Eastern Pipe Service, LLC

October 6, 2020

Mr. Joseph Devine JR. – Town Administrator
Town of Henniker
18 Depot Hill Road
Henniker, NH 03242

RE: Wastewater Collection System Maintenance
CIPP Point Repair Bid 2020 - Bid Date: October 8, 2020 – 2:00 PM

Dear Mr. Devine:

In accordance with the RFP CIPP Point Repair Bid 2020 we are pleased to have the opportunity to offer a cost Proposal Bid for Cured in Place point repairs within the existing sanitary sewers listed in the Scope of Work details Item 1 – 17 included in these documents.

Eastern Pipe Service will furnish all equipment, personel and workmanship for Permaliner Cured in Place Sectional lining of the Scope of Work Items 1-17 at the unit cost of $3,450.00 each item. Total project estimate 17 Items listed = $58,650.00

The rehabilitation of pipelines shall be done by the installation of Permalijner CIPP Sectional Liners a resin-impregnated flexible tube which when cured shall be a continuous tight fitting liner. The CIPP shall extend an equal distance on either side of the defect for a total repair area of 4 to 7 feet per defect to provide a structurally sound and watertight new pipe within the existing sewer pipe

To complete the work at the cost offered, the Town of Henniker, should furnish, at no cost to Eastern Pipe Service the following:

1. Any mapping MH numbering, TV reports of street locations to be repaired.
2. Access to all Manholes not paved over or buried.
3. Water from 1 ½" service @ WWTP, Fire Dept, or pumped from river.
4. Any notification, permits for work on State Roads.

Attached please find the Eastern Pipe Service work history of similar projects experience and references and a listing of equipment and assets available to perform this work. EPS would be available to provide any future service, maintenance and support.

Sincerely,

Eastern Pipe Service

Richard G. Berthiaume
Manager

2020 WASTEWATER COLLECTION SYSTEM MAINTENANCE
CIPP POINT REPAIRS
SCOPE OF WORK

STREET	MANHOLE #	OBSERVATION	DISTANCE DESCRIPTION	GRADE
Flanders Road	G2 – G1	Fracture Multiple	219.6 ft. from MH G2	4
Hall Avenue	85 - 84	Broken @ 07 o'clock, within 8" of joint: Yes	9.7 ft. from MH 85	4
Juniper Ridge	106 - 105	Broken @ 03 o'clock, within 8" of joint: Yes	13.3 ft. from MH 106	4
Juniper Ridge	106 - 105	Hole @ 12 o'clock	151.4 ft. from MH 106	5
Maple Street	M5 – M4	Broken Pipe, Void Visible	132.5 ft. from MH M4	5
Prospect Street	73A - 73	Roots Ball Joint	292.1 ft. from MH 73	4
Rush Road	58 - 57	Broken Pipe Void Visible	9 ft. from MH 58	5
Rush Road	59 - 58	Hole, Soil Visible	6 ft. from MH 58	5
Water Street	135 – Siphon Chamber	Off Road, Infiltration Gusher	128 ft. from MH 135	5
Western Avenue	17 - 16	Broken Pipe @ 12 o'clock	55.7 ft. from MH 17	5
Western Avenue	18 - 17	Infiltration Runner @ 5 o'clock, within 8" of joint: Yes	60.9 ft. from MH 18	4
Western Avenue	35 - 34	Broken @ 11 o'clock, within 8" of joint: Yes	71.5 ft. from MH 35	4
Western Avenue	36 - 35	Broken @ 01 o'clock, within 8" of joint: Yes	43.2 ft. from MH 36	4
Western Avenue	46 - 44	Infiltration Gusher @ 06 o'clock, within 8" of joint: Yes	217.3 ft. from MH 46	5
Western Avenue	47 - 46	Infiltration Runner @ 03 o'clock	289.4 ft. from MH 47	4
Western Avenue	48 - 47	Broken @ 02 o'clock, within 8" of joint: Yes	228.4 ft. from MH 48	4
Ramsdell Road	1 – Pump Station	Grease cut @ pump station	@ pump station	4

Town of Henniker, NH
Wastewater Collection System Maintenance
CIPP Point Repair
Bid 2020

The Town of Henniker, NH is requesting bid pricing for the rehabilitation of sanitary sewer pipelines. These specifications include the minimum requirements for the rehabilitation of sanitary sewer pipelines by the installation of Cured-In-Place Pipe point repairs within the existing pipes with defects as shown in the Scope of Work included as part of these documents.

The rehabilitation of pipelines shall be done by the installation of a resin-impregnated flexible tube which, when cured, shall be continuous and tight-fitting throughout the entire length of the work area. The CIPP shall extend an equal distance on either side of a defect for a total repair area of 4 to 6 feet per defect to provide a structurally sound, and water tight new pipe within a pipe. The contractor is responsible for proper, accurate and complete installation of the CIPP using the system selected by the contractor.

Neither the CIPP system, nor its installation, shall cause adverse effects to any of the owner's processes or facilities. The use of the product shall not result in the formation or production of any detrimental compounds or by-products at the wastewater treatment plant. The contractor shall notify the owner and identify any bi-products produced as a result of the installation operations, test and monitor the levels, and comply with any and all local waste discharge requirements.

These specifications cover all work necessary to furnish and install the CIPP. The contractor shall provide all materials, labor, equipment and services necessary for traffic control, bypass pumping, cleaning and television inspection of sewers to be lined, liner installation, final television inspection and all quality controls. The contractors proposal should include screens to catch debris at the discharge side of manholes while cleaning, traffic control with sign package, traffic cones and all required safety measures per State of New Hampshire guidelines. The Town of Henniker Wastewater Superintendent will notify the State for work performed in State roads, provide water from inch and a half service at WWTP, Fire Dept. or pumped from river and a disposal site for debris and wastewater.

The prices submitted by the contractor, shall include all cost of permits, labor, equipment and materials for the various bid items necessary for furnishing and installing, complete in place, CIPP point repairs in accordance with these specifications. All items of work not specifically mentioned herein which are required, by the contractor, to make the product perform as intended and deliver the final product as specified herein shall be included in the respective lump sum and unit prices bid.

The Town of Henniker request that the work be performed by the successful bidders own personnel. Any subcontractors must be pre-approved by the Wastewater Superintendent.

Bid price proposals must be on company letterhead clearly stating an outline of cost per line item. The bid price shall include all increases in labor, administration and materials for the duration of the contract. No change order in contract price will be permitted.

All work to be done under the direction of the Wastewater Superintendent. The Town of Henniker reserves the right to modify or reduce the scope based on the needs of the town. Additional work may be added at the Town's sole discretion.

Sectional Point Repair Installation

Perma-Liner Industries, LLC. has developed a Sectional Lining Point Repair Process that involves a short liner being installed inside the pipe to cover the damaged or missing pipe section.

The sectional point repairs are manufactured and delivered in a complete kit. Each kit is sized to suit the diameter, length and external loads. This process involves attaching the sectional point repair to a specialized bladder, then positioning the bladder over the damaged area inside the host pipe. The bladder is then inflated and held in place until the thermo-setting resin is cured. Access points are required through upstream and downstream manholes.

Prior to installation of the sectional point repair, the host pipe is cleaned and free of any foreign objects. This will allow a good bond to the host pipe material with the Perma-Liner Sectional Point Repair.

The Perma-Liner Sectional Point Repair is considered a structural repair per ASTM F 1216. The ASTM Specification testing requirements are based on a minimum life expectancy of 50 years.

The Perma-Liner Sectional Point Repairs can be installed in pipe diameters from 4 inches (100mm) to 60 inches (1500mm) diameter and lengths from 2 feet (0.6096m) up to 30 feet (9.1440m) in length.

If a sectional point repair is positioned over a lateral junction, the junction can be re-opened with a specialized robotic cutter after the pipe is lined.

The entire installation can be completed in less than 4 hours!

Sectional Point Repair Specifications

The Perma-Liner Point Repair System uses new, reliable materials to meet our high standards and our customers' expectations. It is a technology that we continue to improve upon every passing year. Times have changed and so has the needs of our clients.

Prior to the development of the Perma-Liner Point Repair System, existing products were insufficient to meet the demands of the ever growing trenchless industry. We knew that the standards should be much higher – more accurate, strength and durability and user friendly.

Compare the processes, compare the resins. Compare independent 3rd party tests. Compare old inaccurate, single-source, wrap around mat based standards with accurate, up-to-date data supplied by Perma-Liner Industries, Inc.

Ask why Perma-Liner Industries, Inc. upgraded the old wrap around mat technology with new installation standards and resin specifications in order to assure a truly reliable Sectional Point Repair Cured-In-Place-Pipe (CIPP) solution for today's more corrosive environments. Ask why competitors did not.

Compare the results. You'll understand why Perma-Liner Industries, LLC. has installers in cities throughout the world installing thousands of sectional point repairs. You'll see that the Perma-Liner Sectional Point Repair isn't only an economical solution and a competitive solution among many; it's the superior solution, the No-Failure solution. Then ask whether you're willing to settle for anything less.

Advanced materials and superior technology is Perma-Liner!

SPECIFICATION FOR POINT REPAIR BY CURED-IN-PLACE-PIPE (CIPP)
FIBERGLASS REINFORCED FELT, PU/PVC COATED, RESIN IMPREGNATED

1.00 Intent

1.01 It is the intent of this Specification to provide for the reconstruction of short lengths of pipelines conduits by the installation of a resin-impregnated flexible tube which is inflated in a short length of the pipeline to form a hard, impermeable, corrosion resistant pipe within a pipe. When cured, the cured-in-place-pipe (CIPP) will be formed to the original conduit. This reconstruction process can be used in a variety of gravity applications such as sanitary sewers and storm sewers. The impermeable Cured-In-Place-Pipe (CIPP) should be continuos, tight-fitting, chemical resistant and air tight.

2.00 Prequalification

2.01 Only bids from prequalified products and contractors will be read. Bids submitted on products or from contractors that have not been prequalified will be returned unopened. The contractor and the proposed method of reconstruction shall be clearly and legibly identified on the bid envelope.

3.00 Materials

3.01 The tube should consist of layered non-woven flexible needled felt tube with an inner PU/PVC impermeable coating and additional layer of reinforced chopped fiberglass and felt. The reinforced fiberglass shall extend at least 3 inches on each side of the inner felt tube to form smooth transitions on each end of the point repair. The tube shall have an impermeable PU/PVC coating. This coating will form the inner layer of the finished pipe and is required for enhancement of corrosion, flow and abrasion properties. The tube shall be thermo-bonded to the prescribed circumference and length. It shall be capable of carrying resin, withstanding installation pressures and curing temperatures. The tube should be compatible with a non-styrene resin system. The tube should be thermo bonded to a size that, when istalled, will form to the internal circumference of the original pipe. Allowance should be made for circumferential stretching during installation.

3.02 Resin –The resin used shall be a high-grade 2-part, ambient cured, corrosion resistant formulation provided by Perma-Liner Industries, LLC. designed for the cured-in-place-pipe (CIPP). Only non-styrene resin formulations will be accepted. The point repair materials must meet or exceed the properties in Table 1.

4.00 Minimum Requirements

Table 1. Properties Shall Meet or Exceed The Following

	ASTM Test Method	Minimum Value
Flexural Strength	D790	4,500 psi
Flexural Modulus	D790	250,000 psi
Tensile Strength	D638	3,000 psi

4.01 The CIPP shall be designed with the minimum properties in Table 1, taking into consideration the condition of the existing pipe.

5.00 Installation

5.01 The tube shall be impregnated with the thermosetting two part resin.

5.02 The tube shall be properly oriented and loaded onto the Carrier Train for proper installation over the repair area.

5.03 The Carrier Train shall be pulled or winched to the damaged area and positioned by Closed Circuit TV camera guiding the installation. The installation shall follow the Manufacturers Process for inflation curing and stripping out.

6.00 Testing Requirements

6.01 Hydraulic Capacity- Calculations must support that the finished Cured-In-Place-Pipe (CIPP)
shall have at least 100% of the full flow capacity of the original host pipe before rehabilitation. Calculated capacities may be derived using a commonly accepted roughness coefficient for the original pipe material. A typical roughness coefficient for the CIPP shall be as verified by third part test data.

7.00 Inspection

7.01 The installation may be inspected visually if appropriate, or by closed-circuit television. Variations from true line and grade may be inherent because of the conditions of the original pipe.

7.02 The finished CIPP should be continuous over the length of the repair area plus one foot extending into structurally sound pipe.

8.00 Clean Up

8.01 Upon acceptance of the installation work and testing, the installer shall reinstate the project area affected by the operations.

9.00 Payment

9.01 Payment for the work included in this section will be in accordance with the prices set forth in the proposal for the quantity of work performed. Progress payments will be made monthly based on the work performed during that period.

End of specification.

Eastern Pipe Service, LLC

Eastern Pipe Service, LLC is a New England based company providing rehabilitation of municipal and industrial sewer systems with more than 40 years' experience in the field of Sanitary Sewer Maintenance, Rehabilitation and Video Inspection. Company principals are Mark Thompson, Owner and Richard G. Berthiaume, General Manager.

Eastern Pipe Service, LLC is a member of the National Association of Sewer Service Companies (NASSCO) and National Utility Contractors Association.

Richard G. Berthiaume
General Manager , Eastern Pipe Service, LLC
Contractor's Designated Project Manager - NASSCO Certification Program PACP #U-606-3470
Experience with over 8 Million feet of CCTV Video Inspection

Hubert Thompson
Manager, Eastern Pipe Service, LLC
Secondary Project Manager: Hubert Thompson, General Manager with Felix Septic Service, Inc.
NASSCO Pipeline Assessment Certification Program PACP #U-212-14644
Experience with over 4 Million feet of CCTV Video Inspection

Todd Burns
Superintendent, Eastern Pipe Service, LLC.
Field Superintendent -NASSCO Pipeline Assessment Certification Program PACP #U-212-14636
Experience with over 5 Million feet of CCTV Video Inspection

TV Inspection

EPS has the right camera for every diameter and application. We use all color pan & tilt 360 degree rotation cameras. Three units available equipped to complete inspections up to 1000 feet in either direction. Our inspection vehicles are also equipped with both small and large diameter transporter for pipes 6 inch to 60 inch. When tractors are stopped, EPS can still get the job done with manhole to manhole winch pulling capabilities. Closed Circuit PACP compliant TV inspection software produces computerized reports with digital video capture.

Eastern Pipe Service will assure adequate and timely completion of this project. We offer the following Listing of Equipment Available to Perform Sewer Cleaning and CCTV Inspection work.

EPS 3 – 2015 Ques Lamp II TV Truck – Pan & Tilt Lateral TV Capability – Granite.NET Software
EPS 2 – 2019 Ques TV Cutter Truck- Ques Pan & Tilt TV Capability – Granite NET - Reporting Software
EPS 7 – Mercedes Sprinter TV Van – Verisight Robotic Rover 125 TV – Granite.NET, Reporting Software

VACTOR 2115 Plus Combination Jet/VAC Cleaners – 3 Available
2015 VACTOR 2115 Plus – 1500 Gallon Water Tank – 15 CY Debris Tank – 3800 CFM Triplex VAC System
2013 VACTOR 2115 Plus – 1500 Gallon Water Tank – 15 CY Debris Tank – 3800 CFM Triplex VAC System
2012 VACTOR 2115 Plus – 1500 Gallon Water Tank – 15 CY Debris Tank – 3800 CFM Triplex VAC System
2010 Sterling Camel – 1200 Gallon Water Tank – 10 CY Debris Tank – 2500 CFM Air/VAC System

Eastern Pipe Service, LLC

Eastern Pipe Service Qualifications Statement – Work History of Similar Projects
References – Permaliner Sectional CIPP Point Repair Lining- Permaliner Mainline CIPP Lining

City of Laconia NH– DPW On Call & Emergency Sewer Cleaning & Repair Services Contract
2019 – Lakeside Ave – Twin 24 Inch Permaliner CIPP Culvert Lining
2020 – Mechanic St – 200 FT – 8 Inch Mainline Permaliner CIPP Liner
- Union Ave – 265 FT, 381 FT – 8 Inch Mainline Permaliner CIPP Liner
- Lafayette St – 811 FT – 8 Inch Mainline Permaliner CIPP Liner – Bypass Pumping

2019 – Beaman St – QTY 2 – 8 inch x 48 inch Permaliner Sectional CIPP Liners
2018 – Tremont St – Drain – 12 inch x 48 inch Permaliner Sectional CIPP Spot Repair
2018 – Fenton Ave – QTY 3 – 8 Inch x 48 inch Permaliner Sectional CIPP Spot Repairs
2017 260 Lakeside Ave – 8 inch x 48 inch Permaliner Sectional CIPP Spot Repair
Winni Coach St – QTY 2 - 8 inch x 7 ft Permaliner Sectional CIPP Spot Repairs– Open 2 services
Baldwin St – QTY 2 – 6 inch x 7 ft Permaliner Sectional CIPP Spot Repairs – Open 2 services
Shore Drive – QTY 2 – 15 inch x 7 FT Permaliner Sectional CIPP Spot Repairs – Open 2 services
Mr. Matt Mooney – DPW Collection Systems Coordinator – 603-528-6379

– Town of Derry NH – DPW - Mr. Jan Wrona – Utility Asset Coordinator – 603-432-6100
2020– Park Ave 8 Inch Mainline 353 Ft, 255Ft, Permaliner Mainline CIPP lining
2019 – Fordway River Crossing – 168 FT - 8 Inch Permaliner Mainline CIPP Lining
2018 – Highland Ave, QTY 4 – 8 Inch x 48 Inch Permaliner Sectional CIPP Spot Repairs
2016 – Clark St – QTY 2 – 8 Inch x 7 FT – Permaliner Sectional CIPP Spot Rep
– Kingsbury St Sewer- 8 inch x 4 FT Permaliner Sectional CIPP Spot Repairs

2020 – Town of Pittsfield WWTP – Utility Partners – Bill Gilpatrick – 603-485-8857
8 Inch Permaliner Mainline CIPP Lining- River Rd 260 Ft – 8 Inch, Barry St 341 Ft – 8 inch
Carroll St – 185 Ft, 8 inch, Main St 102 Ft, 8 Inch.

– Town of Greenville NH – WPCF – Utility Partners – Mr. Brian Golec – 603-878-2800
2020 – Mill St – River Rd – QTY 4 – 8 inch x 7 FT Permaliner Sectional CIPP Spot Repairs
2019 – Dunster Hill Road – QTY 2 – 10 inch x 48 inch Permaliner Sectional CIPP Spot Repairs
2018 – Mill St – QTY 2 – 10 inch x 48 inch Permaliner Sectional CIPP Spot Repairs
2016 Hubbard Hill Road QTY 6 – 8" x 7 FT - Permaliner Sectional CIPP Spot Repairs – over cracks

- South Berwick ME Sanitary District – WWTP – Mr Skip Clough 207-384-0091
2019 – Pleasant St – 345 FT, 321 FT , 8 Inch Permaliner Mainline CIPP Lining
2019 – Main St – QTY 11, 2,381 FT 10 Inch Permaliner Mainline CIPP Lining Bypass Pumping
2020 – Berwick Rd – QTY 2 – 155 FT, 152 FT - 10 Inch Permaliner Mainline CIPP Lining
2020 – Various – QTY 7 – 8 " x 4 FT, 8"x 7 FT Permaliner CIPP Sectional Spot Repairs.

Town of Goffstown Sewer Division – Mr. Michael Yergeau – 603-497-3617
2017 Cross St – 10 inch x 4 FT - Permaliner Sectional CIPP Spot Repairs- cut roots cover service

GREEN MOUNTAIN
Pipeline Services

Town of Henniker, NH
Wastewater Collection System Maintenance
CIPP Point Repair
Bid 2020

BID PRICE PROPOSAL

On October 8th, 2020 Green Mountain Pipeline Services, LLC submits the following unit prices for the Wastewater Collection System Maintenance CIPP Point Repair Bid 2020:

1. 8"-10" CIPP Point Repairs < or = to 6 LF - $2,900.00 EA @ 16 EA - $46,400.00
2. Grease Cutting @ Pump Station - $1,250.00 Lump Sum

Total Contract Price = $47,650.00

It appears in the bid documents that the requirement for bonds for this project is at the discretion of the Town. Should the Town of Henniker require Performance and Maintenance Bonds for this project the total contract price would increase by $750.00 to $48,400.00.

Please find included with our bid a copy of our insurance certificate, references, and technical specifications for the CIP Spot Repair system we use. Should you have any questions regarding our proposal please contact Corey Stearns at the office at (802) 763-7022, or on his cell phone at (802) 316-1062, or at corey@greenmountainpipe.com.

Proposal submitted and executed by:

Corey Stearns
Vice President

GREEN MOUNTAIN
Pipeline Services

At a duly authorized meeting of the Board of Directors of **Green Mountain Pipeline Services, LLC.** held on November 30th, 2018 at which all the Directors were present or waived notice, it was voted that **Corey Stearns** acting as **Executive Vice President** of this company be and he hereby is authorized to execute bidding documents, contracts and bonds in the name and behalf of the said company and affix its corporate seal thereto, and such execution of any contract obligation in this company's name and on its behalf by such **Executive Vice President** under seal of the company shall be valid and binding upon this company.

A true copy

Attest: Kimberly Small
Kimberly Small – Notary Public

Place of Business:
768 South Main St. – Unit 1
Bethel, VT 05032

I hereby certify that I am the **President** of **Green Mountain Pipeline Services, Inc.**, that **Corey Stearns** is the duly elected **Executive Vice President** of said company, and that the above vote has not been amended or rescinded and remains in full forces and effect as of the date of the contract.

(Corporate Seal)

Tim Vivian – President

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 1/22/2020

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 Swingle, Collins & Associates 13760 Noel Road, Suite 600 Dallas TX 75240	CONTACT NAME: Services PHONE (A/C, No, Ext): 972-387-3000 FAX (A/C, No): 972-387-3808 E-MAIL ADDRESS: services@swinglecollins.com
INSURED INFRSER-01 Infrastructure Services Group LLC 1 Haywood Street, Suite 463 Asheville NC 28801	INSURER(S) AFFORDING COVERAGE — NAIC # INSURER A : Travelers Indemnity Company — 25658 INSURER B : Travelers Indemnity Company of CT — 25682 INSURER C : Travelers Property Casualty Insurance Company of A — 25674 INSURER D : INSURER E : INSURER F :

COVERAGES **CERTIFICATE NUMBER:** 648400561 **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 INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE [X] OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: POLICY [X] PRO-JECT [ ] LOC OTHER:			DT-CO-4K572475-IND-19	2/19/2019	2/19/2020	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG $	$ 1,000,000 $ 300,000 $ 10,000 $ 1,000,000 $ 2,000,000 $ 2,000,000 $
B	AUTOMOBILE LIABILITY X ANY AUTO OWNED AUTOS ONLY HIRED AUTOS ONLY SCHEDULED AUTOS NON-OWNED AUTOS ONLY			DT-810-4K572475-TCT-19	2/19/2019	2/19/2020	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) $	$ 1,000,000 $ $ $ $
C	X UMBRELLA LIAB X OCCUR EXCESS LIAB CLAIMS-MADE DED X RETENTION $ 10,000			CUP-1N397256-19-26	2/19/2019	2/19/2020	EACH OCCURRENCE AGGREGATE $	$ 10,000,000 $ 10,000,000 $
B A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y/N [N] N/A (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below			UB-4K856945-19-26-G UB-4K858465-19-26-E	2/19/2019 2/19/2019	2/19/2020 2/19/2020	X PER STATUTE OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ 1,000,000 $ 1,000,000 $ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
Named Insureds Include: Green Mountain Pipeline Services, Inc., Green Mountain Pipeline Services, LLC, Mr. Rehab, LLC and Mr. Rehab, Inc.

CERTIFICATE HOLDER

Insured's Copy
For Informational Purposes Only

CANCELLATION

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

GREEN MOUNTAIN
Pipeline Services

References

1) **City of Manchester**
300 Winston Street
Manchester, NH 03103
603-624-6341
Fred McNeil

CDM Smith
6709 N. Commercial Street
Manchester, NH 03101
603-222-8300
Dave Polcari

Manchester is in the middle of a multi-year I & I reduction program and Green Mountain Pipeline Services is currently completing a third contract for the City. During these three contracts, that have spanned from 2014 to 2019, we have relined with CIPP over 100,000 LF of sanitary & storm sewers ranging in size from 6" to 60", reinstatement & sealing of more than 1500 laterals and the installation of 400 CIPP spot repairs.

2) **Town of Holden**
1196 Main Street
Holden, MA 01520
508-210-5550

Tighe & Bond
53 Southampton Road
Westfield, MA 01085
413-562-1600
Dave Popielarchzyk

Green Mountain Pipeline Services installed 1225 LF of CIPP Liner into an 8" force-main including end-seals and testing the liner to 60 PSI. All of this was as part of a pump station upgrade project where GMPS worked as a sub-contractor for N. Granese & Sons.

3) **Town of Hull**
Wastewater Treatment Facility
1111 Nantasket Avenue
Hull, MA 02045
781-925-1207
John Struziery

Woodard & Curran
980 Washington Ave
Dedham, MA 02026
800-446-5518
Peter Lyons

Beginning in late 2019, Green Mountain Pipeline Services completed the project for the rehabilitation of the Interceptor Sewer that runs through town to the treatment plant. This project included the relining of 10,000 LF of 36" sewer, the by-passing of its flow (7 mgd), the rehabilitation with cement & epoxy of the 72 manholes associated with the interceptor and the testing and sealing of the 175 laterals within the pipe.

4) **City of Norwalk WPCA**
15 South Smith Street
Norwalk, CT 06855
203-854-7791
Ralph Kolb

Jacobs
100 Great Meadow Road
Wethersfield, CT 06109
860-560-8900
Karina Massey

Green Mountain Pipeline Services has been contracted to complete the first of the City's I & I reduction projects. Our project requires the rehabilitation and replacement of sanitary sewers and their associated manhole and laterals. The rehabilitation methods are CIPP MH to MH lining, 32,000; CIPP spot repairs, 20 each; relining of manholes with cement or epoxy, 60 each.

5) **Town of Westborough**
34 West Main Street
Westborough, MA 01581
508-366-3070
Brian Antoniolli

AECOM
250 Apollo Drive
Chelmsford, MA 01824
978-905-2100
Mark Meserve

This project required the rehabilitation of the Town's 6,100 LF of 30" interceptor using CIPP, the by-pass pumping of 4 MGD of sewerage flow and the rehabilitation of 48 manholes with cement and epoxy. Much of this project was through an easement.

6) **City of Newton**
1000 Commonwealth Ave
Newtown, MA 02459
617-796-1000

Weston & Sampson
5 Centennial Drive
Peabody, MA 01960
978-532-1900
Mike DePalma

Since 2013 Green Mountain Pipeline Services has installed over 189,000 LF of CIPP Liners in sanitary sewers ranging size from 6" to 30", rehabilitated over 6,000 VF (750 MH's), tested & sealed over 2500 laterals as part of the City's on-going 10-year program to rehabilitate their whole collection system. On this job we grouted the laterals in non-circular pipes.

7) **City of Worcester**
455 Main Street
Worcester, MA 01608
508-929-1300

Weston & Sampson
427 Main Street
Worcester, MA 01608
508-762-1676
Frank Ochipinti

From 2014 to 2017, Green Mountain Pipeline Services completed two projects for the City of Worcester. The first, the Cambridge Street Interceptor Project involved the relining with CIPP 8,500 LF of sanitary sewers made of brick or hone through rock ranging in size from 28" x 42" to 48" x 72". There were many challenges in this job that required extensively planning and downright 'Yankee' ingenuity to achieve a successful outcome. These included by-passing 30 million gallons of sewerage each day through congested city streets to supporting the liners within the rock tunnel portion, which were not uniform in shape or size, to just transporting such large liners from our wet-out facility in VT. This project also included the rehabilitation of the manhole with epoxy coating and the testing and sealing of laterals in the egg-shaped pipe.

