

Appendix 2 – Light Rail Transit Technology

The information on the following page presents the attributes of light rail technology as presented to the STAC.



Light Rail Transit (LRT)

A Technology Brief

Description

Light Rail Transit:

- can operate in a separate guideway or in dedicated lanes on streets, mixed with automobile traffic
- may be implemented in railroad rights-of-way with long-distance passenger rail or freight traffic under special circumstances; parallel operation is not always acceptable by railroad operators or regulatory agencies
- Vehicles, which are powered by overhead electricity, can be linked together in units of 2 to 3 light rail cars



Typical Service Characteristics

Corridor lengths: 5 to 20 miles

Station spacing: 1/4 to 2 miles

Service frequency: 5 - 15 minutes peak
10 - 20 minutes off peak

Average operating speed: 15 - 30 mph

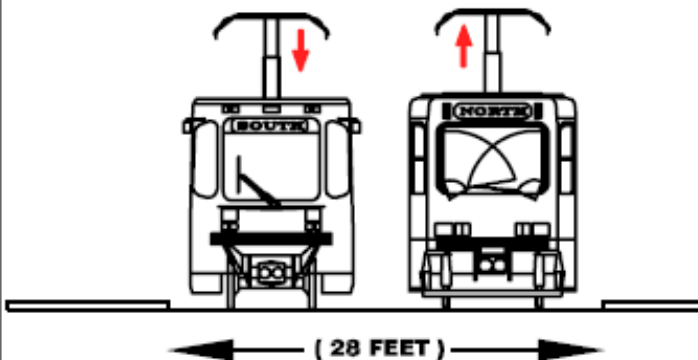
Maximum speed: 65 mph

Typical Costs

Capital: \$25 - \$60 million per mile (double track)
(Exact costs contingent on environmental constraints, number of stations at and above grade, land/Rights of way costs, topography, and other site specific design considerations).

Operating: \$230 per hour per train, which may be one rail car or several linked rail cars.

Typical Cross Section



Typical at-grade cross section requires at least 28 feet of track way. Wider sections are needed at stations and passing track.

Important Notes

Rights of way and land purchase costs are contingent on the location of the corridor, the availability of land and cost to use existing rights-of-way, and whether private land has been reserved or dedicated for a transit alignment and stations.

Land Use and Light Rail Transit (LRT)

LRT typically facilitates transit-oriented development within 1/2 mile of station locations. This technology offers a significant time competitive advantage over buses in mixed traffic and has proven to induce substantial private sector development investment.