

# appendix A



# Interstate Highway 30/Tom Landry Freeway Managed Facility Operational Plan

Proposal to:

Federal Highway Administration, Value Pricing Pilot Program  
TEA-21 Section 1216(a) Value Pricing Pilot Program Application

Jointly Submitted by the Regional Transportation Council on behalf of:  
Dallas Area Rapid Transit,  
Fort Worth Transportation Authority,  
North Central Texas Council of Governments,  
North Texas Tollway Authority, and  
Texas Department of Transportation (Dallas and Fort Worth Districts)

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## INTRODUCTION

The passage of the Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21) has continued the “Congestion Pricing Pilot Program,” now titled the “Value Pricing Pilot Program” (VPPP), initiated as part of the Intermodal Surface Transportation Efficiency Act (ISTEA). Under TEA-21 Section 1216(a), the Value Pricing Pilot Program creates a means to develop cooperative agreements between the Federal Highway Administration (FHWA) and up to 15 state or local governments to establish, maintain, and monitor local pricing projects.

The North Central Texas Council of Governments (NCTCOG), on behalf of the Regional Transportation Council (RTC) – the policy body for the Metropolitan Planning Organization (MPO) for the Dallas-Fort Worth metropolitan area – submits this application for the Interstate Highway (I.H.) 30/Tom Landry Freeway Managed Facility Operational Plan. I.H. 30/Tom Landry Freeway serves as a major east/west corridor between Fort Worth and Dallas, Texas. The Dallas-Fort Worth metropolitan area’s transportation plan, Mobility 2025 – 2004 Update, adopted by the RTC in January 2004, documents a multimodal approach to providing transportation services, including a managed lane element. The RTC, which is responsible for implementing transportation policy issues in the Dallas-Fort Worth metropolitan area, supports a policy position to enhance the region’s transportation system through the Metropolitan Transportation Plan by maximizing high-occupancy vehicle (HOV) lane utilization by offering managed facilities through pricing, and by considering the expanded use of toll roads.

The proposed Managed Facility Operational Plan is derived from the Dallas-Fort Worth Regional Value Pricing Corridor Evaluation and Feasibility Study, a cooperative study between FHWA’s VPPP and local stakeholders to determine a viable demonstration project corridor for implementation of value pricing concepts. The Regional Value Pricing Corridor Evaluation and Feasibility Study, currently undergoing final documentation, will be submitted to FHWA by fall 2004. This application for continuance in FHWA’s VPPP represents a value pricing implementation study to be funded through a VPPP grant for 80 percent of the project cost from FHWA. NCTCOG proposes to meet all legal and administrative requirements related to matching funds, selection and remuneration of consultant, monitoring work, and reporting. Funds for this study will be accounted for through an interagency agreement establishing the roles and responsibilities with the Texas Department of Transportation (TxDOT).

The primary objectives of this project are to improve mobility, enhance the environment, promote economic sustainability, expedite project implementation, and aid in offsetting potential revenue shortfalls for transportation facilities. Knowing these objectives, the purpose of the Managed Facility Operational Plan can be summarized as a means to design and construct a value pricing management operation having the most potential for successful implementation within the I.H. 30/Tom Landry Freeway corridor.

The Regional Value Pricing Task Force, established through the Dallas-Fort Worth Regional Value Pricing Corridor Evaluation and Feasibility Study, will continue to ensure that the identified work items in this Managed Facility Operational Plan are carried out with input from all participating agencies and local communities. Appendix A makes available the membership roster of stakeholders participating on the Regional Value Pricing Task Force. Through the combined efforts of the task force, the I.H. 30/Tom Landry Freeway corridor will be reconstructed to incorporate a suitable managed lane strategy. The Task Force consists of the following local stakeholders:

- The Dallas and Fort Worth TxDOT Districts;
- Dallas Area Rapid Transit (DART), the regional transit agency serving the Dallas area and managing existing HOV operations in the area;
- Fort Worth Transportation Authority (the T), the regional transit agency serving the Fort Worth area;
- North Texas Tollway Authority (NTTA), the regional tollway authority;
- NCTCOG, the region’s MPO; and
- Texas Transportation Institute, active participants in TxDOT-sponsored managed lane research.