The second project for the City was much more conventional with the relining of 27,000 LF of sanitary sewers from 8" to 36", as well as the rehabilitation of manholes with cement and the test & sealing of the laterals.

8) **City of Revere**
281 Broadway
Revere, MA 02151
781-286-8149
Donald Goodwin – DPW Superintendent

CDM Smith
50 Hampshire Street
Cambridge, MA 02139
617-452-6719
Steve Callahan

Project was completed in the Fall of 2013 and consisted of the CIPP relining of 33,000 LF of 8" to 15" Sanitary Sewers; Rehabilitation of 230 Manholes by coating with Epoxy and 75 Manholes by coating with Cement; Relining of 990 lateral/main connections and up the lateral 20". This project was completed on time and on budget.

9) **City of Lewiston**
27 Pine Street
Lewiston, ME 04240
207-513-3005
Jeff Beaule

Two projects have been completed for the City of Lewiston, one in 2015 & one in 2016. The earlier project required the CIPP relining of 11,000 LF of 8" to 30" sanitary sewers with a large portion being the 30" interceptor with only one access point that was still deep in the woods. Green Mountain Pipeline Services had to build a road, and remove said road after the project, to reach the one manhole where we would invert the liners in both upstream and downstream directions. Both shots were in excess of 900 LF each. Another challenge to this location was the presence of a seemingly abandoned RR line that had to be crossed. Special precautions had to be taken so that the temporary road could be removed from the RR without damaging it. All was done according to spec and without incident.

The second project kept GMPS out of the woods and on the streets of Lewiston where we relined with CIPP over 21,000 LF of 8" to 18" sanitary sewers, some requiring tapers to accommodate changes in pipe size within the run of pipe. This was done to avoid excavation.

10) **Village of Waterloo**
41 West Main Street
Waterloo, NY
315-539-9131

MRB Group
145 Culver Road
Rochester, NY 14604
585-381-9250

Green Mountain Pipeline Services rehabilitated 24,000 LF of 8" to 20" sanitary sewers within the village. 3,000 LF of this pipe was located in the middle of Routes 5 & 20 that is the main thoroughfare in the Village and required nighttime work. Also, complicating this project was the excessive amount of rain that this area received in the Spring of 2013 and required extensive by-pass pumping. This project also required the replacement via excavation of close to 2,000 LF of 8" sanitary sewers. GMPS coordinated all of this work and completed it on time.

11) **State of Connecticut DOT**
2800 Berlin Turnpike
Newington, CT 06111
860-594-2000

Folsom Construction
138 Rye Street
South Windsor, CT 06074
860-528-8428
William Cunningham

This project was completed for the CT DOT in July of 2013 and consisted the relining of 375 LF of a 72" RCP Culvert. Project required coordination with DOT and the Folsom Construction because of the difficult access and the sheer size of the liner.

12) **Town of Arlington**
730 Massachusetts Avenue
Arlington, MA 02476
781-316-3323
Wayne Choulnard

Weston & Sampson Engineers
5 Centennial Drive
Peabody, MA 01960
978-532-1900
Jeff Huttom

The Phase 5 – Sanitary Sewer Rehabilitation Program was completed in the Fall of 2013. This project was a complete rehabilitation of a portion on the Town's sanitary sewer system that included the CIPP relining of 13,700 LF of 8" to 15" pipe; the installation of 27 CIPP spot repairs; the testing and sealing of 175 lateral connections and the rehabilitation of 175 manholes via coating with cement. Following all of this work we were required to conduct flow isolations on each of the sections repairs to determine the amount of water stopped from coming into the system.

13) **Town of Danvers**
One Burroughs Street
Danvers, MA 01923
978-762-0254 ext. 637
Rick Rodgers – Town Engineer

CDM Smith
50 Hampshire Street
Cambridge, MA 02139
617-452-6719
Steve Callahan

A complete approach to the rehabilitation of this portion of the sewer system by relining 5,400 LF of sanitary sewers, 8" to 16" with CIPP, the installation of 17 CIPP spot repairs and the relining of 61 lateral/main connections. This project was completed in the fall of 2013.

14) **Town of Shrewsbury**
100 Maple Avenue
Shrewsbury, MA 01545
508-841-8506
Jeff Howland

JA Polito & Sons
587C Hartford Turnpike
Shrewsbury, MA 01545
508-842-5300
Ken Polito

Working as a sub-contractor to JA Polito on the Phase II & III Interceptor Upgrades Projects, GMPS completed the relining with CIPP of 780 LF of 18", 970 LF of 24" and 9,050 LF of 27" sanitary sewer interceptor. This project required us to work in an easement with difficult access and we had to set up and run a by-pass system capable of handling 12 MGD. Working through the winter of 2013-2014, the coldest winter in over twenty years, the project was completed right on time in February of 2014.

15) **Town of Ithaca**
215 North Tioga Street
Ithaca, NY 14850
607-273-1656

The town of Ithaca designed and managed the rehabilitation of the sanitary system on Trumansburg Road, the main road through the western part of the town. The work consisted of the relining of 1,900 LF of 10" pipe and the rehabilitation with cement and epoxy of 6 manholes. Traffic control was a large part of this contract.

16) **Village of Marcellus**
6 Slocombe Avenue
Marcellus, NY 13108
315-673-3112
Harold Muncy

MRB Group
145 Culver Road
Rochester, NY 14604
585-381-9250

This project was completed in September of 2013 and required GMPS to reline 4,400 LF of 8" sanitary sewers within the Village.

17) **Oneida County**
Department of Water Quality & Water Pollution Control
51 Leland Ave
Utica, NY 13501
315-798-5656
John Waters

O'Brien & Gere
101 First Street
Utica, NY 13501

315-956-6950
Brian Whittaker

Completed Phase 2 Project in the summer of 2013. This project was a manhole rehabilitation contract that required the cement coating of 210 manholes, installing 800 chimney seals, adjusting over 600 frames and covers and the installation of 30 new frames and covers. This project was scattered over the entire county and required coordination with not only the Oneida County but the State of New York DOT and each individual town's DPW/Highway Departments.

18) **Village of Newark**
100 East Miller Street
Newark, NY 14513
John Reynolds – Superintendent
315-331-4685

MRB Group
145 Culver Road
Rochester, NY 14604
585-381-9250

Completed, in 2012, a Sewer System Rehabilitation project that involved the relining of 9,700 LF of 6" to 12", rehabilitation of manholes and open cut repairs. Project involved working on a busy State Highway that took considerable coordination with NYS DOT and the Village.

19) **Village of Hilton**
59 Henry Street
Hilton, NY 14468
Mike McHenry – Superintendent
585-392-4144

MRB Group
145 Culver Road
Rochester, NY 14604
585-381-9250

Relined 3,000 LF of 8" & 10" sanitary sewer pipes within the Village and outside the Village in an easement. Project was completed under budget and early during the summer of 2012.

20) **City of Oswego**
13 West Oneida Street
Oswego, NY 13126
Tony Leotta – Assistant Director
315-342-8153

GHD
One Remington Park Drive
Cazenovia, NY 13035
Randy Cameron – Project Eng.
315-679-5800

GMPS worked on the first two contracts within the City involving sewer replacement and rehabilitation. Our portion of the project consisted of the relining of 23,800 LF of 8" through 24" sewer pipe. Also included was the sealing of 335 laterals. The biggest challenge on this job was identifying active laterals to reopen because many of the factory lateral opening had been abandoned and were a significant source of infiltration. Out of the 335 we had to open, only one mis cut was made. The first project was completed in August of 2012 and the second project was complete in November of 2013.

21) **Town of East Longmeadow**
60 Center Street
East Longmeadow, MA
413-525-5400

Tighe & Bond
53 Southampton Road
Westfield, MA 01085
Mike McMannus – Project Eng.
413-562-1600

Relatively small project to reline 2,300 LF of 8" & 10" pipe, seal 12 laterals and smoke test approximately 4,000 LF. Project was completed in the Fall of 2012.

22) **Town of Great Barrington**
334 Main Street
Great Barrington, MA 01230
Joe Sokul – Sewer Superintendent
413-528-0867

Tighe & Bond
53 Southampton Road
Westfield, MA 01085
Mike McMannus – Project Eng.
413-562-1600

Completed this tricky project in the Spring of 2012. It was tricky because of a number of the sewers to be relined crossed Main Street right in the center of Town. Here we relined 1,450 LF of 8" to 36" pipe and sealed 15 laterals.

23) Town of Erving
16 Public Works Blvd
Erving, MA 01344
Paul Prest – Director of Public Works
413-423-3354

Tighe & Bond
53 Southampton Road
Westfield, MA 01085
Mike McMannus – Project Eng.
413-562-1600

Have done three different projects for the Town from 2007 to 2012. The first project consisted of the TV & Cleaning of 4,000 LF of sewers. The second project was the relining of 1,500 10" & 12" pipe and the last project was the relining of 4,900 LF of 8" to 18" pipe and the testing & sealing of 50 laterals.

24) Village of Bolton Landing
4949 Lake Shore Drive
Bolton Landing, NY 12814
Chet Dagles
518-743-2500

CT Male & Associates
50 Century Hill Drive
Latham, NY 12110
Alexandra Rhodes – Project Eng.
518-786-7400

Two projects were completed in the Village for Warren County, 518-623-4141, in 2010 & 2011. The combined work on these projects consisted of 10,400 LF relining of 8" & 10" sanitary sewers and the rehabilitation of 10 manholes. After completing the first project, which was on about 2,000 LF, the Village and County saw how smoothly the project went that the came back us with another 8,000 LF of relining work within a couple of months of completion of the initial project.

25) Village of Lake George
26 Old Post Road
Lake George, NY 12814
Tim Shudt – Sewer Superintendent

CT Male & Associates
50 Century Hill Drive
Latham, NY 12110
Alexandra Rhodes – Project Eng.

Again, completed two projects for the Village in 2010 & 2011. These totaled 7,000 LF of 4" to 15" sanitary sewers, all on the lakeside of the Village. The location of the sewers made this project challenging as they meandered around dock, marinas, motels and parks. Manhole rehabilitation was also part of this project.

26) City of Meriden
142 East Main Street
Meriden, CT 06450
Dennis Waz – Operations Manager
203-630-4261

AECOM
500 Enterprise Drive
Rocky Hill, CT 06067
Dawn Jakaila – Project Eng.
877-263-5777

To date this is the largest project completed by Green Mountain Pipeline Services; Relining 31,000 LF of 8" to 24" sanitary sewers, Sealing 625 Laterals, Relining 1600 VF of Manholes, Numerous Repairs via Excavation. The most interest aspect of this project was the relining of a 24" sewer that went under Hanover Pond including through a manhole that was on an island in the middle of the pond. This line was completed as one 1600 LF shot. Project was completed in 2011, on time and under budget.

27) City of Taunton
90 Ingell Street
Taunton, MA 02780
Anthony Abreau – Assistant Director
508-821-1431

Beta Engineering
6 Blackstone Valley Place
Lincoln, RI 02865
Mike Andrus – Project Eng.
401-333-2382

Green Mountain Pipeline Services' portion of this project, completed in 2011, was the relining 19,800 LF of 6" to 30" sanitary sewers and the sealing of 238 laterals, was just a piece of the latest phase of an on-going sewer rehabilitation program that involves the separation of the City's sewers. For GMPS, the lining work included the relining of about 2,000 LF of a 20" pipe that ran right down in the Taunton River.

28) **Town of Mount Pleasant, NY**
Department of Public Works
Town of Mount Pleasant
One Town Hall Plaza
Valhalla, NY 10595
(914) 831-1062
Robert Guena, P.E. – Director of Water & Sewer

Charles A Manganaro
Consulting Engineers
7 West Cross St.
Hawthorne, NY 10523
(914) 769-3400
Shailesh Naik, P.E. – President

GMPS completed four projects for the Town encompassing over 90,000 lf. of 8" through 15" CIPP between 2008 & 2012. These projects also included the Cleaning & TV Inspection of an additional 100,000 LF of sewers as preparation for the following year's rehabilitation work. Also, completed the relining of two 6" force-mains at the WWTP that totaled 500 LF. The Town was very happy with the outcome of all of these projects. They were particularly happy with GMPS's ability to stay to our schedule, and that all homeowners were happy with the job that we did.

29) **Town of Saugus**
Department of Public Works
515 Main Street
Saugus, MA 01906
Phone: 781-231-4145
Joe Attubato – Director of Public Works

Camp Dresser & McKee Inc.
One Cambridge Place
50 Hampshire Street
Cambridge, MA 02139
Phone: 617-452-6719
Steven Callahan – Engineer

GMPS has completed three CIPP lining projects for the Town totaling over 50,000 lf of 6" to 42" pipe from 2007 to 2012. The time frames for completion of these projects were quite short considering the amount of pipe to be installed. GMPS finished each project on time. Both the engineer and the Town were very impressed with the timely completion of the contract. They were also quite pleased with the positive feedback from many residents that GMPS kept them well informed during the lining process and our professionalism on the job.

30) **Boston Water & Sewer Commission**
980 Harrison Ave.
Boston, MA. 02119
Ernst Etheart – Construction Manager
(617) 989-7459

RJV Construction
21 Lincoln Street
Canton, MA 02021
Victor Paccella – Partner
(617) 908-2101

From April to August of 2009 GMPS installed CIPP liners and Cured-in-place spot repairs for RJV Construction in Boston. Total liner installed was roughly 14,000 l.f., 3,000 l.f. of which, was large diameter pipe. Coordination for this job was challenging as much of the work took place in Boston Proper on Beacon Hill and the South End.

31) **City of Mechanicville, NY**
4 Industrial Park Road
Mechanicville, NY 12118
Jack Massore – Public Works Superintendent
(518) 664-7171

Barton & Loguidice, P.C.
264 Washington Ave. Ext
Albany, NY 12203
Elizabeth Urban – Project Eng.
(518) 218-1801

From December of 2008 through January of 2009 GMPS completed 5,300 of CIPP lining of 18" and 21" pipe. This job was challenging in that the required by-pass had to be through fusion welded HDPE pipe, and had to be pulled through difficult easements along the Hudson River. In addition, this job required extensive cleaning to prepare for the lining as the pipe had extremely heavy root at most joints. Both the City and the consultant were impressed with our crews work ethic, and ability to get the job done in a timely manor with marginal access during cold weather and winter conditions.

32) **Chemung County Sewer Dist. No. 1**
Lake St.
Elmira, NY 14904
Dennis Hilliar – Superintendent
(607) 733-2887

Stearns & Wheler, LLC
One Remington Park Drive
Cazenovia, NY 13035
Jon R. Putnam – Project Eng.
(315) 655-4180

From September to November of 2008 GMPS completed 1,600 lf. of 8", 700 lf. of 10", 900 lf. of 18", and 800 lf. of CIPP lining. In addition, we completed rehabilitation on 3 manholes and installation of various cured-in-place spot repairs of various sizes.

33) **Town of Westfield**
Eason Hall
23 Elm Street
Westfield, NY 14787
Phone: 716-326-3477
Edward LeBarron – Public Works Superintendent

Tolman Engineering, PLLC
3610 Lawson Road
Jamestown, NY 14701
Phone: 716-484-1366
Rex Tolman, P.E. - Partner

GMPS completed rehabilitation of 65 manholes, joint testing and sealing of approx. 6,000 l.f. of 8" pipe, and CIPP lining of approx. 11,000 l.f. of 8" and 10" pipe from October to December of 2007.

34) **Village of Pleasantville**
80 Wheeler Avenue
Pleasantville, NY 10570
Phone: 914-769-1900
Steve Johnson – Superintendent of Public Works

Professional Consulting Inc.
1719 Route 10, Suite 314
Parsippany, NJ 07054
Phone: 973-683-0044
Gary Bauman – Project Engineer

GMPS has completed three projects for the Village over the past three years which encompass over 40,000 LF of CIPP relining and 400 VF of manhole rehabilitation. The Village has been impressed by GMPS's ability and willingness to accommodate difficult scheduling with schools and businesses.

35) **Village of Saranac Lake**
3 Main Street
Saranac Lake, NY 12983
Phone: 518-891-4160
Kevin Pratt – Chief Operator WWTP

GMPS has done work for the village for the last three years. During that time, we have line approx. 3,650 l.f. of 8", 10" &18" pipe, and rehabilitated approx. 50 manholes. The majority of the work that we have completed for the Village has had difficult access and by-pass. The Village has been happy with our professionalism and ability to adapt to odd situations.

36) **Town of Bennington**
205 South Street
Bennington, VT 05204
Phone: 802-442-1037
George LeBlanc, Superintendent of the Wastewater Department

A relationship built over many years has proven to be useful for both the Town and GMPS. Each year GMPS performs various tasks for the Town including television inspection and cleaning but mostly doing spot repairs and manhole rehabilitation, and CIPP Lining. In 2008 GMPS installed approx. 4,000 l.f. of CIPP.

37) **Town of Wakefield**
Department of Public Works
1 Lafayette Street
Wakefield, MA 01880
Phone: 781-246-6300
Michael Collins, P.E., Town Engineer

Weston & Sampson
5 Centennial Drive
Peabody, MA 01960
Phone: 978-532-1900X2295
Peter Kolokithas – Sr. Eng.

GMPS completed sealing and cement lining on 65 manholes for the Town (25 of which were added to the original contract amount of 40). The Town and the engineer were impressed with the craftsmanship and professionalism of the crew.

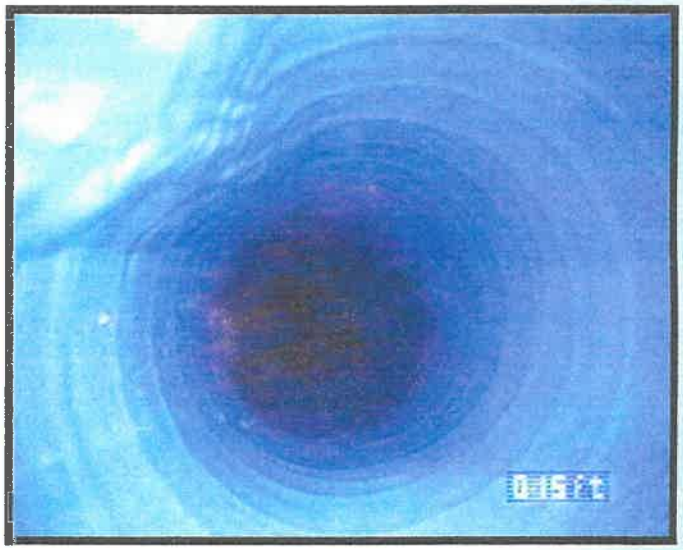
We hope that you find the above references useful in determining our ability to meet the demands of your project.

FORMADRAIN®

(NO-DIG TECHNOLOGIES)

before

after



BY

FORMAPREC®

FORMADRAIN® inc.

TYPICAL SPECIFICATIONS

UNDERGROUND SEWER LINING WITH

TECHNOLOGY

FORMADRAIN®

NSF DWV/Sewer, SE

060303

FORMADRAIN® Inc.

U.S.A.
17801, North Bay Road, unit 601
Sunny Isles Beach, FL., 33160-1909
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7551, boul. Metropolitain E.
Montreal, Quebec, H1J 1J8
Sans Frais : 1-888-337-6764
Tél.: (514) 352-6911
FAX: (514) 352-0167

1. GENERAL CONDITIONS

These specifications cover the technical requirements to line a sewer main (man-hole to man hole lining or point repair), service lateral, stack or other type of underground or above ground conduits with FORMADRAIN® Liner.

1.1. Technological description

The developed technology consists of impregnating (wetting) a bidirectional woven fiberglass tissue with **FORMAPOX 101** epoxy resin. The impregnating tissue is rolled on a pneumatic tube (thermomandrel) corresponding in length with the length to be repaired. The thermomandrel will then be slipped inside the conduit (concrete, clay, brick, PVC, etc.) to be repaired using access, at manhole or cleanout.

After the insertion, the thermomandrel is inflated with steam at 10 to 20 psi (70 @ 140 Kpa) to create heat at 220^0 F to 250^0 F (105^0C to 120^0C) so the tissue is compressed against the conduit walls. The impregnation and the curing are completed within an hour and half with the heat effect.

Once the liner is cured we air-cool the thermomandrel to ensure demolding from the composite membrane. The thermomandrel is then retrieved to be reused.

2. FORMADRAIN® INSTALLATION

The scope of work described by these specifications.

2.1. Conduits cleaning

The manholes and the conduits will be cleaned to remove roots, debris and other deposits to ensure a perfect moulding between the FORMADRAIN® liner and the host pipe.

2.2. Inspection

The section to be lined will be CCTV inspected before and after the FORMADRAIN® installation.

In main sewer lining, laterals will be identified (with CCTV) from a reference point and recorded to minimize the possibility for error when reinstating them.

If the inspection reveals major defects (unalinable) the owner (city or consultant) will be notified before remedial actions are undertaken.

2.3. Laterals reinstatement

All active laterals will be reinstated with a robot cutter operated with a CCTV camera.

2.4. Scope of work

2.4.1. Cleaning and CCTV inspection.
2.4.2. Bypass pumping where required.
2.4.3. Material selection and FORMADRAIN® installation.
2.4.4. The composite (fiberglass and resins) will be prepared in a shop or in the field under a strict quality control.
2.4.5. The wetted composite material is transported to the jobsite (if prepared in a remote location) and slipped into the conduit to be lined.
2.4.6. Curing with steam for a predetermined time based on diameter and length (between 30 minutes and 2 hours).
2.4.7. Cooling and retrieval of the thermomandrel to be reused for other insertions.
2.4.8. Opening of the lateral connections.
2.4.9. CCTV inspection and video, after installation.

3. MATERIALS FOR FORMADRAIN®

The main materials are:

- Balanced bi-directional woven fiberglass.
- Two component epoxy resin as binding matrix.

3.1. General physical properties of the fibreglass (E-glass)

Tension load	3.4×10^3 Mpa	(493 000 psi)
Tension modulus	72×10^3 Mpa	(10 442 000 psi)
Thermal expansion coefficient	$2{,}8 \times 10^{-6}$ po/po/°C	
Break elongation	4,8%	
Elastic recovery [1]	100%	

[1] Because the virgin fiberglass elastic recovery is considered to be 100% resilient, it is assumed that the value of the long term flexural elasticity modulus will be close to the short term flexural elasticity modulus. Tests are currently being conducted under ASTM D-2990; a conservative value of 50% is actually used for design.

3.2. General physical properties of the resin

Tension load	ASTM D638	60 Mpa	(8 700 psi)
Tension modulus	ASTM D638	3,3 x 10^3 Mpa	(478 600 psi)
Flexion load	ASTM D790	100 Mpa	(14 500 psi)
Flexion modulus	ASTM D790	2,1 x 10^3 Mpa	(304 500 psi)
Elongation		4.5% to 12%	
Barcol «hardness	ASTM 2583-81	50	
Thermal expansion	ASTM D696	5.2 x 10^{-6} po/po/^{0}C	

3.3. FORMADRAIN® composite material [2]

Tension load	ASTM D638 [3]	250 Mpa	(36 250 psi)
Tension modulus	ASTM D638	8.0 Gpa	(1 160 000 psi)
Compression load	ASTM	ref. [4]	
Compression modulus	ASTM	ref [4]	
Flexion load	ASTM D790	250 Mpa	(36 250 psi)
Flexion modulus	ASTM D790	9 Gpa	(1 305 000 psi)
Hardness (shore D)		> 80	

3.4. Chemical resistance

FORMADRAIN® Liner comply with ASTM F 1216-98 chemical requirements. Also, FORMADRAIN® Liner is resistant to sewer gas like carbon monoxide, dioxide, hydrogen sulphide etc. The fiberglass tissue is not affected at all by a great majority of chemicals, bacteria's, fungus or insects (ref.: SPE Society of Plastics Engineers, Mr. George Lupin, chief scientist Grumman Aerospace Corporation).

3.5. Resin mix

The two components epoxy resin mix is controlled by weight. The homogenate mix will be applied on the different layers of the bi-directional fiberglass tissue. Samples can be laboratory tested if required.

3.6. Fiberglass stratification

The bi-directional tissue layers are overlapped when wetting.

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[2] The typical values can be modified to meet specific requirements of the customer. Use of different fiberglass or carbon and resins permits adjustment to reinforce a part or the entire assembly.

[3] To appreciate the full integrate of the composite material this standard should be replaced by ASTM D3039 applied in the aeronautical industry for all and every oriented composite.

[4] For a bi-directional composite it is generally accepted to use the tension constraint and modulus to evaluate the compression constraint and modulus. To confirm the material strength we will use ASTM D635 data.

4. WALL THICKNESS DESIGN

For man-hole to man-hole lining, lateral lining or point(spot) repair, engineering calculations are made accordingly to ASTM F1216 Appendix X1, in the situation of a point (spot) repair it is important that the repair starts and ends in a good structural sound pipe; point (spot) repair must cover the broken portion of the pipe (cracks or else) plus a minimum of 1 foot at each ends in a good structural sound pipe.

The thickness of FORMADRAIN® Liner will be established considering the data supplied for the conduit to be lined. FORMADRAIN® is made of a 90° oriented bi-directional woven fiberglass tissue impregnated (wetted) with epoxy resin, FORMADRAIN®'s liner mechanical capacity is increased by adding layers (thickness). Effectively the tension and flexion constraints and modulus are directly related to the nature of the fiberglass (type of glass, number of fibres, surface treatment, etc.) and the epoxy resin (tension, flexion, adherence, viscosity, etc.) and the glass/resin ratio obtained after wetting. The material affects a high performance liner with minimal wall thickness.

It is important to note that FORMADRAIN® is one of the few technologies that meets the criteria for a structural liner where and if it is required. It allows maximum engineering design and keeps costs at a minimum by not oversizing the whole liner length for a punctual requirement.

Among the studied constraints we can quote:

- Structural pipe condition
- Depth of the conduit to be lined
- Dead load
- Live load
- Conduit ovalization

5. HYDRAULIC CAPACITY OF THE LINED CONDUIT

Because of the interior hardness and smoothness of FORMADRAIN®, we figure we maintain a minimum flow resistance factor of at least at 0,009 in the Manning equation. The inside diameter will be _____ mm. for an existing conduit of _____ mm. Considering the minimal thickness of FORMADRAIN®, the flow is practically not affected and can even be improved.

