



The study area for the Denton County Transportation Authority (DCTA) Bus and Paratransit Study (B&PS) is equivalent to the municipalities of Denton, Highland Village and Lewisville, Texas. The purpose of this study was to assess bus and paratransit needs within the service area, and to provide recommendations for improvements and implementation of these services within a five year timeframe (2005 – 2010). The study intended to accomplish several goals, including maximum coverage within participating cities, a moderate level of service depending on demand, maximum cost-effectiveness and opportunities for federal funding, a focus on linkages between local service and regional bus and rail, seamless connections with the other regional transportation systems and a focus on activity centers which generate large numbers of trips.

To gain insight to the study area, the Consultant Team began the study with a Review of Previous Work. The Consultant Team then undertook a Travel Demand and Service Opportunity Assessment which explored the characteristics of the study area that generate travel demand and that may lead to additional opportunities for the provision of transit services within the DCTA participating cities. Existing transit services within the DCTA participating cities were also reviewed in order to identify unmet needs within the study area. These included the need for more frequent local service in Denton, the need for fixed-route bus services in Lewisville, the need for better paratransit services, and the need for commuter transit linking Denton, Highland Village, Lewisville and the Dallas Central Business District.

Based on these analyses, the B&PS developed and packaged three service options for DCTA's bus and paratransit services. These service options meet the goals of the study by addressing needs and deficiencies in the existing bus and paratransit network, creating a bus and paratransit network that is convenient and user-friendly while at the same time cost-effective, addressing the demand for "traditional" (i.e. Denton and Lewisville/Highland Village to Dallas) as well as "reverse" (i.e. Dallas to Lewisville/Highland Village and Denton) commuting patterns within the service area, integrating these bus and paratransit services with services provided by other transit operators in the region, and laying the groundwork for the implementation of future regional rail service in Denton County by preparing a feeder bus network that will tie into and support future rail as well as introducing commuter bus service that will build a market regional rail service. Each option is composed of a variety of bus transit service elements (routes, route types, spans and days of service, frequency of service, etc.) and the capital facilities required to support them.

There are three basic route types that comprise the proposed fixed-route network: **Local** transit service is municipal in nature and involves frequent stops and low speeds designed to pick up and deliver passengers close to their destinations or origins. It is also designed to feed into Regional Express bus service. It is equivalent to the LINK bus service currently operating in Denton; which has been re-designed to improve the overall operating efficiency of the system. Local fixed-route service in Lewisville, which currently does not exist, is also provided in Options Two and Three. **University** services are generally shorter circulator routes that serve the UNT campus, outlying campus facilities and student housing developments in Denton. University services are operated on a contractual basis. This service is currently known as E-trans and is designed to serve UNT students, faculty and staff. **Regional Express** service has fewer stops and a higher operating speed than local service. This service is designed to give commuters an option in their journeys to work in Dallas, university students an option in their journeys to class,



and transit-dependent persons access to services within the DCTA participating city area and to other parts of the region. This service facilitates transfers to other transit services, such as those provided by DART or TRE and is intended to serve as a “predecessor” to future rail service.

In addition to the fixed route network, ADA complementary and On-Call paratransit services are provided in all options. The amount and type of paratransit service provided in each option is directly affected by the expanse of the fixed-route network. Paratransit services to municipalities that are not part of DCTA, such as Flower Mound and Corinth, would continue to be provided on a contractual basis.

**Option One** is intended to be analogous to existing transit services with respect to hours of operation, service coverage and service frequency. This option also introduces Regional Express service between Denton, Lewisville/Highland Village, Carrollton and, during AM and PM peak periods, the Dallas central business district. The existing nine-route E-trans network serving UNT continues to operate at current levels of service.

**Option Two** expands service provided in Option One by increasing hours of service, introducing local bus service in Lewisville, and doubling frequencies of service on all routes. In Lewisville and Highland Village, the existing Dial-a-Ride service is replaced by two on-call zones and complementary ADA paratransit service is implemented. The E-trans network is also expanded.

**Option Three** increases service even further, expanding hours of operation from early morning to late night and introducing Sunday service. More routes are added to the network, including new regional express service from Lewisville/Highland Village to Irving and DFW airport. This option creates additional opportunities for commutes both to and from Denton County.

All three options include capital facilities necessary to support bus and paratransit services, including park and rides, transfer centers, shelters and benches, and bus operating and maintenance facilities. The three options also consider the capital equipment necessary to operate and maintain the proposed services, which include everything from bicycle racks on buses to shop tools to computer equipment. Each option also specifies the number and type of vehicles (rolling stock) needed to successfully provide service.

In addition to designing these service packages, the Consultant Team estimated ridership, operating costs, and capital costs for all three options (see **Table E-1** on the following page) and proposed a new fare structure to assist in funding the expanded services as well as bring DCTA’s fare policy in line with those of other regional transit agencies. Many riders of the existing LINK system expressed interest in daily and monthly passes, and these have been incorporated into the proposed fare structure, which is illustrated in **Table E-2**. University students, faculty and staff with valid university ID would continue to utilize all transit services free of charge, as provided for in the contracts between DCTA and UNT and Texas Woman’s University (TWU).



**Table E-1  
Annual Ridership, Operating and Capital Costs**

	Option One	Option Two	Option Three
<b>Total Annual Boardings</b>	1.6 million	2.3 million	2.6 million
<b>Annual Operating Cost</b>	\$6.1 million	\$9.4 million	\$12.8 million
<b>Estimated Annual Fare Revenue</b>	\$2.8 million	\$3.6 million	\$3.9 million
<b>Net Annual Operating Cost</b>	\$3.3 million	\$5.8 million	\$8.9 million
<b>Annualized Capital Cost</b>	\$1.6 million	\$1.8 million	\$2.5 million
<b>Total Annual Cost</b>	\$4.9 million	\$7.6 million	\$11.4 million

**Table E-2  
Proposed Fare Structure**

Fare Category	Current One-Way Fare	Proposed One-Way Fare
Adult	\$1.00	\$1.25
Reduced (elderly, disabled, youth)	\$0.50	\$0.60
Child	Free	Free
ADA Paratransit	\$2.00	\$2.50
Lewisville/Highland Village DAR	\$0.50	n/a
On-Call	n/a	\$2.50
Denton-Lewisville Express	n/a	\$2.50
Lewisville-Dallas Express	n/a	\$3.50
Denton-Dallas Express	n/a	\$4.50
Transfers to service of equal or lesser value within DCTA	n/a	Free
Transfers to service of greater value within DCTA	n/a	Upgrade fare
Day Local Pass	n/a	\$2.50
Monthly Local Pass	n/a	\$40.00
Monthly Local Reduced Pass (elderly, disabled, youth)	n/a	\$15.00
Monthly Regional Express Pass	n/a	\$70.00

The timeframe for implementation of services and facilities is dependent upon the DCTA Board adoption of the Bus and Paratransit Study proposals, funding availability, demand for service, and DCTA policy, particularly with regard to contracting decisions.