## ASSESSMENT PLAN

NCTCOG will serve as the point of contact for the I.H. 30/Tom Landry Freeway Managed Facility Operational Plan. This study will allow for the operation of managed lanes on I.H. 30/Tom Landry Freeway that will accommodate HOVs, potential express bus service, and single-occupant vehicle (SOV) buy-in for available capacity through value pricing strategies.

### 1. Congestion Problem:

The rapidly increasing congestion within the Dallas-Fort Worth region points to a critical need for mitigation of these effects by efficiently managing and operating existing facilities and planning for future management opportunities. The North Central Texas region continues to experience significant growth from a population of 5,309,000 in 2000 that has grown to over 5,858,000 in 2004 representing an average annual growth rate of 137,000 persons. The peak period transportation demand related to this high growth rate is already straining the greater portion of the region's transportation system. This congestion has begun to expand into many of the previously off peak or "shoulder" hours, creating a more inefficient, unreliable, and unpredictable system. Consequently, major transportation agencies are having difficulty in planning, designing, funding, and constructing traditional transportation projects, which are acceptable to the community, as expeditiously as the region's transportation leaders believe is needed.

### Selected Corridor:

The Dallas-Fort Worth Regional Value Pricing Corridor Evaluation and Feasibility Study identified 23 local corridors that pass the initial screening criteria that were narrowed down to seven corridors having the highest potential for short-term implementation. The project partners met to discuss these corridors using the criteria established through that study as listed below:

- Facility not subject to legal considerations or constraints;
- Facility supports enforcement;
- Facility provides options for social equity;
- Facility minimizes construction disruption;
- Facility constructability: ability to open to traffic within five years;
- Facility allows barrier lane separation;
- Facility meets urban design standards;
- Facility access: weaving distance meets minimum design requirements; and
- Facility main lanes exceed level-of-service (LOS) E, judged by evaluating:
  - HOV a.m. peak hour (number of vehicles) and LOS year 2003
  - Main lane a.m. peak hour LOS year 1999 and 2003
  - Main lane p.m. peak hour LOS year 1999 and 2003

As a result of the analysis, the I.H. 30/Tom Landry Freeway corridor was selected for the initial value pricing demonstration project within the Dallas-Fort Worth region.

FIGURE 1



### IH 30 / Tom Landry Freeway Corridor

#### Facility Description

The I.H. 30 corridor was originally constructed as a six-lane limited access toll road facility with circuitous ramps for getting on and off the tollway and providing space for the former tollbooths. The I.H. 30/Tom Landry Freeway corridor identified in this submittal extends from Arlington to the Dallas Central Business District (CBD). The full facility limits stretch approximately 15 miles from Beckley Street, on the west side of Dallas, to State Highway (S.H.) 360 west of the Tarrant County/Dallas County line. A three-mile transition area will be constructed between the existing six main lanes west of Cooper Street in Arlington to the new managed lane configuration east of S.H. 360. The map shown in Figure 1 highlights the I.H. 30/Tom Landry Freeway corridor as described above.

