

# ADVANCING WATER PIPELINE MAINTENANCE

SPRAY-IN-PLACE PIPE REHABILITATION USING 100% SOLIDS EPOXY

**J.B. Conant** | Coatings Specialist, Warren Environmental  
**Lance Secrest** | General Manager, Spray In Place Solutions



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**JB  
CONANT**

**WARREN ENVIRONMENTAL  
COATINGS SPECIALIST**



**LANCE  
SECREST**

**SPRAY IN PLACE SOLUTIONS  
GENERAL MANAGER**



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# ASSET PROTECTION ACROSS MARKETS

WASTEWATER



POTABLE WATER



STORMWATER



POWER



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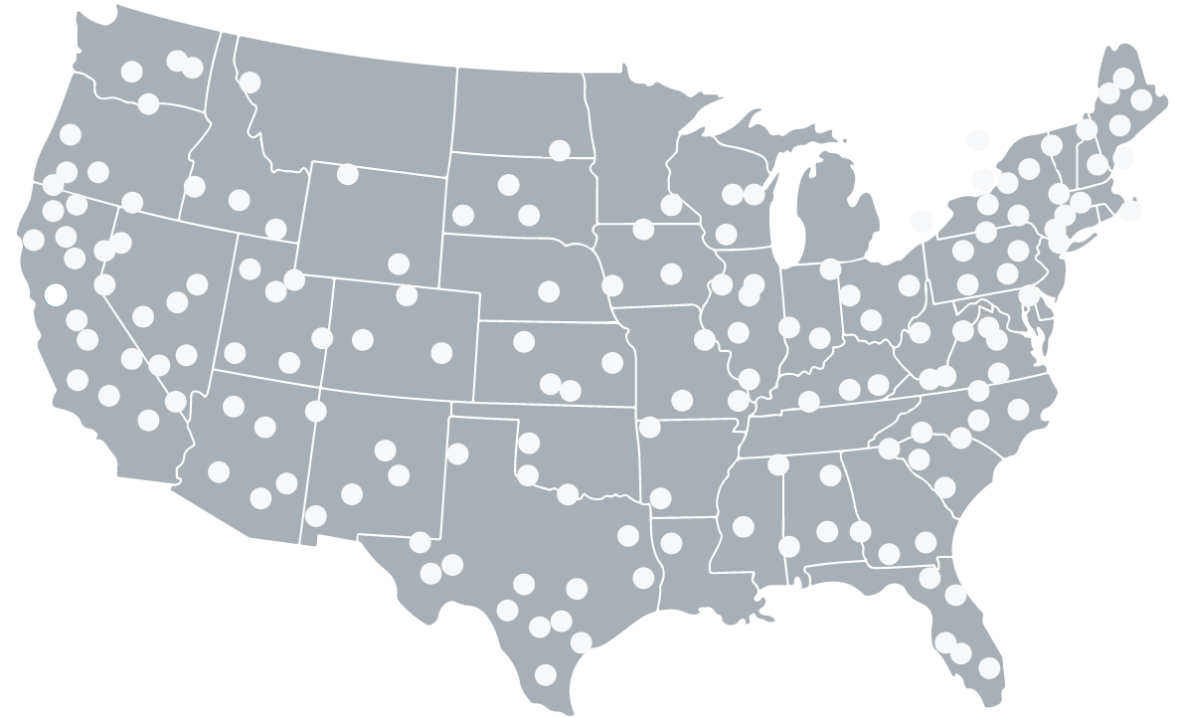
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# NATIONWIDE APPROVALS

## NEARBY APPROVALS:

- City of Fort Worth
- Dallas
- Austin
- San Antonio
- Houston
- Arlington
- Frisco
- Fayetteville
- NTMWD
- TRA Maintenance
- Irving
- Grand Prairie
- Wichita Falls
- Tulsa
- Shreveport
- And more!



