP Lining of Various Pipe Sizes	8"-16"	2019	6,000	\$	125,000.00	3 Complete
Lockport NY	NY	Town of Needham MA	?	Steve Dempsey-Sewer Supervisor(Hingham)-781-603-8642	On Call Sewer Services	8"-12"	2019	5,500	\$	225,000.00	3 Complete
Needham MA	MA	Town of Westwood	?	Karl Schrantz(OBG)-315-966-6951	250 LF of 18" Sanitary Sewer Rehab	18"	2019	200	\$	45,000.00	3 Complete
Westwood MA	MA	Town of Hingham	?	Kanday Company-Rick Szuzk-716-675-7245	350 LF OF 8" CIPP Lining	8"	2019	350	\$	15,750.00	3 Complete
Hingham	MA	City of Greenwich CT(For Kaali Nagy)	?	TBD	Albany-Shaker Road Sanitary Sewer Rehabilitation	8"-16"	2019	3,900	\$	134,000.00	3 Complete
Blo Nomic Services	SC	Berkeley County WS	?	Eric Breen- 857 233 8860	Various CIPP Lining	8"-15"	2019	6,000	\$	210,000.00	3 Complete
Somerville MA(CRL)	MA	City of Somerville	?	Berkeley County Water and Sewer-Mark Waters- 843-719-2312	Berkey Sewer Sanitation Rehab	8"	2018	10,000	\$	300,000.00	3 Complete
Greenwich CT	CT	City of Providence	?	Mike Ruggiero	CIPP Pipe Lining	8"	2018	101	\$	7,878.00	3 Complete
Providence RI	RI	Town of Fairfield	?	Rich Feminella 203-622-7760	1/1 Reduction Project	8"	2018	700	\$	21,000.00	3 Complete
Fairfield CT	CT	City of Dedham	?	Meg Goulet-401-461-6551	Sewer System Rehab	8"-12"	2018	500	\$	20,000.00	3 Complete
Dedham MA	MA	Village of New Hartford	?	Bill Norton-Town of Fairfield	815' of 12" CIPP Lining	12"	2018	815	\$	32,600.00	3 Complete
Hartford CT	CT	Southington CT	?	A Dimartino-Petruzzello Properties LLC	6'-120 LF of CIPP 8"-280 LF of CIPP	6"-8"	2018	400	\$	12,000.00	3 Complete
Southington CT	CT	City of Buffalo NY	?	Chris Morant-Town of New Hartford	350 LF OF 8" CIPP Lining	8"	2018	350	\$	10,500.00	3 Complete
Buffalo NY	NY	City of Buffalo NY	?	Scott Brickey-Calco Construction	370 LF OF 6" Mainline Lining	6"	2018	370	\$	11,100.00	3 Complete
Salem MA	MA	City of Salem	?	Destro & Bros concrete Co	800 LF of 8"-12" CIPP Lining	15"	2017	800	\$	22,500.00	3 Complete
				William Ross City of Salem-978 741 7401		8"-12"	2017		\$	24,000.00	3 Complete
TOTAL									857,961.00	\$	33,099,085.80



CARYLON CORPORATION

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National Water Main - New Jersey

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CIPP Experience Summary Table (References and Experience)

Work Location (City/Town)	State	System Owner	Engineer/Client Contact(s)	Project Description	Size	Completion Date	Footage	Project Value	Status
Scarsdale	NY	Village of Scarsdale	Joseph M. Fusillo, P.E., Director, Municipal Engineering - The Chazen Companies - (914)-265-5611	MTM Lining	8"-20"	2018-2019	7,500.00		1_Active
Port Chester	NY	Village of Port Chester - Westchester County, NY	Village of Fishkill, NY - Dave Morrison, Superintendent of Public Works - Derrick Wilcox, P.E. - Delaware Engineering (607) 432-8073	Furnish and install 18,420 LF of cured in place sanitary sewer liner and rehabilitate associated manholes within the Village	8"	2020	18,420	\$ 1,255,562.50	1_Active
Fishkill	NY	Village of Fishkill, NY	Village of Fishkill, NY - Dave Morrison, Superintendent of Public Works - Derrick Wilcox, P.E. - Delaware Engineering (607) 432-8073	Sanitary Sewer I&I Improvements Project	15" & 18"	2020	1,900	\$ 230,602.25	1_Active
North Bergen	NJ	Township of North Bergen, NJ	John Engle - Boswell Engineering	Sanitary Sewer Lining of 10" VCP	10"	2020	320	\$ 20,150.00	1_Active
Union	NJ	Township of Union, NJ	Crossroads Paving Co. - 386 South Street, Suite 169 Newark, NJ 07105 (973) 902-6003	Union - 2020 Road Program Phase II	8"	2020	60	\$ 16,800.00	1_Active
Union	NJ	Township of Union, NJ	Grenada Construction - 147 Thomas Street, Newark, NJ 07114	Union - 2020 Road Program Phase III	8"	2020	480	\$ 18,987.50	1_Active
Union	NJ	Township of Union, NJ	Crossroads Paving Co. - 386 South Street, Suite 169 Newark, NJ 07105 (973) 902-6003	Union - 2020 Road Program Phase IV	8"	2020	460	\$ 75,030.00	1_Active
Union	NJ	Township of Union, NJ	Lancha Construction Corp. 300 Englishtown Road, Jamesburg, NJ 08831 - 732-257-0226	Union - 2020 Road Program Phase V	8" & 15"	2020	1,900	\$ 173,862.50	1_Active
Palmer	PA	Palmer Township, PA		Sanitary Sewer Lining - Various Locations	8"	2020			1_Active
Woodtown	PA	Woodtown, PA		Sanitary Sewer Lining		2020			1_Active
City of Long Beach,	NY	City of Long Beach,	Rita Butler- Long Beach rbutler@longbeachny.gov 516-705-7231 1 West Chester Street Long Beach NY 11561	Install 4" 8" 10" 12" 15" 18" 24" and 30" Liner		2019	1,000.00		1_Active
New Rochelle	NY	City of New Rochelle	City of New Rochelle	Trenchless Lining and Manhole repairs File NO. 18-020 Project NO. 02-999-P338		2019		90,000.00	1_Active
MayBrook	NY	Village of Maybrook	Sean T. Hoffman, PE Municipal Engineer H2M architects + engineers 2 Executive Boulevard, Suite 401 Suffern, NY 10901 Tel: 848 357 7238	Relining of 8" Sanitary Sewer for the Village of Maybrook	8"	2019	1,182.00		1_Active
Coopersburg	PA	Borough of Coopersburg	Timothy Paashaus - Borough Manager - 610-282-3307	1800 LF of MTM Lining	8"	2019	1,900.00		1_Active
Hanover	PA	Borough of Hanover	Emily Fleischer - Gannett Fleming, Inc 717.763.7211 x2173 efleischer@gnfnet.com P.O. Box 67100, Harrisburg, PA 17106-7100	MM CIPP 8" 12" and 15" Sewer		2019	5,674.00		1_Active
New Providence	NJ	Borough of New Providence	Diana Pizzulli- Maser Consulting 973-398-3144 x 4517 dpizzulli@maserconsulting.com 400 Valley Road Suite 304 Mt. Arlington, NJ 07658	Installed 8", 10" and 18" CIPP Repairs	4	2019	4,845.00		1_Active
Reading	PA	City of Reading	Alison Heist- City of Reading alison.heist@readingpa.gov 815 Washington St. Room 2-39 Reading, PA 19601			2019	430.00		1_Active
Topton	PA	Borough of Topton	Vicki E Adams- Barry Isett Vadam@barryisett.com 610-398-0904	Install 8" & 10" Sewer Lining	8" & 10"	2019	10,903.00		1_Active
Upper Moreland	PA	Upper Moreland Harbora Joint Sewer Authority	Anthony Price- Environmental Engineering aprice@eema-inc.com 215-368-3375 P.O. Box 232 Kulpville, PA 16843	CIPP Lining 8", 10", 12", 15"	8", 10", 12", 15"	2019	18,927.00		1_Active

Warren	PA	Warren Township	Sear Sauder, PS & S ssauder@psands.com, 973-271-4025 67B Mountain Blvd. Ext Warren, NJ 07059	CIPP 8", 12" Lines	30	2019	15,540.00	1_Active
Jenkintown	PA	Borough of Jenkintown	Frank A. Ciufo - PENNONI Engineering (215-569-6636) (267-221-6733) Jason Gruber Manager Distribution & Collections Lehigh County Authority 1242 Martin Luther King Jr Dr. Allentown, Pennsylvania 18102 JasonGruber@lehighcountyauthority.org 610-437-7848, ext. 753	8", 10" CIPP of Sewer, Spot Repair Liner		2019	9,214.00	1_Active
Lehigh County Bergenfield	PA NJ	Lehigh County Authority Borough of Bergenfield		950 LF of 8" MTM Lining	8"	2019	950.00	1_Active
Montgomery Township	PA	Montgomery Township		MTM Lining	8"-21"	2019	1,965.00	1_Active
Englewood	NJ	Englewood NJ	Nika Burns - D & L Paving Contractors, Inc 875 Franklin Ave Nulley, NJ 07110 P-973-667- 7300 / F-973-667-1190	MTM Lining	8"	2019	3,650.00	1_Active
Englewood	NJ	Englewood NJ	New Price Concrete Construction Co. - Vincent Maisano - P-201-488-8208/F-201-488- 7259/Cell-201-208-8480- 215 Eileen Terrace Hackensack, NJ 07601	MTM Lining	8"-10"	2019	1,100.00	1_Active
Breezy Point	NY	Breezy Point Brooklyn, NY	Renova Environmental - 3417 Sunset Ave Ocean Twp. NJ 07712 - Kelly Gilles - P-732-659- 1000 / Cell: 732-945-5133 / F:732-659-1034	MTM Lining	8"-8"	2019	2,250.00	1_Active
Allentown	PA	Allentown, PA	Scheurmann Excavating Inc. - Mike Heffekinger O-610-262-5000 / Cell-484-221-1455 - 5285 West Coplay Rd Whitehall, Pa 18052	MTMT Lining	8" - 12"	2019	3,100.00	1_Active
Bethlehem Township	PA	Bethlehem Township PA	Sieve Hunsberger - BTMA Director - 3535 Orth St Bethlehem, PA 18020 - P-610-814-5421	MTM Lining	8"	2019	650.00	1_Active
Fanwood	NJ	Fanwood, NJ	Silo Excavation - Nick Sigismundi - O 908-754- 0776 - C-732-266-5955	MTM Lining	8" - 12"	2019	1,430.00	1_Active
Suffolk County	NY	Suffolk County, NY	Mathew Roberts - P-516-220-0514	MTM	8" - 10"	2019	1,950.00	1_Active
Cliffside Park	NJ	Cliffside Park, NJ	Boswell Engineering - John Englese - P 201- 954-5891	MTM	8"	2019	240.00	1_Active
Bayonne	NJ	City of Bayonne	David Missig - Project Manager Suez Water - 461 From Rd Suite 400 Paramus NJ	MTM	12"	2019	275.00	1_Active
Bayonne	NJ	City of Bayonne	500 Englewood	Relining of 8"-15" Sanitary Sewers	8"-8", 10"-12", 14" 16", 18", 20"	2019 - 2021	8,000	1_Pending
Bayonne	NJ	City of Bayonne	City of Bayonne - Superintendent Suez Water (Suez Pollution Control Corp.) 200 East Shore Road Bayonne, NJ 07001	Cleaning, Inspection and Lining of 24" Sanitary Sewer (UV)	16"	2021	250	2_Pending
Bayonne	NJ	City of Bayonne	City of Bayonne - Superintendent Suez Water (Suez Pollution Control Corp.) 200 East Shore Road Bayonne, NJ 07001	Cleaning, Inspection and Lining of 24" Sanitary Sewer (UV)	20"	2021	250	2_Pending
Bayonne	NJ	City of Bayonne	City of Bayonne - Superintendent Suez Water (Suez Pollution Control Corp.) 200 East Shore Road Bayonne, NJ 07001	Cleaning, Inspection and Lining of 24" Sanitary Sewer (UV)	18"	2021	1,500	2_Pending
Bayonne	NJ	City of Bayonne	City of Bayonne - Superintendent Suez Water (Suez Pollution Control Corp.) 200 East Shore Road Bayonne, NJ 07001	Cleaning, Inspection and Lining of 24" Sanitary Sewer (UV)	18"	2021	1,500	2_Pending
Bayonne	NJ	City of Bayonne	City of Bayonne - Superintendent Suez Water (Suez Pollution Control Corp.) 200 East Shore Road Bayonne, NJ 07001	Cleaning, Inspection and Lining of 24" Sanitary Sewer (UV)	18"	2021	1,500	2_Pending
Bayonne	NJ	City of Bayonne	City of Bayonne - Superintendent Suez Water (Suez Pollution Control Corp.) 200 East Shore Road Bayonne, NJ 07001	Cleaning, Inspection and Lining of 24" Sanitary Sewer (UV)	18"	2021	1,500	2_Pending
City of Demarest	NY	City of Demarest	John Gisenan II Joseph M. Sanzari, Inc. 90 West Franklin Street Hackensack, NJ 07601 Office: (201) 342-6995 x 225	Cleaning, Inspection and Lining of 279 Linear Feet of 18-inch Storm Sewer (UV)	18	2021	279	3_Complete
Borough of Cresskill	NJ	Borough of Cresskill	John Gisenan II Joseph M. Sanzari, Inc. 90 West Franklin Street Hackensack, NJ 07601 Office: (201) 342-6995 x 225	Cleaning, Inspection and Lining of 36 Linear Feet of 20-inch x 28-inch Storm Sewer (UV)	20 x 28	2021	36	3_Complete

Township of Lakewood	NJ	Township of Lakewood	Brian G Stalnard Engineering Project Manager New Jersey American Water 149 Yellowbrook Road Farmingdale, NJ 07727 Office: (846) 222-3302	Cleaning, Inspection and Lining of 11,000 Linear Feet of 8-inch and 12-inch Sanitary Sewer (UV)	8", 12"	2021	11,000	\$112,500.00	3_Complete
Baldwin, Hamlet in Long Island	NY	Baldwin, Hamlet in Long Island	William Maggiali Sr. Capital Planning Engineer Nassau SUEZ North America 3340 Merrick Road Seaford, NY 11783 Office: (516) 390-6491	Cleaning, Inspection and Lining of 270 Linear Feet of 30-Inch Sanitary Sewer (UV)	30"	2021	170	\$58,360.00	3_Complete
City of Portland	ME	City of Portland	Benjamin Pearson, PE Compliance Coordinator Resources, Public Works 874-8843	Cleaning, Inspection and Lining of 574 Linear Feet of 18-inch & 73 LF of 15-inch Sanitary Sewer (UV)	15", 18"	2021	647	\$	3_Complete
Town of Sprague	CT	Town of Sprague	Norman Miller, P.E. CDOT District 2 Drainage Engineer 171 Salem Turnpike Norwich, CT 06360 (860) 823-3243	Cleaning, Inspection and Lining of 35 Linear Feet of 18-Inch Sanitary Sewer (UV)	18"	2021	35	\$	3_Complete
City of Derby	CT	City of Derby	Alan Dodge, P.E. Engineer 3 Transportation District IV Drainage Connecticut Department of Transportation Office: (203) 591-3629	Cleaning, Inspection and Lining of (2) 32 Linear Feet of 24-inch Storm Sewer (UV)	24"	2021	64	\$	3_Complete
Township of Fairfield	NJ	Township of Fairfield	Kevin O'Brien, PE Senior Project Engineer Mott MacDonald 111 Wood Avenue South Iselin, NJ 08830-4112 Office: (973) 912-3355	Cleaning, Inspection and Lining of 279 Linear Feet of 36-Inch Sanitary Sewer (UV)	36"	2021	279	\$153,000.00	3_Complete
North Plainfield	NJ	Borough of North Plainfield, NJ	Borough of North Plainfield, NJ - City Engineer		8"	2020	309		3_Complete
Summit	NJ	City of Summit, NJ	City of Summit, NJ - Rick Matias	MH to MH Lining - Edison Drive and Bryant Park	8"	2020	267	\$	3_Complete
Clifton	NJ	City of Clifton, NJ	D & L Paving Contractors, Inc. 675 Franklin Ave, Nutley, NJ 07110 (973) 667-7300	Sanitary Sewer Lining of 8" VCP	8"	2020	410	\$	3_Complete
Secaucus	NJ	Town of Secaucus, NJ	D & L Paving Contractors, Inc. 675 Franklin Ave, Nutley, NJ 07110 (973) 667-7301	Storm Sewer Lining of 15"	15"	2020	115	\$	3_Complete
Hawthorne	NJ	Town of Hawthorne, NJ	Scott Goodman - Boswell Engineering	Storm Sewer Lining of 15"	15"	2020	332	\$	3_Complete
Little Falls	NJ	Township of Little Falls, NJ	Tomas Matias - Staff Engineer II - H2M Architects + Engineers 2 Executive Blvd, Suite 401, Suffern, NY 10901	Township of Little Falls - Coney Road MTM Lining	8"	2020	333	\$	3_Complete
West Caldwell	NJ	Township of West Caldwell - Essex County, NJ		Forest Avenue Sanitary Sewer Rehabilitation - Installation of approximately 3,000 LF of sanitary sewer liner in existing 8" VCP	8"	2020	3,000	\$	3_Complete
Hanover	NJ	Hanover Sewerage Authority	Mott MacDonald - Bob Heller, Senior Project Manager (973) 912-2538	Contract 2019-3 Rehabilitation of Sanitary Sewer by Grouling, CIPP Spot Lining and Lateral Connection Repair (LCR) Sealing	8"	2020	680	\$	3_Complete
Glen Ridge	NJ	Borough of Glen Ridge, NJ	Robert E. Wells, PE, Project Manager - Suburban Consulting Engineers, Inc. - (973) 398-1778	Sanitary Sewer Lining (8") - Add on work	8"	2020	3,900	\$	3_Complete
Hillside	NJ	Township of Hillside, NJ	Montane Construction - 80 Contant Ave Lodi, NJ 07644	Hillside Emergency Sanitary and Storm Sewer Repairs	8"	2019	225	\$	3_Complete
Vineyard	NJ	Township of Vineyard, NJ			8"	2019	5,850	\$	3_Complete
Wakefield	MA	Town of Wakefield, MA			8"	2019	677	\$	3_Complete

Boonton	NJ	Town of Boonton, NJ	William Schumann, Designer - Suburban Consulting Engineers, Inc. - (973) 398-1776	Town of Boonton - Chestnut Street 170LF of MTM Lining	8"	2019	170		3_Complete
Mount Laurel	NJ	Township of Mount Laurel, NJ	Benjamin R. Waller, PE, CME, CPWM, S3, C3 - Partner/Project Engineer - (856) 253-7170	2018 Sanitary Sewer Rehabilitation Project - Contract 2018-12	10" & 16"	2019	2,115	\$	3_Complete
Evesham	NJ	Evesham MUA		Evesham MUA North Cropwell Road Sewer Main Lining	12"	2019	235		3_Complete
Totowa	NJ	Borough of Totowa, NJ			8"	2019	440		3_Complete
Madison	NJ	Borough of Madison - Morris County, NJ		Sanitary Sewer Main Lining 8-inch Diameter - up to 5 500 LF	8"	2019	4,500		3_Complete
Hellertown	PA	Borough of Hellertown, PA		MTM Lining	8" and 10"	2019	1,100.00		3_Complete
Marietta Red Lion	PA	Borough of Marietta, PA		Marietta Borough Sanitary Sewer Collection and Conveyance System Rehabilitation - Basin F (Phase 1)	8" and 15"	2019	3,614.00		3_Complete
	PA	Borough of Red Lion, PA			8"	2019	106.00		3_Complete
West Chester	PA	Borough of West Chester	Nathan M. Cline, PE, Pennoni NCIline@Pennoni.com +1 (610) 888-8564 One South Church Street, 2nd Floor West Chester, PA 19382						3_Complete
Chapauqua	NY	Chapauqua, NJ	Dave Walsh - Summit Development - P-914-244-5155	CIPP Lining of 8"-10", 12" Sanitary Sewers	8" 10", 12"	2019	2,480.00		3_Complete
Lynbrook	NY	Lynbrook, NY	Suez Long Island Inc. - Santosh Gunavante - P-516-260-3361 - Engineer/PM	MTM	8"	2019	465.00		3_Complete
Fords	NJ	Fords NJ	Terra-Tech - Eric Ostapczuk - P-973-630-8030 - Assistant Civil Engineer/PM	MTM	8	2019	600.00		3_Complete
Valley Stream Clifton	LI NY NJ	Valley Stream City of Clifton	Ralph Sergie - Brady Risk Environmental - 631-875-6890	8" Sanitary Sewer Relining		2019	80.00		3_Complete
			Mike Lardner: 973-470-5793	Relining of 8" Sewer		2018	755.00		3_Complete
						2018	260.00		3_Complete
North Bergen	NJ	North Bergen MUA	Bernard N. Mirand - Engineer (201) 641-0770 - 330 Phillips Ave	Bergenline Avenue Sewer Lining 70th Street to 62nd Street Township of North Bergen Hudson County, NJ - 1945 L.F. of 8", 10", 12", 15", 18" and 24" Sanitary Sewer Rehabilitation Lining		2018	3,325.00		3_Complete
Old Bridge	NJ	Old Bridge MUA	Nelson Landon - Alamo Group - Office: 609-287-8310 / Cell: 609-760-0998	MTM Lining of 8" & 10" Sanitary Sewer		2018	9,700.00		3_Complete
Parsippany-Troy Hills	NJ	The Township of Parsippany-Troy Hills	Reivax Contracting	Installation of 1121 LF of 12" sanitary sewer MTM Lining and Installation of 9 LCRs	12" / 4	2018	1,121.00		3_Complete
Ridgefield	NJ	The Borough of Ridgefield NJ	Cirelli and Son Paving & Masonry 4 Coppola St, Nutley, NJ 07110 973-235-0302	Installation of 207 LF of 8" Sanitary Sewer MTM Lining	8"	2018	207.00		3_Complete
Ridgefield	NJ	Borough of Ridgefield	Maser Consulting - 400 Valley Road, Ste 304 Mt. Arlington NJ 07856 - Sunny Mullen (PM) 402-630-0595 - Robert J. Culvert 201-820-8589	Edgewater Avenue Sanitary Sewer Lining and Repairs FY2018 CDBG Borough of Ridgefield Bergen County, NJ - Installed 1,545 LF of 8" and 806 LF of 10"	8" and 10"	2018	2,451.00		3_Complete
Sea Girt	NJ	Borough of Sea Girt	Lorraine P. Carafa- Seagirt Borough lcarafa@seagirtboro.com 732-449-9433, x116 321 Baltimore Blvd. Sea Girt, NJ 08750	Install 12" CIPP Lining	12"	2018	1,725.00		3_Complete
Teterboro	NJ	Borough of Teterboro, NJ	Bosewell Engineering - Berge Tombalakian - Borough Engineer Representative (201) 373-8916	Installation of 164 LF of 8" Sanitary Sewer MTM Lining	8"	2018	164.00		3_Complete
The Borough of Ridgefield	NJ	Borough of Ridgefield	Maser Consulting - 400 Valley Road, Ste 304 Mt. Arlington NJ 07856 - Sunny Mullen (PM)	Edgewater Avenue Sanitary Sewer Lining and Repairs FY2018 CDBG Borough of Ridgefield Bergen County, NJ		2018	2,641.00		3_Complete
The Borough of Ridgefield	NJ	The Borough of Ridgefield NJ	402-630-0595 - Robert J. Culvert 201-820-8589	Installation of 207 LF of 8" sanitary sewer MTM Lining	0	2018	207.00		3_Complete
The Township of Parsippany-Troy Hills	NJ	The Township of Parsippany-Troy Hills	Cirelli and Son Paving & Masonry 4 Coppola St, Nutley, NJ 07110 973-235-0302	Installation of 1150 LF of 12" sanitary sewer MTM Lining and Installation of 8 LCRs	0	2018	1,150.00		3_Complete
The Township of Union	NJ	The Township of Union NJ	Reivax Contracting Luis Santana: 973-817-5553	Union - 2018 Road Program Phase 3 - Base Bid Proposal - Reeves, Patton, Erhardt, Harmony, Susan & Lancaster Reconstruction Project - 320 VF of MH Rehab, Installation of 4 Point Repairs and Installation of 3220 LF of sanitary sewer MTM Lining	4	2018	3,220.00		3_Complete