DESIGN GUIDE

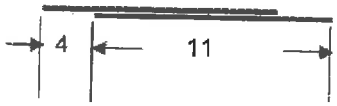
NUMBER OF LAYERS PARTIALLY DETERIORATED PIPE CONDITION 0% OVALITY, K=10, N=2			
	Deepness (feet)		
Pipe ID in inches (mm)	5	10	20
3 (75)	2	2	2
4 (100)	2	2	2
6 (150)	2	2	2
8 (200)	2	2	2
10 (250)	2	2	2
12 (300)	2	2	2
15 (375)	2	2	3
18 (450)	2	3	4
21 (525)	3	3	4
24 (600)	3	4	5
27 (675)	3	4	5
30 (750)	4	5	6
36 (900)	4	5	7
42 (1050)	5	6	8
48 (1200)	6	7	9
54 (1350)	6	8	10
60 (1500)	7	9	11

NUMBER OF LAYERS FULLY DETERIORATED PIPE CONDITIONS 5% OVALITY, E'=10, N=1.5, R_w=0.75			
	Deepness (feet)		
Pipe ID in inches (mm)	5	10	20
3 (75)	2	2	2
4 (100)	2	2	2
6 (150)	2	2	2
8 (200)	2	2	2
10 (250)	2	2	2
12 (300)	2	2	3
15 (375)	2	3	3
18 (450)	2	3	4
21 (525)	3	3	5
24 (600)	3	4	5
27 (675)	3	4	6
30 (750)	4	5	6
36 (900)	4	6	8
42 (1050)	5	6	9
48 (1200)	5	7	10
54 (1350)	6	8	11
60 (1500)	6	9	12

Table 6 (2 tables on this page)

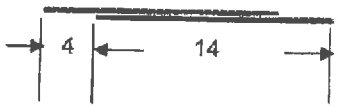
Schematics of FORMADRAIN® fiberglass* overlaps**

3 inches diameter conduits (75 mm)



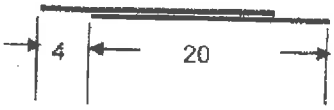
(2 strips of 11 in. wide)
(0.21 lb/foot, for light fiberglass)
(0.32 lb/foot, for 1 std and 1 light*)

4 inches diameter conduits (100 mm)



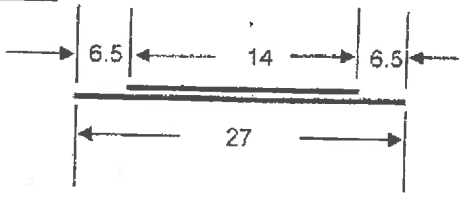
(2 strips of 14 in. wide)
(0.40 lb/foot, for 1 std and 1 light*)

6 inches diameter conduits (150 mm)



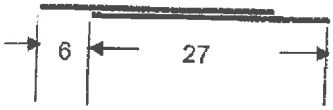
(2 strips of 20 in. wide)
(0.76 lb/foot for 2 standard fiberglass)
(0.57 lb/foot for 1 standard and 1 light* fiberglass)

OR



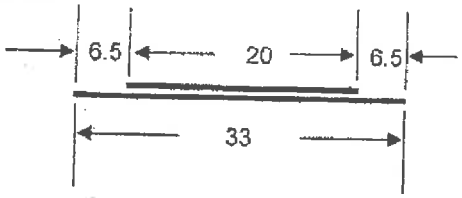
(1 x 27 in strip and 1 x 14 in.)
(0.78 lb/foot)

8 inches diameter conduits (200 mm)



(2 strips of 27 in. wide)
(1.03 lb/foot)

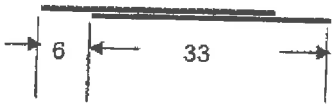
OR



(1 x 33 in. strip + 1 x 20 in.)
(1.01 lb/foot)

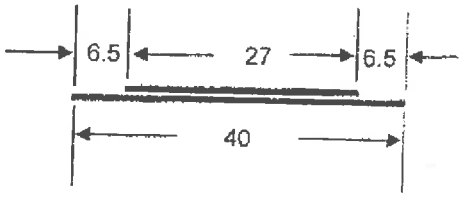
***Take note that the light fiberglass must be the top layer.**
**** Take note that a polythene layer must cover liner (see Sketch 1 on page 10).**

10 inches diameter conduits (250 mm)



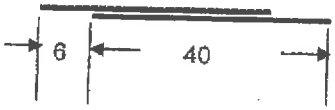
(2 x 33 in. strips wide)
(1.26 lb/foot)

OR



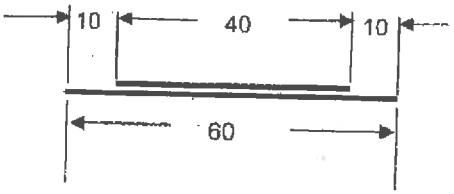
(1 x 40 in. strip +1 x 27 in.)
(1.28 lb/foot)

12 inches diameter conduits (300 mm)



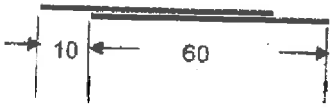
(2 x 40 in. strips wide)
(1.53 lb/foot)

15 inches diameter conduits (375 mm)



(1 x 60 in. strip + 1 x 40 in.)
(1.91 lb/foot)

16 and 18 inches diameter conduits (400 mm and 450 mm)



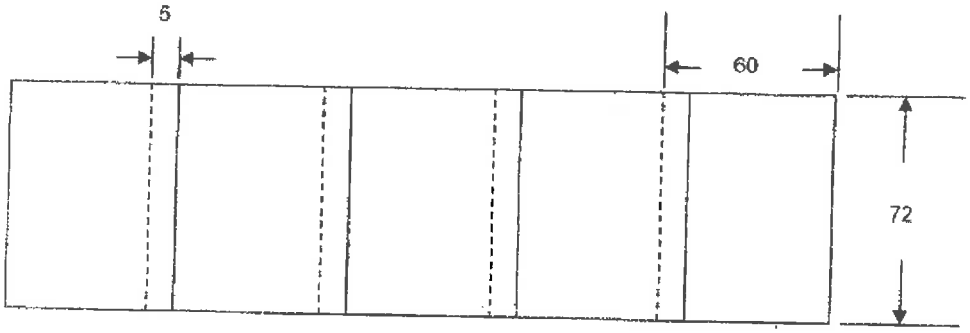
(2 x 60 in. wide strips)
(2.29 lb/foot)

***2 layers is the minimum thickness which is sufficient for a 12 inches inside diameter pipes (round) with a soil cover of 8 feet or less (see table 6 in annex A). Engineering calculations may be required.**
**** Take note that a polythene layer must cover liner (see Sketch 1 on page 10).**

All measurements are in inches

21 inches ID pipe

SCHEMATICS OF FORMADRAIN® FIBERGLASS OVERLAPS
top view



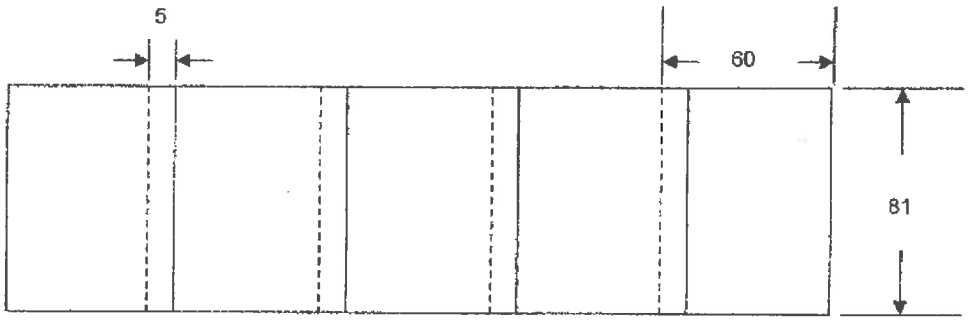
(60 inches wide x 72 inches long strips)
(Standard fiberglass)
(total weight of resin **per layer:** 1.40 lbs/foot)

Note : when positioning fibreglass for additional layers, do not superpose joints (circumferential and longitudinal joints), alternate joints positioning to avoid having an overthickness at the joint. Very important not to forget outside polythene layer.

All measurements are in inches

24 inches ID pipe

SCHEMATICS OF FORMADRAIN® FIBERGLASS OVERLAPS
top view



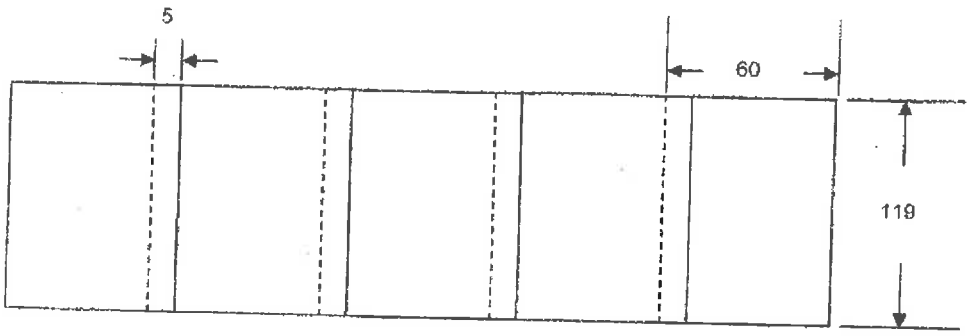
(60 inches wide x 81 inches long strips)
(Standard fiberglass)
(total weight of resin **per layer**: 1.58 lbs/foot)

Note : when positioning fibreglass for additional layers, do not superpose joints (circumferential and longitudinal joints), alternate joints positioning to avoid having an overthickness at the joint. Very important not to forget outside polythene layer.

All measurements are in inches

36 inches ID pipe

SCHEMATICS OF FORMADRAIN® FIBERGLASS OVERLAPS
top view



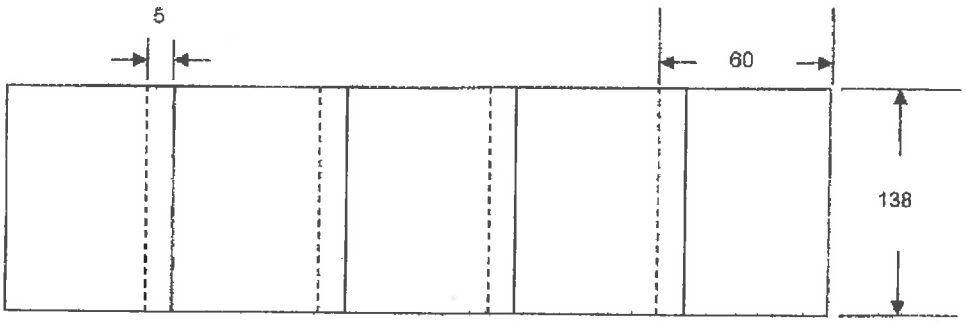
(60 inches wide x 119 inches long strips)
(Standard fiberglass)
(total weight of resin **per layer :** 2.36 lbs/foot)

Note : when positioning fibreglass for additional layers, do not superpose joints (circumferential and longitudinal joints), alternate joints positioning to avoid having an overthickness at the joint. Very important not to forget outside polythene layer.

All measurements are in inches

42 inches ID pipe

SCHEMATICS OF FORMADRAIN® FIBERGLASS OVERLAPS
top view



(60 inches wide x 138 inches long strips)
(Standard fiberglass)
(total weight of resin **per layer :** 2.73 lbs/foot)

Note : when positioning fibreglass for additional layers, do not superpose joints (circumferential and longitudinal joints), alternate joints positioning to avoid having an overthickness at the joint. Very important not to forget outside polythene layer.

All measurements are in inches

Operating pressures*

Mandrel Inside diameter (ID) in inches (mm)	Pipe diameter in inches (mm)	Steam Pressure in PSIG new mandrel	Pressure in PSIG Used mandrel > 3 insertions
1.0 (25)	2 (50)	N/D	N/D
1.5 (38)	3 (75)	N/D	N/D
2.0 (50)	4 (100)	19	17
2.5 (62.5)	6 (150)	18	16
3.5 (87.5)	8 (200)	12	10
3.5 (87.5)	6 (150)	10	8
4.0 (100)	9 (225)	13	11
4.0 (100)	8 (200)	12	10
6.0 (150)	12 (300)	10	9
6.0 (150)	10 (250)	9	8
8.0 (200)	15 (375)	9	8
8.0 (200)	12 (300)	8	7
12.0 (300)	24 (600)	7	6
12.0 (300)	21 (525)	7	6
12.0 (300)	18 (450)	6	5
16.0 (400)	30 (750)	7	6
16.0 (400)	24 (600)	6	5
20.0 (500)	48 (1200)	7	6
20.0 (500)	42 (1050)	6	5
20.0 (500)	36 (900)	6	5
20.0 (500)	30 (750)	5	5

Table 3

Mandrel must be inflated up to pressure as indicated on tag attached to mandrel. If a replacement rubber is ordered Licensee has to established pressure by testing mandrel (operating pressure = mandrel inflation to required diameter + 1 psi/fiberglass layer). Because required pressures may vary, pressures in table 3 can be use as a guideline only. Take note that pressures in table 3 are for 2 layers of fiberglass; ad 1 psi per extra layer (to fully open the insertion kit) for a maximum of 5 layers.

Curing is an important part of the process and must be supervised at all times by a technician that will maintain the operation pressure. The operating pressure should be reached within 5 minutes, use air if required to obtain the result. A compressor should always be connected to the steam injection system as back up to keep the inflation in case of steam failure. Steam hoses should

An air-steam regulating system is used to control the recommended pressure (temperature). The pressure is read on the gauge connected to the thermomandrel before inserting. The curing time indicated in table 2 should be respected.

Curing time in minutes for FORMAPOX 101 epoxy resin (sewer application).

Inside Diameter of the mandrel in inches (mm)	Length of mandrel in ft (metres)		
	10 (3)	50 (15)	100 (30)
2.0 (50)	35	40	50
2.5 (62.5)	35	40	50
3.5 (87.5)	35	45	50
4.0 (100)	35	50	75
6.0 (150)	45	60	90
8.0 (200)	45	75	105
12.0 (300)	45	90	120
16.0 (400)	45	90	-

Table 2[4]

Curing time[1] in minutes for FORMAPOX 301 epoxy resin (Industrial application, high chemical resistance).

A minimum of 2 hours is requested.

When the mandrel is directly inflated with steam the by-pass valve is fully open till the pressure starts to raise than use the regulator to stabilize it to the desired position. When using both air and steam simultaneously to inflate, the air pressure must be reduced gradually as the steam takes over and kept with steam only. **Operating pressure is indicated for each mandrel on a tag attached directly to mandrel.**

[4]Note : The curing time starts once the kit is at full curing pressure with steam only. The steam hoses should not be laid on ice or snow or a frozen surface that create to much condensation. The hoses shall be kept as short as possible, specially during cold weather.

FORMAPOX 101 CHEMICAL RESISTANCE

(ASTM F1216 - 93)

CHEMICAL SOLUTION	Flexural Modulus in Mpa (after 30 days)	Flexural Modulus in psi (after 30 days)	Lost in %*
Tap water (pH 6-9) 100%	10 318	1 496 038	-3%
Nitric Acid 5%	10 313	1 495 313	-3%
Phosphoric acid 10%	8 334	1 208 430	17%
Sulfuric acid 10%	8 206	1 189 870	18%
Gazoline 100%	10 182	1 476 318	-1%
Vegetable oil 100%	11 513	1 669 385	-15%
Detergent 0.1%	10 699	1 551 283	-7%
Soap 0.1%	10 525	1 526 125	-5%

**Average Flexural modulus ASTM D790-00 (5 samples) = 10032 Mpa (1 454 640 psi).*
Short Term Flexural Modulus in Typical Specifications = 9000 Mpa (1 305 000 psi).

Table 7

MATERIAL SAFETY DATA SHEET

FORMAPOX 101 PART A

SECTION 1 - MANUFACTURER/ PRODUCT INFORMATION

FORMADRAIN INC 7551 Métropolitain E. Anjou, Québec Canada H1J 1J8	EMERGENCY TELEPHONE NUMBER TEL (514) 352-8911 or (905) 608-2706 FAX (514) 352-0167 or (905) 608-2704

Trade Name:	Formapox 101 Part A
Chemical FamilyName:	Epoxide
Product Use:	Fibreglass Laminating

SECTION 2 - REGULATORY INFORMATION

WHMIS Designation:	D2B
Transportation of Dangerous Goods:	Not regulated
Shipping Name	Epoxy Resin
PIN/UN No.:	
Primary Class:	
Sub Class:	
Packing Group:	
TSCA Inventory Status:	Listed on TSCA inventory
DSL Inventory Status:	Listed on DSL inventory

SECTION 3 - HAZARDOUS INGREDIENTS

CAS Name:	Phenol, 4,4'-(1-methylethylidine) bis-, polymer with (chloromethyl) oxirane
CAS Number	25068-38-06
Common Name:	Bisphenol A diglycidyl ether polymer
Approximate %:	80-100%
Exposure Limits (ACGJH TLV):	Not established
LD50 (oral):	>5.00 mg/kg (rat)
LD50 (dermal):	20,000 mg/kg (rabbit)

FORMAPOX 101 PART A

SECTION 4 – PHYSICAL DATA

Appearance & Odour:	White viscous liquid, slight odour
Physical State:	Liquid
Odour Threshold (ppm)	Not available
Boiling Point (Deg. C):	>200 C
Decomposition Temp. (Deg. C):	>200 C
Freezing Point (Deg. C)	Not available
Evaporation rate:	Not available
Percent Volatile:	0
Vapour Density (Air = 1):	Not available
Vapour Pressure (mm @ 21 c):	Ca. 1 mm Hg at 180 C
Solubility in Water:	Insoluble
pH:	Not available
Specific Gravity:	1.2
Viscosity:	Not available
Coefficient of Water/Oil:	Not available

SECTION 5 – FIRE OR EXPLOSION HAZARD

Flash Point:	252 C (Closed Cup)
Upper Flammable Limit In Air:	Not available
Lower Flammable Limit In Air:	Not available
Autoignition Temperature:	Not available
Extinguishing Media:	Carbon dioxide, dry chemical, foam or water mist.
Special Fire Fighting Procedures:	Use self contained breathing apparatus.
Unusual Fire/ Explosion Hazards:	Decomposition and combustion products may be toxic.
Hazardous Combustion Products:	Carbon monoxide, carbon dioxide, aldehydes

SECTION 6 – REACTIVITY DATA

Unstable Conditions:	Elevated temperatures, strong acids or bases in bulk
Incompatible Substances:	Strong oxidizing agents
Hazard. Decomposition Products:	Carbon monoxide, carbon dioxide, alderhydes
Hazardous Polymerization And Conditions Contributing To:	Reaction with curing agents is exothermic; smoke or toxic fumes may be evolved if heat of reaction becomes excessive due to high curing temperature or curing of large masses of material

SECTION 7 – TOXICOLOGICAL PROPRIETIES

Route of Entry :	Dermal.
Threshold Limit Value (T.L.V.):	Not available
Oral LD50:	>5,000 mg/kg (rat)
Dermal LD50:	20,000 mg/kg (rabbit)
Inhalation:	Not available
Skin Irritation:	Moderate irritation

Eye Irritation:	Slight irritation
Sensitization:	Moderate sensitizer
Carcinogenicity:	Not carcinogenic
Teratogenicity:	Not a teratogen
Mutagenicity:	Not mutagenic
Other Known Tox. Effects:	No identified health hazards
Subchronic Studies:	Not available
Exposure Effects, Acute:	Causes skin and eye irritation, sensitization, dermatitis.
Overexposure Effects, Chronic:	Possible sensitizer

SECTION 8 – PREVENTIVE MEASURES

Personal Protective Equipment	
Respirator:	Use NIOSH approved mask with organic vapour cartridge.
Eyes:	Wear chemical goggles.
Gloves:	Wear impervious gloves.
Clothing:	Wear gauntlets and apron, especially when transferring bulk.
Other:	Shower and eye wash facilities should be accessible.
Engineering Controls:	Local exhaust recommended, general mechanical ventilation acceptable.
Spill Procedures:	Absorb into sand or other absorbent material. Shovel into closable container for chemical waste disposal. Wear protective equipment specified above. Flush residue well with detergent solution. Spilled material and water rinses are classified as chemical waste and must be disposed of in accordance with government regulations.
Waste Disposal:	Dispose of in accordance with government regulations.
Handling Procedures & Equipment:	Avoid all personal contact. Use with adequate ventilation. Wash thoroughly after using. For industrial use only.
Storage Requirements:	Keep container tightly closed. Store away from heat.
Special Shipping Information:	See Transportation of Dangerous Goods section.

SECTION 9 – FIRST AID MEASURES

Eyes:	Immediately flush eyes with large amounts of water. Hold eyelids apart while flushing. Get medical attention.
Skin:	Wash with mild soap and water.
Inhalation:	Remove to fresh air.
Ingestion:	If conscious, give large quantities of water to drink. Do not induce vomiting. Get medical attention
General advice:	Promptly remove and wash contaminated clothing prior to reuse. Discard contaminated footwear.

SECTION 10 – PREPARATION INFORMATION

Issue Date & Edition:	January 15, 2005 Edition 2
MSDS Prepared By:	PSI

MATERIAL SAFETY DATA SHEET

FORMAPOX 101 PART B

SECTION 1 - MANUFACTURER/ PRODUCT INFORMATION

FORMADRAIN INC 7551 Metropolitain E. Anjou, Quebec Canada H1J 1J8	EMERGENCY TELEPHONE NUMBER TEL (514) 352-8911 or (905) 608-2706 FAX (514) 352-0167 or (905) 608-2704

Trade Name:	Formapox 101 Part B
Chemical Family Name:	Amidoamines
Product Use:	Curing agent for laminating epoxy

SECTION 2 – REGULATORY INFORMATION

WHMIS Designation:	D2A D2B E
Transportation of Dangerous Goods:	Regulated
Shipping Name	Corrosive Liquid, Basic, Organic, N.O.S. (Amidoamine Resin, Triethylenetetramine)
PIN/UN No.:	3267
Primary Class:	8
Sub Class:	None
Packing Group:	III
TSCA Inventory Status:	Listed on TSCA inventory
DSL Inventory Status:	Listed on DSL inventory

SECTION 3 – HAZARDOUS INGREDIENTS

Name:	Reaction product of vegetable oil fatty acids with tetraethylenepentamine
CAS Number	68991-84-4
Approximate %:	30-60
Exposure Limits (ACGJH TLV):	Not available
LD50 (oral):	Estimate: >7.6g / kg (rat)
LD50 (dermal):	Estimate: >6.8g / kg (rabbit)

FORMAPOX 101 PART B

SECTION 3 - HAZARDOUS INGREDIENTS continued

Name:	Reaction product of tall oil fatty acids with triethylenetetramine
CAS Number :	68082-29-1
Approximate 96:	10-30
Exposure Limits (ACGIH TLV):	Not available
LD50 (oral):	Estimate 5g (rat)
LD50 (dermal):	Estimate: >2g/ kg (rabbit)

SECTION 4 – PHYSICAL DATA

Appearance & Odour:	Blue paste/liquid with amine odour
Physical State:	Viscous liquid
Boiling Point (Deg. C):	Not available
Decomposition Temp. (Deg. C):	Not available
Freezing Point (Deg. C)	Not available
Evaporation rate:	Not available
Percent Volatile:	Not available
Vapour Density (Air = 1):	Not available
Vapour Pressure:	Not available
Solubility in Water:	Slight
pH:	Not available
Specific Gravity:	1.3
Coefficient of Water/Oil:	Not available

SECTION 5 – FIRE OR EXPLOSION HAZARD

Flash Point:	>110 C (CC)
Upper Flammable Limit In Air:	Not available
Lower Flammable Limit In Air:	Not available
Auto-ignition Temperature:	Not available
Extinguishing Media:	Carbon dioxide, dry chemical, foam or water mist.
Special Fire Fighting Procedures:	Use self contained breathing apparatus.
Unusual Fire/ Explosion Hazards:	Decomposition and combustion products may be toxic.
Hazardous Combustion Products:	See hazardous decomposition products below

SECTION 6 – REACTIVITY DATA

Unstable Conditions:	Stable
Incompatible Substances:	Strong oxidizing agents
Hazard. Decomposition Products:	Oxides of nitrogen, oxides of carbon (CO, CO2)
Hazardous Polymerization:	Will not occur.

SECTION 7 – TOXICOLOGICAL PROPRIETIES

Route of Entry :	Dermal. Heated product may produce inhalable vapours.
Threshold Limit Value (T.L.V.):	Not available
Oral LD50:	See hazardous ingredients
Dermal LD50:	See hazardous ingredients
Inhalation:	May cause irritation of the upper respiratory tract.
Skin Irritation:	Severe irritant. May cause burns.
Eye Irritation:	Severe Irritant. May cause burns.
Sensitization:	May cause sensitization through skin contact and inhalation
Carcinogenicity:	Not indicated
Teratogenicity:	Not indicated
Mutagenicity:	Polyethylene amines are suspected mutagens
Other Known Tox. Effects:	No other identified health hazards
Subchronic Studies:	Not available
Overexposure Effects, Acute:	Skin, eye and respiratory tract irritation. Skin and eye burns possible. May cause irritation of the gastrointestinal tract.
Overexposure Effects, Chronic:	Possible allergic reaction. May aggravate existing eye, skin and lung conditions.

SECTION 8 – PREVENTIVE MEASURES

Personal Protective Equipment	
Respirator:	Use NIOSH approved mask with organic vapour cartridge.
Eyes:	Wear chemical goggles.
Gloves:	Wear impervious gloves.
Clothing:	Wear gauntlets and apron, especially for transfer of bulk quantities.
Other:	Shower and eye wash facilities should be accessible
Engineering Controls:	Use adequate local exhaust ventilation
Spill Procedures:	Absorb into sand or other absorbent material. Shovel into closable container for chemical waste disposal. Wear protective equipment specified above. Flush residue well with detergent solution. Spilled material and water rinses are classified as chemical waste and must be disposed of in accordance with government regulations.
Waste Disposal:	Dispose of in accordance with government regulations.
Handling Procedures & Equipment:	Avoid all personal contact. Use with adequate ventilation. Wash thoroughly after using. For industrial use only.
Storage Requirements:	Keep container tightly closed. Store away from heat.
Special Shipping Information:	See Transportation of Dangerous Goods section.

SECTION 9 – FIRST AID MEASURES

Eyes:	Immediately flush eyes with large amounts of water for at least 15 minutes. Hold eyelids apart while flushing. Get immediate medical attention.
Skin:	Wash with mild soap and water. Get medial attention if necessary.
Inhalation:	Remove to fresh air. Get medical attention.
Ingestion:	If conscious, give large quantities of water to drink. Do not induce vomiting. Get medical attention.
General advice:	Promptly remove and wash contaminated clothing prior to reuse. Discards contaminated footwear.

SECTION 10 – PREPARATION INFORMATION

Issue Date & Edition:	January 15, 2005 Edition 2
MSDS Prepared By:	PSI

THE INFORMATION AND RECOMMENDATIONS CONTAINED HEREIN ARE BASED UPON DATA BELIEVED TO BE CORRECT. HOWEVER, NO GUARANTEE OR WARRANTY OF ANY KIND EXPRESSED OR IMPLIED IS MADE WITH RESPECT TO THE INFORMATION HEREIN.

INLAND WATERS
PIPELINE SERVICES

275 Scituate Avenue
Johnston, RI 02919
877-943-5300 - Toll Free
401-943-5302
401-943-5714 - Fax

October 7, 2020

Mr. Joseph Devine Jr.
Town Administrator
Town of Henniker
18 Depot Road
Henniker, NH

Ref: **RFP: 2020 Wastewater Collection System Maint. CIPP Point Repair 2020**
Installation of CIPP Short Liners within described 8", 10" & 12" Town of Henniker owned sewer lines for structual repair.

Dear Mr. Devine,

Per your request listed for your review is the lump sum pricing schedule for the installation of seventeen (17) CIPP short liners described within your bid specification. Total of 17 locations Flanders Rd, Hall Ave., Juniper Ridge, Maple St., Prospect St., Rush Road, Waters St., Western Ave., & Ramsdell Rd. Pump Station. IW would schedule onsite activities upon an authorized representative's written notice to proceed (Fall 2020).

Project Notes:
IW to provide.

Project Manager
OSHA certified field techs.
Pipeline Services Utility Truck equipped with CIPP installation equipment & full color CCTV inspection studio.
Trelleborg CIPP Short liner materials (submittals available upon request).
Logi-Ball packers.
Aries ILLUM-ZOOM CCTV pan/tilt full color pipeline inspection system.
Deliverable: Infrastructure Technologies' IT PIPES PACP certified data generated inspection report.
Confined space protocol.
High Velocity Jet.
Misc. tools, equipment and supplies.
Limited traffic control (signs & cones)
Schedule local police details (when necessary).
Current COI with named additional insured.