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# THIRD-PARTY TESTED



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# SPRAY-IN-PLACE PIPE (SIPP) REHABILITATION

## HIGH-LEVEL APPROACH

- Computer precision
- 200 mils in single coat
- Global monitoring via web app
- Return-to-service within hours



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# SIPP REHABILITATION

BEFORE



DURING



AFTER



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# SPRAY-IN-PLACE PIPE (SIPP) REHABILITATION

## 3 SIPP CAPABILITIES CHANGE THE LINING GAME

- 100% Bonded to Host
- Through 90° and 45° Bends
- No blocking Lateral Connections



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Post SIPP application



# SPRAY-IN-PLACE PIPE (SIPP) REHABILITATION

## THE FUTURE OF TRENCHLESS TECHNOLOGY

- Rehab via trenchless technology
- Saves time and money
- Long-term corrosion protection
- NSF/ANSI/CAN 61 and 600



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# SIPP VS. PIPE REPLACEMENT COMPARISON



	
SIPP EPOXY CLEANING AND LINING	TRADITIONAL EXCAVATION & REPLACEMENT
TIME REQUIRED	
3 TO 5 DAYS	4 TO 6 WEEKS
ACCESS REQUIREMENTS	
4 POINTS NEED 3 FT OF ACCESS	TRENCH ENTIRE STREET CAUSES SEVERE DISRUPTION







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# SPECIFICATION DETAILS

## AWWA M-28

Specifies ASTM F-1743 as Class IV Structural Lining Standard

## AWWA PCC-2

Pressure piping, equipment repair

## AWWA F 12 16

Inversion, curing of resin-impregnated tube

	ASTMF-1743	SPRAY-IN-PLACE	VALUE DIFFERENCE
Tensile Strength	3,000 psi	7,000 psi	+133%
Flexural Strength	4,500 psi	11, 000 psi	+144%
Compressive Strength	Not listed	12,000 psi	
Flexural Modulus	250,000 psi	425,000 psi	+70%

AWWAM28 Standards for rehabilitation of water mains. This specifies ASTM F-1743 as the Class IV Structural Lining Standard.



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631-256-6046



400' of 24" CI Pipe

TX



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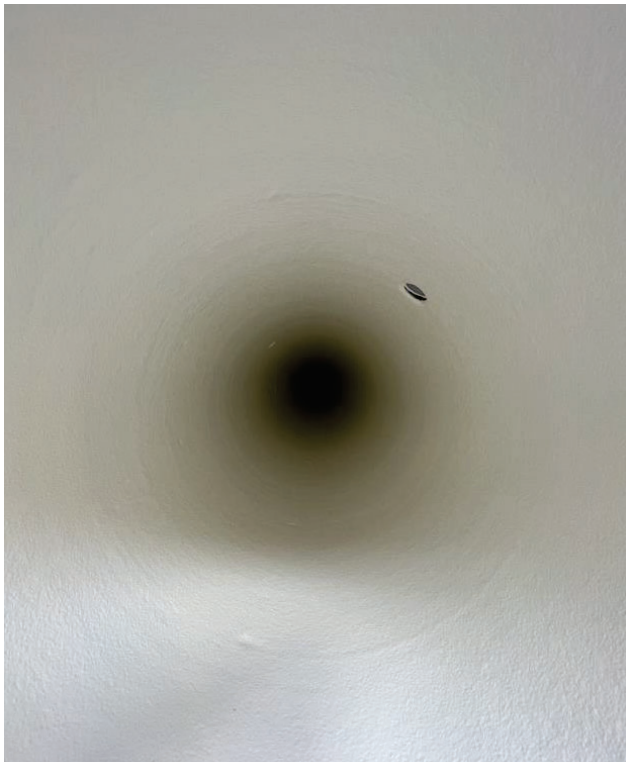
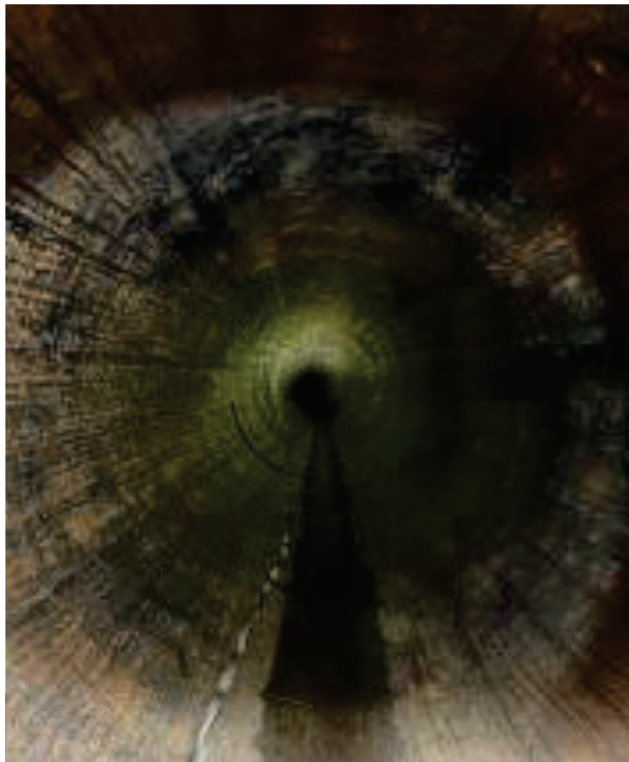
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# CITY OF HOUSTON, TX CAST-IRON PIPE LINING

