



FM 1960

Houston, TX

The intersection of Texas State Highway 249 and Farm Road (FM) 1960 is being upgraded from at-grade to grade-separated. Texas State Department of Highways and Public Transportation plans call for the new Highway 249 to fly over the intersection while FM1960 becomes a depressed roadway. Due to the presence of a major shopping mall, a large amount of traffic on the frontage roads also has to be accommodated at-grade requiring two new bridges to cross the depressed portion of FM 1960. The constraints associated with limited space, high traffic volume, and associated construction staging were solved by using permanent tiedback supported walls along both sides of the depressed roadway.

After submitting the low bid for furnishing and installation of all soldier beams, lagging and permanent tiebacks for the wall, Schnabel Foundation Company designed the permanent tiebacks and proposed several changes to Texas DOT's scheme in order to improve overall constructability. The tieback design was optimized to match the capability of Schnabel equipment developed specially for predominantly clayey soil conditions like those found at this site. This combination of design and construction responsibility for the key aspects of the system allowed Schnabel to complete the installation with a favorable impact on the construction schedule.

Use of permanently tiedback walls effectively isolated the work area from traffic on the frontage roads, minimizing the disruption of the busy intersection. Excavation and construction of the tiedback walls for the depressed roadway were able to proceed right through the end-of-year holiday season with minimal effect on access to the shopping mall at its busiest time of year.

Owner: Texas Department of Transportation
 Design Engineers: Texas DOT and Schnabel Foundation Company
 General Contractor: McCarthy Brothers Company
 Tiedback Wall Contractor: Schnabel Foundation Company

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