



Tireman/Greenfield Sinkhole

Quick Facts

- ✓ Sinkhole occurred March 3, 2016 on eastbound Tireman Ave near Greenfield Rd
- ✓ Failures in 24-inch and 7-foot-9-inch sewers resulted in the sinkhole
- ✓ Tireman Ave is closed between Greenfield Rd and Montrose St
- ✓ Sinkhole area of Tireman at Greenfield Rd secured with fencing
- ✓ Excavation and investigation completed in March and April 2016
- ✓ Repair work projected for May - July 2016
- ✓ Street and sidewalk restoration expected for July - August 2016

A sinkhole occurred on eastbound Tireman Avenue near Greenfield Road on March 3, 2016. The Detroit Water and Sewerage Department (DWSD) is expected to **complete the repair and restore the road surface and sidewalks by August**. The area has been secured for safety.

DWSD appreciates the patience of residents and others who live or work in the area and all who travel along Tireman and Greenfield. The **repair does not affect water and sewer service**. It also **does not impact water quality**. DWSD's priority is to ensure the area remains safe and the repair is completed effectively.

The sinkhole was caused by the **collapse of a 24-inch sewer that connects to a 7-foot-9-inch sewer underneath Tireman at Greenfield**.

Upon notification, a DWSD contractor video-inspected to determine the condition of the 24-inch and 7-foot-9-inch sewers. It was discovered – **in addition to the collapse of the 24-inch sewer tie – the 7-foot-9-inch sewer also developed hinged cracks with significant openings** between the cracks and missing pieces. The 7-foot-9-inch sewer failed section is where the sewer bends and ties into the Greenfield sewer on the west side of the intersection of Greenfield and Tireman. The 7-foot-9-inch sewer is at a depth of approximately 40-feet below the road surface. With this discovery, the **required repair method and resources became more complicated**.

A DWSD contractor was directed to submit a proposal to repair the 24-inch and 7-foot-9-inch sewers. Additionally, the contractor was directed to inspect the entire length of the Tireman sewer from Greenfield to the diversion chamber west of Burt Road.

The contractor prepared and **submitted a proposal with a schedule of work** along with investigatory and survey tasks on March 21. DWSD reviewed and approved the proposal on March 23, and directed the contractor to start the work. After it completed the surveys, a revision to the original proposal was required. The amendment was due to a soil boring report (i.e., soil condition) and survey of the sewer alignment.

The **original sewer shaft**, which was designed to be rectangular with a trench box, **can no longer be used**.

The actual sewer alignment was determined to be a **few feet south of where originally thought**, which meant the rectangular shaft will **conflict with an existing high pressure gas main**. Based on these conditions, the contractor revised the original proposal to **replace the rectangular shaft with a more suitable circular shaft** that fits in the available space (with no conflict with the high pressure gas main).

The **repair was placed on hold while the engineering work required for the shaft and soil stabilization was being designed**. The inspection for the remainder of the Tireman sewer has proceeded during this time. The contractor is **scheduled to re-start the repair work on May 2**. Based on the submitted schedule, **the work is to be completed the week of July 4, 2016**. However, **DWSD is projecting additional time of 4-6 weeks** for unforeseen delays (i.e. inclement weather, technical difficulties, etc.).

