1: Executive Summary

1.1 Project Initiation

The North Central Texas Council of Governments (NCTCOG) has conducted a Regional Value Pricing Evaluation Study for the Dallas-Fort Worth Region. This project is the first of a three-phase study funded in part through a grant from the Federal Highway Administration’s (FHWA) Value Pricing Pilot Program in 2002. With this grant, a Regional Value Pricing Project Review Committee (PRC) was established to direct the pursuit of implementation strategies supporting managed facility concepts recommended in the region’s Metropolitan Transportation Plan as well as identify new implementation strategies. The PRC consists of representatives of the following agencies:

- Dallas Area Rapid Transit (DART)
- Denton County Transportation Authority (DCTA)
- Fort Worth Transportation Authority (FWTA)
- North Texas Tollway Authority (NTTA)
- North Central Texas Council of Governments (NCTCOG)
- Texas Department of Transportation (TxDOT)
- Texas Transportation Institute (TTI)
- Federal Highway Administration (FHWA).

Through the combined efforts of the PRC, the best approach was developed for selecting and applying pricing strategies to transportation projects in the North Central Texas region.

1.2 Definition of Value Pricing and Managed Lanes

FHWA describes value pricing, also known as congestion pricing or peak-period pricing, as a way of harnessing the power of the market and reducing the waste associated with congestion, using fees or tolls for road use, which vary with the level of congestion. Fees are typically assessed electronically to eliminate delays associated with manual toll collection facilities. This concept of assessing relatively higher prices for travel during peak periods is the same as that used in many other sectors of the economy to respond to peak-use demands. Airlines offer off-peak discounts and hotel rooms cost more during peak tourist seasons. Road-use charges that vary with the level of congestion provide incentives to shift some trips to off-peak times, less-congested routes, or alternative modes, or to cause some lower-valued trips to be combined with other trips, or to be eliminated. A shift in a relatively small proportion of peak-period trips can lead to substantial reductions in overall congestion. And, while congestion charges create incentives for more efficient use of existing capacity, they also provide improved indicators of the potential need for future capacity expansion. They also generate revenues that can be used to further enhance urban mobility (source: www.hhh.umn.edu/centers/slp/proects/conpric).

In the Dallas-Fort Worth Region, the term “managed lanes” encompasses all types of lane management strategies, including occupancy and price based lane or facility management (i.e., High Occupancy Vehicle [HOV] lanes or pricing by occupancy, time of day, congestion level, etc.).

1.3 Mobility in the Dallas Fort-Worth Region

The Dallas-Fort Worth Region is experiencing ever-increasing traffic congestion. This is primarily due to the enormous growth
Executive Summary

of the Dallas and Fort Worth area suburbs and a combination of the additional vehicles on the region’s freeways and a shortage of the land and the resources required to build more capacity. Consequently, the region’s transportation leaders have assumed a different approach to managing the increasing congestion, by operating its freeways in a more efficient manner. Because limited resources make it more difficult and costlier to build new highways in response to the rising congestion, it is important that the current highway system is improved and made more efficient. Value pricing is one such strategy that can be used.

According to recently published data by the Texas Transportation Institute, the Dallas-Fort Worth region has seen its population, cars, and traffic increase over the past 20 years. From 1982 to 2002, the area’s population increased by almost 70% (growing from 2.5 million in 1982 to 4.2 million in 2002). According to NCTCOG’s official demographic datasets, in 2005, there will be over 5.6 million persons in the Dallas-Fort Worth metropolitan planning area. At the same time, the annual delay (in person-hours) has increased by 950 percent (growing from 14,132 hours in 1982 to 147,000 hours in 2002). More importantly, the Dallas-Fort Worth Region’s traffic congestion has deteriorated at a faster pace than most other urban areas. In 1982, the region ranked #11 in person hours of delay at the national level. By 2002, the region ranked #5 in person hours of delay.

Figure 1-1, which was included in the Texas Metropolitan Mobility Plan, shows areas of moderate and severe peak-period congestion as well as the severity of roadway capacity deficiencies in the region. The Texas Metropolitan Mobility Plan addresses a statewide initiative to quantify long-range needs within the larger metropolitan areas of the state and to develop a shorter range prioritized listing of projects aimed
at improving mobility and managing traffic congestion and reducing air quality impacts. This Plan serves as a comprehensive, multimodal blueprint for transportation systems and services within the Dallas-Fort Worth region. It is not constrained by anticipated revenues. It recognizes the heightened awareness of the growing concerns for improved air quality, public acceptance of major transportation facilities, and the need for adequate financial resources for Plan implementation.

During this time period, both the roadway system and public transportation system have been expanded, with an increase in the region’s roadway network by 28 percent (total centerline miles have increased from 13,940 in 1982 to 17,780 in 2002). Similarly, the region’s public transit investments have increased the annual passenger miles of travel by over 300%.

It is apparent that even with the region’s investment in new roads and public transit, the region’s growth has outpaced its ability to accommodate its transportation demand.

1.4 POTENTIAL APPLICATION OF VALUE PRICING IN THE DALLAS-FORT WORTH REGION

In the Dallas-Fort Worth Region, pricing strategies could be used as a demand management strategy to avoid the need to add capacity, or to raise revenue for additional capacity on tollways or freeways, or a combination of both. Current active projects in California, Texas, Florida, and New York have shown that value pricing can be an effective technique for managing congestion and raising revenue on highway facilities. This study includes an overview of these existing projects and other pricing studies.

The existing highway system in the Dallas-Fort Worth Region is composed of three types of roadways: freeways, tollways, and HOV lanes. Figure 1-2 shows the Dallas-Fort Worth Region’s roadway system. These roadway types are owned, operated and maintained by separate agencies, each having a specific mission relating to the types of facilities under its control. TxDOT constructs and maintains the freeway network, which includes non-tolled, limited-access facilities. Tollways in this region are owned and operated by the NTTA, which are authorized to raise construction costs.
capital through the issuance of bonds, and to collect tolls to repay those bonds and to operate and maintain the facility. The HOV lanes are operated by DART and are open to transit vehicles and HOVs, with the goal of improving transit travel times and encouraging ridesharing.

This regional study, which was conducted over a two-year period, resulted in the establishment of criteria, policies, and procedures to identify potential candidates for a short-term value pricing demonstration project. The study also included development of regional guidelines that can be used to identify potential managed facilities as part of the region’s metropolitan transportation planning.

1.5 STUDY METHODOLOGY AND STEPS

The goal of this study was to develop a methodology to identify potential facilities and corridors on which value pricing could be desirable.

This study included the review of a broad range of value pricing concepts, techniques, and information from other value pricing studies and roadway projects to establish the most appropriate value pricing screening criteria for this region. These screening criteria could be applied to all corridors to identify those corridors showing the highest potential for immediate action. The study consisted of the following tasks:

- Review Value Pricing corridors nationally and internationally
- Develop Regional Guidelines for Implementing Value Pricing
- Develop recommendations for short-term implementation of a demonstration project
- Identify a long-range mechanism for evaluating potential application for value pricing in the Dallas-Fort Worth Region.

The results of these tasks are described in detail in the following chapters:

- Chapter 2: Value Pricing History and Experience
- Chapter 3: Guide for Applying Value Pricing in the Dallas-Fort Worth Region
- Chapter 4: Application of Criteria to Select a Short-Term Demonstration Project
- Chapter 5: Application of the 10 Criteria for the Long-Term Consideration of Value Pricing