The proposed I.H. 30/Tom Landry Freeway Value Pricing Project extends the research and recommendations of the Dallas-Fort Worth Regional Value Pricing Corridor Evaluation and Feasibility Study. As such, the proposed pricing program is directly derived from the findings of that study. The proposed project covers the eastern half of a heavily congested 30-mile corridor connecting the urban activity centers of Dallas and Fort Worth bisecting the major suburban activity centers, Great Southwest Industrial Park, and the major entertainment districts of Arlington and Grand Prairie. The I.H. 30 corridor is critically deficient in its lack of continuous frontage roads, circuitous access, and egress interchange with Loop 12/Walton Walker Boulevard. Additionally, there is no direct interchange with the S.H. 360/Angus Wynne Jr. Freeway. Because the tolls were discontinued after the bonds were paid off and the facility returned to non-toll status, it has taken many years to program interchange improvements. Now, traffic demand throughout this corridor, caused by strong demographic growth, greatly exceeds this facility's capacity and results in a greatly degraded LOS. Also, the I.H. 30/Tom Landry Freeway access and egress configurations are below standard, due to its initial limited access toll way design, and impact the safety and efficiency for carrying its traffic load.

The North Central Texas region is now in the process of upgrading I.H. 30/Tom Landry Freeway in order to meet the needs identified in the long-range Metropolitan Transportation Plan. The existing design and engineering plans for the I.H. 30/Tom Landry Freeway are being reviewed to look for any opportunities to integrate transportation modes and services, including freeways/tollways, HOV lanes, light rail transit, and commuter rail service, and to utilize technology, pricing, and management techniques in order to seek any means possible to improve the performance of the facility.

Mobility 2025 – 2004 Update calls for 10 lanes of mixed traffic with an additional two lanes of reversible HOV lanes. Due to financial constraints, the I.H. 30/Tom Landry Freeway is currently undergoing a

staged reconstruction process. Statewide and regional policy requires that as capacity is added in a corridor, it must be re-evaluated for potential toll/managed lane applications, including value pricing. Currently the staged construction plan calls for five mixed lanes of traffic in each direction, with a single reversible HOV lane. TxDOT and DART are committed to the construction of a single lane HOV facility to be in place by 2007 as part of the list of transportation control measures (TCM) that are documented in the State Implementation Plan (SIP). ***This VPPP application is to revise the facility design to accommodate a multi-lane, managed/HOV facility in place of a single-lane, HOV-only facility.***

## 2. Nature of the Proposed Pricing Project:

The following goals are meant to address the problems in this corridor:

1. Provide for enhanced mobility, access, and safety;
2. Offer project operational and design flexibility through increased system integration;
3. Improve transit interface locations to encourage higher utilization;
4. Meet cost-effectiveness measures and provide for revenue enhancement potential;
5. Continue to expand the public outreach components for developing transportation solutions;
6. Increase options for transportation and lifestyle changes that will improve air quality; and
7. Address right-of-way constraints (leverage funds for construction – not right-of-way)

TxDOT has made several evaluations of potential facility designs. Based on TxDOT's existing studies, the evaluation currently recommends the incorporation of managed lanes in the center of the right-of-way flanked by mixed-use traffic lanes. A combination of express and HOV lanes are warranted when the competing freeway facilities are congested, providing a travel time advantage. The right-of-way footprint required to accommodate the needs of both the express and HOV demand could not be reasonably met if separate facilities for each mode were used. To better integrate these modes into the Mobility 2025 – 2004 Update, the express and HOV modes were blended together to form a "managed/HOV lane" design. This design incorporates multi-lanes geared to serve both express and HOV trip needs. The concept of value pricing would be instituted on these managed-HOV lanes in order to market the facility, manage the traffic flow, and provide an incentive to rideshare. The very nature of lane management is one where user fees are charged to maintain high levels of service and optimum speeds.

Several design concepts are being pursued for the I.H. 30/Tom Landry Freeway. The base configuration will be upgraded to increase the general-purpose capacity from the current three lanes in each direction to four lanes in each direction. In addition, the I.H. 30/Tom Landry Freeway is being designed with a managed lane section in the median. The I.H. 30/Tom Landry Freeway managed facility will incorporate one lane in each direction with one reversible lane to accommodate peak-direction managed-lane traffic that will require a moveable barrier. Based on anticipated projections for the managed portions of the I.H. 30/Tom Landry Freeway, the need for more than one lane in each direction will be documented. Operationally, a managed lane section will be barrier separated from the mixed flow lanes.

