

## SECTION 8: BID FORMS

### BID FORM 8A: BID SUBMITTAL CHECKLIST

- ☐ Form 8B: Acknowledgement and Pricing Proposal
- ☐ Form 8C: Drug Free/Tie Preference Statement
- ☐ Form 8D: Public Entity Crimes Statement
- ☐ Form 8E: Anti-Collusion Statement
- ☐ Form 8F: Statement of Vendor Qualifications
- ☐ Form 8G: Professional References for Previous Experience
- ☐ Form 8H: Listing of Subcontractors
- ☐ Form 8I: Cured in Place Pipe Specs
- ☐ Form 8J: Cured-in-Place Pipe Specs
- ☐ Independent Contractors Agreement
- ☐ Attachment: Bid Proposal
- ☐ Copy of License(s)
- ☐ Insurance Certificate
- ☐ Submission of one (1) original marked "ORIGINAL" and one (1) digital (flash drive) copy.

BY: American In-Line Inspection, Inc.  
Name of Business

\*   
Authorized Signature

Robin J. Vallance, Owner  
Printed Name and Title

3-21-2023  
Date

**THIS DOCUMENT MUST BE COMPLETED AND RETURNED WITH YOUR BID.**

**BID FORM 8B: Bid Form  
Acknowledgement and Pricing Proposal**

PROJECT IDENTIFICATION: Sewer Rehabilitation Services

BID IDENTIFICATION AND NUMBER: BID NO. 23-B-005

THIS BID IS SUBMITTED TO:

CITY OF SOUTH DAYTONA  
OFFICE OF THE CITY MANAGER  
1672 S. RIDGEWOOD AVENUE  
SOUTH DAYTONA, FLORIDA 32119

Name of Bidder: American In-Line Inspection, Inc.

Mailing Address: 415 Timaquan Trail, Edgewater, FL 32132

Street Address: 415 Timaquan Trail

City/State/Zip: Edgewater, FL 32132

Phone Number: (386) 409-5446 FAX Number: (386) 957-4919

I have carefully examined the Invitation to Bid (ITB), Instructions to Vendors, General and/or Special Conditions, Specifications, and any other documents accompanying or made a part of this invitation.

I hereby propose to furnish the goods or services specified in the Invitation to Bid at the prices or rates as finally negotiated. I agree that my bid will remain firm for a period of up to ninety (90) days in order to allow the City of South Daytona adequate time to evaluate the proposed bid. Furthermore, I agree to abide by all conditions of the Invitation to Bid.

I certify that all information contained in this Bid is truthful to the best of my knowledge and belief. I further certify that I am a duly authorized to submit this Bid on behalf of the Vendor / Contractor as its act and deed and that the Vendor / Contractor is ready, willing and able to perform if awarded the contract.

I propose and agree, if this Bid is accepted, to enter into an Agreement with the City in the form included in the Contract Documents to furnish all necessary materials, equipment, machinery, tools, apparatus, transportation and labor and to complete all Work as specified or indicated in the Contract Documents for the Contract Price and within the Contract Time indicated in this Bid and in accordance with the Contract Documents.

I will accept as full compensation for completion of the project in full compliance with the Contract Documents, the lump sum price for the work items submitted herein with this Bid.

I further certify that this Bid is made without prior understanding, Contract, connection, discussion, or collusion with any person, firm or corporation submitting a Bid for the same product or service; no officer, employee or agent of the City of South Daytona City Council or of any other Vendor interested in said ITB; and that the undersigned executed this Vendor's Acknowledgement with full knowledge and understanding of the matters therein contained and was duly authorized to do so.

I further certify that having read and examined the specifications and documents for the designated services and understanding the general conditions for contract under which services will be performed, does hereby propose to furnish all labor, equipment, and material to provide the services set forth in the ITB.

I hereby declare that the following listing states any clarifications, any and all variations from and exceptions to the requirements of the specifications and documents. The undersigned further declares that the "work" will be performed in strict accordance with such requirements and understands that any exceptions to the requirements of the specifications and documents may render the Bid non-responsive.

#### **ADDENDUM ACKNOWLEDGEMENT**

I have carefully examined the Invitation to Bid (ITB), Instructions to Vendors, General and/or Special Conditions, Specifications, and any other documents accompanying or made a part of this Invitation to Bid.

I acknowledge receipt and incorporation of the following addenda, and the cost, if any, of such revisions has been included in the price of the bid proposal.

Addendum Number: 1 Date: 3-20-23 Addendum Number: \_\_\_\_\_ Date: \_\_\_\_\_  
Addendum Number: \_\_\_\_\_ Date: \_\_\_\_\_ Addendum Number: \_\_\_\_\_ Date: \_\_\_\_\_

*Please note that the City may award contracts to multiple contractors.*

#### **BID**

The undersigned offers to furnish all materials, equipment and labor for construction of the "BID NO. 23-B-005, Sewer Rehabilitation Services," for the City of South Daytona, Florida, complete in every respect in strict accordance with the drawings, specifications, exhibits, figures and any future changes therein.

The bid price as outlined in Bid Form 8J is attached.

IN WITNESS WHEREOF, Bidder has hereunto executed this form this 27 day of March, 2023.

American In-line Inspection, Inc.  
(Name of Bidding Firm)

\* [Signature]  
(Signature of person signing form)

\* Robin J. Vallance, President  
(Printed name and Title of person signing form)

STATE OF Florida  
COUNTY OF Volusia

This document was sworn to (or affirmed) and subscribed before me by means of ☒ physical presence or ☐ online notarization, this 27 day of March, 2023

he/she is personally known to me or has presented Personally Known as identification.



DARCY MCILRAVY  
Commission # HH 017443  
Expires November 2, 2024  
Bonded Thru Budget Notary Services

Darcy McIlravy  
Notary Public  
My Commission Expires: Nov. 2, 2024

**THIS FORM MUST BE COMPLETED AND RETURNED WITH YOUR BID.**



**City of South Daytona**  
**Sewer Rehabilitation Services**  
**BID NO. 23-B-005**  
**Addendum #1**

**Monday, March 20, 2023**

***Questions Received. Answered from the City of South Daytona are in RED.***

Can TDS sheets be submitted in an effort to get our supplier MTC polyester resin lining system approved as a product on this bid.

Per Part – 2 Products, C. (Resin) 3) of the technical spec: If they wish to offer an alternative, the following shall be provided:

“Therefore, the basis of design shall be 100% epoxy resin, or approved equal. Requests for consideration of equivalent resins other than 100% epoxy shall include a detailed comparison of the benefits & disadvantages (i.e. pros and cons) of the alternate resin system versus the basis of design 100% epoxy resin over the lifecycle of the product.”

Please include the comparison information required in the bid when submitting. The Selection Committee will review the submittal.

3-21-2023, WPKush, American In-line



**BID FORM 8C:**  
**Drug-Free Preference Statement**

**IDENTICAL TIE BIDS** - Preference shall be given to businesses with drug-free workplace programs. Whenever two or more bids, proposals, statements, or replies that are equal with respect to price, quality, and service are received by the city for the procurement of commodities or contractual services, a bid received from a business that certifies that it has implemented a drug-free workplace program shall be given preference in the award process. Established procedures for processing tie bids will be followed if none of the tied vendors have a drug-free workplace program.

In order to have a drug-free workplace program, a business shall:

- (1) Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.
- (2) Inform employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation and employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.
- (3) Give each employee engaged in providing the commodities or contractual services that are under bid a copy of the statement specified in subsection (1).
- (4) In the statement specified in subsection (1), notify the employees that, as a condition of working on the commodities or contractual services that are under bid, the employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of chapter 893 or of any controlled substance law of the United States or any state, for a violation occurring in the workplace no later than five (5) days after such conviction.
- (5) Impose a sanction on or require the satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee's community, by any employee who is so convicted.
- (6) Make a good faith effort to continue to maintain a drug-free workplace through implementation of Section 287.087, Florida Statutes.

As an authorized representative of the firm, I certify that this firm complies fully with the above requirements.

American In-Line Inspection, Inc.

(Name of Bidding Firm)

x   
(Signature of person signing form)

x Robin J. Hallance, President  
(Printed name and Title of person signing form)

STATE OF Florida  
COUNTY OF Volusia

This document was sworn to (or affirmed) and subscribed before me by means of ☒ physical presence or ☐ online notarization, this 27 day of March, 2023 he/she is personally known to me or has presented \_\_\_\_\_ as identification.



DARCY MCILRAVY  
Commission # HH 017443  
Expires November 2, 2024  
Bonded Thru Budget Notary Services

  
Notary Public  
My Commission Expires: Nov. 2, 2024

**THIS FORM MUST BE COMPLETED AND RETURNED WITH YOUR BID.**

**BID FORM 8D:**  
**Public Entity Crimes Statement**

*(To be signed in the presence of notary public or other officer authorized to administer oaths.)*

Before me, the undersigned Authority, personally appeared affiant who, being by me first duly sworn, made the following statement:

This sworn statement is submitted with Bid, Proposal or Contract No. 23-B-005 for City of South Daytona Sewer Rehabilitation Svcs. This sworn statement is submitted by American In-Line Inspection, Inc. whose business address is 415 Timaguan Trail, Edgewater, FL 32132 and (if applicable) its Federal Employer Identification Number (FEIN) is 59-3509291. (If the entity has no FEIN, include the Social Security Number of the individual signing this sworn statement:

N/A.)

\* My name is Robin J. Vallance and my relationship to the entity named above is

\* President  
(relationship such as sole proprietor, partner, president, vice president)

- (1) I understand that a public entity crime as defined in Section 287.133 of the Florida Statutes includes a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity in Florida or with an agency or political subdivision of any other state or with the United States, including, but not limited to, any proposal or contract for goods or services to be provided to any public entity or such an agency or political subdivision and involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy or material misrepresentation.
- (2) I understand that "convicted" or "conviction" is defined by the Florida Statutes to mean a finding of guilt or a conviction of a public entity crime, with or without an adjudication of guilt, in any federal or state trial court of record relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, non-jury trial, or entry of a plea of guilt or nolo contendere.
- (3) I understand that "affiliate" is defined by the Florida Statutes to mean (1) a predecessor or successor of a person or a corporation convicted of a public entity crime, or (2) an entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime, or (3) those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of an affiliate, or (4) a person or corporation who knowingly entered into a joint venture with a person who has been convicted of a public entity crime in Florida during the preceding 36 months.
- (4) I understand that a "person" as defined in Paragraph 287.133(i)(e), Florida Statutes, means any natural person or entity organized under the laws of any state or of the United States with the legal power to enter into a binding contract and which bids or applies to bid on contracts for the provision of goods or services let by a public entity, or which otherwise transacts or applies to transact business with a public entity. The term "person" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in management of an entity.
- (5) Based on information and belief, the statement which I have marked below is true in relation to the entity submitting this sworn statement. (Please indicate which statement applies).



✓

Neither the entity submitting this sworn statement, nor any officers, directors, executives, partners, shareholders, employees, members or agents who are active in management of the entity, nor any affiliate of the entity have been charged with and convicted of a public entity crime subsequent to July 1, 1989.

The entity submitting this sworn statement, or one or more of the officers, directors, executives, partners, shareholders, employees, members, or agents who are active in management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989, AND (Please indicate which additional statement applies.)

There has been a proceeding concerning the conviction before a hearing officer of the State of Florida, Division of Administrative Hearings. The final order entered by the hearing officer did not place the person or affiliate on the convicted vendor list. (Please attach a copy of the final order.)

The person or affiliate was placed on the convicted vendor list. There has been a subsequent proceeding before a hearing officer of the State of Florida, Division of Administrative Hearings. The final order entered by the hearing officer determined that it was in the public interest to remove the person or affiliate from the convicted vendor list. (Please attach a copy of the final order).

As an authorized representative of the firm, I certify that this firm complies fully with the above requirements.

American In-Line Inspection, Inc.  
(Name of Bidding Firm)

X [Signature]  
(Signature of person signing form)

+ Robin J. Vallance, President  
(Printed name and Title of person signing form)

STATE OF Florida  
COUNTY OF Volusia

This document was sworn to (or affirmed) and subscribed before me by means of ✓ physical presence or     online notarization, this 27 day of March, 2023 he/she is personally known to me or has presented     as identification.



DARCY MCILRAVY  
Commission # HH 017443  
Expires November 2, 2024  
Bonded Thru Budget Notary Services

Darcy McIlravy  
Notary Public  
My Commission Expires: Nov. 2, 2024

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**BID FORM 8E:  
Anti-Collusion Statement**

By signing this form, the Proposer agrees that this Bid is made without any other understanding, agreement, or connection with any person, corporation, or firm submitting a bid for the same purpose and that the bid is in all respects fair and without collusion or fraud.

**SIGN** in ink in the space provided below. Unsigned Bids will be considered incomplete, and will be disqualified, and rejected.

IT IS AGREED BY THE UNDERSIGNED VENDOR THAT THE SIGNING AND DELIVERY OF THE BID REPRESENTS THE VENDORS ACCEPTANCE OF THE TERMS AND CONDITIONS OF THE FOREGOING SPECIFICATIONS, CONTRACT AND PROVISIONS, AND IF AWARDED, THIS CONTRACT WILL REPRESENT THE AGREEMENT BETWEEN THE VENDORS AND THE CITY OF SOUTH DAYTONA.

\*   
(Signature of person signing form)

\* Robin J. Vallance  
(Printed name and Title of person signing form)

Name of Bidder: American In-line Inspection, Inc.

Address: 415 Timaguan Trail

City/State/Zip: Edgewater, FL 32132

Phone Number: (386) 409-5446 FAX Number: (386) 957-4919

FEIN Number: 59-3509291

**NO** Bid may be withdrawn for a period of ninety (90) days subsequent to the submittal of the Bids, without the consent of the City of South Daytona.

**NO BID (REASON):** N/A

**THIS FORM MUST BE COMPLETED AND RETURNED WITH YOUR BID.**



**BID FORM 8F:**  
**Statement of Vendor Qualifications**

The undersigned warrants that he or she is duly authorized to complete this document, and hereby affirms that the information contained in this Form is complete, true, and correct to the best of their knowledge and belief. If necessary, questions may be answered on separate paper and attached, with any additional information that may be pertinent.

- (1) Name of Vendor. American In-Line Inspection, Inc.
- (2) Permanent main office address. 415 Timaguan Tr. Edgewater, FL 32132
- ✓ (3) Date organized. April 30, 1998
- ✓ (4) If a corporation, where incorporated. Florida
- ✓ (5) How many years have you been engaged in the contracting business under your present firm or trade name? 24
- ✓ (6) Contracts on hand: (Schedule these, showing amount of each contract and the appropriate anticipated dates of completion.)
- ✓ (7) General character of work performed by your company. Underground Rehab inspection & Repairs
- ✓ (8) Have you ever failed to complete any work awarded to you? If so, where and why? NO
- ✓ (9) Have you ever defaulted on a contract? If so, where and why? NO
- ✓ (10) List the more important projects recently completed by your company, stating the approximate cost for each and the month and year completed.
- ✓ (11) List your major equipment currently owned or leased.
- ✓ (12) Experience in work similar to this type of project. See References Documents
- ✓ (13) Background and experience of the principal members of your organization, including the officers.
- ✓ (14) The undersigned hereby authorizes and requests any person, firm, or corporation to furnish any information requested by the City in verification of the recitals comprising this Statement of Vendor Qualifications.

American In-Line Inspection, Inc.  
(Name of Bidding Firm)

✱ [Signature]  
(Signature of person signing form)

✱ Robin J. Wallace, President  
(Printed name and Title of person signing form)

STATE OF Florida  
COUNTY OF Volusia

This document was sworn to (or affirmed) and subscribed before me by means of ☒ physical presence or ☐ online notarization, this 27 day of March, 2023, he/she is personally known to me or has presented

✱ \_\_\_\_\_ as identification.  
  
DARCY MCILRAVY  
Commission # HH 017443  
Expires November 2, 2024  
Bonded Thru Budget Notary Services

[Signature]  
Notary Public  
My Commission Expires: Nov. 2, 2024

**THIS FORM MUST BE COMPLETED AND RETURNED WITH YOUR BID.**

**BID FORM 8G:**  
**Professional References for Previous Experience**

The Vendor proposes that he/she is qualified to perform the referenced work and has successfully done so on recent projects similar in nature and size. The City reserves the right to check references and confirm information provided herein.

Please provide three (3) current and correct references from clients for similar services. (Do not include the City of South Daytona)

**Reference 1:**

|  |   |
|--|---|
| Company Name:                              | City of Eustis                                  |
| City, State:                               | Eustis, Florida                                 |
| Contact Person:                            | Greg Dobbins, C# 352-516-0171                   |
| Telephone Number:                          | 352-357-5618                                    |
| Email Address:                             | dobbins@ci.eustis.fl.us                         |
| Description of Goods or Services provided: | Sewer Rehabilitation Services<br>Bid No. 007-17 |
| Contract Amount:                           | 10,800 Feet of Manhole to Manhole CIPP Lining.  |
| Start/End Date of Contract:                | Feb/April 2017 to April 2023                    |

**Reference 2:**

|  |  |
|--|--|
| Company Name:                              | City of Edgewater  |
| City, State:                               | Edgewater, Florida   |
| Contact Person:                            | Randy Coslow   |
| Telephone Number:                          | 386-424-2400 x 4007  |
| Email Address:                             | rcoslow@CityofEdgewater.org  |
| Description of Goods or Services provided: | ① Clean + Video Inspection, 50,000 LF Existing San. Sewer<br>② CIPP MH to MH Lining 1,520 +/- LF |
| Contract Amount:                           | ① \$102,000.00 to \$185,000.00 P.O. No 010125<br>② \$86,112.00 Add on P.O. No 010125             |
| Start/End Date of Contract:                | Aug 2019 to July 2020 to Open Piggy Back Contract.   |

**Reference 3:**

|  |   |
|--|---|
| Company Name:                              | Spruce Creek Fly-In (Property Owner Association)                                |
| City, State:                               | Spruce Creek Fly-In, Volusia County, FL   |
| Contact Person:                            | Maurice Kearns, General Mgr. / (Walt Reddel Public Works)                       |
| Telephone Number:                          | 386-760-5884 / (cell 708-703-0060)  |
| Email Address:                             | manager@scpoc.com / wredde@gmail.com  |
| Description of Goods or Services provided: | Storm Sewer Drainage Improvement Bid<br>CIPP MH to MH Epoxy Lining 2021 to 2025 |
| Contract Amount:                           | Forty-three Runs, 3,800 +/- LF<br>\$692,118.00 Plus Add-on's & Emergency Calls  |
| Start/End Date of Contract:                | Jan. 2022 to 2025   |

**THIS FORM MUST BE COMPLETED AND RETURNED WITH YOUR BID.**

**BID FORM 8H:**  
**Listing of Subcontractors**

The Vendor proposes that the following subcontractors are qualified to perform the referenced work and have successfully done so on recent projects similar in nature and size. All subcontractors whose work product accounts for 5% or more of the total contract value shall be listed. Upon approval of subcontractors listed, the successful Vendor shall not substitute subcontractors without approval from the City. Vendor shall attach additional sheets as necessary.

**Subcontractor 1:**

|                            |                                 |                               |   |
|----------------------------|---------------------------------|-------------------------------|---|
| Name:                      | Stephens Technologies, Inc      |                               |   |
| City, State:               | Lake Hamilton, FL               |                               |   |
| Description of Work:       | Epoxy Chemical / Liner Material |                               |   |
| Percent of Contract Price: | 30% Plus                        | Previous Experience Together: | 27-yr's <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |

**Subcontractor 2:**

(Only IF Needed)

|                            |                              |                               |  |
|----------------------------|------------------------------|-------------------------------|--|
| Name:                      | Mersino's                    |                               |  |
| City, State:               | Edgewater, FL                |                               |  |
| Description of Work:       | Bypass Pumping (Sewer Flows) |                               |  |
| Percent of Contract Price: | 10 %                         | Previous Experience Together: | 8-yr's <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |

**Subcontractor 3:**

(Only IF Needed)

|                            |                        |                               |   |
|----------------------------|------------------------|-------------------------------|---|
| Name:                      | Better Barricades      |                               |   |
| City, State:               | New Smyrna Beach, FL   |                               |   |
| Description of Work:       | Maintenance of Traffic |                               |   |
| Percent of Contract Price: | 10 %                   | Previous Experience Together: | 11-yr's <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |

**THIS FORM MUST BE COMPLETED AND RETURNED WITH YOUR BID.**



|   |
|---|
| <p style="text-align: center;"><b>BID FORM 8I:</b><br/><b>Cured-in-Place Pipe Specs</b></p> |
|---|

**A. REQUIREMENTS**

1. The Contractor shall provide necessary warranty and documentation of required experience per the Contract Bid Submittal Requirements and as specified herein.
2. The OWNER requires all Customers to be notified a minimum of 5 calendar days of any anticipated flow interruptions. It is the Contractor's responsibility to make said Customer notifications.
3. The CIPP shall be continuous, jointless and structurally sound liner from manhole to manhole. All existing and confirmed lateral connections shall be internally reinstated/reopened. The Contractor will be responsible for sealing all manhole wall and lateral reinstatement connections.
4. The OWNER will pay for installed materials only per the Contract Bid Tabulation Bid Item Unit Cost.
5. All work shall adhere to Occupational Health and Safety Administration (OSHA) standards, current edition.
6. Maintenance of Traffic shall adhere to FDOT Design Standards, Index 600, current edition.