The Township of Union	NJ	The Township of Union NJ	Black Rock Enterprises 1316 Old Bridge-Englishtown Rd #1, Old Bridge, NJ 08857 - 732-967-6400	Union - 2018 Road Program Phase 2 - Proposal A & B - Union Avenue Reconstruction Project - 312 VF of MH Rehab, Installation of 9 Point Repairs, Installation of 1715 LF of sanitary sewer MTM Lining		2018	9	1,715.00	3_Complete
The Township of Union	NJ	The Township of Union NJ	S. Balata Construction Inc. 238 Ermon Rd #1r, Parlin, NJ 08859 - 732-238-8884	Union - Stuyvesant Avenue Streetscape - Phase II - 150 VF of MH Rehab and Installation of 1530 LF of sanitary sewer MTM Lining		2018	0	1,530.00	3_Complete
Union	NJ	The Township of Union NJ	Lancha Construction Corp. 300 Englishtown Road, Jamesburg, NJ 08831 - 732-257-0226	Union - 2018 Road Program Phase 3 - Base Bid Proposal - Reeves, Patton, Ehrhardt, Harmony, Susan & Lancaster Reconstruction Project - 178 VF of MH Rehab, Installation of 2 Point Repairs and Installation of 2995 LF of sanitary sewer MTM lining		2018	8"	3,220.00	3_Complete
Union	NJ	The Township of Union NJ	Black Rock Enterprises 1316 Old Bridge-Englishtown Rd #1, Old Bridge, NJ 08857 - 732-967-6400	Union - 2018 Road Program Phase 2 - Proposal A & B - Union Avenue Reconstruction Project - 312 VF of MH Rehab, Installation of 9 Point Repairs, Installation of 1715 LF of sanitary sewer MTM Lining (1,146 LF of 8" and 270 LF of 15")	8", 15" / 9	2018		1,716.00	3_Complete
Union	NJ	The Township of Union NJ	S. Balata Construction Inc. 238 Ermon Rd #1r, Parlin, NJ 08859 - 732-238-8884	Phase II - 151 VF of MH Rehab and Installation of 1531 LF of sanitary sewer MTM Lining	8"	2018		1,531.00	3_Complete
Woodbridge	NJ	Woodbridge Township	John Kociolok 732-634-4500	Spot Repair	102	2018			3_Complete
The Township of Union	NJ	The Township of Union NJ	JTG Construction Inc. 312 Emmet Street, Newark, NJ 07114 - Rick - 973-824-1371	Union - 2018 Road Program Phase 1 - Proposal A & B - Union Avenue Reconstruction Program - 245 VF of MH Lining, Installation of 7 Point Repairs and Installation of 900 LF of 8" sanitary sewer MTM Lining	7	2018		900.00	3_Complete
Union	NJ	The Township of Union NJ	JTG Construction Inc. 312 Emmet Street, Newark, NJ 07114 - Rick - 973-824-1371	Union - 2018 Road Program Phase 1 - Proposal A & B - Union Avenue Reconstruction Program - 204 VF of MH Lining, Installation of 14 Point Repairs and Installation of 841 LF of 8" sanitary sewer MTM Lining	8"	2018		900.00	3_Complete
Riverhead	NY	Town of Riverhead	Mr. George Woodson, Highway Superintendent Office Number: (631) 727-3200 Cell Phone: (631) 466-0141	Cleaning, Inspection and Lining of 80 Linear Feet of and 18-inch CMP Storm Water Line (UV LINING)	18"	2018		80.00	3_Complete
Tarrytown	NY	Village of Tarrytown	Mr. Howard D. Wessells, Jr. - Superintendent of Public Works Office Number: (914) 631-7873	Cleaning, Inspection and Lining of 650 Linear Feet of 36-inch CMP Storm Water Lines (UV LINING)	36"	2018		650.00	3_Complete
Valley Stream	NY	Valley Stream, NY	Ralph Sergio - Brady Risk Environmental Office Number: 631 875 6890	Cleaning, Inspection and Lining of 1,200 Linear Feet of 8-inch VCP Sanitary Sewer Lines (UV LINING)	8"	2018		1,200.00	3_Complete
Village of Maybrook	NY	Village of Maybrook, NY	Sean T. Hoffmann, PE Municipal Engineer H2M architects + engineers 2 Executive Boulevard, Suite 401 Suffern, NY 10901 Tel: 848 357 7238	Village of Maybrook Sanitary Sewer Lining - Prospect Street and Broadway Federal Contract No. B-17-UC-38-0105 - Installed 502 LF of 8" Sanitary Sewer MTM Lining	8"	2018		502.00	3_Complete
Suffolk County	NY	Suffolk County	Suffolk County - 600 Bergen Ave West Babylon, NY. Matthew Roberts 516-220-0514	Installation of 5,500 LF of 8"-12" sanitary sewer MTM Lining	0	2018		5,500.00	3_Complete
Banger Borough	Pa	Borough of Bangor	Ed DiMond Buchart Hom, Inc. T: (856) 797-4334 C: (856) 745-3546 edmond@bucharthom.com	General Contractor for Grouting and MTM Lining		2018		5,202.00	3_Complete
Birdsboro	Pa	Birdsboro	Christina Crawford - Spotts, Stevens and McCoy - 610-898-3042	MTM of 8" Lining		2018		1,037.00	3_Complete
East Bangor	PA	East Bangor Borough,	Joseph Markulics - Ott Consulting, Inc Office Number: 610 928 4690	Cleaning, Inspection and Lining of 1,097 Linear Feet of 30-inch Corrugated Metal Storm Lines and 133 Linear Feet of 15-inch Corrugated Metal Storm Lines (UV LINING)	15" and 30"	2018		1,230.00	3_Complete

Lehigh County	PA	Lehigh County Authority	Jason Gruber Manager Distribution & Collections Lehigh County Authority 1242 Martin Luther King Jr Dr. Allentown, Pennsylvania 18102 JasonGruber@lehighcountyauthority.org 610-437-7646, ext. 753	Installation of 880 LF of 8" sanitary sewer MTM Lining and Installation of 12 Point Repairs	14	2018	860.00	3_Complete
Macungie	PA	The City of Macungie PA	Barry Isett & Associates, Inc. - Harry E. Garman PE, PLS, F. NSPE - 484-866-4830 (CELL)	2018 CIPPL Project - Installation of 10,584 LF of 8" sanitary sewer MTM Lining	8"	2018	10,584.00	3_Complete
Rulledge Borough	Pa	Borough of Rulledge	Colleen Gray - Catania Engineering Associates, Inc. - 520 W. Macdade Blvd Millmont Park, 19033 - 610-532-2923	MTM Lining of 8" sewers		2018	2,500.00	3_Complete
The City of Macungie	PA	The City of Macungie PA	Barry Isett & Associates, Inc. - Harry E. Garman PE, PLS, F. NSPE - 484-866-4830 (CELL)	2018 CIPPL Project - Installation of 9000 LF of 8" sanitary sewer MTM Lining	0	2018	9,000.00	3_Complete
Upper Saucon	PA	The Township of Upper Saucon PA	Upper Saucon PA - Chris Cope - Director of Water/Sewer Resources	Installation of 200 LF of 8" sanitary sewer MTM Lining and Installation of 2 Point Repairs	8"	2018	200.00	3_Complete
Springfield	FL	City of Springfield	Robert Lindley - Gulf Coast Engineer (Office# 251-725-0200 - Spencer (251)-472- 6684	Installed CIPP Lining of 8" of 6mm with End Seals		2017	12,000.00	3_Complete
Avon by the Sea East Rutherford Union	NJ NJ NJ	Borough of Avon by the Sea East Rutherford Union	T&M Associates - 11 Tindall Rd, Middletown, NJ 07748 Charles Rooney 732-671-6400	2017 Sanitary Sewer Lining and Trenchless Rehabilitation - Borough of Avon by the Sea - 400 L.F. of 8" Sanitary Sewer Rehabilitation Lining and (8) 8" Sanitary Sewer Trenchless Pipe Repairs	8	2017 2017 2017	400.00 545.00 425.00	3_Complete 3_Complete 3_Complete
Union	NJ	Zuccaro, Inc.	Silvio Zuccaro S&S Zuccaro (973) 222-8407	8" MTM Lining of Sanitary Sewers		2017	1,575.00	3_Complete
Huntington	NY	Brady Risk Environmental LLC		Relining of 8" -10" Sanitary Sewer		2017	155.00	3_Complete
Avon by the Sea Bergen County	NJ NJ	Township of Avon by the Sea Bergen County	T&M Associates 11 Tindall Rd, Middletown, NJ 07748 Charles Rooney 732-671-6400	Relining of 8" -10" Sanitary Sewer General Contractor on Trenchless Lining of Sanitary sewer in the borough		2016 2016	2,451.00 737.00	3_Complete 3_Complete
Bloomfield	NJ	City of Bloomfield	Nordan Murphy, PE, PP, CME Associate 2 Market Street, Paterson, NJ 07501 tel: 973 523 6200 ext. 202 fax: 973 523 1765 www.alainogroup.com	GC of various trenchless MTM Lining 8" Mains		2016	1,808.00	3_Complete
Borough of Roseland Clifton	NJ NJ	Borough of Roseland City of Clifton	Christopher Critchett Assistant Superintendent Public Works Borough of Roseland 973-228-6555 ext 6096 Mike Lardner: 973-470-5793	Trenchlessly Line Sanitary Sewer Mains with MTM Lining		2016 2016	260.00 610.00	3_Complete 3_Complete
Earle Naval Weaponery Base	NJ	Earle Naval Weaponery Base, Colts Neck, NJ	Nadriad D K Patel NADIAD INC. 1026 Old Corlies Ave Neptune, NJ 07753 Phone: 732-692-7723 Fax: 732-361-4645 dpatel@nadriadinc.com www.nadriadinc.com	Installed 610 in 15" sewer main				3_Complete
East Rutherford	NJ	East Rutherford Sewer Utility Commission	Bob Roth - 201-206-2545	Trenchlessly Line Sanitary Sewer Mains with MTM Lining		2016	2,635.00	3_Complete
Eatontown	NJ	Eatontown Sewerage Authority	John McKeelvey - T&M Associates - 11 Tindall Rd Middletown, NJ 07748	Relining of 8" Sanitary Sewer Main		2016	240.00	3_Complete
			Anthony Ciallella Diversified Realty Advisors, LLC 47 River Road, Suite 200 Summit, NJ 07901 Direct- 908-897-0730 Main Office 908-273-2400 - Ext 1106 Cell - 973-886-8979 Email - aciallella@diversifiedra.com	Relining of 8" Sanitary Sewer		2016	253.00	3_Complete
Union	NJ	Township of Union		Lining of various Sanitary Sewer Mains 8"		2016	460.00	3_Complete

Union Woodbridge	NJ	Township of Union Woodbridge Township	Luis Santana Estimator Reivax Contracting 356 Thomas St. Newark, NJ 07114 Tel: (973) 817-5553 Fax: (973) 817-5559 E-mail: lsantana@reivaxcontracting.com John Kodolek: 732-634-4500	Lining of Various Sanitary Sewers 8" Installed 180 CIPP Liners	180	2016 2016	1,235.00	3_Complete
Union	NJ	Topline Construction Corp	(908) 231-7570	1504LF Lining of 8" - 10" Sanitary Sewer		2016	1,504.00	3_Complete
Borough of Hanover	PA	Borough of Hanover	Richard Rorer The Borough of Hanover 44 Frederick Street Hanover, PA 17331 717/637-3877	General Contractor on Trenchless lining of Sanitary sewer in the borough Ranging from 8" to 15"		2016	4,441.00	3_Complete
Coopersburg	PA	Borough of Coopersburg	Benjamin Bowen: Mark R. Clark Project Designer James R. Holley & Associates, Inc 18 S. George St. York, PA 17401	NWMCC was the general contractor on a lateral rehabilitation contract. NWMCC Installed 300' in 6" Sewer main	300	2016		3_Complete
Dover Borough	PA	Borough of Dover		GC of various trenchless MTM Lining 8" Mains		2016	940.00	3_Complete
Hanover	PA	Borough of Hanover	Timothy Mayers: 717-633-6673 Lehigh County Authority 1053 Spruce Street PO Box 3348 Allentown, PA 18106	Installation of 750LF of MH to MH Lining 18" Main.		2016	750.00	3_Complete
Lehigh County	PA	Lehigh County Authority		MTM Lining of 8"		2016	238.00	3_Complete
Royersford	PA	Borough of Royersford	Frank A. Cufio, PE Pennoni 1501 Main Street, Suite 220 Warrington, PA 18976 Direct: 215-569-6036 Mobile: 267-221-6733 www.pennoni.com FCufio@Pennoni.com	General Contractor for Sewer rehabilitation on advice Sanitary Sewer Mains 8" - 12" MTM and Spot Repair	15	2016	2,555.00	3_Complete
The Township of Hanover	PA	The Township of Hanover	Gannett Fleming Organization - P.O. Box 67100, Harrisburg, PA, 17106-7100 Michael Mahaffey 717-763-1808	Sanitary Sewer Subshed "H" Main Lining Project - 3774 L.F. of 8" and 15" Sanitary Sewer Rehabilitation Lining	0	2016	3,774.00	3_Complete
The Township of Haverford	PA	The Township of Haverford	Pennoni Engineering - 1501 Main Street, Suite 220 Warrington, PA 18976 Charles Faulkner, PE 267-549-2835	Township of Haverford Sanitary/Storm Sewer Pipe Lining Contract No. SS-38 - 531 L.F. of 8" Sanitary Sewer Rehabilitation Lining and 12" Storm Sewer Rehabilitation Lining	0	2016	531.00	3_Complete
Township of Hampden	PA	Township of Hampden	Jeremy S. Miller, P.E. Director of Public Works Hampden Township 230 S. Sporting Hill Rd. Mechanicsburg, PA 17050 (717) 761-0119 www.hampdentownship.us	Trenchless lining of Sanitary Sewer in Various Locations in the borough in 8" - 18"		2016	17,500.00	3_Complete
West Goshen	Pa	West Goshen Sewer Authority	Joshua T. Fox, P.E. Regional Service Group Manager Water & Wastewater Services Herbert, Rowland & Grubic, Inc. 369 East Park Drive Harrisburg, PA 17111 717-554-1121 (o) 717-979-1526 (c) 717-554-1158 (f) jfox@hrg-inc.com	General Contractor for various rehabilitation Methods Trenchless lining was one for Sanitary Sewers from 8" - 15"		2016	2,137.00	3_Complete
Dover Borough	PA	The Borough of Dover	James R. Holley & Associates, 18 S. George St. York, PA 17401 Mark Clark 717-846-4373	Dover Borough- Delwood Drive PVC Lining of the Sanitary Sewer Pipe - 908 L.F. of 8" Sanitary Sewer Rehabilitation Lining	0	2016	908.00	3_Complete

Builer	NJ	Builer Township	Snderson & Dendler Assoc Bill Ryden	NWMC was the general contractor on a rehabilitation contract. NWMC installed approximately 6 liners and 253 MIM of 8" Liner.	6	2015	253.00	3_Complete
Cranford	NJ	City of Cranford	Sandra	Installed 72'		2015	72.00	3_Complete
Franklin Township	NJ	Franklin Township	CME Associates: Joseph Gemmell, P.E. 3141 Bordentown Ave Prlin, NJ 732-727-8000	Installation of 10 CIPP Point Repairs Installation of 1,300 LF of MTM	10	2015	1,300.00	3_Complete
Green Brook	NJ	Township of Green Brook	Maser Consulting Ronald Madison: 610-988-4201	Sanitary sewer repairs and re-lining of various 8" sanitary sewer mains.	10	2015	993.00	3_Complete
Paterson	NJ	City of Paterson	Montana Construction: Mike 80 Contant Ave, Lodi, NJ 07644 (973) 478-5200	Installation of 215LF of MTM MTM Lining		2015	1,003.00	3_Complete
South Orange	NJ	South Orange				2015	300.00	3_Complete
Union	NJ	Township of Union	Reivax Contracting Luis Santiana: 973-817-5553	Installed 7 Sectional CIPP Repairs and 1,402 of full segment liners	7	2015	1,575.00	3_Complete
Roslyn	NY	Village of Roslyn	Sam Delipinski: 516-204-3469	Installation of 13,500 LF of 8" to 10" MH to MH Sanitary Sewer Lining		2015	26,130.00	3_Complete
Suffolk County	NY	Suffolk County	Suffolk County Town of Ralph Sergio 631-854-4901	MTM Lining		2015	813.00	3_Complete
Suffolk County	NY	Suffolk County	Suffolk County Town of Ralph Sergio 631-854-4902	Installed 4 CIPP Repairs	4	2015		3_Complete
Goshen	NY	Village of Goshen	Lanc & Tully: Dawn Kalisky P.O. Box 687 Rt 207 Goshen, NY 10924 845-294-3700			2015	750.00	3_Complete
Green Castle	PA	Greencastle Township Pa	Sub Contractor to Video Pipe Services Greg Stevenson - 856-697-1900	Installed 24 CIPPs & 750LF of MTM Lining	24	2015	1,649.00	3_Complete
			Jason Gruber Manager Distribution & Collections Lehigh County Authority 1242 Martin Luther King Jr Dr. Allentown, Pennsylvania 18102 JasonGruber@lehighcountyauthority.org 610-437-7646, ext. 753	MTM Lining Various areas 8" - 12"		2015		3_Complete
Lehigh County	PA	Lehigh County Authority	SSM Group Jim Carr: 610-621-2000	Installation of 61 spot repairs in 8" to 24" line totalling over 450 linear feet	8"	2015	2,155.00	3_Complete
Norristown	PA	City of Norristown	Maser Consulting: Paul S. Niehoff, P.E. 973-398-3110	Installation of 825LF		2014	450.00	3_Complete
Montvale	NJ	Town of Montvale	Alaimo Group Consulting Engineers Nordam Murphy, P.E.: 973-523-6200 Fax: 973-523-1765	MH to MH- 510 FT 15" 175 FT 8"		2014	825.00	3_Complete
Totowa	NJ	Township of Totowa				2014	685.00	3_Complete
Northport	NY	Village of Northport	Gannett Fleming Engineering Nathan Wheeler: 516-364-4140 x1322	Installation of 3,180 LF of MH to MH Lining in 8" - 10" Sanitary Sewer Mains. Installed 15' - 6 ft Sectional CIPP Repairs		2014		3_Complete
Oyster Bay	NY	Oyster Bay Sewer Authority	H2M Engineering Steve Hearn: 631-756-8000 Ext: 1510	Installed 28 CIPPs and 170FT Main Lining	10"	2014	3,180.00	3_Complete
Port Jefferson	NY	Town of Port Jefferson	Ralph Sergio: 631-954-4901 Email: ralph.sergio@suffolkcountyny.gov	Installation of 1900 LF of 8" sewer main and 450 LF of 12" sewer main. Installation of 2 - 6ft Sectional CIPPs	8"	2014	170.00	3_Complete
Clark Summit	PA	Borough of Clark Summit	Robert P. Naegle, P.E.: 570-586-5091 Fax: 570-586-5073	Point repairs- 15 / 5FT Repairs 3/6 FT Repairs 1/8 FT Repair 200 FT additional lining MH TO MH - 256 FT 8" 135 FT 10"	8"	2014	2,350.00	3_Complete
Dover	NJ	Dover Board of Education	Jonathan R. Tardiff P.E. C.M.E., Engineer			2013	391.00	3_Complete
Fort Dix	NJ	Fort Dix	Rome Management Associates Judy Brooks: 609-593-7600	Installed 450 ft 8" CIPP Sewer Main		2013	450.00	3_Complete
Hanover	NJ	Hanover Sewerage Authority	Hatch Mott MacDonald Robert Haller: 973-912-2538 Fax: 973-912-2455	Installed 7,400' linear feet of 8" and 12" liner		2013	7,400.00	3_Complete
Hasbrouck Heights	NJ	Borough of Hasbrouck Heights		Installation of 1200LF of MH to MH Lining 8" Main. Installation of 2 - 6ft Sectional CIPPs	2	2013	1,200.00	3_Complete
Bronxville	NY	Yonkers, NY	Job & Job Engineering: 201-487-8754	Installed 750' of 8 inch CIP Sewer Main		2013	750.00	3_Complete
May Brook	NY	May Brook Township	Mike May: 914-337-1312 DeWinter Engineering Jim DeWinter: 845-888-2722	Installed 1,000' of 8" liner	8"	2013	1,000.00	3_Complete
Syosset	NY	Town of Oyster Bay	BDG Construction Corp Anthony Galur: 516-624-1879	Installation of 2200' of 8" & 10" CIP Sewer Main	8"	2013	2,200.00	3_Complete
				Installed 150' 8 inch CIP Pipe	8"	2013	150.00	3_Complete

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Robinson Pipe Cleaning Co

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CIPP Experience Summary Table (References and Experience)

Work Location (City/Town)	State	System Owner	Engineer/Client (Contact)	Project Description	Size	Completion Dates	End Use	Project Value	Status
Louisville	KY	Louisville Metropolitan District	Louisville Jefferson Co. MSD Heather Dodds & John Loehle: (502) 540-6000	FY22 CMOM Rehabilitation Project	8" - 15"	Current	6,500	\$ 200,000.00	1_Active
Louisville	KY	Louisville Metropolitan District	Ultiman Schutte Samantha Paliko (502) 377-1937	Grimstead Large Diameter CIPP	8" - 33"	Current	3,000	\$ 400,000.00	1_Active
Bowling Green	KY	Bowling Green Municipal Utilities	BGMU Scott Neighbors 270-782-4559	2021 Sewer Rehab Project	12" - 15"	Current	1,120	\$ 150,000.00	1_Active
City of East Chicago	IN	City of East Chicago	National Power Rodding Reid Ruprecht (312) 688-6291	Roxana Neighborhood Storm and Sanitary Sewer Lining Improvements	8" - 24"	Current	15,000	\$ 1,000,000.00	1_Active
Bedford	IN	GHD Plant	GHD Rich Wood 265-685-2737	GM Plant Pipe Rehab	15"	2022	112	\$ 18,000.00	3_Complete
Owensboro	KY	Regional WWater Resource Agency	RWRA Garrett Gordon 270-297-9215	CIPP FY 21-2	8"	2022	15,000	\$ 222,000.00	3_Complete
Brownstown	IN	Lake and Forest Club	Terra Cotta Rehab Matt Terranova: (502) 741-4299	Lake and Forest Club Pipe Rehab	8" - 15"	2022	5,000	\$ 135,000.00	3_Complete
Town of Spencer	IN	Town of Spencer, Indiana	Commonwealth Engineers Drew Flammion: (812) 474-1177	Town of Spencer Inflow and Infiltration Project - \$682,000.00	8" - 18"	2022	7,000	\$ 210,000.00	3_Complete
Shepherdsville	KY	City of Shepherdsville, KY	OK4 Engineering Steve Emly: (812) 913-0017	City of Shepherdsville 2019 Sewer Lining/Rehabilitation Project - \$762,570.00	8" - 18"	2020	21,000	\$ 605,000.00	3_Complete
Louisville	KY	Louisville Metropolitan District	Louisville Jefferson Co. MSD Heather Dodds & John Loehle: (502) 540-6000	Nightingale 1&2 Rehabilitation Project - \$2,980,279.25	8" - 18"	2020	22,000	\$ 530,000.00	3_Complete
Slater	MO	City of Slater	Ace Pipe Cleaning Ryan Poetner: (314) 368-1574	Slater Sewer System Rehabilitation	8"	12/2018 - 01/2019	3,400	\$ 155,000.00	3_Complete
Columbia	MO	City of Columbia	Ace Pipe Cleaning Ryan Poetner: (314) 368-1574	Columbia Sewer System Rehabilitation	8"	11/2018 - 12/2018	7,100	\$ 85,000.00	3_Complete
Bullitt County	KY	Bullitt County Sewer District	Terra Cotta Rehab Matt Terranova: (502) 741-4299	Bullitt County Sewer System Rehabilitation	8" - 15"	10/2018 - 11/2018	5,000	\$ 170,000.00	3_Complete
Jeffersonville	IN	City of Jeffersonville	Richard Huffmon: Grayson Utility Commission Gerald Haney: (606) 474-7569	Franklin Square Rehabilitation	8" - 15"	09/2016 - 10/2016	2,500	\$ 82,500.00	3_Complete
Grayson	KY	City of Grayson Utility Commission	Louisville Jefferson Co. MSD Heather Dodds & John Loehle: (502) 540-6000	KIA Funded wastewater System Improvement Project Contract No 2	8" - 10"	08/2018 - 09/2018	13,000	\$ 370,500.00	3_Complete
Louisville	KY	Louisville Metropolitan District	Terra Cotta Rehab Matt Terranova: (502) 741-4299	FY14 - FY19 Annual Rehabilitation	8" - 15"	07/2014-07/2018	100,000	\$ 2,800,000.00	3_Complete
Morehead	KY	City of Morehead	Terra Cotta Rehab Matt Terranova: (502) 741-4299	Morehead Sewer System Rehabilitation	8"	06/2015 - 11/2018	2,500	\$ 85,000.00	3_Complete
Morehead	KY	City of Morehead	Hopkinsville Water Environment Authority Jim Taylor: (502) 540-6000	Morehead Sewer System Rehabilitation	8"	06/2015 - 11/2018	10,000	\$ 340,000.00	3_Complete
Hopkinsville	KY	Hopkinsville Water Environment Authority	Hopkinsville Water Environment Authority Jim Hageny: (502) 549-0598	Hopkinsville Sewer System Rehabilitation	8" - 15"	04/2015 - 07/2015	8,500	\$ 280,500.00	3_Complete
Oldham County	KY	Oldham County Environmental Authority	Ace Pipe Cleaning Ryan Poetner: (314) 368-1574	OCEA Inflow and Infiltration Project - \$936,938.00	8" - 18"	Jun-20	22,000	\$ 355,000.00	3_Complete
Lebanon	MO	City of Lebanon		Lebanon Sewer System Rehabilitation	8"	Jan-19	8,600	\$ 190,000.00	3_Complete