Henniker to provide:
Authorized representative.
Interface with IW field representatives.
Clear access to work zone MH's.
Approved Town of Henniker Police traffic details (when necessary).

Pricing Schedule:

2020 Wastewater Collection System Maint. CIPP Point Repairs
LUMP SUM TOTAL: $31,150.00

Project Clarifications:

IW estimates the completion of contracted services within 4-5 consecutive weekday shifts.
Any delays that are not directly related to IW's equipment or manpower may result in additional time required to complete onsite activities.
IW pricing schedule for onsite activities is based on a ten (10) hour weekday (7:00am-5:00pm).
At clients request additional field service work can and will be performed on a prior approved time & material rate structure.

If you have further questions or require additional information do not hesitate in contacting me direct at 401-265-3225 or bobl@inlandwatersinc.com. I await your reply.

Respectfully Submitted,

Robert W. Routhier Jr.
Owners Representative
Partner / Project Director
Inland Waters, Inc.

INLAND WATERS
PIPELINE SERVICES

275 Scituate Avenue
Johnston, RI 02919
877-943-5300 - Toll Free
401-943-5302
401-943-5714 - Fax

October 6, 2020

Mr. Joseph Devine
Town Administrator
Town of Henniker, NH
18 Depot Road
Henniker, NH 03242

Ref: Contractor Letter of Qualification 2020 CIPP Point Repair

Mr. Devine,

Thank you for allowing Inland Waters, Inc. (IW) the opportunity to provide you with a Contractor Pre-Qualification Statement for the above referenced project. At your request IW will provide the necessary equipment and manpower to perform specification sewer CIPP Point Repair services for the described locations in your RFP. Please be advised that Inland Waters, Inc. is an EEO compliant Rhode Island registered corporation (est. 1998) and is in current good standing with the State of New Hampshire Secretary of State Office's. IW offices and service center is conveniently located off Interstate 95/295 in Johnston, RI and easily accessible to Town of Henniker, NH.

IW is a full service pipeline inspection, maintenance and repair company specializing in performance of these services within the municipal and private sectors, all services will be performed by IW Labor, IW owned equipment and the utilization of NASSCO certified operating procedures. IW is fully insured (HUB New England), bonding capable (ALLIANT) and carries a healthy line of credit with a reputable regional financial institution. To our knowledge IW has never been aware of any federal or state investigation or has had any filed charges for criminal activities or civil infraction since its inception in 1998.

With our prior twenty two years of experience performing these same services for Municipal, Federal Agencies, Contract Operation Administrators and Civil Engineering Firms IW is confident in understanding the task at hand and meeting expectations for a successful partnership in the performance of these contracted services. Please be advised that IW is a NASSCO approved contractor has contracted our services to New Hampshire municipalities on a continuing basis.

If you have further questions or require additional information do not hesitate in contacting me direct @ 401-265-3225 or bob@inlandwatersinc.com, I await your reply.

Respectfully Submitted,

Robert W. Routhier Jr.,
Partner & Project Director
Inland Waters, Inc.

INLAND WATERS
PIPELINE SERVICES

275 Scituate Avenue
Johnston, RI 02919
877-943-5300 - Toll Free
401-943-5302
401-943-5714 - Fax

Town of Henniker, NH
RFP: 2020 CIPP Point Repair

INLAND WATERS Sewer Rehabilitation Project References:

Mr. Nathan Holmes
Regional Manager
207-238-0855
GRANITE INLINER
195A Norrigewock Rd.
Fairfield, ME 04937
City of Nashua, NH
Sewer System Rehabilitation 2019
City of Concord, NH
Sewer System Rehabilitation 2018

Mr. David Boucher
Water & Utilities Director
Town of Milford, NH
564 Nashua Street
Milford, NH 03055
Sewer System Rehab 2017 & 2020

Mr. John Potts, PE
Sr. Project Engineer
978-977-0110
Weston & Sampson Engineering
55 Walker Brooks Drive, Suite 100
Reading, MA 01867
Town of Melrose, MA
SSEE-1 2020

Ms. Kate Perotti, PE
Sr. Project Engineer
978-977-0110
Weston & Sampson Engineering
100 Foxborough Blvd. #250
Foxborough, MA 02035
Town of Braintree, MA
Year 7, Sewer System Rehabilatation
July 2020

Mr. Jeff Petruzzi
Senior Project Manager
508-248-1700
Insituform Technologies, LLC
253B Worcester Road
Charlton, MA 01507
Town of Milton, MA
Sewer System Rehabilitation S14-1
Winter 2019

Mr. Chris DiStefano
Project Manager
978-938-4888
Commonwealth Construction Utilities, Inc.
PO Box 972
Watertown, MA 02471
Town of Watertown CIPP Phase I MH Rehab
Winter/Spring 2020

Additional references available upon request

NATIONAL WATER MAIN CLEANING COMPANY

HENNIKER, NH - WASTEWATER COLLECTION SYSTEM MAINTENANCE CIPP POINT REPAIR BID 2020

Bid Date: 10/08/2020

Item #	Description	QTY	Unit	Price	Total
1	Flanders Rd. MH G2-G1: Fracture Multiple - 8" PIPE	1	EA	$ 1,800.00	$ 1,800.00
2	Hall Ave. MH 84-85: Broken @ 07 o'clock w/in 8" of JTS - 8" PIPE	1	EA	$ 1,800.00	$ 1,800.00
3	Juniper Ridge MH 106-105 : Broken - 8" PIPE	1	EA	$ 1,800.00	$ 1,800.00
4	Juniper Ridge MH 106-105 : hole @ 12 o'clock 8" PIPE	1	EA	$ 1,800.00	$ 1,800.00
5	Maple St MH M5-M4: Broken Pipe, Void Visible 8" PIPE	1	EA	$ 1,800.00	$ 1,800.00
6	Prospect St MH 73A-73: Roots Ball Joint 8" PIPE	1	EA	$ 1,800.00	$ 1,800.00
7	Rush Rd MH 58-57: Broken Pipe Void Visible 8" PIPE	1	EA	$ 1,800.00	$ 1,800.00
8	Rush Rd MH 59-58: Hole, Soil Visible 8" PIPE	1	EA	$ 1,800.00	$ 1,800.00
9	Water St. MH 135: Off Road infiltration Gusher - 10" Pipe	1	EA	$ 1,800.00	$ 1,800.00
10	Western Ave MH 17-16 Broken Pipe @12 o'clock - 10" Pipe	1	EA	$ 1,800.00	$ 1,800.00
11	Western Ave MH 17-16 Broken Pipe @12 o'clock - 10" Pipe	1	EA	$ 1,800.00	$ 1,800.00
12	Western Ave MH 18-17 Infiltration Runner @ 5'0clock, within 8" of Joint	1	EA	$ 1,800.00	$ 1,800.00
13	Western Ave MH 34-35 Broken @11 o'clock, within 8" of Joint 8" PIPE	1	EA	$ 1,800.00	$ 1,800.00
14	Western Ave MH 36-35: Broken A01 o'clock, within 8" of joints 8" PIPE	1	EA	$ 1,800.00	$ 1,800.00
15	Western Ave MH 46-44: Infiltration Gusher @ 6 o'clocl, w/in 8" of Joint 8" PIPE	1	EA	$ 1,800.00	$ 1,800.00
16	Western Ave MH 46-47: infiltration Runner @ 03 o'clock 8" PIPE	1	EA	$ 1,800.00	$ 1,800.00
17	Western Ave Mh 47-48: Broken @ 02 o'clock, within 8" of Joints 8" PIPE	1	EA	$ 1,800.00	$ 1,800.00
18	Ramsdell Rd Pump Station Cut Grease at Pump Station - 12"	1	EA	$ 4,400.00	$ 4,400.00
				BID TOTAL	**$ 35,000.00**

NATIONAL WATER MAIN CLEANING
A Carylon Company

1000 Rear Elm St.
Rocky Hill, CT 06067
(800) 422-0815
(860) 372-4199
(781) 828-2473

25 Marshall St.
Canton, MA 02021
(800) 422-0815
(781) 828-0863
(781) 828-2473
NYC BIC License #468

928 Broad St.
Utica, NY 13501
(866) 341-1287
(315) 624-9520
(315) 624-9523

10/08/2020

Ken Levesque
Town of Henniker, NH
18 Depot Hill Rd #2
Henniker, NH 03242
603-428-3240

Subject: Bidders Ability to perform within the specified time limits
Wastewater Collection System Maintenance CIPP Point Repair Bid 2020

Mr. Lévesque,

This letter is to state that NWMCC will be able to complete the projected project scope of work by December 31st, 2020 for the above referenced contract

If you have any questions you may contact me at 800-242-0815
Sincerely,

NATIONAL WATER MAIN CLEANING COMPANY
James Fleming
James Fleming
Project Engineer

NWMCC Comprehensive Rehabilitation Job References:

Owner: Town of Dedham, MA
Contact: Jason L. Mammone, PE, Director of Engineering
Phone: 781.751.9350
Email: jmammone@dedham-ma.gov
Project Information
Name: Town of Dedham, MA Sewer On-call Services
Type of Rehabilitation: Main Line CIPP Lining, MH Rehab, Lateral Lining, Lateral Grouting
Contract Value:
2015-2017, $3,320,000.00

Owner: Town of Middletown, RI Engineering Department
Contact: Warren Hall, PE, Town Engineer
Phone: 401.418-0413
Email: whall@middletownri.com
Project Information
Name: Cured In Place Pipe Project – Commodore Perry (012-007), Easton's Point (014-002)
Type of Rehabilitation: Main Line CIPP Lining, MH Rehab, Lateral Lining, Lateral Grouting
Contract Value:
Contract MIDD 012-007: 2018-2019, $3,310,000.00

Owner: City of Revere, MA
Contact: Nicholas J. Rystrom, PE, City Engineer
Phone: 781.286.8153
Email: nrystrom@revere.org
Engineer Consultant:
CDM-Smith
Contact: Steven R. Callahan, Senior Project Manager
Phone: 617.452.6719
Email: callahansr@cdmsmith.com
Project Information
Name: Sewer System Rehabilitation (Contract WW-001)
Type of Rehabilitation: Main Line CIPP Lining, MH Rehab, Lateral Lining, Lateral Grouting, Excavated Point Repairs
Contract Value
Phase V: 2015-2016, $6,650,000.00
Phase VI: 2016-2017, $5,000,000.00
Phase VII: 2018-2019, $1,731,000.00
Phase VIII: 2018-2019, $1,675,000.00

Owner: Town of Saugus, MA
Contact: Brendan B. O'Regan, Director of Public Works
Phone: 781.231.4145
Email: boregan@saugus-ma.gov
Engineer Consultant:
CDM-Smith
Contact: Steven R. Callahan, Senior Project Manager

Phone: 617.452.6719
Email: callahansr@cdmsmith.com
Project Information
Name: Sewer System Rehabilitation
Type of Rehabilitation: Main Line CIPP Lining, MH Rehab, Lateral Lining, Lateral Grouting, Excavated Point Repairs
Contract Value
2016, $1,348,000.00 (Comprehensive)

Owner: Town of Lexington, MA
Engineer Consultant:
Weston & Sampson Engineers
Contact: Amanda Jett LeBlanc, PE
Phone: 978.818.9602
Email: JettLeBlanc.Amanda@wseinc.com
Project Information
Name: Phase 6 Sewer System Improvements
Type of Rehabilitation: Main Line CIPP Lining, MH Rehab, Lateral Lining, Lateral Grouting, Excavated Point Repairs
Contract Value
2016, $1,348,000.00 (Comprehensive)

Owner: City of Cambridge, MA
Contact: Eric Breen - Engineer
Phone: 617.349.6954
Email: ebreen@cambridgema.gov
Project Information
Name: FY 19 sewer, stormwater and combined system trenchless lining and repair
Type of Rehabilitation: Main Line CIPP Lining, Excavated Point Repairs
Contract Value
2019 $2,361,082.00

Owner: Town of Westwood, MA
Contact: Tod, Korchin, Director of Public Works
Phone: 781.251.2578
Email: tkorchin@tonwn.westwood.ma.us
Engineer Consultant:
Environmental Partners Group
Contact: Ryan J. Paul, PE
Phone: 617.657.0200
Email: rjp@envpartners.com
Project Information
Name: Town of Westwood, MA FY17 Sewer System Rehabilitation
Type of Rehabilitation: Main Line CIPP Lining, MH Rehab, Lateral Lining, Lateral Grouting,
Contract Value:
2017, $ 500,000.00

Owner: Town of Hingham MA
Contact: Steve Dempsey, Sewer Supervisor
Phone: 781.741.1430

Email: dempseys@hingham-ma.gov
Engineer Consultant:
Weston and Sampson
Contact: Patrick M. Cotton
Phone: 978.532.1900
Email: cottonp@wseinc.com
Project Information
Name: Town of Hingham, MA On-call Sewer Services
Type of Rehabilitation: Main Line CIPP Lining, MH Rehab, Lateral Lining, Lateral Grouting, Main Line Grouting
Contract Value:
2014-2016, $ 500,000.00

Owner: Town of Danvers, MA
Contact: Richard Rogers, PE, Town Engineer
Phone: 978.762.0254
Email: rrogers@danversma.gov
Project Information
Name: Town of Danvers, MA Comprehensive Sewer System Rehab
Type of Rehabilitation: Main Line CIPP Lining, MH Rehab, Lateral Lining, Lateral Grouting, Excavated Point Repairs
Contract Value:
2018-2019, $450,000.00

2007-2019
Owner: Metropolitan District Commission
Project: Multiple Sewer Rehabilitation Projects – Metropolitan District Hartford CT
Contact: Jason Waterbury 860-278-7850 Ext. 3380 / Cell:860-209-8181
The Metropolitan District
555 Main Street, PO Box 800
Hartford, CT 06142
Email Address: jwaterbury@themdc.com
Total I/I Rehabilitation Projects Value: 5,000,000 +

National Water Main Cleaning Co. 25 Marshall St. Canton, MA 02021-2479 Phone 781 828 0863, Fax 781 828 2473
Specializing in today's needs for environmental protection

SALVATORE F. PERRI

President
National Water Main Cleaning Co.
Professional Records

Qualifications

Responsible for the daily operation of a service oriented company consisting of three-divisions specialized in performing industrial cleaning, municipal services, and hydro-excavation.

Experience

National Water Main Cleaning Co. Newark, NJ

President

- Initiate and coordinate the start up of major industrial cleaning contracts, municipal catch basin cleaning, sewer cleaning, video inspection and large hydro excavation contracts.
- Manage a staff in excess of 100 people, supported by a fleet of approximately 100 service vehicles.
- Leads the company cost estimating team, the custom relations efforts, sales force, service quality control and the implementation of safety plans and corporate health programs.

National Water Main Cleaning Co. Newark, NJ

Project Manager for Boston Water and Sewer Commission

- Conducting two contracts to clean and video inspect various sized sewers, and one contract to perform Hydro Excavation to locate water services to determine if they are lead or copper.

National Water Main Cleaning Co. Newark, NJ

Project Superintendent for New York City DEP, Contracts TV-1 & TV-4

- Cleaned and video inspected approximately 2 million linear feet of various sewers from 1987 - 1991anaged.

Education

Indiana University of Pennsylvania Indiana, PA

- B.A. Economics

Certifications

Certifications

- Hazardous Waste Operation & Emergency Response Certificate.
- Hazardous Waste Operation & Emergency Response Refresher Training.
- Exxon Chemical Company SHAIC Training.
- Tosco Refining Company Training, Linden, New Jersey.

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DENNIS P. SULLIVAN, P.E.

General Manager – New England
Executive Vice President – National Water Main Cleaning Company
National Water Main Cleaning Co.
Professional Records

Qualifications

Opened up an office in the Boston area for National Water Main Cleaning Company in 2000. Subsequently opened up Hartford, CT division in 2008 and Utica, NY in 2010. NWMCC general scope of services consists of infrastructure inspection & rehabilitation including sewer/drain cleaning and inspection, sewer trenchless rehabilitation consisting of chemical grouting, pipe lining, concrete restoration, epoxy coating. Manage a current work force of 120+ employees consisting of field employees, project engineers & managers, salesman & office staff.

Experience

2000-Present National Water Main Cleaning Co. Canton, MA
Executive Vice President/General Manager

- Responsibilities include supervising project managers, accouting staff, project bidding & proposals, client relations, business development, sales & equipment purchasing.

1999-2000 Boston Water & Sewer Commission Boston, MA
Project Manager

- Storm drain and sewer design and provide construction management duties for multiple water, drain and sewer line installation projects within the City of Boston.
- Develop Plans and Specification to be put out for Bid.
- Answer all design and construction questions.
- Supervise several construction inspectors and two survey parties.
- Processed monthly estimates, negotiate change orders and as built all jobs in Auto Cad from construction total station surveys.

1992-1999 J.F. White Contracting Company Inc. Newton, MA
Project Engineer

- Prepared shop drawings, ordered materials and coordinated workforce & subcontractors.
- Utilized the construction management software Expedition to track submittals, pay items, correspondences, RFIs, and change orders.

Education

B.S. Civil Engineering
Worcester Polytechnic Institute Worcester, MA

Northeastern University

- Partial Completion - M.S. Civil Engineering Program Boston, MA

Certifications

- Professional Engineer (Massachusetts, No. 39504)
- Massachusetts Contracting License (CS063459)
- Scuba Diving Certified

National Water Main Cleaning Co. 25 Marshall St. Canton, MA 02021-2479 Phone 781 828 0863, Fax 781 828 2473
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JAMES O. LOUNSBERY

Executive Vice President
National Water Main Cleaning Co.
Professional Records

Qualifications

Responsible for governmental compliance to OSHA & DOT regulations, quality control, and continuous improvement; develop and implement safety and equipment training.

Experience

National Water Main Cleaning Co. Newark, NJ

Executive Vice President

- Conduct project/job surveys.
- Generate project proposals.
- Estimate cost of projects
- Lead customer relations and sales efforts.

National Water Main Cleaning Co. Newark, NJ

Project Manager for IT Corp./Exxon Co., USA, Linden, New Jersey

- Conducting cleaning and video inspection services as part of site remediation.
- Keep lines of communication open to customer, ensure that work being conducted to the satisfaction of the owner and the engineer.
- Keep employee Health and safety data current.
- Calibrate gas testers for use on site.
- Communicate with on site supervisor daily about progress and any problems which arise to be resolved immediately.

National Water Main Cleaning Co. Newark, NJ

Project Manager for New York City DEP, Contract SC-57

- Coordinated all activities associated with the cleaning and video inspection of sewers in all 5 boroughs.
- Interacted with the city Engineer, scheduled crews, ran equipment and coordinated billing.

Education

Clarkson University Potsdam, NY

- B.S. Chemical Engineering

Orange County Community College Middletown, NY

- A.S. Engineering Science
- Certifications

Certifications

- Hazardous Waste Operation & Emergency Response Training.
- HAZWOPER Supervisor Training.
- Exxon Chemical Company SHAIC Training.
- Tosco Refining Company Training, Linden, New Jersey.
- Merck & Company Contractor Safety Orientation.
- Occupational Health and Safety Technologist (OHST). Cert. # 1435.
- State of New Jersey Certified Commercial Pesticide Applicator License # 26624A.

National Water Main Cleaning Co. 25 Marshall St. Canton, MA 02021-2479 Phone 781 828 0863, Fax 781 828 2473
Specializing in today's needs for environmental protection

HERCULES ANASTASIADIS

Vice President - Boston
National Water Main Cleaning Co.
Professional Records

Qualifications

Joined NWMCC as an intern until graduating as a Civil Engineer. Areas of specialty include I/I identification and rehabilitation reports, analysis of CCTV data for main and lateral lines, estimating, scheduling, all aspects of project management. Reports directly to the Executive Vice President of National Water Main Cleaning co.

Experience

2018-Present National Water Main Cleaning Co. Canton, MA
Vice President

- Reports directly to the Executive Vice President of National Water Main Cleaning Co.
- Responsibilities include supervising all personnel issues, bidding, proposal development, client relations, equipment purchasing and project scheduling.
- Supervise project managers

2013-2018 National Water Main Cleaning Co. Canton, MA
Assistant Vice President

- Reports directly to the Vice President of National Water Main Cleaning Co.
- Responsibilities include supervising all personnel issues, bidding, proposal development, client relations, equipment purchasing and project scheduling.
- Supervise project managers

2005-2013 National Water Main Cleaning Co. Canton, MA
Project Engineer, Operations Manager

- Conduct project/job surveys
- Responsibilities include supervising all personnel issues, bidding, proposal development, client relations, and project scheduling.
- Oversee trenchless repairs
- Scheduling and managing upwards of 30 crews

Education

Wentworth Institute of technology Boston, MA

- B.S. Civil Engineering

Certifications

- 10 Hour OSHA, 40 Hour OSHA
- PACP, LACP, MACP NASSCO Certified (#U-1008-7623)

National Water Main Cleaning Co. 25 Marshall St. Canton, MA 02021-2479 Phone 781 828 0863, Fax 781 828 2473
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Joseph D Perone

Assistant Vice President
National Water Main Cleaning Company
Phone (800) 242-7257 Fax (973)483-5065
E-Mail jperone@nwmcc.com

Work History

- National Water Main Cleaning Co. Newark New Jersey
  (05/2011 - Present)
  Assistant Vice President

- National Water Main Cleaning Co. Newark New Jersey
  (2007 - 2010)
  Operations Manager

- National Water Main Cleaning Co. Newark New Jersey
  (Feb.2001 – 2007)
  Project Manager

Underground Video Inspection Inc. Hillsdale New Jersey
(August 1997 – February 2001)
Vice President

Bergen County Utilities Authority Little Ferry, New Jersey
(March 1993 – August 1997)
Sewer Worker
Plant Operator
Solids Operator

Education

Hackensack High School, Hackensack, New Jersey
(1968 – 1971) Graduated
Bergen Community College
(1979 – 1981) Various Engineering Courses
Bergen Tech
(1982 – 1983) Water & Wastewater Collections & Treatment
Rutgers University
(2006 – 2007) Advanced Wastewater Collections

Qualifications:

* Certified and Licensed by New Jersey Department of Environmental Protection in Public Wastewater Treatment. Treatment License #0018221

* Certified and Licensed by New Jersey Department of Environmental Protection in Public Wastewater Collection. Collection License #C 2161

* Certified and Licensed by the State of New Jersey in Pesticide Application for the control of roots in sewer systems. Applicators License #26746B, Business Applicators License #98181A

* Member of the Water Environment Federation since February 1998

* Member of the Collection Committee for the New Jersey Water Environmental Federation

* Certified Applicator of Cured in Place Point Repairs in Stephens Technology from Florida and Epros International based in Europe

* Certified Applicator Cured in Place Lateral Lining Process, Epros, Nu-Flow & Maxi Liner Systems

* Licensed by the New Jersey Board of Realtors as a certified Real Estate Sales Agent

* Certified in confined space entry

* Certified and Trained PACP

Present Responsibilities

Assistant Vice President
Manage Projects
Interviewing & Hiring New Employees for Work Force
Personnel Motivation & Discipline
Conduct Project/Job Surveys
Cost Estimating of Projects
Generate Project Proposals
Oversee Project Start-ups
Customer Relations
Corporate Equipment Purchasing
(medium to light duty)
Equipment Design

Sales and Marketing
Customer Training & Presentations
Create Training Manuals

Pipe Lining Manager
Oversee all aspects of:
- Cured in Place Point Repairs
- Lateral Connection Repairs
- Manhole to Manhole Lining
- Corporate Resin Control & Inventory
- Research and Development New Lining Techniques and Processes
- Equipment Purchase and Design
- Specification and Technical Manager

National Water Main Cleaning Co. 25 Marshall St. Canton, MA 02021-2479 Phone 781 828 0863, Fax 781 828 2473

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JONATHAN REYNOLDS

Assistant Secretary/Treasurer - Canton

National Water Main Cleaning Co.

Professional Records

Qualifications

Joined NWMCC after graduating with a Finance/Economics degree. Areas of specialty include: Accounts payable, Accounts Receivable and Payroll.

Reports directly to the Vice President of National Water Main Cleaning Company.

Experience

2017-Present National Water Main Cleaning Co. Canton, MA

Assistant Secretary/Treasurer

- Reports directly to the Vice President of National Water Main Cleaning Co.
- Responsibilities include supervising all personnel issues, administrative and accounting functions
- Supervise office personnel

2009-2017 National Water Main Cleaning Co. Canton, MA

Accountant

- Accounts Receivable/Invoicing
- Accounts Payable
- Oversee Payroll

Education

Westfield State University Westfield, MA

B.S. Finance

B.A. Economics

NATIONAL WATER MAIN CLEANING CO.

Specializing in today's needs for environmental protection.