**B. REFERENCE SPECIFICATIONS AND STANDARDS**

- 1) This specification references the following American Society for Testing and Materials (ASTM) Standard Specifications, American Water Works Association (AWWA) Specifications and their reference standards, which are made a part hereof by such reference and shall be the latest edition and revision thereof. All work shall comply with the reference standards unless specifically stated otherwise in this Specification.
- a. ASTM D5813 - Standard Specification for Cured-in-Place Thermosetting Resin Sewer Pipe
  - b. ASTM F1216 - Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Inversion and Curing of a Resin-Impregnated Tube
  - c. ASTM F1743 - Standard Practice for Rehabilitation of Existing Pipelines and Conduits by Pulled-In-Place Installation of Cured-In-Place Thermosetting Resin Pipe
  - d. ASTM D543 - Standard and Practice for Evaluating the Resistance of Plastics to Chemical Reagents
  - e. ASTM D638 - Standard Test Method for Tensile Properties of Plastics
  - f. ASTM D790 - Standard Test Methods for Flexural Properties of Un-reinforced and Reinforced Plastics and Electrical Insulating Materials
  - g. ASTM D792 - Standard Test Methods for Density and Specific Gravity of Plastics by displacement
  - h. ASTM F2019-03 - Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Pulled in Place Installation of Glass Reinforced Plastic (GRP) Cured-In-Place Thermosetting Resin Pipe (CIPP)
  - i. ASTM D2122-98(2004) - Standard Test Method for Determining Dimensions of Thermoplastic Pipe and Fittings

- j. ASTM D2990 - Standard Test Methods for Tensile, Compressive, and Flexural Creep and Creep-Rupture of Plastics

### **C. PERFORMANCE WORK STATEMENT (PWS)**

1) The Contractor shall submit, to the OWNER, a Performance Work Statement (PWS) at the pre-construction meeting, which clearly defines the CIPP product delivery in conformance with the requirements of these contract documents. Unless otherwise directed by the OWNER, the PWS shall at a minimum contain the following:

- a. Clearly indicate that the CIPP will conform to the project requirements as outlined in the Description of Work and as delineated in these specifications.
- b. Where the scope of work is specifically delineated in the contract documents, a detailed installation plan describing all preparation work, cleaning operations, pre-video inspections, by-pass pumping, maintenance of traffic, installation procedure, method of curing, lateral reinstatement, quality control, testing to be performed, final video inspection, warranties furnished and all else necessary and appropriate for a complete CIPP liner installation. A detailed installation schedule shall be prepared, submitted and conform to the requirements of this contract.
- c. Contractor's description of the proposed CIPP lining technology, including a detailed plan for identifying all existing lateral connections and maintaining all Customer sewer service during CIPP installation.
- d. A description of the CIPP materials to be furnished for the project. Materials shall be fully detailed in the submittals and conform to these specifications and/or shall conform to the pre-approved product submission.
- e. The name and experience of each lead individual performing work on this Contract shall be submitted with the PWS.
- f. Engineering design calculations, in accordance with the Appendix of ASTM F1216, for each length of liner to be installed including the thickness of each proposed CIPP. It will be acceptable for the Contractor to submit a design for the most severe line condition and apply that design to all of the line sections. These calculations shall be performed and certified by a qualified Professional Engineer. All calculations shall include data that conforms to the requirements of these specifications or has been pre-approved by the OWNER.
- g. Proposed manufacturers technology data shall be submitted for all CIPP products and all associated technologies to be furnished.
- h. A detailed description of the Contractor's proposed procedures for removal of roots/blockages in the pipe that may be encountered during the cleaning process.
- i. A detailed public notification plan shall be prepared and submitted including detailed staged notification to Customers affected by the CIPP installation.

## **PART 2 – PRODUCTS**

### **A. MATERIALS**



1) The CIPP System must meet the chemical resistance requirements of these contract documents. All materials, shipped to the project site, shall be accompanied by test reports certifying that the material conforms to the ASTM standards listed herein. Materials shall be shipped, stored, and handled in accordance with the CIPP manufacturer's recommendations to avoid damage. Damage includes, but is not limited to, gouging, abrasion, flattening, cutting, puncturing, or ultra-violet (UV) degradation. On site storage locations, shall be approved by the OWNER. All damaged materials shall be promptly removed from the project site at the Contractor's expense and disposed of in accordance with all current applicable agency regulations.

#### **B. FABRIC TUBE**

- 1) The fabric tube shall consist of one or more layers of absorbent non-woven felt fabric, felt/fiberglass or fiberglass and meet the requirements of ASTM F1216, ASTM F1743, ASTM D5813 & ASTM F2019.
- 2) The fabric tube shall be capable of absorbing and carrying resins, constructed to withstand installation pressures and curing temperatures and have sufficient strength to bridge missing pipe segments, and stretch to fit irregular pipe sections. The Contractor shall submit certified information from the felt manufacturer on the nominal void volume in the felt fabric that will be filled with resin.
- 3) The wet-out fabric tube shall have a uniform thickness and excess resin distribution that when compressed at installation pressures will meet or exceed the design thickness after cure.
- 4) The fabric tube shall be manufactured to a size and length that when installed will tightly fit the internal circumference, meeting applicable ASTM standards or better, of the original pipe. Allowance shall be made for circumferential stretching during installation. The tube shall be properly sized to the diameter of the existing pipe and the length to be rehabilitated and be able to stretch to fit irregular pipe sections and negotiate bends. The Contractor shall determine the minimum tube length necessary to effectively span the designated run between manholes. The Contractor shall verify the lengths in the field prior to ordering and prior to impregnation of the tube with resin, to ensure that the tube will have sufficient length to extend the entire length of the run. The Contractor shall also measure the inside diameter of the existing pipe in the field prior to ordering liner so that the liner can be installed in a tight-fitted condition.
- 5) The outside and/or inside layer of the fabric tube (before inversion/pull-in, as applicable) shall be coated with an impermeable, flexible membrane that will contain the resin and facilitate, if applicable, vacuum impregnation and monitoring of the resin saturation during the resin impregnation (wet-out) procedure.
- 6) No material shall be included in the fabric tube that may cause de-lamination in the cured CIPP. No dry or unsaturated layers shall be acceptable upon visual inspection as evident by color contrast between the felt fabric and the activated resin containing a colorant.
- 7) The wall color of the interior pipe surface of CIPP after installation shall be a light reflective color so that a clear detailed examination with closed circuit television inspection equipment may be made. The hue of the color shall be dark enough to distinguish a contrast between the fully resin saturated felt fabric and dry or resin lean areas.
- 8) Seams in the fabric tube, if applicable, shall meet the requirements of ASTM D5813.

9) The outside of the fabric tube shall be marked every 5 feet with the name of the CIPP manufacturer, manufacturing lot and production footage.

10) The minimum length of the fabric tube shall be that deemed necessary by the installer to effectively span the distance from the starting manhole to the terminating manhole or access point, plus that amount required to run-in and run-out for the installation process.

11) The nominal fabric tube wall thickness shall be constructed, as a minimum, to the nearest 0.5 mm increment, rounded up from the design thickness for that section of installed CIPP. Wall thickness transitions, in 0.5 mm increments or greater as appropriate, may be fabricated into the fabric tube between installation entrance and exit access points. The quantity of resin used in the impregnation shall be sufficient to fill all of the felt voids for the nominal felt thickness.

### **C. RESIN**

1) The resin shall be a corrosion resistant polyester or vinyl ester resin and catalyst system that when properly cured within the tube composite meets the requirements of ASTM F1216, ASTM F1743 or F2019, the physical properties herein, and those, which are to be utilized in the design of the CIPP for this project. The resin shall produce CIPP which will comply with or exceed the structural and chemical resistance requirements of this specification.

2) It is the desire of the OWNER that the CIPP liner adhere to the walls of the host pipe in as many locations as possible to reduce the likelihood of infiltration through the annular space between the host pipe and liner.

3) Therefore, **the basis of design shall be 100% epoxy resin**, or approved equal. Requests for consideration of equivalent resins other than 100% epoxy shall include a detailed comparison of the benefits & disadvantages (i.e. pros and cons) of the alternate resin system versus the basis of design 100% epoxy resin over the lifecycle of the product.

### **D. STRUCTURAL REQUIREMENTS**

1) The physical properties and characteristics of the finished liner will vary considerably, depending on the types and mixing proportions of the materials used, and the degree of cure executed. It shall be the responsibility of the Contractor to control these variables and to provide a CIPP system which meets or exceeds the minimum properties specified herein:

- a. The CIPP shall be designed as per ASTM standards. The structural properties of the CIPP design shall assume no benefit related to bonding to the original pipe wall.
- b. The design engineer shall set the long term (50 year extrapolated) Creep Retention Factor at 33% of the initial design flexural modulus as determined by ASTM D790 test method. This value shall be used unless the Contractor submits long term test data (ASTM D2990) to substantiate a higher retention factor.
- c. The CIPP material shall, at a minimum, meet or exceed the structural properties, as listed below:
  - i. Flexural Strength (Short Term) 4,500 psi (ASTM D790)



- ii. Flexural Modulus of Elasticity (Short Term) 250,000 psi (ASTM D790) iii. Method Cured Composite Per ASTM F1216
- 2) The required structural CIPP wall thickness shall be based, as a minimum, on the physical properties of the cured composite and per the design of the Professional Engineer and in accordance with the Design Equations contained in the appendix of the ASTM standards, and the following design parameters:
- a. Design Safety Factor - 2.0 (1.5 for pipes 36" or larger)
  - b. Creep Retention Factor - 33%
  - c. Ovality - 2% or as measured by field inspection
  - d. Constrained Soil Modulus Per AASHTO LRFD Section 12 and AWWA Manual M45
  - e. Groundwater Depth - As specified or indicated on the Plans
  - f. Soil Depth (above the crown) - As specified or indicated on the Plans
  - g. Live Load - Highway, railroad or airport as applicable
  - h. Soil Load (assumed) - 120 lb/cu. Ft.
  - i. Minimum service life - 50 years
- 3) The Contractor shall submit, prior to installation of the lining materials, certification of compliance with these specifications and/or the requirements of the pre-approved CIPP system. Certified material test results shall be included that confirm that all materials conform to these specification and/or the pre-approved system. Materials not complying with these requirements will be rejected.

#### **E. PRODUCT SUBMITTALS**

- 1) The Contractor shall submit the following information:
- a. Manufacturer's certification that the materials to be used meet the referenced standards and these specifications.
  - b. License or certificate verifying Manufacturer's/Licenser's approval of the installer.
  - c. Proposed equipment and procedures for accomplishing the work.
  - d. Tube wet-out & cure method including:
    - i. A complete description of the proposed wet-out procedure for the proposed technology.
    - ii. The Manufacturer's recommended cure method for each diameter and thickness of CIPP liner to be installed. The PWS shall contain a detailed curing procedure detailing the curing medium and the method of application.
    - iii. Design calculations for wall thickness designs to be completed by an Engineer proficient in the pipe design.

### **PART 3 – CONSTRUCTION**

#### **A. PREPARATION AND CLEANING**

- 1) Contractor shall perform pre-video inspection of the pipe to be lined. The Contractor shall provide the OWNER a copy of the video in digital format for review and approval.
- 2) The pre-video shall be after the pipe is cleaned.

- 3) The Contractor is responsible to clear the pipe of obstructions that will interfere with the installation and long-term performance of the CIPP.
  - 5) If the pre-video inspection reveals an obstruction, misalignment, broken or collapsed section or sag that was not identified as part of the original scope of work and will prohibit proper installation of the CIPP, the Contractor may be directed by the OWNER to correct the problem(s) prior to lining by utilizing open cut repair methods. The Contractor shall be compensated for this work under a Contract Bid Item.
- 6) The Contractor shall be responsible for confirming the locations of all lateral connections prior to installing and curing the CIPP.
- 7) In the event the status of a lateral connection cannot be adequately defined, the OWNER will make the final decision, prior to installation and curing of the liner, as to the status.
- 8) The Contractor may, under the direction of the OWNER, utilize any of the existing manholes in the project area as installation access points. If a road closure or detour is required due to the location of the gravity sanitary sewer, Contractor must obtain permission from the OWNER and maintenance authority of the road (e.g. City of Edgewater, County of Volusia, Florida Department of Transportation).
- 9) The Contractor shall remove all internal debris from the pipe that will interfere with the installation and the final product delivery of the CIPP as required in these specifications. Solid debris and deposits shall be removed from the system and disposed of properly by the Contractor. The Contractor shall dispose of all debris at no additional charge to the OWNER. Moving material from manhole section to manhole section shall not be allowed. As applicable, the Contractor shall either plug or install a by-pass pumping system to properly clean the pipe. Precaution shall be taken by the Contractor in the use of cleaning equipment to avoid damage to the existing pipe. The repair of any damage, caused by the cleaning equipment, shall be the responsibility of the Contractor.
- 10) The liquid portion of the any vacuumed material may be carefully decanted and returned to the OWNER's sanitary collection system at a location designated by the OWNER and only under direct supervision of OWNER's staff. Contractor shall coordinate such decanting operations subject to the availability and convenience of OWNER's staff. Contractor shall retain the solid portion, including any grease, grit, and gross solids, and any liquid in which such solids are entrained for disposal at a properly permitted facility. This allowance for decanting into OWNER's collection system requires continued good faith on the Contractor's part and may be limited or wholly rescinded at any time should OWNER observe or suspect that Contractor is not practicing due care in the adherence to these limitations.
- 11) The Contractor is responsible for construction water. The OWNER can supply the Contractor with a Temporary Construction Water Meter (with proper backflow prevention) provided an account is applied and paid for by the Contractor with the OWNER's Billing Department.

## **B. BY-PASS PUMPING**

### **PART 1 – GENERAL**



## 1.01 DESCRIPTION OF WORK

- A. The work covered by this section consists of providing all labor, equipment, material, and supplies and performing all operations required to bypass pump sewage around a manhole or sewer section in which work is to be performed. The Contractor shall be prepared to bypass pump sewage as part of his operations. The Contractor shall provide all pumps, piping and other equipment necessary to accomplish bypass pumping; perform all construction; obtain all permits; pay all costs; and perform complete restoration of all existing facilities to conditions equal or better than existed prior to construction and to the satisfaction of the Engineer. All costs to accomplish bypass pumping, at the required volume, and all associated work including restoration, shall be considered incidental to the work and no additional compensation will be allowed.

## 1.02 GENERAL

- A. When the depth of flow in the sewer line being televised or repaired is above the maximum allowable for the proposed work, then the Contractor shall reduce the flow to the level shown below by manual operation of pump stations, plugging or blocking of the flow or by pumping and bypassing of the flow as acceptable to the Engineer. For manual operation of pump stations, the Contractor shall coordinate such operations with the appropriate City personnel. Plugging or blocking of the flow shall only be allowed when the Contractor can demonstrate that the upstream gravity collection system can accommodate the surcharging without any adverse impact.
- B. The depth of flow in the sewer line being televised or repaired shall not exceed that shown for the respective pipe sizes and for the operations indicated.
- C. Initial Television Inspection. For the initial television inspection, the sewer line shall be blocked completely. No flow, except infiltration, will be allowed through the sewer line.
- D. Television Inspection Before and After Lining Installation. For the television inspection before and after lining installation the sewer line shall be blocked completely. No flow, except infiltration before lining, will be allowed through the sewer line.
- E. Other Television Inspection, including Warranty.

| Pipe Size      | Maximum Depth of Flow             |
|----------------|-----------------------------------|
| 6" – 10" Pipe  | 20 Percent (20%) of Pipe Diameter |
| 12" – 24" Pipe | 25 Percent (25%) of Pipe Diameter |
| Above 24" Pipe | 30 Percent (30%) of Pipe Diameter |

F. Television Inspection After Joint Testing/Sealing. For the television inspection after joint testing/sealing the sewer line shall be blocked completely. No flow will be allowed through the sewer line.

G. Joint Testing/Sealing

| Pipe Size      | Maximum Depth of Flow             |
|----------------|-----------------------------------|
| 6" – 10" Pipe  | 20 Percent (20%) of Pipe Diameter |
| 12" – 24" Pipe | 30 Percent (30%) of Pipe Diameter |
| Above 24" Pipe | 35 Percent (35%) of Pipe Diameter |

H. Pipe Lining Installation. For the pipe lining installation, the sewer line shall be blocked completely. No flow, except infiltration, will be allowed through the sewer line.

I. Manhole Repairs. For manhole repairs, the flow through the manhole shall be controlled or blocked completely, as required, to properly complete the repairs as specified.

### 1.03 SUBMITTALS

The Contractor shall submit a written plan describing his means and methods for flow control and bypass pumping to the Engineer for review.

## PART 2 – PRODUCTS (NOT USED)

## PART 3 – EXECUTION

### 3.01 PLUGGING AND BLOCKING

A. A sewer line plug shall be inserted into the line upstream of the section being televised or repaired. The plug shall be so designed that all or any portion of the upstream flow can be released. During the television inspections and repair operations the flow through the line



being worked shall be reduced to within the maximum limits stated above. After the work has been completed, the flow shall be restored to normal.

### 3.02 PUMPING AND BYPASSING

- A. When pumping and bypass pumping is required, as determined by the Engineer, the Contractor shall supply all necessary pumps, conduits, and other equipment to divert the flow around manhole section in which work is to be performed. The bypass system shall be of sufficient capacity to handle existing flow plus additional flow that may occur during rainstorm events. The Contractor will be responsible for furnishing the necessary labor and supervision to set up and operate the pumping and bypassing system. Pumps and equipment shall be continuously monitored by the Contractor during the periods that pumping and bypassing are required. If pumping is required on a 24-hour basis, engine shall be equipped in a manner to keep noise to a minimum.

### 3.03 FLOW CONTROL PRECAUTIONS

- A. When flow in a sewer line is plugged, blocked or bypassed by the Contractor, he shall take sufficient precautions to protect the public health and to protect the sewer lines from damage that might result from sewer surcharging. Further, the Contractor shall take precautions to insure that sewer flow control operations do not cause flooding or damage to public or private property being served by the sewers involved and he shall be responsible for any damage resulting from his flow control operations.
- B. When flow in a sewer line is plugged or blocked by the Contractor, he shall monitor the conditions upstream of the plug and shall be prepared to immediately start bypass pumping, if needed. Any liquid or solid matter which is bypass pumped from the sewer collection system shall be discharged to another sewer manhole or appropriate vehicle or container only. No such liquid or solid matter shall be allowed to be discharged, stored, or deposited on the ground, swale, road, stormwater drainage system or open environment. The Contractor shall protect all pumps, conduit and other equipment used for bypass pumping from traffic.
- C. Should the liquid or solid matter from the sewer collection system be spilled, discharged, leaked, or otherwise deposited to the open environment as a result of the Contractor's flow control operations, he shall be responsible for all cleanup and disinfection of the affected

area and all costs associated with same. The Contractor shall also be responsible for notifying the sewer system operating personnel and appropriate regulatory agencies and performing all required cleanup operations at no additional cost to the Owner.

