



**John Keel, CPA**  
**State Auditor**

An Audit Report on

**The Department of  
Transportation's Reported  
Funding Gap and Tax Gap  
Information**

April 2007

Report No. 07-031



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## *The Department of Transportation's Reported Funding Gap and Tax Gap Information*

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### *Overall Conclusion*

#### Funding Gap

In its July 2006 strategic plan, the Department of Transportation (Department) reported that there was an \$86 billion "funding gap" between transportation needs and available transportation funding. Auditors determined that the \$86 billion amount includes:

- \$8.6 billion in costs for metropolitan regions that should not have been included because (1) there were additional costs outside of the agreed-upon cost elements or (2) a mathematical error was made. Excluding these costs reduces the amount of the reported funding gap to \$77.4 billion (a 10 percent reduction).
- Undocumented costs, including:
  - \$27.92 billion in undocumented costs for metropolitan regions.
  - \$9 billion in undocumented costs for urban regions.

#### Funding Gap

The funding gap is the difference between the estimated funding needed to achieve a desired level of mobility by 2030 and the anticipated traditional available funding.

The accuracy of the estimated costs for metropolitan and urban regions cannot be determined because of the lack of supporting documentation.

The methodology the Department used to calculate the amount of the funding gap provides a general assessment of the statewide need for additional mobility funding; however, it may not be reliable for making policy or funding decisions. To calculate the funding gap, the Department collaborated with the eight largest metropolitan planning organizations to obtain cost estimates, and it used those estimates to determine the funding gap for metropolitan regions. The Department provided some guidance to the metropolitan planning organizations. The data the Department used were cost estimates that were self-reported by the metropolitan planning organizations. The cost for urban regions was estimated by the Department based on broad and generalized assumptions. For the estimated costs in rural regions, the Department relied on cost estimates for the Texas Trunk System (a project developed in 1990 to connect the rural regions of the state with a statewide system).

*This audit was conducted in accordance with Texas Government Code, Section 321.0131.*

*For more information regarding this report, please contact Mike Apperley, Assistant State Auditor, or John Keel, State Auditor, at (512) 936-9500.*

The Department and metropolitan planning organizations also asserted that the main benefit from funding gap estimates was the increased communication and shared responsibility between the entities to address mobility and funding challenges. The Department stated that it plans to update the funding gap estimate every two years and make improvements to the reporting methodology.

## Tax Gap

The Department also asserts that revenues associated with traveling on a specific highway are not sufficient to pay for the construction and maintenance of that highway over its estimated life. The costs associated with this "tax gap" (as defined by the Department) include the initial construction and right-of-way costs and the cost of preventive and routine maintenance.

### Tax Gap

The tax gap is the difference between the revenue collected through a highway and the costs of the highway. Costs include the initial construction and right-of-way costs, plus preventive and routine maintenance costs. The Department also includes reconstruction costs in its calculation of the tax gap.

However, it is important to note the following:

- The Department included reconstruction costs<sup>1</sup> as a one-time cost of a road segment at the 30-year point, but the typical life expectancy of a road segment is 40 years.
- If reconstruction costs were excluded from the Department's cost model, some road segments would pay for themselves within their typical estimated life of 40 years.
- The Department's 40-year cost model does not include the revenue benefit beyond the 40-year point.

## *Selected Recommendations*

The Department should:

- Continue to coordinate the development of the funding gap by prescribing the elements of cost and revenue assumptions and validating the cost and revenue estimates provided by external organizations.
- Determine an appropriate tax gap analysis period beyond the 40-year life of a project to capture road segment reconstruction costs.
- Ensure that cost definitions in its tax gap calculation methodology correctly reflect all elements within the cost model. If reconstruction costs are to be included, the Department should extend the analysis period beyond the 40-year

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<sup>1</sup> Reconstruction costs are the costs to reconstruct a road segment.

life cycle of a road segment to ensure that expenses are associated with revenues.

- Conduct a formal review and approval process to ensure that assumptions used in its tax gap calculation methodology are consistent throughout the Department.