1806 Newark Turnpike • Kearny, NJ 07032 • Phone: 973-483-3200 • Fax: 973-483-5065 • E-Mail: office@nwmcc.com
25 Marshall Street • Canton, MA 02021 • Phone: 781-828-0863 • Fax: 781-828-4397 • E-Mail: boston@nwmcc.com

List of Company Executives:

President:
Salvatore F. Perri
5 Hickory Road
Short Hills, NJ 07078

Executive Vice President:
James O. lounsbery
231 Highland Avenue
Middletown, NY 10940

Executive Vice President:
Dennis P. Sullivan
58 Bristol Road
Wellesley, MA 02481

Vice President:
Joseph Perone
4 Lincoln Street
South Hackensack, NJ 07606

Vice President:
Hercules Anastasiadis
30 Freeman Avenue
West Roxbury, MA 02132

Secretary/Treasurer:
Raymond R. Lindsley
14 Second Street
Budd Lake, NJ 07828

Assistant Secretary/Treasurer:
Jonathan Reynolds
35 Roosevelt Drive
Northbridge, MA 01534

Owner	Job Title	State	Date of Award	Amount of Contract	Percent Complete	Completion Date
Department of Conservation and Recreation	DCR Contract 626	MA	22/Sep/14	$ 4,000,000.00	70.00%	Dec-22
THE MDC	Large Diameter Pipe Cleaning	CT	20-Apr-17	$ 3,686,603.33	90%	Mar-19
Town of Middletown, RI	MIDD-018-005 Upper Easton's Point S	RI	14/Mar/18	$ 3,399,051.25	70%	Dec-19
City of Beverly, MA	Contract No. 18-028, Sewer Subsysten	MA	26/Sep/18	$ 2,598,736.00	0%	Dec-19
City of Cambridge, MA	File No. 8333, FY 19 Sewer, Storm Dra	MA	6/Dec/18	$1,967,490.25	0%	Dec-19
Town of Lexington, MA	Contract No. 19-58, MWRA Project No	MA	6/Dec/18	$ 1,757,086.50	0%	Dec-19
City of Revere, MA	Bid No. DPCD-2017-1013, Comprehen	MA	16/Nov/17	$ 1,625,269.31	95%	May-19
City of Revere, MA	Spot Replacement of Sewers, Sewer S	MA	28/May/18	$ 1,549,569.25	65%	Dec-19
Village of Kenmore, NY	2018 WCIP Sanitary Sewer and Manhe	NY	12/Jul/18	$ 1,218,416.00	0%	Dec-19
Oneida County, NY	Bid No. 1859, Contract 14, Sanitary Se	NY	16/Mar/17	$ 995,407.25	95%	May-19
Town of Cheektowaga, NY	Bid No. 2018-12, Phase III of Sanitary S	NY	20/Apr/18	$ 938,473.95	75%	Jul-19
Boston Water and Sewer Commission	Contract No. 19-309-010,	MA	6/Dec/18	$ 818,314.75	0%	Dec-19
Town of Cheektowaga, NY	Bid No. 2017-14, Phase II of Sanitary S	NY	5/Apr/17	$ 792,352.20	95%	Jun-19
City of Saugus, MA	Bid No. 18-18, Sewer System Rehabilit	MA	2/Aug/18	$ 778,691.00	65%	May-19
Town of Hingham, MA	Contract No. FY17-S2, Contract 2 – Tre	MA	1/Dec/16	$ 770,636.00	65%	Dec-19
MassDOT District 6	Proposal No. 608756-100743, Schedul	MA	7/Nov/17	$ 767,964.76	15.00%	Jul-19
Boston Water and Sewer Commission	Contract No. 19-309-008, Sewer and D	MA	6/Dec/18	$ 759,231.00	0%	Dec-19
City of Lawrence, MA	CWSRF #4427, Project No. 0228526.0	MA	24/Oct/18	$ 748,899.50	0%	Dec-19
Boston Water and Sewer Commission	Contract No. 17-309-006, Cleaning an	MA	1/Nov/18	$ 747,649.03	0%	Dec-19
Buffalo Sewer Authority	Sewer Cleaning and Internal	NY	7/Feb/18	$ 735,500.00	15%	Dec-19
Town of Danvers, MA	CO-06-3, Comprehensive Sewer Syster	MA	19/Jul/18	$ 589,422.55	75%	May-19
Boston Water and Sewer Commission	Contract No. 18-309-010,	MA	16/Mar/18	$ 547,260.25	95%	May-19
Boston Water and Sewer Commission	Contract No. 19-309-009,	MA	5/Dec/18	$ 522,204.25	0%	Dec-19
Boston Water and Sewer Commission	Contract No. 18-303-004,	MA	8/Nov/17	$ 500,962.00	95%	May-19
Town of Arlington, MA	Phase #10 Sanitary Sewer Rehabilitati	MA	23/Aug/18	$ 500,416.91	25%	Mar-19
Town of Wellesley, MA	Contract No. 16C-480-1564, Sewer Ins	MA	19/May/16	$ 446,743.06	15%	Aug-19
MassDOT District 4	Proposal No. 608670-99446, Schedule	MA	1/Aug/17	$ 419,024.76	90%	Aug-19
City of Everett, MA	Sewer Line and Catch Basin Cleaning	MA	27/Jul/17	$ 403,764.50	80%	Jul-19
Oneida County, NY	Bid No. 1875, Contract 16 – Sanitary S	NY	8/Mar/18	$ 386,042.00	38%	Dec-19
Town of Haverhill, MA	Contract No. IFB 002.19, Marsh Avent	MA	8/Aug/18	$ 359,755.75	50%	Jul-19
MassDOT District 5	Proposal No. 608434-99200, Schedule	MA	6/Jun/17	$ 344,969.27	90%	Jul-19
Town of Cheektowaga, NY	Bid No. 2017-34, Sanitary Sewer Later	NY	18/Oct/17	$ 298,100.00	95%	Jun-19
Town of Middletown, CT	Sewer Rehabilitation	CT	12-Mar-18	$ 259,450.00	25%	Jul-19
City of Bangor, ME	Bid No. P18-073, Repair of Undergrou	ME	5/Sep/18	$ 256,800.00	20%	Dec-19
Lee Kennedy Co., Inc.	Hancock Lot Parking Facility	MA		$ 248,000.00	33%	Dec-19
MassDOT District 2	Proposal No. 608558-102056, Schedul	MA	28/Nov/17	$ 241,472.00	45.00%	Dec-19

ity of Manchester, NH	FY18-270-42, Cleaning and Closed Circ	NH	12/Apr/18	$ 212,260.00	75%	Dec-19
ity of Shelton, CT	Bid No. 38-78, On-Call Television Inspe	CT	7-Jun-18	$ 205,530.00	20%	Jul-19
lassDOT District 5	Proposal No. 608446-99086, Schedule	MA	31/May/17	$ 191,369.67	88.00%	May-19
own of Ithaca, NY	2018 Sanitary Sewer Rehabilitation Pr	NY	5/Jun/18	$ 174,450.00	95%	May-19
oston Parks and Recreation Department	Drainage System Improvements, City-	MA	7/Apr/16	$ 139,330.00	70.00%	Dec-19
ECO Energy	Vault Sealing – 2018	PA	27-Mar-18	$ 136,360.00	0%	Dec-19
lassachusetts Port Authority	Subcontract No. 218444-002 MPA Proj	MA	18/Sep/18	$ 127,995.00	20%	May-19
own of Salem, NH	Bid 2018-026, Contract and Specificati	NH	30/Aug/18	$ 95,488.50	0%	May-19
lassachusetts Water Resources Authority	MWRA Contract No. 7505, Southern E	MA	2/Jul/18	$ 82,300.00	50%	Jul-19
ity of Lewiston, ME	Bid No. 2018-061, River Road Culvert	ME	14/Aug/18	$ 82,220.00	100%	Oct-18
own of Trumbull, CT	Bid No. 6279, Sewer System Rehabilita	CT	22-Mar-18	$ 69,102.55	80%	Jul-19
own of Erving, MA	Job No. E5004-05, POTW #1 Double B	MA	29/Nov/18	$ 68,602.00	0%	Jul-19
arragansett Bay Commission	Contract No. 304.65C, Fields Point D/B	RI	14/Feb/18	$ 64,095.00	95%	Feb-19
ity of Worcester, MA	Contract No. 6774-W7, Route 20 Sewe	MA	7/Dec/17	$ 47,800.00	15%	May-19
ity of Worcester, MA	Green Street and Quinsigamond Aven	MA		$ 45,500.00	80%	Feb-19
eagent World, Inc.	P.O. No.: RW_T211_20180926_2	MA	26/Sep/18	$ 44,320.00	25%	Dec-19
own of Hull, MA	Purchase Order No. 11263, 0217319.0	MA	10/Oct/18	$ 37,936.00	90%	May-19
Ventworth Institute of Technology		MA	18/Dec/18	$ 6,950.00	75%	May-19
			Total	$ 38,805,357.35		

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ID #	PLATE #	* Flt Program	REG.	VEHICLE ID#	YEAR	CAB	EQUIP.
A-11 / T236	NWMCC2	CO *	MA	1GNKVGKD7FJ245424	2015	CHEV	TRAVERSE
A-13	NWMCC3	CO *	MA	5GADT13S852226568	2005	RAINER	RAINER
A-16	T13852	CO*	MA	1G1PA5SG4D7146605	2013	CHEVY	CRUZE
A-17	S25768	CO*	MA	1G1PA5SG4D7165249	2013	CHEVY	CRUZE
A-19	S25751	CO*	MA	1G1PA5SG4D7306238	2013	CHEVY	CRUZE
A-21	NWMCC1	PASS	MA	1GNEVHKW9JJ132927	2018	CHEVY	TRAVERSE
A-22	R44939	CO*	MA	1G11C5SA1GU157594	2016	CHEVY	MALIBU
AC-1 Sull Air Compressor	C10744	CO*	MA	200705230098	2007	SULLAIR	COMPRESSOR
AC-2 Ingersol Rand	C56698	CO*	MA	4FVCABAA8AU414623	2010	Cam	Trailer
AC-3 DOOSAN 2	D12822	CO*	MA	4FVCABAA3DU451731	2013		COMPRESSOR
AC-4 DOOSAN 3	D35190	CO*	MA	4FVCABAAFU473084	2015	DOOSAN	COMPRESSOR
AC-5 Doosan	D26611	CO*	MA	4FVCABAA6GCU47333	2016	COMPRESSOR	COMPRESSOR
AC-6 DOOSAN 1	D12823	CO*	MA	4FVCABAA1DU453199	2013	COMPRESSOR	COMPRESSOR
AC-7 Ingersoll Rand	D54098	CO*	MA	371297UEQA59	2012	COMPRESSOR	COMPRESSOR
ARROW BOARD 2	A24296	CO*	MA	4GM1A091391523513	2009	ARROW BOARD	ARROW BOARD
ARROW BOARD 3	B10367	CO*	MA	5F11S1019A1002255	2010	WANCO	ARROW BOARD
ARROW BOARD-1	A30209	CO*	MA	4GM1A091781523237	2008	ARROW BOARD	ARROW BOARD
ATTENUATOR	B77365	CO*	MA	1E9TF160DVC520950	2012	TRAILER	ATTENUATOR
BT-346	1933B	AP*	MA	5KKXAM005JPJX3720	2018	WESTERN STAR	Boiler Truck
C-32	62944	AP*	MA	4V52AEHDXSR475115	1995	VOLVO	CB Truck
C-36A	P16312	CO*	MA	1GDM7F1314F509988	2004	GMC	CB Truck
C39-A	N90624	AP*	MA	1GDM7F1364F517049	2004	FTR	CB Truck
C-37A	84097	AP*	MA	1GDM7F1315F505733	2005	GMC	CB Truck
C-39A	93585	AP*	MA	1GDM7F1364F517049	2004	GMC	CB Truck
C-41	71458	AP*	MA	1VG6M112B4LB068518	1990	MAC	CB Truck
FORKLIFT		AP*	MA	FORKLIFT			FORKLIFT
GATOR UNIT	BOSTON	AP*	MA	10855DSLAM010351 (SERIAL#)			GATOR UNIT
C-47	76626	AP*	MA	1HTMMAAN75H152827	2005	INT	CB Truck
C-48	80276	AP*	MA	1HTMKAAN53H564263	2003	INT	CB Truck
C-52	8984A	AP*	MA	1GDP7F1324F520768	2004	GMC	CB Truck
C-53	8983A	AP*	MA	4GTP8F1316F700844	2006	ISUZU	CB Truck
C-54	8511A	AP*	MA	4GTP8F1346F700823	2006	ISUZU	CB Truck
CT-4	8671A	AP*	MA	1GDP8F1355F528216	2005	GMC	Cutter Truck
H-101	73556	AP*	MA	1HTSDAAN0RH596676	1994	INT	JETTER
H-193	91351	AP*	MA	1HTSCAAR8XH663527	1999	INT	JETTER
H-195	93434	AP*	MA	1FDXK84NXFVA73641	1985	FORD	JETTER
H-202	94175	AP*	MA	1FVACXCY7FHGP9255	2015	FREIGHTLINER	JETTER
H-210	6791A	AP*	MA	3ALACYFE4JDJZ4705	2018	FREIGHTLINER	JETTER
H-211	8916A	AP*	MA	1FVACYFE7KHLR1119	2019	FREIGHTLINER	JETTER
H-213	2770B	AP*	MA	3ALACYFE6MDMJ9629	2021	FREIGHTLINER	JETTER
JC-101	62940	AP*	MA	4V2DCFPE6SR713025	1995	VOLVO	JET/VAC
JC-109	73707	AP*	MA	4V5JCBPE2TR853878	1996	VOLVO	JET/VAC

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JC-146	71460	AP*	MA	4V5J32HE7YN871239	2000	VOLVO	JET/VAC
JC-187	74646	AP*	MA	2FZAATAK73AL75298	2003	STE	JET VAC
JC-190	65352	AP*	MA	2FZHAZAS03AM12094	2003	STE	JET VAC
JC-207	65353	AP*	MA	1HTWCAZR15J158098	2005	INT	JET VAC
JC-231	75336	AP*	MA	1HTGCADT4XHG609882	1999	INT	JET VAC
JC-232	75337	AP*	MA	2FZHATAJ71AG14072	2001	STE	JET VAC
JC-236	73708	AP*	MA	1HTWYSBT76J348079	2006	INT	JET VAC
JC-242	76763	AP*	MA	1HTGLAHTXXH572928	1999	INT	JET VAC
JC-243	76764	AP*	MA	1HTGLAXT61H360262	2001	INT	JET VAC
JC-259	76627	AP*	MA	1HTWKAZR98J053641	2008	INT	JET VAC
JC-260	76629	AP*	MA	1HTWKAZR08J053642	2008	INT	JET VAC
JC-289	98035	AP*	MA	5VCDC6KG3AH209874	2010	AUTO	JET VAC
JC-290	82384	AP*	MA	5VCDC6KG7AH209876	2010	AUTO/BOX	JET VAC
JC-295	84997	AP*	Ma	5VCDC6KG0AH209878	2010	AUTO	JET VAC
JC-315	52464	AP*	MA	1HTXLAPT86J200190	2006	INT	JET VAC
JC-333	95861	AP*	MA	3ALXA7CG9FDGU3063	2016	FREIGHTLINER	JET VAC
JC-339	93937	AP*	MA	5VCACLUH1FH219026	2015	AUTO	
JC-378	75963	AP*	MA	5VCACLUH0HH223815	2017	AUTO	JET VAC
JC-382	75970	AP*	MA	5VCACLUH4HH223817	2017	AUTO	JET VAC
JC-383	4417A	AP*	MA	5VCACLUH8HH223870	2017	AUTO	JET VAC
JC-394	2316A	AP*	MA	5KKXAMCG4HPJF8494	2017	WESTERN STAR	JET VAC
JC-395	8941A	AP*	MA	5KKXAMCG1HPJF8498	2017	WESTERN STAR	JET VAC
JC-414	8907A	AP*	MA	5KKXAF007KPKV5686	2019	WESTERN STAR	JET VAC
JC-427	1803B	AP*	MA	5VCAELEJ3LH230875	2020	Autocar	JET VAC
JC-428	1807B	AP*	MA	5VCAELEJ1LH230874	2020	Autocar	JET VAC
LL-41	1886B	AP*	MA	3ALACXFE2LDME4922	2020	FREIGHTLINER	LATERAL LINER TRK
LL-24	P65349	CO*	MA	1HTMMAALX5H100493	2005	INT	
LL-30	R49171	CO*	MA	1FVACWDTXEHFU4542	2014	FREIGHTLINER	
LL-4	84096	AP*	MA	1HTMMAAKX6H200375	2006	INTL	LATERAL LINER TRK
LL-8	S51948	CO*	MA	1HTMMAAL15H103847	2005	INT	
LL-8A	R62181	CO*	MA	1FVACWDT4FHGD7036	2015	FREIGHTLINER	
LT-1	E31683	TRN	MA	MATR393864032	2019	CIPP Services	Shooter/Inverter 60 "
MH-10	R59135	CO*	MA	1FVACWDT2FHGD9965	2015	FREIGHTLINER	FREIGHTLINER
MH-11	R75879	CO*	MA	3ALACWDT4FDGM0125	2015	FREIGHTLINER	FREIGHTLINER
MH-12	4883B	AP*	MA	3ALACXCY6FDGM0145	2015	FREIGHTLINER	FREIGHTLINER
MH-14	R83111	CO*	MA	3ALACWDT6FDGM0126	2015	FREIGHTLINER	FREIGHTLINER
MH-1A	62946	AP*	MA	1HTSDAAN31H349186	2001	INT	TRK
MH-2	81471	AP*	MA	1HTSDAAN7SH606030	1995	INT	TRK
MH-4	81468	AP*	MA	1HTSDAAN4YH233506	2000	INT	TRK
MH-8	62943	AP*	MA	4VMDCKPF3XN780673	1999	VOLVO	VOLVO TRK
MH-9	87117	AP*	MA	1HTMMAAN87H486934	2007	INT	VOLVO TRK
MJ-3 (TRAILER)	B45881	CO*	MA	1H9T8204BC122005	2011	HAR/TRARILER	TRAILER

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MJ-6TRAILER	B69229	CO*	Ma	1H9X15102DC122007	2013	TRAILER	TRAILER
MJ-8 Trailer	C54097	CO*	MA	1H9X15109EC122023	2014	TRAILER	TRAILER
MJ-9	C54096	CO*	MA	1H9X15100EC122024	2014	TRAILER	TRAILER
MT-1	D46114	CO*	MA	1BOBU2127X1438096	1999	WADE	TRAILER
MT-3	B45940	CO*	MA	1B9FB20254A39509	2004	UTIL	TRAILER
MT-4	C84426	CO*	MA	1B9FB20276A439615	2006	UTIL	TRAILER
MT-6	C84374	CO*	MA	1P9AP1117GR330257	2016		TRAILER
PR-12	82510	AP*	MA	1HTMMAAN75H147627	2005	INT	POINT REPAIR
RCY-399	2270A	AP*	MA	5KKXAMCG7HPJF8490	2017	WESTERN STAR	RECYCLER
RCY-400	2269A	AP*	MA	5KKXAMCG6HPJF8495	2017	WESTERN STAR	RECYCLER
RCY-411	8934A	AP*	MA	5KKXAM007JPJX3721	2018	WESTERN STAR	RECYCLER
RCY-415	8730A	AP*	MA	5KKXAM009JPJX3722	2018	WESTERN STAR	RECYCLER
RT-354	6296B	AP*	MA	1FVHCYBS7DHFF8445	2013	FREIGHTLINER	Reefer
SON-103	T83086	CO*	MA	1FDXE45P59DA87859	2009	FORD	Sonar
SS-033	P13235	CO*	MA	JNAPC81L9AAC80273	2010	ELGIN	STREET SWEEPER
SS-034	S24232	CO*	MA	1FVACXDT5GHGW9294	2016	FREIGHTLINER	STREET SWEEPER
SS-035	S24233	CO*	MA	1FVACXDT5GHGW9327	2016	FREIGHTLINER	STREET SWEEPER
SS-52	T98180	CO*	MA	1FVACXFC8KHKM1030	2019	FREIGHTLINER	STREET SWEEPER
T-129	75937	AP*	MA	4GDV9C4W8KV801819	1989	WHI	DUMP TRUCK
T-148	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	GMC	CK UP/KEVIN MARTEL
T-166	L59306	CO*	MA	1GCHC29D26E183831	2006	CHE	SILVER UT TRK
T-172	M30643	CO*	MA	1GCCS196X68216839	2006	CHE	PICK UP
T-174	M42623	CO*	MA	1HTSCAAM8TH250098	1996	INT	PICK UP
T-182	N82126	CO*	MA	1GCCS14E088176076	2008	CHE	COLORADO
T-183	N82111	CO*	MA	1GCCS19E788176083	2008	CHE	COLORADO
T-190	M87637	CO*	MA	1GBJC33658F179534	2008	CHE	PICK UP
T-194	N44453	CO*	MA	1GBE4C1989F410830	2009	CHE	PICK UP
T-199	2RR711	CO*	MA	2CNFLEEWXA6256095	2010		
T-201	N53411	CO*	MA	1GCESBDE3A8110044	2010	CHEV	SEDAN/MILLINGTON
T-202	N53413	CO*	MA	1GCSKSEA6AZ108782	2010	CHEV	ILVERADO/FALCONIEI
T-203	N90625	CO*	MA	1HTSCAAK9TH318410	1996	INTER VAN	BOSTON TRAILER
T-205	P16310	CO*	MA	1GCNCPEA6BZ241017	2011	CHEV	
T-206	P16905	CO*	MA	1GCESBFEXB8116972	2011	CHEV	COLORADO/SAFETY
T-208	P12348	CO*	MA	1HTSCAAM6WH512611	1998	INT/BOX	
T-212	P14179	CO*	MA	1GCRKPEA6BZ305898	2011	CHE	
T-217	P50832	CO*	MA	1GCRKPE00CZ190580	2012	CHEV	
T-218	P50831	CO*	MA	1GCRKPE04CZ190078	2012	CHEV	
T-220	P65347	CO*	MA	WD3PF3CC6C5626447	2012	MERZ/VAN	MOBILE TV
T-221	P65348	CO*	MA	WD3PF3CC4C5623014	2012	MERZ/VAN	MOBILE TV
T-222	P64521	CO*	Ma	1FBNE31L16HA78173	2006	FORD VAN	
T-227	P84859	CO*	Ma	1GCRKPEA7DZ238649	2013	CHEV/SILVERADO	G. MILLINGTON
T-230	R20756	CO*	Ma	1GC2KVCG5D2367051	2013	CHEV/SILVERADO	

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T-231	R20753	CO*	Ma	1GC2KVCG3DZ364410	2013	CHEV/SILVERADO	
T-232	R17871	CO*	Ma	J8DC4B1877008024	2007	GMC	RACK TRUCK
T-237	1RZ121	CO*	MA	2GNFLEEK9F6242026	2015	CHEVY	Dave
T-238	1RZ131	CO*	MA	2GNFLEEK3F6237534	2015	CHEVY	James
T-239	R88963	CO*	MA	1GC2KUEG5FZ516357	2015	CHEVY	SILVERADO
T-243	R94335	CO*	MA	1FVACWDC77HY75935	2007	FREIGHTLINER	BOX
T-250	R94336	CO*	MA	1FVACWCS97DY37462	2007	FREIGHTLINER	RACK TRUCK
T-251	S47769	CO*	MA	1GB4CYC81GF147786	2016		RACK TRUCK
T-252	S52846	CO*	MA	1GCVKNEC8GZ186487	2016		PICK UP
T-253	S25923	CO*	MA	1GC1CUEG1GF136301	2016		PICK UP
T-254	R17872	CO*	Ma	J8DC4B16367001139	2006	GMC	USED TO BE TV205
T-255	80245	AP*	MA	1GBE4C1285F501948	2005	GMC	LATERAL LINER TRK
T-256	99826	AP*	MA	1M2P296C93M065890	2003	MACK	
T-257	99827	AP*	MA	2NPLHN7X69M780343	2009	PETERBILT	
T-258	S68096	CO*	MA	1FVACWCS75HU68929	2005	FREIGHTLINER	
T-259	S68097	CO*	MA	1GBE5C19X7F413965	2007	CHEVY	
T-260	S98695	CO*	MA	1GC2KUEG1GZ345608	2016	CHEVY	PICK UP
T-262	T12412	CO*	MA	3GCUKNEC2HG274030	2017	CHEVY	PICK UP
T-273	T12413	CO*	MA	1GC1KUEG4HF114815	2017	CHEVY	PICK UP
T-274	T12414	CO*	MA	1GCVKNEC4HZ196371	2017	CHEVY	PICK UP
T-277	T19956	CO*	MA	1GB4CYC8XFF641319	2015	CHEVY	PICK UP
T-278	T19957	CO*	MA	1GB4CYC85FF639879	2015	CHEVY	PICK UP
T-307	T73378	CO*	MA	1GCHG39R1Y1126066	2000	CHEVY	VAN
T-311	R44938	CO*	MA	NM0LS7E79F1193741	2015	FORD	VAN
T-314	62941	AP*	MA	4V5JCBPE0TR853877	1996	VOLVO	Truck
T-315	87310	AP*	MA	1HTGSSJTXCJ124033	2012	INT	Truck
T-316	8982A	AP*	MA	1GDP7F1365F528339	2005	GMC	
T-318	8633A	AP*	MA	1GDP8F1305F520007	2205	GMC	Boiler Truck
T-319	8634A	AP*	MA	1FVHCYBS9DDFB5507	2013	FREIGHTLINER	Reefer Truck
T-320	P90407	CO*	MA	JALE5W16287301402	2008	ISUZU	MOBILE TV
T-321	R46413	CO*	MA	JALE5W168E7301898	2014	ISUZU	
T-324	8510A	AP*	MA	4GTP8F1396F700851	2006	ISUZU	Cutter Truck
T-325	8509A	AP*	MA	1GDP7F1354F520909	2004	GMC	RACK TRUCK
T-330	T93783	CO*	MA	1GCUYAEF9KZ250932	2019	Chevrolet	Silverado
T-331	T93784	CO*	MA	1GCUYAEFXKZ249823	2019	Chevrolet	Silverado
T-334	T93786	CO*	MA	1GCUYAEF2KZ237164	2019	Chevrolet	Silverado
T-335	87309	AP*	MA	1HTGSSJTOCJ124039	2012	INT	Tractor
T-336	V17781	CO*	MA	2GC2KREG7K1200149	2019	Chevrolet	Silverado
T-337	V17782	CO*	MA	2GC2KREG3K1200066	2019	Chevrolet	Silverado
T-338	V17780	CO*	MA	2GC2KREG6K1203835	2019	Chevrolet	Silverado
T-341	2651B	AP*	MA	1GDP8F1385F528713	2005	GMC	Box Truck
T-343	V40642	CO*	MA	1HTKJPVH5KH196277	2019	Chevrolet	Silverado
T-347	1932B	AP*	MA	1GDP7F1304F520316	2004	GMC	Main Line Support

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HIGHLIGHTED BLUE=MA VEH.		Plate Type	STATE			MAKE	MAKE
ID #	PLATE #	* Flt Program	REG.	VEHICLE ID#	YEAR	CAB	EQUIP.
T-348	V82415	CO*	MA	3ALACWFC1JDKC9327	2018	FREIGHTLINER	Main Line Support
T-349	1934B	AP*	MA	1FVHCYBS5DHFF8413	2013	FREIGHTLINER	Reefer Truck
T-355	6299B	AP*	MA	1M1AW04Y5FM007692	2015	Mack	Tractor
T-356	6300B	AP*	MA	1M1AW02Y0FM048279	2015	Mack	Tractor
TR-10	C83681	CO*	MA	5JPBU1618FP038276	2015		
TR-11	D12935	CO*	MA	5JPBU1610GP044235	2016		
TR-12	D35253	CO*	MA	575GB1823GP322427	2016		
TR-13	D66187	CO*	MA	5JPBU2425HP052351		CAM	
TR-14	A64470	CO*	MA	1T9BU122X3A694068	2003	UTIL	TRAILER
TR-16	E45580	TR	MA	1GRDM96239H711733	2009	GDANE	Trailer
TR-19	E85197	TR	MA	1UYVS253X7M080118	2007	UTIL	Trailer
TR-2	B11086	CO*	MA	20390	1978	MITSU	TRL
TR-20	2334B	STR	MA	1GRAA062XAW703443	2010	Great Dane	Reefer
TR-24	13E6	STR	MA	1UYVS2538YM906174	2000	Conveyor	Reefer-Conveyor
TR-25	3284B	STR	MA	1GRAA0622BW700456	2011	Great Dane	Reefer
TR-26	13C2	STR	MA	1GRAA0629CB709650	2012	Great Dane	Reefer
TR-27	13C3	STR	MA	1S12E9302ME545405	2021	Strider	Boiler Trailer
TR-4	D46129	CO*	MA	16VEX1829A2353876	2010	BIGT	TRAILER
TR-5	E80752	TR	MA	16VCX1827A2E47975	2010	UTIL	TRAILER
TR-7	B77775	CO*	MA	16VCX1827A2E61987	2010	BIG TEX	TRAILER
TR-8	P65835	CO*	MA	16VLX0811A2A67287	2010	BIG TEX	OFF ROAD TRAILER
TR-9	C75341	CO*	MA	5JPBU16199PO22690	2009	CAM	
TV-104A	L46343	CO*	MA	1GDJG312161181576	2006	GMC	MOBILE TV
TV-149	S25728	CO*	MA	1FDXE40S8XHB18586	1999	FORD	MOBILE TV
TV-152	N16262	CO*	MA	1GBE4C1276F412955	2008	CHE	MOBILE TV
TV-191	P27704	CO*	MA	1GDE4C1296F428937	2006	GMC	MOBILE TV
TV-191A	S17592	CO*	MA	JALE5W160D7300596	2013	ISUZU	MOBILE TV
TV-215	R18645	CO*	MA	JALE5W168D7301107	2013	ISUZU	MOBILE TV
TV-223	R57586	CO*	MA	JALE5W166E7302709	2014	ISUZU	
TV-204B	T86343	CO*	MA	JALE5W161K7302922	2019	ISUZU	MOBILE TV
TV-205B	T86344	CO*	MA	JALE5W168K7302920	2019	ISUZU	MOBILE TV
TV-224	R57580	CO*	MA	JALE5W163F7300496	2015	ISUZU	
TV-225	R57579	CO*	MA	JALE5W163F7300479	2015	ISUZU	MOBILE TV
TV-226	R57585	CO*	MA	JALE5W163F7300837	2015	ISUZU	
TV-227	R46412	CO*	MA	JALE5W16XE7302082	2014	ISUZU	
TV-244	R87715	CO*	MA	1FDXE45FX2HA01211	2002	FORD	MOBILE TV
TV-253	S65700	CO*	MA	1FDAF56S4YEB78500	2000	FORD	F550
TV-261	S86544	CO*	MA	JALE5W160H7302497	2017	ISUZU	MOBILE TV
TV-282	V16533	CO*	MA	JALE5W165K7304964	2019	ISUZU	MOBILE TV
TV-283	V18904	CO*	MA	1FDXE45S02HB65130	2002	FORD	MOBILE TV
TV-41A	P55569	CO*	MA	1GD373BLOB11O7799	2011	GMC	MOBILE TV
TV-46	M42624	CO*	MA	1GBHP32Y4R3303236	1994	CHE	MOBILE TV
TV-50	M87635	CO*	MA	1GBHP32Y9R3315611	1994	CHE	MOBILE TV

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25 Marshall Street Canton, MA 02021 · Phone: 617-361-5533 · Fax: 617-361-5501 · E-Mail: boston@nwmcc.com

10/6/2020 10/6/2020

EQUIPMENT LIST BY ID # ·ith * submitted into fleet progr

HIGHLIGHTED BLUE=MA VEH.		Plate Type	STATE			MAKE	MAKE
ID #	PLATE #	* Flt Program	REG.	VEHICLE ID#	YEAR	CAB	EQUIP.
TV-76	R23843	CO*	MA	5B4KP42Y313329411	2001	BOX TRUCK	TV TRUCK
V-230	5247A	AP*	MA	1FVHG3DV0EHFX6306	2014	FREIGHTLINER	JET VAC
VV-41	65113	AP*	MA	4UZAARBW62CJ69542	2001	FRE	GROUTING RIG
VV-46	76765	AP*	MA	1HTMMAAL56H185647	2006	INT	GROUTING RIG
VV-66	93013	AP*	MA	1FVACXDTXFHGB7685	2015	FREIGHTLINER	
VV-67	93014	AP*	MA	1FVACXDT8FHGB7684	2015	FREIGHTLINER	
VV-74	1534A	AP*	MA	3ALACXFEXJDJZ4704	2018	FREIGHTLINER	GROUTING RIG
VV-78	9237A	AP*	MA	1FVACXFE7KHLR1082	2019	FREIGHTLINER	GROUTING RIG

National Water Main Cleaning Co. 25 Marshall St. Canton, MA 02021-2479 Phone 781 828 0863, Fax 781 828 2473
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JAMES W. FLEMING

Project Engineer - Boston
National Water Main Cleaning Co.
Professional Records

Qualifications

Joined NWMCC as an intern until graduating with a bachelor's degree in Construction Management. Areas of specialty include:. I/I identification and rehabilitation reports, analysis of CCTV data for main and lateral lines, Infiltration elimination with specialty designed trenchless methods and structural rehabilitation of deteriorating sewer systems. Experienced Manager of multiple crews and subcontractors on complex projects. Extensive knowledge of Confined Space Entry and Safety Procedures

Experience

2008-Present National Water Main Cleaning Co. Canton, MA

Project Engineer

- Manage and oversee in-depth trenchless rehabilitation projects involving multiple crews
- Field responsibilities include supervising all personnel on site and ensuring proper safety procedures are being followed., Make certain all crews are reaching the daily production required, Properly setting up the job so that each task with in the project will have the proper materials, equipment and staffing to perform quality work
- Office responsibilities include obtaining subcontractor pricing for bidding, Establishing schedules and job tracking for upcoming and ongoing projects. Provide Submittal packages for review to newly awarded projects.
- Oversee and supervise no-dig repairs:
  CIPP – Short liners and Lateral Connection Repairs
  Manhole Rehabilitation – Cementious Lining, Chimney Seals, and Epoxy Coating
- Oversees Highway Maintenance projects included catch basin cleaning and street sweeping
- Enforcement of field safety programs.