### **C. INSTALLATION OF LINER**

- 1) 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 by-products produced as a result of the installation operations, test and monitor the levels, and comply with any and all local waste discharge requirements.
- 2) The CIPP liner shall be installed and fully cured prior to installation of a Manhole Liner.
- 3) The Contractor shall clean-up, restore existing surface conditions and structures, and repair any of the CIPP system determined to be defective. The Contractor shall conduct installation operations and schedule clean-up in a manner to cause the least possible obstruction and inconvenience to Customers, traffic, pedestrians, businesses, etc.
- 4) The CIPP liner shall be installed and cured in the host pipe in accordance with the CIPP manufacturer's recommendations as described and submitted in the PWS.
- 5) The CIPP liner shall be constructed of materials and methods, that when installed, shall provide a continuous, jointless and structurally sound liner from manhole to manhole able to withstand all imposed static and/or dynamic loads, and free of all defects that will affect the long term life and operation of the pipe.
- 6) CIPP installation shall be in accordance with the applicable ASTM standards with the following modification:
  - a. The wet-out tube shall be positioned in the pipe using the method specified by the manufacturer. Care should be exercised not to damage the tube as a result of installation. The tube should be pulled-in or inverted through an existing manhole or approved access point and fully extend to the next designated manhole or termination point.
- 7) Prior to installation, and in accordance with the CIPP manufacturer's recommendations, remote temperature gauges or sensors shall be placed inside the host pipe to monitor the temperatures during the cure cycle. Liner and/or host pipe interface temperature shall be monitored and logged during curing of the liner.
- 8) Curing shall be accomplished by utilizing the appropriate medium in accordance with the CIPP manufacturer's recommended cure schedule. The curing source or in and output temperatures shall be monitored and logged during the cure cycles. The CIPP manufacturer's recommended cure schedule shall be used for each line segment installed, and the liner wall thickness and the existing ground conditions with regard to temperature, moisture level, and thermal conductivity of soil, per ASTM as applicable, shall be taken into account by the Contractor.
- 9) The CIPP liner shall not be installed through a manhole. Each liner shall begin and end at a manhole.



**D. COOL DOWN**

- 1) The Contractor shall cool the liner in accordance with the CIPP manufacturer's recommendations as described and outlined in the PWS.
- 2) Temperatures and curing data shall be monitored and recorded, by the Contractor, throughout the installation process to ensure that each phase of the process is achieved as approved in accordance with the CIPP manufacturer's recommendations.

**E. FINISH**

- 1) The installed CIPP shall be continuous over the entire length of a pipe section and be free from visual defects such as foreign inclusions, dry spots, pinholes, major wrinkles and delamination. The lining shall be impervious and free of any leakage from the pipe to the surrounding ground or from the ground to inside the lined pipe.
- 2) Any defect, which will or could affect the structural integrity or strength of the linings, shall be repaired at the Contractor's expense, in accordance with the procedures submitted under Part 3, G. CIPP Repair/Replacement.
- 3) The beginning and end of the CIPP shall be sealed to the existing host pipe. The sealing material shall be compatible with the pipe end and shall provide a watertight seal.
- 4) The connection at the host pipe interface with all service laterals shall be sealed to provide a water tight seal. The sealing material shall be compatible with the pipe end and shall provide a watertight seal.
  - 3) If the wall of the CIPP leaks, it shall be repaired or removed and replaced with a watertight liner in accordance with the CIPP manufacturer's recommendations.

**F. MANHOLE AND LATERAL CONNECTIONS**

- 1) A seal, consisting of a resin mixture or hydrophilic seal compatible with the installed CIPP shall be applied at manhole walls and at all lateral connections in accordance with the CIPP manufacturer's recommendations.
- 2) The maximum a lateral can be plugged is 8 hours. Lateral connections may not remain plugged overnight.
- 3) Laterals shall be internally reinstated unless indicated otherwise in the contract documents.
- 4) Lateral reinstatement shall be made after the CIPP has been installed, fully cured, and cooled down. It is the Contractor's responsibility to make sure that all lateral connections are reinstated.
- 5) All existing and confirmed lateral connections shall be internally reinstated/re-opened to their original shape and capacity (minimum 95%) using a CCTV camera and remote cutting tool. Lateral connections shall not be cut more than 100% of the original shape or capacity.
- 6) In the event that lateral reinstatements result in openings that are greater than 100% of the original opening, the Contractor shall install a CIPP type repair, sufficiently in size, to repair the over-cut lateral opening, at no additional charge to the OWNER.

- 7) The edges of the opening shall not have pipe fragments or liner fragments, which may obstruct flow or snag debris. All over-cut lateral connections will be properly repaired to meet the requirements of these specifications.
- 8) Pipe coupons resulting from lateral reinstatements shall be collected at the downstream manhole prior to leaving the site. At no time shall coupons be left in the gravity sanitary sewer system.

**G. CIPP REPAIR/REPLACEMENT**

- 1) Occasionally installation will result in the need to repair or replace a defective CIPP. The Contractor shall outline specific repair or replacement procedures for potential defects that may occur in the installed CIPP. Repair/replacement procedures shall be accordance with the CIPP manufacturer's recommendations and shall be submitted as part of the PWS.
- 2) Defects in the installed CIPP that will not affect the operation and long term life of the product shall be identified and defined.
- 3) Repairable defects that may occur in the installed CIPP shall be specifically defined by the Contractor based on manufacturer's recommendations, including a detailed step-by-step repair procedure, resulting in a finished product meeting the requirements of these contract specifications.
- 4) Un-repairable defects that may occur to the CIPP shall be clearly defined by the Contractor based on the manufacturer's recommendations, including a recommended procedure for the removal and replacement of the CIPP.

**PART 4 – FINAL COMPLETION**

**A. TESTING**

- 1) The Contractor shall have an independent testing lab analyze finished liner regarding the ASTM standards for Tensile Properties, Flexural Modulus, Chemical Resistance and wall thickness (or as specified by the OWNER). Samples shall be taken from manhole cutoffs and lateral coupons.
- 2) A minimum of 1 sample shall be taken of the first segment installed at each location specified in the Contract Bid Documents.
- 3) A minimum of 2 samples shall be taken for each 2,500 linear feet of liner installed or for each manufacturing lot.
- 4) The laboratory results shall identify the test sample location as referenced to the nearest manhole and station.
- 5) If properties tested do not meet minimum requirements, the liner shall be repaired or replaced by the Contractor, at no cost to the OWNER.
- 6) The installed liner thickness shall be measured for each line section installed. If the liner thickness does not meet these specifications then the liner shall be repaired or removed by the Contractor at no cost to the OWNER. The liner thickness shall have tolerance of minus 5% plus 50%. The Contractor may use industry proven, non-destructive methods for confirming the thickness of the installed liner.



- 7) The Contractor shall furnish removable sizing sleeves, when possible, to collect liner samples, which accurately replicate the hose pipe diameter.
- 8) All liner testing and repairs to the installed CIPP shall be completed before Final Completion and Final Payment to the Contractor.

**B. INSPECTIONS**

- 1) Contractor shall perform a post-video inspection of the lined pipe. The Contractor shall provide the OWNER a copy of the video in digital format for review and approval.
- 2) Immediately prior to conducting the post-video, the Contractor shall thoroughly clean the newly installed liner removing all debris and buildup that may have accumulated.
- 3) The post-video shall be after the installation of the CIPP and all laterals are reinstated.
- 4) The post-video will visual inspect the finished liner as follows:
  - a. Shall be continuous over the entire length of the installation and shall be free of significant visual defects, damage, deflection, holes, leaks and other defects.
  - a. Shall maintain the overall hydraulic capacity of the original pipe diameter. In those cases where full capacity cannot be achieved after liner installation, the Contractor shall submit a request to waive this requirement, together with the reasons for the waiver request. Calculated capacities may be derived using a commonly accepted roughness coefficient for the existing pipe material taking into consideration its age and condition.
- 2) The post-video shall be submitted to the OWNER within ten (10) working days of the liner installation. The data shall note the inspection date, location of all reconnected side sewers, debris, as well as any other defects in the liner, including, but not limited to, gouges, cracks, bumps, or bulges.
- 3) If post installation inspection documentation is not submitted within Ten (10) working days of the liner installation, the OWNER may at its discretion suspend any further installation of CIPP until the post-installation documentation is submitted. As a result of this suspension, no additional working days will be added to the contract, nor will any adjustment be made for increase in cost.
- 4) Bypass pumping or plugging from the upstream manhole shall be utilized to minimize sewer from entering the pipe during the post-video inspection. In the case of bellies in the line, the pipe shall be cleared of any standing water to provide continuous visibility during the inspection.
- 5) Where leakage is observed through the wall of the pipe, the Contractor shall institute additional testing including but not limited to air testing, localized testing and any other testing that will verify the leak-proof integrity of the installed liner to the satisfaction of the OWNER.

**C. AS-BUILTS**

- 1) As-Built drawings/reports and pre & post inspection videos shall be submitted to the OWNER for review and approval for Final Completion contract date. As-Built

drawings will include the identification of the work completed by the Contractor and shall be prepared on one set of Contract Drawings provide to the Contractor at the onset of the project.

- 2) As-Built drawings shall be kept on the project site at all times, shall include all necessary information as outlined in the PWS or as agreed to by the OWNER and the Contractor at the start of the Contract and shall be updated as the work is being completed, and shall be clearly legible.

**D. WARRANTY**

- 1) The Contractor shall provide necessary warranty and documentation of required experience per the Contract Bid Submittal Requirements and as specified herein.
- 2) The CIPP manufacturer shall warrant the liner to be free from defects in raw materials for a minimum of one (1) year, or as specified in the Contract Bid Submittal Requirements, from the date of installation and Final Completion by the OWNER.
- 3) The Contractor shall warrant the CIPP installation for a minimum of one (1) year, or as specified in the Contract Bid Submittal Requirements, from the date of installation and Final Completion by the OWNER.
- 4) During the CIPP manufacturer and Contractor warranty period, any defect found that may materially affect the integrity, strength, function and/or operation of the pipe shall be repaired at the Contractor's expense in accordance with procedures included in Part 3, G. CIPP Repair/Replacement at no cost to the OWNER.
- 5) The OWNER may inspect all or portions of the lined pipe during the warranty period and if found that any of the liners have developed abnormalities since the time of Final Completion, the abnormalities shall be repaired and/or replaced as defined in Part 3, G.  
CIPP Repair/Replacement at no cost to the OWNER.

**END OF SECTION**



**BID FORM 8J:  
Bid Fees**

| Item  | Description                                   | Unit | Unit Price      |
|---|---|------|-----------------|
|   | Day Rate: Multiple Locations                  | EA   | \$500.00        |
| Traffic Control/ MOT, Equipment Set-up and Monitoring   |   |      |                 |
|   | Mobilization Per Vehicle + Demob              | EA   | \$125.00        |
| Sanitary Sewer Manhole & Pipe Preparation/ Plug, Preclean and Video   |   |      |                 |
|   | Vac Truck, Pre Clean Sanitary Sewer           | LF   | \$1.75          |
|   | CCTV/Video, Pre Video Sanitary Sewer          | LF   | \$1.50          |
| Sanitary Sewer CIPP Installation  |   |      |                 |
|   | CIPP Liner Equipment Site SET-up Per Run      | EA   | \$400.00        |
| Sanitary Sewer CIPP 4.5 mm Liner Thickness (used in 2-14 ft manhole depths)   |   |      |                 |
|   |   |      | Minimum Footage |
|   | 6" Diameter                                   | LF   | \$68.00 140 LF  |
|   | 8" Diameter                                   | LF   | \$62.50 140 LF  |
|   | 10" Diameter                                  | LF   | \$76.00 120 LF  |
|   | 12" Diameter                                  | LF   | \$92.00 120 LF  |
|   | 16" Diameter                                  | LF   | \$125.00 120 LF |
|   | 18" Diameter                                  | LF   | \$158.00 100 LF |
|   | 24" Diameter                                  | LF   | \$212.00 100 LF |
| Sanitary Sewer CIPP 6 mm Liner Thickness (used in 14-25 ft manhole depths or where more structural integrity is needed) |   |      |                 |
|   |   |      | Minimum Footage |
|   | 6" Diameter                                   | LF   | \$78.00 140 LF  |
|   | 8" Diameter                                   | LF   | \$69.50 140 LF  |
|   | 10" Diameter                                  | LF   | \$85.50 120 LF  |
|   | 12" Diameter                                  | LF   | \$102.00 120 LF |
|   | 16" Diameter                                  | LF   | \$143.00 120 LF |
|   | 18" Diameter                                  | LF   | \$180.00 100 LF |
|   | 24" Diameter                                  | LF   | \$243.00 100 LF |
| Sanitary Sewer CIPP Reinstatement   |   |      |                 |
|   | Mainline Lateral Reinstatement                | EA   | \$250.00        |
|   | Mainline Invert Reinstatement                 | EA   | \$200.00        |
| Sanitary Sewer CIPP Installation Post Video   |   |      |                 |
|   | CCTV/Video, Post Video                        | LF   | \$1.50          |
| Additional Services   |   |      |                 |
|   | Plugging Mainline 6"-10"                      | Day  | \$250.00        |
|   | Plugging Mainline 12"-16"                     | Day  | \$300.00        |
|   | Plugging Mainline 18"-24"                     | Day  | \$450.00        |
|   | Manhole Bypass Pumping 6"-10" Flow            | Day  | \$1,250.00      |
|   | Manhole Bypass Pumping 12"-16" Flow           | Day  | \$1,650.00      |
|   | Manhole Bypass Pumping 18"-24" Flow           | Day  | \$2,100.00      |
|   | Mainline Hammer Tap/ Extended Lateral Removal | EA   | \$400.00        |
|   | Root Intrusion Removal                        | HRLY | \$300.00        |
|   | Chemical Grout Repairs 6"-10"                 | EA   | \$375.00        |
|   | Chemical Grout Repairs 12"-16"                | EA   | \$425.00        |
|   | Chemical Grout Repairs 18"-24"                | EA   | \$575.00        |
|   | Additional Video and Reports                  | EA   | \$25.00         |

(5 Gals of Chemical)

American In-Line

Once awarded, the applicant will enter an Agreement similar to the one below:

|  |
|--|
| <b>STANDARD AGREEMENT FOR SERVICES</b> |
|--|

**THIS Standard Agreement for Services** (hereinafter this "Agreement") is made and entered into this \_\_\_\_ day of \_\_\_\_\_ 20\_\_, by and between the **CITY OF SOUTH DAYTONA**, a Florida municipality, whose principal address is 1672 S. Ridgewood Avenue, South Daytona, Florida 32119 (hereinafter the "CITY") and \_\_\_\_\_, a \_\_\_\_\_ corporation, whose principal address \_\_\_\_\_ (hereinafter "CONTRACTOR"). The CITY and CONTRACTOR are collectively referred to herein as the "PARTIES."

**WITNESSETH**

**WHEREAS**, the CITY is a political subdivision of the State of Florida, having a responsibility to provide certain services to benefit the citizens of the City of South Daytona; and

**WHEREAS**, the CITY has the full power and authority to enter into the transactions contemplated by this Agreement; and

**WHEREAS**, CONTRACTOR is in the business of providing the equipment, materials, labor and other such service as identified in Exhibit "A" in the City of South Daytona and elsewhere in the State of Florida; and

**WHEREAS**, CONTRACTOR is competent and has sufficient manpower, training, and technical expertise to perform the services contemplated by this Agreement in a timely and professional manner consistent with the standards of the industry in which CONTRACTOR operates; and

**WHEREAS**, Section 448.095, Fla. Stat., imposes certain obligations on public agencies with regard to the use of the E-Verify system by their contractors and subcontractors.

**WHEREAS**, CONTRACTOR was the successful bidder of a project competitively bid and identified as Invitation to Bid (Exhibit "A") for City of South Daytona which satisfies the CITY's Procurement Policy; and

**WHEREAS**, CONTRACTOR agrees to provide such goods and services as more particularly described in this Agreement, as well as in any bid or quotation documents issued in connection with this project.

**NOW THEREFORE** in consideration of the premises, and in consideration of the mutual conditions, covenants, and obligations hereafter expressed, the parties agree as follows:

1. **Recitals.** The foregoing recitals are true and correct, constitute a material inducement to the parties to enter into this Agreement, and are hereby ratified and made a part of this Agreement.



2. **Description of Work.**

- a. The CITY hereby retains CONTRACTOR to furnish goods and services as described in the Scope of Services, which is attached hereto as Exhibit "A" and incorporated herein by reference. Any conflict between the terms and conditions in the body of this Agreement and the terms and conditions set forth in Exhibit "A" will be resolved in favor of the body of this Agreement.
- b. CONTRACTOR must provide all permits, labor, materials, equipment, and supervision necessary for the completion of the Scope of Services, unless specifically excluded.
- c. CONTRACTOR must also comply with, and abide by, all requirements as contained in any invitation to bid (ITB), request for proposals (RFP), request for qualifications (RFQ), bid specifications, engineering plans, shop drawings, material lists, or other similar documents issued for this project by the CITY, together with any addenda, hereinafter the "Bid Documents, as applicable." The Bid Documents, if applicable, are hereby incorporated into this Agreement by reference and are declared to be material part of this Agreement.

3. **Provision of Services**

- a. **Scope:** The CONTRACTOR hereby agrees to provide the proposed scope as identified in Exhibit "A."
- b. **Manner and Place:** The work shall be performed as outlined in Exhibit "A," in accordance with Standard Construction Details as required and in a manner as required by all current federal, state, county, fire, building, and land development codes, laws, ordinances and regulations, and with applicable permits and licenses per the City Code of Ordinance. Contractors shall not deliver goods or services without a written Purchase Order(s) or Notice to Proceed(s), signed by an authorized agent of the CITY.
- c. **Time and Essence:** CONTRACTOR acknowledges that time is of the essence for this Agreement.
- d. **Authorization for Services:** This Agreement standing alone does not authorize the purchase of any work or services or require the CITY to place any orders for work or service. Authorization for performance of services by the CONTRACTOR under this agreement shall be in the form of a written Notice to Proceed issued and executed by the CITY. The CITY reserves the right to contract with other parties for work and services contemplated by this Agreement, as determined in the CITY's sole and absolute discretion.
- e. **Liquidated Damages:** CONTRACTOR is responsible for commencing work under this Agreement within \_\_\_\_\_ days upon receipt of the Notice of Award and must substantially complete the work not later than \_\_\_\_\_ calendar days thereafter, and to fully complete the work within \_\_\_\_\_ calendar days. The CONTRACTOR shall not be entitled to any damages on account of hindrances or delays in construction from any cause whatsoever. This paragraph shall include but not be limited to any actions which result in delays in scheduling, substantial changes in

scope of work, or substantial increases in the costs of performing the work under this Agreement.

Liquidated damages will be assessed against Vendor in the amount of \$500.00 per day, for each day after each milestone that the work contemplated is incomplete.

4. **Term.**

- a. This Agreement shall be for an initial Term of t The term of the contract shall be three (3) years, with the option for an additional two (2) two-year renewal periods, thereafter unless either party notifies the other party of intent not to renew, with such notice being given not less than sixty (60) days prior to the end of any annual term, or unless otherwise terminated as provided herein.

5. **Payment.**

- a. The CITY agrees to compensate CONTRACTOR, for work actually performed under this Agreement, at the rate or basis described in Exhibit "A", which is attached hereto and incorporated herein by reference. CONTRACTOR must perform all work required by the Scope of Services, but in no event will CONTRACTOR be paid more than the negotiated amount set forth in Exhibit "A".
- b. Progress payments, if any, will be made as set forth in Exhibit "A".
- c. The CITY reserves the right to ratably withhold amounts in the event of the nonperformance of all or part of CONTRACTOR's obligations. CONTRACTOR must, without additional compensation, correct and revise any errors, omissions, or other deficiencies in its work product, services, or materials arising from the error or omission or negligent act of CONTRACTOR.

6. **Acceptance of work product, payment, and warranty.**

- a. Upon receipt of a periodic work product, or notice that work has progressed to a point of payment in accordance with Exhibit "A" attached or the Bid Documents, if any, together with an invoice sufficiently itemized to permit audit, the CITY will diligently review those documents. When it finds the work acceptable under this Agreement the installment payment, found to be due to CONTRACTOR, will be paid to CONTRACTOR within thirty (30) days after the date of receipt of the invoice, unless another payment schedule is provided in Exhibit "A". CONTRACTOR warrants that the data utilized by CONTRACTOR (other than as provided by the CITY) is from a source, and collected using methodologies, which are generally recognized in CONTRACTOR's industry or profession to be a reliable basis and foundation for CONTRACTOR's work product. CONTRACTOR must notify the CITY in writing if it appears, in CONTRACTOR's professional judgement that the data or information provided by the CITY for use in CONTRACTOR's work product is incomplete, defective, or unreliable. CONTRACTOR guarantees to amend, revise, or correct to the satisfaction of the CITY any error appearing in the work as a result of CONTRACTOR's failure to comply with the warranties and representations contained herein. Neither inspection nor payment, including final payment, by the CITY will relieve CONTRACTOR from its obligations to do and complete the work product in accordance with this Agreement.



