CASE STUDY
PILOT TUBE | MICROTUNNELING

Project Name:
Des Moines WRA Ingersoll Run Outlet Sewer Segment 1

Prime/Sub Contractors:
Minger Construction Co., Inc. - Jordan, MN

Location:
Des Moines, IA

Ground Conditions:
Wet clay

Akkerman Equipment:
4800 GBM System, P250D Power Pack, PCH 44

Pipe:
42-in Hobas™ FRP - Jacking Pipe

Total Length/Longest:
3 x 60-LF crossings with minimal clearance

PROJECT OVERVIEW

These (3) - 0% grade crossings were installed by Minger Construction in just two weeks leaving a mere 7-inches of horizontal clearances between each of the 42-in pipes. Although short in length, pilot tube microtunneling was selected to directly install the final product pipe underneath an existing box culvert so that flow would not be disturbed.

THE CHALLENGES

- Required three 60-LF trenchless crossings with only 7 inches of horizontal clearance between each 42-in pipe
- Crossings were installed at 0% grade, demanding extreme precision
- Installation took place beneath an existing box culvert, requiring careful planning to avoid disrupting flow
- Wet clay conditions added complexity to line control and stability during installation

THE SOLUTION

- Minger Construction used the Akkerman 4800 GBM System with a P250D Power Pack and PCH 44 for guided pilot tube microtunneling
- Directly installed final product pipe to avoid a second pass, improving efficiency and reducing disturbance risk
- Pilot tube technology enabled highly accurate line and grade control despite wet clay conditions and tight spacing
- Completed all three crossings in just two weeks, with no disruption to the existing culvert infrastructure

OUTCOME

- Successfully installed all three 60-LF 42-in. crossings with only 7 inches of separation between pipes
- Maintained precise 0% grade alignment under tight spatial constraints and challenging wet clay conditions
- Completed trenchless installation in just two weeks, minimizing impact to surrounding infrastructure
- Prevented disruption to existing box culvert flow through accurate, single-pass pilot tube microtunneling
- Demonstrated the effectiveness of Akkerman's guided boring technology in precision-critical urban sewer applications

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