CASE STUDY
TUNNEL BORING | CONVENTIONAL TUNNELING

Project Name:
Taxiway DS East–West Gates Tie-In Project

Prime/Sub Contractors:
Iowa Trenchless – Panora, IA

Location:
Denver International Airport, Denver, CO

Owner:
Airport Authority

Ground Conditions:
Claystone with large boulders

Akkerman Equipment:
WM480C-I Tunnel Boring Machine.
5000 Pump Unit and TBM accessories

Pipe:
48-in ID Reinforced Concrete Pipe (59.5-in OD)

Total Length/Longest:
365 LF

PROJECT OVERVIEW

Iowa Trenchless completed conventional tunnel boring operations for the Taxiway DS East–West Gates Tie-In Project at Denver International Airport in Denver, Colorado. The project required installation of a storm sewer and deicing conveyance system beneath active taxiway infrastructure.

Operating in difficult ground conditions featuring claystone and large boulders, the crew advanced the tunnel to a deep receiving shaft while maintaining alignment accuracy. The installation supports critical airport infrastructure while minimizing disruption to ongoing operations.

THE CHALLENGES

- Excavating through claystone with large obstructions and boulders
- Maintaining line and grade accuracy beneath active airport taxiways
- Advancing to a deep receiving shaft under constrained site conditions
- Ensuring uninterrupted airport operations during construction

THE SOLUTION

- Utilized the Akkerman WM480C-I TBM to manage excavation in mixed ground conditions
- Deployed a 5000 Pump Unit to maintain consistent advancement and production
- Applied controlled tunneling methods to maintain alignment accuracy through obstructions
- Executed installation strategies to minimize surface disruption in an active airport environment

OUTCOME

- Successfully completed the 365 LF tunnel installation beneath airport taxiways
- Maintained accurate line and grade through claystone and boulder conditions
- Achieved consistent excavation performance despite large obstructions
- Minimized disruption to airport operations and surface activities
- Enabled installation of critical storm sewer and deicing infrastructure



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