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Video Industrial Services, Inc

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CIPP Experience Summary Table (References and Experience)

Work Location (City/State)	State	System Owner	Partner/Client (Confidential)	Project Description	Size	Completion Date	Feet/Inches	Protect. Value	STATUS
Birmingham	AL	Lakeshore Foundation	Mr. Doug Tanner (Lakeshore Foundation)	Sanitary Sewer CIPP Lining	8"	2018	120	\$8,250.00	3_Complete
Birmingham	AL	Highland Restaurant	Harris Services	Storm Drain CIPP Lining	8"	2018	100	\$7,500.00	3_Complete
Northport	AL	Bolta, US	Mr. John Miller (Bolta US) (205) 861-1705	Sanitary Sewer CIPP Lining	12"-18"	2018	565	\$37,000.00	3_Complete
Thorsby	AL	Town of Thorsby, AL	Mr. Terry Jackson (Town of Thorsby, AL)	Sanitary Sewer CIPP Lining	8"	2018	165	\$9,275.00	3_Complete
Birmingham	AL	Samford University	Mr. Mark Fuller (Samford University)	Sanitary Sewer CIPP Lining	8"	2017	100	\$12,100.00	3_Complete
Birmingham	AL	REV Construction	Mr. Joiner Pugh - (205) 349-1960	Installed 235 LF of CIPP Liner	8"	2/3/2021	235	\$10,575.00	3_Complete
Birmingham	AL	BL Harbert	Mr. Alex Getz - (205) 873-5175	Installed 200 LF of CIPP Liner	8"	2/1/2021	200	\$20,000.00	3_Complete
Birmingham	AL	ALDOT	Mr. Kenny Miller	Installed 150 LF of CIPP Liner	18"	12/5/2020	150	\$30,000.00	3_Complete
Holtville	AL	ALDOT	Mr. Steve Wilson	Installed 165 LF of CIPP Liner	18"	12/1/2020	165	\$14,000.00	3_Complete
LaGrange	GA	City of LaGrange, GA	Mr. Steve LeFevor - City of LaGrange (706) 883-2119	Installed 450 LF of 8" CIPP Liner	8"	11/1/2020	450	\$20,250.00	3_Complete
Tuscaloosa	AL	ALDOT	Jerrell Bowden - ALDOT (205) 554-3280	Installed 170 LF of 36" CIPP Liner	36"	10/5/2020	170	\$42,500.00	3_Complete
Mountain Brook	AL	City of Mountain Brook	Johnny Harris - City of Mountain Brook (205) 802-3869	Installed 150 LF of 24" CIPP Liner	24"	10/4/2020	150	\$11,250.00	3_Complete
Atalla	AL	City of Atalla, AL	Mr. Jason Nicholson - (256) 538-9886	Airport Road Sewer Rehab - Installed 250 LF of 24" CIPP Liner	24"	6/22/2020	250	\$36,400.00	3_Complete
Birmingham	AL	Jefferson County, AL	Mr. Hinton Holman - (205) 414-8400	Installed 700 LF of 8" CIPP Liner	8"	6/12/2020	700	\$30,000.00	3_Complete
Jacksonville	AL	ALDOT	Mr. Robert Watson - (205) 995-5917	Installed 610 LF of CIPP Liner	15"-24"	6/1/2020	610	\$51,000.00	3_Complete
Birmingham	AL	Jefferson County, AL	Mr. Tom Hale - (205) 942-1055	Installed 120 LF of CIPP Liner	10"	5/25/2020	120	\$5,400.00	3_Complete
Birmingham	AL	ALDOT	Mr. Todd Connell - (205) 668-0173	Installed 86 LF of CIPP Liner	18"	5/6/2020	86	\$19,350.00	3_Complete
Birmingham	AL	ALDOT	Mr. Todd Connell - (205) 668-0173	Installed 150 LF of CIPP Liner	15"	5/1/2020	150	\$26,250.00	3_Complete
Calera	AL	ALDOT	Todd Connell, PE (ALDOT) (205) 668-0173	Installed 300 LF of 18" CIPP Liner	18"	10/26/2019	300	\$75,000.00	3_Complete
LaGrange	GA	City of LaGrange, GA	Mr. Steve LeFevor - City of LaGrange (706) 883-2119	Installed 250 LF of 8" CIPP Liner	8"	8/1/2019	250	\$18,250.00	3_Complete
Mountain Brook	AL	City of Mountain Brook	Johnny Harris - City of Mountain Brook (205) 802-3869	Installed 40 LF of 18" CIPP Liner	18"	7/1/2019	40	\$9,150.00	3_Complete
Montgomery	AL	Liberty Construction	Mr. Josh Williams (334) 271-0734	Installed 480 LF of 24" CIPP Liner	24"	7/1/2019	480	\$118,000.00	3_Complete
Clanton	AL	ALDOT	Tracey Fletcher - ALDOT (334) 368-2954	Installed 72 LF of 18" CIPP Liner	18"	6/1/2019	72	\$14,400.00	3_Complete
Tuscaloosa	AL	ALDOT	Jerrell Bowden - ALDOT (205) 554-3280	Installed 154 LF of 30" CIPP Liner	30"	6/1/2019	316	\$49,580.00	3_Complete
LaGrange	GA	City of LaGrange, GA	Mr. Steve LeFevor - City of LaGrange (706) 883-2119	Installed 700 LF of 8" CIPP Liner	8"	5/1/2019	700	\$40,000.00	3_Complete
Tuscaloosa	AL	University of Alabama	Mr. Brandon Giesbrecht (Plumcore) (205) 212-4040	Installed 170 LF of 18" CIPP Liner	18"	4/1/2019	170	\$21,000.00	3_Complete
Tuscaloosa	AL	City of Tuscaloosa	Robert Lindley - Gulf Coast Underground (470) 891-9329	Installed 913 LF of 8" - 18" CIPP Liner	8" - 15"	9/1/2017	913	\$81,272.00	3_Complete



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CIPP Experience Summary Table (References and Experience)



CARYLON CORPORATION

A Carylon Company

Mobile Dredging & Video Pipe, Inc.

CIPP Experience Summary Table (References and Experience)									
Work Location (City/Town)	State	System Owner	Engineered Client (Contractor)	Project Description	Size	Completion Date	Number of Liners	Project Value	Status
Mays Landing Perryville	NJ	Hamilton Twp., MUA	Ron Curcio: 609-703-4366 (Pollisina & Assoc.)	1500 LF of 10" sanitary sewer lining	8" to 10"	10/1/2021	4	\$60,000.00	3_Complete
	MD	Perryville Public Works	Phil Meakins: 443-206-0935 (Perryville, MD)	3300 LF of 8" sanitary sewer lining	8"	12/31/2021	12	\$120,000.00	3_Complete
Brookhaven	PA	Brookhaven, PA	Colleen Gray: 610-532-2884 (Catalina Engineering)	630 LF of 8 inch sanitary sewer lining	8"	12/1/2021	2	\$60,000.00	3_Complete
Pemberton	NJ	NJDOT	John Santos: 732-238-9370 (Green Construction)	75 LF of 18 inch storm pipe	18"	1-Jun	1	\$25,000.00	3_Complete
Gloucester Twp.	NJ	Gloucester Twp MUA	Domenic Martino: 856-228-3144 (Gloucester Twp., MUA)	250 LF of 18 inch storm pipe	18"	Jul-21	1	\$28,000.00	3_Complete
Crackville	PA	Crackville, PA	Don Cuff: 570-628-5655 (Entech)	170 LF of 8 inch sanitary sewer	8"	8/5/2021	1	\$20,000.00	3_Complete
Camden	NJ	NJ American Water	Gary Brooks: 856-549-8767 (NJAW)	150 LF of 8 inch sanitary sewer	8"	Nov-21	1	\$18,000.00	3_Complete
TOTAL							-	\$738,438.82	



Manufactured Technologies Corporation

Manufactured Technologies Corporation
17988 Edison Avenue • St. Louis, MO 63005
(636) 530-3330 • manufacturedtechnologies.com

March 2nd, 2022

Re: **National Power Rodding Corp.-Certified Installer of MTUBE**

To whom it may concern:

I am writing this letter on behalf of Manufactured Technologies Corporation (MTC), an Aegion company, to confirm our organization is in its 17 year of operation as a material supplier for the cure-in-place-pipe (CIPP) industry.

Our CIPP Felt tubes are manufactured by Insituform Technologies, LLC in accordance with specifications outlined by the American Society for Testing and Materials (ASTM) and meet or exceed all of the guidelines of ASTM F-1216 and ASTM F-1743. Furthermore, MTC CIPP felt tubes are manufactured in an ISO 9001:2008 certified factory.

Since our inception, we have supplied more than 15 million linear feet of coated felt tube to certified installers across North America such as National Power Rodding Corp. **and we are proud to call them our customer. National Power Rodding Corp.** is authorized to sell, install, and service MTC Cure-In-Place-Pipe Liners.

If you have any additional questions, please do not hesitate to contact me directly.

Thank you,

Derek Shields | Business Development
Manufactured Technologies Corporation
17988 Edison Avenue | Chesterfield, MO 63005
MTC: 662-578-7797 | Cell: 480-553-4936 | Fax: 662-712-2619
www.manufacturedtechnologies.com
dshields@aegion.com

**** DISCLAIMER OF WARRANTY:** AS INSTALLATION CONDITIONS (INCLUDING, AMONG OTHERS, PIPE TYPE & CONDITION, GROUNDWATER, DEPTH & TEMPERATURE, DEPTH OF COVER & SOIL TYPE, LIVE LOADS, SITE ACCESS AND WEATHER) AND INSTALLER EXPERIENCE, TECHNIQUES AND TYPE OF EQUIPMENT VARY GREATLY. MTC EXCLUDES ANY WARRANTY OF ANY KIND, EXPRESSED OR IMPLIED, WITH RESPECT TO THE GOODS SOLD HERE UNDER AS TO MERCHANT ABILITY, FITNESS FOR PARTICULAR USE OR ANY OTHER MATTER WITH RESPECT TO THE GOODS, WHETHER USED ALONE OR IN COMBINATION WITH OTHER PRODUCTS. MTC HAS NOT PROVIDED ANY DESIGN SPECIFICATIONS OR COMPUTATIONS, AND ACCORDINGLY, MTC DOES NOT WARRANT THE DESIGN.

GRIFFOLYN®**TX-1200****REEF INDUSTRIES, INC.****TECHNICAL DATA SHEET****DESCRIPTION**

Griffolyn® TX-1200 is a 3-ply laminate combining two layers of linear low density polyethylene and a high-strength cord grid. It is specifically engineered to provide high strength and durability in a lightweight material.

PHYSICAL PROPERTIES AND TYPICAL VALUES

PROPERTY	ASTM TEST METHOD	U.S. VALUE	METRIC VALUE
Weight	D-751	38 LB/1000 FT ²	18.6 KG/100 M ²
3" Load @ Yield	D-882	92 LBF	409 N
3" Load @ Break	D-882	65 LBF	289 N
		3050 PSI	21 MPA
3" Elongation @ Break	D-882	450 %	450 %
Tongue Tear	D-2261	21 LBF	93 N
Trapezoidal Tear	D-4533	25 LBF	111 N
PPT Resistance	D-2582	31 LBF	138 N
Dart Impact Strength	D-1709	1.6 LBS	730 G
Cold Impact Strength	D-1790	-40°F	-40°C
Permeance	E-96	0.047 Grain/Hr•Ft ² •In.Hg	2.70 NG/(PA•S•M ²)

FEATURES AND BENEFITS

- Multiple layers and cord reinforcement resist punctures and tears.
- UV stabilization protects the material from degradation during extended exposure to sunlight.
- Cold-crack resistance eliminates failures in extremely cold temperatures.
- Low permeability greatly inhibits moisture transmission.
- Flexibility and light weight allow for easy handling and quick installation.
- Custom fabrication is available to meet your exact specifications.
- Long life expectancy allows for significant cost savings through reuse and fewer replacements.
- Class C, ASTM E-1745-11 Standard Specification for water vapor retarders used in contact with soil or granular fill under concrete slabs.

MORE

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➤ THEY PROTECT IT



SUGGESTED APPLICATIONS

- Pallet, cable reel and drum covers for outside storage.
- Custom bags and tubing.
- Temporary walls, plant dividers, building enclosures and containment tents.
- Shipping container covers and liners.
- Floor covers, dust partitions and cleanroom enclosures.
- Soil covers to control leachate for stockpiles and landfills.
- Agricultural storage systems, hay covers and windbreaks.
- Athletic field and equipment covers.
- Interim landfill covers
- Architectural vapor retarder for underslab, walls, ceilings and in roofing systems.

ORDERING INFORMATION

AVAILABLE COLORS:

Black, White, Black/White, and Clear

Custom sizes up to 200' x 300' and custom fabrication are available to meet your exact specifications.

USABLE TEMPERATURE RANGE:

Minimum: -45°F -42°C

Maximum: 170°F 77°C

OUTDOOR EXPOSURE

Under normal continuous exposure the average life expectancy ranges from 30 to 48 months.



REEF INDUSTRIES, INC.

9209 Alameda Genoa Rd. • Houston, Texas 77075

P: 713.507.4251 • F: 713.507.4295

E-mail: rl@reefindustries.com • www.reefindustries.com

TOLLFREE 1.800.231.6074

The information provided herein is based upon data believed to be reliable. All testing is performed in accordance with ASTM standards and procedures. All values are typical and nominal and do not represent either minimum or maximum performance of the product. Although the information is accurate to the best of our knowledge and belief, no representation of warranty or guarantee is made as to the suitability or completeness of such information. Likewise, no representation of warranty or guarantee, expressed or implied, or merchantability, fitness or otherwise, is made as to product application for a particular use.



Manufactured Technologies Corporation

Manufactured Technologies Corporation
17988 Edison Avenue • St. Louis, MO 63005
636-530-3330 • manufacturedtechnologies.com

MTC CURE SCHEDULE (General Use Only)

Standard CIPP Tube Parameters		Hold Times & Interface Temperatures										Standard Polyester-Filled Resin System
		Steam Cure					Hot Water Cure					
		≤500 LF		> 500 LF			≤500 LF		> 500 LF			
Diameter	Thickness	0.5 hr	150° F	1.0 hr	150° F	1.0 hr	140° F	1.5 hrs	140° F	2.0 hrs	140° F	Accelerated Steam Mix
6" to 12"	≤9 mm	1.0 hr	150° F	1.5 hrs	150° F	1.5 hrs	140° F	2.0 hrs	140° F	3.0 hrs	140° F <td>Accelerated Steam Mix</td>	Accelerated Steam Mix
15"	7.5 mm	2.0 hrs	150° F	3.0 hrs	130° F	2.0 hrs	140° F	3.0 hrs	140° F	4.0 hrs	140° F <td>Phase II Mix</td>	Phase II Mix
> 15"	9 mm to < 12 mm	3.0 hrs	130° F	4.0 hrs	130° F	3.0 hrs	140° F	4.0 hrs	140° F	5.0 hrs	140° F <td>Phase II Mix</td>	Phase II Mix
> 15"	≥12 mm to < 18 mm	4.0 hrs	130° F	5.0 hrs	130° F	4.0 hrs	130° F	5.0 hrs	130° F	6.0 hrs	130° F <td>Phase II Mix</td>	Phase II Mix
> 15"	18 mm	4.0 hrs	130° F	5.0 hrs	130° F	4.0 hrs	130° F	5.0 hrs	130° F	6.0 hrs	130° F <td>Phase II Mix</td>	Phase II Mix
> 15"	≥19.5 mm to < 25 mm	4.5 hrs	130° F	5.5 hrs	130° F	4.5 hrs	130° F	5.5 hrs	130° F	6.0 hrs	130° F <td>Phase II Mix</td>	Phase II Mix
> 15"	25 mm to 30 mm	5.0 hrs	130° F	6.0 hrs	130° F	5.0 hrs	130° F	6.0 hrs	130° F	7.0 hrs	130° F <td>Phase II Mix</td>	Phase II Mix
> 15"	> 30 mm	5.0 hrs	130° F	6.0 hrs	130° F	5.0 hrs	130° F	6.0 hrs	130° F	7.0 hrs	130° F <td>Phase II Mix</td>	Phase II Mix

Cool Down Procedures

For steam cure, maintain recommended head and cool down until all interface temps are ≤ 100°F/40°C.

For water cure, maintain recommended head and cool down until the internal water temp is ≤ 100°F/40°C.

*** * IMPORTANT:** The table above contains information that is to be considered by all individuals reading it as a guideline only -- i.e. a "rule of thumb" and not a guarantee of performance. As installation conditions (including among others, pipe type & condition, groundwater depth & temperature, depth of cover & soil type, live loads, site access and weather) and installer experience, techniques and type of equipment vary greatly, MTC excludes any warranty of any kind, express or implied, with respect to the goods sold hereunder as to merchantability, fitness for particular use or any other matter with respect to the goods whether used alone or in combination with other products. MTC has not provided any design specifications or computations, and accordingly, MTC does not warrant the design. * *



CERTIFICATE OF REGISTRATION

This is to certify that

Insituform Technologies, LLC

Headquarters

17999 Edison Avenue, Chesterfield, Missouri, 63005, USA

Refer to Attachment to Certificate of Registration dated March 17, 2020 for additional certified sites
operates a

Quality Management System

which complies with the requirements of

ISO 9001:2015

for the following scope of certification

Design, development, manufacturing and installation of products for the rehabilitation of pipelines using trenchless technology. Certification of installation services is non-transferrable and applies only when performed directly by Insituform Technologies, LLC.

Certificate No.: CERT-0133635
File No.: 1650845
Issue Date: March 17, 2020

Original Certification Date: February 11, 2014
Certification Effective Date: March 16, 2020
Certification Expiry Date: March 13, 2023

Heather Mahon
Global Head of Technical Services
SAI Global Assurance



ISO 9001



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ATTACHMENT TO CERTIFICATE OF REGISTRATION

These sites are registered under Certificate No: CERT-0133635 issued on March 17, 2020

File No.		Effective Date
1650845	Insituform Technologies, LLC Headquarters 17999 Edison Avenue Chesterfield , Missouri 63005 USA Design, development, manufacturing and installation of products for the rehabilitation of pipelines using trenchless technology	March 16, 2020
1650848	Insituform Technologies, LLC Wetout 7605 18th Street Edmonton , Alberta T6P 1N9 Canada Manufacturing	March 16, 2020
1650849	Insituform Technologies, LLC Wetout 912 Stanton Road Olyphant , Pennsylvania 18447 USA Manufacturing	March 16, 2020
1650850	Insituform Technologies, LLC Wetout 468 Cypress Road Ocala , Florida 34472 USA Manufacturing	March 16, 2020
1650851	Insituform Technologies, LLC Wetout 2255 W. 850 N. Cedar City , Utah 84721 USA Manufacturing	March 16, 2020
1650853	Insituform Technologies, LLC Installation West 9654 Titan Court Littleton , Colorado 80125 USA Preparation and Installation	March 16, 2020
1650854	Insituform Technologies, LLC Manufacturing 160 Corporate Drive Batesville , Mississippi 38606 USA Manufacturing	March 16, 2020

These registrations are dependent on Insituform Technologies, LLC Headquarters (File No. 1650845) maintaining their scope of registration to ISO 9001:2015

ATTACHMENT TO CERTIFICATE OF REGISTRATION

These sites are registered under Certificate No: CERT-0133635 issued on March 17, 2020

1650855	Insituform Technologies, LLC Wetout 2130 Stout Field West Drive Indianapolis , Indiana 46241 USA Manufacturing	March 16, 2020
1650856	Insituform Technologies, LLC Wetout 3061 Dublin Circle Bessemer , Alabama 35022 USA Manufacturing	March 16, 2020
1650857	Insituform Technologies, LLC Wetout 6526 Bluebonnet Parkway McGregor , Texas 76657 USA Manufacturing	March 16, 2020
1650858	Insituform Technologies, LLC Wetout 91-255 Kalaeloa Boulevard Kapolei , Hawaii 96707 USA Manufacturing	March 16, 2020
1650859	Insituform Technologies, LLC Installation Central 580 Goddard Avenue Chesterfield , Missouri 63005 USA Preparation and Installation	March 16, 2020
1650860	Insituform Technologies, LLC Installation Canada 5743 - 68 Avenue NW Edmonton , Alberta T6B 3P8 Canada Preparation and Installation	March 16, 2020
1650863	Insituform Technologies, LLC Installation - Eastern Region 709 E. Ordinance Road Baltimore , Maryland 21226 USA Preparation and Installation.	March 16, 2020

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1650864	Insituform Technologies, LLC Installation - Eastern Region 253 B Worcester Road Charlton , Massachusetts 01507 USA Preparation and Installation.	March 16, 2020
1650866	Insituform Technologies, LLC Installation - Eastern Region 6966 Business Park Blvd. North Jacksonville , Florida 32256 USA Preparation and Installation.	March 16, 2020
1650867	Insituform Technologies, LLC Installation - Eastern Region 9001 NW 97 Terrace Suite F Medley , Florida 33178 USA Preparation and Installation.	March 16, 2020
1650868	Insituform Technologies, LLC Installation - Eastern Region 1819 John Moore Rd. Monroe , North Carolina 28110 USA Preparation and Installation.	March 16, 2020
1650869	Insituform Technologies, LLC Installation - Eastern Region 3016 U.S Highway 301 N. Suite 900 Tampa , Florida 33619 USA Preparation and Installation.	March 16, 2020
1650870	Insituform Technologies, LLC Installation - Eastern Region 3061 Dublin Circle Bessemer , Alabama 35022 USA Preparation and Installation.	March 16, 2020
1650872	Insituform Technologies, LLC installation - Eastern Region 5033 Mosson Rd. Fort Worth , Texas 76119 USA Preparation and Installation.	March 16, 2020

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1650873	Insituform Technologies, LLC Installation - Eastern Region 18378 Tom Dr. Hammond , Louisiana 70403 USA Preparation and Installation.	March 16, 2020
1650874	Insituform Technologies, LLC Installation - Eastern Region 13502 Alameda School Road Houston , Texas 77047 USA Preparation and Installation.	March 16, 2020
1650876	Insituform Technologies, LLC Installation - Eastern Region 1410 Gould Blvd LaVergne , Tennessee 37086 USA Preparation and Installation.	March 16, 2020
1650878	Insituform Technologies, LLC Installation - Western Region 10260 Matern Place Sante Fe Springs , California 90670 USA Preparation and Installation.	March 16, 2020
1650879	Insituform Technologies, LLC Installation - Western Region 645 W. 24th St., Ste 102 Tempe , Arizona 85281 USA Preparation and Installation.	March 16, 2020
1650880	Insituform Technologies, LLC Installation - Western Region 91-255 Kalaeloa Blvd. Kapolei , Hawaii 96707 USA Preparation and Installation.	March 16, 2020
1650881	Insituform Technologies, LLC Installation - Western Region 17220 Bel Ray Place Belton , Missouri 64012 USA Preparation and Installation.	March 16, 2020

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1650882	Insituform Technologies, LLC Installation - Western Region 1088 Victory Drive Howell , Michigan 48843 USA Preparation and Installation.	March 16, 2020
1650883	Insituform Technologies, LLC Installation - Western Region 11351 W. 183rd St. Orland Park , Illinois 60467 USA Preparation and Installation.	March 16, 2020
1650885	Insituform Technologies, LLC Installation - Western Region 2130 Stout Field West Drive Indianapolis , Indiana 46241 USA Preparation and Installation.	March 16, 2020
1650886	Insituform Technologies, LLC Installation - Canadian Region 8009 57th Street SE Unit 4 Calgary , Alberta T2C 5K7 Canada Preparation and Installation.	March 16, 2020
1650887	Insituform Technologies, LLC Installation - Canadian Region 139 Rue Barr Saint-Laurent , Québec H4T 1W6 Canada Preparation and Installation.	March 16, 2020
1650888	Insituform Technologies, LLC Installation - Canadian Region 3 Burford Rd. Hamilton , Ontario L8E 3C6 Canada Preparation and Installation.	March 16, 2020
1680743	Insituform Technologies, LLC 19165 SW 119th Street Tualatin , Oregon 97062-7384 USA Preparation and Installation	March 16, 2020

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ATTACHMENT TO CERTIFICATE OF REGISTRATION

These sites are registered under Certificate No: CERT-0133635 issued on March 17, 2020

1699161

Insituform Technologies LLC

March 16, 2020

Wetout

7940 Boulevard Industriel Chambly , Québec J3L 4X3 Canada

Manufacturing of products for the rehabilitation of pipelines using trenchless technology

These registrations are dependent on Insituform Technologies, LLC
Headquarters (File No. 1650845) maintaining their scope of registration to
ISO 9001:2015



SUBMITTAL DOCUMENT

INSIGNIA™ HYDROPHILIC END SEAL

SUBMITTAL DOCUMENT FOR
INSIGNIA™ HYDROPHILIC END SEAL

ITEM 1 – General Information

Manufacturer Company Name: LMK Technologies, LLC

Contact Individual(s) Rick Gage

Street Address: 1779 Chessie Lane

City, State, Zip Code: Ottawa, IL 61350

Telephone: 815.433.1275

Fax: 815.433.0107

Product Submittal: *This submittal is for the Insignia™ End Seal product is specifically designed to be used in conjunction with CIPP, Fold and Form and UV cured mainlined linings.*

ITEM 2 - Definitions

Insignia™ Compression Gaskets by LMK Technologies® are hydrophilic sealing gaskets are used to seal the junction of a main or lateral pipe and a manhole.