NOMINATED FOR 2024 UIA WATER PROJECT OF THE YEAR



CLIENT TYPE  
**MUNICIPAL**

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MARKET  
**POTABLE WATER**

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LOCATION  
**HOUSTON, TX**

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PRODUCTS USED  
**301-01 NSF CERTIFIED**



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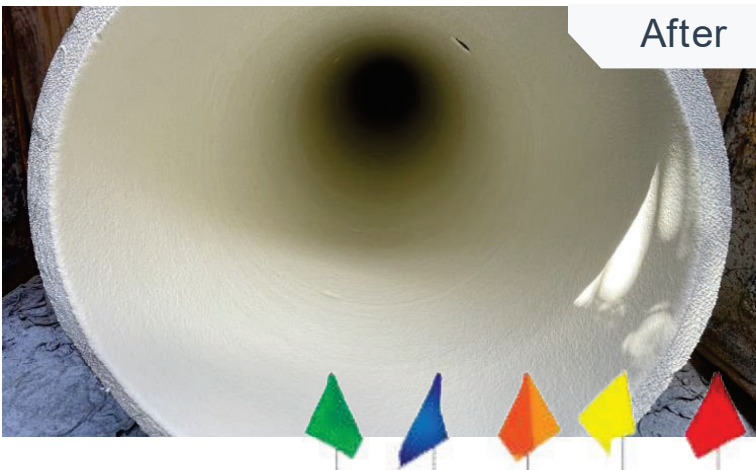
# CITY OF HOUSTON, TX CAST-IRON PIPE LINING



Drag scrapers



Before



After



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# CITY OF HOUSTON, TX CAST-IRON PIPE LINING



## REHABILITATING A CRITICAL 24-INCH TRANSMISSION MAIN

- Highly corroded with “kicked” areas
- Houston Water considered seals but went with rehab
- Agreed to SIPP after demonstration



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# CITY OF HOUSTON, TX CAST-IRON PIPE LINING



## EXPERT APPLICATION IN CHALLENGING ENVIRONMENT

- Congested downtown area
- July; internal temp. of 97°F

## ADHESION RESULTS

- 50 mm pull — 360 psi
- 50 mm pull — 383 psi
- 30 mm pull — 460 psi



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# QUESTIONS?

**REACH OUT TODAY!**

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