7. **Termination.**

- a. Termination at Will: This Agreement may be terminated by the CITY in whole or in part at any time without cause by the CITY giving written notice to CONTRACTOR not less than 30 days prior to the date of termination; provided, however, that in such event, neither party will be relieved from its rights or obligations of this Agreement through the date of the actual termination. Notice must be delivered by certified mail, return receipt requested, or in person with proof of delivery.
- b. Termination for Cause: This Agreement may be terminated by either party for cause by the CITY or CONTRACTOR giving written notice to the other party not less than 10 days prior to the date of termination; provided, however, that in such event, neither party will be relieved from its rights or obligations of this Agreement through the date of the actual termination. Notice must be delivered by certified mail, return receipt requested, or in person with proof of delivery.

8. **Project management.**

- a. The Project Managers for this project are as follows. Any subsequent changes to the Project Manager for either party may be provided by notice as described in paragraph 8 below and does not require an amendment to this Agreement.
- b. CITY's Project Manager is: Steve Danskine, Public Works Director, 1770 Segrave Street, South Daytona, Florida 32119, [sdanskine@southdaytona.org](mailto:sdanskine@southdaytona.org), 386-322-3080.
- c. CONTRACTOR's Project Manager is: [...].

9. **Notices.** All notices to the parties under this Agreement must be in writing and sent certified mail to:

- a. To CITY: The City of South Daytona, Attention: City Manager, 1672 Ridgewood Avenue, South Daytona, Florida 32119;
- b. To CONTRACTOR: \_\_\_\_\_, Attention: \_\_\_\_\_,  
\_\_\_\_\_  
[insert street address], \_\_\_\_\_  
[insert city, state, zip].

10. **Insurance.**

- a. CONTRACTOR must maintain such insurance as will fully protect both CONTRACTOR and the CITY from any and all claims under any Workers Compensation Act or Employers Liability Laws, and from any and all other claims of whatsoever kind or nature to the damage or property, or for personal injury, including death, made by anyone whomsoever, that may arise from operations carried on under this Agreement, either by CONTRACTOR, any subcontractor, or by anyone directly or indirectly engaged or employed by either of them.

- b. The insurance coverage required by this Agreement must not be less than the amounts described in the Bid Documents. If the Bid Documents do not state an insurance requirement or the amount of insurance, then the amount of insurance required by this Agreement must not be less than:
    - i. Workers' Compensation (unless exempt) with Employers' Liability with a limit of \$500,000.00 each accident, \$500,000.00 each employee, \$500,000.00 policy limit for disease;
    - ii. Commercial General Liability (CGL) insurance with a limit of not less than \$300,000.00 each occurrence. If such CGL insurance contains a general aggregate limit, it shall apply separately to this project in the amount of \$600,000.00. CGL insurance shall be written on an occurrence form and include bodily injury and property damage liability for premises, operations, independent contractors, products and completed operations, contractual liability, broad form property damage and property damage resulting from explosion, collapse or underground (x, c, u) exposures, personal injury, and advertising injury. Damage to rented premises shall be included at \$100,000.00;
    - iii. Commercial Automobile Liability Insurance with a limit of not less than \$300,000.00 each accident for bodily injury and property damage liability. Such insurance shall cover liability arising out of any auto (including owned, hired and non-owned autos) and such policy shall be endorsed to provide contractual liability coverage; and
    - iv. Fire damage liability shall be included at \$300,000.00.
  - c. CONTRACTOR must furnish the CITY with Certificates of Insurance, which are to be signed by a person authorized by that insurer to bind coverage on its behalf. The CITY is to be specifically included as an additional insured and loss payee on all policies except Workers' Compensation. In the event the insurance coverage expires prior to the completion of the project, a renewal certificate must be issued 30 days prior to the expiration date. The policy must provide a 30 day notification clause in the event of cancellation or modification to the policy. All certificates of insurance must be on file with and approved by the CITY before commencement of any work activities.
  - d. The insurance coverages procured by CONTRACTOR as required herein will be considered as primary insurance over and above any other insurance, or self-insurance, available to CONTRACTOR, and any other insurance, or self-insurance available to CONTRACTOR will be considered secondary to, or in excess of, the insurance coverage(s) procured by CONTRACTOR as required herein.
11. **General Provisions.** CONTRACTOR must comply with the following general provisions:
- a. **Bond.** If a surety bond has been required by the Bid Documents for CONTRACTOR's faithful performance and payment, and if at any time the surety is no longer acceptable to the CITY, CONTRACTOR must, at its expense, within five



(5) days after the receipt of notice from the CITY to do so, furnish an additional bond or bonds in such form and with such Surety or Sureties as are satisfactory to the CITY. The CITY will not make any further payment to CONTRACTOR, nor will any further payment be deemed to be due to CONTRACTOR, until such new or additional security for the faithful performance of the work is furnished in a manner and form satisfactory to the CITY.

- b. **Compliance with Laws.** In providing the Scope of Services, CONTRACTOR must comply with all federal, state, and local laws, statutes, ordinances, rules, and regulations pertaining to or regulating the provision of such services, including those now in effect and hereafter adopted.

- c. **Personal nature of Agreement; Assignment.**

- i. The parties acknowledge that the CITY places great reliance and emphasis upon the knowledge, expertise, training, and personal abilities of CONTRACTOR. Accordingly, this Agreement is personal and CONTRACTOR is prohibited from assigning or delegating any rights or duties hereunder without the specific written consent of the CITY.
- ii. If CONTRACTOR requires the services of any subcontractor or professional associate in connection with the work to be performed under this Agreement, CONTRACTOR must obtain the written approval of the CITY Project Manager prior to engaging such subcontractor or professional associate. CONTRACTOR will remain fully responsible for the services of any subcontractors or professional associates.

- d. **Discrimination.**

- i. CONTRACTOR shall not discriminate against any employee employed in the performance of this Agreement, or against any applicant for employment because of age, ethnicity, race, religious belief, disability, national origin, or sex. CONTRACTOR shall not exclude any person, on the grounds of age, ethnicity, race, religious belief, disability, national origin, or sex, from participation in, denied the benefits of, or be otherwise subjected to discrimination in any activity under, this Agreement.
- ii. CONTRACTOR shall provide a harassment-free workplace, with any allegation of harassment given priority attention and action by management.

- e. **Independent contractor.**

- i. CONTRACTOR is, and will be deemed to be, an independent contractor and not a servant, employee, joint adventurer, or partner of the CITY. None of CONTRACTOR's agents, employees, or servants are, or will be deemed to be, the agent, employee, or servant of the CITY. None of the benefits, if any, provided by the CITY to its employees, including but not limited to,

compensation insurance and unemployment insurance, are available from the CITY to the employees, agents, or servants of CONTRACTOR. CONTRACTOR will be solely and entirely responsible for its acts and for the acts of its agents, employees, servants, and subcontractors during the performance of this Agreement. Although CONTRACTOR is an independent contractor, the work contemplated herein must meet the approval of the CITY and is subject to the CITY's general right of inspection to secure the satisfactory completion thereof. CONTRACTOR must comply with all Federal, State and municipal laws, rules and regulations that are now or may in the future become applicable to CONTRACTOR, or to CONTRACTOR's business, equipment, or personnel engaged in operations covered by this Agreement or accruing out of the performance of such operations. The CITY will not be held responsible for the collection of or the payment of taxes or contributions of any nature on behalf of CONTRACTOR.

- ii. CONTRACTOR will bear all losses resulting to it on account of the amount or character of the work, or because of bad weather, or because of errors or omissions in its contract price.
- iii. CONTRACTOR must utilize, and must expressly require all subcontractors to utilize, the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by CONTRACTOR and any subcontractors during the Term of this Agreement.

f. **Indemnification.**

- i. CONTRACTOR must indemnify and hold the CITY harmless against and from any and all claims, losses, penalties, interest, demands, judgments, costs, damages, or expenses, including attorney's fees and court costs, incurred by the CITY, or its agents, officers, or employees, arising directly or indirectly from CONTRACTOR's performance under this Agreement or by any person on CONTRACTOR's behalf, including but not limited to those claims, losses, penalties, interest, demands, judgments, costs, damages, or expenses arising out of any accident, casualty, or other occurrence causing injury to any person or property. This includes persons employed or utilized by CONTRACTOR (including CONTRACTOR's agents, employees, and subcontractors). CONTRACTOR must further indemnify the CITY against any claim that any product purchased or licensed by the CITY from CONTRACTOR under this Agreement infringes a United States patent, trademark, or copyright. CONTRACTOR acknowledges that CONTRACTOR has received consideration for this indemnification, and any other indemnification of the CITY by CONTRACTOR provided for within the Bid Documents, the sufficiency of such consideration being acknowledged by CONTRACTOR, by CONTRACTOR's execution of this Agreement. CONTRACTOR's obligation will not be limited by, or in any way to, any insurance coverage or by any provision in or exclusion or omission from any policy of insurance, whether such insurance is in connection with this Agreement or otherwise. Such indemnification is in addition to any and all



other legal remedies available to the CITY and not considered to be the CITY's exclusive remedy.

- ii. In the event that any claim in writing is asserted by a third party which may entitle the CITY to indemnification, the CITY must give notice thereof to CONTRACTOR, which notice must be accompanied by a copy of statement of the claim. Following the notice, CONTRACTOR has the right, but not the obligation, to participate at its sole expense, in the defense, compromise or settlement of such claim with counsel of its choice. If CONTRACTOR does not timely defend, contest, or otherwise protect against any suit, action or other proceeding arising from such claim, or in the event the CITY decides to participate in the proceeding or defense, the CITY will have the right to defend, contest, or otherwise protect itself against same and be reimbursed for expenses and reasonable attorney's fees and, upon not less than ten (10) days notice to CONTRACTOR, to make any reasonable compromise or settlement thereof. In connection with any claim as aforesaid, the parties hereto must cooperate fully with each other and make available all pertinent information necessary or advisable for the defense, compromise or settlement of such claim.
- iii. The indemnification provisions of this paragraph will survive the termination of this Agreement.

- g. **Sovereign Immunity.** Nothing in this Agreement extends, or will be construed to extend, the CITY's liability beyond that provided in section 768.28, Florida Statutes. Nothing in this Agreement is a consent, or will be construed as consent, by the CITY to be sued by third parties in any matter arising out of this Agreement.

- h. **Public records.**

- i. CONTRACTOR is a "Contractor" as defined by Section 119.0701(1)(a), Florida Statutes, and must comply with the public records provisions of Chapter 119, Florida Statutes, including the following:
  - 1. Keep and maintain public records required by the CITY to perform the service.
  - 2. Upon request from the CITY's custodian of public records, provide the CITY with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in Chapter 119 or as otherwise provided by law.
  - 3. Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of this Agreement term and following completion of the Agreement if CONTRACTOR does not transfer the records to the CITY.
  - 4. Upon completion of this Agreement, transfer, at no cost, to the CITY all public records in possession of CONTRACTOR or keep and maintain public records required by the CITY to perform the service. If CONTRACTOR transfers all public records to the CITY upon

completion of this Agreement, CONTRACTOR must destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If CONTRACTOR keeps and maintains public records upon completion of this Agreement, CONTRACTOR must meet all applicable requirements for retaining public records. All records stored electronically must be provided to the CITY, upon request from the CITY's custodian of public records, in a format that is compatible with the information technology systems of the CITY.

- ii. "Public records" is defined in Section 119.011(12), Florida Statutes, as may, from time to time, be amended.
- iii. If CONTRACTOR asserts any exemptions to the requirements of Chapter 119 and related law, CONTRACTOR will have the burden of establishing such exemption, by way of injunctive or other relief as provided by law.
- iv. CONTRACTOR consents to the CITY's enforcement of CONTRACTOR's Chapter 119 requirements, by all legal means, including, but not limited to, a mandatory injunction, whereupon CONTRACTOR must pay all court costs and reasonable attorney's fees incurred by CITY.
- v. CONTRACTOR's failure to provide public records within a reasonable time may be subject to penalties under Section 119.10, Florida Statutes. Further, such failure by CONTRACTOR will be grounds for immediate unilateral cancellation of this Agreement by the CITY.
- vi. **IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS, DEPUTY CITY CLERK BECKY WITTE, AT 386-322-3011; BWITTE@SOUTHDAYTONA.ORG; MAILING ADDRESS: 1672 RIDGEWOOD AVE., SOUTH DAYTONA, FL 32119.**

- i. **Federal or State Funding.** If any portion of the funding for this Agreement is derived from the State of Florida, or any department of the State of Florida, or from federal funding through the State of Florida, the provisions of this sub-paragraph shall apply, provisions elsewhere in this Agreement to the contrary notwithstanding. CONTRACTOR shall make inquiry from the CITY's Project Manager to determine whether Federal or State funding is applicable to this Agreement.
  - i. E-Verify. CONTRACTOR must utilize, and must expressly require all subcontractors to utilize, the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by CONTRACTOR during the Term of this Agreement.
  - ii. Agency. CONTRACTOR agrees and acknowledges that it, its employees, and its subcontractors are not agents or employees of the Federal Government,



of the State of Florida, or of any department of the Federal Government or the State of Florida.

- iii. Indemnification. To the fullest extent permitted by law, CONTRACTOR shall indemnify and hold harmless the CITY, the Federal Government, the State of Florida, any department of the Federal Government or the State of Florida, and all officers and employees, from liabilities, damages, losses and costs, including, but not limited to, reasonable attorney's fees, to the extent caused by the negligence, recklessness or intentional wrongful misconduct of CONTRACTOR and persons employed or utilized by CONTRACTOR in the performance of this Agreement. This indemnification shall survive the termination of this Agreement. Nothing contained in this paragraph is intended to nor shall it constitute a waiver of the State of Florida and the CITY's sovereign immunity.
- iv. Workers' Compensation Insurance. CONTRACTOR must provide Workers' Compensation Insurance in accordance with Florida's Workers' Compensation law for all employees. If subletting any of the work, CONTRACTOR must ensure that the subcontractor(s) have Workers' Compensation Insurance for their employees in accordance with Florida's Workers' Compensation law. If using "leased employees" or employees obtained through professional employer organizations ("PEO's"), CONTRACTOR must ensure that such employees are covered by Workers' Compensation insurance through the PEO's or other leasing entities. CONTRACTOR must ensure that any equipment rental agreements that include operators or other personnel who are employees of independent Contractors, sole proprietorships or partners are covered by insurance required under Florida's Workers' Compensation law.
- v. Liability Insurance. Contractor shall carry Commercial General Liability insurance providing continuous coverage for all work or operations performed under the Agreement. Such insurance shall be no more restrictive than that provided by the latest occurrence form edition of the standard Commercial General Liability Coverage Form (ISO Form CG 00 01) as filed for use in the State of Florida. CONTRACTOR shall cause the State of Florida to be made an Additional Insured as to such insurance. Such coverage shall be on an "occurrence" basis and shall include Products/Completed Operations coverage. The coverage afforded to the State of Florida as an Additional Insured shall be primary as to any other available insurance and shall not be more restrictive than the coverage afforded to the Named Insured. The limits of coverage shall not be less than \$1,000,000 for each occurrence and not less than a \$5,000,000 annual general aggregate, inclusive of amounts provided by an umbrella or excess policy. The limits of coverage described herein shall apply fully to the work or operations performed under the Contract, and may not be shared with or diminished by claims unrelated to this Agreement. The policy/ies and coverage described herein may be subject to a deductible. CONTRACTOR shall pay all deductibles as required by the policy. No policy/ies or coverage described herein may contain or be subject to a Retention or a Self-Insured

Retention. At all renewal periods which occur prior to final acceptance of the work, the CITY and the State of Florida shall be provided with an ACORD Certificate of Liability Insurance reflecting the coverage described herein. The CITY and the State of Florida shall be notified in writing within ten days of any cancellation, notice of cancellation, lapse, renewal, or proposed change to any policy or coverage described herein. The CITY's or the State of Florida's approval or failure to disapprove any policy/ies, coverage, or ACORD Certificates shall not relieve or excuse any obligation to procure and maintain the insurance required herein, nor serve as a waiver of any rights or defenses the CITY or the State of Florida may have.

- vi. Inspections. CONTRACTOR shall permit, and require its subcontractors to permit, the CITY's and the State of Florida's authorized representatives to inspect all work, materials, payrolls, and records, to audit the books, records, and accounts pertaining to the financing and development of the Services described in the Contract Documents.
  - vii. Auditor General Cooperation. CONTRACTOR shall comply with §20.055 (5), Florida Statutes, and shall incorporate in all subcontracts the obligation to comply with §20.055 (5), Florida Statutes.
  - j. **E-Verify Compliance.** Contractor affirmatively states, under penalty of perjury, that in accordance with Section 448.095, Fla. Stat., Contractor is registered with and uses the E-Verify system to verify the work authorization status of all newly hired employees, that in accordance with such statute, Contractor requires from each of its subcontractors an affidavit stating that the subcontractor does not employ, contract with, or subcontract with an unauthorized alien, and that Contractor is otherwise in compliance with Sections 448.09 and 448.095, Fla. Stat.
  - k. **Federal-Aid Construction Contract.** If this is a federal-aid construction project, it shall be subject to the provisions in Exhibit "A", which is attached hereto and incorporated herein by reference.
12. **Miscellaneous Provisions.** The following miscellaneous provisions apply to this Agreement:
- a. **Binding Nature of Agreement.** This Agreement is binding upon the successors and assigns of the parties hereto.
  - b. **Entire Agreement.** This Agreement states the entire understanding between the parties and supersedes any written or oral representations, statements, negotiations, or agreements to the contrary. CONTRACTOR recognizes that any representations, statements, or negotiations made by the City staff do not suffice to legally bind the CITY in a contractual relationship unless they have been reduced to writing, authorized, and signed by the authorized CITY representatives.



- c. **Amendment.** No modification, amendment, or alteration in the terms or conditions of this Agreement will be effective unless contained in a written document executed with the same formality as this Agreement.
- d. **Severability.** If any term or provision of this Agreement is held, to any extent, invalid or unenforceable, as against any person, entity, or circumstance during the Term hereof, by force of any statute, law, or ruling of any forum of competent jurisdiction, such invalidity will not affect any other term or provision of this Agreement, to the extent that the Agreement will remain operable, enforceable, and in full force and effect to the extent permitted by law.
- e. **Construction.** If any provision of this Agreement becomes subject to judicial interpretation, the court interpreting or considering such provision should not apply the presumption or rule of construction that the terms of this Agreement be more strictly construed against the party which itself or through its counsel or other agent prepared it. All parties hereto have participated in the preparation of the final form of this Agreement through review by their respective counsel, if any, or the negotiation of specific language, or both, and, therefore, the application of such presumption or rule of construction would be inappropriate and contrary to the intent of the parties.
- f. **Headings.** All headings in this Agreement are for convenience only and are not to be used in any judicial construction or interpretation of this Agreement or any paragraph.
- g. **Waiver.** The indulgence of either party with regard to any breach or failure to perform any provision of this Agreement does not constitute a waiver of the provision or any portion of this Agreement, either at the time the breach or failure occurs or at any time throughout the term of this Agreement. The review of, approval of, or payment for any of CONTRACTOR's work product, services, or materials does not operate as a waiver, and should not be construed as a waiver, of any of the CITY's rights under this Agreement, or of any cause of action the CITY may have arising out of the performance of this Agreement.
- h. **Force Majeure.** Notwithstanding any provisions of this Agreement to the contrary, the parties will not be held liable if failure or delay in the performance of this Agreement arises from fires, floods, strikes, embargos, acts of the public enemy, unusually severe weather, out break of war, restraint of government, riots, civil commotion, force majeure, act of God, or for any other cause of the same character which is unavoidable through the exercise of due care and beyond the control of the parties. This provision does not apply if the "Scope of Services" of this Agreement specifies that performance by CONTRACTOR is specifically required during the occurrence of any of the events herein mentioned.
- i. **Compliance/Consistency with Scrutinized Companies Provisions of Florida Statutes.** Section 287.135(2)(a), Florida Statutes, prohibits a company from

bidding on, submitting a proposal for, or entering into or renewing a contract for goods or services of any amount if, at the time of contracting or renewal, the company is on the Scrutinized Companies that Boycott Israel List, created pursuant to section 215.4725, Florida Statutes, or is engaged in a boycott of Israel. Section 287.135(2)(b), Florida Statutes, further prohibits a company from bidding on, submitting a proposal for, or entering into or renewing a contract for goods or services over one million dollars (\$1,000,000) if, at the time of contracting or renewal, the company is on either the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, both created pursuant to section 215.473, Florida Statutes, or the company is engaged in business operations in Cuba or Syria. CONTRACTOR hereby certifies that Contractor is not listed on any of the following: (i) the Scrutinized Companies that Boycott Israel List, (ii) Scrutinized Companies with Activities in Sudan List, or (iii) the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List. CONTRACTOR further hereby certifies that CONTRACTOR is not engaged in a boycott of Israel or engaged in business operations in Cuba or Syria. CONTRACTOR understands that pursuant to section 287.135, Florida Statutes, the submission of a false certification may subject CONTRACTOR to civil penalties, attorney's fees, and/or costs. CONTRACTOR further understands that any contract with CITY for goods or services of any amount may be terminated at the option of CITY if CONTRACTOR (i) is found to have submitted a false certification, (ii) has been placed on the Scrutinized Companies that Boycott Israel List, or (iii) is engaged in a boycott of Israel. And, in addition to the foregoing, if the amount of the contract is one million dollars (\$1,000,000) or more, the contract may be terminated at the option of CITY if the CONTRACTOR is found to have submitted a false certification, has been placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or has been engaged in business operations in Cuba or Syria.