LMK Technologies is the owner of Trademarks: Insignia™ and LMK®.

Larry Kiest, Jr. Founder and President

Mr. Kiest is the inventor of more than 100 U.S. and foreign issued patents, teaching methods and apparatuses for the Rehabilitation of Underground Pipes, Conduits and Structures. Mr. Kiest is a Licensed Plumber in the State of Illinois, Advisory Board Member of Trenchless Technology Center Louisiana Tech University, Member of ASCE/ PINS Lateral Committee, Board Member of NASSCO, Chairman of NASSCO Lateral Committee, Active Board Member NASSCO 2008-2010, Member of NASTT, Member of AWWA Standards Committee, Member of WEF, Member of Task MSTT, Active Board Member MSTT 2008-2010, Member of ASTM, and Chairman of Task Committee F17, subcommittee 17.67 standard practice for rehabilitation of a sewer service lateral using a one piece main and lateral cured-in-place liner installed by means of air inversion. Mr. Kiest has conducted business in the field of Trenchless Pipe Renewal Systems since 1985.

ITEM 3 – References:

1. Jim Shelton PE, Senior Engineer
Malcolm Pirnie Engineering
824 Market Street, Suite 710
Wilmington, DE
Phone: 302-658-1718
Fax 302-884-6909
E-mail: jshelton@pirnie.com
2. Tim Back, PE, President/Owner
Back Municipal Consulting
Cincinnati, OH
Phone: 513-253-8461
Fax: 513-376-7125
3. John Vose, Repairs and Excavation Supervisor
City of Naperville, IL,
Phone: 630-420-6741
Fax: 630-420-4119
4. Rich McGillis, Senior Manager
Sanitary District #1
Northern Kentucky
Phone: 859-640-4491
5. Cathy Morley, P.E., Senior Project Manager
RJN Group
Wheaton, IL
Phone: 630-682-4700 x-354
Fax: 630-682-4754
6. Tyson Crandall, Project Manager
Reynolds Inliner, LLC,
Sanford, FL
Phone: 812-865-3232
Fax: 812-865-3075
7. Bob O'Connor, President

8. Alex Sharpe, Project Manager
Insituform
Indianapolis, IN
Phone: 317-489-3867

9. Breck Vinson, Project Manager,
Reynolds In-Liner
Phone: 812-865-3232

Projects:

Sanitation District #1

1045 Eaton Drive Ft. Wright, KY 41017
Utility Contact: Rich McGillis
Senior Manager of Collection Systems
859-547-1642
General Contractor: Reynolds Inliner
Contact: Tyson Crandall, Project Manager 812-865-3232

Lawrence Indiana Sewer Utilities Department

9201 Harrison Park, Lawrence Indiana 46216
Phone: 317-542-0511
General Contractor: Reynolds Inliner
Contact: Breck Vinson, Phone 812-865-3232

West Central Conservancy District

243 South County Road 625 East Avon, IN 46123
Phone: (317) 272-2980
General Contractor: Insituform
Contact: Alex Sharpe, Phone 317-489-3867

ITEM 4 – Materials, Installation and Design

4.1	Intent	It is the intent of this specification to detail a safe, efficient, cost-effective installation method of a hydrophilic pipe end sealing product called INSIGNIA™ END SEAL for the junction of a main or lateral pipe and a manhole. The INSIGNIA™ END SEAL provides a full-circle compression seal to a substantial area at the ends of a pipe rehabilitated by lining. This hydrophilic sealing product is intended for use in conjunction with most all pipe rehabilitation systems, including but not limited to: inverted CIPP liners, pull-in-place CIPP liners, and fold-and-form plastic pipe liners. The INSIGNIA™ END SEAL product shall be commercially available from LMK Technologies or a distributor for use as an adjunct to rehabilitative pipe lining projects on a price per kit basis.
4.2	Technique	The INSIGNIA™ END SEAL product and process consists of providing a full-circle seal at the junction of a main or lateral pipe and a manhole by using a tubular sleeve of hydrophilic material specifically tailored to provide the most safe, efficient, cost-effective, watertight seal at the ends of a rehabilitated pipe. The INSIGNIA™ END SEAL product and process overcomes major deficiencies of other known products and methods used at the junction of a pipe at the manhole. For example, the use of a hydrophilic rope is commonly used near the ends of rehabilitated pipe. The use of such a hydrophilic rope may result in imprecise placement within the host pipe, as the flexible rope is prone to shift within the pipe or fall during installation of a pipe liner, resulting in an incomplete seal at the pipe ends. Another example of material used to seal pipe ends is a hydrophilic caulk. The use of such a caulk to seal the ends of a pipe at the manhole may result in inconsistent wall thickness and imprecise placement before and after a pipe-liner is installed. Since there are no structural elements to hold the caulk in place, the caulk is allowed to smear and spread throughout the pipe. Additionally, the use of either hydrophilic rope or caulk requires arduous cleaning of the pipe interior before application in an attempt to stick and retain the seal to the pipe as a liner is installed. The INSIGNIA™ END SEAL product and process overcomes these deficiencies by the use of a sealing product that provides a hydrophilic material that does not shift or move during installation of a rehabilitative pipe liner. Additionally, the INSIGNIA™ END SEAL product provides a uniform seal and consistent wall thickness around the pipe end after installation of a pipe liner. Furthermore, the INSIGNIA™ END SEAL product does not require arduous cleaning of the pipe end before installation. The INSIGNIA™ END SEAL product includes a tubular sleeve constructed of a hydrophilic polymeric material, designed with a specified length and wall thickness to provide a compression seal to the end of a pipe at the manhole. A mechanical fastener is provided with the tubular sleeve that is specifically designed to hold the tubular sleeve in place during installation of a pipe liner.

		known installation methods. After the pipe-liner is set in place, the tubular sleeve will swell in the presence of water, creating a full-circle seal between the newly-installed pipe-liner and the host pipe for the entire length of the INSIGNIA™ END SEAL.
4.3	Material	The materials utilized for the INSIGNIA™ END SEAL shall be provided in kits that are designed to accommodate varying pipe diameters, manhole depths, junction configurations, and pipe liner products. The INSIGNIA™ END SEAL kits are compatible with most rehabilitative pipe liner products, including cured-in-place, and fold-and-form. Additionally, the INSIGNIA™ END SEAL kit may be used with many different pipe liner installation and curing methods, including inversion, pull-in-place, hot water curing, steam curing, ultra violet curing, and ambient curing methods. The components of the INSIGNIA™ END SEAL include a tubular sleeve, and a mechanical fastener.
4.4	Existing Sewer	The system is compatible with all types of pipes; V.C.P., concrete, cast iron, P.V.C and existing main pipes that have been renewed by a CIPP process.
4.5	Pipe Diameter Ranges	Main: The Insignia End Seal Sleeve is available in sizes of 6", 8", 10", 12", 15", 18", 21", 24", 27", 30", 33", 36", 42", 48" and 54"
4.6	Tubular Sleeve	The member that creates the end seal is a hydrophilic neoprene rubber of approximately 50 Shore A durometer. The tubular sleeve has a uniform wall thickness of approximately 2 mm, a length of approximately 3.5 inches, and a diameter slightly less than the interior pipe diameter.

4.7	Physical Property	Unit	Value	Test Method
	Shore A Hardness	Point	50 ± 5	ASTM D2240
	Tensile Strength	PSI	1177	ASTM D412
	Elongation at Break	%	523	ASTM D412
	Specific Gravity		1.2	ASTM D297
	Swell Capacity in Water Contact	%	200	GRCSC

4.8	Mechanical Fastener	There are several mechanical fasteners available for use with the INSIGNIA™ END SEAL product. A first option is a shape-memory alloy that has been formed into a specific accurate or other curvilinear configuration having an outer profile that is generally greater than the circumference of the pipe before insertion. This conformation allows the alloy to be bent into a configuration that fits inside of the tubular sleeve and the pipe. Once inside the pipe, the alloy is pressed against the wall of the tubular sleeve, thus pressing the tubular sleeve against the wall of the pipe. The shape memory characteristic of the fastener urges the fastener to return to its original profile. The alloy remains in
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		worm gear to tightly hold the tubular sleeve in place.
4.9	Installation Recommendations: Access to the ends of the pipe to be rehabilitated	Access a manhole where a main pipe or a lateral pipe connects. A technician may access the manhole interiors via conventional methods to access the main or lateral pipe to be rehabilitated. The pipe interior at the manhole shall be measured from 6:00 to 12:00 and from 3:00 to 9:00. The mean shall be the nominal inner diameter.
4.11	Material Compatibility	After the INSIGNIA™ END SEAL product has been placed into the ends of the pipe, a rehabilitative liner product shall be installed into the pipe. The INSIGNIA™ END SEAL product is intended for use in conjunction with most pipe rehabilitation systems, including but not limited to: cured-in-place pipe liners and fold-and-form pipe liners. The INSIGNIA™ END SEAL kit may be used with many different pipe liner installation and curing methods including, inversion, pull-in-place, hot water curing, steam curing, ultra violet curing, and ambient curing. Since the INSIGNIA™ END SEAL product has a uniform wall thickness and is held firmly within the pipe to be rehabilitated, a compression seal will be provided to a large area of the pipe end adjacent the manhole. Since the INSIGNIA™ END SEAL product may be used with a variety of rehabilitative pipe liners, the standard installation practices of each individual pipe liner method should be closely followed. Therefore, procedures should be used that meet applicable NASSCO, ASTM, NACE and SSPC standards and provide quality assurance controls that meet the manufacturer's printed recommendations.

4.10 End Seal Width and Thickness

End Seal Size in Inches	Width in Inches	Thickness in Inches
6	3.5	.059
8	3.5	.098
10	3.5	.12
12	3.5	.12
15	3.5	.12
18	3.5	.12
21	3.5	.12
24	3.5	.12
27	3.5	.177
30	3.5	.177
33	3.5	.177
36	3.5	.177
42	3.5	.236
48	3.5	.236
54	3.5	.236

ITEM 5 – Preparation and Testing

5.1	Cleaning and Inspection	All roots, deposits, and debris should be removed from the pipe with hydraulically powered equipment, high velocity jet cleaners, or mechanically powered equipment as per NASSCO recommended specifications for sewer collection system rehabilitation. Since the INSIGNIA™ END SEAL provides a seal based on compression instead of adhesion, extensive cleaning beyond obvious obstructions is optional. A full-circle seal at the ends of the pipe will be achieved regardless of the presence of fats, oils, and grease which is inherent in sewer pipes even after high velocity jet cleaning. It should be noted that the various pipe rehabilitation installation methods have different installation standards (such as ASTM standards and manufacturer's recommendations), and those installation standards should be observed during installation of the liner.
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Item 6 – Other

Advanced Materials:

- Insignia Hydrophilic End Seal (Compression Gasket Sealing Technology)

Respectfully Submitted By:

Larry Kiest, Jr.

Larry Kiest, Jr.
President
LMK Technologies, LLC

SPECIFICATION



INSTALLATION PRACTICE FOR INSIGNIA™ HYDROPHILIC END SEAL SLEEVE

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#1560 V.8, 9/16 (15-10-478)

INSTALLATION SPECIFICATION FOR HYDROPHILIC END SEAL SLEEVE

1.0 Intent

1.1 It is the intent of this specification to detail a safe, efficient, cost-effective installation method of a compression gasket sealing product that swells with the presence of water, called Insignia™ Hydrophilic End Seal Sleeve for the junction of a main or lateral pipe and a manhole. The end seal is a molded rubber gasket that provides a full-circle compression seal to a substantial area at the end of a mainline pipe that will be rehabilitated by lining. This hydrophilic sealing product is intended for use in conjunction with most pipe rehabilitation systems, including but not limited to: inverted CIPP liners, pull-in-place CIPP liners, and fold-and-form plastic pipe liners. The Insignia Hydrophilic End Seal product shall be commercially available from LMK Technologies or an LMK distributor for use as an adjunct to rehabilitative pipe lining projects on a price per kit basis.

2.0 Overview

2.1 The Insignia End Seal product and process consists of providing a full-circle, molded gasket made of hydrophilic rubber seal at the junction of a main or lateral pipe and a manhole by using a material specifically engineered to provide the most safe, efficient, cost-effective, watertight seal at the end of a rehabilitated pipe. Gaskets that do not swell with water, are not molded, or that are dispensed like caulk are not equal and shall not be used. Any substitution to the specification to be deemed equal must provide 10,000 hour hydration/dehydration test results that prove the hydrophilic rubber will not dry out at various cycles.

2.2 The Insignia End Seal kit includes a tubular sleeve constructed of a hydrophilic polymeric material, designed with a specified length and wall thickness to provide a compression seal to the end of a pipe at the manhole, a stainless steel band and anchor screws for end seal sleeves 18" or larger in diameter.

2.3 The installation practice of the hydrophilic end seal sleeve is simple. The field technician inserts the tubular sleeve within the pipe to be rehabilitated, one-half inch to one-inch from the end of the pipe. The mechanical fastener is placed against the inner wall of the tubular sleeve, securing the tubular sleeve against the inner wall of the pipe. [For sizes 18" and larger, anchor screws shall be installed to assist in holding the mechanical fastening band in place.] After the mechanical fastener is secured in place, a liner is inserted through the tubular sleeve utilizing known installation methods. After the liner is set in place, the tubular sleeve will swell in the presence of water, creating a full-circle seal between the newly-installed liner and the host pipe for the entire circumference of the Insignia End Seal. It will take a minimum of 36 to 48 hours for the hydrophilic rubber to swell in the presence of water.

3.0 Material

3.1 The components utilized for the Insignia End Seal shall be provided in kits that are designed to accommodate varying pipe diameters, manhole depths, junction configurations, and pipe liner

products. The Insignia End Seal kits are compatible with most rehabilitative pipe liner products, including cured-in-place and fold-and-form. Additionally, the Insignia End Seal kit may be used with many different pipe liner installation and curing methods, including inversion, pull-in-place, hot water curing, steam curing, ultraviolet curing, and ambient curing methods. The kit components of the Insignia End Seal include a tubular sleeve, a mechanical fastener band and anchor screws for sizes 18" and larger.

3.2 Tubular Sleeve: The member that creates the end seal is a hydrophilic neoprene rubber of approximately 50 Shore A durometer. The tubular sleeve has a uniform wall thickness and width, and a diameter slightly less than the interior pipe diameter. The hydrophilic neoprene rubber has the following characteristics:

Characteristic	Unit	Value	Test Method
Shore A Hardness	point	50 +/- 5	ASTMD2240
Tensile Strength	psi	1177	ASTMD412
Elongation at Break	%	523	ASTMD412
Specific Gravity		1.2	ASTMD297
Swell Capacity in Water Contact	%	200	GRCSC

3.3. Sizes: The Insignia End Seal Sleeve is available in standard sizes of 6", 8", 10", 12", 15", 18", 21", 24", 27", 30", 33", 36", 42", 48" and 54". Custom sizes are also available.

4.0 Installation Recommendations

4.1 Access to the ends of the pipe to be rehabilitated: Access a manhole where a main pipe or a lateral pipe connects. A technician may access the manhole interior via conventional methods to access the main or lateral pipe to be rehabilitated. The pipe interior at the manhole shall be measured from 6:00 to 12:00 and from 3:00 to 9:00. The mean shall be the nominal inner diameter.

4.2 Cleaning and Inspection: All roots, deposits, and debris should be removed from the pipe with hydraulically powered equipment, high velocity jet cleaners, or mechanically powered equipment as per NASSCO recommended specifications for sewer collection system rehabilitation. Since the Insignia End Seal provides a seal based on compression instead of adhesion, extensive cleaning beyond obvious obstructions is optional. A full-circle seal at the ends of the pipe will be achieved regardless of the presence of fats, oils, and grease which is inherent in sewer pipes even after high velocity jet cleaning. It should be noted that the various pipe rehabilitation installation methods have different installation standards (such as ASTM standards and manufacturer's recommendations), and those installation standards should be observed during installation of the liner.

4.3 Since the Insignia End Seal product may be used with a variety of rehabilitative pipe liners, the standard installation practices of each individual pipe liner method should be closely followed. Therefore, procedures should be used that meet applicable NASSCO, ASTM, NACE and SSPC standards and provide quality assurance controls that meet the manufacturer's printed recommendations.

Patents:
8,240,340
8,240,341
8,567,451
8,636,036
8,561,145
8,640,737



Mississippi Textiles Corporation · 160 Corporate Drive · Batesville, MS 38606

Tel: (662) 578-7797 · Fax: (662) 578-7798 · www.mtubeonline.com

September 24, 2014

To: Whom It May Concern

From: Mark Wetzel
General Manager, Mississippi Textiles Corporation

RE: **CERTIFICATE OF COMPLIANCE**

Dear Sir or Madam,

Mississippi Textiles Corporation (MTC), a subsidiary of Insituform Technologies, LLC, felt tubes are manufactured in an ISO:9001:2008 certified factory in accordance with specifications of MTC and will comply with the guidelines of ASTM F1216 and ASTM F1743. Our liners are impregnated with polyester resin, which is produced by industry leading suppliers, including but not limited to: AOC and Interplastic Corporation. Our resin systems have a successful history in lab conditions and actual field installations of meeting the chemical resistance recommendations of ASTM F1216, ASTM F1743 and ASTM D5813.

The following physical properties are recommended for CIPP design when using a polyester resin system:

Flexural Modulus of Elasticity.....	400,000 psi
Flexural Strength	4,500 psi
*Tensile Strength	2,500 psi
Flexural Modulus Reduction to Account For Long-Term Effects.....	50%

* As stated in ASTM F1216, tensile strength is not a parameter that is used in standard gravity flow design.

The above values were derived from samples tested in accordance with modified ASTM D790. If you should have any additional questions, please do not hesitate to contact me at your convenience. I am available at (662) 530-3355 or mwetzel@mtubeonline.com.

Best regards,

Mark Wetzel
General Manager, MTC

DISCLAIMER OF WARRANTY: AS INSTALLATION CONDITIONS (INCLUDING, AMONG OTHERS, PIPE TYPE & CONDITION, GROUNDWATER DEPTH & TEMPERATURE, DEPTH OF COVER & SOIL TYPE, LIVE LOADS, SITE ACCESS AND WEATHER) AND INSTALLER EXPERIENCE, TECHNIQUES AND TYPE OF EQUIPMENT VARY GREATLY, MTC EXCLUDES ANY WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, WITH RESPECT TO THE GOODS SOLD HEREUNDER AS TO MERCHANTABILITY, FITNESS FOR PARTICULAR USE OR ANY OTHER MATTER WITH RESPECT TO THE GOODS WHETHER USED ALONE OR IN COMBINATION WITH OTHER PRODUCTS. MTC HAS NOT PROVIDED ANY DESIGN SPECIFICATIONS OR COMPUTATIONS, AND ACCORDINGLY, MTC DOES NOT WARRANT THE DESIGN.



17988 Edison Avenue
 Saint Louis, Missouri 63005
 Phone: 636-530-8000
 www.aegion.com

Technical Information: Standard Inverted and Pull-In CIPP

1. The CIPP Technical Envelope

	Water Inversion	Steam Inversion	Pull-In
Diameter Range	6 in. - 124 in.	6 in. - 72 in.	6 in. - 12 in.
Thickness Limit	50 mm.	Varies	4.5 mm. - 9.0 mm.
pH Range (Polyester Resin Only)	0.5-10.5	0.5-10.5	0.5-10.5
Effluent Temperature (Vinylester resin for 120-140 F)	Up to 140° F	Up to 140° F	Up to 140° F
Structural	Yes	Yes	Yes
Bends	Case by Case Basis	Case by Case Basis	No
Offset Joints	Yes	Yes	Minimal
Diameter Changes	Yes	No	No
Thickness Changes	Yes	No	No
Shot Length (Diameter Dependent)	Up to 2500 ft.	Up to 800 ft.	Up to 800 ft.
Host Pipe Shape	All Shapes	Most Shapes	Round
Host Pipe Material	All Materials	All Materials	All excluding plastic or asbestos cement pipe
Resin	Polyester or Vinylester	Polyester or Vinylester	Polyester or Vinylester

2. Raw Materials

Suppliers are given specifications that must be met for each material.

Part of Tube	Raw Materials Used
Felt	Polyester Fiber
Coating	Polypropylene Blend Polyethylene Blend
Thread	Polyester Thread (Standard Inverted) Cotton Sheathed Polyester Thread (Pull-In) Aramid Fiber Thread (Standard Inverted and Pull-In)

The following characteristics of the Raw Materials are evaluated for Quality Assurance:

Raw Material	Characteristic	Evaluation Method
Fiber	Denier	Visual Reference: Material Tag
Fiber	Crimps per inch	Certificate of Analysis
Fiber	% Finish	Certificate of Analysis
Fiber	Staple Length	Certificate of Analysis
Fiber	Tenacity	Certificate of Analysis
Fiber	Elongation %	Certificate of Analysis
PE Pellets	Melt Index	Certificate of Analysis
PE Pellets	Density	Certificate of Analysis
PE Pellets	Gel Count	Certificate of Analysis
PP Pellets	Melt Flow	Certificate of Analysis
Thread	Strength	Certificate of Analysis
Thread	Elongation	Certificate of Analysis
Thread	Lube	Certificate of Analysis

3. Manufacturing Process

Tubes are manufactured in Batesville, Mississippi, United States and meet all relevant specifications for a cured-in-place pipe product: ASTM D5813, ASTM F1216, and ASTM F1743.

The finished tube is manufactured using multiple layers of felt, with one layer coated with polypropylene or polyethylene plastic. The layers are cut/slitted to the desired width and sewn concentrically. The coated layer is also sealed at the seam using an extrusion or taping process to form the final tube. The tube is then inspected and packaged for shipment. All manufacturing processes operate under a quality system that is certified to the ISO9001: 2008 standard.

Step One: Felting

Felt production is achieved by a non-woven process (needle punch) using polyester fiber. The finished felt rolls undergo tests to ensure weight, thickness, density, and elongation meet documented specifications. Multiple samples are taken across the full width of each roll of material produced to ensure fabric consistency. Multiple samples are taken in the machine and cross-machine direction of the fabric to test the fabric stretch at varying loads and the tensile strength. 100% of all felt produced is tested for thickness under a specified load. Tensile strength testing is in accordance with ASTM Standard D5813. For test results, see Appendix A.

The following characteristics are evaluated throughout the Felting process for Quality Assurance:

Characteristic	Evaluation Method
Weight	Scale
Thickness	Compression Testing Machine
Elongation	Tensile Testing Machine
Tensile Strength	Tensile Testing Machine

Step Two: Coating

Felt tubes are coated with a permanently-bonded, continuous layer of polypropylene or polyethylene. The coating is firmly attached to the felt and is resistant to hydrolysis and chemical attack. Because of this, polypropylene and polyethylene coatings have a greater longevity than polyurethane coatings. Polypropylene and polyethylene coatings have also been tested and proven to be more resilient to styrene based resins. Polyurethane coatings tend to swell and blister under prolonged styrene exposure which can adversely affect the final cured product.

The following characteristics are evaluated throughout the Coating process for Quality Assurance:

Characteristic	Evaluation Method
Overall Thickness	Compression Testing Machine
Coating Thickness	Dial Indicator
Weight	Scale
Peel Strength	Tensile Testing Machine
Tensile	Tensile Testing Machine
Elongation	Tensile Testing Machine

Step Three: Slitting

Special cut widths are used depending on whether the tube will be inverted or pulled in, and the width of the fabric ultimately depends on the overall design diameter and thickness of the tube being produced.

The following characteristics are evaluated throughout the Slitting process for Quality Assurance:

Characteristic	Evaluation Method
Width	Tape Measure
Length	Mechanical roll counter
Material Type, Job # & Sequence	Verify roll ticket and roll # to cut requisition
Surface Contaminants	Visual
Holes / Cuts / Tears	Visual

Step Four: Sewing

Tubes are sewn together using a butt sewn seam and are tested to ensure the seam is as strong as or stronger than the fabric. The butt sewn seam eliminates the need for overlapped seams. To create uniform thickness around the full circumference of the tube, Insituform developed and patented a method for sewing together the butted ends of our fabric. Our experience has shown that the strongest tubes with the fewest wrinkles are made with butt-sewn seams because overlapped seams have shown to create uneven thickness, resin lean areas, and surface wrinkles.

