# Overview of 54-Inch Main Break

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March 26, 2025

# Overview of 54-Inch

- On February 17, 2025, the 54-inch transmission main experienced a catastrophic break at the intersection of Beard Street and Rowan Street in Southwest Detroit.
- The 54-inch transmission main was constructed in 1930 and the pipe material is welded steel.
- The failure was along the longitudinal weld and was ~9 feet in length at the 6 o'clock position.

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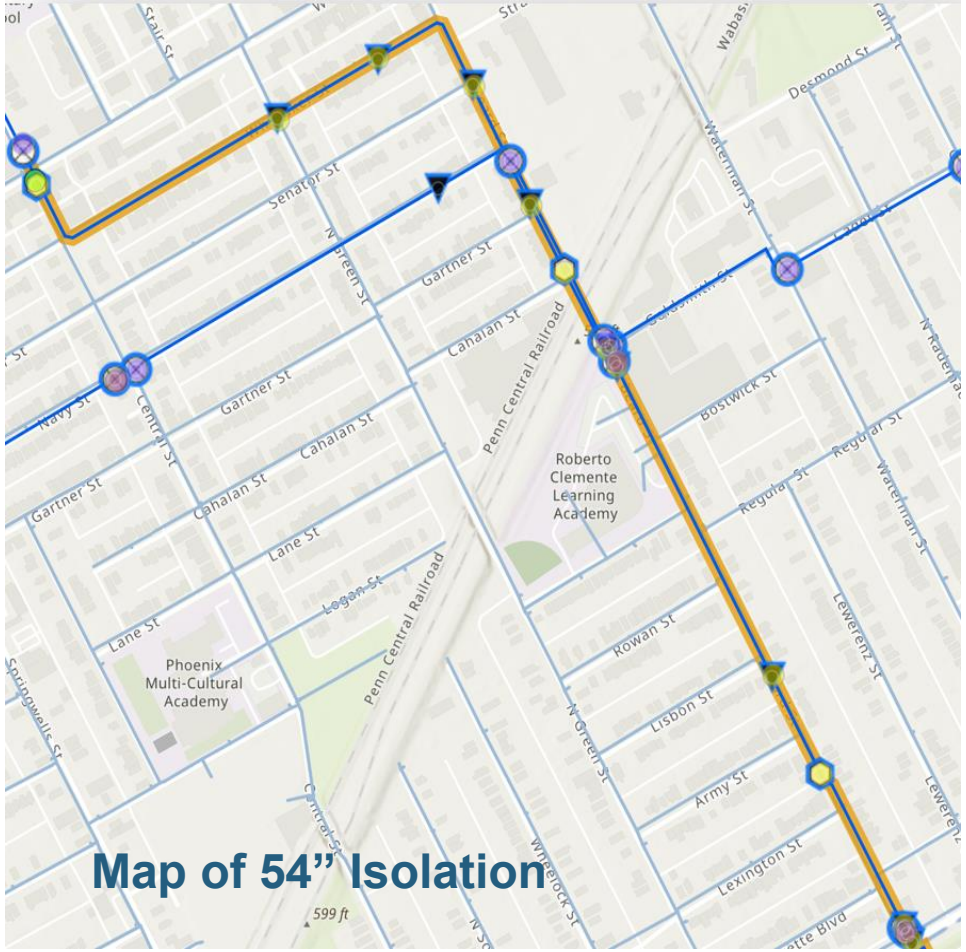
# Water Main Break Location




Map of 54” Isolation

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# Response Timeline of First 48 Hours

**February 17, 2025**

Notification to GLWA at approximately 4:00 am

**February 17, 2025**

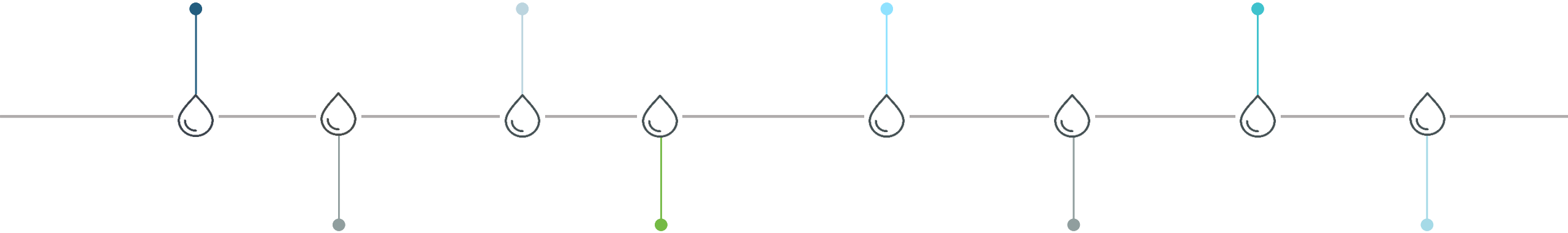
GLWA located isolation valves at approximately 6:30 am

**February 17, 2025**

Dewatering at Break Location started at approximately 5:00 pm

**February 18, 2025**

GLWA starts Excavation & Shoring to Remove the Broken Main at approximately 1:00 pm