- j. **Law; Venue.** This Agreement is being executed in Volusia County, Florida and is governed in accordance with the laws of the State of Florida. Venue of any action hereunder will be in Volusia County, Florida.

13. **Special Provisions.**

- a. This Agreement is a non-exclusive contract; the CITY is not prohibited, or deemed to be prohibited, from bidding similar services either as an independent job or a component of a larger project.

**IN WITNESS WHEREOF**, the parties hereto have signed and sealed this Agreement effective the date first written above.



WILLIAM C. HALL, Mayor

(Seal)

Date signed by CITY: \_\_\_\_\_

(CORPORATE SEAL)

Printed/Typed/Stamped Name of Notary  
My commission expires: \_\_\_\_\_

City of South Daytona, BID NO. 23-B-005, Sewer Rehabilitation Services, Page 94 of 94



Underground Utility Video Services

415 Timaquan Trail  
Edgewater, FL 32132  
(386) 409- 5446 Phone  
(386) 957- 4919 Fax  
americaninline@cfl.rr.com

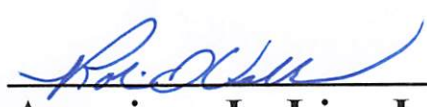
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**To Whom It May Concern:**

We at American In-Line Inspection, Inc. certify that to the extent of our knowledge, the information is true and accurate, and that the supervisory personnel will be directly involved with and used on this project.

Thanks again for keeping American In-Line in mind.

Robin J. Vallance

  
\_\_\_\_\_  
American In-Line Inspection, Inc.

Sign

Robin J. Vallance  
\_\_\_\_\_  
American In-Line Inspection, Inc.

Print

Date

3-27-2023  
\_\_\_\_\_





**City of South Daytona**  
**Sewer Rehabilitation Services**  
**BID NO. 23-B-005**  
**Addendum #1**

**Monday, March 20, 2023**

*Questions Received. Answered from the City of South Daytona are in RED.*

Can TDS sheets be submitted in an effort to get our supplier MTC polyester resin lining system approved as a product on this bid.

Per Part – 2 Products, C. (Resin) 3) of the technical spec: If they wish to offer an alternative, the following shall be provided:

“Therefore, the basis of design shall be 100% epoxy resin, or approved equal. Requests for consideration of equivalent resins other than 100% epoxy shall include a detailed comparison of the benefits & disadvantages (i.e. pros and cons) of the alternate resin system versus the basis of design 100% epoxy resin over the lifecycle of the product.”

Please include the comparison information required in the bid when submitting. The Selection Committee will review the submittal.

3-21-2023, WPKush, American In-line

American In-Line Inspection Service, Inc.  
 415 Timaquan Trail  
 Edgewater, FL 32132  
 Office # 386-409-5446  
 Fax # 386-957-4919  
 Email Address: AmericanInLine@cfl.rr.com

C.I.P.P. Project Personnel List

Robin Vallance - Owner/President

CIPP Field P.M. / Superintendent, CIPP Installer, Boiler Technician, CDL, Confined Space Certified  
 27 years of CIPP Lining Experience with over 300,000 LF of various size pipe

Walter Kush - Sales, MOT, Rehab Tech

CIPP Installer, CDL, MOT Certified, Confined Space Certified

Troy Irwin - Superintendent

10 years of CIPP Lining Experience with over 100,000 LF of various size pipe

Justin Worthington - Drainage Rehab Tech

CIPP Field P.M. / Superintendent, CIPP Installer, Boiler Technician, CDL, Confined Space Certified

12 years of CIPP Lining Experience with over 300,000 LF of various size pipe

Matthew Lodolce - Drainage Rehab Tech

CIPP Field Superintendent, CIPP Installer, CDL, Confined Space Certified/PACP, MACP and LACP Certified

12 years of CIPP Lining Experience with over 300,000 LF of various size pipe

Henry Puckett - Drainage Rehab Tech

CIPP Installer, Confined Space Certified/PACP, MACP and LACP Certified

4 years of CIPP Lining Experience with over 25,000 LF of various size pipe

George Riel - Drainage Rehab Tech

CIPP Installer, Confined Space Certified/PACP, MACP and LACP Certified

6 years of CIPP Lining Experience with over 80,000 LF of various size pipe

Jarred Caldwell - Drainage Rehab Tech

CIPP Installer, Confined Space Certified/PACP, MACP and LACP Certified

8 years of CIPP Lining Experience with over 120,000 LF of various size pipe

Joseph Stivers - Drainage Rehab Tech

CIPP Installer, Confined Space Certified/PACP, MACP and LACP Certified

3 years of CIPP Lining Experience with over 20,000 LF of various size pipe

CIPP Installer, CDL, Confined Space Certified

2 years of CIPP Lining Experience with over 10,000 LF of various size pipe



**AMERICAN IN-LINE INSPECTION SERVICE, INC. VEHICLES AND TRAILERS****CLEANER TRUCKS****OWN****LOAN**

| Equipment                       |   |   |
|---------------------------------|---|---|
| 2018 Mack/ Vactor               |   | X |
| 2004 Sterling L7501 / Vactor    | X |   |
| 2006 Peterbuilt Vaccon #3       | X |   |
| 1996 Mitsubishi Fuso FE- Stinky | X |   |

**CAMERA TRUCKS**

| Equipment                           |   |   |
|-------------------------------------|---|---|
| 2015 Ford Transit (Blue) Camera Van | X |   |
| 2014 Mercede Profiling Van          | X |   |
| 2019 Ford F450 White Camera Truck   |   | X |
| 1946 Chevy Coe Camera Truck         | X |   |

**ADDITIONAL TRUCKS**

| Equipment                                   |   |  |
|---|---|--|
| 1994 Ford E350 Box Truck - Service Truck    | X |  |
| 2004 F550 Ford Super Duty Box Truck(cutter) | X |  |
| F550 Ford Super Duty Box Truck Generator    | X |  |
| 1996 Freightliner Ref Truck FL-70           | X |  |
| 2006 Ford F550 XL - Grout Truck             | X |  |
| 2012 Mitsubishi Tow Truck                   | X |  |

**TRAILERS**

| Equipment                                  |   |  |
|--|---|--|
| 1990 HMD Trailer / Boiler                  | X |  |
| 1990 HMD Trailer / Boiler                  | X |  |
| 1999 Repair Trailer - Red open bed         | X |  |
| 1994 ASPT / Enclosed Trailer               | X |  |
| 2008 Laser Profile Trailer                 | X |  |
| 2008 Laser Profile Trailer - Generator     | X |  |
| 2004 All Pro - Open bed Car hauler Trailer | X |  |
| 2008 Wells Cargo Trailer - Blue            | X |  |
| 2007 Wells Cargo Trailer - White           | X |  |
| Rosso Paver                                | X |  |

**COMPANY VEHICLES**

| Equipment                          |   |  |
|------------------------------------|---|--|
| 2001 Ford E250 4 X 4 Van (Quigley) | X |  |
| 2008 Ford F650 Pickup              | X |  |
| 2018 Dodge Ram Pro Cargo Van       | X |  |
| 1993 Ford F-150 Camo               | X |  |
| 2006 Toyota Scion                  | X |  |

American In-Line Inspection Service, Inc.  
 415 Timaquan Trail  
 Edgewater, FL 32132  
 Office -386-409-5446 Fax - 386-957-4919

**Job List**

| <b>Company</b>                  | <b>Location</b>                            | <b>Description</b>                          | <b>2022</b> | <b>2023</b> |
|---------------------------------|--|---|-------------|-------------|
| Spruce Creek Fly-In Community   | Port Orange, FL                            | Rehab storm system                          | X           | ongoing     |
| City of New Smyrna Beach        | New Smyrna Beach, FL                       | Rehab sewer system                          | X           | ongoing     |
| Daytona Beach Shores            | Daytona Beach Shores, FL                   | Repairs in the sewer system                 |             | X           |
| City of Ocoee                   | Ocoee, FL                                  | Storm drainage repairs                      | X           | ongoing     |
| J. Malever Construction Co, Inc | Clermont, FL                               | Cleaning, video storm & sewer               | X           | ongoing     |
| Jr. Davis Construction Co.      | Various locations thru out Central Florida | Cleaning, video storm & sewer               | X           | ongoing     |
| Masci General Contractor, Inc.  | Various locations thru out Central Florida | Cleaning, video storm & sewer               | X           | ongoing     |
| On Top of the World             | Clearwater, FL                             | Cleaning & video sewer                      | X           | ongoing     |
| Purified Water Services LLC     | Kissimmee, FL                              | Rehab sanitary system                       | X           | ongoing     |
| Middlesex Corp.                 | I75/Overpass - WestleyChapel, FL           | Cleaning, video storm drainage              | X           | ongoing     |
| Phillips & Jordan Inc           | Various locations thru out Central Florida | Cleaning, video storm & sewer               | X           | ongoing     |
| Skanska SA Civil Southeast Inc. | I4/Interchange Polk City, FL.              | Cleaning & video newly installed storm pipe | X           | ongoing     |





[Department of State](#) / [Division of Corporations](#) / [Search Records](#) / [Search by Entity Name](#) /

## Detail by Entity Name

Florida Profit Corporation

AMERICAN IN-LINE INSPECTION SERVICE, INC.

### Filing Information

**Document Number** P98000034166  
**FEI/EIN Number** 59-3509291  
**Date Filed** 04/13/1998  
**State** FL  
**Status** ACTIVE

### Principal Address

415 TIMAQUAN TRAIL  
EDGEWATER, FL 32132

Changed: 03/02/2009

### Mailing Address

415 TIMAQUAN TRAIL  
EDGEWATER, FL 32132

Changed: 03/02/2009

### Registered Agent Name & Address

WHIGHAM, FRANK C  
300 INTERNATIONAL PARKWAY  
SUITE 100  
LAKE MARY, FL 32746

Address Changed: 01/17/2020

### Officer/Director Detail

#### **Name & Address**

Title PRES

VALLANCE, ROBIN J  
160 Damascus Road  
Deland, FL 32724

### Annual Reports

| Report Year | Filed Date |
|-------------|------------|
|-------------|------------|

|      |            |
|------|------------|
| 2021 | 01/30/2021 |
| 2022 | 01/28/2022 |
| 2023 | 01/21/2023 |

**Document Images**

|   |                          |
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| <a href="#">04/13/1998 -- Domestic Profit</a> | View image in PDF format |



2022 / 2023

## Volusia County Business Tax Receipt

Issued pursuant to F.S. 205 and Volusia County Code of Ordinances Chapter 114-1 by:  
Volusia County Treasury and Billing - 125 W New York Ave, Room 120, Deland, FL 32720 - (386) 943-7085



Account #: 199805210002

Expires: September 30, 2023

Business Location: 415 TIMAQUAN TRL

Business Name: AMERICAN INLINE INSPECTION SVS

Owner Name: AMERICAN INLINE INSPECTION SVS

Mailing Address: 415 TIMAQUAN TRL  
EDGEWATER, FL 32132

| BUSINESS TYPE       | REQ DOC # | CODE | COUNT | TAX     |
|---------------------|-----------|------|-------|---------|
| Business Service    |           | 471  | 2     | \$22.00 |
| Hazardous Waste Fee |           | HW   | 1     | \$44.00 |

- This receipt indicates payment of a tax, which is levied for the privilege of doing the type(s) of business listed above within Volusia County. This receipt is non-regulatory in nature and is not meant to be a certification of the holder's ability to perform the service for which he is registered. This receipt also does not indicate that the business is legal or that it is in compliance with State or local laws and regulations.
- The business must meet all County and/or Municipality planning and zoning requirements or this Business Tax Receipt may be revoked and all taxes paid would be forfeited.
- The information contained on this Business Tax Receipt must be kept up to date. Contact the Volusia County Treasury and Billing for instructions on making changes to your account.

**THIS PORTION OF THE BUSINESS TAX RECEIPT MUST BE  
POSTED CONSPICUOUSLY IN YOUR PLACE OF BUSINESS**

## Volusia County Business Tax Receipt

Treasury and Billing - 125 W New York Ave, Room 120, Deland, FL 32720 - (386) 943-7085

DATE PAID: 07/18/2022  
RECEIPT #: 474360  
TOTAL TAX: \$66.00  
PENALTY: \$0.00  
TOTAL PAID: \$66.00



Business Name: AMERICAN INLINE INSPECTION SVS  
Owner Name: AMERICAN INLINE INSPECTION SVS  
Mailing Address: 415 TIMAQUAN TRL  
EDGEWATER, FL 32132

Account #: 199805210002

Expires: September 30, 2023

Business Location: 415 TIMAQUAN TRL

PLEASE DETATCH THIS PORTION OF THE BUSINESS TAX RECEIPT FOR YOUR RECORDS.

22

# CITY OF EDGEWATER CERTIFICATE OF USE

23

104 N. RIVERSIDE DRIVE • PO BOX 100 • EDGEWATER, FL 32132 • 386-424-2400

WWW.CITYOFEDGEWATER.ORG

**Business Name:** AMERICAN IN LINE INSP SVS INC

**Location Address:** 415 TIMAQUAN TRL

| <u>Receipt Number</u>           | <u>Issue Date</u> | <u>Exp Date</u>    | <u>Business Tax</u> | <u>Penalty</u> | <u>Total</u> |
|---------------------------------|-------------------|--------------------|---------------------|----------------|--------------|
| 23-00005831                     | July 26, 2022     | September 30, 2023 | 31.50               | 0.00           | 31.50        |
| CERTIFICATE OF USE - COMMERCIAL |                   |                    |                     |                |              |

**Business Tax Receipt:** The issuance of this Business Tax Receipt in no way bestows any right to violate laws, ordinances, statutes or regulations of the State of Florida, County of Volusia, or The City of Edgewater.

**COMMENTS:**

**RESTRICTIONS:**

**CONTROL # :** 0004038

**MUST BE CONSPICUOUSLY DISPLAYED TO PUBLIC VIEW AT BUSINESS LOCATION**



22

**CITY OF EDGEWATER**  
**LOCAL BUSINESS TAX RECEIPT**

23

104 N. RIVERSIDE DRIVE • PO BOX 100 • EDGEWATER, FL 32132 • 386-424-2400

WWW.CITYOFEDGEWATER.ORG

Business Name: DARC LLC  
Location Address: 415 TIMAQUAN TRL

**Receipt Number**  
23-00008825  
SERVICES-OTHER

**Issue Date**  
July 26, 2022

**Exp Date**  
September 30, 2023

**Business Tax**  
42.55

**Penalty**  
0.00

**Total**  
42.55

**Business Tax Receipt:** The issuance of this Business Tax Receipt in no way bestows any right to violate laws, ordinances, statutes or regulations of the State of Florida, County of Volusia, or The City of Edgewater.

**COMMENTS:** THIS COMPANY IS LANDLORD TO AMERICAN IN LINE INSPE

**RESTRICTIONS:** NO CERT OF USE

**CONTROL # :** 0005407

**MUST BE CONSPICUOUSLY DISPLAYED TO PUBLIC VIEW AT BUSINESS LOCATION**

# Stephens Technologies

This Acknowledges That

## American In-Line

Is a trained and authorized installer of Stephen's Technologies patented New Life Liner System and is qualified licensee from

January 1st, 2020 to December 31st 2026

*Kenneth Barton*

**Kenneth Barton, President**



er and has  
mical safety





# STEPHENS TECHNOLOGIES

THIS ACKNOWLEDGES THAT

## Robin Vallance

*Has been trained and authorized installer of Stephen's Technologies patented NewLife Liner System and has participated in bi yearly safety and application class. This class covers personal safety, PPE, chemical safety procedures, any updates on system.*

*January 1st. 2023. to December 31st. 2024*

*Kenall Barton*

Ken Barton, President



# STEPHENS TECHNOLOGIES

THIS ACKNOWLEDGES THAT

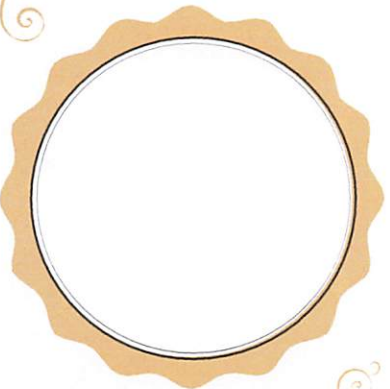
Justin Worthington

*has been trained and authorized installer of Stephen's Technologies patented NewLife Liner System and has participated in bi yearly safety and application class. This class covers personal safety, PPE, chemical safety procedures, any updates on system.*

*January 1st. 2023. to December 31st. 2024*

*Kennt Barton*

Ken Barton, President





# STEPHENS TECHNOLOGIES

THIS ACKNOWLEDGES THAT

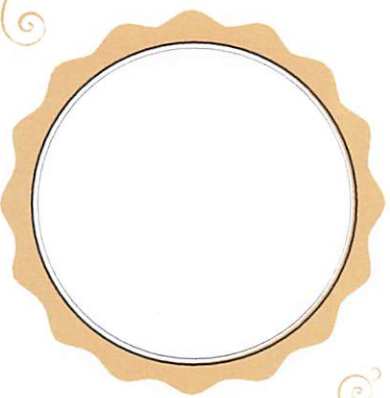
Troy Irwin

*Has been trained and authorized installer of Stephen's Technologies patented NewLife Liner System and has participated in bi yearly safety and application class. This class covers personal safety, PPE, chemical safety procedures, any updates on system.*

*January 1st. 2023. to December 31st. 2024*

*Ken Barton*

Ken Barton, President



# STEPHENS TECHNOLOGIES

THIS ACKNOWLEDGES THAT

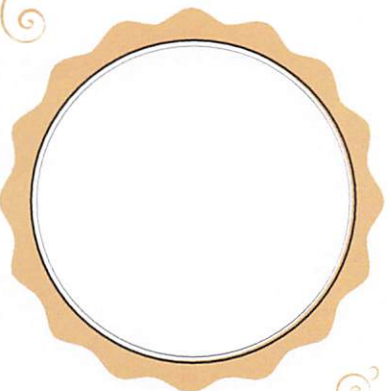
George Riel

*Has been trained and authorized installer of Stephen's Technologies patented NewLife Liner System and has participated in bi yearly safety and application class. This class covers personal safety, PPE, chemical safety procedures, any updates on system.*

*January 1st. 2023. to December 31st. 2024*

*Ken Barton*

Ken Barton, President





# STEPHENS TECHNOLOGIES

THIS ACKNOWLEDGES THAT

Jarred Caldwell

*Has been trained and authorized installer of Stephen's Technologies patented NewLife Liner System and has participated in bi yearly safety and application class. This class covers personal safety, PPE, chemical safety*

*procedures, any updates on system.*

*January 1st. 2023. to December 31st. 2024*

*Ken Barton*

Ken Barton, President





# STEPHENS TECHNOLOGIES

THIS ACKNOWLEDGES THAT

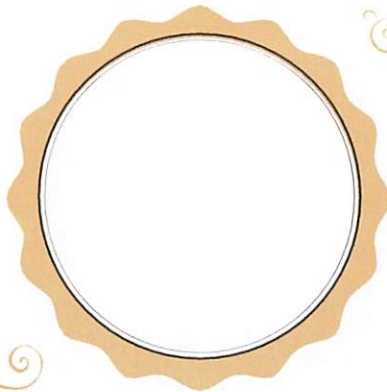
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## Matthew Lodolce