Education

Wentworth Institute of Technology Boston, MA

- B.S. Construction Management

Keene State College Keene, NH

- Certificate of completion for OSHA 10/30 Hour train the trainer

Certifications

- OSHA Certified 10/30 Hour Trainer
- 10 Hour OSHA
- 30 Hour OSHA
- 30 Hour OSHA (Superintendents Training)
- OSHA 40 Hour Hazwoper Training
- Confined Space Entry Certified
- Quadex applicator
- Raven Applicator
- Flex Seal Applicator

National Water Main Cleaning Co. 25 Marshall St. Canton, MA 02021-2479 Phone 781 828 0863, Fax 781 828 2473
Specializing in today's needs for environmental protection

Ioannis Anastasiadis

Project Manager - Boston
National Water Main Cleaning Co.
Professional Records

Qualifications

Joined NWMCC as an intern until graduating for my MSI as a project manager in Civil Engineering. Areas of specialty include: I/I identification and rehabilitation reports, analysis of CCTV data for main and lateral lines, Siphon Cleaning and dewatering, Sonar CCTV inspecting, estimating, scheduling, all aspects of project management

Reports directly to the Vice President of National Water Main Cleaning Company.

Experience

2016-Present National Water Main Cleaning Co. Canton, MA

Project Engineer

- Reports directly to the Vice President of National Water Main Cleaning Co.
- Responsibilities include supervising all personnel issues, bidding, proposal development, client relations, equipment purchasing and project scheduling.
- Conduct project/job surveys
- Managed all BWSC CL&TV contracts
- Scheduling and managing upwards of 10 crews

Education

Alexandrio Insttitute of technology Greece

- B.S. Civil Engineering of Infrastructure

Merrimack College North Andover, MA

M.S. Project Management in Civil Engineering

Certifications

- 10 Hour OSHA, 40 Hour OSHA
- PACP, LACP, MACP NASSCO Certified (#U-1008-7623)

National Water Main Cleaning Co. 25 Marshall St. Canton, MA 02021-2479 Phone 781 828 0863, Fax 781 828 2473
Specializing in today's needs for environmental protection

Andrew Flannagan
Project Engineer - Boston
National Water Main Cleaning Co.
Professional Records

Qualifications

Joined NWMCC as a Project Engineer in 2015 after graduating from University of Massachusetts-Dartmouth with bachelors in Civil Engineering.

Experience

2015-Present National Water Main Cleaning Co. Canton, MA

Project Engineer

Manage and oversee comprehensive sewer rehabilitation projects including:

City Of Revere, MA
Comprehensive Sewer System Rehabilitation Phase V
Contract Amount- $6,600,000.00
Comprehensive Sewer System Rehabilitation Phase VI
Contract Amount- $5,000,000.00

Town Of Saugus, MA
Sewer System Rehabilitation-Subsystem 4(Lateral Lining)
Contract Amount- $253,700.00
Sewer System Rehabilitation-Subsystem 6(Manhole Rehab)
Contract Amount-$221,850.00

Town Of Danvers, MA
Wastewater Facilities Improvements-Comprehensive Sewer System Rehabilitation
Contract Amount-$715,400.00

Town of Beverly, MA
Sewer Subsystem M Sewer System Rehabilitation
Contract Amount-$1,900,000.00

Town of Franklin, MA
Phase 5 Sanitary Sewer System Rehabilitation
Contract Amount-$372,000.00

City Of Newport, RI
Ruggles Avenue Deep Sewer Improvements(Tunnel Rehab)
Contract Amount-$414,800.00

Education

University of Massachusetts-Dartmouth Dartmouth, MA

B.S. Civil Engineering

Certifications

10 Hour OSHA
PACP Certified(Pipeline assessment Certification)
LACP Certified(Lateral assessment Certification)
MACP Certified(Manhole assessment Certification)

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25 Marshall Street • Canton, MA 02021 • Phone: 781-828-0863 • Fax: 781-828-2473 • E-Mail: boston@nwmcc.com
928 Broad Street • Utica, NY 13504 • Phone: 315.624.9520 • Fax: 315.624.9523
1000 R Elm Street • Rocky Hill, CT.06067 • Phone: 860-372-4199 • Fax: 781-989-5173

NATIONAL WATER MAIN CLEANING COMPANY

A Division of the Carylon Corporation
Federal Tax ID # 22-1753261
State Incorporated: New Jersey, July 1964

BANK REFERENCE:

Wells Fargo and Co.
10 S. Wacker, 16th Floor
Chicago, IL 60606

Contact:

Priscilla White
Tel: 312-345-1176
Cell: 312-848-8304
Fax: 312-845-4222
Email: priscilla.white@wellsfargo.com
Assistant Vice President
Relationship Associate II

Account:

208804 5 054235

NATIONAL WATER MAIN CLEANING
A Carylon Company

1000 Rear Elm St.
Rocky Hill, CT 06067
t (800) 422-0815
p (860) 372-4199
f (781) 828-2473

25 Marshall St.
Canton, MA 02021
t (800) 422-0815
p (781) 828-0863
f (781) 828-2473
NYC BIC License #468

928 Broad St.
Utica, NY 13501
t (866) 341-1287
p (315) 624-9520
f (315) 624-9523

10/08/2020

Ken Levesque
Town of Henniker, NH
18 Depot Hill Rd #2
Henniker, NH 03242
603-428-3240

Subject: Quality of materials and services specified in the bid
Wastewater Collection System Maintenance CIPP Point Repair Bid 2020

Attached to this letter are the following items that constitute NWMCC project submittals for the above referenced contract.

SPECIFICATION SECTION	***ITEM#***	***DESCRIPTION***
0000	001	Pipe line cleaning and CCTV Inspection
0000	002	SHORT LINERS

If you have any questions you may contact me at 800-242-0815
Sincerely,

NATIONAL WATER MAIN CLEANING COMPANY
James Fleming
James Fleming
Project Engineer

CLOSED CIRCUIT COLOR TELEVISION EQUIPMENT: This equipment will be capable of inspecting underground piping from 8-inch through 66-inch+ with access from manholes.

Main Line Multi-Angle Closed Circuit Color Camera (MAC): This unit is designed for six inch and larger diameter sewer mains with limited access through excavations, manholes, etc. (minimum 24 inches opening). The unit can function on the self-propelled crawler tractor.

The MAC camera shall have a high-resolution lens capable of spanning 360 degrees circumferentially and 270 degrees on the horizontal axis. Focal distance is adjustable through a range of one inch to infinity. The purpose of the rotating head camera is to view all service connections, and to locate all defects, as well as any questionable problem areas. The MAC lets you look directly at each observation to assist in making better assessments. The drawback is you need a minimum opening of 36 inches in a straight pipe.

All camera equipment is specifically designed and constructed for the purpose of televising sewers.

Additional camera lighting will be supplied where feasible to ensure a clear, continuously in-focus picture of the entire periphery of the sewer pipe for all conditions encountered during the work. The camera is able to operate in 100 % humidity conditions.

The camera, television monitor and all other necessary components of the video system shall be capable of producing minimum 600 lines of resolution color video picture.

The narrated video of the TV inspection is digitally recorded in a high quality color MPEG-1 format.

From 4-inch ductile iron pipe to 24-foot wide sewer outfall tunnels, cleaning, internal CCTV inspection and rehabilitation of sewer collection systems and drain lines is the major focus for NWMCC. The company owns and operates 15 mobile television studio trucks, 24 combination jet vacuum machines along with an assortment of specialized collection system equipment.

Every mobile television studio truck is equipped with specifically designed camera equipment and computerized software to capture and record observations into an easily accessible electronic database. The program is designed to capture digital video and data of pipeline inspection findings through licensed software called WinCan®. Video inspection observations are also

recorded on videotape, with audio commentary. Incorporating infiltration rates for individual line segments and establishing structural category rating for line segments are also customizable features available through the WinCan® software. Capturing the data within an access database makes it easy to incorporate and build a system wide management tool whose features are available through the WinCan® software.

WORK PROCEDURE

All cleaning and video inspection activities will begin at the farthest upstream manhole and work in a downstream direction from there. This procedure will prevent passing any debris from a dirty (contaminated) sewer into one already cleaned.

Once the National Water Main Cleaning Company crew is mobilized, a local fire hydrant (city water or fire suppression system) will be accessed and fresh water will be fed to the water storage reservoir. Once filled, the jetting unit will be moved into position on a manhole or access point.

Once the jetter is in position, our jet nozzle will be inserted into the downstream manhole in the upstream sewer line. The water pressure will be turned on and the hose will propel itself toward the upstream manhole. The hose will then be retracted using a hydraulic motor attached to our hose reel or by hand if not set directly up on the opening. A combination of pipe sediment and water will be removed from the sewer. The liquid will be decanted back into the Sewer. When the line segment is ready for the television inspection work to begin, a camera will be inserted into the upstream manhole. The camera will be advanced in a downstream direction down the pipe to assure pipe cleanliness. If pipe sediment is encountered, the jet nozzle will be reinserted and the pipe re-cleaned with the camera in the line to assure job completion.

Sewer Inspection Job References

Ten (10) Television Inspection Job References

Mr. Syamal N. Chaudhuri, DPW Director
Town of Burlington, MA
25 center Street
Burlington, MA 01803
Office: (781) 270-1672
(2005-2006): Clean and TV 210,000 LF of sewer pipe ranging in size from 8-inch to 24-inch. Inspect 700 MH structures.

Mr. Richard D. Kruczek, P.E.
Camp Dresser & McKee, Inc
100 Great Meadow Road, Suite 104
Wethersfield, Connecticut 06109
(860) 529-7615 main
(860) 808-2256 direct
(860) 529-8102 fax
(2006) Clean and TV approximately 500,000 LF of sewer pipe ranging in size from 8-inch to 36-inch sewer

Mr. George M. Pandleton.
Project Manager
Maguire Group, Inc.
One Court Street
New Britain, Connecticut 06051
(860) 224-9141
(2006) Clean and TV appositely 175,000 LF of Sewer pipe ranging in size from 8-inch to 48-inch.

Mr. Michael Abcunas
Department of Public Works
City of Cambridge
147 Hampshire Street
Cambridge, MA 02139
Office: (617) 349-4887
(2008-2009) Clean and TV approximately 300,000 LF of sewer pipe ranging in size from 8-inch to 60-inch sewer

Mr. Yelma Desseta
Department of Public Works
City of Keene
350 Marlboro Street
Keene, NH 03431
Office: (603) 757-0659
(2008) Clean and TV approximately 100,000 LF of sewer pipe ranging in size from 8-inch to 18-inch sewer

Mr. Jim Wilcox
Purchasing
City of Cambridge
147 Hampshire Street
Cambridge, MA 02139
Office: (617) 349-6426
(2006-2007) Clean and TV approximately 70,000 LF of sewer pipe ranging in size from 8-inch to 60-inch sewer

Mr. Blake Lukis
Town of Wellesley, MA
Department of Public Works
Water & Sewer Division
455 Worcester Street
Wellesley, MA 02481
Office: (781) 235-7600
(2007-2008) Clean and TV approximately 72,000 LF of sewer pipe ranging in size from 8-inch to 36-inch sewer

M. John Cherian
City of Revere, MA
Department of Planning &
Community Development
281 Broadway
Revere, MA 02151
Office: (781) 286-8186
(2005-2006) Clean and TV approximately 65,000 LF of sewer pipe ranging in size from 8-inch to 24-inch sewer

Mr. John P. Sullivan
Chief Engineer
Boston Water and Sewer Commission
City of Boston
980 Harrison Boulevard,
Boston MA 02119
Office: (617) 989-7000
(2006-2008) Clean and TV approximately 70,000 LF of sewer pipe ranging in size from 8-inch to 48-inch sewer

Ms. Meg Goulet, P.E.
Narragansett Bay Commission
One Service Road
Providence, RI 02905
Office: (401) 461-8848
(2005-2006) Clean and TV approximately 55,000 LF of sewer pipe ranging in size from 8-inch to 62-inch sewer

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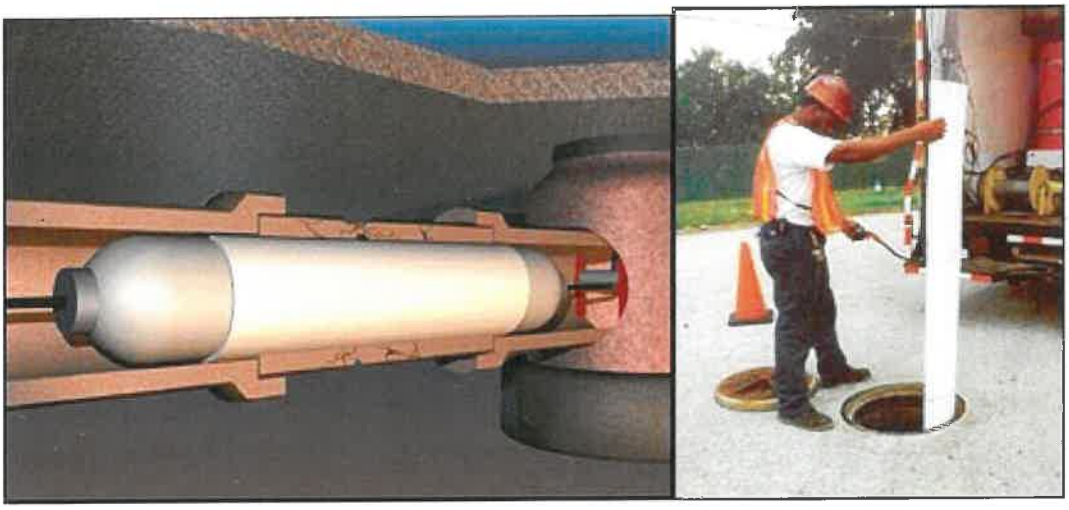
25 Marshall Street • Canton, MA 02021 • Phone: 781-828-0863• Fax: 781-828-4397 • E-Mail: boston@nwmcc.com
1000R Elm Street • Rocky Hill, CT 06067 • Phone:860.372.4199 •

02765 - Cured–in-Place Short Liner
Description of System, Equipment & Materials
No-Dig Spot Repair of Sewers Method of Installation



Trenchless short liners are a practical, fast and economical "no dig" solution for pipes with partial structural deterioration and/or distortion, interior corrosion, settling, misalignment and cracking. It provides joint less renovation, improves flow characteristics, adds to the structural integrity of the pipe and virtually eliminates all ex-filtration and infiltration at the repaired area.

Our cured-in-place-pipe (CIPP) lining consists of an epoxy-based, impregnated polyurethane-coated felt tubing that is installed by experienced technicians using trenchless "pull in, inflate and cure" methods. It is used for sectional pipe repairs and can reconstruct pipe segments from 6 inches to 5 feet in diameter, and 1 foot to 30 feet in length, which allows all repair sections to extend at a minimum of 1 ft beyond either side of the defect.

Our methods exceed all ASTM minimum strength requirements, and the resins can be formulated for job specific applications

Procedure:
Once the pipe segment has been cleaned and all measurements (distances from manhole to defect to be rehabilitated) have been taken, the fiberglass felt material will be impregnated with the silicate resin and wrapped around the flow through flex packer. The packer with the lining material will then be inserted in the pipe through the manhole and carried to the pre measured distance either by the use of push rods or by pulling with a winch. Once in place the packer will be inflated and left in place for 1 hours until the resin cures, the packer will then be deflated and pulled towards the

manhole where it will be extracted from the pipe. Once the packer is extracted from the pipe a post TV inspection will be done to ensure that the repair is satisfactory and that it placed at the right location. If the repair lined over a lateral connection then it will be immediately reinstated and televised thereafter.

Description of System for Handling Existing Flow

Flex Packers

The short liner packers are flow-through bladders designed to allow flow to pass through the packer during the short liner repair work. In case of emergencies, the work crew will carry a three- inch pump in case immediate flow bypass work is needed.

Sewer Point Repair Liner

The CIPSR material manufacturer is Trelleborg Pipe Seals GmbH located in Duisburg, Germany. Tel. 49(0)2065.999.200 Website: http://www.trelleborg.com/en/Epros.

Sewer Lateral and Main LineSectional Lining System is a cured-in-place sectional system for the repair of damaged sewer pipelines. The patch is a composite of two basic materials - a fiberglass matting impregnated with an ambient curing two-part silicate resin system.

FABRIC: CRF (Chemically Resistant Fiberglass) glass fiber matting consists of two layers of fiberglass, one layer of chopped fiberglass bonded to a layer of woven fiberglass.

RESIN SYSTEMS: Three silicate resins are available for the SEWER LATERAL AND MAIN LINESECTIONAL LINING SYSTEM: S, W, and WO1*. All silicate resins use the same Waterglass hardener. The resin is selected for each installation based on the desired curing time and the ambient temperature. All three resins, when used with our CRF glass fiber matting and properly cured, will meet or exceed the minimum physical properties.

PHYSICAL PROPERTIES

Physical Property	Test Method	Minimum Value
Compressive Strength	ISO 604-2 Determination of Compressive Properties (Technically equivalent to ASTM D 695)	17,000 psi (0.1172 GPa)
Flexural Modulus	ISO 178-2 Determination of Flexural Properties (Technically equivalent to ASTM D 790)	800,000 psi (5.5168 GPa)
Flexural Strength	ISO 178-2 Determination of Flexural Properties (Technically equivalent to ASTM D 790)	27,000 psi (0.1862 GPa)
Tensile Strength	ISO-527-4 Determination of Tensile Properties-Test Conditions for Isotropic and Orthotropic Fiber-Reinforced Plastic Composites (Technically equivalent to ASTM D 638)	19,120 psi (0.1318 GPa)
Impact Strength	ISO 179-1 Determination of Charpy Impact Properties (Similar in title only to ASTM D 6110)	8980.07 ft-lb(f)/ft^2 (131 kJ/m2)
Specific Gravity	DIN-53 479-7 (density) Testing of plastics and elastomers	1.437

The SEWER LATERAL AND MAIN LINESECTIONAL LINING SYSTEM exceeds the structural requirements of ASTM F 1216.

COMPARISON OF INITIAL MINIMUM STRUCTURAL PROPERTIES ASTM F 1216 vs SEWER LATERAL AND MAIN LINESECTIONAL LINING SYSTEM		
Structural Property	ASTM F 1216	SEWER LATERAL AND MAIN LINESECTIONAL LINING SYSTEM
Flexural Strength ASTM D790 psi (GPa)	4,500 (0.031)	17,000 (0.117)
Flexural Modulus ASTM D 790 psi (GPa)	250,000 (1.724)	800,000 (5.5167)

SEWER LATERAL AND MAIN LINE SECTIONAL LINING SYSTEM provides a structural repair with a "frictional/interference" fit in sewer pipes. SEWER LATERAL AND MAIN LINE SECTIONAL LINING SYSTEM is suitable for repairs in pipes of circular or egg-shaped cross sections composed of concrete, reinforced concrete, vitrified clay, PVC or asbestos cement, where the structural stability of the patch is not dependent upon its bond to the host pipe. Structural stability of the patch is achieved by pressing the liner tightly against the walls of the host pipe and thereby forcing excess resin into irregularities and defects in the old pipe. When the excess resin is cured, it forms a tight interference fit with the host pipe, even without the formation of a chemical bond.

* SEWER LATERAL AND MAIN LINE SECTIONAL LINING SYSTEM Resins, S (Summer), W (Winter), and WO1 (Winter colder temperatures) are all comprised of the same base resin, however each contains additives to either retard or accelerate the pot life and curing time within a specific temperature range. Pot life and curing times may also be adjusted by mixing of two of the "B" component resins (S, W, and WO1) as shown in the SEWER LATERAL AND MAIN LINE SECTIONAL LINING SYSTEM installation procedures.

Fiberglass Liner

PRODUCT SPECIFICATION SHEET

PRODUCT DATA	VALUE*
POLYESTER MAT **Weight (g/m^2)**	**370**
FIBERGLASS CONTINUOUS ROVING **Tex**	**1100**
FIBERGLASS CONTINUOUS ROVING **Weight (g/m^2)**	**86.61**
FIBERGLASS CHOP **Weight (g/m^2)**	**500**
TOTAL WEIGHT (g/m^2)	**970.36**
SUPPLIED THICKNESS **Measured per ASTM D1777 (mm)**	**3.6-4.1**
FINISHED THICKNESS **Assuming 15-25 psi installation pressure (mm)**	**3.0-3.5**

* All values are approximate
Glassliner product is manufactured at an ISO 9002-1994 Facility

Equipment for Lateral Reinstatement

- Stable operation in 6" to 24" lines with heavy duty (65 lb. in 8" setting) stainless steel and bronze construction
- Cutter motor options - .7 hp or .9 hp
- 7.0 inch horizontal ram travel
- 2.75 inch diameter horizontal ram
- Quick change head and air motor
- Standard 1/4 inch or optional 3/8 inch long collets
- 5 wire control - retrofit to Bowman or Kangaroo(tm) wiring
- Air dryer purges cutter interior motors
- Four ram sizes provide 11/2" to 4" vertical travel

All service connections sealed during the CIPSR process will be reopened and the line will be televised before and after each CIPSR installation.

Warrantee Statement

In accordance with the contract specification, NWMCC guarantees the short liner installation repair for a period of 1 year from the date the project is accepted by the owner.

epros

Safety data sheet

Waterglass Component A

1. Product/Preparation and Company Identification

Information on the product
Commercial product name: epros Resin, Comp. A (Hardener)

Manufacturer/supplier: epros GmbH
Dr.-Alfred-Herrhausen-Allee 20d
47228 Duisburg
Tel: +49 (0) 2065-999-0
Fax: +49 (0) 2065-999-222

2. Composition/Information on Ingredients

Chemical identification:

CAS No.	Description
1344-09-8	Silicic acid, sodium salt

>10% sodium silicate
Identification number (n)
EINECS No.: 215-687-4

3. Potential Hazards

Hazard description: Xi – irritating
Specific hazards for man and environment:
R 38 Irritating to skin
R 41 Danger of serious eye injury.

4. First Aid Measures

General advice:
Take off immediately all contaminated clothing.
Inhalation: Remove to fresh air; if effects occur, obtain medical attention.

Skin contact:
Wash off immediately with soap and water and rinse well.

Eye contact:
Rinse with running water for several minutes while keeping eyes wide open and obtain medical attention.

Ingestion:
Rinse mouth and then drink much water.
Do not induce vomiting, obtain medical aid immediately.

5. Fire fighting measures

Suitable extinguishing media: Adjust firefighting measures to the environment.

Special protective equipment for firefighters: no special measures required.

Further information: Cool exposed tanks/containers with water sprays.

6. Accidental Release Measures

Personal precautions:
Wear protective equipment. Keep away persons not wearing appropriate protective equipment.

Environmental precautions:
Prevent penetration into sewers or waters.
In case of penetration into waters or sewers, inform the competent authorities.
In case of penetration into the subsoil, inform the competent authorities.

Cleaning/take-up method:
Take up with a liquid-absorbing material (sand, diatomaceous earth, acid binders, universal binders).
Dispose of contaminated material as waste according to Section 13.

7. Handling & Storage

Information on safe handling:
Keep containers tightly closed.
Open and handle containers carefully.
Information on fire & explosion hazards:
The product is not flammable.
No specific measures required.

Storage room and container requirements:
Keep only in original containers.
Never use light-metal receptacles.
Provide a caustic-proof floor.
Information on storage together with: not required
Other information on storage conditions: Protect from frost.

8. Exposure Controls & Personal Protective Equipment

Additional information on the design of technical plants:
no other information, see item 7

Ingredients requiring occupational exposure limits to be controlled:

CAS No.	Product Description	%	Type	Value	Unit

The product contains no significant quantities of substances requiring occupational exposure controls.

Additional information:
Based on the lists as applicable at the date of issue.

Personal protective equipment:

General protection and hygiene measures:
Take off contaminated, wetted clothing immediately.
Do not inhale gases/vapours/aerosols.
Avoid contact with eyes and skin.
Keep away from food, drink and animal feeding stuffs.
Wash hands before breaks and at end of work..