## ***Summary of Management's Response***

The Department summarized its responses as follows:

*Given that the stated objective of this audit was to determine whether the \$86 billion funding gap and related tax gap information...are based on a sound methodology using verifiable data and reasonable, supportable assumptions, TxDOT is pleased that the SAO made no recommendations regarding improvements to the methodology and that the SAO concluded that the methodology the Department used to calculate the amount of the funding gap provides a general assessment of the statewide needs for additional mobility funding. As we move forward with further revisions of the underlying processes for estimating statewide needs, we will incorporate the audit recommendations to produce a more accurate estimate for the state.*

*We acknowledge the identified oversights in the tax gap spreadsheets and we have already modified these spreadsheets. In evaluating the true cost of a roadway, a thorough analysis must include the cost of reconstruction of that asset. We will modify our tax gap methodology and the analysis timeframe to incorporate the appropriate portion of these roadway reconstruction costs in the analysis, as recommended in this report.*

## ***Summary of Objective, Scope, and Methodology***

The objective of this audit was to determine whether the \$86 billion funding gap and related tax gap information that the Department has reported are based on a sound methodology using verifiable data and reasonable, supportable assumptions.

The audit scope included information that the Department and metropolitan planning organization developed during 2004 while creating the Texas Metropolitan Mobility Plans.

The audit methodology included interviewing staff and examining each metropolitan region's 2004 Texas Metropolitan Mobility Plan.

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# Detailed Results

## Chapter 1

### ***The Department Should Strengthen Its Funding Gap Methodology to Ensure It Produces Reliable Information***

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The Department's reported funding gap was determined through collaboration with metropolitan planning organizations.

In 2003, the Texas Transportation Commission requested that the Department of Transportation (Department) review a report by the Governor's Business Council's (*Texas' Roadways - Texas' Future A Look at the Next 25 Years of Roadway Supply, Demand, Cost and Benefit*, April 2003) and determine what could be done to alleviate the reported congestion problem. In response to

#### **Metropolitan Planning Organizations**

Metropolitan planning organizations include representatives from the metropolitan area such as judges, transit officials, and state legislators. Each metropolitan planning organization is required by federal statute to develop an urban model with a 25-year horizon that includes elements of population density, social and economic factors, and modes of traffic.

that request, the Department collaborated with the eight largest metropolitan planning organizations, and each metropolitan planning organization developed a Texas Metropolitan Mobility Plan. This was the first time the Department had collaborated extensively with the metropolitan planning organizations throughout the state to address the statewide transportation needs.

The metropolitan planning organizations' methodology for developing the Texas Metropolitan Mobility Plans used existing traffic network modeling programs and current transportation plans. The methodology also initiated the development of the Texas Congestion Index (TCI), which is a ratio of peak-period driving time to free-flow driving time at or near the speed limit. The TCI was calculated using each region's traffic networks. The metropolitan planning organizations used existing traffic modeling to (1) establish a baseline TCI, (2) estimate the TCI if projects in the current transportation plan were completed, and (3) estimate the TCI if all serious congestion was reduced.

The Department identified the transportation funding needed for each metropolitan region as follows:

- The metropolitan planning organizations identified the estimated funding available for projects in their Metropolitan Transportation Plans, which are 25-year plans that federal statute requires each metropolitan planning organization to prepare.
- The metropolitan planning organizations prepared a cost estimate for their regions using modeling data to reduce serious congestion without regard to financial constraint. This cost estimate equaled each region's funding

gap and included the agreed-upon elements of additional lane miles, right-of-way, and freeway-to-freeway interchanges.

- The Department then identified the total transportation funding needed for each region by adding the estimated funding gap to the estimated available funding.

The Department reported there was an \$86 billion funding gap.

In its July 2006 strategic plan (*TxDOT Has a Plan, Strategic Plan for 2007-2011*) the Department reported that the State had an estimated \$86 billion transportation funding gap. The Department estimated that the 8 metropolitan planning organizations and 17 urban and rural planning organizations would receive \$102 billion in traditional funding. The Department estimated that there was an \$86 billion funding gap to achieve a desired level of mobility by 2030. It estimated the total funding needs for those regions was \$188 billion (the sum of the \$102 billion in traditional funding and the \$86 billion funding gap, see Table 1).