GLWA on site at approximately 5:35 am

**February 17, 2025**

GLWA initial isolation at approximately 7:30 am

**February 17, 2025**

GLWA full isolation at approximately 12:20 pm

**February 18, 2025**

Repair of Main Continues

**February 18, 2025**

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# Repair of Water Main

| | |
|---|---|
| Friday, February 21 | 15-feet of 54-inch pipe was installed |
| Monday, February 24 | New access hatch was installed on the new section of pipe |
| Thursday, February 27 | Concrete encasement was placed |
| Friday, February 28 | Backfill of the excavation started |
| Saturday, March 1 | DWSD's 6-inch water main repair started |
| Saturday, March 8 and 9 | DTE repaired the gas main |
| Monday, March 10 | Roadway and sidewalk restoration started |
| Thursday, March 13 | Beard Street reopened with a temporary road |
| Road and green space restoration is scheduled to be completed by end of May 2025 | |

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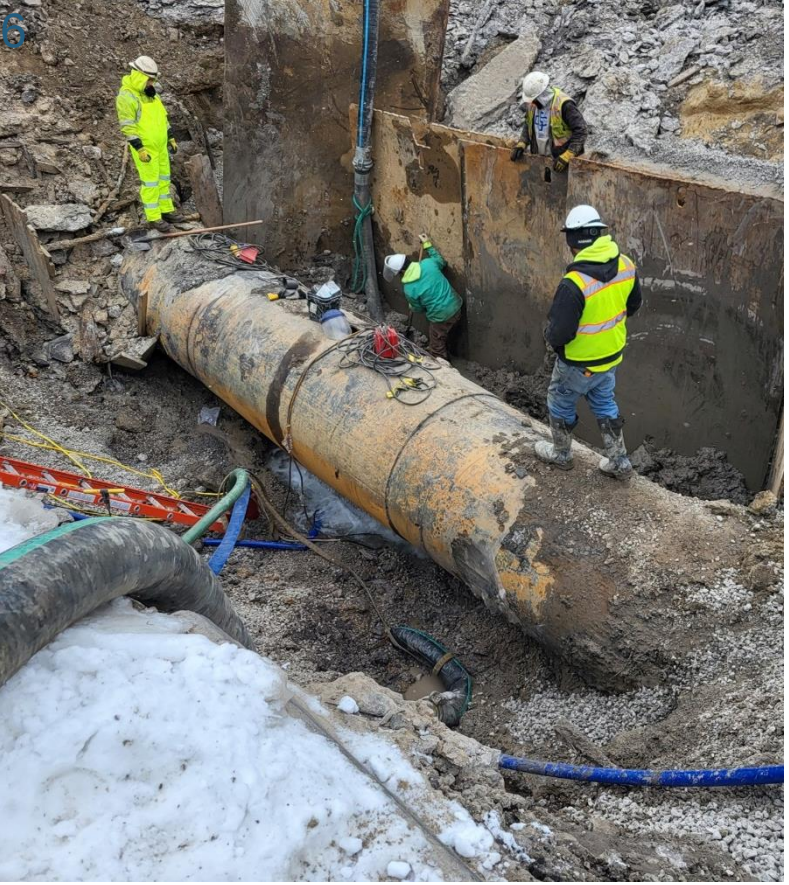

# Pipe Isolation & Repair


# Repair In Process


# Site Restoration

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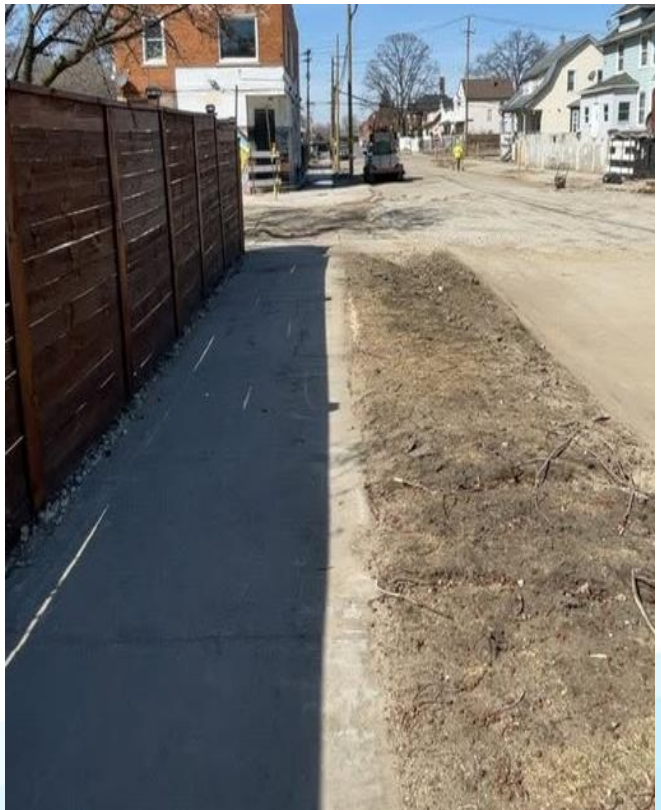

# Temporary Road Restoration

# 54-Inch / 66-Inch Renewal Options

Water Engineering and Operations are going to complete field testing to assess the potential abandonment section. If field testing indicates mains along Jefferson (without Beard Main) can supply the Water Resource Recovery Facility, leave isolated section of Beard/Rowan out of service until pipeline renewal is completed.

Water Engineering is evaluating renewal options:

- Carbon Fiber Reinforced Polymer (CFRP)
- High-Density Polyethylene (HDPE) Slip Lining
- Steel Slip Lining
- All proposed alternatives are American Water Works Association (AWWA) Class 4 Lining Technologies, meaning that the liner pipe (HDPE, steel, CFRP) is a fully structural pipe liner that can support internal pressure of pipe without relying on the host pipe.

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