Respiratory protection: Only in case of aerosol or mist formation.

Hand protection: Safety gloves.

Eye protection: Tightly closing goggles.

9. Physical & Chemical Properties

Appearance:	liquid
Colour:	turbid
Odour:	odourless
	Value / range / unit / method
Change of state:	
Melting point / melting range	Not determined
Boiling point / boiling range	Not determined
Flash point:	Not applicable
Explosion hazard:	The product implies no explosion hazards.
Density (at 20°C) :	1.55 – 1.60 g/cm³
Viscosity:	300 – 1200 mPas (at 20°C)
Water solubility / miscibility:	fully miscible
pH (10 g/l) at 20°C:	12.5 – 12.8

10. Stability & Reactivity

Thermal decomposition / conditions to avoid:
No decomposition when used for the intended purpose.

Hazardous reactions:
Highly exothermic reaction with acids

Hazardous decomposition products:
No hazardous decomposition products are known

11. Toxicological Information

Acute toxicity ;
Relevant LD / LC_{50} values:

Component	Type	Value	Species
Soda waterglass	oral	>2,000 mg/kg	rat

Primary exposure routes:
Skin: irritating to skin and mucous membranes
Eye: strong irritation involving the danger of serious eye injury
Sensitisation: No sensitising effect is known.

12. Ecological Information

Water Hazard Class 1 (self-assessment): low hazard
Prevent penetration into groundwater, surface waters or sewers.

13. Disposal Considerations

Product:
Advice:
Do not dispose of with domestic waste. Prevent penetration into the sewer.
Waste Code:
524 02
Descr.: Caustic solutions, caustic mixtures and mordants (alkaline)
Disposal information:
Chemical/physical, biological treatment plant
Uncleaned packages:
Advice: Dispose of in compliance with official regulations

14. Transport Information

Transport / other information: no hazardous material under above regulations

15. Regulatory Information

Identification of the product according to European directives:
The product is classified and identified according to EU directives/HazMat regulations.

Symbol and hazard description of the product: Xi – irritating

R-phrases:

38 Irritating to skin
41 Danger of serious eye injury

S-phrases:

37/39 Wear suitable protective gloves and safety goggles/face shield during work
26 In case of contact with eyes, rinse with water and seek medical advice.
28 In case of contact with skin, wash off immediately with plenty of water and soap.
45 In case of accident or if you feel unwell, seek medical advice immediately (show this label where possible)

National regulations (Germany):

Classification under VbF: none
Water Hazard Class:
WGK 1 (self-assessment): low hazard.

16. Other Information

The information and data are based on the current state of our knowledge, but they constitute no warranted product qualities and establish no legal contract relationship.

Data sheet issued by: State Institute for Hygiene, Budapest
Contact: Dr. Gyula DURA, fax: 0361/215 0148

Safety data sheet

Resin comp. B

1. Product/Preparation and Company Identification

Description:	epros Resin, Type W Short Liner Resin, Comp. B
Commercial product name:	Type W Short Liner Resin
Manufacturer/supplier:	epros GmbH Dr.-Alfred-Herrhausen-Allee 20d 47228 Duisburg Tel: +49 (0) 2065/999 0 Fax: +49 (0) 2065/999 222
In case of emergency:	Tel: +36 (0) 2934 6386

2. COMPOSITION

Hazardous ingredient:
Diphenylmethane –4,4'-Diisocyanaate, isomers and homologs (MDI, Polymer-MDI)
(Monomer MDI <20-25%, polymer MDI <50% in total < 80%)
CAS No.: 9016-87-9

3. HAZARDS IDENTIFICATION

EFFECTS OF ACUTE EXPOSURE: Harmful by inhalation. In eyes it will cause irritation and may result in mild cornea opacity. May cause skin irritation. Ingestion may cause adverse health effects.
EFFECTS OF CHRONIC EXPOSURE: The isocyanate component is a respiratory sensitizer. . It may cause allergic respiratory reaction. Medical supervision of all employees who handle or come in contact with isocyanates is recommended. This should include pre employment and periodic medical examinations with respiratory function tests. Persons with asthmatic conditions or other chronic respiratory diseases or recurrent eczema or sensitization should be excluded from working with isocyanates. Once a person has been diagnosed as having been sensitized to an isocyanate, no further exposure should be permitted.

4. FIRST AID MEASURES

If aerosol or vapour is inhaled in high concentration: Remove the person to fresh air. Assist breathing if necessary. Call an ambulance. Obtain medical attention immediately. Eye Contact: Immediately rinse with plenty of water, holding eye open if necessary and seek medical advice immediately. Skin Contact: Wash thoroughly with soap and water. If irritation develops obtain medical assistance. Swallowing: If victim is alert and not convulsing, give l/2 to 1 glass water to dilute material. Do not induce vomiting. Never give anything by mouth to an unconscious person. Obtain emergency medical attention immediately.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media: Water, fog, foam, dry chemicals, CO_2
5.2 Fire and explosion hazards. Flammable limits in air (% by volume), Lower N/D, Upper N/D
Burning rate N/D. Unusual fire and explosion hazards: Water contamination of product will generate CO^2 gas.
In confined or closed containers or chambers, this will causes pressurization or explosion.

Special fire fighting procedures: Wear self-contained breathing apparatus in confined areas or when exposed to combustion products.
5.3 Protective equipment: Wear self-contained breathing apparatus in confined areas or when exposed to combustion products.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions: Wear suitable protective clothing (see paragraph 8)

6.2 After spillage, leakage: do not touch spilled material. Confine spill and cover with absorbent material.
Wash down spill area with decontaminant solution of 90% water, 8% ammonia and 2% detergent. Allow to react at least 10 minutes. Contaminated absorbent material may poise the same hazards as the spilled material. CO_2 and heat will be released. Collect in open containers. Add more decontamination solution. Cover containers loosely.

7. HANDLING AND STORAGE

7.1 Handling: Keep the usual precautionary measures for chemicals. Avoid eye and skin contact. Avoid inhaling. In all areas where MDI aerosols and/or vapour are produced, exhaust ventilation must be provided.
7.2 Storage: Store in a cool, dry and well ventilated location. Keep containers tightly closed. Avoid product temperatures above 25°C and below 15°C. Protect opened containers with dry inert gas before re-closing.

8. EXPOSURE CONTROLS/PERSONAL PROTECTIN

8.1 Exposure controls
Occupational exposure limits. Methylene bisphenyl isocyanate (MDI): ACGIH TLV is 0.005 ppm (0.051 mg/m^3): TWA and OSHA PEL is 0.02 ppm ceiling. Engineering controls: Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.
8.2 Personal protective equipment:
Respiratory protection: Atmospheric levels should be maintained below the exposure guideline. For most conditions, no respiratory protection should be needed: however, if material is heated or sprayed, use an approved air purifying respirator or positive pressure supplied air respirator.
Protective gloves: Use protective clothing impervious to this material. Selection of specific items such as face shield, gloves, boots or full-body suit will depend on operation.
Eye protection: Use safety glasses/goggles.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form/Appearance/Physical State:

	Liquid at room temperature	
Color	Dark-brown	
Odor	Earthy, musty	
Temperature of decomposition	>260° C	(Literature data)
Density	1.20 – 1.25 g/cm^3 (20° C)	
Viscosity	150 – 500 mPa.s (20° C)	
Vapor pressure	<10 $^{-5}$ mbar (20°)	
Solubility (Water)	Not applicable: Reacts with water	
Partition coefficient	N/A	
PH (1% solution)	N/A	
Flash point	>200° C	(Literature data)
Ignition temperature	>400° C	(Literature data)
Explosion limits	not determined	

10. STABILITY AND REACTIVITY

Stability: stable under normal conditions. Flammable under fire conditions.
Conditions to avoid: Protect from humidity.
No hazardous decompostion of the product occurs when stored and handled correctly.
Incompatibilities: Humidity, alcohols, amines, strong bases.
Hazardous polymerization: Polymerizes about 260° C with evolution of CO_2.
Conditions to avoid: Humidity, alcohols, amines, strong bases. Polymerization produces gases which may burst closed or confined containers.
Decomposition products: CO, NOx, HCN

11. TOXICOLOGICAL INFORMATION

For the Diphenylmethane Diisocyanate
LC50 (inhalation, rat): 178 mg/m^3 ; 370 mg/m^3 as aerosol of 4 hours exposure
The LD 50 for skin absorption in rabbits is >2000 mg/kg
Single dose oral toxicity on rats: > 15000 mg/kg
Skin irritation: yes
Eye irritation: yes
Sub acute and chronic toxicity:
No effect level (NOEL): 0.2 mg/m^3 (inhalation of aerosols)
Lowest effect level (LOEL): 1.0 mg/m^3 (inhalation of aerosols)
Mutagenicity data on MDI are inconclusive. MDI was weakly positive in some in vitro (test tube) studies; other in vitro studies were negative. A mutagenicity study in animals was negative.
Carcinogenicity Data: The ingredient(s) of this product is (are) not classified as carcinogenic by ACGIH (American Conference of Governmental Industrial Hygienists) or IARC (International Agency For Research on Cancer), not regulated as carcinogens by OSHA, (Occupational Safety and Health Administration) and not listed as carcinogens by NTP (National Toxicology Program).

MDI is not classifiable as to its carcinogen city to humans (IARC). There is evidence that a break-down (hydrolysis) product of MDI, 4,4'-methylene dianiline, is carcinogenic in rats and mice. IARC evaluation: There is no adequate data for evaluating the carcinogen city of 4,4'-methylene dianiline to humans. Other cancer information: Lung tumours have been observed in laboratory animals exposed to aerosol droplets of MDI/Polymeric MDI (6 mg/m3) for their lifetime. Tumours occurred concurrently with respiratory irritation and lung injury. 0.2 mg/m3 concentration is considered as the "no-effect level".
Current exposure guidelines are expected to protect against these effects.
According to available information, the ingredients have not been found to show reproductive toxicity, teratogenicity, mutagenicity or synergistic toxic effects with other materials.
Experience on humans:
No detrimental effects to health are known where the product is handled properly and industrial hygiene precautions are observed. Acute exposure is characterized by the irritation of the respiratory tract causing runny nose, sore throat, coughing, chest discomfort, shortness of breath and reduced lung function. Overexposure may lead to bronchitis, bronchial spasm and pulmonary edema. Chronic exposure may lead to sensitization or asthmatic attack in certain individuals, with the following symptoms, chest tightness, wheezing, cough and shortness of breath.

12. ECOLOGICAL INFORMATION

Immiscible in water. Reacts with water to form insoluble polyureas. Polyurea is inert and non-degradable.
Ecotoxic effect on

Daphnia:	EL/LC_{50} : > 1000 mg/l
Bacteria:	EC/LC_{50} : > 10000 mg/l
Fish:	EC/LC_{50} : > 10000 mg/l

13. DISPOSAL CONSIDERATION

Dispose in accordance with state and local environmental regulations. Landfill or incinerate in approved facility by licensed contractor. Do not incinerate in closed containers. Do not allow into any sewers, or the ground, or into any body of water.

14. TRANSPORT INFORMATION

DOT Shipping Name:	Diphenylmethane-4,4' Diisocyanate
DOT Hazard Class or Division:	Not Regulated
Identification Number:	N/A
Packing Group:	N/A
Labels Required:	N/A

15. REGULATORY INFORMATION

Labeling in accordance with directive 88/379/EEC and its amendments and adaptations:

Chemical health hazard:	Yes
Labeling categories:	Harmful, irritant
Hazard symbols:	Xn, Xi
Risk phrases:	R20 Harmful by inhalation; R36/37/38 Irritating to eyes, respiratory system and skin R42 may cause sensitization by inhalation
Safety phrases:	S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S28 After contact with skin, wash immediately with plenty of water. S38 In case of insufficient ventilation, wear suitable respiratory equipment. S45 In case of accident or if you fell unwell, seek medical advice immediately (show the label where possible).

Protection of workers:
TRGS 900 MAK value: 0.005 ppm = 0.05 mg/m^3
Hungarian limit value in work environment: 0.05 mg/m^3 (TWA); 0.1 mg/m^3 (peak concentration)
Council Directive 82/501/EEC on the major accident hazards of certain industrial activities regulates quantity of MDI (Annex II; Part I; Item No. 27)
National Prescriptions: WGK (German classification of water pollution risk) 2 Polluting substances
Waste code: 572 02 (Germany) 070299 (European Union)

16. OTHER INFORMATIN

It is the responsibility of persons in receipt of this Product Safety Data Sheet to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product.
The information contained herein is based on the present state of our knowledge and does not therefore guarantee certain properties. Recipients of our product must take responsibility for observing existing laws and regulations.

This Data Sheet was compiled by: Dr. Gyula Dura, Toxicologist
National Institute of Hygiene, Budapest
Tel: (+361) 215 2250

Safety data sheet

Resin comp. B

1. Product/Preparation and Company Identification

Description:	epros Resin, Type S Longliner Resin, Comp. B
Commercial product name:	Type S Longliner Resin
	Manufacturer/supplier: epros GmbH
	Dr.-Alfred-Herrhausen-Allee 20d
	47228 Duisburg
	Tel: +49 (0) 2065/999 0
	Fax: +49 (0) 2065/999 222
In case of emergency:	Tel: +36 (0) 2934 6386

2. COMPOSITION

Hazardous ingredient:
Diphenylmethane –4,4'-Diisocyanaate, isomers and homologs (MDI, Polymer-MDI)
(Monomer MDI <20-25%, polymer MDI <50% in total < 80%)
CAS No.: 9016-87-9

3. HAZARDS IDENTIFICATION

EFFECTS OF ACUTE EXPOSURE: Harmful by inhalation. In eyes it will cause irritation and may result in mild cornea opacity. May cause skin irritation. Ingestion may cause adverse health effects.
EFFECTS OF CHRONIC EXPOSURE: The isocyanate component is a respiratory sensitizer. It may cause allergic respiratory reaction. Medical supervision of all employees who handle or come in contact with isocyanates is recommended. This should include pre employment and periodic medical examinations with respiratory function tests. Persons with asthmatic conditions or other chronic respiratory diseases or recurrent eczema or sensitization should be excluded from working with isocyanates. Once a person has been diagnosed as having been sensitized to an isocyanate, no further exposure should be permitted.

4. FIRST AID MEASURES

If aerosol or vapour is inhaled in high concentration: Remove the person to fresh air. Assist breathing if necessary. Call an ambulance. Obtain medical attention immediately. Eye Contact: Immediately rinse with plenty of water, holding eye open if necessary and seek medical advice immediately. Skin Contact: Wash thoroughly with soap and water. If irritation develops obtain medical assistance. Swallowing: If victim is alert and not convulsing, give l/2 to 1 glass water to dilute material. Do not induce vomiting. Never give anything by mouth to an unconscious person. Obtain emergency medical attention immediately.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media: Water, fog, foam, dry chemicals, CO_2
5.2 Fire and explosion hazards. Flammable limits in air (% by volume), Lower N/D, Upper N/D
Burning rate N/D. Unusual fire and explosion hazards: Water contamination of product will generate CO^2 gas.
In confined or closed containers or chambers, this will causes pressurization or explosion.

Special fire fighting procedures: Wear self-contained breathing apparatus in confined areas or when exposed to combustion products.
5.3 Protective equipment: Wear self-contained breathing apparatus in confined areas or when exposed to combustion products.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions: Wear suitable protective clothing (see paragraph 8)

6.2 After spillage, leakage: do not touch spilled material. Confine spill and cover with absorbent material.
Wash down spill area with decontaminant solution of 90% water, 8% ammonia and 2% detergent. Allow to react at least 10 minutes. Contaminated absorbent material may poise the same hazards as the spilled material. CO_2 and heat will be released. Collect in open containers. Add more decontamination solution. Cover containers loosely.

7. HANDLING AND STORAGE

7.1 Handling: Keep the usual precautionary measures for chemicals. Avoid eye and skin contact. Avoid inhaling. In all areas where MDI aerosols and/or vapour are produced, exhaust ventilation must be provided.
7.2 Storage: Store in a cool, dry and well ventilated location. Keep containers tightly closed. Avoid product temperatures above 25°C and below 15°C. Protect opened containers with dry inert gas before re-closing.

8. EXPOSURE CONTROLS/PERSONAL PROTECTIN

8.1 Exposure controls
Occupational exposure limits. Methylene bisphenyl isocyanate (MDI): ACGIH TLV is 0.005 ppm (0.051 mg/m^3): TWA and OSHA PEL is 0.02 ppm ceiling. Engineering controls: Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.
8.2 Personal protective equipment:
Respiratory protection: Atmospheric levels should be maintained below the exposure guideline. For most conditions, no respiratory protection should be needed: however, if material is heated or sprayed, use an approved air purifying respirator or positive pressure supplied air respirator.
Protective gloves: Use protective clothing impervious to this material. Selection of specific items such as face shield, gloves, boots or full-body suit will depend on operation.
Eye protection: Use safety glasses/goggles.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form/Appearance/Physical State:

	Liquid at room temperature	
Color	Dark-brown	
Odor	Earthy, musty	
Temperature of decomposition	>260° C	(Literature data)
Density	1.20 – 1.25 g/cm^3 (20° C)	
Viscosity	150 – 500 mPa.s (20° C)	
Vapor pressure	<10 $^{-5}$ mbar (20°)	
Solubility (Water)	Not applicable: Reacts with water	
Partition coefficient	N/A	
PH (1% solution)	N/A	
Flash point	>200° C	(Literature data)
Ignition temperature	>400° C	(Literature data)
Explosion limits	not determined	

10. STABILITY AND REACTIVITY

Stability: stable under normal conditions. Flammable under fire conditions.
Conditions to avoid: Protect from humidity.
No hazardous decompostion of the product occurs when stored and handled correctly.
Incompatibilities: Humidity, alcohols, amines, strong bases.
Hazardous polymerization: Polymerizes about 260° C with evolution of CO_2.
Conditions to avoid: Humidity, alcohols, amines, strong bases. Polymerization produces gases which may burst closed or confined containers.
Decomposition products: CO, NOx, HCN

11. TOXICOLOGICAL INFORMATION

For the Diphenylmethane Diisocyanate
LC50 (inhalation, rat): 178 mg/m^3 ; 370 mg/m^3 as aerosol of 4 hours exposure
The LD 50 for skin absorption in rabbits is >2000 mg/kg
Single dose oral toxicity on rats: > 15000 mg/kg
Skin irritation: yes
Eye irritation: yes
Sub acute and chronic toxicity:
No effect level (NOEL): 0.2 mg/m^3 (inhalation of aerosols)
Lowest effect level (LOEL): 1.0 mg/m^3 (inhalation of aerosols)
Mutagenicity data on MDI are inconclusive. MDI was weakly positive in some in vitro (test tube) studies; other in vitro studies were negative. A mutagenicity study in animals was negative.
Carcinogenicity Data: The ingredient(s) of this product is (are) not classified as carcinogenic by ACGIH (American Conference of Governmental Industrial Hygienists) or IARC (International Agency For Research on Cancer), not regulated as carcinogens by OSHA, (Occupational Safety and Health Administration) and not listed as carcinogens by NTP (National Toxicology Program).

MDI is not classifiable as to its carcinogen city to humans (IARC). There is evidence that a break-down (hydrolysis) product of MDI, 4,4'-methylene dianiline, is carcinogenic in rats and mice. IARC evaluation: There is no adequate data for evaluating the carcinogen city of 4,4'-methylene dianiline to humans. Other cancer information: Lung tumours have been observed in laboratory animals exposed to aerosol droplets of MDI/Polymeric MDI (6 mg/m3) for their lifetime. Tumours occurred concurrently with respiratory irritation and lung injury. 0.2 mg/m3 concentration is considered as the "no-effect level".
Current exposure guidelines are expected to protect against these effects.
According to available information, the ingredients have not been found to show reproductive toxicity, teratogenicity, mutagenicity or synergistic toxic effects with other materials.
Experience on humans:
No detrimental effects to health are known where the product is handled properly and industrial hygiene precautions are observed. Acute exposure is characterized by the irritation of the respiratory tract causing runny nose, sore throat, coughing, chest discomfort, shortness of breath and reduced lung function. Overexposure may lead to bronchitis, bronchial spasm and pulmonary edema. Chronic exposure may lead to sensitization or asthmatic attack in certain individuals, with the following symptoms, chest tightness, wheezing, cough and shortness of breath.

12. ECOLOGICAL INFORMATION

Immiscible in water. Reacts with water to form insoluble polyureas. Polyurea is inert and non-degradable.
Ecotoxic effect on

Daphnia:	EL/LC_{50} : > 1000 mg/l
Bacteria:	EC/LC_{50} : > 10000 mg/l
Fish:	EC/LC_{50} : > 10000 mg/l

13. DISPOSAL CONSIDERATION

Dispose in accordance with state and local environmental regulations. Landfill or incinerate in approved facility by licensed contractor. Do not incinerate in closed containers. Do not allow into any sewers, or the ground, or into any body of water.

14. TRANSPORT INFORMATION

DOT Shipping Name:	Diphenylmethane-4,4' Diisocyanate
DOT Hazard Class or Division:	Not Regulated
Identification Number:	N/A
Packing Group:	N/A
Labels Required:	N/A

15. REGULATORY INFORMATION

Labeling in accordance with directive 88/379/EEC and its amendments and adaptations:

Chemical health hazard:	Yes
Labeling categories:	Harmful, irritant
Hazard symbols:	Xn, Xi
Risk phrases:	R20 Harmful by inhalation; R36/37/38 Irritating to eyes, respiratory system and skin R42 may cause sensitization by inhalation
Safety phrases:	S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S28 After contact with skin, wash immediately with plenty of water. S38 In case of insufficient ventilation, wear suitable respiratory equipment. S45 In case of accident or if you fell unwell, seek medical advice immediately (show the label where possible).

Protection of workers:
TRGS 900 MAK value: 0.005 ppm = 0.05 mg/m^3
Hungarian limit value in work environment: 0.05 mg/m^3 (TWA); 0.1 mg/m^3 (peak concentration)
Council Directive 82/501/EEC on the major accident hazards of certain industrial activities regulates quantity of MDI (Annex II; Part I; Item No. 27)
National Prescriptions: WGK (German classification of water pollution risk) 2 Polluting substances
Waste code: 572 02 (Germany) 070299 (European Union)

16. OTHER INFORMATIN

It is the responsibility of persons in receipt of this Product Safety Data Sheet to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product.
The information contained herein is based on the present state of our knowledge and does not therefore guarantee certain properties. Recipients of our product must take responsibility for observing existing laws and regulations.

This Data Sheet was compiled by: Dr. Gyula Dura, Toxicologist
National Institute of Hygiene, Budapest
Tel: (+361) 215 2250

epros

Data Sheet

Curing Data of epros Resin W and S

Curing Data of epros Resin Type W and S for Short and Long Patch Liners

	Mixing ratio in volume			at 22°C / 71,6°F	
No.	comp. A	comp. B(W)	comp. B(S)	Pot time (min)	Curing time (min)
1	3	6	–	17	60-70
2	3	5	1	18	65-75
3	3	4	2	21	70-80
4	3	3	3	25	75-85
5	3	2	4	28	80-90
6	3	1	5	31	85-95
7	3	–	6	32	90-100

* only Laboratory results at 22°C / 71,6°F with a quantity of 0.3 litre / 10 fl oz.

Resin type	W	W	S	S
Temperature [°C / °F]	Pot time [min]	Curing time [min]	Pot time [min]	Curing time [min]
8° / 33°	20-22	100-120	45-48	150-300
13° / 55°	18-20	90-110	41-45	130-150
18° / 64°	16-19	75-100	32-35	120-135
23° / 73°	15-17	60-70	30-32	90-100
28° / 82°	10-12	45-55	20-23	70-85
33° / 91°	7-9	40-45	14-16	65-75

* only Laboratory results with a quantity of 0.3 litre / 10 fl oz.

B(W) = Component B (W) = epros Silicate Resin Type W
B(S) = Component B (S) = epros Silicate Resin Type S
A = Waterglass = epros Hardener for Silicate resin

Notes:

- The mixing ratio of the resin is 1(A) : 2 (B) in volume.
- Always observe the safety instructions of the manufacturer when handling the **epros** Resin components.
- Hand protection, eye protection, and body protection are required.
- Close the container of component B immediately after use, because the contents react with atmospheric humidity.
- Never fill the resin in wet or moist containers. Carbon dioxide will form and can cause these containers to burst.
- Both containers shall be shaken before use.
- Never mix more than 15 litres in one bucket.

Technisches Datenblatt /
Technical specification sheet

CRF-PP Nadelvliesmaterial

Werkstoffprofil / Material profile
Werkstoff / Material: Hutmanschetten / Top Hat – LCR-Liner

Lieferdaten / Supply data
zu CRF-Hutmanschetten und Liner nach Vorgabe konfektioniert / CRF-Top Hat's or LCR-Liner manufactured according customer request
Untermass nach Vorgabe / Undersizing according application

Allgemeine Angaben / General data

Materialnummer / material number	3715221318
Fasertyp / type of fibres	Polypropylene / CRF-Glas
Beschichtung / Coating	einseitig / onsided PVC ca. 250 µm
Farbe Trägergewebe / colour basic weave	weiß / white
Farbe Beschichtung / colour coating	transparent
Art des Trägers / type of basic material	Nadelvlies / needlemat

Physikalische Kennwerte / physical properties

Flächengewicht / weight per square meter		DIN EN 29 073 T1	[g/m²]	730*
Dicke / Thickness [Auflagegew. 20 cN/cm² / Auflagefläche 25cm²]		DIN EN ISO 9073-2	[mm]	4*
Beschichtungsauflage / weight of coating		DIN EN 12127	[g/m²]	250*
Benötigte Kraft für Längs-Dehnung von		in Anlehnung an		
	10%	DIN EN ISO 13934-1	[N/5cm]	ab 40
	18%		[N/5cm]	ab 62
	30%		[N/5cm]	ab 90
	50%		[N/5cm]	ab 130
Benötigte Kraft für Quer-Dehnung von		in Anlehnung an		
	10%	DIN EN ISO 13934-1	[N/5cm]	ab 45
	18%		[N/5cm]	ab 75
	30%		[N/5cm]	ab 138
	50%		[N/5cm]	ab 279
Weiterreißfestigkeit Quer Fmax		DIN EN ISO 13937-2	[N]	> 110
Trennkraft Folie zu Träger		DIN 55357	[N]	> 105

Bei der Vielseitigkeit der Einbau- und Betriebsbedingungen sowie der Anwendungs- und Verfahrenstechnik können die Angaben in diesem Datenblatt nur als unverbindliche Richtlinien gelten.	With the variety of installation and service conditions as well as of application and process engineering, the data of this sheet can only be taken as a non-binding guide.

*=Modalwert (Typischer Wert) / modal value (typical value)
Ausgabe / issue: 04.07
Änderungsstand / modification: 3.3

Trelleborg epros GmbH · Dr. Alfred-Herrhausen-Allee 36 · 47228 Duisburg/Germany
Phone: +49 2065 999-0 · Fax: +49 2065 999-111 · E-Mail: verkauf@epros.de · Internet: www.epros.de

TRAVELERS
Insurance. In-Synch.℠

Oscar F. Rincon
Sr. Account Manager - Construction Services
Bond & Financial Products
215 Shuman Blvd., Naperville, IL 60563
Telephone: (630) 961-7005
Fax: (866) 216-5979
orincon@travelers.com

October 7, 2020

RE: PREQUALIFICATION LETTER – TOWN OF HENNIKER, NH
WASTEWATER COLLECTION SYSTEM MAINTENANCE
CIPP POINT REPAIR – BID 2020

Contractor: NATIONAL WATER MAIN CLEANING CO.
25 Marshall Street, Canton, MA 02021

To Whom It May Concern:

TRAVELERS CASUALTY AND SURETY COMPANY OF AMERICA, a Connecticut Corporation, is the surety company for NATIONAL WATER MAIN CLEANING CO. At the present time, we are providing NATIONAL WATER MAIN CLEANING CO. with a bond program of $10,000,000 for a single project and $50,000,000 aggregate with a current available bonding capacity of approximately $25,000,000. We consider them to be a high-quality construction organization and a very valuable client/partner and wouldn't hesitate to recommend NATIONAL WATER MAIN CLEANING CO. to any owner or architect on any construction contract.