Table 1

Summary of the Department's Estimate of the Funding Gap (in billions of dollars)			
Regions	Amount Funded	Amount Unfunded	Total Funding Needs
Metropolitan	\$ 68	\$ 68	\$ 136
Urban	25	9	34
Rural	<u>9</u>	<u>9</u>	<u>18</u>
Totals	\$102	\$86	\$ 188

Source: Department of Transportation.

The reported funding gap contained costs that should not have been included, a mathematical error, and undocumented costs.

Auditors determined that the Department's \$86 billion reported funding gap included \$8.6 billion in costs for metropolitan regions that should not have been included because (1) they were additional costs outside of the agreed-upon cost elements or (2) a mathematical error was made. Excluding these costs reduces the amount of the reported funding gap to \$77.4 billion (a 10 percent reduction). Table 2 on page 3 provides information on the funding gap.

The Department's reported \$86 billion funding gap also included \$27.92 billion and \$9 billion in undocumented costs for metropolitan regions and urban regions, respectively (see Table 3 on page 4). The accuracy of the estimated costs for metropolitan and urban regions cannot be determined

because of the lack of supporting documentation at both the metropolitan planning organizations and the Department.

Table 2

Auditors' Adjustment to the Reported Funding Gap (in billions of dollars)			
Region	Department's Reported Funding Gap	Errors Identified by Auditors	Adjusted Funding Gap
<b>Metropolitan Regions</b>			
San Antonio	\$ 8.40	none	\$ 8.40
Dallas/Fort Worth	21.80	none	21.80
Houston	18.50	none <sup>a</sup>	18.50
Austin	13.80	Freeway-to-Freeway Interchanges Reconstruction Rail Freight Relocation	5.20
		\$(3.70) (4.00) (0.90)	
El Paso	3.44	none <sup>a</sup>	3.44
Lubbock	0.15	none <sup>a</sup>	0.15
Corpus Christi	0.63	none <sup>a</sup>	0.63
Hidalgo	<u>0.80</u>	<u>none</u>	<u>0.80</u>
Totals for Metropolitan Regions	\$ 67.52	\$(8.60)	\$ 58.92
<b>Urban Regions</b>			
All Urban Regions	\$ 9.00	none	\$ 9.00
<b>Rural Regions</b>			
All Rural Regions	\$ 9.00	none	\$ 9.00
<b>Totals for All Regions</b>	<b>\$86.00<sup>b</sup></b>	<b>\$(8.60)</b>	<b>\$77.40<sup>c</sup></b>
<sup>a</sup> This metropolitan planning organization did not retain supporting data for cost estimates; therefore, auditors were unable to conduct tests to identify potential errors. <sup>b</sup> The Department reported an \$86 billion funding gap; however, the reported amount was rounded, and the sum of the individual metropolitan, urban, and rural regions funding gaps the Department identified was \$85.52 billion. <sup>c</sup> Total does not sum exactly due to rounding.			

Source: Department estimates.

Table 3

Undocumented Costs in the Reported Funding Gap (in billions of dollars)		
Region	Department's Reported Funding Gap	Adjustment
<b>Metropolitan Regions</b>		
Houston	\$ 18.50	unknown
Austin	5.20	unknown
El Paso	3.44	unknown
Lubbock	0.15	unknown
Corpus Christi	<u>0.63</u>	unknown
Total Undocumented Costs for Metropolitan Regions	\$ 27.92	
<b>Urban Regions</b>		
All Urban Regions	\$ 9.00	unknown
Total Undocumented Costs for Metropolitan and Urban Regions	\$ 36.92	

Source: Department estimates.

**The metropolitan planning organizations and the Department did not retain supporting data for the estimates of metropolitan needs.**

The metropolitan region funding gap the Department reported was based on self-reported estimates calculated by the eight largest metropolitan planning organizations in their Texas Metropolitan Mobility Plans. The Department provided metropolitan planning organizations some guidance regarding the preparation of the Texas Metropolitan Mobility Plans; it did not review the metropolitan planning organizations' self-reported cost estimates and accepted them as submitted.