The following characteristics are evaluated throughout the Coating process for Quality Assurance:

Characteristic	Evaluation Method
Material Type/ Coating / Sequence	Verify roll ticket and roll # to sew order
Width	Tape Measure
Flamebond Attachment	Pull at Flamebond area
Flamebond Tensile Strength	Tensile Testing Machine
Flamebond Peel Strength	Tensile Testing Machine
Flamebond Machine Settings	Record Settings
Stitches per inch	Tape Measure
Seam Structure	Visual Inspection
Surface Contaminants	Visual
Coating Voids	Visual
Holes / Cuts / Tears	Visual
Dropped Stitches	Visual
Starter Rope Location	Tape Measure

Step Five: Extrusion/Taping

An extrusion or taping process is used to bond the coated layer at the seam.

The following characteristics are evaluated throughout the extrusion process for Quality Assurance:

Characteristic	Evaluation Method
Coating / Material Type	Verify to Order
Thickness	Bulk Test with scale
Adhesion	Peel Testing
Adhesion	Verify Correct Extruder Settings
Adhesion	Verify Correct Extruder Settings
Correct Extrusion Material	Verify with order ticket
Extrusion Location	Automated Camera System
Extrusion Location	Visual
Extrusion Voids	Visual
Excessive / Uneven Extrusion	Visual
Heat/Pressure (Taping System)	Visual

Step Six: Inspection

The tubes go through a 100% inspection process to ensure we are shipping the highest quality product. This includes a dye bath on the standard inverted product that highlights any pinholes that might be present in the coated layer. All repairs are made prior to the tubes being shipped.

The following characteristics are evaluated throughout the Inspection process for Quality Assurance:

Characteristic	Evaluation Method
Watertight Outer Tube	Vacuum Test (Inverted Tube Only)
Watertight Outer tube	Dye Bath (Inverted Tube Only)
Seam Structure	Visual
Extrusion / Tape Location	Visual
Extrusion / Tape Voids	Visual
Excessive / Uneven Extrusion / Tape	Visual
Surface Contaminants	Visual
Coating Voids	Visual / Dye Bath (Inverted Tube Only)
Holes / Cuts / Tears	Visual / Dye Bath (Inverted Tube Only)

Appendix A:

The following material test records are samples of actual test data results for non-woven fabrics (felt) used in the manufacturing of Insituform tubes. The testing criteria for these materials meet the following standards:

ASTM D-5199 – Standard Test Method for Thickness of Geotextile/Geomembranes

ASTM D-5035 – Standard Test Method for Breaking Force & Elongation of Textile Fabrics

Additionally, per ASTM D-5813 – Standard Specification for Cured-In-Place Thermosetting Resin Sewer Pipe, all supplied materials meet or exceed the 750 psi “Fabric Tube Strength” requirement as defined by paragraph 6.1 of the specification. The porosity of our fibers is approximately 85%.

This is conformation that all materials supplied by Insituform Technologies, Inc. are tested for product quality and fitness for use per the aforementioned ASTM guidelines with all test records maintained and made available at the customer's request.

3mm Coated Felt

Roll	Line	Material	Work Order	Date	Thickness (ASTM D5199)	CD Tensile (ASTM 5035)	MD Tensile (ASTM 5035)
8433	3	3100183	369023	12/20/2011	3.4	1240	1292
8434	3	3100183	369023	12/20/2011	3.3	1290	1380
8436	3	3100183	369023	12/21/2011	3.2	1247	1324
8437	3	3100183	369023	12/21/2011	3.3	1263	1344
8438	3	3100183	369023	12/21/2011	3.2	1259	1347
8439	3	3100183	369023	12/21/2011	3.4	1155	1315
8440	3	3100183	369023	12/21/2011	3.3	1244	1247
8441	3	3100183	369023	12/21/2011	3.4	1213	1264
8442	3	3100183	369023	12/21/2011	3.2	1272	1339
8443	3	3100183	369023	12/21/2011	3.2	1245	1279

16oz Material - 3mm Plain Felt

Roll	Line	Material	Work Order	Date	Thickness (ASTM D5199)	CD Tensile (ASTM 5035)	MD Tensile (ASTM 5035)
6771	2	3000003	365316	11/30/2011	3.2	1121	1135
6772	2	3000003	365316	11/30/2011	3.2	1186	1121
6773	2	3000003	365316	12/1/2011	3.1	1217	1087
6774	2	3000003	365316	12/1/2011	3.4	1183	1173
6775	2	3000003	365316	12/1/2011	3.1	1134	1073
6776	2	3000003	365316	12/1/2011	3.3	1128	1143
6777	2	3000003	365316	12/1/2011	3.2	1251	1074
6778	2	3000003	365316	12/1/2011	3.3	1167	1122
6779	2	3000003	365316	12/1/2011	3.3	1235	1136
6780	2	3000003	365316	12/1/2011	3.2	1226	1114

24oz Material - 4.5mm Plain Felt

Roll	Line	Material	Work Order	Date	Thickness (ASTM D5199)	CD Tensile (ASTM 5035)	MD Tensile (ASTM 5035)
7849	1	3000064	369019	12/13/2011	4.9	1137	1063
7850	1	3000064	369019	12/13/2011	4.8	1071	1012
7851	1	3000064	369019	12/13/2011	4.8	1050	1068
7852	1	3000064	369019	12/13/2011	4.7	1057	1060
7853	1	3000064	369019	12/13/2011	4.7	1116	1005
7854	1	3000064	369019	12/13/2011	4.7	1074	1047
7855	1	3000064	369019	12/13/2011	4.8	1167	1027
7856	1	3000064	369019	12/13/2011	5.1	1218	1132
7857	1	3000064	369019	12/13/2011	5	1190	1059
7858	1	3000064	369019	12/13/2011	4.9	1084	1051

30oz Material - 6mm Plain Felt

Roll	Line	Material	Work Order	Date	Thickness (ASTM D5199)	CD Tensile (ASTM 5035)	MD Tensile (ASTM 5035)
8124	1	3000069	369020	12/21/2011	6.5	1121	1059
8125	1	3000069	369020	12/21/2011	6.5	1126	1122
8126	1	3000069	369020	12/21/2011	6.4	1092	1039
8127	1	3000069	369020	12/21/2011	6.5	1045	1044
8128	1	3000069	369020	12/21/2011	6.5	1109	1076
8129	1	3000069	369020	12/21/2011	6.3	1069	1065
8130	1	3000069	369020	12/21/2011	6.3	1071	1132
8131	1	3000069	369020	12/21/2011	6.6	1096	1100
8132	1	3000069	369020	12/21/2011	6.4	1155	1083
8133	1	3000069	369020	12/21/2011	6.5	1050	1090



**Insituform
Technologies, Inc.**

Worldwide Pipeline Rehabilitation 17999 Edison Ave.
Chesterfield, MO 63005

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Fax: (636) 530-8744

**104T Series
Polyester Resin
January 20, 2012**

**Polyester Resin for Gravity
CIPP Applications**

Insituform's 104T Series is a family of polyester resins for gravity sanitary and storm sewer applications. Resins currently approved for the 104T Series include:

AOC L758
Interplastic COR78-221-269
AOC L721
Insituform 102T

Typical Resin/Felt Properties

Flexural Strength, psi/MPa	4,500/31.5	ASTM D 790
Flexural Modulus, psi/MPa	400,000/2,760	ASTM D 790

Description

Insituform's 104T Series resins are comprised of filled, thixotropic polyester resins and are an excellent application for sanitary and storm sewers. These resins can also be used in some industrial applications. Polyester resins provide the corrosion resistance required for sanitary sewer applications and also provide the durability needed for long-term applications.

Features

Good physical properties, corrosion resistant, durable, good long-term properties, excellent catalyzed pot life, high heat distortion temperature and high molecular weight.

Safety

Safety guidelines are available in the appropriate Material Safety Data Sheet.

Detailed Information

Detailed information for any of the approved resins in the 104T Series can be provided upon request.



**Insituform
Technologies, Inc.**

Worldwide Pipeline
Rehabilitation

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**104T Series
Polyester Resin
January 20, 2012**

**Corrosion Testing for Gravity
CIPP Applications**

Insituform's 104T Series is a family of polyester resins for gravity sanitary and storm sewer applications. Resins currently approved for the 104T Series include:

AOC L758
Interplastic COR78-221-269
AOC L721
Insituform 102T

Typical Resin/Felt Properties

Flexural Strength, psi/MPa	4,500/31.5	ASTM D 790
Flexural Modulus, psi/MPa	400,000/2,760	ASTM D 790

Chemical Resistance Testing

CIPP laminates made from each of Insituform's 104T Series resins are tested for chemical resistance using ASTM F1216 for one month exposure and ASTM D5813 for one year exposure.

Test Results

The results of the one month chemical exposure testing are shown in the attached data sheet.
ASTM F1216 TEST RESULTS ONE MONTH RESISTANCE OF CIPP TO CHEMICAL REAGENTS

The results of the one year chemical exposure testing are shown in the attached data sheet.
ASTM D5813 TEST RESULTS ONE YEAR RESISTANCE OF CIPP TO CHEMICAL REAGENTS

Detailed Information

Detailed information for any of the approved resins in the 104T Series can be provided upon request.

INSITUFORM TECHNOLOGIES, INC.

104 SERIES OF PLOYESTER RESIN

ASTM F1216 TEST RESULTS ONE MONTH RESISTANCE OF CIPP TO CHEMICAL REAGENTS

	AOC L721-LTA		AOC L758-LTI		COR 78-221-269		INSITUFORM 102T	
	RETENTION VALUE	REQUIREMENT 80%	RETENTION VALUE	REQUIREMENT 80%	RETENTION VALUE	REQUIREMENT 80%	RETENTION VALUE	REQUIREMENT 80%
CONTROL SAMPLE								
FLEXURAL STRENGTH, psi	6,650		6,048				6,896	
FLEXURAL MODULUS, psi	590,000		722,710				750,666	
TAP WATER								
FLEXURAL STRENGTH, psi	7,602		6,353				6,703	
% RETENTION	114%	PASSED	100%	PASSED	98.86%	PASSED	97%	PASSED
FLEXURAL MODULUS, psi	551,706		632,142				730,936	
% RETENTION	93.5%	PASSED	88%	PASSED	92.39%	PASSED	97%	PASSED
5% NITRIC ACID								
FLEXURAL STRENGTH, psi	7,464		5,924				6,281	
% RETENTION	112%	PASSED	98%	PASSED	105.01%	PASSED	91%	PASSED
FLEXURAL MODULUS, psi	568,565		616,116				755,552	
% RETENTION	96.4%	PASSED	85%	PASSED	97.09%	PASSED	101%	PASSED
10% PHOSPHORIC ACID								
FLEXURAL STRENGTH, psi	7,623		6,291				7,177	
% RETENTION	115%	PASSED	100%	PASSED	99.86%	PASSED	104%	PASSED
FLEXURAL MODULUS, psi	544,623		678,126				757,194	
% RETENTION	92.3%	PASSED	94%	PASSED	95.31%	PASSED	101%	PASSED
10% SULFURIC ACID								
FLEXURAL STRENGTH, psi	7,557		6,236				6,989	
% RETENTION	114%	PASSED	100%	PASSED	102.58%	PASSED	101%	PASSED
FLEXURAL MODULUS, psi	575,028		646,307				745,008	
% RETENTION	97.5%	PASSED	90%	PASSED	98.87%	PASSED	99%	PASSED
100% GASOLINE								
FLEXURAL STRENGTH, psi	8,397		6,576				7,639	
% RETENTION	126%	PASSED	100%	PASSED	103.29%	PASSED	111%	PASSED
FLEXURAL MODULUS, psi	599,527		695,498				765,138	
% RETENTION	102%	PASSED	96%	PASSED	99.51%	PASSED	102%	PASSED
100% VEGETABLE OIL								
FLEXURAL STRENGTH, psi	7,852		6,460				6,772	
% RETENTION	118%	PASSED	100%	PASSED	98.28%	PASSED	98%	PASSED
FLEXURAL MODULUS, psi	624,613		685,065				759,969	
% RETENTION	106%	PASSED	95%	PASSED	98.87%	PASSED	101%	PASSED
0.1% DETERGENT								
FLEXURAL STRENGTH, psi	7,125		6,396				6,712	
% RETENTION	107%	PASSED	100%	PASSED	106.44%	PASSED	97%	PASSED
FLEXURAL MODULUS, psi	548,941		682,070				737,963	
% RETENTION	93%	PASSED	94%	PASSED	99.35%	PASSED	98%	PASSED
0.1% SOAP								
FLEXURAL STRENGTH, psi	6,771		5,906				7,164	
% RETENTION	101%	PASSED	98%	PASSED	100.72%	PASSED	104%	PASSED
FLEXURAL MODULUS, psi	562,800		649,337				767,237	
% RETENTION	95.4%	PASSED	90%	PASSED	95.79%	PASSED	102%	PASSED

INSITUFORM TECHNOLOGIES, INC.
104 SERIES OF PLOYESTER RESIN
ASTM D5813 TEST RESULTS ONE YEAR RESISTANCE OF CIPP TO CHEMICAL REAGENTS

	AOC L721-LTA		AOC L758-LTI		COR 78-221-269		INSITUFORM 102T	
	RETENTION VALUE	REQUIREMENT 80%	RETENTION VALUE	REQUIREMENT 80%	RETENTION VALUE	REQUIREMENT 80%	RETENTION VALUE	REQUIREMENT 80%
CONTROL SAMPLE								
FLEXURAL MODULUS, psi	619,000		668,000				742,000	
1% NITRIC ACID								
FLEXURAL MODULUS, psi	533,000		561,000				700,000	
% RETENTION	86.1%	PASSED	84.0%	PASSED	93.69%	PASSED	94.00%	PASSED
5% SULFURIC ACID								
FLEXURAL MODULUS, psi	562,000		572,000				728,000	
% RETENTION	90.8%	PASSED	85.6%	PASSED	93.85%	PASSED	98.00%	PASSED
100% ASTM FUEL C								
FLEXURAL MODULUS, psi	587,000		666,000				744,000	
% RETENTION	94.8%	PASSED	99.7%	PASSED	95.79%	PASSED	100.00%	PASSED
100% VEGETABLE OIL								
FLEXURAL MODULUS, psi	634,000		665,000				753,000	
% RETENTION	102.4%	PASSED	99.6%	PASSED	103.56%	PASSED	101.00%	PASSED
0.10% DETERGENT								
FLEXURAL MODULUS, psi	550,000		591,000				633,000	
% RETENTION	88.9%	PASSED	88.5%	PASSED	90.78%	PASSED	85.00%	PASSED
0.10% SOAP								
FLEXURAL MODULUS, psi	553,000		651,000				654,000	
% RETENTION	89.3%	PASSED	97.5%	PASSED	93.69%	PASSED	88.00%	PASSED



**Insituform
Technologies, Inc.**

Worldwide Pipeline Rehabilitation 17999 Edison Ave. Chesterfield, MO 63005 Tel: (636) 530-8000 Fax: (636) 530-8744

**104T Series
Polyester Resin
January 20, 2012**

**Flexural Creep Testing for Gravity
CIPP Applications**

Insituform's 104T Series is a family of polyester resins for gravity sanitary and storm sewer applications. Resins currently approved for the 104T Series include:

AOC L758
Interplastic COR78-221-269
AOC L721
Insituform 102T

Typical Resin/Felt Properties

Flexural Strength, psi/MPa	4,500/31.5	ASTM D 790
Flexural Modulus, psi/MPa	400,000/2,760	ASTM D 790

Flexural Creep Testing

CIPP laminates made from each of Insituform's 104T Series resins were tested for flexural creep in accordance with ASTM D2990 for 10,000 hours.

Test Results

The results of tests for each group of laminates were plotted from 100 hours to 10,000 hours on a log/log graph. Using Microsoft Excel a linear trend line was created. The 50 year flexural creep modulus was estimated by extending the linear regression to 50 years.

Safety

Safety guidelines are available in the appropriate Material Safety Data Sheet.

Detailed Information

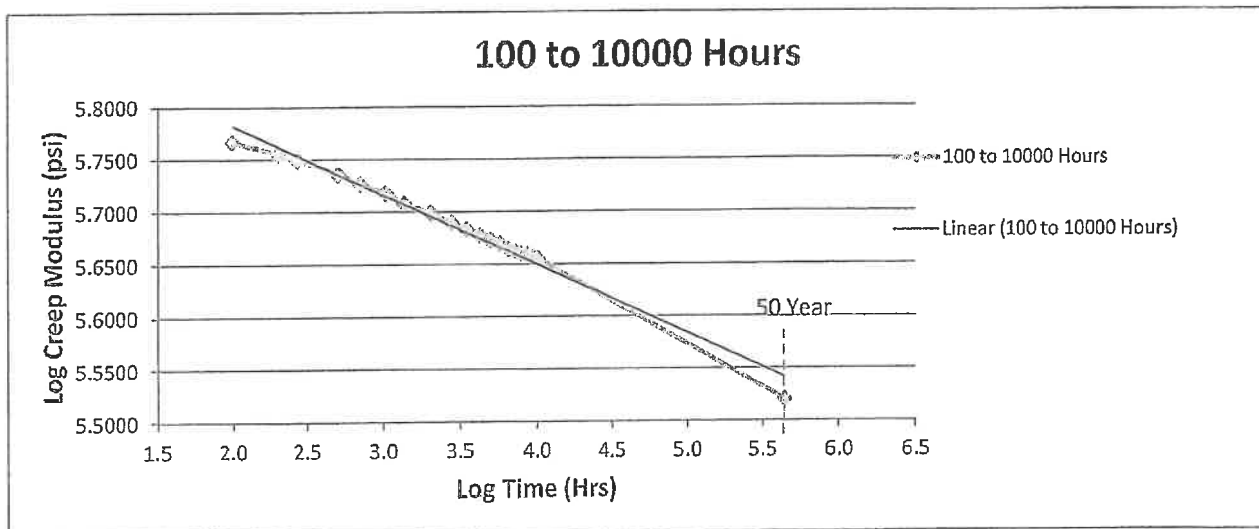
Detailed information for any of the approved resins in the 104T Series can be provided upon request.

ASTM D 2990 Flexural Creep Data
AOC L758-LTI Polyester Resin
Insituform-104 Series Resin
Hauser Laboratories Boulder, CO
August 17, 2005

Elapsed Time (hours)	Flex Displ Avg (in)	Flex Creep Mod Avg (psi)	Log Values	
			Time	Modulus
99	0.0290	584660	1.9948	5.7669
197	0.0298	569260	2.2953	5.7553
268	0.0303	560940	2.4285	5.7489
500	0.0312	544620	2.6993	5.7361
698	0.0318	533000	2.8440	5.7267
1037	0.0325	522140	3.0157	5.7178
1343	0.0932	510740	3.1281	5.7082
2014	0.0339	500180	3.3040	5.6991
2758	0.0346	489720	3.4406	5.6899
3458	0.0352	482240	3.5388	5.6833
4200	0.0356	476220	3.6233	5.6778
4925	0.0360	471140	3.6924	5.6731
5637	0.0363	467240	3.7510	5.6695
6381	0.0367	462120	3.8049	5.6648
7102	0.0369	459640	3.8514	5.6624
7751	0.0371	457380	3.8894	5.6603
8493	0.0372	456440	3.9291	5.6594
9262	0.0373	454440	3.9667	5.6575
10011	0.0375	452500	4.0005	5.6556
438000		331443	5.6415	5.5204

50 years = 343678 psi

Note Data available in full report

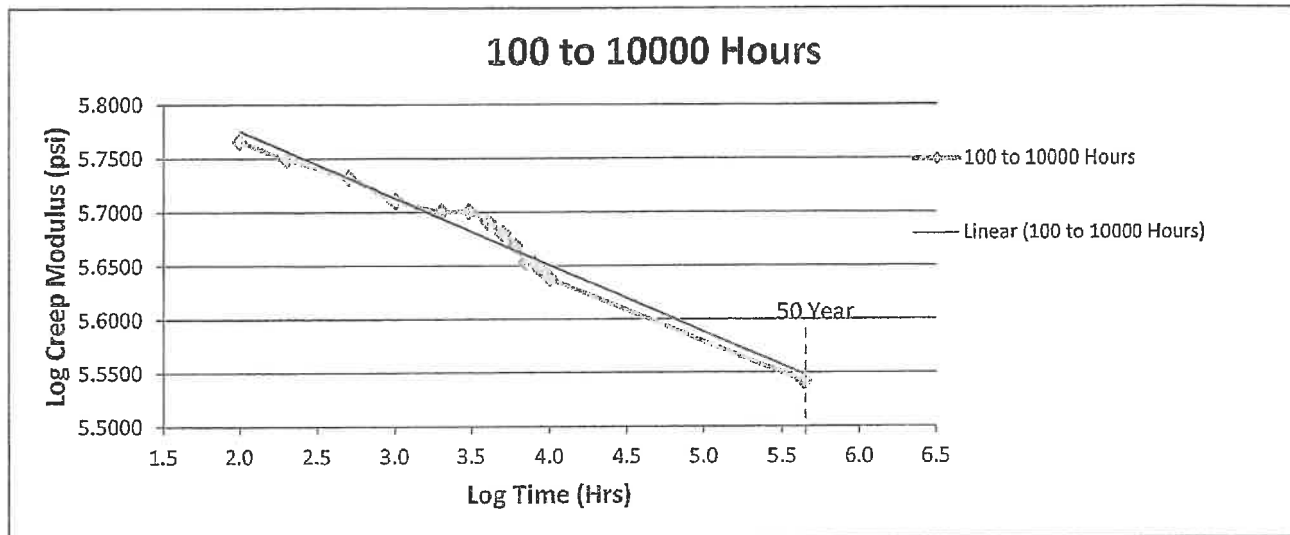


ASTM D 2990 Flexural Creep Data
Interplastic COR 78-AT-3xx/221-269 Polyester Resin
Insituform-104 Series Resin
Interplastic Corporation Thermoset Resins Division
March 10, 2006

Elapsed Time (hours)	Flex Displ Avg (in)	Flex Creep Mod Avg (psi)	Log Values	
			Time	Modulus
100	no data	582633	2.0000	5.7654
200	available	561404	2.3010	5.7493
500		539559	2.6990	5.7320
1,000		513580	3.0000	5.7106
2,000		502416	3.3010	5.7011
3,000		502416	3.4771	5.7011
4,000		491726	3.6021	5.6917
5,000		479816	3.6990	5.6811
6,000		466891	3.7782	5.6692
7,000		450217	3.8451	5.6534
8,000		448759	3.9031	5.6520
9,000		441614	3.9542	5.6450
10,000		434692	4.0000	5.6382
438000		348,344	5.6415	5.5420

50years = 348344 psi

Note Data available in full report

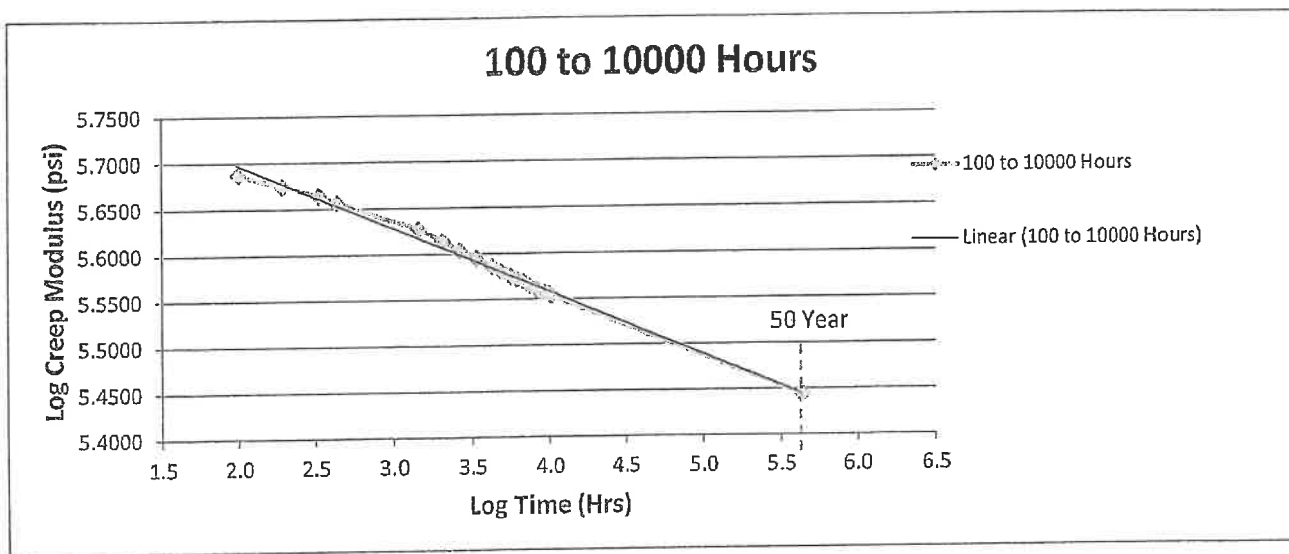


ASTM D 2990 Flexural Creep Data
AOC L721-LT Polyester Resin
Insituform-104 Series Resin
Microbac
December 13, 2011

