

CASE STUDY

MICROTUNNELING | SLURRY MICROTUNNELING



Project Name:
Paradise Whitney Interceptor



Prime/Sub Contractors:
Pipe Jacking Unlimited Inc./Frontier-Kemper Constructors Inc. JV



Location:
Las Vegas, NV



Owner:
Clark County Water Reclamation District



Ground Conditions:
Up to 10,000 psi Caliche, Low blow count Soils and Sticky Clay



Akkerman Equipment:
Akkerman SL60C Microtunneling System



Pipe:
62.9-in. ID Flowtite®



Total Length/Longest:
6,600-lf./1,500-lf.

PROJECT OVERVIEW

The PWI was a multi-year project that consists of 13 miles of large diameter pipeline constructed from Valley View Boulevard and Serene Avenue in the southwest valley to Nellis Boulevard and Flamingo Road in the southeast valley. The project alignment is generally southwest to northeast in the area to south of the Strip and McCarran Airport.

Portions of the collection system in the project area are at, and even above capacity. The project will ensure adequate capacity and a more reliable system into the future.

THE CHALLENGES

- Working in residential and commercial areas along heavily traveled roads with varying ground conditions
- The ground varied from very soft, saturated material to hard materials
- Groundwater
- Logistical challenges

THE SOLUTION

For the trenchless installations, Pipe Jack Unlimited/Frontier-Kemper used a combination of earth pressure balance machine (EPBM) and slurry microtunnel boring machine (MTBM). The EPBMs(60-, 66- and 72-in.) were designed and manufactured by Tony DeAguiar and Pipe Jacking Unlimited while the MTBM (60-in.) was manufactured by Akkerman Inc.

The SL60 MTBM from Akkerman includes a 250-hp drive train as opposed to a standard 150-hp drive train. “Having more horsepower allows the machine to work in more challenging geology and on longer drives,” said Chris Sivesind, Sales Engineer for Akkerman.

OUTCOME

For CCWRD, the benefits of trenchless construction

became apparent. In fact, two portions of the project were changed from open cut to trenchless to minimize traffic disruption and impacts on residents. These included a single 830-lf drive on Warm Springs Road and three drives totaling 2,700 lf along East Eldorado Lane.

“The CCWRD has been an excellent owner to work for,” Marshall said. “When issues arise, they are addressed promptly and as a team, we work through them together to find the best solution for the project without posturing or wasting time. The sign of a good working relationship isn’t only when things go as expected, the true test is how everyone works together when there is an issue, and I can say that the CCWRD, Las Vegas Paving, Corp. and Contri Construction team that we are a part of is one of the best I have worked with in many years.”



source: Public Works Magazine



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