We may comment only favorably on the ability of NATIONAL WATER MAIN CLEANING CO. to push a project through to completion on or before the deadline set by the owner, architect or engineer. Indeed, during the time we have serviced this account, NATIONAL WATER MAIN CLEANING CO. has consistently met all its obligations and the company's excellent track record has resulted in many repeat contracts.

TRAVELERS CASUALTY AND SURETY COMPANY OF AMERICA is authorized to transact business in all fifty (50) states with a Treasury Listing of $211,123,000 and is rated A++ XV by A.M. Best Company.

In closing, we have the in the integrity and ability of NATIONAL WATER MAIN CLEANING CO. and should you desire more information on our bonding relationship with NATIONAL WATER MAIN CLEANING CO. please do not hesitate to contact us.

Yours truly,

TRAVELERS CASUALTY AND SURETY COMPANY OF AMERICA

Oscar F. Rincon
Attorney-In-Fact

NATIONAL WATER MAIN CLEANING
A Carylon Company

1000 Rear Elm St.
Rocky Hill, CT 06067
tf (800) 422-0815
p (860) 372-4199
f (781) 828-2473

25 Marshall St.
Canton, MA 02021
tf (800) 422-0815
p (781) 828-0863
f (781) 828-2473
NYC BIC License #468

928 Broad St.
Utica, NY 13501
tf (866) 341-1287
p (315) 624-9520
f (315) 624-9523

10/08/2020

Ken Levesque
Town of Henniker, NH
18 Depot Hill Rd #2
Henniker, NH 03242
603-428-3240

Subject: Availability to provide future Service, Maintenance and Support
Wastewater Collection System Maintenance CIPP Point Repair Bid 2020

National Water Main Cleaning Company is a full-service pipe maintenance contractor who servers the New England and up state NY area. NWMCC can provide year-round maintenance and emergency services. NWMCC has several contracts with other surrounding towns and cities within the state of New Hampshire and is accustom to responding in a timely manner and to assist with any underground pipe problems that may occur through out the seasons.

If you have any questions you may contact me at 800-242-0815
Sincerely,

NATIONAL WATER MAIN CLEANING COMPANY
James Fleming
James Fleming
Project Engineer

TED BERRY
COMPANY LLC.
A VORTEX COMPANY

Town of Henniker, NH
18 Depot Hill Road
Henniker, NH 03242

October 5, 2020

Attention: Mr. Joseph Devine Jr.

RE: Wastewater Collection System Maintenance CIPP Point Repair Bid 2020

Greetings:

Thank you for allowing us to provide you with the following proposal to provide Cured-In-Place Pipe (CIPP) services in the Town of Henniker, NH, in order to fulfill bidding requirements for the Wastewater Collection System Maintenance CIPP Point Repair Bid 2020.

Scope of work:

Install 17 point repairs ranging from 8"-12" as specified on the third page of the bid documents attached to this proposal.

Description of Billable Items:

Item 1. **CIPP Point Repairs:** Costs include all materials, labor, equipment and services necessary bypass pumping, cleaning and television inspection of sewers to be lined, liner installation, final television inspection and all quality controls associated with installing 17 CIPP Point repairs as dictated in the bid documents ranging in size from 8"-12".

Item 2. **Traffic Control:** Costs include all services necessary in providing traffic control associated with the safe completion of the above described scope of work.

Project Responsibilities

Per page two of the provided bid documents, the following list addresses project/bid responsibilities:

1. **Price:**
   a. Please refer to the table located in the Billable Items section of this proposal.
2. **Bidder's ability to perform work within the specified time limits:**
   a. Work is estimated to take 9 days to complete. If schedule changes arise Ted Berry Company, LLC. will notify the Town of Henniker immediately.
3. **Bidder's experience and reputation, including past performance for the Town:**
   a. Please refer to the attached project and experience list.
4. **Quality of materials and services specified in the bid:**
   a. Ted Berry Company has been installing CIPP point repairs throughout New England for more than 15 years. Ted Berry Company utilizes Trelleborg Resins to provide the best possible products to the customer.
5. **Bidder's ability to meet other terms and conditions, including insurance and bond requirements:**
   a. Please refer to attached Bid Bond.
6. **Bidder's financial responsibility:**
   a. Please refer to attached Bid Bond documentation
7. **Bidder's availability to provide future service, maintenance and support:**
   a. Ted Berry Company, LLC. provides a standard 1-year warranty/maintenance on provided services and can mobilize when needed to assist with other utility projects if needed.
8. **Nature and size of bidder:**
   a. Ted Berry Company, LLC. is an 80-person service company of Vortex Companies located out of Livermore, ME. The company operates several service groups which provide

521 Federal Road, Livermore, ME 04253

municipal utility services, industrial cleaning services, trenchless pipe rehabilitation, and internal robotic CCTV inspection services of underground pipelines. The company operates 24 hours per day 365 days per year in order to serve the needs of all our customers.

9. **Any other factors that the Board of Selectmen determines are relevant and appropriate in connection with a given project or service:**
    a. If any other documents or information is required, please reach out to Henry Gibson by email at henry.gibson@tedberrycompany.com or by phone at (207) 897-3348.

Other Contract Requirements: Per the last paragraph on page 2 of the provided bid documents, Ted Berry Company, LLC. agrees to *"indemnify the Town of Henniker from any and all liability, loss or damage, including but not limited to bodily injury, illness, death or property damage, which the Town becomes legally obligated to pay as a result of claims, demands, cost or judgment against the Town arising out of the contractor's actions or omissions relating to this project."*

Billable Items

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	ITEM PRICE
1	CIPP Point Repairs	17	EA	$1,600.00	$27,200.00
2	Traffic Control	1	LS	$5,000.00	$5,000.00
TOTAL BID PRICE					**$32,200.00**

We appreciate the opportunity to provide you with this estimate and we look forward to the chance to work with you.

Sincerely,

Shawn Ready
Northeast Regional Vice President

No job is so important, and no service is so urgent that we cannot take the time out to perform or work safely.

521 Federal Road, Livermore, ME 04253

Town of Henniker, NH
Wastewater Collection System Maintenance
CIPP Point Repair
Bid 2020

The Town of Henniker, NH is requesting bid pricing for the rehabilitation of sanitary sewer pipelines. These specifications include the minimum requirements for the rehabilitation of sanitary sewer pipelines by the installation of Cured-In-Place Pipe point repairs within the existing pipes with defects as shown in the Scope of Work included as part of these documents.

The rehabilitation of pipelines shall be done by the installation of a resin-impregnated flexible tube which, when cured, shall be continuous and tight-fitting throughout the entire length of the work area. The CIPP shall extend an equal distance on either side of a defect for a total repair area of 4 to 6 feet per defect to provide a structurally sound, and water tight new pipe within a pipe. The contractor is responsible for proper, accurate and complete installation of the CIPP using the system selected by the contractor.

Neither the CIPP system, nor its installation, shall cause adverse effects to any of the owner's processes or facilities. The use of the product shall not result in the formation or production of any detrimental compounds or by-products at the wastewater treatment plant. The contractor shall notify the owner and identify any bi-products produced as a result of the installation operations, test and monitor the levels, and comply with any and all local waste discharge requirements.

These specifications cover all work necessary to furnish and install the CIPP. The contractor shall provide all materials, labor, equipment and services necessary for traffic control, bypass pumping, cleaning and television inspection of sewers to be lined, liner installation, final television inspection and all quality controls. The contractors proposal should include screens to catch debris at the discharge side of manholes while cleaning, traffic control with sign package, traffic cones and all required safety measures per State of New Hampshire guidelines. The Town of Henniker Wastewater Superintendent will notify the State for work performed in State roads, provide water from inch and a half service at WWTP, Fire Dept. or pumped from river and a disposal site for debris and wastewater.

The prices submitted by the contractor, shall include all cost of permits, labor, equipment and materials for the various bid items necessary for furnishing and installing, complete in place, CIPP point repairs in accordance with these specifications. All items of work not specifically mentioned herein which are required, by the contractor, to make the product perform as intended and deliver the final product as specified herein shall be included in the respective lump sum and unit prices bid.

The Town of Henniker request that the work be performed by the successful bidders own personnel. Any subcontractors must be pre-approved by the Wastewater Superintendent.

Bid price proposals must be on company letterhead clearly stating an outline of cost per line item. The bid price shall include all increases in labor, administration and materials for the duration of the contract. No change order in contract price will be permitted.

All work to be done under the direction of the Wastewater Superintendent. The Town of Henniker reserves the right to modify or reduce the scope based on the needs of the town. Additional work may be added at the Town's sole discretion.

All bids must be submitted in sealed envelopes, addressed to the Town of Henniker in care of Mr. Joseph Devine Jr., Town Administrator and plainly marked with the name of bid and the time of the bid opening.

The Town of Henniker will accept proposals/bids at Town of Henniker, 18 Depot Hill Road, Henniker, NH 03242 until 2:00 pm on October 8, 2020 at which time they will be opened publicly and read aloud.

Prospective bidders will be evaluated on the following criteria:

1. Price;
2. Bidder's ability to perform within the specified time limits;
3. Bidder's experience and reputation, including past performance for the Town;
4. Quality of materials and services specified in the bid;
5. Bidder's ability to meet other terms and conditions, including insurance and bond requirements;
6. Bidder's financial responsibility;
7. Bidder's availability to provide future service, maintenance and support;
8. Nature and size of bidder; and
9. Any other factors that the Board of Selectmen determines are relevant and appropriate in connection with a given project or service.

The Town of Henniker reserves the right to reject any and all bids, re-bid, negotiate any contracts, to waive irregularities in proposals, and to accept the proposal which, in the Town's sole discretion, best serves the interest of the Town, and waive any formalities in the bid process.

The contractor will be required to provide an insurance certificate confirming the following insurance coverage: *worker's compensation insurance as required by the State of NH; broad-form comprehensive general liability insurance in the amount no less than $1,000,000 combined single limit per occurrence; and vehicle insurance to include bodily injury, property damage, uninsured motorist, and employer's non-ownership coverage in the amount no less than $1,000,000 combined single limit per occurrence. Contractor may be required and shall be prepared to post a bond or letter of credit to cover 1.5X the bid price upon request of the Board of Selectmen.*

The contractor must also agree in writing to indemnify the Town of Henniker from any and all liability, loss or damage, including but not limited to bodily injury, illness, death or property damage, which the Town becomes legally obligated to pay as a result of claims, demands, cost or judgment against the Town arising out of the contractor's actions or omissions relating to this project.

2020 WASTEWATER COLLECTION SYSTEM MAINTENANCE
CIPP POINT REPAIRS
SCOPE OF WORK

STREET	MANHOLE #	OBSERVATION	DISTANCE DESCRIPTION	GRADE
Flanders Road	G2 – G1	Fracture Multiple	219.6 ft. from MH G2	4
Hall Avenue	85 - 84	Broken @ 07 o'clock, within 8" of joint: Yes	9.7 ft. from MH 85	4
Juniper Ridge	106 - 105	Broken @ 03 o'clock, within 8" of joint: Yes	13.3 ft. from MH 106	4
Juniper Ridge	106 - 105	Hole @ 12 o'clock	151.4 ft. from MH 106	5
Maple Street	M5 – M4	Broken Pipe, Void Visible	132.5 ft. from MH M4	5
Prospect Street	73A - 73	Roots Ball Joint	292.1 ft. from MH 73	4
Rush Road	58 - 57	Broken Pipe Void Visible	9 ft. from MH 58	5
Rush Road	59 - 58	Hole, Soil Visible	6 ft. from MH 58	5
Water Street	135 – Siphon Chamber	Off Road, Infiltration Gusher	128 ft. from MH 135	5
Western Avenue	17 - 16	Broken Pipe @ 12 o'clock	55.7 ft. from MH 17	5
Western Avenue	18 - 17	Infiltration Runner @ 5 o'clock, within 8" of joint: Yes	60.9 ft. from MH 18	4
Western Avenue	35 - 34	Broken @ 11 o'clock, within 8" of joint: Yes	71.5 ft. from MH 35	4
Western Avenue	36 - 35	Broken @ 01 o'clock, within 8" of joint: Yes	43.2 ft. from MH 36	4
Western Avenue	46 - 44	Infiltration Gusher @ 06 o'clock, within 8" of joint: Yes	217.3 ft. from MH 46	5
Western Avenue	47 - 46	Infiltration Runner @ 03 o'clock	289.4 ft. from MH 47	4
Western Avenue	48 - 47	Broken @ 02 o'clock, within 8" of joint: Yes	228.4 ft. from MH 48	4
Ramsdell Road	1 – Pump Station	Grease cut @ pump station	@ pump station	4

TED BERRY COMPANY LLC.

A VORTEX COMPANY

Year	Job Number	Customer Name	Job Name	Job Location
2013	T-13-811	Town of Jay, ME	CIPP Point Repair in front of MEMCO	Jay, ME
2014	M-14-795	Sargent Corporation	10" x 2' CIPP Point Repair	Bingham, ME
2014	T-14-035	Daniel O'Connell's Sons, Inc	Daniel O'Connell -Install 18" CIPP Point Repairs	Randolph, NH
2014	T-14-1003	Ogunquit Sewer District	Various 10" CIPP Repairs	Ogunquit, ME
2014	T-14-326	York Sewer District	York Sewer District - Various CIPP Point Repairs	York, ME
2014	T-14-388	Town of Hillsborough, NH	Point Repair	Hillsboro, NH
2014	T-14-545	Town of Hillsborough, NH	4 CIPP Point Repair	Hillsboro, NH
2014	T-14-771	Town of Livermore Falls, ME	Misc. CIPP Repairs	Livermore Falls, ME
2014	T-14-778	City of Saco, ME	CIPP Point Repairs	Saco, ME
2014	T-14-990	Boothbay Harbor Sewer District	Various CIPP Repairs	Bar Harbor, ME
2015	T-15-1028	City of Concord, NH	8" x 4' CIPP Repair	Concord, NH
2015	T-15-240	Greater Augusta Utility Dist	2 Fletcher St CIPP Repair	Augusta, ME
2015	T-15-483	Town of Dixfield, ME	Main St. CIPP Repairs	Dixfield, ME
2015	T-15-655	Kennebunk Sewer District	Misc. CIPP repairs	Kennebunk, ME
2015	T-15-663	Town of Livermore Falls, ME	10" CIPP Repair on Church St	Livermore Falls, ME
2015	T-15-664	Town of Rumford, ME	CIPP Repair/Sinkhole 8-12-15	Rumford, ME
2015	T-15-677	Sanford Sewerage District	Bridge St. CIPP Repair	Sanford, ME
2015	T-15-700	York Sewer District	UV CIPP/FELT CIPP/Point Repair Multiple Locations	York, ME
2015	T-15-832	Greater Augusta Utility Dist	12" CIPP Point Repair - Gannett St - Augusta	Augusta, ME
2015	T-15-928	Sappi Fine Paper	10" CIPP Repair	Westbrook, ME
2015	T-15-976	Carrabassett Valley Sanitary District	6" CIPP Repair at Sugartree condos	Carrabassett, ME
2016	T-16-00496	Town of Hudson, NH	Point Repair - 24" x 4'	Hudson, NH
2016	T-16-00496	Town of Hudson, NH	Point Repair - 24" x 4'	HUDSON
2016	T-16-00543	Kennebunk Sewer District	Kennebunk 12' x 6" Point Repair	Kennebunk, ME
2016	T-16-00647	Running Hill Inc.	Point Repair 8" x 4'	Portland, ME
2016	T-16-00813	Sugarloaf Mountain Corp.	Base Lodge Remove/Reinstall CIPP Repair	Carrabassett Valley, ME
2016	T-16-00920	City of Saco, ME	Various CIPP Point Repairs	Saco, ME
2016	T-16-039	Sanford Sewerage District	(2) 8" x 4' CIPP Repairs	Sanford, ME
2017	CD-17-00468	John Poat	Cleaning & CIPP- Point Repair	Livermore Falls, ME
2017	T-17-00108	Sanford Sewerage District	Various CIPP Repairs	Sanford, ME
2017	T-17-00110	Greater Augusta Utility Dist	Northern Ave. CIPP Repair	Augusta, ME

2017	T-17-00326	R.S. Audley, Inc.	I-93 CIPP Repair	Londonderry, NH
2017	T-17-00397	Town of Farmington, ME	Sectional Point Repairs	Farmington, ME
2017	T-17-00465	Bowden Construction Inc.	77 School St 4" x 12' CIPP Repair	Waldobor, ME
2017	T-17-00504	Greater Augusta Utility Dist	Western Ave CIPP Repairs	Augusta, ME
2017	T-17-00676	City of Lewiston, ME	Lisbon Street Point Repair	Lewiston, ME
2017	T-17-00756	City of Bangor, ME	Broadway Emergency 24" CIPP Repair	Bangor, ME
2017	T-17-00816	Greater Augusta Utility Dist	15" CIPP Sectional Repairs	Hallowell, ME
2017	T-17-00876	Town of Kennebunkport, ME	Green St./Ocean Ave. 12" CIPP Repair	Kennebunkport, ME
2017	T-17-00926	Town of Hillsborough, NH	2017 CIPP Repairs	Hillsboro, NH
2017	T-17-00940	St Laurent & Sons	Hallowell CIPP Repair - 4' from MH	Hallowell, ME
2018	M-18-0010801	Town of Wilton, ME	Push Camera Inspect Point Repair on 245 Lake Road	Wilton, ME
2018	T-18-00107	Town of Jay, ME	Emery Street 10" CIPP Point Repair	Jay, ME
2018	T-18-00114	Calendar Island Construction	141 Front St Push in Point Repair	Bath, ME
2018	T-18-00414	Town of Anson, ME	Lateral CIPP Repair and Reinstatement (2)	Anson, ME
2018	T-18-00424	City of Bath, ME	CIPP Lateral Point Repairs	Bath, ME
2018	T-18-00534	City of Portland, ME	g Oaks Pond overflow structure- 10" PVC- Sealing- Sectional	Portland, ME
2018	T-18-00731	Town of Hillsborough, NH	2018 CIPP Repairs	Hillsboro, NH
2019	19T0019	JF Scott Construction	2' Point Repair	Rockland, ME
2019	19T0111	D & C Construction	Portland 24in Sectional Repair	Portland, ME
2019	19T0162	Town of Farmington, ME	Farmington Sewer Point Repairs	Farmington, ME
2019	19T0206	Verso Corporation	42" Sectional Repair	Jay, ME
2019	19T0221	City of Belfast, ME	Main Street 8" Point Repair	Belfast, ME
2019	19T0253	Next Level Environmental	15" CIPP Point Repair Holliston, MA	Holliston, MA
2019	19T0331	Town of Jay, ME	8" UVGRP/Point Repair	Jay, ME
2019	19T0370	D & C Construction	Washington Street Point Repair	Portland, ME
2019	19T0458	Town of Camden, ME	8" CIPP Point Repair	Camden, ME
2019	T-19-00113	Town of Oakland, ME	Oak St Sectional Repairs	Oakland, ME
2019	T-19-00214	Revoli Construction	36" Liner or Point Repair Hamton NH	Hampton, NH
2019	T-19-00263	Town of Farmingdale, ME	Sectional CIPP Repairs	Farmingdale, ME
2019	T-19-00312	City of Belfast, ME	Sectional CIPP Repair to Cover Utility Pole	Belfast, ME
2019	T-19-00449	York Sewer District	2019 Sectional CIPP Repairs	York, ME
2019	T-19-00522	City of Laconia, NH	2019 Sectional CIPP Repairs	Laconia, NH
2020	20T0095	L.W. Morgridge & Sons	Eliot 8" leach bed cipp repair	Eliot, ME
2020	20T0274	Town of Islesboro, ME	2020 Point Repairs	ISLESBORO
2020	20T0357	Continental Paving Inc.	Bedford NH 18in RCP Point Repairs	Bedford, NH
2020	20T0691	Gorham Sand & Gravel	Commercial Street Point Repairs	PORTLAND
2020	20T0750	Dearborn Brothers Construction	Wells Mini Golf Sectional Repair	Wells, ME
2020	20T0774	Alvin J. Coleman & Son, Inc.	NHDOT 24in CIPP Repairs	Concord, NH
2020	20T0801	Leavitt Earthworks	Push in 8in point repair - Lombard Lane - Saco	Saco, ME

THE AMERICAN INSTITUTE OF ARCHITECTS

AIA Document A310

Bid Bond

KNOW ALL MEN BY THESE PRESENTS, THAT WE Ted Berry Company LLC
521 Federal Road, Livermore, ME 04253
as Principal, hereinafter called the Principal, and Harco National Insurance Company
702 Oberlin Road, Raleigh, NC 27605-0800
a corporation duly organized under the laws of the State of IL
as Surety, hereinafter called the Surety, are held and firmly bound unto Town of Henniker, NH
18 Depot Hill Road, Hennicker, NH 03242
as Obligee, hereinafter called the Obligee, in the sum of Five Percent of Amount Bid
Dollars ($ 5%),
for the payment of which sum well and truly to be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted a bid for Wastewater Collection System Maintenance CIPP Point Repair

NOW, THEREFORE, if the Obligee shall accept the bid of the Principal and the Principal shall enter into a Contract with the Obligee in accordance with the terms of such bid, and give such bond or bonds as may be specified in the bidding or Contract Documents with good and sufficient surety for the faithful performance of such Contract and for the prompt payment of labor and materials furnished in the prosecution thereof, or in the event of the failure of the Principal to enter such Contract and give such bond or bonds, if the Principal shall pay to the Obligee the difference not to exceed the penalty hereof between the amount specified in said bid and such larger amount for which the Obligee 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.

Signed and sealed this 1st day of October , 2020

Henry T. Gibson IV (Witness)

Ted Berry Company LLC (Principal) (Seal)

By: NE Reg V.P. (Title)

Autumn Stockton (Witness)

Harco National Insurance Company (Surety) (Seal)

By: Attorney-in-Fact Aaron P. Clark (Title)

POWER OF ATTORNEY

Bond # Bid Bond

HARCO NATIONAL INSURANCE COMPANY
INTERNATIONAL FIDELITY INSURANCE COMPANY

Member companies of IAT Insurance Group, Headquartered: 702 Oberlin Road, Raleigh, North Carolina 27605

KNOW ALL MEN BY THESE PRESENTS: That **HARCO NATIONAL INSURANCE COMPANY**, a corporation organized and existing under the laws of the State of Illinois, and **INTERNATIONAL FIDELITY INSURANCE COMPANY**, a corporation organized and existing under the laws of the State of New Jersey, and having their principal offices located respectively in the cities of Rolling Meadows, Illinois and Newark, New Jersey, do hereby constitute and appoint

TIMOTHY F. KELLY, AARON P. CLARK, FLORENCE MCCLELLAN, KRISTIN DARLING, R.F. BOBO

Houston, TX

their true and lawful attorney(s)-in-fact to execute, seal and deliver for and on its behalf as surety, any and all bonds and undertakings, contracts of indemnity and other writings obligatory in the nature thereof, which are or may be allowed, required or permitted by law, statute, rule, regulation, contract or otherwise, and the execution of such instrument(s) in pursuance of these presents, shall be as binding upon the said **HARCO NATIONAL INSURANCE COMPANY** and **INTERNATIONAL FIDELITY INSURANCE COMPANY**, as fully and amply, to all intents and purposes, as if the same had been duly executed and acknowledged by their regularly elected officers at their principal offices.

This Power of Attorney is executed, and may be revoked, pursuant to and by authority of the By-Laws of **HARCO NATIONAL INSURANCE COMPANY** and **INTERNATIONAL FIDELITY INSURANCE COMPANY** and is granted under and by authority of the following resolution adopted by the Board of Directors of **INTERNATIONAL FIDELITY INSURANCE COMPANY** at a meeting duly held on the 13th day of December, 2018 and by the Board of Directors of **HARCO NATIONAL INSURANCE COMPANY** at a meeting held on the 13th day of December, 2018.

"**RESOLVED**, that (1) the Chief Executive Officer, President, Executive Vice President, Senior Vice President, Vice President, or Secretary of the Corporation shall have the power to appoint, and to revoke the appointments of, Attorneys-in-Fact or agents with power and authority as defined or limited in their respective powers of attorney, and to execute on behalf of the Corporation and affix the Corporation's seal thereto, bonds, undertakings, recognizances, contracts of indemnity and other written obligations in the nature thereof or related thereto; and (2) any such Officers of the Corporation may appoint and revoke the appointments of joint-control custodians, agents for acceptance of process, and Attorneys-in-fact with authority to execute waivers and consents on behalf of the Corporation; and (3) the signature of any such Officer of the Corporation and the Corporation's seal may be affixed by facsimile to any power of attorney or certification given for the execution of any bond, undertaking, recognizance, contract of indemnity or other written obligation in the nature thereof or related thereto, such signature and seals when so used whether heretofore or hereafter, being hereby adopted by the Corporation as the original signature of such officer and the original seal of the Corporation, to be valid and binding upon the Corporation with the same force and effect as though manually affixed."

IN WITNESS WHEREOF, **HARCO NATIONAL INSURANCE COMPANY** and **INTERNATIONAL FIDELITY INSURANCE COMPANY** have each executed and attested these presents on this 31st day of December, 2018

INTERNATIONAL FIDELITY INSURANCE COMPANY CORPORATE SEAL 1904 NEW JERSEY

STATE OF NEW JERSEY
County of Essex

STATE OF ILLINOIS
County of Cook

HARCO NATIONAL INSURANCE COMPANY CORPORATE SEAL 1984 ILLINOIS

Kenneth Chapman
Executive Vice President, Harco National Insurance Company
and International Fidelity Insurance Company

On this 31st day of December, 2018 , before me came the individual who executed the preceding instrument, to me personally known, and, being by me duly sworn, said he is the therein described and authorized officer of **HARCO NATIONAL INSURANCE COMPANY** and **INTERNATIONAL FIDELITY INSURANCE COMPANY**; that the seals affixed to said instrument are the Corporate Seals of said Companies; that the said Corporate Seals and his signature were duly affixed by order of the Boards of Directors of said Companies.

SHIRELLE A. OUTLEY NOTARY PUBLIC NEW JERSEY My Comm. Exp. 04-04-2023 No. 50079910

IN TESTIMONY WHEREOF, I have hereunto set my hand affixed my Official Seal, at the City of Newark, New Jersey the day and year first above written.

Shirelle A. Outley a Notary Public of New Jersey
My Commission Expires April 4, 2023

CERTIFICATION

I, the undersigned officer of **HARCO NATIONAL INSURANCE COMPANY** and **INTERNATIONAL FIDELITY INSURANCE COMPANY** do hereby certify that I have compared the foregoing copy of the Power of Attorney and affidavit, and the copy of the Sections of the By-Laws of said Companies as set forth in said Power of Attorney, with the originals on file in the home office of said companies, and that the same are correct transcripts thereof, and of the whole of the said originals, and that the said Power of Attorney has not been revoked and is now in full force and effect.

IN TESTIMONY WHEREOF, I have hereunto set my hand on this day, October 1, 2020

A00717

Irene Martins, Assistant Secretary