Sufficient HOV demand exists on the I.H. 30/Tom Landry Freeway facility to warrant a separate HOV facility where the excess capacity can be managed through auto occupancy and user fees. In order to accommodate HOV demand on this toll facility, NCTCOG is suggesting a managed facility approach. This concept is different than the traditional HOV concept on other freeway-type facilities in that separate HOV-only lanes are not suggested. Rather, HOV occupancy will be verified and excess capacity will be sold to SOVs using Automatic Vehicle Identification (AVI) technology. The SOV toll may vary by time of day. The incentives for the HOV participant would

be a reduced toll or other incentives versus that of SOVs.

**Assessment Work Plan:**

	<b>Work Plan Description</b>	<b>Responsible Agency</b>	<b>Budget (\$)</b>
1	Schematic and Planning of Facility	DART/TxDOT	100,000
2	Plan Specifications and Estimates Design of Facility	DART/TxDOT	2,100,000
3	Construction of Facility (Incremental Cost)	TxDOT	13,000,000
4	Purchase and Installation of Tolling Equipment	NTTA	1,800,000
5	Facility Operation and Use Enforcement (3 years)	DART	4,650,000
6	Toll Collection Operation and Toll Enforcement (3 years)	NTTA	11,100,000
7	Maintenance of Toll Collection Equipment (3 years)	NTTA	450,000
8	Maintenance of Managed Lane Operations (3 years)	DART	2,175,000
9	Maintenance of Managed Lane Facility (3 years)	TxDOT	150,000
10	Value Pricing Pilot Program Monitoring and Performance Evaluation	NCTCOG	100,000
	<b>Total</b> (Based on static costs plus three years of operations and maintenance costs)		<b>\$35,625,000</b>

## Value Pricing Opportunities and Strategies:

The I.H. 30/Tom Landry Freeway Managed Facility Operational Plan will consider a full range of value pricing strategies for operational implementation. The Regional Value Pricing Task Force, through the activities associated with the region's value pricing initiatives, will ensure adequate review, discussion, and resolution of institutional structures to employ the most appropriate value pricing opportunities and strategies. Potential strategies to be reviewed as part of this application are listed below:

1. SOV buy-in on HOV lanes;
2. HOV ridership incentives;
3. Integration efforts and use incentive;
4. Increased express bus and vanpool usage to connect activity centers; and
5. Increased bus route usage through enhanced travel time reliability.

**Project Timeline:** The work effort for the I.H. 30/Tom Landry Freeway Managed Facility Operational Plan will begin immediately upon notification of approval. Note that the I.H. 30/Tom Landry Freeway already has ongoing activities with regard to the planned HOV operation planned in this facility. This demonstration project would be an upgrade of the ongoing project already in the pipeline.

Because this corridor is committed to be in operation in order to meet Transportation Control Measure/SIP commitments for improving air quality, this project, including the managed lane, is targeted to be in operation by 2007. This timeline assumes the funds are received by October 2004 and expended over a 36-month period.

### 3. Program Participants

**General:** The transportation providers in the North Central Texas region work year round to properly develop transportation projects in an inclusive manner. This includes regular regional and local meetings with agency, municipal, and community representatives who are active in transportation policy implementation. This established process will provide an additional forum for the VPPP to be discussed as needed for policy guidance.

#### Specific to Assessment Plan:

- **Lead Agency Contact:** The lead agency for the I.H. 30/Tom Landry Freeway Managed Facility Operational Plan submittal will be NCTCOG. Cooperating agencies include DART, the T, NTTA, and the Dallas and Fort Worth Districts of TxDOT.
- **Regional Value Pricing Task Force:** The Regional Value Pricing Task Force, consisting of the agencies mentioned above, will provide general guidance and review for the I.H. 30/Tom Landry Freeway Managed Facility Operational Plan.
- **Task Specific Work Integration Efforts:** The I.H. 30/Tom Landry Freeway Managed Facility Operational Plan will establish the design, operation, and maintenance requirements to implement the first value pricing application in the Dallas-Fort Worth region. It is anticipated that additional corridors will pass the threshold criteria showing the ability to employ value pricing strategies in the future. Monitoring this and other potential corridors is also part of this proposal. A consultant may be retained to perform this function. The state and local transportation agencies will all work together to oversee and coordinate the consultant's efforts.