Auditors reviewed each metropolitan planning organization's Texas Metropolitan Mobility Plan and determined that one plan included additional elements that should not have been included in the cost of reducing congestion. Specifically, this metropolitan planning organization included \$4.9 billion in reconstruction and rail freight relocation costs. These costs are considered additional because the Department and the metropolitan planning organizations agreed the cost estimation methodology would use only the cost of additional lane miles, right of ways, and freeway-to-freeway interchanges. This metropolitan planning organization also overstated its 2004 funding gap by \$3.7 billion because of a mathematical error.

As discussed above, adjustment of the Department's estimate of the funding gap to exclude additional costs and correct the mathematical error reduces the reported funding gap from \$86 billion to \$77.40 billion. In addition, five of the eight metropolitan planning organizations did not retain documentation to support \$27.92 billion in costs they self-reported in their Texas Metropolitan Mobility Plans. Therefore, auditors were unable to verify these cost estimates. The accuracy of the estimated costs for metropolitan regions cannot be determined because of the lack of supporting documentation.

The Department used broad and generalized assumptions to establish the funding gaps for urban regions.

The Department estimated the urban regions' funding gap based upon the assumption that the unfunded needs of the urban regions were at least equal to the urban projects currently funded within the metropolitan planning organizations' Metropolitan Transportation Plans. Specifically, the Department estimated that if the current Metropolitan Transportation Plans had \$9 billion in funding for projects in urban regions, then there was at least \$9 billion in unfunded need for the urban regions.

The Department acknowledged that this was a simplified method to estimate the urban regions' funding gap and did not have any verifiable information to support its assumption. To establish a more reliable estimate, the Department is coordinating with the urban regions to develop the Texas Urban Mobility Plan, a plan similar to the Texas Metropolitan Mobility Plans but for the urban areas.

The Department used the Texas Trunk System to establish the funding gap for rural regions.

To estimate the funding gap for rural regions, the Department used the costs of the Texas Trunk System, a project developed in 1990 to connect the rural regions of the state with a statewide system. Specifically, the Department used a simplified approach to estimate the total cost of the Texas Trunk System and incorporated a 6 percent inflation rate over 25 years. Using this methodology, the Department estimated there would be an annual cost of \$364 million to build an estimated 3,200 miles over the next 25 years.

**Texas Trunk System**

The Texas Trunk System is a project developed in 1990, to connect the rural regions of the state with a statewide system. It is funded with \$9 billion in current funds.

The Department estimated that the total cost of completing the Texas Trunk System was \$18 billion. Because the project is currently funded with \$9 billion, the Department determined that this left a \$9 billion funding gap.

The Department's funding gap methodology provides a general assessment of the statewide need for additional mobility funding, but it may not be reliable for making policy and funding decisions.

The Department and metropolitan planning organizations acknowledged that the funding gap estimates are approximations that indicate the magnitude of the funds required to address increased congestion in metropolitan regions. This view was specifically expressed by one metropolitan planning organization, which stated that the Texas Metropolitan Mobility Plan was "not ready to become a vehicle for policy or funding decisions statewide in its current developmental phase." The Department and metropolitan planning organizations also asserted that the main benefit from the funding gap estimates was the increased communication and shared responsibility between the entities to address mobility and funding challenges.

The methodology uses established planning models to estimate the required additional lane miles to reduce serious congestion. The Department's traffic network model adds additional lane miles to each region's traffic network, regardless of the physical limitations of the actual road network. These additional lane miles are not tied to a specific mobility improvement and are substitutes for the costs of actual mobility projects required to reduce congestion. In addition, the Department's methodology does not allow for the impact of other significant transportation projects or modes of transportation, which may affect the mobility of metropolitan and urban regions throughout the state.

## Recommendation

The Department should continue to coordinate the development of the funding gap by prescribing the elements of cost and revenue assumptions and validating the cost and revenue estimates provided by external organizations.