Elapsed Time (hours)	Flex Displ Avg (in)	Flex Creep Mod Avg (psi)	Log Values	
			Time	Modulus
100	0.4277	486685	2.0004	5.6872
196	0.4268	472531	2.2911	5.6744
335	0.4260	461658	2.5244	5.6643
437	0.4254	453185	2.6404	5.6563
1441	0.4231	423727	3.1586	5.6271
2043	0.4220	411252	3.3102	5.6141
2620	0.4211	401484	3.4183	5.6037
3362	0.4203	393836	3.5266	5.5953
4293	0.4195	385482	3.6328	5.5860
4892	0.4190	380492	3.6895	5.5803
5640	0.4185	375809	3.7513	5.5750
6122	0.4182	373235	3.7869	5.5720
6718	0.4180	371235	3.8272	5.5696
7415	0.4175	367127	3.8701	5.5648
8230	0.4171	363806	3.9154	5.5609
9270	0.4168	360535	3.9671	5.5569
9913	0.4166	359357	3.9962	5.5555
10179	0.4165	358178	4.0077	5.5541
438000		278,070	5.6415	5.4442

50years = 278368 psi

Note Data available in full report



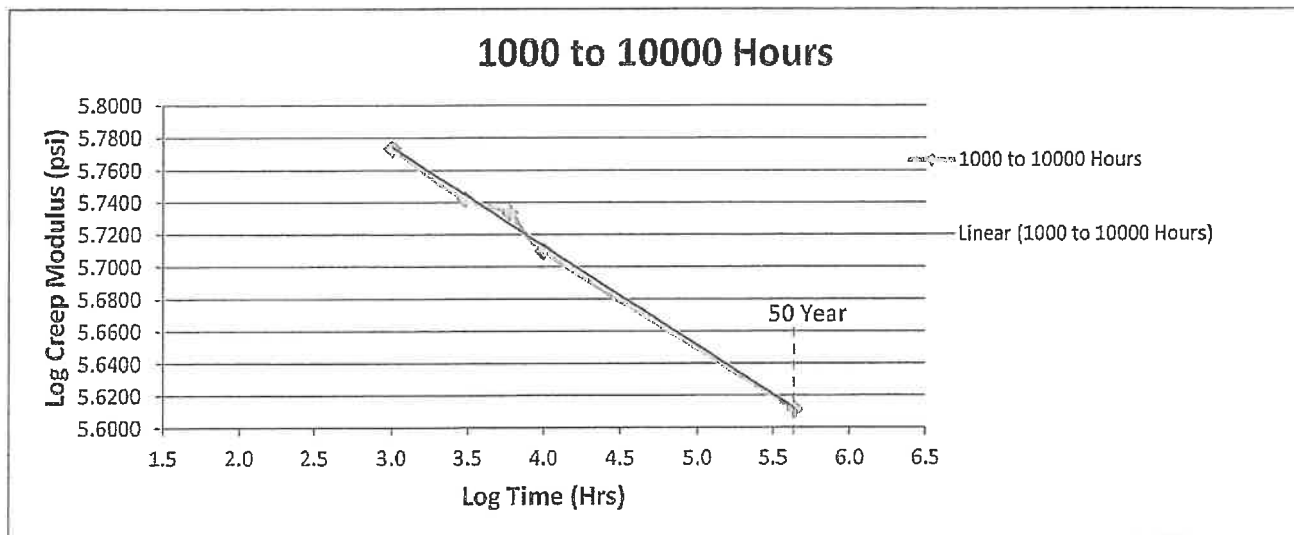
January 20, 2012

ASTM D 2990 Flexural Creep Data
Insituform 102 T/TA Polyester Resin
Insituform-104 Series Resin
CENTRE for ADVANCEMENT of TENCHLESS TECHNOLOGIES
May 1, 2005

Elapsed Time (hours)	Flex Displ Avg (in)	Flex Creep Mod Avg (psi)	Log Values	
			Time	Modulus
1000	0.7240	593614	3.0000	5.7735
3000	0.7767	552208	3.4771	5.7421
6000	0.7920	541394	3.7782	5.7335
10000	0.8350	512511	4.0000	5.7097
438000		408593	5.6415	5.6113

50years = 408593 psi

Note Data available in full report





MTube Handling Guidelines

Dry Tube Handling

Avoid handling equipment that can produce cuts or tears in the tube:

- Fork lifts
- Poor-condition pallets or roller beds
- Cables

Do not drag tube across rough ground or surfaces.

Do not walk across tube.

Store dry tube indoors if possible. If tube must be stored outdoors, keep covered to avoid exposure to sunlight. Move tube indoors for 24 hours if stored outside before wetout to ensure tube temperature is below 80 degrees during wetout.

All patches of MTube should be applied using a Drader gun and polypropylene welding rods.

Drader Guidelines

DISCLAIMER: These guidelines are general in nature. Because operator technique, training, and experience as well as field installation conditions all vary greatly, Mississippi Textiles Corp. (MTC) does not warrant or guarantee the results that may be achieved by the operator in following these guidelines.

WARNING! Drader guns produce high heat and the operator must handle with care to avoid burns and fire.

REQUIRED TOOLS AND MATERIALS

- Acetone
- Duct Tape
- Clean Rags
- Drader Gun (Welder)
- Modified Extruder Head (part number 3900002)
- Ice Filled Bag or Aerosol Refrigerant
- MTube™ (Tube)
- Pliers
- Razor Knife
- Silicone Rubber Roller
- Wire Brush (Brass)
- Tape Measure
- Polypropylene (PP) Welding Rods (part number 3600106)
- Digital Temperature Display (part number 3900046) with Thermocouple Wire (part number 3900045)
- Masking Tape

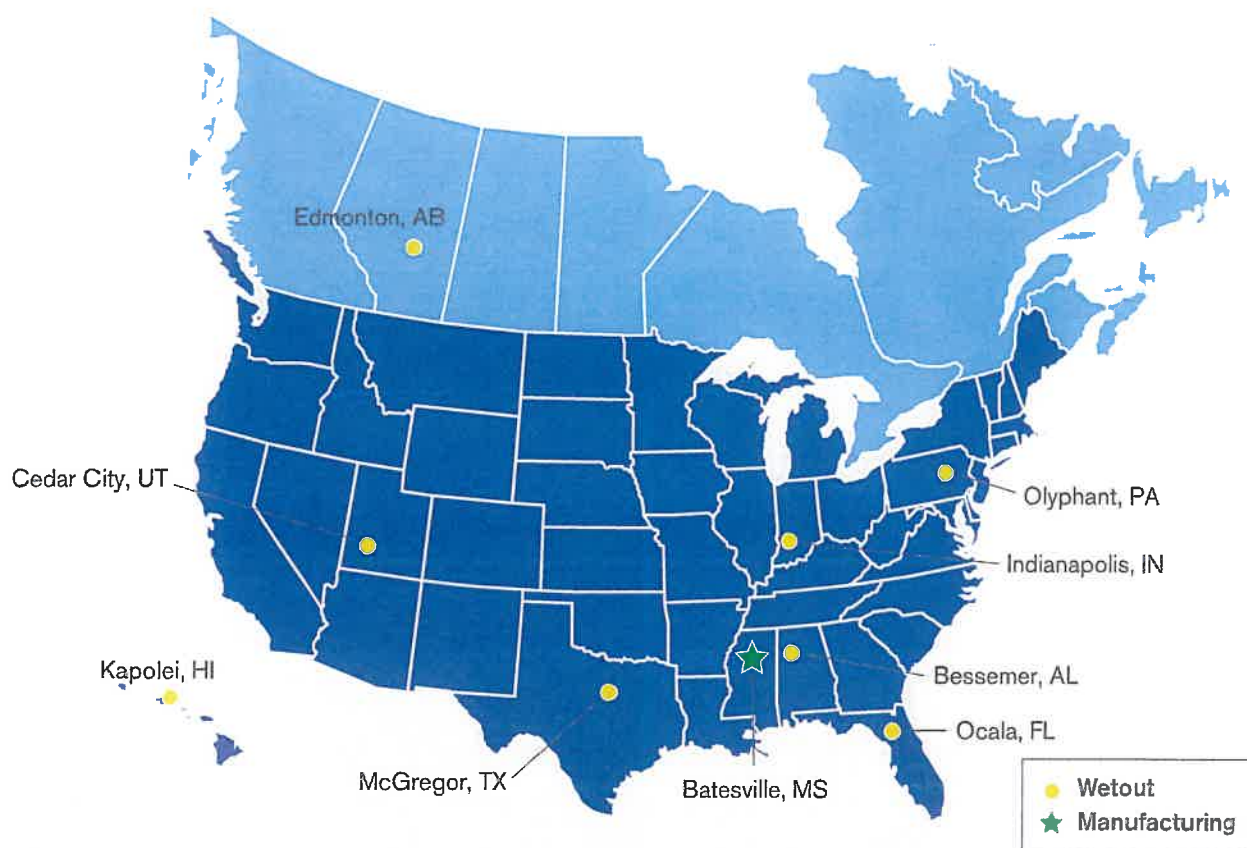
PROCESS STEPS

Equipment Start-Up and Preparation

- 1 Attach the modified extruder head to the hand-held weld gun.
- 2 The recommended welding head design includes a thermocouple mounted in the tip of the head that allows the melt temperature to be precisely measured. The gun temperature settings outlined in this work instruction reference the recommended temperature settings using the digital display attached to the thermocouple.
- 3 Set gun temperature to about 450° F.
- 4 Plug the welder into the appropriate electrical and pneumatic outlets and set power switch to "ON".
- 5 Allow the welder to warm up for several minutes until the red heating indicator cycles off, indicating the set temperature has been reached. Allow the unit to cycle on and off several times to ensure the temperature equalizes across the weld head.
- 6 Use the digital thermometer to verify the weld head reaches at least 450° F before attempting to weld. To ensure acceptable bonding, the temperature of the weld head should be maintained between 425° and 450° F throughout the welding process.

MTC

Leading CIPP supplier



Manufactured Technologies Corporation formerly known as Mississippi Textiles Corporation (MTC) was formed in 2005 to provide high-quality, affordable CIPP to the trenchless rehabilitation industry.

Today, MTC serves as a single-source supplier for a variety of domestic and international contractors. Our commitment to premium raw materials, state-of-the-art manufacturing and exceptional customer service makes us the most reliable and complete choice for your CIPP needs.

With multiple wetout facilities across North America, we are ready to serve you at any jobsite location. This unique footprint allows us to conveniently wet out tube where and when you need it.

MTCTM
an AEGION[®] company

MTC — LOWER COSTS AND RAISE QUALITY ON YOUR NEXT PROJECT

Benefits

- Premium raw materials
- Superior product uniformity
- Leading technical support
- Affordable, fixed pricing
- Multiple wetout facilities
- Flexible pipe design
- 6-inch to 96-inch diameter tubes
- Sewn-seam construction
- Tapers / Transitions
- Water or Steam Cure

Applications

- Sanitary and storm sewers
- Industrial effluent
- Cooling water pipelines
- Outfalls

Quality and Convenience

We construct our tubes for optimal installation and long-term performance. During the manufacturing process, MTube® undergoes more than 25 stringent quality checks for weight, thickness, density, strength and elongation — resulting in a product with superior uniformity.

Backed by more than 40 years of industry expertise, we provide our customers with operational and technical support, including field assistance and submittal data.



State-of-the-art manufacturing facilities ensure MTube® is constructed and wet out for optimal installation and long-term performance.

MTube® CIPP Process

Since 1971, CIPP has been used to rehabilitate over 25,000 miles of pipelines worldwide. A structural solution, MTube® is a resin-saturated felt tube that is typically inserted into an existing wastewater pipeline through manholes.

Once it is in place, it is cured using hot water or steam. Service laterals can be reinstated internally using a robotic cutter. Compared to open trench replacement methods, MTube® is a significantly less intrusive and more cost-effective solution for installing a new pipe with a 100-year design life.



Step 1:

A resin-saturated, coated felt tube is inverted (shown) or pulled into a damaged pipe.



Step 2:

Hot water or steam is used to cure the resin and form a tight-fitting, joint-less and corrosion resistant pipe.



Step 3:

Service laterals are typically restored internally with robotically controlled cutting devices and the rehabilitated pipe is inspected by closed-circuit TV.



an AEGION® company

Manufactured Technologies Corporation
17988 Edison Avenue
St. Louis, MO 63005
636.530.3330
www.manufacturedtechnologies.com

Quality on Demand

MTube® is the industry's highest quality cured-in-place pipe (CIPP) tube, ready when you need it.

Every CIPP project you undertake has its share of challenges and unexpected obstacles. When you order MTube® for your projects, you can be assured that you are getting the highest quality felt tubes available on the market and that you are getting them on your schedule. Our tubes are specially manufactured to accommodate your installation method whether you use water or steam inversion. MTube® will also handle the unique demands of steam cure.

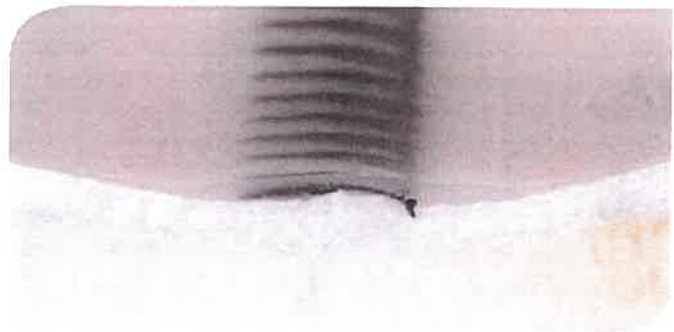
We understand what it takes to consistently produce high quality MTube®. Over 30 years of experience and state-of-the-art manufacturing techniques ensure that our MTube® are constructed for optimal installation and long-term performance.

MTube® are manufactured from premium quality raw materials. The raw synthetic fibers we select to make our MTube® must pass our exacting standards for quality. We then put our MTube® through more than 25 stringent quality checks for weight, thickness, density, strength and elongation. The result is an MTube with superior uniformity.

Premium CIPP tube available wet or dry.



State-of-the-art ISO certified manufacturing techniques ensure that MTube® are constructed and wet-out for optimal installation and long-term performance.



The heat-bonded coating over the seam seals the stitching and creates a permanent connection at the butt-sewn seam joint.

The butted ends of our felt are sewn together. Experience has shown that the strongest tubes are made with butt-sewn seams. The uncoated, butt-sewn seam provides the required strength and produces a smooth, uniform pipe wall around the full circumference of the tube.

A heat-bonded coating is extruded over the seam. Extruding hot coating onto the butt-sewn joint seals the outer seams of our MTube®. This seals the stitching and creates a permanent connection at the butt-sewn seam joint.

MTube™ are available in 6- to 96-inch diameters.

We produce our MTube® to meet your schedules and deadlines. When you encounter the unexpected, you'll appreciate our ability to react to short lead times.

Get your next CIPP project off to a great start, order high-quality MTube® from MTC.

For Quality on Demand, call us at 877-MTC-TUBE (877-682-8823).

MTube[®] Specifications for Cured-In-Place Pipe

1. INTENT

1.1 This document provides specifications for the tube products used in the reconstruction of pipelines and conduits. Proper installation of a resin-impregnated flexible tube produces a tight forming product within the original conduit. The resin is cured using either hot water under hydrostatic pressure or steam pressure within the tube. The Cured-In-Place Pipe (CIPP) will be continuous and permanently fixed within the original pipe.

1.1.1 As installation conditions and experience and techniques differ greatly, Mississippi Textiles Corporation (MTC) excludes any warranty of any kind, express or implied, with respect to the goods sold hereunder as to merchantability, fitness for a particular purpose or any other matter with respect to the goods whether used alone or in combination with other products. MTC has not provided any design specifications; accordingly, MTC does not warrant the design.

2. REFERENCED DOCUMENTS

This specification references standards from the American Society for Testing and Materials, such as: ASTM F1216 (Rehabilitation of Existing Pipelines and Conduits by the Inversion and Curing of a Resin-Impregnated Tube) and ASTM F1743 (Rehabilitation of Existing Pipelines and Conduits by Pulled-in-Place Installation of Cured-in-Place Thermosetting Resin Pipe (CIPP)), which are made a part hereof by such reference and shall be the latest edition and revision thereof.

3. MATERIALS

3.1 Tube - The sewn Tube shall consist of one or more layers of absorbent non-woven felt fabric and shall meet the requirements of ASTM F1216, Section 5.1 or ASTM F1743, Section 5.2.1.

3.1.1 The Tube shall be manufactured to a size, as specified by the customer. Allowance should be made for circumferential stretching during inversion. Overlapped layers of felt in longitudinal seams that cause lumps in the final product shall not be utilized.

3.1.2 The outside layer of the Tube shall be coated with an impermeable, flexible membrane that will contain the resin and allow the resin impregnation (wet out) procedure to be monitored.

3.1.3 The Tube shall be homogeneous across the entire wall thickness containing no intermediate or encapsulated elastomeric layers. No material shall be included in the Tube that may cause delamination in the cured CIPP. No dry or unsaturated layers shall be evident in the wet out tube.

3.1.4 The wall color of the interior pipe surface of CIPP after installation shall be a relatively light, reflective color so that a clear examination with closed circuit television inspection equipment may be made.

3.1.5 Seams in the Tube shall be stronger than the non-seamed felt material.

3.2 Resin - The resin system shall satisfy the requirements of ASTM F1216 and ASTM F1743. The resin system shall produce a CIPP that will comply with the structural and chemical resistance requirements of the relevant ASTM standards.

4. STRUCTURAL REQUIREMENTS

4.1 The CIPP shall be designed by the customer as per ASTM F1216, Appendix X.1.

5. INSTALLATION

Tube Design, Installation and Cool Down shall be performed by the contractor in accordance with ASTM F1216 or ASTM F1743.

5.1 CIPP installation shall be in accordance with ASTM F1216, Section 7, or ASTM F1743, Section 6.

5.1.2 Curing is accomplished by utilizing hot water under hydrostatic pressure or pressurized steam in accordance with the resin manufacturer's recommended cure schedule.

5.1.3 Cool down shall be in accordance with ASTM F1216, Section 7, or ASTM F1743, Section 6.



Mississippi Textiles Corporation
160 Corporate Drive
Batesville, MS 38606
Phone: 662-578-7797

www.mtubeonline.com



NATIONAL POWER RODDING

A Carylton Company

2500 West Arthington Street
Chicago, IL 60612

p: (312) 666-7700

f: (312) 666-0748

www.nationalpowerrodding.com

NATIONAL POWER RODDING CORP. CIPP INSTALLATION PROCEDURES

1. Clean and Inspect

Prior to installation a closed circuit inspection will be performed by a National Power Rodding Cleaning operator to determine the quality of the pipe. This inspection will consist of looking for any obstructions such as protruding service connections, deformed pipe, collapsed pipe, offset joints and roots. At that time the television operator will determine what actions need to be taken to ensure successful installation of liner. This may include cleaning or digging a portion of the line segment

2. Line Measurements

Experienced personnel will enter each access point of the line segment to get physical measurement of the pipe. All manned entry will be performed following OSHA confined space entry guidelines. Above ground physical measurement from point (A to B) will be performed to confirm the operator's measurements.

3. Liner Manufacturing

All physical measurements will be submitted to a liner manufacturer to begin the liner creation process. This process will consist of combining multiple layers of felt to create the liner. One layer of which will be coated with polypropylene or polyethylene plastic. During the process the layers are cut/slit to the desired width and sewn concentrically. The coated layer is then sealed at the seam using an extrusion or taping process to form a final tube. The final tube is then inspected and vacuum impregnated with resin under controlled conditions. A sufficient volume of resin will be used to fill all voids in the tube.

4. Field Set-up

The project foreman will determine what type of traffic control set-up will be needed based on local, state, and federal guidelines. If bypass is needed, the operators will plug the upstream access point and pump the wastewater or water from that access point to either the immediate downstream access point or next access point downstream. This bypass will be performed by using 3 or 4 inch or larger trash pumps along with hard hoses and lay-flay discharge hoses connected with cam-lok fittings. These pumps will stay in place during installation of all liners on each segment. Once the bypass is in place the operators will set-up all of the necessary equipment needed to install the liner.

5. Inversion Process

The inversion process will consist of the following steps

- (a) Attaching the liner to the top or bottom inversion equipment. This will be completed by turning each layer of the liner back onto the elbow of the inversion equipment one at a time to be banded on.
- (b) Placing the inversion equipment in the proper position for top or bottom inversion.
- (c) Applying air pressure to invert the liner. Air pressure will continue to be applied until the liner has reached the end of the host pipe.
- (d) Attaching regulation equipment to the open end of the liner to control the temperature and pressure inside of the pipe.
- (e) Heating and Pressurizing the liner to the manufacture's specifications to ensure that the liner has attached properly to the host pipe.

6. Curing and Cool down

Once the liner has reached the manufacture's specification or cure time the liner will then be cooled down. During the cool down process the temperature is slowly lowered to the manufacture's specifications to allow the liner to set in place.

7. Cutting Ends

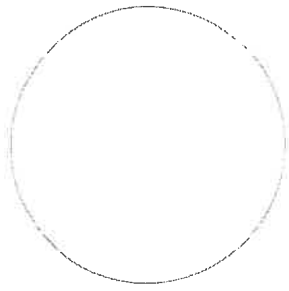
After the liner has been cured and cooled down each end should be cut approximately 2 inches beyond the pipe face. Two inches is left beyond the host pipe to allow the liner to lock into the face of the host pipe.

8. Reinstate Lateral Connections

Lateral reinstating is performed by robotic cutting equipment. This robotic cutter is equipped with a camera to allow precise cutting and brushing of the service connection.

9. Final Inspection

After the connections have been reinstated a final CCTV inspection can be performed through the entire length of the liner. It is recommended that all of the aforementioned steps should be accomplished before taking down any by-pass pumping and or/ plugging. The final CCTV inspection will show the full diameter of the installed liner throughout the entire length of the pipe segment.



NOTIFICATION OF SANITARY SEWER REHABILITATION

Dear Resident,

National Power Rodding Company has been contracted to rehabilitate the sanitary sewers in the vicinity of your home or business. This rehabilitation is being performed using trenchless procedures, so there will be little or no need for excavation. However, during the installation process we are requesting that you suspend/minimize your water usage and therefore your sewer usage. In addition, we are requesting that you make sure that any traps within your home or business are functioning properly and are filled with water.

We are requesting that you suspend/minimize your water usage and use only the essentials, such as toilets and hand washing. In addition, any sump pump connection must be shut off on the date of work defined below. Once your service connection for your sewage has been placed back into service, a representative of our company will notify you so that you may resume your typical usage.

This work will be performed _____. We are anticipating that the hours of requested suspension of water usage will be from 7:00 AM to 5:00 PM. Please understand that this time period may be longer due to issues and circumstances that develop during the progress of work. However, it is our intention to complete the work in an efficient and timely manner so as to cause the least inconvenience possible.

As a reminder, please minimize the use of

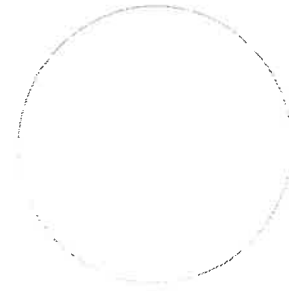
***Showers and baths** ***Washing clothes**

***Washing dishes** ***Extensive toilet use**

On rare occasions during our installation process a distinctive resin like odor may be detected. The odor will dissipate with exposure to the air and there are no residual effects. This odor typically enters via a trap void of water or plumbing defect. Please fill all drains with a bucket of water. This will fill the trap and prevent the odor from entering your home or business.



National Power Rodding
2500 W Arthington
Chicago, IL 60612
312-666-7700



NOTIFICATION OF SANITARY SEWER REHABILITATION

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***Showers and baths** ***Washing clothes**

***Washing dishes** ***Extensive toilet use**

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National Power Rodding
2500 W Arthington
Chicago, IL 60612
312-666-7700



Insituform
an AEGION company

Insituform® CIPP (Uncured)

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations
Revision Date: 08/10/2015 Date of issue: 08/10/2015

Version: 1.0

SECTION 1: IDENTIFICATION

1.1. Product Identifier

Product Form: Mixture

Product Name: Insituform® CIPP (Uncured)

Product Code: Impregnated Insitutube Product (Polyester Filled)

1.2. Intended Use of the Product

Use of the substance/mixture: Sewer rehabilitation. For professional use only.

1.3. Name, Address, and Telephone of the Responsible Party

Company

Insituform Technologies, LLC

17988 Edison Ave.

Chesterfield, MO 63005

T: 636.530.8000

www.insituform.com

1.4. Emergency Telephone Number

Emergency Number : 877.576.2653

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture

Classification (GHS-US)

Flam. Liq. 3 H226

Skin Irrit. 2 H315

Eye Irrit. 2A H319

Skin Sens. 1 H317

Carc. 2 H351

STOT SE 3 H335

STOT RE 1 H372

Asp. Tox. 1 H304

Full text of H-phrases: see section 16

2.2. Label Elements

GHS-US Labeling

Hazard Pictograms (GHS-US)



GHS02



GHS07



GHS04

Signal Word (GHS-US)

Hazard Statements (GHS-US)

: Danger

: H226 - Flammable liquid and vapor.

H304 - May be fatal if swallowed and enters airways.

H315 - Causes skin irritation.

H317 - May cause an allergic skin reaction.