### 4. Public Involvement:

Public involvement will occur at different levels, depending on the information being presented and the specific tasks being undertaken. In projects where managed HOV lanes, value pricing, and other topics

related to pricing arise they are brought to the attention of the public early and continually in the process. In general, the public involvement process will consist of:

**Regional:** Regional public involvement occurs through NCTCOG and includes regular quarterly public meetings for all planning activities, including the development of the Metropolitan Transportation Plan, Transportation Improvement Program, Unified Planning Work Program, and air quality conformity.

**I.H. 30/Tom Landry Freeway Corridor Study:** The I.H. 30/Tom Landry Freeway Corridor Study will include continuous public involvement activities through its environmental study, feasibility study, and corridor study focused on the individual requirements of this corridor. Regular public meetings will be held along with individual stakeholder meetings for more direct public input.

**Project:** The I.H. 30/Tom Landry Freeway Corridor Study will have its own detailed public involvement process focusing on particular details of the facility.

**Equity Analysis and Assessment (Environmental Justice):** An equity analysis will be performed as part of the I.H. 30/Tom Landry Freeway Environmental Assessment to ensure that the requirements of Title VI and Presidential Order on Environmental Justice are met.

## 5. Legal and Administrative Authority:

The Texas Legislature passed SB 370 during the 75th Legislative session that gave legal authority for TxDOT, toll authorities, transit agencies, and the private sector to participate in value pricing. In addition, NCTCOG has the responsibility to develop and maintain the Metropolitan Transportation Plan and include system management strategies such as the managed facility identified. Additionally, several major investment studies, including the LBJ Corridor Major Investment Study, recommended managed lanes as part of their Locally Preferred Alternatives (LPA), which received local municipal support. Several facilities in the Dallas-Fort Worth region, including the LBJ Corridor, are already in the process of implementing managed/HOV lanes and working toward obtaining full NEPA clearance with the identified managed/HOV lane included for further development.

## 6. Available Pre-Project Studies and Findings:

The concept of applying value pricing to a project is new to the North Central Texas region. However, there has been some initial work completed as part of the metropolitan transportation process, ongoing and completed major investment studies, and other planning efforts. The following is available, upon request, for reference for the Regional Value Pricing Evaluation Study.

- ***Dallas-Fort Worth Regional Value Pricing Corridor Evaluation And Feasibility Study***
- Integrated Managed HOV/Tollway concept as contained in the Mobility 2025: The Metropolitan Transportation Plan, 2004 Update
- LBJ Major Investment Study documentation
- S.H. 114/S.H. 121 Major Investment Study documentation
- Available DART-collected HOV ridership and park-and-ride lot data (multiple years of data)
- LBJ Freeway HOV Lanes – Preliminary Feasibility Study
- LBJ Freeway Managed Lanes – Phase Two Traffic and Revenue Study
- LBJ Freeway West Section and East Section Environmental Assessments
- Available TxDOT Research results when completed, including:
  1. Research Project – TxDOT 0-4009 Pricing of Managed Lanes
  2. Research Project – TxDOT 0-4161 Draft Chapter Concerning Entry-Exit and Intersection Design Criteria for Barrier-Separated HOV Facilities for TxDOT Highway Design Manual
  3. Research Project – TxDOT 0-4160 Operating Freeways with Managed Lanes
  4. Research Project – TxDOT 0-4818 Developing a Comprehensive Pricing Evaluation Model for Managed Lanes