## Management's Response

*We agree with the recommendation regarding the funding gap methodology. It is important to reiterate that TxDOT requested the eight largest Metropolitan Planning Organizations (the Metro MPOs) to develop financially unconstrained funding plans to meet their projected transportation needs. This was the first time that the Texas Transportation Commission directed the use of this methodology for determining a true transportation funding shortfall. To expect that there would be no room for improvements would be wrong. The Metro MPOs did an excellent job given the magnitude of the task, the limited time to complete, and the many variables involved in projecting out 25 years.*

*In following the development of the Texas Metropolitan Mobility Plan (TMMP), it was always the intent to continue to improve the process and refine the numbers. The first TMMP provided for revisiting the plans every two years. TxDOT and the eight Metro MPOs have learned a lot from this initial process and we will continue to make improvements. One of the other outcomes was the realization that a more complete analysis needed to be performed to determine the unfunded urban needs. As a result, we requested the seventeen Urban MPOs to perform the same analysis as the eight Metro MPOs. The refinement of the initial Metro MPOs and the new Urban MPOs plans are nearing completion and will be adopted soon. We are confident that miscalculations identified in the SAO report have been corrected in the new TMMP report.*

*We have already begun the process to update and improve the development of the funding gap estimate by convening meetings with the metropolitan regions and the urban region transportation planners. TxDOT will develop common definitions for costs to be included in the funding gap calculation as well as a set of general assumptions that regions should agree to in estimating future public revenues. Finally, we will establish a mechanism to review the data compiled by the regions and validate that the common definitions and assumptions are being appropriately used. It is important again to recognize that for the last six years, the Texas Transportation Commission has directed TxDOT to quantify the funding gap and equate it to the current and projected funding challenges we face and develop the tax rate implications for closing this transportation funding gap.*

## ***The Department's Tax Gap Methodology Contains Errors and Should Be Modified to More Closely Associate Revenues and Expenses Generated by Road Segments***

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The Department developed its tax gap methodology during 2005 at the request of the Texas Transportation Commission to illustrate that the revenue associated with traveling on a specific highway does not pay for the cost of building and maintaining that highway.

Department documents show that the amount of motor fuel tax revenue that was contributed to the State Highway Fund in fiscal year 2004 was \$2.1 billion. Of that amount, the Department reported it spent \$820 million to maintain 189,259 of the 301,000 statewide lane miles. The remaining miles were maintained by other city and county entities.

The Department's calculation of the tax gap (1) was based on spreadsheets that contained errors and (2) included reconstruction costs<sup>2</sup> prior to the traditionally expected end of the life of a road segment. Specifically:

- The Department's methodology included highway reconstruction costs at the 30-year mark, despite that fact that (1) there are contradictory assertions that the life of a road is 40 years or more and (2) reconstruction cost are excluded from the Department's own definition of the tax gap total life-cycle costs.
- The Department's tax gap methodology established reconstruction cost as a one-time cost that occurs at 30 years. The estimated reconstruction cost was calculated by inflating the original construction cost by 4 percent annually over the 30-year period. The life expectancy of a road as determined by metropolitan planning organizations' Texas Metropolitan Mobility Plans, transportation experts, and the Department's staff is considered 40 years. Reconstruction costs should occur at the 40-year point of the model.
- The Department's tax gap methodology excluded revenue from vehicle registration fees and it used unsupported source data in certain calculations. The Department has subsequently corrected its methodology to appropriately account for vehicle registration fees.

The Department provided six examples of road segment tax gaps it had used to illustrate the tax gap to external entities. One example was excluded from auditors' analysis because the data did not have sufficient detail for auditors to

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<sup>2</sup> Reconstruction costs are the costs to reconstruct a road segment.

reconcile the data used in the model. Auditors reviewed the remaining five examples and determined the following:

- Reconstruction costs accounted for more than 60 percent of the estimated 40-year cost. These costs represent the Department's estimate of the additional funding required to sustain the road segment after 40 years.
- All examples contained errors because the model did not include estimated vehicle registration fees (even though the methodology indicated vehicle registration fees were included in the revenue).
- The formula used to allocate the state motor fuel tax revenues was verified; however, the method used to allocate federal motor fuel tax revenues did not account for the higher tax revenues for diesel fuel.
- Four of the five examples overstated the fleet average miles per gallon for the traffic on that specific road. The calculated fleet average miles per gallon did not accurately represent the percentage of cars and trucks for four of the five examples. A higher average fleet mile per gallon means less fuel is consumed and, therefore, less motor fuel tax revenue is generated on that specific road segment.
- Five of the examples used data that did not match the source data provided to auditors.

