

Drainage Tunnel and Pump Station Overview

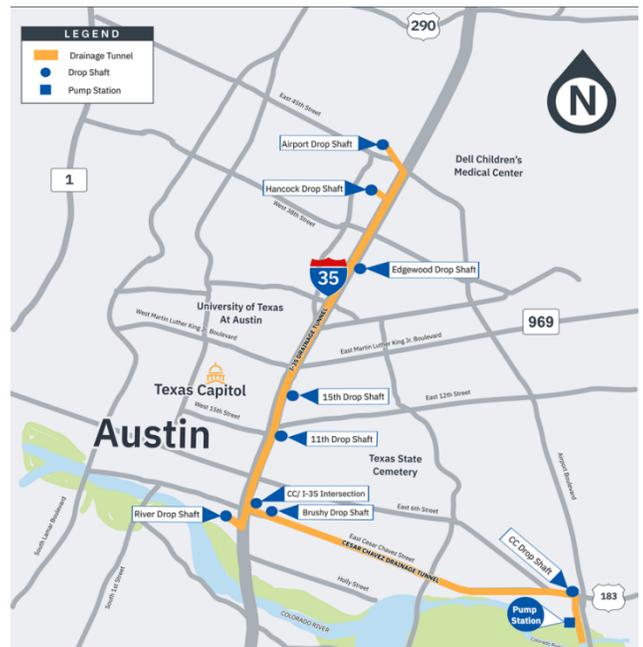
The Texas Department of Transportation (TxDOT) will reconstruct and lower I-35 as a part of the I-35 Capital Express Central project. The planned improvements will require effective flood and stormwater management.

This segment will construct 6.5 miles of 22-foot diameter drainage tunnels between Airport Boulevard and Holly Street; and along Cesar Chavez Street, from I-35 to US 183. Access shafts will also be added along I-35 to ensure proper maintenance and operational access to the new infrastructure. The segment will also include the construction of a pump station to improve stormwater management along the corridor.

Construction Milestones

Work on this project will take place in four phases:

- Phase I: Utility relocation and site work at Airport Boulevard, 15th Street, Brushy Street and River Street drop shafts and the Cesar Chavez/I-35 junction; excavate at the Airport Boulevard and 11th Street drop shafts and Cesar Chavez/I-35; install geotechnical monitoring equipment.
- Phase II: Excavate 15th Street, Cesar Chavez Street and River Street drop shafts.
- Phase III: Utility relocation at Hancock Center, Edgewood Avenue and 11th Street drop shafts; launch tunnel boring machines; excavate the Hancock Center, Edgewood Avenue and Brushy Street drop shafts.
- Phase IV: Establish tunnel connections from drop shafts; restore drop shaft sites; install final tunnel lining.



Details

Construction is funded by TxDOT and the Capital Area Metropolitan Planning Organization (CAMPO). Construction start is May 2025.

The contractor for the drainage tunnel is SAK/Shea JV and the contractor for the pump station is Webber Waterworks.

Contact Information

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Technical Terminology



Figure 1- Airport drop shaft

Drop Shaft: A drop shaft is a vertical tunnel that connects the street level to the underground drainage tunnel system. It is designed to help the water flow into the tunnel efficiently. Drop shafts will also be used as access points to the new infrastructure to ensure proper maintenance and operational access once construction is complete.



Figure 2- Vibration monitor



Figure 3- Constructed tunneling boring machine



Figure 4- Planned pump station

Geotechnical Monitoring

Equipment: Equipment that monitors during construction activities, including the use of vibration monitors, seismic equipment, and regular inspections to measure vibration levels. If movement exceeds established thresholds, TxDOT will halt activities until mitigation measures can be implemented.

Tunnel Boring Machine (TBM): A cylindrical machine that drills through rock with a spinning cutter and uses hydraulic presses. As it moves forward, the TBM builds the tunnel by placing concrete rings to form the walls. The TBM will build the drainage tunnel and will then be removed.

Pump Station: A facility that pumps water from the drainage tunnel into the pump station where debris will be removed and filtered. The facility's operations will be used to move water into a treatment phase before being released into the Colorado River.