---

*Has been trained and authorized installer of Stephen's Technologies patented NewLife Liner System and has participated in bi yearly safety and application class. This class covers personal safety, PPE, chemical safety procedures, any updates on system.*

*January 1st. 2023. to December 31<sup>st</sup>. 2024*



*Kenneth Barton*

---

Ken Barton, President



# STEPHENS TECHNOLOGIES

THIS ACKNOWLEDGES THAT

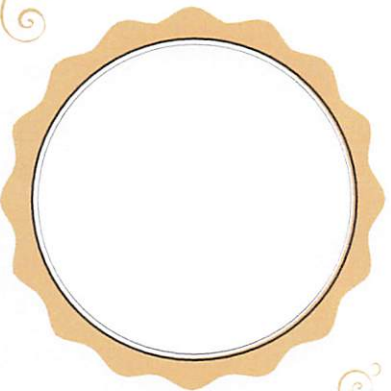
Henry Puckett

*Has been trained and authorized installer of Stephen's Technologies patented NewLife Liner System and has participated in bi yearly safety and application class. This class covers personal safety, PPE, chemical safety procedures, any updates on system.*

*January 1st. 2023. to December 31st. 2024*

*Keneth Barton*

Ken Barton, President





# STEPHENS TECHNOLOGIES

THIS ACKNOWLEDGES THAT

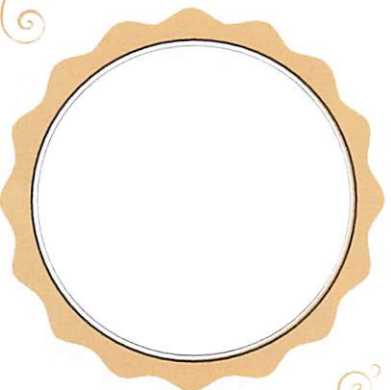
Walt Kush

*Has been trained and authorized installer of Stephen's Technologies patented NewLife Liner System and has participated in bi yearly safety and application class. This class covers personal safety, PPE, chemical safety procedures, any updates on system.*

*January 1st. 2023. to December 31st. 2024*

*Kenall Barton*

Ken Barton, President

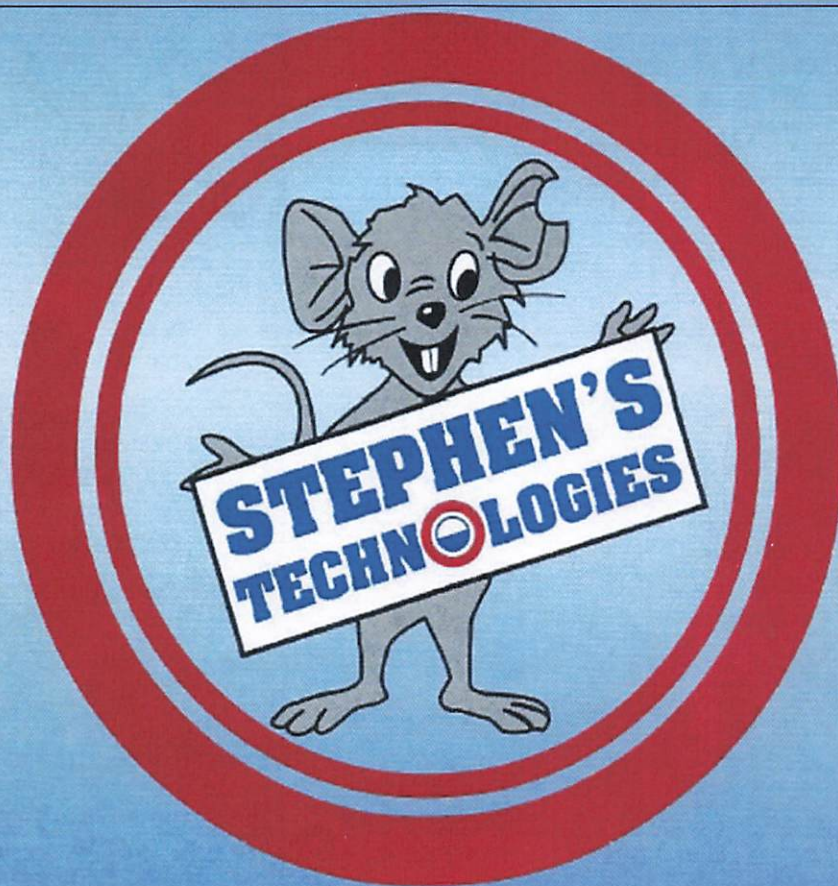




# ***STEPHEN'S TECH***

***CIPP***

***Manhole to Manhole***



## ***NEWLIFE LINER SYSTEM***

***WWW.STEPHENTECH.COM***

**Innovative Products For The Infrastructure Repair Industry**





# New Life Coatings

31004 HWY 27 N  
LAKE HAMILTON, FL 33851  
TEL 863-438-8783  
FAX 863-439-3755  
[www.STEPHENSTECH.com](http://www.STEPHENSTECH.com)

## NLC-115-18 Epoxy Manhole-To-Manhole Lamination System

**DESCRIPTION:** An extended pot life, 2-component epoxy system designed for elevated temperature cure.

**CHARACTERISTICS:** A heat-cured epoxy system which displays 2-3 hour latency @ 80-degrees F. and cures rapidly at temperatures above 140-degrees F. Unlike other popular systems, The NLC-115-2 System bonds to the substrate eliminating the need for grouting. System will also reach full cure at ambient temperatures above 65-deg. F.

**APPLICATION:** Designed for manhole-to-manhole relining systems developed jointly by Newlife Coatings and Stephen's Technologies.

**ADVANTAGES:** \*Rapid Wet-Out Of Conventional Substrates\* \*Extended Working Time\* \*Zero Induction Time\* \*0% VOC's\* \*100% Solids\* \*Bonds To Most Substrates\* \*NO GROUTING\* No Water Wash-out\*

**SAFETY AND HANDLING:** NLC-115-18 is typical of most epoxies in that the activator can cause skin and eye damage in the uncured state. Even the resin can cause some irritation upon prolonged or repeated exposure. Rubber gloves, protective eyewear, and protective clothing are strongly recommended when handling these materials. In the event of accidental contact, treat as follows:

**Skin Contact:** Wash thoroughly with soap and water. Remove contaminated clothing and wash before re-wearing.

**Eye Contact:** Flush immediately for 15 minutes with large volumes of water and seek medical attention.

### TYPICAL PROPERTIES:

| LIQUID PROPERTIES (SYSTEM):  |                   |
|------------------------------|-------------------|
| Viscosity                    | 2,000 - 2,500 cps |
| Thix Index                   | 3.0 - 3.5         |
| Specific Gravity             | 1.005             |
| Flash Point (Closed Cup)     | >220-Deg. F.      |
| Color                        | Light Grey        |
| Geltime (200g @77-Deg. F.)   | >2 Hours          |
| Geltime (200g@50-Deg. F)     | >20 Hours         |
| Thin Film Set @ 140-Deg. F.) | 3.0 Hours         |
| Thin Film Set @ 180-Deg. F.  | 1.5 Hours         |
| Thin Film Set @ 200-Deg. F.  | 1.0 Hour          |

**Changing The World As You Know It...**

| <b>TYPICAL PROPERTIES:</b>                          |  | <b>W/ 3mm Liner</b> | <b>W/4.5mm Liner</b> |
|---|--|---------------------|----------------------|
| <b>Tensile Strength (ASTM D638-86)</b>              |  | 5,300 PSI           | 7,950 PSI            |
| <b>Flexural Strength (ASTM D790-86)</b>             |  | 9,400 PSI           | 14,100 PSI           |
| <b>Flexural Modulus @ .125" (ASTM D790-86)</b>      |  | 332,000 PSI         | 498,000 PSI          |
| <b>Compressive Strength (ASTM D695-85)</b>          |  | 9900 PSI            | 14,850 PSI           |
| <b>Glass Transition Temperature (ASTM D3418-82)</b> |  | 148-Deg. F.         |                      |
| <b>Tensile Elongation @ Break</b>                   |  | 5.8%                |                      |
| <b>Thin Film Set Time @ 200-Deg. F</b>              |  | 1.0 Hours           |                      |
| <b>Shore D Hardness</b>                             |  | 81                  |                      |
| <b>Adhesion To Concrete</b>                         |  | >550 PSI            |                      |

| <b>TYPICAL PROPERTIES<br/>(CONTINUED):</b>        |                    |
|---|--------------------|
| <b>Chemical Resistance<br/>(28 Day Immersion)</b> | <b>Weight Gain</b> |
| <b>Toluene</b>                                    | 8.6%               |
| <b>Ethanol</b>                                    | 19.4%              |
| <b>10% Acetic Acid</b>                            | 8.6%               |
| <b>70% Sulfuric Acid</b>                          | 1.65%              |
| <b>50% Sodium Hydroxide</b>                       | 1.4%               |
| <b>Distilled Water</b>                            | 0.1%               |



**SPECTRALAB, INC.**  
Laboratory and Consulting Services  
6345 82nd Avenue North  
Pinellas Park, FL 33781  
813-545-2297

SPL2181  
2/18/98

**SPECTRALAB TEST REPORT FOR NEW LIFE COATINGS**

**REQUESTED BY:** David Barker

**SUBJECT:** Evaluate Mechanical Properties of Epoxy Impregnated Felt

**SUBMITTED SAMPLES:**

One 9" x 10" piece of 3/8" epoxy impregnated felt and one 8" x 8" piece of 3/4" epoxy impregnated felt (NLC-115-18).

**SUMMARY OF RESULTS:**

| Test                 | Method     | Results            |
|----------------------|------------|--------------------|
| Tensile strength     | ASTM D638  | 5300 ± 350 psi     |
| Flexural modulus     | ASTM D790  | 332000 ± 45000 psi |
| Flexural strength    | ASTM D790  | 9400 ± 840 psi     |
| Compressive strength | ASTM D695  | 9900 ± 530 psi     |
| Shore D hardness     | ASTM D2240 | 81 ± 1             |

**PROCEDURES/RESULTS:**

The measurements used in the calculation of the mechanical properties were taken using calipers calibrated to 0.001 inches. The instrument used was an Instron 1130. Individual testing parameters are listed below relevant to each particular analysis.

**Tensile Strength:**

The test was performed per ASTM D638. Cross head speed was 0.2"/minute. The average specimen's dimensions were 0.3" wide x 0.1" thick.

| Sample | Tensile Strength (psi) |
|--------|------------------------|
| A      | 5900                   |
| B      | 5142                   |
| C      | 5249                   |
| D      | 5157                   |
| E      | 5020                   |

**Flexural Strength and Flexural Modulus:**

Samples were tested per ASTM D790. The average sample dimensions were 0.5" wide x 0.15" thick. The samples were supported by a span of 4" and loaded at the midpoint with the rough surface in tension. The cross head speed was 0.2"/minute.

| Sample | Flexural Strength (psi) | Flexural modulus (1000 psi) |
|--------|-------------------------|-----------------------------|
| A      | 9307                    | 326371                      |
| B      | 9242                    | 291492                      |
| C      | 8727                    | 307369                      |
| D      | 9584                    | 391930                      |
| E      | 8607                    | 290211                      |
| F      | 10935                   | 383897                      |

**Compressive Strength:**

Samples were tested per ASTM D695. The average sample dimensions were 1.2" long x 0.3" wide x 0.3" thick. The cross head speed was 0.2"/minute.

| Sample | Computed Value |
|--------|----------------|
| A      | 10101          |
| B      | 9295           |
| C      | 9775           |
| D      | 10003          |
| E      | 9521           |
| F      | 10896          |
| G      | 9595           |

**Shore D Hardness:**


Samples were tested per ASTM D2240. The instrument used was a calibrated Shore D durometer from Shore Instruments and Manufacturing Company.

Shore D hardness       $81 \pm 1$  (average of 5 readings)

**APPROVAL**

JW/wd

Joe Wilson, Chemist

 2/18/98

Jack Brand, Lab Director



**SPECTRALAB, INC.**  
**Laboratory and Consulting Services**  
**6345 82nd Avenue North**  
**Pinellas Park, FL 33781**  
**813-545-2297**

**SPL2072**  
**11/28/97**

**SPECTRALAB TEST REPORT FOR NEW LIFE COATINGS**

**REQUESTED BY:** David Barker

**SUBJECT:** Compatibility of Epoxy in 8% Sulfuric Acid

**SUBMITTED SAMPLE:**

One 0.25" thick slab of cured epoxy - NLC115-18.

**SUMMARY OF RESULTS:**

**% Weight Gain**

After 7 Days =  $0.42 \pm 0.02$

After 28 Days =  $0.68 \pm 0.03$

**PROCEDURES/RESULTS:**

A cured slab ~1/4" thick was supplied by the requestor. Three 2" square specimens were cut from the slab. Each specimen was weighed and submerged in 8% sulfuric acid for 4 weeks @ 25°C. The samples were removed from the acid solution, rinsed and reweighed after 7 and 14 days. Percent weight changes were calculated from the weight data.

**APPROVAL**

JW

Joe Wilson, Chemist

Jack Brand 11/28/97

Jack Brand, Lab Director



## STEPHEN'S TECHNOLOGIES, INC.

31004 HWY. 27, P.O. BOX 478

LAKE HAMILTON, FL 33851

TEL. #: (888) S.T.E.P.H.E.N.

FAX #: (863) 439-3755

### NewLife Liner System

October 9, 2009

Stephen's Technologies has been a manufacturing CIPP Liners since 1991 and holds several patents on conduit rehabilitation.

Stephen's Technologies main product is 100 % Solids Epoxy lining and coatings.

Some advantages of 100% solid epoxy lining:

- 1) No VOC's (Styrene etc.)
  - A) No toxic odor
  - B) Environmental friendly
  - C) Not flammable
- 2) No annular space between liner and host pipe.
  - A) Means CIPP liners keep the rehab liner closer to the original internal diameter of the host pipe.
- 3) Adheres to the host pipe.
  - A) Stops migrating infiltration.
  - B) Eliminates the need to chemical seal services and manhole connections.
    1. You will not have to seal openings on a regular basis to stop infiltration.
  - C) Does not shift in host pipe due to any contraction and expansion.
    1. Stays sealed at manhole connections.
    2. Keeps lateral connection in place.
- 4) 100% Epoxy has four times the strength of polyesters or vinylesters.
  - A) For this reason an epoxy line 1/3 the thickness will keep the host pipe closer to its design volume and the epoxy liner will still be stronger.
- 5) Epoxy has twice the life expectancy of PVC.
- 6) CIPP Liners easily do 45% bends and most 90° sweeps.
  - A) More versatile than fold and form PVC liner.

Stephen's Technologies New Life Liner Systems are made in America.

**Innovative Ideas For Infrastructure Rehabilitation**

## **CURED-IN-PLACE PIPE LINING**

### **PART1 GENERAL**

#### **1.01 Scope**

The work specified in this Section includes all labor, materials, accessories, equipment and tools necessary to install and test cured-in-place pipe lining in main lines and in service laterals.

#### **1.02 General**

The finished pipe in place shall be fabricated from materials which when cured will be chemically resistant to withstand internal exposure to domestic sewage; stopping migrating water by adhering to host pipe. Liner materials shall have no VOC's, reactive or otherwise.

#### **1.03 Submittals**

The Contractor shall submit shop drawings and other information to the Engineer for review in accordance with standard practices. Included shall be materials to design calculations for the work.

#### **1.04 Product and Installer Acceptability**

To be acceptable, the Contractor must be experienced in the installation of epoxy-saturated fiberglass and/or felt liners. Contractor must be trained by the Manufacturer and provide the Engineer with a certificate. Contractor should have local experience or completed jobs with similar characteristics for at least five years.

### **PART 2 PRODUCTS**

#### **2.01 Materials for Main Lines**

- A. The polyester fiber felt tubing and resin material shall be in accordance with the requirements of ASTM F 1216 and be fabricated to a size that when installed will neatly fit the interior of the host pipe, allowing the epoxy to adhere to the host pipe. Allowance shall be made for circumferential stretching during inversion.
- B. The minimum tube length shall be that deemed necessary by the Contractor to effectively span the distance between the access points.
- C. The Contractor will use a polyester fiber felt tube and an epoxy resin and activator system compatible with the inversion process and having the following physical properties for the cured pipe:

|                                |           |             |
|--------------------------------|-----------|-------------|
| Tensile Strength               | ASTM D638 | 5,300 PSI   |
| Flexural Stress                | ASTM D790 | 9,400 PSI   |
| Flexural Modulus of Elasticity | ASTM D790 | 325,000 PSI |
| Compressive Strength           | ASTM D695 | 9,900 PSI   |



- D. The lining manufacturer shall submit the product to be used to the Engineer for review and acceptance.
- E. **Structural Requirements:** The structural performance of the finished pipe must be adequate to accommodate all anticipated loads throughout its design life. Since the pipe strength is related to the uniformity and density of the pipe wall, only resin vacuum impregnation will be allowed. Resin impregnation without vacuum entraps air and creates voids which weaken the pipe wall. If reinforcing materials (fiberglass, etc.) are used, the reinforcing material must be fully encapsulated within the resin to assure that the reinforcement is not exposed, either to the inside of the pipe or at the interface of the CIPP and the existing pipe.
- F. **Structural Design Methods:** Design methods are to be derived from traditionally accepted pipe formulae for various loading parameters and modes of failure. All equations will be modified to include ovality as a design parameter.
- G. **Continuous Structure:** The CIPP must bridge breaks and missing sections of the existing pipe, substantially reducing or eliminating infiltration or exfiltration. The new jointless pipe-within-a-pipe must adhere to the old pipe wall and consolidate all disconnected sections into a single continuous conduit.
- H. **Useful Life:** The CIPP must have a minimum design life of fifty (50) years. The minimum design life may be documented by submitting life estimates by national and/or international authorities or specifying agencies. otherwise, long-term testing and long-term in-service results (5 YEARS) may be used, with the results extrapolated to fifty (50) years.
- I. **Materials:** All constituent materials will be suitable for service in the environment intended. The final product will not deteriorate, corrode or lose structural strength that will reduce the projected product life.
- J. **Physical Strength:** The design for the CIPP wall thickness will be based on the following strengths as shown herein, unless otherwise submitted and approved by the Engineer:
- K.

| Test Parameter             | Magnitude   | Test Standard      |
|----------------------------|-------------|--------------------|
| Flexural Stress            | 9,400 PSI   | Modified ASTM D790 |
| Flexural Modulus of Elast. | 325,000 PSI | Modified ASTM D790 |

## **PART 3 EXECUTION**

### **3.01 Cleaning/Surface Preparation**

It shall be the responsibility of the Contractor to clean the pipeline with a high-pressure water jet and to remove all internal debris out of the pipeline in accordance with sound installation practices.

### **3.02 Sewer Repairs**

Any protruding pieces of concrete, dropped joints or broken pipe shall be subjected to point repairs, so that the pipe is left in a clean smooth condition in all respects ready for lining. If conditions such as broken pipe and major blockages are found that will prevent proper cleaning, or where additional damage would result if cleaning is attempted or continued, the Contractor, with the concurrence of the Engineer, shall perform the necessary point repair(s), and then complete the cleaning.

### **3.03 Flow Control**

Flow control shall be exercised as required to ensure that no flowing sewage comes into contact with sections of the sewer under repair.

### **3.04 Liner Installation**

The prepared pipe shall be reviewed and be acceptable as to cleanliness and smoothness before the Contractor begins to line the pipe.

The Contractor shall present to the Engineer, for review, a description of his methods for avoiding liner stoppage due to conflict and friction with such points as the manhole entrance and the bend into the pipe entrance. He shall also present plans for dealing with a line blockage. This information shall be rendered to the Engineer in a timely fashion prior to the preconstruction conference.

The Contractor shall have on hand at all times, for use by his personnel and the Engineer, a digital thermometer or other means of accurately and quickly checking the temperature of exposed portions of the liner.

The contractor shall immediately notify the Engineer of any construction delays during the insertion operation taking place

- A. The Contractor shall designate a location where the tube will be vacuum impregnated prior to installation. The Contractor shall allow the Owner to inspect the materials and the "wet-out" procedure.
- B. The tube shall be inverted (turned inside-out) with water pressure or any air pressurized tank specifically designed for this purpose.
- C. After the inversion is complete, the Contractor shall supply a suitable heat source and water recirculation equipment. The equipment shall be capable of uniformly raising the water temperature to a level required to effectively cure the resin.
- D. The heat source shall be fitted with suitable monitors to gauge the temperature of the incoming and outgoing water supply. Water temperature in the pipe during the cure period shall be as recommended by the resin manufacturer.

