

## Downtown Dallas Transit Improvement D2 Program Dallas Area Rapid Transit (DART)

**Location:** Dallas, TX

**Date:** 2016 - Present

**Structure:** Running Tunnels and Stations

**Length:** Approx. 5,900 ft (1,798 m)

**Cross-Section:** 23.5 ft width x 23.5 ft height  
(7.15 x 7.15 m)

**Geology:** Fill, Alluvial deposits and Austin Chalk

**Cost:** \$1.2 billion

**Client:** HDR/HNTB

**Owner:** Dallas Area Rapid Transit

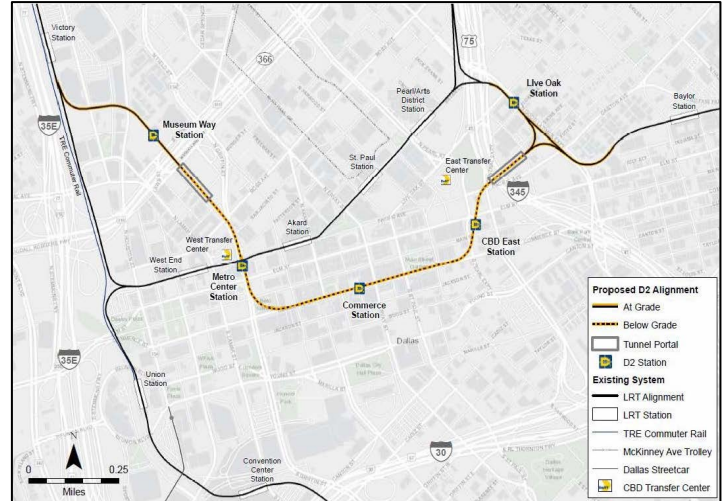


Figure 1. General alignment plan view (Courtesy of DART).

### Services: Preliminary Engineering for Underground Stations and Running Tunnels at 10% Completion Level

The Dallas Area Rapid Transit will extend its existing light rail system from west of the Interstate 345 viaduct as a U-section and transition underground approximately under S Harwood Street for just over a mile; it emerges north of Pacific Ave. as a U-section again before transitioning to an at-grade configuration. The proposed alignment assumes underground construction for Metro Center Station, Commerce Station and CBD East Station, mined tunnels and U-sections extending westward and eastward toward East and West Portals.

Gall Zeidler Consultants (GZ) is providing preliminary engineering for mined Sequential Excavation Method running tunnels and underground stations, review of the vertical and horizontal alignments, evaluation of ground conditions and ground support requirements, mitigation strategies for SEM tunneling, constructability reviews of mined structures, assistance in the development of Project Specifications, Design Criteria, and tunneling Risk Register, as well as, the development of a series of Technical Memoranda for incorporation into the project's Constructability Assessment Report. The Technical Memoranda included assessment of underground excavation methods, waterproofing of underground structures, and evaluation of existing conditions.

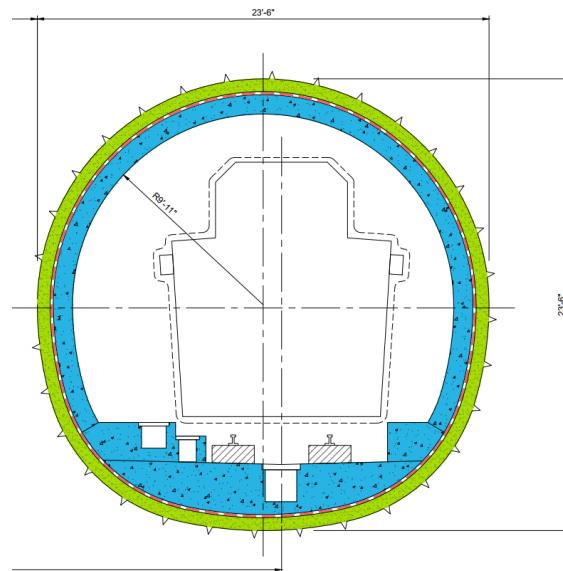


Figure 2. Typical SEM running tunnel cross section.