H319 - Causes serious eye irritation.

H335 - May cause respiratory irritation.

H351 - Suspected of causing cancer.

H372 - Causes damage to organs through prolonged or repeated exposure.

Precautionary Statements (GHS-US)

: P201 - Obtain special instructions before use.

P202 - Do not handle until all safety precautions have been read and understood.

P210 - Keep away from extremely high or low temperatures, ignition sources, and incompatible materials. - No smoking.

P233 - Keep container tightly closed.

P240 - Ground/bond container and receiving equipment.

P241 - Use explosion-proof electrical, ventilating, and lighting equipment.

P242 - Use only non-sparking tools.

P243 - Take precautionary measures against static discharge.

P260 - Do not breathe vapors, mist, or spray.

P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.

P270 - Do not eat, drink or smoke when using this product.

Insituform® CIPP (Uncured)

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Proprietary 3 – Organic Peroxide	Proprietary	≤ 3	Org. Perox. C, H242 Acute Tox. 4 (Inhalation: dust, mist), H332 Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 3, H412
Proprietary 4 – Organic Peroxide	Proprietary	≤ 3	Org. Perox. C, H242 Skin Sens. 1, H317 Aquatic Acute 3, H402 Aquatic Chronic 3, H412
Proprietary 5 – Organic Peroxide	Proprietary	≤ 3	Org. Perox. B, H241
Proprietary 6 – Organic Peroxide	Proprietary	≤ 3	Org. Perox. D, H242 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Butylcyclohexanol	Proprietary	≤ 1.5	Eye Irrit. 2A, H319 Aquatic Acute 3, H402
Quartz	Proprietary	≤ 1	Carc. 1A, H350* STOT SE 3, H335 STOT RE 1, H372
Alkanes	Proprietary	≤ 1	Asp. Tox. 1, H304 Aquatic Chronic 4, H413
Isododecane	Proprietary	≤ 1	Asp. Tox. 1, H304
Titanium dioxide	Proprietary	≤ 0.5	Carc. 2, H351**

*Evidence indicates that quartz dust causes cancer and lung disease when inhaled over an extended period of time. Since this product is in a liquid form, the quartz dust is not able to become airborne and cannot be inhaled. Thus, the hazards usually associated with quartz dust are not applicable to this product.

**Titanium dioxide is suspected of causing cancer through inhalation. Since this product is in a liquid form, titanium dioxide is not able to become airborne and cannot be inhaled. Thus, the hazards usually associated with titanium dioxide dust are not applicable to this product.

The specific chemical identity and/or exact percentage of composition has been withheld as a trade secret within the meaning of the OSHA Hazard Communication Standard [29 CFR 1910.1200].

Full text of H-phrases: see section 16

SECTION 4: FIRST AID MEASURES

4.1. Description of First Aid Measures

First-aid Measures General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label if possible).

First-aid Measures After Inhalation: Remove to fresh air and keep at rest in a position comfortable for breathing. Obtain medical attention if breathing difficulty persists.

First-aid Measures After Skin Contact: Remove contaminated clothing. Drench affected area with water or soap and water for at least 15 minutes. Wash contaminated clothing before reuse. Obtain medical attention if irritation develops or persists.

First-aid Measures After Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

First-aid Measures After Ingestion: Do NOT induce vomiting. Rinse mouth. Immediately call a POISON CENTER or doctor/physician.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/Injuries: Causes serious eye irritation. Causes skin irritation. May cause an allergic skin reaction. Suspected of causing cancer. Causes damage to organs through prolonged or repeated exposure. May cause respiratory irritation. May be fatal if swallowed and enters airways.

Symptoms/Injuries After Inhalation: Sneezing, coughing, burning sensation of throat with constricting sensation of the larynx and difficulty in breathing.

Symptoms/Injuries After Skin Contact: Redness, pain, swelling, itching, burning, dryness, and dermatitis.

Symptoms/Injuries After Eye Contact: Redness, pain, swelling, itching, burning, tearing, and blurred vision.

Insituform® CIPP (Uncured)

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Materials for Protective Clothing	: When a risk assessment indicates protective clothing is necessary, chemically resistant materials and fabrics should be used.
Hand Protection	: Wear chemically resistant protective gloves.
Eye Protection	: Chemical safety glasses.
Skin and Body Protection	: Personal protective equipment for the skin and body should be selected based on the task being performed and when a risk assessment indicates this is necessary.
Respiratory Protection	: If exposure limits are exceeded or if a risk assessment indicates it is necessary, approved respiratory protection should be worn.
Environmental Exposure Controls	: Do not allow the product to be released into the environment.
Consumer Exposure Controls	: Do not eat, drink or smoke during use.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State	: Liquid
Appearance	: Transparent, white, blue coated felt impregnated with putty-like, semi-solid liquid
Odor	: Aromatic
Odor Threshold	: No data available
pH	: No data available
Evaporation Rate	: No data available
Melting Point	: No data available
Freezing Point	: No data available
Boiling Point	: No data available
Flash Point	: 31 °C (87.8 °F) (TCC)
Auto-ignition Temperature	: No data available
Decomposition Temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor Pressure	: No data available
Relative Vapor Density at 20 °C	: No data available
Relative Density	: No data available
Solubility	: No data available
Partition Coefficient: N-Octanol/Water	: No data available
Viscosity	: No data available

9.2. Other Information No additional information available.

SECTION 10: STABILITY AND REACTIVITY

- 10.1. Reactivity: This material contains organic peroxides. Heating may cause hazardous decomposition. Hazardous decomposition products from peroxides are flammable and can be explosive under confinement. May react violently with incompatible materials.
- 10.2. Chemical Stability: Stable under recommended handling and storage conditions (see section 7).
- 10.3. Possibility of Hazardous Reactions: Hazardous polymerization may occur.
- 10.4. Conditions to Avoid: Direct sunlight. Extremely high or low temperatures. Sparks, heat, open flame and other sources of ignition. Incompatible materials.
- 10.5. - Incompatible Materials: Strong acids. Strong bases. Strong oxidizers. Accelerators. Heavy metals. Heavy metal salts. Reducing agents. Rust. Amines. Sulfur compounds.
- 10.6. Hazardous Decomposition Products: Benzoic acid. Tert-butanol. Acetone. Benzene. Methane. 3,3,5-trimethylcyclohexane. Thermal decomposition generates: Carbon oxides (CO, CO₂). Nitrogen oxides. Hydrocarbons. Alcohols. Metal oxides. Methylenediphenyl Diisocyanate (MDI). Organic compounds. Irritating or toxic vapors.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information On Toxicological Effects

Acute Toxicity: Not classified

Styrene (100-42-5)	
LD50 Oral Rat	1000 mg/kg
LC50 Inhalation Rat	1.1.7 mg/l/4h

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Quartz	
LD50 Oral Rat	> 5000 mg/kg
LD50 Dermal Rat	> 5000 mg/kg
Proprietary 3 – Organic Peroxide	
ATE (Dust/Mist)	1.50 mg/l/4h
Butylcyclohexanol	
LD50 Oral Rat	4200 mg/kg
LD50 Dermal Rabbit	> 5 g/kg
Titanium dioxide	
LD50 Oral Rat	> 10000 mg/kg

Skin Corrosion/Irritation: Causes skin irritation.

Serious Eye Damage/Irritation: Causes serious eye irritation.

Respiratory or Skin Sensitization: May cause an allergic skin reaction.

Germ Cell Mutagenicity: Not classified

Carcinogenicity: Suspected of causing cancer.

This product contains styrene, which results in the category 2 carcinogen classification. Classifications of styrene from IARC, NTP, and the OSHA Hazard Communication Carcinogen List are shown below. The 13th Report on Carcinogens by the National Toxicology Program classified styrene as “reasonably anticipated to be a human carcinogen based on limited evidence of carcinogenicity from studies in humans, sufficient evidence of carcinogenicity from studies in experimental animals, and supporting data on mechanisms of carcinogenesis” (NTP. 2014. *Report on Carcinogens, Thirteenth Edition*). Additional studies have been conducted with mixed results regarding the carcinogenicity hazard associated with Styrene.

1) A published study suggested that “S-induced mouse lung tumors are unlikely to be relevant to human risk” (*Regulatory Toxicology and Pharmacology*. 2013 June; 66 (1)).

2) A recent update to an extensive study of reinforced plastic workers found “no coherent evidence that styrene exposure increases risk from cancers of the lymphatic and hematopoietic tissue, pancreas, or lung” (*Epidemiology*. 2013 March; 24 (2)).

Based on the weight of evidence and supplier information, styrene was classified as a category 2 carcinogen.

Styrene (100-42-5)	
IARC group	2B
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen.
OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.
Quartz	
IARC group	1
National Toxicology Program (NTP) Status	Known Human Carcinogens.
OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.
Titanium dioxide	
IARC group	2B
OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.
Talc	
IARC group	3
National Toxicology Program (NTP) Status	Evidence of Carcinogenicity, Twelfth Report - Items under consideration.

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): May cause respiratory irritation.

Specific Target Organ Toxicity (Repeated Exposure): Causes damage to organs (ears) through prolonged or repeated exposure (Inhalation).

Aspiration Hazard: May be fatal if swallowed and enters airways.

Symptoms/Injuries After Inhalation: Sneezing, coughing, burning sensation of throat with constricting sensation of the larynx and difficulty in breathing.

Symptoms/Injuries After Skin Contact: Redness, pain, swelling, itching, burning, dryness, and dermatitis.

Symptoms/Injuries After Eye Contact: Redness, pain, swelling, itching, burning, tearing, and blurred vision.

Symptoms/Injuries After Ingestion: The major health threat of ingestion occurs from the danger of aspiration (breathing) of liquid drops into the lungs, particularly from vomiting. Aspiration may result in chemical pneumonia (fluid in the lungs), severe lung damage, respiratory failure and even death.

Chronic Symptoms: Repeated or prolonged inhalation of fumes or vapors may result in hearing loss. Suspected of causing cancer. Chronic exposure may cause defatting of the skin.

INSITUFORM® CIPP (Uncured)

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Proper Shipping Name : RESIN SOLUTION
 Packing Group : III
 Identification Number : UN1865
 Hazard Class : 3
 Label Codes : 3
 ERG Code (ATA) : 3L



SECTION 15: REGULATORY INFORMATION

15.1 US Federal Regulations

Insituform® CIPP (Uncured)	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard Fire hazard Reactive hazard
Styrene (100-42-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Listed on United States SARA Section 313	
SARA Section 313 - Emission Reporting	0.1 %
Quartz	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard
Proprietary 2 - Organic Peroxide	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Proprietary 1 - Organic Peroxide	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Proprietary 3 - Organic Peroxide	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Proprietary 5 - Organic Peroxide	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Alkanes	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Isododecane	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Proprietary 4 - Organic Peroxide	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Butylcyclohexanol	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Titanium dioxide	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
SARA Section 311/312 Hazard Classes	Delayed (chronic) health hazard
Talc (14807-96-6)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Proprietary 6 - Organic Peroxide (686-91-7)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

15.2 US State Regulations

Quartz	
U.S. - California - Proposition 65 - Carcinogens List	WARNING: This product contains chemicals known to the State of California to cause cancer.
Titanium dioxide	
U.S. - California - Proposition 65 - Carcinogens List	WARNING: This product contains chemicals known to the State of California to cause cancer.
Styrene (100-42-5)	
U.S. - Massachusetts - Right To Know List	

Safety Data Sheet

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H242	Heating may cause a fire
H302	Harmful if swallowed
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H332	Harmful if inhaled
H335	May cause respiratory irritation
H350	May cause cancer
H351	Suspected of causing cancer
H372	Causes damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H401	Toxic to aquatic life
H402	Harmful to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects
H413	May cause long lasting harmful effects to aquatic life

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

SDS US (GHS HazCom)

July 05, 2019



U.S. Department
of Transportation

East Building, PHH-30
1200 New Jersey Avenue S.E.
Washington, D.C. 20590

Pipeline and Hazardous
Materials Safety Administration

DOT-SP20850

EXPIRATION DATE: 2021-02-28

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: Insituform Technologies, LLC
Chesterfield, MO
2. PURPOSE AND LIMITATION:
 - a. This special permit authorizes the transportation in commerce of resin-impregnated, coated polyester felt tubing used as a means of restoring structural integrity to aging or damaged pipelines through the use of a cured-in-place pipe ("CIPP") technology. This special permit provides no relief from the Hazardous Materials Regulations (HMR) other than as specifically stated herein. The most recent revision supersedes all previous revisions.
 - b. The safety analyses performed in the development of this special permit only considered the hazards and risks associated with the transportation in commerce.
 - c. Unless otherwise stated herein, this special permit consists of the special permit authorization letter issued to the grantee together with this document.
 - d. No party status will be granted to this special permit.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 173.203, 173.242 in that alternative packaging is authorized, as provided herein.

Tracking Number: 2019034873

b. OPERATIONAL CONTROLS:

(1) All tubes shall be visually inspected for any signs of leakage prior to transportation. There shall be no leakage of resin throughout transportation.

(2) The tubes may only be transported between Insituform's "wet out" facilities and job sites, and in the case of multiple-day projects, between job sites and interim bases.

(3) Tubes cured by water or steam shall be transported in a refrigerated shipping container or transportation vehicle maintaining a temperature of no greater than 30 °F (-1.1 °C).

(4) Tubes must be transported away from any type of ignition source.

8. SPECIAL PROVISIONS:

a. A person who is not a holder of this special permit who receives a package covered by this special permit may reoffer it for transportation provided no modification or change is made to the package or its contents and it is reoffered for transportation in conformance with this special permit and the HMR.

b. A current copy of this special permit must be maintained at each facility where the package is offered or reoffered for transportation.

9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle.

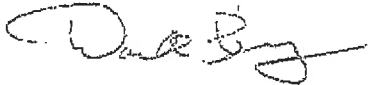
10. MODAL REQUIREMENTS: A current copy of this special permit must be carried aboard each cargo vessel, aircraft, or motor vehicle used to transport packages covered by this special permit. The shipper must furnish a copy of this special permit to the air carrier before or at the time the shipment is tendered.

11. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this special permit and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. 5101 et seq:

July 05, 2019

this special permit must notify the Associate Administrator for Hazardous Materials Safety, in writing, of any incident involving a package, shipment or operation conducted under terms of this special permit.

Issued in Washington, D.C.:



for William Schoonover
Associate Administrator for Hazardous Materials Safety

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Pipeline and Hazardous Material Safety Administration, U.S. Department of Transportation, East Building PHH-30, 1200 New Jersey Avenue, Southeast, Washington, D.C. 20590.

Copies of this special permit may be obtained by accessing the Hazardous Materials Safety Homepage at http://hazmat.dot.gov/sp_app/special_permits/spec_perm_index.htm. Photo reproductions and legible reductions of this special permit are permitted. Any alteration of this special permit is prohibited.

PO: Kenny Herzog/Ben Moore



ORLAND PARK

INSURANCE REQUIREMENTS

Please provide a policy Specimen Certificate of Insurance showing current coverage's along with this form

WORKERS' COMPENSATION & EMPLOYER LIABILITY

Full Statutory Limits - Employers Liability
\$500,000 – Each Accident \$500,000 – Each Employee
\$500,000 – Policy Limit
Waiver of Subrogation in favor of the Village of Orland Park

AUTOMOBILE LIABILITY (ISO Form CA 0001)

\$1,000,000 – Combined Single Limit Per Occurrence
Bodily Injury & Property Damage

GENERAL LIABILITY (Occurrence basis) (ISO Form CG 0001)

\$1,000,000 – Combined Single Limit Per Occurrence
Bodily Injury & Property Damage
\$2,000,000 – General Aggregate Limit
\$1,000,000 – Personal & Advertising Injury
\$2,000,000 – Products/Completed Operations Aggregate
Additional Insured Endorsements: (not applicable for Goods Only)
ISO CG 20 10 or CG 20 26
and
CG 20 01 Primary & Non-Contributory
Blanket Waiver of Subrogation in favor of the Village of Orland Park

☐ CG 20 37 Additional Insured – Completed Operations (provide if box is checked)

In addition to the above, please provide the following coverage, if box is checked.

☒ LIABILITY UMBRELLA (Follow Form Policy)
☒ \$1,000,000 – Each Occurrence \$1,000,000 – Aggregate
☐ \$2,000,000 – Each Occurrence \$2,000,000 – Aggregate
☐ Other: _____

EXCESS MUST COVER: General Liability, Automobile Liability, Employers' Liability

☐ PROFESSIONAL LIABILITY
☐ \$1,000,000 Limit – Claims Made Form, Indicate Retroactive Date
☐ \$2,000,000 Limit – Claims Made Form, Indicate Retroactive Date
☐ Other: _____
Deductible not-to-exceed \$50,000 without prior written approval

☐ BUILDERS RISK

Completed Property Full Replacement Cost Limits – Structures under construction

☐ ENVIRONMENTAL IMPAIRMENT/POLLUTION LIABILITY

\$1,000,000 Limit for bodily injury, property damage and remediation costs
resulting from a pollution incident at, on or mitigating beyond the job site

☐ CYBER LIABILITY

\$1,000,000 Limit per Data Breach for liability, notification, response,
credit monitoring service costs, and software/property damage

Any insurance policies providing the coverages required of the Consultant, excluding Professional Liability, shall be specifically endorsed to identify **"The Village of Orland Park, and their respective officers, trustees, directors, officials, employees, volunteers and agents as Additional Insureds on a primary/non-contributory basis with respect to all claims arising out of operations by or on behalf of the named insured."** The required

9/9/22

Additional Insured coverage shall be provided on the Insurance Service Office (ISO) CG 20 10 or CG 20 26 endorsements or an endorsement at least as broad as the above noted endorsements as determined by the Village of Orland Park. Any Village of Orland Park insurance coverage shall be deemed to be on an excess or contingent basis as confirmed by the required (ISO) CG 20 01 Additional Insured Primary & Non-Contributory Endorsement. The policies shall also contain a Waiver of Subrogation in favor of the Additional Insureds in regard to General Liability and Workers' Compensation coverage. The certificate of insurance shall also state this information on its face. Any insurance company providing coverage must hold an A-, VII rating according to Best's Key Rating Guide. Each insurance policy required shall have the Village of Orland Park expressly endorsed onto the policy as a Cancellation Notice Recipient. Should any of the policies be cancelled before the expiration date thereof, notice will be delivered in accordance with the policy provisions. Permitting the contractor, or any subcontractor, to proceed with any work prior to our receipt of the foregoing certificate and endorsements shall not be a waiver of the contractor's obligation to provide all the above insurance.

Consultant agrees that prior to any commencement of work to furnish evidence of Insurance coverage providing for at minimum the coverages, endorsements and limits described above directly to the Village of Orland Park, 14700 S. Ravinia Avenue, Orland Park, IL 60462. Failure to provide this evidence in the time frame specified and prior to beginning of work may result in the termination of the Village's relationship with the contractor.

ACCEPTED & AGREED THIS 7th DAY OF June, 2023



Signature

William T. Kreidler, President

Printed Name & Title

Authorized to execute agreements for:

National Power Rodding Corp.

Name of Company



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

10/26/2022

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Arthur J. Gallagher Risk Management Services, Inc. 2850 Golf Road Rolling Meadows IL 60008	CONTACT NAME: Christina Cunningham, Client Service Mgr Sr. PHONE (A/C, No, Ext): E-MAIL ADDRESS: christina_cunningham@ajg.com
INSURED NATIONAL POWER RODDING CORP. 2500 W. ARTHINGTON STREET CHICAGO, IL 60612-4108	INSURER(S) AFFORDING COVERAGE INSURER A: Zurich American Insurance Company INSURER B: American Zurich Insurance Company INSURER C: American Guarantee and Liability Ins Co INSURER D: INSURER E: INSURER F:

COVERAGES

CERTIFICATE NUMBER: 1225169533

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL SUBR INSD WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	☒ COMMERCIAL GENERAL LIABILITY ☐ CLAIMS-MADE ☒ OCCUR ☒ XCU INCLUDED GEN'L AGGREGATE LIMIT APPLIES PER: ☐ POLICY ☒ PROJECT ☐ LOC OTHER:		GLO 9377201-19	10/31/2022	10/31/2023	EACH OCCURRENCE \$ 2,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 300,000 MED EXP (Any one person) \$ 0 PERSONAL & ADV INJURY \$ 2,000,000 GENERAL AGGREGATE \$ 4,000,000 PRODUCTS - COMP/OP AGG \$ 4,000,000 \$
A	☒ AUTOMOBILE LIABILITY ☒ ANY AUTO ☐ OWNED AUTOS ONLY ☒ HIRED AUTOS ONLY ☐ SCHEDULED AUTOS ☒ NON-OWNED AUTOS ONLY		BAP 9377199-19	10/31/2022	10/31/2023	COMBINED SINGLE LIMIT (Ea accident) \$ 5,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
C	☒ UMBRELLA LIAB ☒ OCCUR ☐ EXCESS LIAB ☐ CLAIMS-MADE DED ☒ RETENTION \$ 10,000		AUC 5916947-17	10/31/2022	10/31/2023	EACH OCCURRENCE \$ 3,000,000 AGGREGATE \$ 3,000,000 \$
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N ☒ N N/A	WC 9377202-19	10/31/2022	10/31/2023	☒ PER STATUTE ☐ OTH-ER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
EVIDENCE OF INSURANCE ONLY

CERTIFICATE HOLDER

CANCELLATION

NATIONAL POWER RODDING CORP.
2500 W. ARTHINGTON ST.
CHICAGO, IL 60612

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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Policy Number
GLO9377201-19

ENDORSEMENT

ZURICH AMERICAN INSURANCE COMPANY

Named Insured CARYLON CORPORATION

Effective Date: 10-31-22
12:01 AM., Standard Time

Agent Name GALLAGHER

Agent 24059-000

BLANKET NOTICE TO OTHERS OF CANCELLATION

BLANKET NOTIFICATION TO OTHERS OF CANCELLATION

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY. THIS ENDORSEMENT MODIFIES INSURANCE PROVIDED UNDER THE:
COMMERCIAL GENERAL LIABILITY COVERAGE PART

A. IF WE CANCEL THIS COVERAGE PART BY WRITTEN NOTICE TO THE FIRST NAMED INSURED FOR ANY REASON OTHER THAN NONPAYMENT OF PREMIUM, WE WILL DELIVER ELECTRONIC NOTIFICATION THAT SUCH COVERAGE PART HAS BEEN CANCELLED TO EACH PERSON OR ORGANIZATION SHOWN IN A SCHEDULE PROVIDED TO US BY THE FIRST NAMED INSURED. SUCH SCHEDULE:

1. MUST BE INITIALLY PROVIDED TO US WITHIN 15 DAYS;
- A. AFTER THE BEGINNING OF THE POLICY PERIOD SHOWN IN THE DECLARATIONS; OR B. AFTER THIS ENDORSEMENT HAS BEEN ADDED TO POLICY;
2. MUST CONTAIN THE NAMES AND E-MAIL ADDRESSES OF ONLY THE PERSONS OR ORGANIZATIONS REQUIRING NOTIFICATION THAT SUCH COVERAGE PART HAS BEEN CANCELLED;
3. MUST BE IN AN ELECTRONIC FORMAT THAT IS ACCEPTABLE TO US; AND
4. MUST BE ACCURATE.

SUCH SCHEDULE MAY BE UPDATED AND PROVIDED TO US BY THE FIRST NAMED INSURED DURING THE POLICY PERIOD. SUCH UPDATED SCHEDULE MUST COMPLY WITH PARAGRAPHS 2. 3. AND 4. ABOVE.

B. OUR DELIVERY OF THE ELECTRONIC NOTIFICATION AS DESCRIBED IN PARAGRAPH A. OF THIS ENDORSEMENT WILL BE BASED ON THE MOST RECENT SCHEDULE IN OUR RECORDS AS OF THE DATE THE NOTICE OF CANCELLATION IS MAILED OR DELIVERED TO THE FIRST NAMED INSURED. DELIVERY OF THE NOTIFICATION AS DESCRIBED IN PARAGRAPH A. OF THIS ENDORSEMENT WILL BE COMPLETED AS SOON AS PRACTICABLE AFTER THE EFFECTIVE DATE OF CANCELLATION TO THE FIRST NAMED INSURED.

C. PROOF OF EMAILING THE ELECTRONIC NOTIFICATION WILL BE SUFFICIENT PROOF THAT WE HAVE COMPLIED WITH PARAGRAPHS A. AND B. OF THIS ENDORSEMENT.

D. OUR DELIVERY OF ELECTRONIC NOTIFICATION DESCRIBED IN PARAGRAPHS A. AND B. OF THIS ENDORSEMENT IS INTENDED AS A COURTESY ONLY. OUR FAILURE TO PROVIDE SUCH DELIVERY OF ELECTRONIC NOTIFICATION WILL NOT:

1. EXTEND THE COVERAGE PART CANCELLATION DATE;
2. NEGATE THE CANCELLATION; OR
3. PROVIDE ANY ADDITIONAL INSURANCE THAT WOULD NOT HAVE BEEN PROVIDED IN THE ABSENCE OF THIS ENDORSEMENT.