- E. Initial cure shall be deemed complete when the exposed portions of the tube appear to be hard and sound and the temperature sensor indicates that the temperature is of a magnitude to realize an exotherm. The cure period shall be of a duration recommended by the resin manufacturer and may require continuous recirculation of the water to maintain the temperature.
- F. Cooldown: The Contractor shall cool the hardened pipe to a temperature below 85-degrees F. before relieving the hydrostatic head. Cooldown may be accomplished by the introduction of cool water into the inversion standpipe to replace hot water being pumped out .
- G. Finish: The new pipe shall be cut off at a suitable location. The finished product shall be continuous over the length of pipe reconstructed and be free from dry spots. The liner should make a Seal at both ends stopping any migrating infiltration. Pipe entries and exists shall be smooth and free of irregularities. No visible leaks shall be present and the contractor shall be responsible for grouting to remove leaks. During the warranty period , any defects which will affect the integrity or strength of the product shall be repaired at the Contractor's expense, in a manner mutually agreed upon by the engineer and the Contractor.
- H. After the pipe has been cured in place, the Contractor shall reconnect the existing service connections. Where holes are cut through the liner, they shall be neat and smooth in order to prevent blockage at the connections. Cut-in connections shall be opened to a minimum of 95 percent of the flow capacity of the building sewer. Liner is to adhere to the Host pipe to stop migrating infiltration. All coupons shall be recovered at the downstream manhole and removed. The reinstatement of the connections shall be a separate pay item. The Contractor should not reactivate any line sections until accepted by the Engineer.

### **3.05 Cleanup**

After the liner installation has been completed and accepted, the Contractor shall cleanup the entire project area and return the ground cover to the original or better condition. All excess material and debris not incorporated into the permanent installation shall be disposed of by the Contractor.

### **3.06 Television Inspection**

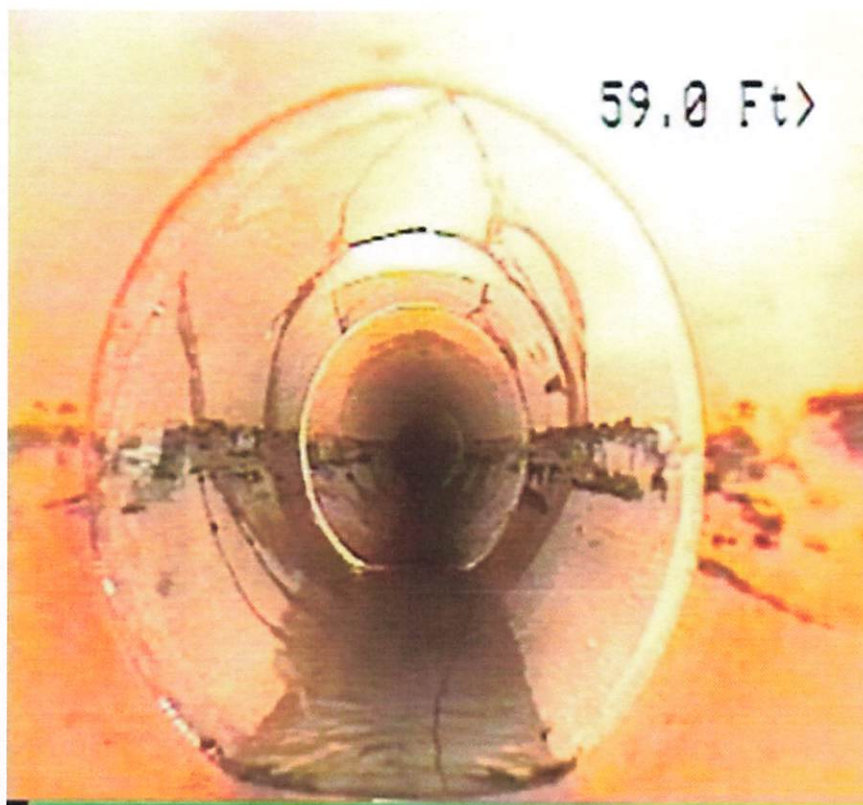
Television inspection is required for all cured-in-place lining, including main lines and service laterals.

### **3.07 Warranty**

The liner shall be certified by the manufacturer for specified material properties for a particular job. The manufacturer warrants the liner to be free from defects in raw materials for one year from the date of acceptance. During the warranty period, any defects which affect the integrity or strength of the pipe shall be repaired at the Contractor's expense in a manner mutually agreed by the Owner and the Contractor.



# MANHOLE TO MANHOLE

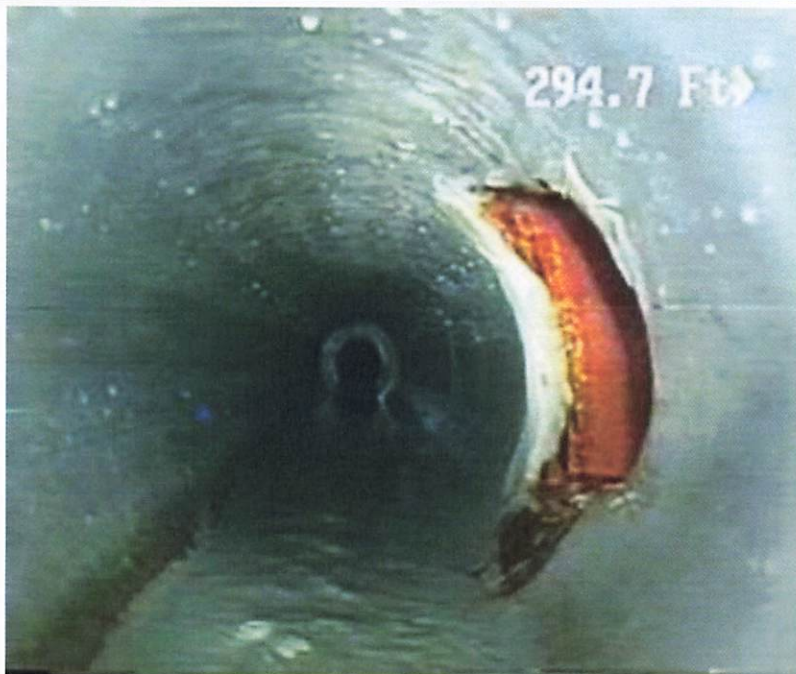


BEFORE



AFTER

# MANHOLE TO MANHOLE RE-INSTATED LATERAL



# **SAFETY DATA SHEET**

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.

## **U.S. Department Of Labor**

Occupational Safety and Health Administration  
(Non-Mandatory Form) Form Approved  
OMB No. 1218-0072

**IDENTITY:** *Stephen's Technology -- NLC-115-18 MTM Acti-*  
*vator*



New life Coatings, Inc.

31004 US HWY 27  
8783

Lake Hamilton, FL. 33851

Emergency Telephone: 863-438-8783

Information Telephone: 863-438-

Date Prepared: 10-14-2020



---

## 1. Product and Company Identification

Product name: NLC-115-118 MTM- Activator

Product Use Description: Curing Agent Epoxy

Manufacture/Importer/Distributor: New Life Coatings  
P.O. Box 478  
Lake Hamilton, FL 33851

Telephone Number: (863) 438-8783

Emergency Contact: (863) 438-8783  
Contact email: [stephenstechnologies@yahoo.com](mailto:stephenstechnologies@yahoo.com)

---

## 2. Hazards Identification

### GHS Classification

Acute toxicity – oral Category 4  
Acute toxicity – inhalation Category 4  
Skin Corrosion – Category 1B  
Serious Eye Damage – Category 1  
Skin Sensitization – Category 1  
Reproductive toxicity – Category 2  
Specification target organ toxicity – repeated exposure – oral Category 2

### GHS label elements

Signal Word: Danger

### Hazard Statements:

H302+H332: Harmful if swallowed or if inhaled.  
H314: Causes Severe skin burns and eye damage.  
H317: May cause an allergic skin reaction.  
H361: Suspected of damaging fertility or the unborn child.  
H373a: May cause damage to organs through prolonged or repeated exposure if swallowed.

### Precautionary Statements:

Prevention: P201: Obtain special instructions before use.  
P260: Do not breathe dust/fume/gas/mist/vapors/spray.  
P264: Wash hands thoroughly after handling.  
P280: Wear protective gloves/protective clothing/eye protection/face protection.  
P281: Use personal protective equipment as required.

Response: P301+P330+P331: IF SWALLOWED: rinse mouth. Do NOT induce vomiting.  
P303+P361+P338: IF ON SKIN (or hair): Remove/Take off immediately all Contaminated clothing. Rinse skin with water/shower.  
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308+P313: If exposed or concerned: Get medical advice/attention.  
P310: Immediately call a POISON CENTRE or doctor/physician.

Hazards not otherwise classified

Harmful if swallowed.

Corrosive

Components of the product may affect the nervous system.

Severe skin irritant.

Severe eye irritant.

May cause sensitization by skin contact.

---

### 3. Composition/Information on Ingredients

| Components   | CAS Number  | Concentration |
|--|-------------|---------------|
| Methyleneoxide, polymer with benzenamine, hydrogenated | 135108-88-2 | >30%          |
| Tetraethylenepentamine                                 | 112-57-2    | <10%          |
| Nonyl Phenol   | 84852-15-3  | <10%          |

components are trade secret.

---

### 4. First Aid Measures

**General advice:** Seek medical advice. If breathing has stopped or is labored, give assisted respirations. Supplemental oxygen may be indicated. If the heart has stopped, trained personnel should begin cardiopulmonary resuscitation immediately.

**Eye Contact:** Hold eyelids apart, initiate and maintain gentle and continuous irrigation until the patient receives medical care. If medical care is not promptly available, continue to irrigate for one hour.

**Skin Contact:** Immediately remove contaminated clothing, and any extraneous chemical, if possible, to do so without delay. Initiate and maintain continuous irrigation until the patient receives medical care. If medical care is not promptly available, continue to irrigate for one hour. Cover wound with sterile dressing. Take off contaminated clothing and shoes immediately. Note to physicians: Application of corticosteroid cream has been effective in treating skin irritation.

**Ingestion:** DO not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Prevent aspiration of vomit. Turn victim's head to the side.

**Inhalation:** Move to fresh air.

**Most important**

Symptoms/effects  
acute and delayed      Eye disease. Skin disorders and Allergies. Neurological disorders.

---

## 5. Fire-Fighting Measures

Suitable extinguishing media:      Alcohol-resistant foam.  
Carbon dioxide (CO<sub>2</sub>)  
Dry Chemical.  
Dry Sand.  
Limestone Powder.

Specific hazards:                      May generate ammonia gas. May generate toxic nitrogen oxide gases. Use of water may result in the formation of very toxic aqueous solutions. Do not allow run-off from fire fighting to enter drains or water courses. Incomplete combustion may form carbon monoxide. Ammonia gas may be liberated at high temperatures. In case of incomplete combustion an increased formation of oxides of nitrogen (NOX) is to be expected. Downwind personnel must be evacuated. Burning produces noxious and toxic fumes.

Special protective equipment:  
For fire-fighters                      Avoid contact with skin. A face shield should be worn. Use personal protective equipment. Wear self-contained breathing apparatus for firefighting if necessary.

Further information:                      Do not allow run-off from fire fighting to enter drains or water courses.

---

## 6. Accidental Release Measures

Personal Precautions:      Use self-contained breathing apparatus and chemically protective clothing.  
Protective Equipment      Wear suitable protective clothing, gloves, and eye/face protection. Evacuate  
and Emergency                      personnel to safe areas.  
Procedures

Environmental                      Construct a dike to prevent spreading.  
precautions:

Methods for cleaning      Approach suspected leak areas with caution. Contact Evonik Emergency  
Up:                                      Response Center for advice. Place in appropriate chemical waste container.

Additional advice:                      If possible, stop flow of product.

---

## 7. Handling and Storage

### Handling

Do not use sodium nitrite or other nitrosating agents in formulation containing this product. Suspected cancer-causing nitrosamines could be formed. Avoid contact with skin and eyes. Emergency showers and eye wash stations should be readily accessible. Adhere to work practices rules established by government regulations. Avoid contact with eyes. Use personal protective equipment. When using, do not eat, drink, or smoke.



## Storage

Do not store near acids. Keep containers tightly closed in a dry, cool, and well-ventilated place.

## Technical measures/Precautions

Respiratory protection: Not required for properly ventilated areas.

---

## 8. Exposure Controls/ Personal Protection

### Engineering measures

Provide readily accessible eye wash stations and safety showers.

Provide natural or explosion-proof ventilation adequate to ensure concentrations are kept below exposure limits.

### Personal protection equipment

Respiratory protection: Not required for properly ventilated areas.

### Hand protection:

Neoprene gloves.

Nitrile rubber.

Butyl-rubber.

Impervious gloves.

PVC disposable gloves.

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicated this is necessary.

### Eye Protection:

Full face shield with goggles underneath.

Chemical resistant goggles must be worn.

### Shirt and body protection:

Impervious Clothing.

Full rubber suit (rain gear)

Rubber or plastic boots.

Long sleeve shirts and trousers without cuffs.

Slicker Suit.

### Environmental exposure controls:

Consult a dike to prevent spreading.

### Special instructions for protection and hygiene:

Discard contaminated leather articles. Provide readily accessible eye wash stations and safety showers. Wash hands at the end work shift and before eating, smoking, or using the toilet. Provide readily accessible eye wash stations and safety showers.

### Exposure limit (s)

|                        |                                   |      |        |
|------------------------|-----------------------------------|------|--------|
| Tetraethylenepentamine | Time Weighted Average (TWA): WEEL | 1ppm | 5mg/m3 |
|------------------------|-----------------------------------|------|--------|

---

## 9. Physical and Chemical Properties

|  |   |
|--|---|
| Appearance:  | Viscous. Amber                            |
| Odor:  | Amine-like                                |
| Odor threshold:  | No data available.                        |
| PH:  | 10  |
| Melting point/range:   | No data available.                        |
| Boiling point/range:   | >385 ° F (>196.11 ° C)                    |
| Flash point:   | 267 ° F (130.56 ° C)                      |
| Evaporation rate:  | No data available.                        |
| Flammability (solid, gas): Upper/Lower<br>Explosion/flammability limit: Not applicable | Not applicable                            |
| Vapor pressure:  | <2.00 mmHg at 70 °F (21 °C)               |
| Water solubility:  | Slightly soluble                          |
| Relative Vapor density:  | Not applicable                            |
| Relative density:  | 0.99 (water =1)                           |
| Partition coefficient: (noctano/water)   | No data available                         |
| Auto-ignition temperature:   | No data available                         |
| Decomposition temperature:   | No data available                         |
| Viscosity:   | No data available                         |
| Molecular Weight:  | No data available                         |
| Density:   | 61.804 lb/ft3 (0.99 g/cm2) at 70°F (21°C) |

---

## 10. Stability and Reactivity

|                      |   |
|----------------------|---|
| Chemical Stability:  | Stable under normal conditions.   |
| Conditions to avoid: | No data available   |
| Materials to avoid:  | Sodium hypochlorite.<br>Organic acids (i.e. acetic acid, citric acid etc.).<br>Mineral acids. |

Product slowly corrodes copper, aluminum, zinc and galvanized surfaces.

Reaction with peroxides may result in violent decomposition of peroxide possibly an explosion.

CAUTION! N-Nitrosamines, many of which are known to be potent carcinogens, may be formed when the product comes in contact with nitrous acid, nitrites or atmosphere with high nitrous oxide concentration.

Nitrous acid and other nitrosating agents.

Reactive metals (e.g. sodium, calcium, zinc, etc.).

Materials reactive with hydroxyl compounds.

Oxidizing agents.

#### Hazardous decomposition

##### Products:

Nitric acid.

Ammonia

Nitrogen oxides (NOx).

Nitrogen oxide can react with water vapors to form corrosive nitric acid.

Carbon monoxide.

Carbon dioxide (CO<sub>2</sub>).

Aldehydes

Flammable hydrocarbon fragments.

Nitrosamine.

Possibility of hazardous Reactions/Reactivity: No data available.

---

## 10. Toxicological Information

### Information on toxicological effects

#### Likely route of exposure

##### Effects of Eye:

Causes eye burns. May cause blindness. Severe eye irritation.

##### Effects on Skin:

Causes skin burns. If absorbed through the skin, may cause central nervous system effects, such as headache, nausea, dizziness, confusion, breathing difficulties,

##### Inhalation Effects:

Can cause severe eye, skin, and respiratory tract burns. May cause central nervous system effects, such as headache, nausea, dizziness, confusion, breathing difficulties. Severe case of overexposure can result in respiratory failure.

##### Ingestion Effects:

Harmful if swallowed. If ingested, severe burns of the mouth and throat, as well as danger of perforation of the esophagus and the stomach. May cause central nervous system effect, such as headache, nausea, vomiting,



abdominal pain, dizziness, confusion, breathing difficulties. Severe cases of exposure can result in respiratory failure.

**Symptoms:** No data available.

#### **Acute Toxicity**

**Acute Oral Toxicity:** LD50: > 20mg/l species: rat Method: Estimated.

**Inhalation:** LC50 (1h): > 20mg/l Species: Rat Method: Estimated.

**Acute Dermal Toxicity:** LD50: >2,000 mg/kg Species: Rabbit Method: Estimated.

**Skin corrosion/irritation:** Severe skin irritation.

**Serious eye damage/eye irritation:** Severe eye irritation.

**Sensitization:** May cause sensitization by skin contact. Sensitization has occurred in laboratory animals after repeated exposures.

#### **Chronic toxicity or effects from long term exposures**

**Carcinogenicity:** No data available.

**Reproductive toxicity:** No data is available on the product itself.

**Germ cell mutagenicity:** The product or a component may be mutagenic, the data is inconclusive.

**Specific target organ systemic toxicity:  
(single exposure)** No data available.

**Aspiration hazard:** No data available.

#### **Delayed and Immediate Effect and Chronic Effects from Short- and Long-Term Exposure.**

This product contains no listed carcinogens according to IARC, ACGIH, NTP and/or Osha in concentrations of 0.1 percent or greater. Prolonged contact may result in chemical burns and permanent damage. May cause allergic skin reaction. Eye disease, Skin disorders and Allergies, Neurological disorders.

Mixed polycyclic aliphatic amines was tested in rats for systemic effects in a subchronic (28-day) oral study at doses ranging from 15 to 300 mg/kg/day. Effects seen at 300 mg/kg/day included decreased survival, decreased body weight gain, increased liver, kidney, and adrenal weights and histological changes in the liver, kidney, adrenals, and spleen. The No-Observed-Adverse-Effect-Level (NOAEL) was 15 mg/kg/day. Rats exposed orally to 800 mg/kg benzyl alcohol for thirteen weeks exhibited CNS depression and histopathological changes in the brain, thymus and skeletal muscles. The No Observed Adverse Effect Level (NOAEL) was 400 mg/kg. No evidence of carcinogenicity was seen in a two-year study with rats and mice.

---

## 12. Ecological Information

### Ecotoxicity effects

Aquatic toxicity: No data is available on the product itself.

### Toxicity to daphnia – Components

Nonyl Phenol: EC50 (48h): 0.0848 mg/l Species: Daphnia

Nonyl Phenol: EC50 (48h): 0.19 mg/l Species: Daphnia

### Persistence and degradability

Biodegradability: No data is available on the product itself.

Mobility: No data available.

Bioaccumulation: No data is available on the product itself.

### Bioaccumulation - Components

Methyleneoxide, polymer with Does not bioaccumulate.

benzenamine, hydrogenated

Nonyl Phenol Moderate bioaccumulation potential.

---

## 13. Disposal Considerations

Waste from residues/ unused  
Products: Does not bioaccumulate.

Contaminated packaging: Dispose of container and unused contents in accordance with federal, state, and local requirements.

---

## 14. Transport Information

### DOT

#### UN/ID No.

UN2735

Proper shipping name: Amines, liquid, corrosive, n.o.s., (nonyl Phenol, Polyamidoamine)

Class or Division: 8

Packing Group: III

Label(s): 8

Marine Pollutant: No

### IATA

UN/ID No. UN2735

Proper shipping name: Amines, liquid, corrosive, n.o.s., (nonyl Phenol, Polyamidoamine)

Class or Division: 8

Packing Group: III

Label(s): 8

Marine Pollutant: Yes

Acute Health Hazard Chronic Health Hazard

EPA Sara Title III Section 313 (40 CFR 372) Component(s) above 'de minimus' level  
None.

