



Bus service increases about 6% between the No-Build and Build alternatives, while light rail service increases about 40%. Light rail service increases significantly, because the service on the Irving line is assumed to run all the way from the Belt Line Station to the Parker Road Station on the Red Line, increasing system light rail mileage by about 40% over the No-Build Alternative. The service levels for commuter rail and paratransit are not expected to change between the two alternatives. However, the costs for these two modes are still estimated so that the final O&M costs represent systemwide costs.

The appropriate O&M cost variables were then applied to the mile, hour, and peak vehicle estimates to calculate an estimate of annual operating costs. The cost factors for bus and light rail are based on total vehicle hours and total vehicle miles (rather than revenue vehicle miles and hours), since the ridership model produces total mile and hour estimates for these modes. The bus and light rail estimates also include an estimate of fixed and administrative costs based on the number of forecasted peak vehicles. Using a three variable model for these two modes (the bulk of DART's service and the only modes that vary across the alternatives) allows the O&M cost model to capture shifts in operating speed and peak to base ratio across time and across alternatives. In fact, the forecasts indicated that the average speed of DART's bus service will decrease in the future, while the average speed of the light rail service increases.

The cost factors for commuter rail and paratransit are based only on revenue vehicle hours, since the ridership model produces only this forecast variable for these two modes. Since the amount of service for these modes does not vary between alternatives (and does not vary much from actual service today), the simpler variable model will still capture costs at a sufficient level of detail.

Table 2-5 presents the O&M cost variables for each mode that are used to estimate the systemwide O&M costs.

TABLE 2-5 OPERATING AND MAINTENANCE COST VARIABLES				
Variable/Mode	Bus	LRT	CRT	Paratransit
Cost/Vehicle Hour	\$25.11	\$27.36		
Cost/Vehicle Miles	\$1.72	\$2.91		
Cost/Revenue Hour			\$1,16173	\$70.51
Cost/Vehicle	\$116,762	\$558,558	8,785,636	12,269,284

Source: Nancy R. Edmonson, based on DART data, 2006

The cost estimates for the commuter rail and paratransit modes are based on the forecasted revenue hours for each alternative and the budgeted cost/revenue hour for FY 2006.

Table 2-6 presents annual O&M cost estimates by alternative and mode.

TABLE 2-6 OPERATING AND MAINTENANCE COSTS CONSTANT \$2006		
	Alternative	
	No Build	Build
Mode		
Bus	\$218,551,304	\$231,777,602
Light Rail	\$ 90,133,061	\$126,636,223
Commuter Rail	\$ 23,549,487	\$ 23,549,487
Paratransit	\$ 29,520,088	\$ 29,520,088
Systemwide	\$361,753,940	\$411,483,400

Source: Nancy R. Edmonson, 2006