E. WE ARE NOT RESPONSIBLE FOR THE ACCURACY, INTEGRITY, TIMELINESS AND VALIDITY OF INFORMATION CONTAINED IN THE SCHEDULE PROVIDED TO US AS DESCRIBED IN PARAGRAPHS A. AND B. OF THIS ENDORSEMENT.

ALL OTHER TERMS AND CONDITIONS OF THIS POLICY REMAIN UNCHANGED.

Policy Number
GLO9377201-19

SCHEDULE OF NAMED INSURED(S)

ZURICH AMERICAN INSURANCE COMPANY

Named Insured CARYLON CORPORATION

Effective Date: 10/31/2022
12:01 AM, Standard Time

Agent Name GALLAGHER

Agent 24059 000

NAMED INSURED

CARYLON CORPORATION
VIDEO INDUSTRIAL SERVICES, INC.
ACE PIPE CLEANING, INC.
NATIONAL PLANT SERVICES, INC.
DEEP SOUTH INDUSTRIAL SERVICES, INC.
NATIONAL POWER RODDING CORP.
ODESCO INDUSTRIAL SERVICES, INC.
SEWER SYSTEM EVALUATIONS, INC.
NATIONAL INDUSTRIAL MAINTENANCE, INC.
MOBILE DREDGING & VIDEO PIPE, INC.
NATIONAL WATER MAIN CLEANING COMPANY
METROPOLITAN ENVIRONMENTAL SERVICES, INC.
BIO-NOMIC SERVICES, INC.
ROBINSON PIPE CLEANING CO.
ROBINSON PIPE SERVICES, INC.
BEARY PROPERTIES, INC.
DEEP SOUTH SOLUTIONS, INC.
SPECIALIZED MAINTENANCE SERVICES, INC.
NATIONAL INDUSTRIAL MAINTENANCE SOLUTIONS, INC.
SELECT TRANSPORTATION, INC.
VIDEO PIPE SERVICES, INC.
NATIONAL INDUSTRIAL MAINTENANCE - MICHIGAN, INC.
BEARY MANAGEMENT SERVICES, INC.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

DESIGNATED CONSTRUCTION PROJECT(S) GENERAL AGGREGATE LIMIT

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

SCHEDULE

Designated Construction Project(s):

A GENERAL AGGREGATE LIMIT APPLIES TO EACH CONSTRUCTION PROJECT WHERE THE NAMED INSURED IS PERFORMING OPERATIONS, HOWEVER, A GENERAL AGGREGATE LIMIT DOES NOT APPLY TO ANY CONSTRUCTION PROJECT WHERE THE NAMED INSURED IS PERFORMING OPERATIONS THAT ARE INSURED UNDER A WRAP-UP OR ANY OTHER CONSOLIDATED OR SIMILAR INSURANCE PROGRAM.

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

- A. For all sums which the insured becomes legally obligated to pay as damages caused by "occurrences" under Section I - Coverage A, and for all medical expenses caused by accidents under Section I - Coverage C, which can be attributed only to ongoing operations at a single designated construction project shown in the Schedule above:
1. A separate Designated Construction Project General Aggregate Limit applies to each designated construction project, and that limit is equal to the amount of the General Aggregate Limit shown in the Declarations.
 2. The Designated Construction Project General Aggregate Limit is the most we will pay for the sum of all damages under Coverage A, except damages because of "bodily injury" or "property damage" included in the "products-completed operations hazard", and for medical expenses under Coverage C regardless of the number of:
 - a. Insureds;
 - b. Claims made or "suits" brought; or
 - c. Persons or organizations making claims or bringing "suits".
 3. Any payments made under Coverage A for damages or under Coverage C for medical expenses shall reduce the Designated Construction Project General Aggregate Limit for that designated construction project. Such payments shall not reduce the General Aggregate Limit shown in the Declarations nor shall they reduce any other Designated Construction Project General Aggregate Limit for any other designated construction project shown in the Schedule above.
 4. The limits shown in the Declarations for Each Occurrence, Damage To Premises Rented To You and Medical Expense continue to apply. However, instead of being subject to the General Aggregate Limit shown in the Declarations, such limits will be subject to the applicable Designated Construction Project General Aggregate Limit.

- B. For all sums which the insured becomes legally obligated to pay as damages caused by "occurrences" under Section I - Coverage A, and for all medical expenses caused by accidents under Section I - Coverage C, which cannot be attributed only to ongoing operations at a single designated construction project shown in the Schedule above:
1. Any payments made under Coverage A for damages or under Coverage C for medical expenses shall reduce the amount available under the General Aggregate Limit or the Products-completed Operations Aggregate Limit, whichever is applicable; and
 2. Such payments shall not reduce any Designated Construction Project General Aggregate Limit.
- C. When coverage for liability arising out of the "products-completed operations hazard" is provided, any payments for damages because of "bodily injury" or "property damage" included in the "products-completed operations hazard" will reduce the Products-completed Operations Aggregate Limit, and not reduce the General Aggregate Limit nor the Designated Construction Project General Aggregate Limit.
- D. If the applicable designated construction project has been abandoned, delayed, or abandoned and then restarted, or if the authorized contracting parties deviate from plans, blueprints, designs, specifications or timetables, the project will still be deemed to be the same construction project.
- E. The provisions of Section III - Limits Of Insurance not otherwise modified by this endorsement shall continue to apply as stipulated.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

**EARLIER NOTICE OF CANCELLATION
PROVIDED BY US**

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART
LIQUOR LIABILITY COVERAGE PART
POLLUTION LIABILITY COVERAGE PART
PRODUCTS/ COMPLETED OPERATIONS LIABILITY COVERAGE PART

SCHEDULE

Number of Days' Notice 60__

(If no entry appears above, information required to complete this Schedule will be shown in the Declarations as applicable to this endorsement.)

For any statutorily permitted reason other than nonpayment of premium, the number of days required for notice of cancellation, as provided in paragraph 2. of either the CANCELLATION Common Policy Condition or as amended by an applicable state cancellation endorsement, is increased to the number of days shown in the Schedule above.

Waiver Of Subrogation (Blanket) Endorsement

Policy No.	Eff. Date of Pol.	Exp. Date of Pol.	Eff. Date of End.	Producer	Add'l Prem.	Return Prem.
GLO9377201-19	10/31/2022	10/31/2023	10/31/2022	24059000	\$ INCL	\$

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

This endorsement modifies insurance provided under the:

Commercial General Liability Coverage Part

The following is added to the **Transfer Of Rights Of Recovery Against Others To Us Condition**:

If you are required by a written contract or agreement, which is executed before a loss, to waive your rights of recovery from others, we agree to waive our rights of recovery. This waiver of rights shall not be construed to be a waiver with respect to any other operations in which the insured has no contractual interest.

Other Insurance Amendment - Primary And Non-Contributory

ZURICH[®]

Policy No.	Eff. Date of Pol.	Exp. Date of Pol.	Eff. Date of End.	Producer No.	Add'l. Prem	Return Prem.
GLO9377201-19	10/31/2022	10/31/2023	10/31/2022	24059000	INCL	

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

Named Insured: Carylon Corporation

Address (including ZIP Code): 2500 Arthington; Chicago, IL 60612

This endorsement modifies insurance provided under the:

Commercial General Liability Coverage Part

1. The following paragraph is added to the Other Insurance Condition of Section IV - **Commercial General Liability Conditions:**

This insurance is primary insurance to and will not seek contribution from any other insurance available to an additional insured under this policy provided that:

- a. The additional insured is a Named Insured under such other insurance; and
 - b. You are required by a written contract or written agreement that this insurance would be primary and would not seek contribution from any any other insurance available to the additional insured.
2. The following paragraph is added to Paragraph 4.b. of the Other Insurance Condition of Section IV - **Commercial General Liability Conditions:**

This insurance is excess over:

Any of the other insurance, whether primary, excess, contingent or on any other basis, available to an additional insured, in which the additional insured on our policy is also covered as an additional insured on another policy providing coverage for the same "occurrence", offense, claim or "suit". This provision does not apply to any policy in which the additional insured is a Named Insured on such other policy and where our policy is required by written contract or written agreement to provide coverage to the additional insured on a primary and non-contributory basis.

All other terms and conditions of this policy remain unchanged.

WAIVER OF OUR RIGHT TO RECOVER FROM OTHERS ENDORSEMENT

We have the right to recover our payments from anyone liable for an injury covered by this policy. We will not enforce our right against the person or organization named in the Schedule. (This agreement applies only to the extent that you perform work under a written contract that requires you to obtain this agreement from us.)

This agreement shall not operate directly or indirectly to benefit anyone not named in the Schedule.

Schedule

ALL PERSONS AND/OR ORGANIZATIONS THAT ARE REQUIRED BY WRITTEN CONTRACT OR AGREEMENT WITH THE INSURED, EXECUTED PRIOR TO THE ACCIDENT OR LOSS, THAT WAIVER OF SUBROGATION BE PROVIDED UNDER THIS POLICY FOR WORK PERFORMED BY YOU FOR THAT PERSON AND/OR ORGANIZATION.

Policy Number
BAP9377199-19

SCHEDULE OF NAMED INSURED(S)

ZURICH AMERICAN INSURANCE COMPANY

Named Insured CARYLON CORPORATION

Effective Date: 10/31/2022
12:01 A.M., Standard Time

Agent Name GALLAGHER

Agent No. 24059-000

NAMED INSURED

CARYLON CORPORATION
ACE PIPE CLEANING, INC.
BEARY PROPERTIES, INC.
BIO-NOMIC SERVICES, INC.
DEEP SOUTH INDUSTRIAL SERVICES, INC.
DEEP SOUTH SOLUTIONS, INC.
METROPOLITAN ENVIRONMENTAL SERVICES, INC.
MOBILE DREDGING & VIDEO PIPE, INC.
NATIONAL INDUSTRIAL MAINTENANCE, INC.
NATIONAL INDUSTRIAL MAINTENANCE SOLUTIONS, INC.
NATIONAL PLANT SERVICES, INC.
NATIONAL POWER RODDING CORP.
NATIONAL WATER MAIN CLEANING COMPANY
ODESCO INDUSTRIAL SERVICES, INC.
ROBINSON PIPE CLEANING CO.
ROBINSON PIPE SERVICES, INC.
SEWER SYSTEM EVALUATIONS, INC.
SPECIALIZED MAINTENANCE SERVICES, INC.
VIDEO INDUSTRIAL SERVICES, INC.
SELECT TRANSPORTATION, INC.
BEARY MANAGEMENT SERVICES, INC.
NATIONAL INDUSTRIAL MAINTENANCE -
MICHIGAN, INC.
VIDEO PIPE SERVICES, INC.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

WAIVER OF TRANSFER OF RIGHTS OF RECOVERY AGAINST OTHERS TO US (WAIVER OF SUBROGATION)

This endorsement modifies insurance provided under the following:

AUTO DEALERS COVERAGE FORM
BUSINESS AUTO COVERAGE FORM
MOTOR CARRIER COVERAGE FORM

With respect to coverage provided by this endorsement, the provisions of the Coverage Form apply unless modified by the endorsement.

This endorsement changes the policy effective on the inception date of the policy unless another date is indicated below.

Named Insured: CARYLON CORPORATION

Endorsement Effective Date: 10/31/2022

SCHEDULE

Name(s) Of Person(s) Or Organization(s):

ALL PERSONS AND/OR ORGANIZATIONS THAT ARE REQUIRED BY WRITTEN CONTRACT OR AGREEMENT WITH THE INSURED, EXECUTED PRIOR TO THE ACCIDENT OR LOSS, THAT WAIVER OF SUBROGATION BE PROVIDED UNDER THE POLICY FOR WORK PERFORMED BY YOU FOR THAT PERSON AND/OR ORGANIZATION.

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

The **Transfer Of Rights Of Recovery Against Others To Us** condition does not apply to the person(s) or organization(s) shown in the Schedule, but only to the extent that subrogation is waived prior to the "accident" or the "loss" under a contract with that person or organization.

ENDORSEMENT

Insurance for this coverage part provided by:

ZURICH AMERICAN INSURANCE COMPANY

Policy Number

BAP 9377199-19

Renewal of Number

BAP 9377199-18

BLANKET NOTIFICATION TO OTHERS OF CANCELLATION

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.
THIS ENDORSEMENT MODIFIES INSURANCE PROVIDED UNDER THE:
COMMERCIAL AUTO COVERAGE PART

- A. IF WE CANCEL THIS COVERAGE PART BY WRITTEN NOTICE TO THE FIRST NAMED INSURED FOR ANY REASON OTHER THAN NONPAYMENT OF PREMIUM, WE WILL DELIVER ELECTRONIC NOTIFICATION THAT SUCH COVERAGE PART HAS BEEN CANCELLED TO EACH PERSON OR ORGANIZATION SHOWN IN A SCHEDULE PROVIDED TO US BY THE FIRST NAMED INSURED. SUCH SCHEDULE:
1. MUST BE INITIALLY PROVIDED TO US WITHIN 15 DAYS:
 - A. AFTER THE BEGINNING OF THE POLICY PERIOD SHOWN IN THE DECLARATIONS; OR
 - B. AFTER THIS ENDORSEMENT HAS BEEN ADDED TO POLICY;
 2. MUST CONTAIN THE NAMES AND E-MAIL ADDRESSES OF ONLY THE PERSONS OR ORGANIZATIONS REQUIRING NOTIFICATION THAT SUCH COVERAGE PART HAS BEEN CANCELLED;
 3. MUST BE IN AN ELECTRONIC FORMAT THAT IS ACCEPTABLE TO US; AND
 4. MUST BE ACCURATE.
- SUCH SCHEDULE MAY BE UPDATED AND PROVIDED TO US BY THE FIRST NAMED INSURED DURING THE POLICY PERIOD. SUCH UPDATED SCHEDULE MUST COMPLY WITH PARAGRAPHS 2. 3. AND 4. ABOVE.
- B. OUR DELIVERY OF THE ELECTRONIC NOTIFICATION AS DESCRIBED IN PARAGRAPH A. OF THIS ENDORSEMENT WILL BE BASED ON THE MOST RECENT SCHEDULE IN OUR RECORDS AS OF THE DATE THE NOTICE OF CANCELLATION IS MAILED OR DELIVERED TO THE FIRST NAMED INSURED. DELIVERY OF THE NOTIFICATION AS DESCRIBED IN PARAGRAPH A. OF THIS ENDORSEMENT WILL BE COMPLETED AS SOON AS PRACTICABLE AFTER THE EFFECTIVE DATE OF CANCELLATION TO THE FIRST NAMED INSURED.
- C. PROOF OF EMAILING THE ELECTRONIC NOTIFICATION WILL BE SUFFICIENT PROOF THAT WE HAVE COMPLIED WITH PARAGRAPHS A. AND B. OF THIS ENDORSEMENT.
- D. OUR DELIVERY OF ELECTRONIC NOTIFICATION DESCRIBED IN PARAGRAPHS A. AND B. OF THIS ENDORSEMENT IS INTENDED AS A COURTESY ONLY. OUR FAILURE TO PROVIDE SUCH DELIVERY OF ELECTRONIC NOTIFICATION WILL NOT:
1. EXTEND THE COVERAGE PART CANCELLATION DATE;
 2. NEGATE THE CANCELLATION; OR
 3. PROVIDE ANY ADDITIONAL INSURANCE THAT WOULD NOT HAVE BEEN PROVIDED IN THE ABSENCE OF THIS ENDORSEMENT.
- E. WE ARE NOT RESPONSIBLE FOR THE ACCURACY, INTEGRITY, TIMELINESS AND VALIDITY OF INFORMATION CONTAINED IN THE SCHEDULE PROVIDED TO US AS DESCRIBED IN PARAGRAPHS A. AND B. OF THIS ENDORSEMENT.

ALL OTHER TERMS AND CONDITIONS OF THIS POLICY REMAIN UNCHANGED.



ZURICH

Additional Insured – Owners, Lessees Or Contractors – Scheduled Person Or Organization

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

Policy No. GLO 9377201-19

Effective Date: 10/31/2022

This endorsement modifies insurance provided under the following:

Commercial General Liability Coverage Part

SCHEDULE

Name of Person or Organization:

ANY PERSON OR ORGANIZATION, BUT ONLY WHEN YOU ARE REQUIRED TO PROVIDE ADDITIONAL INSURED STATUS IN A WRITTEN CONTRACT OR WRITTEN AGREEMENT EXECUTED PRIOR TO LOSS AND WHERE THAT CONTRACT SPECIFICALLY REQUIRES THE ISO CG2010 10/2001 EDITION FORM OR THE EQUIVALENT OF SAME

- A. Section II – Who Is An Insured** is amended to include as an insured the person or organization shown in the Schedule, but only with respect to liability arising out of your ongoing operations performed for that insured.
- B.** With respect to the insurance afforded to these additional insureds, the following exclusion is added:

2. Exclusions

This insurance does not apply to "bodily injury" or "property damage" occurring after:

- (1)** All work, including materials, parts or equipment furnished in connection with such work, on the project (other than service, maintenance or repairs) to be performed by or on behalf of the additional insured(s) at the site of the covered operations has been completed; or
- (2)** That portion of "your work" out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as a part of the same project.

All other terms, conditions, provisions and exclusions of this policy remain the same.



Additional Insured – Owners, Lessees Or Contractors – Completed Operations

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

Policy No.	GLO 9377201-19	Effective Date:	10/31/2022
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This endorsement modifies insurance provided under the following:

Commercial General Liability Coverage Part

SCHEDULE

Name of Person or Organization:

ANY PERSON OR ORGANIZATION, BUT ONLY WHEN YOU ARE REQUIRED TO PROVIDE ADDITIONAL INSURED STATUS IN A WRITTEN CONTRACT OR WRITTEN AGREEMENT EXECUTED PRIOR TO LOSS AND WHERE THAT CONTRACT SPECIFICALLY REQUIRED THE ISO CG2037 10/2001 EDITION FORM OR THE EQUIVALENT OF SAME

Location And Description of Completed Operations:

ANY LOCATION OR PROJECT, OTHER THAN A WRAP-UP OR OTHER CONSOLIDATED INSURANCE PROGRAM LOCATION OR PROJECT FOR WHICH INSURANCE IS OTHERWISE SEPARATELY PROVIDED TO YOU BY A WRAP-UP OR OTHER CONSOLIDATED INSURANCE PROGRAM

Additional Premium:

Included

Section II – Who Is An Insured is amended to include as an insured the person or organization shown in the Schedule, but only with respect to liability arising out of "your work" at the location designated and described in the schedule of this endorsement performed for that insured and included in the "products-completed operations hazard".

All other terms, conditions, provisions and exclusions of this policy remain the same.

BID BOND

TRAVELERS CASUALTY AND SURETY COMPANY OF AMERICA
Hartford, Connecticut 06183

CONTRACTOR:

(Name, legal status and address)

National Power Rodding Corp.
2500 W. Arthington Street
Chicago, IL 60612

SURETY:

(Name, legal status and principal place of business)

Travelers Casualty and Surety Company of America
One Tower Square
Hartford, CT 06183

OWNER:

(Name, legal status and address):

Village of Orland Park
14700 S Ravinia Ave.
Orland Park, IL 60462

BOND AMOUNT: ten percent of total bid (10%)

PROJECT:

(Name, location or address, and Principal number, if any)

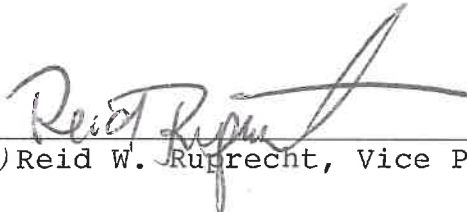
2023 I&I Sanitary Sewer Rehabilitation

The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond sixty (60) days.

If this Bond is issued in connection with a subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

Signed and sealed this 7th day of June 2023

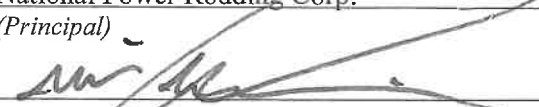

(Witness) Reid W. Ruprecht, Vice President


(Witness) Oscar F. Rincon

National Power Rodding Corp.

(Principal)

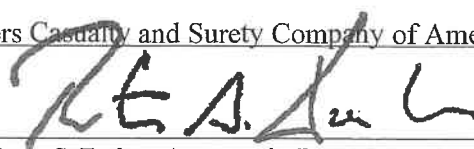
(Seal)


(Title) William T. Kreidler, President

Travelers Casualty and Surety Company of America

(Surety)

(Seal)


(Title) Peter S. Forker, Attorney-in-Fact



**Travelers Casualty and Surety Company of America
Travelers Casualty and Surety Company
St. Paul Fire and Marine Insurance Company**

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company are corporations duly organized under the laws of the State of Connecticut (herein collectively called the "Companies"), and that the Companies do hereby make, constitute and appoint **Peter S Forker** of **ROLLING MEADOWS**, Illinois, their true and lawful Attorney(s)-in-Fact to sign, execute, seal and acknowledge any and all bonds, recognizances, conditional undertakings and other writings obligatory in the nature thereof on behalf of the Companies in their business of guaranteeing the fidelity of persons, guaranteeing the performance of contracts and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law.

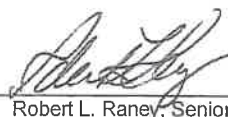
IN WITNESS WHEREOF, the Companies have caused this instrument to be signed, and their corporate seals to be hereto affixed, this **21st** day of **April**, 2021.



State of Connecticut

City of Hartford ss.

By: _____


Robert L. Raney, Senior Vice President

On this the **21st** day of **April**, 2021, before me personally appeared **Robert L. Raney**, who acknowledged himself to be the Senior Vice President of each of the Companies, and that he, as such, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing on behalf of said Companies by himself as a duly authorized officer.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

My Commission expires the **30th** day of **June**, 2026




Anna P. Nowik, Notary Public

This Power of Attorney is granted under and by the authority of the following resolutions adopted by the Boards of Directors of each of the Companies, which resolutions are now in full force and effect, reading as follows:

RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President, any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary may appoint Attorneys-in-Fact and Agents to act for and on behalf of the Company and may give such appointee such authority as his or her certificate of authority may prescribe to sign with the Company's name and seal with the Company's seal bonds, recognizances, contracts of indemnity, and other writings obligatory in the nature of a bond, recognizance, or conditional undertaking, and any of said officers or the Board of Directors at any time may remove any such appointee and revoke the power given him or her; and it is

FURTHER RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President may delegate all or any part of the foregoing authority to one or more officers or employees of this Company, provided that each such delegation is in writing and a copy thereof is filed in the office of the Secretary; and it is

FURTHER RESOLVED, that any bond, recognizance, contract of indemnity, or writing obligatory in the nature of a bond, recognizance, or conditional undertaking shall be valid and binding upon the Company when (a) signed by the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary and duly attested and sealed with the Company's seal by a Secretary or Assistant Secretary; or (b) duly executed (under seal, if required) by one or more Attorneys-in-Fact and Agents pursuant to the power prescribed in his or her certificate or their certificates of authority or by one or more Company officers pursuant to a written delegation of authority; and it is

FURTHER RESOLVED, that the signature of each of the following officers: President, any Executive Vice President, any Senior Vice President, any Vice President, any Assistant Vice President, any Secretary, any Assistant Secretary, and the seal of the Company may be affixed by facsimile to any Power of Attorney or to any certificate relating thereto appointing Resident Vice Presidents, Resident Assistant Secretaries or Attorneys-in-Fact for purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, and any such Power of Attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by such facsimile signature and facsimile seal shall be valid and binding on the Company in the future with respect to any bond or understanding to which it is attached.

I, **Kevin E. Hughes**, the undersigned, Assistant Secretary of each of the Companies, do hereby certify that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies, which remains in full force and effect.

Dated this **7th** day of **June**, 2023




Kevin E. Hughes, Assistant Secretary

**To verify the authenticity of this Power of Attorney, please call us at 1-800-421-3880.
Please refer to the above-named Attorney(s)-in-Fact and the details of the bond to which this Power of Attorney is attached.**

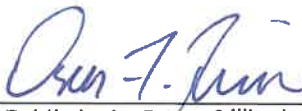
ACKNOWLEDGMENT BY SURETY

STATE OF Illinois }
County of Cook } ss.

On this 7th day of June, 2023, before me personally
appeared Peter S. Forker, known to, me to be the Attorney-in-Fact of
Travelers Casualty and Surety Company of America, the corporation
that executed the within instrument, and acknowledged to me that such corporation executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, at my office in the aforesaid County, the day and
year in this certificate first above written.





Notary Public in the State of Illinois
County of Cook

ADDENDUM No. 1

CHANGE THE FOLLOWING ITEM(S) IN THE SPECIFICATIONS:

SPECIAL PROVISIONS:

1. ITEM #13: LATERAL CLEANING AND TELEVISIONING

- a. Page 57 of 81; **DELETE** the following under "Description":

"Each lateral to be CIPP lined or grouted shall be cleaned and televised prior to CIPP lining or grouting."

INSERT the following under "Description":

"Each lateral to be CIPP lined shall be cleaned and televised prior to CIPP lining."

- b. Page 62 of 81; **DELETE** the following under "Basis of Payment"; last sentence:

"or grout"