US California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)

This product does not contain any chemicals known to State of California to cause cancer, birth defects or any other harm.

---

#### 16. Other Information

##### HMIS Rating

|                  |   |
|------------------|---|
| Health:          | 3 |
| Flammability:    | 1 |
| Physical Hazard: | 0 |

##### Revision Notes

|              |  |
|--------------|--|
| Prepared by: | New Life Coatings<br>PO Box 478<br>Lake Hamilton, FL 33851<br>(863) 438-8783 |
|--------------|--|

|                   |            |
|-------------------|------------|
| Preparation Date: | 10-14-2020 |
|-------------------|------------|



# **SAFETY DATA SHEET**

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.

## **U.S. Department Of Labor**

Occupational Safety and Health Administration  
(Non-Mandatory Form) Form Approved  
OMB No. 1218-0072

**IDENTITY:** *Stephen's Technology* -- **NLC-115-18 MTM Base**



New life Coatings, Inc.  
31004 US HWY 27  
Lake Hamilton, FL. 33851

Emergency Telephone: 863-438-8783  
Information Telephone: 863-438-8783  
Date Prepared: 10-15-2020

|   |
|---|
| 1 Identification of the substance/mixture and of the company /undertaking |
|---|

## 1.Product Identifier

Trade name: NLC-115-118 MTM- Base

Application of the substance / the preparation: Epoxy resin

### 1.3Detail of the supplier of the Safety Data Sheet

Manufacture/Importer/Distributor: New Life Coatings  
P.O. Box 478  
Lake Hamilton, FL 33851  
(863) 438-8783

Telephone Number:

Emergency Contact:

(863) 438-8783

Contact email:

[stephenstechnologies@yahoo.com](mailto:stephenstechnologies@yahoo.com)

|                        |
|------------------------|
| Hazards Identification |
|------------------------|

### 2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008



GHS08 health hazard

Muta.2: H341: Suspected of causing genetic defects.



GHS09 environment

Aquatic Chronic 2:H411: Toxic to aquatic life with long lasting effects.



GHS07

Skin irrit. 2:H315: Cause skin irritation

Skin Sens. 1:H317: May cause an allergic skin reaction.

---

### Classification according to Directive 67/548/EEC or Directive effects 1999/45/EC



XI: Irritant  
R36/38: Irritating to eyes and skin.



XI: Sensitizing

R43: May cause sensitization by skin contact.

### Information concerning particular hazards for human and environment:

The product has to be labeled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

### Classification system:

The classification is according to the latest editions of the EU-lists and extended by company and literature data.

## 2.2 Label elements

### Labelling according to Regulation (EC) No 1272/2008

The product is classified and labeled according to the CLP regulation.

#### Hazard pictograms



GHS07 GHS08 GHS09

#### Signal Word: WARNING

##### Hazard-determining components of labeling:

Reaction products of Epichlorohydrin and Bisphenol A oxirane, mono [(C12-14-alkyloxy)methyl] derivs

##### Hazard Statements:

H315: Causes skin irritation.

H317: May cause an allergic skin reaction.

H341: Suspected of causing genetic defects.

H411: Toxic to aquatic life with long lasting effects.

Contains epoxy constituents. May produce an allergic reaction.

Contains Reaction products of Epichlorohydrin and Bisphenol A, oxirane, mono[(C12-14-alktloxy)methyl] derivs. May produce an allergic reaction.

##### Precautionary statements:

P261: Avoid breathing dust/fume/gas/mist/vapors/spray.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P281: Use personal protective equipment as required.

P273: Avoid release to the environment.

P264: Wash thoroughly after handling.

P272: Contaminated work clothing should not be allowed out of the workplace.

P201: Obtain special instructions before use.

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

P321: Specific treatment (see on this label).

P362: Take off contaminated clothing and wash before reuse.

P363: Wash contaminated clothing before reuse.

P308+P313: If exposed or concerned: Get medical advice/attention.

P332+P313: If skin irritation occurs: Get medical advice/attention.

P333+P313: If skin irritation or rash occurs: Get medical advice/attention.

P302+P352: IF ON SKIN: Wash with plenty of soap and water.

P391: Collect spillage.

P405: Store locked up.

P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

##### Hazard description:

##### WHMIS-symbols:

D2A- Very toxic material causing other toxic effects.



D2B - Toxic material causing other toxic effects



NFPA ratings (scale 0 - 4)



Health = 2

Fire = 1

Reactivity = 0

HMIS-ratings (scale 0 - 4)



Health = 2

Fire = 1

Reactivity = 0

### 2.3 Other hazards

#### Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

## 3 Composition/information on ingredients

**Description:** Mixture of substances listed below with nonhazardous additions.

### Dangerous components:

|  |   |         |
|--|---|---------|
| CAS: 25085-99-8  | Reaction products of Epichlorohydrin and Bisphenol<br>A Xi R36/38<br>Muta. 2, H341<br>Aquatic Chronic 2, H411<br>Skin Irrit. 2, H315; Skin Sens. 1A, H317   | 50-100% |
| CAS: 68609-97-2<br>EINECS: 271-846-8<br>Index number: 603-103-00-4 | oxirane, mono[(C12-14-alkyloxy)methyl] derivs<br>Xi R38; Xi R43<br>Skin Irrit. 2, H315; Skin Sens. 1, H317  | 10-25%  |
| CAS: 106-89-8<br>EINECS: 203-439-8<br>Index number: 603-026-00-6   | 1-chloro-2,3-epoxypropane<br>T Carc. Cat. 2 R45-23/24/25; C R34; Xi R43<br>R10<br>Flam. Liq. 3, H226<br>Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331<br>Carc. 1B, H350<br>Skin Corr. 1B, H314<br>Skin Sens. 1, H317 | < 0.1%  |

**Additional information:** For the wording of the listed risk phrases refer to section 16.

## **4. FIRST aid measures**

### **4.1 Description of first aid measures**

#### **After inhalation:**

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist. In case of unconsciousness place patient stably inside position for transportation.

#### **After skin contact:**

Immediately wash with water and soap and rinse thoroughly.

Immediately remove any clothing soiled by the product.

If skin irritation continues, consult a doctor.

#### **After eye contact:**

Remove contact lenses if worn.

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

## **5. Firefighting Measures**

### **5.1 Extinguishing media**

**Suitable extinguishing agents:** Use fire extinguisher methods suitable to surrounding conditions.

### **5.2 Special hazards arising from the substance or mixture.**

Formation of toxic gases is possible during heating or in case of fire.

### **5.3 Advice for firefighters:**

#### **Protective equipment:**

Wear self-contained respiratory protection device.

Wear fully protective suit.

**Additional information** Cool endangered receptacle with water spray.

## **6. Accidental release measures**

### **6.1 Personal precautions, protective equipment, and emergency procedures**

Remove persons from danger area.

Use respiratory protective device against the effects of fumes/dust/aerosol.

Ensure adequate ventilation.

Wear protective equipment. Keep unprotected persons away.

**6.2 Environmental precautions:** Do not allow to enter sewers/surface or ground water.

### **6.3 Methods and materials for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binder, sawdust)

Dispose contaminated material as waste according to item 13.

Clean the affected area carefully; suitable cleaners are:

### **6.4 Reference to other sections:**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

## 7. Handling and storage

### 7.1 Precautions for safe handling:

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

**Information about fire-explosion protection:** No special measures required.

7.2 Conditions for safe storage, including any incompatibilities

**Storage:**

**Requirements to be met by storerooms and receptacles:** No special requirement.

**Information about storage in one common storage facility:**

Store away from oxidizing agents.

Store away from foodstuffs.

Do not store together with acids.

**Further information about storage conditions:** Store in cool, dry, conditions, in well-sealed receptacles.

### 7.3 Specific end use(s):

No further relevant information available.

## 8. Exposure controls/personal protection

**Additional information about design of technical facilities:** No further data: see item 6.

### 8.1 Control Parameters:

**Ingredients with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

**Additional information:** The lists valid during the making were used as basis.

### 8.2 Exposure controls:

**Personal protective equipment:**

**General protective and hygienic measures:**

Keep away from foodstuffs, beverages, and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

**Respiratory protection:**

Use suitable respiratory protective device in case of insufficient ventilation.

Use suitable respiratory protective device when aerosol or mist is formed.

### Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of glove material on consideration of the penetration times, rates of diffusion and the degradation.

**Material of Gloves:**

Butyl rubber, BR

The selection of the suitable gloves does not only depend on the material, but also on further marks of

Quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application.

**Penetration time of glove material:**

The exact break through time has to be found out by the manufacture of the proactive gloves and has to be observed.

### Eye Protection:



Safety glasses

Goggles recommended during refilling.



## 9. Physical and Chemical Properties

### 9.1 Information on basic physical and chemical properties:

#### General Information:

|  |   |
|--|---|
| Appearance:                              | Liquid  |
| PH-value:                                | Not determined                                |
| Change in condition:                     | Undetermined                                  |
| Flash point:                             | 150°C (302°F)                                 |
| Flammability (Solid, gaseous):           | Not applicable                                |
| Ignition temperature:                    |   |
| Decomposition temperature:               | Not determined                                |
| Self-igniting:                           | Product is not self-igniting                  |
| Danger of Explosion:                     | Product does not present an explosion hazard. |
| Explosion Limits:                        |   |
| Vapor Pressure:                          | Not determined                                |
| Density at 20° C:                        | 0.96 g/cm <sup>3</sup>                        |
| Solubility in/Miscibility with water:    | Not miscible or difficult to mix              |
| Partition coefficient (n-octanol/water): | Not determined                                |
| Viscosity:                               |   |

#### 9.2 Other Information: No further relevant information available

## 10. Stability and reactivity

### 10.1 Reactivity

### 10.2 Chemical stability

**Thermal decomposition/ conditions to be avoided.**

No decomposition if used according to specifications.

### 10.3 Possibilities of hazardous reactions

Reacts with oxidizing agents.

Reacts with amines.

Exothermic polymerization.

**10.4 Conditions to avoid:** No further relevant information available.

**10.5 Incompatible materials:** No further relevant information available.

**10.6 Hazardous decomposition products:** Carbon monoxide and carbon dioxide.

## 11. Toxicological Information

### 11.1 Information on toxicological effects:

**Acute toxicity:**

**Primary irritant effect:**

**On skin:** Irritant to skin and mucous membranes.

**On the eye:** Irritating effect.

**Sensitization:** Sensitization possible through skin contact.

Sensitizing effect through inhalation is possible by prolonged exposure.

**Additional toxicological information:**

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

## 12. Ecological Information:

### 12.1 Toxicity

**Aquatic Toxicity:** The product contains materials that are harmful to the environment.

**12.2 Persistence and degradability:** The product is not easily, but potentially degradable.

**12.3 Bioaccumulate potential:**

Due to the distribution coefficient n-octanol/water an accumulation in organisms is possible.

**12.4 Mobility in soil:** No further relevant information available.

**Additional ecological information:**

**General notes:**

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water.

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

**12.5 Results of PBT and vPvB assessment**

**PBT:** Not applicable

**vPvB:** Not applicable

**12.6 Other adverse effects:** No further relevant information available.

## 13. Disposal Considerations:

### 3.1 Waste Treatment methods:

**Recommendation:**

Must not be disposed together with household garbage. Do not allow product to reach sewage system. Can be burned with household garbage after consulting with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.

**Uncleaned packaging:**

**Recommendation:** Disposal must be made according to official regulations.

## 14. Transport information:

|   |   |
|---|---|
| <b>14.1 UN-Number</b>   |   |
| <b>14.2 UN Proper shipping name</b>   |   |
| <b>14.3 Transport hazard class(es)</b><br>DOT, ADR, ADN, IMDG, IATA<br>Class: | Not Regulated   |
| <b>14.4 Packing group</b>   | Not Regulated   |
| <b>14.5 Environmental Hazards:</b>  | Product contains environmentally hazardous substances |

|  |                |
|--|----------------|
| <b>14.6 Special precautions for user</b>       | Not applicable |
| <b>14.7 Transport in bulk according to An-</b> | Not Applicable |
| <b>UN: Model Regulation"</b>                   |                |

#### 15. Regulatory Information:

**15.1 Safety, health, and environmental regulations/legislation specific for the substance or mixture United States (USA)**

##### **SARA**

**Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

**Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

**TSCA (Toxic Substances Control Act):**

All ingredients are listed.

**Proposition 65 (California):**

**Chemicals known to cause cancer:**

[106-89-8 1-chloro-2,3-epoxypropane](#)

**Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

**Chemicals known to cause reproductive toxicity for males:**

106-89-8 1-chloro-2,3-epoxypropane

**Chemicals known to cause developmental toxicity:**

None of the ingredients listed.

**Carcinogenic Categories:**

**EPS (Environmental Protection Agency)**

None of the ingredients is listed.

**TLV (Threshold Limit Value established by ACGIH:**

[None of the ingredients listed.](#)

**NIOSH-CA (National Institute for Occupational Safety and Health):**

None of the ingredients listed.

**OSHA-CA (Occupational Safety & Health Administration):**

None of the ingredients listed.

##### **Canada**

**Canadian Ingredient Disclosure list (limit 0.1%):**

106-89-8 1-chloro-2, 3-epoxypropane

**Canadian Ingredient Disclosure list (limit 1%):**

None of the ingredients listed.

**15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

#### 16. Other Information:

This information is based on our present knowledge; However, this shall not constitute a guarantee for any specific product feature and shall not establish a legally valid contractual relationship.

##### **Relevant Phases:**

H226: Flammable liquid and vapor.

H301: Toxic if swallowed.

H311: Toxic in contact with skin.

H314: Causes severe skin burns and eye damage.

H315: Causes skin irritation.

H317: May cause an allergic skin reaction.

H331: Toxic if inhaled.

H341: Suspected of causing genetic defects.

H350 May cause cancer



H441: Toxic to aquatic life with long lasting effects.  
R10: Flammable.  
R23/24/25: Toxic by inhalation, in contact with skin and if swallowed.  
R34: Causes burns.  
R36/38: Irritating to eyes and skin.  
R38: Irritating to skin.  
R43: May cause sensitization by skin contact.  
R45: May cause cancer.

**Abbreviations and acronyms:**

ADR: Accord europeen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
DOT: US Department of Transportation  
IATA: International Air Transport Association  
GHS: Globally Harmonized System of Classification and Labeling of Chemicals.  
ACGIH: American Conference of Governmental Industrial Hygienists  
NFPA: National Fire Protection Association (USA)  
HMIS: Hazardous Materials Identification System (USA)  
WHMIS: Workplace Hazardous Materials Information System (Canada)

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# AVANTI

Stop leaks. Stabilize soil.  
Control groundwater. Permanently.

Rev03.2014

## TECHNICAL DATA SHEET

# AV-100 CHEMICAL GROUT

GRANULES / LIQUID CHEMICALLY REACTIVE GEL

### DESCRIPTION

AV-100 is an ultra-low viscosity chemically reactive gel available as either granules or liquid. Having the same viscosity as water, AV-100 can permeate anywhere water can travel and cures within a controllable time frame anywhere from 5 seconds to  $\pm 10$  hours. Once it cures, it creates an effective, long-lasting water barrier while providing superb soil stabilization.

### APPLICATION

- Stops water infiltration into manholes, sanitary and storm sewer mainlines, joints, laterals, tunnels, mines, and various other geotechnical applications and underground structures by stabilizing external substrate
- Ground modification/slope stability for prevention of landslides, erosion, or any place where site conditions or project requirements dictate modification of the existing soil properties

### FEATURES AND BENEFITS

- Thinnest product on the market
- Can be injected through remote packer equipment
- Controllable reaction times from seconds to hours
- Will not undergo syneresis
- Half-life of 362 years as determined by U.S. Dept. of Energy
- No suspended solids
- Higher strength compared to acrylates
- Greater longevity compared to silicates
- Available in granular or liquid form

### GROUTING TECHNIQUES

- Tube-a-manchette (TAM) Grouting
- Probe Grouting
- Curtain Grouting
- Remote Packer

### HOW IT WORKS

AV-100 is injected using a stainless steel, dual-component pump from two containers (see mix procedure). Injecting a 1:1 ratio into the soil or external substrate will produce a strong, impermeable gel obtained via a copolymerization reaction. Additives are available to modify the reactions and cured gel characteristics.

### OPTIONAL ADDITIVES

- AC-50W Root Inhibitor – inhibits future root growth (add to grout tank)
- AV-257 Icoset – increases strength and adhesive qualities (add to grout tank)
- KFe (Potassium Ferricyanide) – extends gel time (add to grout tank)
- AV-105 Gel Guard – reduces freezing point (add equal amounts to both tanks)
- Dyes – used extensively for tracking grout flow

### PACKAGING

Product packaged by weight based on specific gravity.

- Tote = Net Wt. 2,300 lbs. / Volume 258 – 265 gal.
- Drum = Net Wt. 130 lbs. / Volume 14.6 – 15 gal.

### SHIPPING

- Motor class 77.5
- Hazard class 6.1
- Motor freight available
- Air freight available

### PROPERTIES\*

#### UNCURED (solid)

|                   |   |
|-------------------|---|
| Appearance:       | White granules  |
| Specific Gravity: | 1.15 @ 72°F (22°C) $\pm 3\%$  |
| Bulk Density:     | 1938 lb/yd <sup>3</sup> $\pm 3\%$ (1150 kg/m <sup>3</sup> $\pm 3\%$ ) |
| Toxicological:    | See MSDS  |

#### UNCURED (liquid)

|                   |   |
|-------------------|---|
| Appearance:       | Clear water-white liquid                      |
| Viscosity:        | 1 – 2 cP @ 72°F (22°C) in solution            |
| Specific Gravity: | 1.04 @ 72°F (22°C) $\pm 3\%$                  |
| Weight:           | 8.66 lb/gal $\pm 3\%$ (1.038 kg/L $\pm 3\%$ ) |
| Toxicological:    | See MSDS                                      |

#### CURED

|                  |                            |
|------------------|----------------------------|
| Appearance:      | Clear gel mass/translucent |
| Hydraulic        |                            |
| Conductivity:    | $< 10^{-6}$ m/s            |
| Static Pressure: | 120 psi (2585 kPa)         |
| Toxicity:        | Non-toxic                  |

\*Laboratory Results

### MIX PROCEDURE (See Mixing Instructions)

Tank A: Add 10 gallons (37.8 L) of water, add one bag (granules) or one liquid drum of AV-100 to solution, add 0.5 gallons (1.9 L) of AV-101 and fill with water up to 30 gallons. Tank B: Add 10 gallons (37.8 L) of water, add 5 lbs (2.27 kg) of AV-102, and then bring to 30 gallons with water. Makes a 60 gallon (227 L) batch. Note: Ingredients are only compatible with stainless steel or plastic.

### PERFORMANCE

Performance will be influenced by site conditions. If site temperatures are low, heat the product to recommended operating temperatures of 60°F – 100°F (16°C – 38°C). Decreasing pH may extend cure time. High minerals/metals content may adversely affect gel time. Refer to AV-100 Technical Manual for complete product information.

### CLEANING PRODUCTS

Use water with light detergent.

### STORAGE

Store in temperatures within or near 60°F – 100°F (16°C – 38°C) in a dry atmosphere.

### SAFETY

Use of AV-100 is authorized by Avanti International only after completion of the required Safe Operating Practices Program (SOPP). Always use OSHA-approved personal protective equipment (PPE). Refer to the MSDS for complete safety precautions. The MSDS, mixing instructions, and Technical Manual are available by request or via download at [www.AvantiGrout.com](http://www.AvantiGrout.com).

### NOTICE

The data, information and statements contained herein are believed to be reliable, but are not construed as a warranty or representation for which Avanti International assumes any legal responsibility. Since field conditions vary widely, users must undertake sufficient verification and testing to determine the suitability of any product or process mentioned in this or any other written material from Avanti for their own particular use. NO WARRANTY OF SUITABILITY OR FITNESS FOR A PARTICULAR PURPOSE IS MADE. In no case shall Avanti International be liable for consequential, special, or indirect damages resulting from the use or handling of this product.



### Grout Installation Procedures

- 1) Plug and pump down storm line.
- 2) Clean lines to ensure no debris is in repair areas.
- 3) Use approved confined space entry equipment to enter pipe.
- 4) Install proper packer and camera into line.
- 5) Pull camera over repair area and video pre-grouting.
- 6) Pull packer and sealing bladder over the repair area. Inflate bladder to isolate the repair area. Pressure injects the grout into the repair area.
- 7) Pull camera back over grouted area and video post repair.