



Technology

The vehicles and systems technologies to be utilized for this project would be identical to the light rail services currently operating in the DART Service Area. The electrically powered vehicles collect primary electrical power [845 Volts-Direct Current (Vdc)] via a pantograph from an overhead contact system that distributes the power from wayside traction power substations. Vehicle control is primarily the responsibility of the light rail vehicle operator with guidance from a wayside signal system, grade crossing protection, and operating rules.

Fare Collection

Fare collection for the line would continue to use DART's current self-service, barrier-free concept. Fares and fare collection policies would be consistent with current operations. In accordance with current DART policy, LRT fares would be integrated and equal to the fares of local bus service.

Electric Power Substations and Special Trackwork

Approximately seven traction power substations (TPSS) would be located along the proposed project to supply sufficient power to meet the operating plan. The substations would be 2.5 megawatt prefabricated units. The proposed locations for the TPSSs, shown in **Table 2-3**, have been identified to avoid impacts. The actual number and location of substations would be refined and confirmed during detailed final design. TPSS locations are typically spaced about 7,000 feet apart and have a typical 80 feet by 40 feet dimension. To the extent possible, TPSS locations would be accommodated within DART right-of-way. The DART mitigation monitoring process will track any changes in the locations and identify mitigation, if needed. An environmental study will be submitted to FTA when appropriate.

TABLE 2-3 TRACTION POWER SUBSTATIONS		
Number	Location	Approximate Civil Station
1	West of west levee of Trinity River, under LRT bridge	Station 83 + 60
2	East of University of Dallas Station platform	Station 157 + 00
3	NE corner Lake Carolyn Pkwy. / Las Colinas Blvd. intersection	Station 228 + 00
4	West of North Las Colinas Station platform, S. of LRT tracks	Station 298 + 60
5	North of Hidden Ridge Drive, west of LRT line	Station 368 + 50
6	West of Hurd Drive	Station 429 + 00
7	West of Bush Turnpike, on Belt Line Station site	Station 484 + 50

Source: DART, 2006

The track layout would incorporate special trackwork (switches) to permit service under track outage conditions and to facilitate LRT operating moves to reverse train direction. Special trackwork would be located where trains can most conveniently switch from one track to the other based on LRT operating requirements. Refined TPSS locations will be determined during the subsequent Final Design phase.

2.2.6 Rail Operating Facility

The current DART fleet of 95 LRT vehicles will expand to 160 with the addition of the Southeast Corridor and Northwest Corridor lines in 2008-2009.

The Irving/DFW Line project will make use of two operating facilities that have already been environmentally cleared. The original Service & Inspection (S&I) Facility has been expanded to accommodate Southeast Corridor fleet requirements, and fleet expansion for other LRT lines that are in operation. The expanded S&I Facility is able to maintain 125 vehicles. No additional property was required for this expansion. The entire S & I Facility was environmentally cleared in the South Oak Cliff Corridor EIS (1991). A new S&I yard lead was environmentally cleared as part of the Southeast Corridor EIS (2003). The S&I Facility provides major maintenance functions on light rail vehicles, as well as cleaning, washing, and painting. The S&I Facility also includes the