Auditors' recalculation of five of the tax gap examples with the corrected revenue and excluding the reconstruction costs resulted in some road segments for which revenue exceeded the cost to build and maintain the road segment during the 40-year time frame (see Table 4 on page 10). Although these examples show that a road segment may pay for its initial construction and maintenance, they do not account for the estimated liability incurred to sustain this road segment past its expected life cycle. The Department's model includes this cost as a lump sum liability incurred at the 30-year mark; however, during a 40-year analysis period, this would overstate the cost of the road segment. This would be an overstatement because it does not consider the revenue associated with that road segment after that segment is reconstructed at the 40-year point. If reconstruction costs are deemed a necessary part of the analysis, the Department should extend the analysis period beyond the 40-year life cycle of the road segment and include only the portion of the reconstruction cost associated with the analysis time period.

Table 4

Department Cost Models for Specific Road Segments Compared with Auditors' Recalculations of Costs (in millions of dollars)					
Road Segments					
Project Start	2010	2005	2005	2005	2005
	Harris County: SH 99 Segment E.IH 10 to US 290	Collin County: City of Frisco from Steward's Creek to US 380	Collin County: City of Frisco FM 3537 from SH 289 to FM 2478	Collin County: FM 2251 from FM 544 to FM 2170	Travis County: US 183 South of US 290 to North Bolm Road
Department cost model <u>including</u> reconstruction cost at 30 years and <u>excluding</u> vehicle registration fees					
40-Year Tax Revenue	\$ 162.54	\$ 40.84	\$ 17.76	\$ 14.09	\$ 98.20
40-Year Cost	<u>1,009.10</u>	<u>79.90</u>	<u>74.88</u>	<u>106.79</u>	<u>565.88</u>
Difference between Revenue and Cost	\$ (846.55)	\$ (39.06)	\$ (57.12)	\$ (92.70)	\$ (467.68)
Percent Paid	16%	51%	24%	13%	17%
Auditors' recalculation <u>including</u> vehicle registration fees <u>and excluding</u> reconstruction cost at 30 years					
40-Year Tax Revenue	\$ 162.54	\$ 40.84	\$ 17.76	\$ 14.09	\$ 98.20
Plus Adjustment for Overstated Average Miles per Gallon	4.77	1.20	-	.02	(23.06)
Plus Vehicle Registration Fees	<u>66.42</u>	<u>16.69</u>	<u>7.05</u>	<u>5.60</u>	<u>29.83</u>
Adjusted 40-year Total Revenue	\$ 233.73	\$ 58.73	\$ 24.81	\$ 19.71	\$ 104.98
40-Year Cost	\$ 1,009.10	\$ 79.90	\$ 74.88	\$ 106.79	\$ 565.88
Minus 30-Year Reconstruction Cost	<u>(721.24)</u>	<u>(51.85)</u>	<u>(51.85)</u>	<u>(73.22)</u>	<u>(426.82)</u>
Adjusted 40-Year Cost	\$ 287.88	\$ 28.05	\$ 23.02	\$ 33.57	\$ 139.06
Difference between Adjusted 40-Year Revenue and Adjusted 40-Year Cost	\$ (54.15)	\$ 30.68	\$ 1.79	\$ (13.86)	\$ (34.08)
Adjusted Percent Paid	81%	209%	108%	59%	75%
Difference between Percentage Paid under the Department's Cost Model and Percent Paid under Auditors' Recalculation	65%	158%	84%	46%	58%
Note: Totals in this table may not sum exactly due to rounding.					

## Recommendations

The Department should:

- Determine an appropriate tax gap analysis period beyond the 40-year life of a project to capture road segment reconstruction costs.
- Ensure that cost definitions in its tax gap calculation methodology correctly reflect all elements within the cost model. If reconstruction costs are to be included, the Department should extend the analysis period beyond the 40-year life cycle of a road segment to ensure that expenses are associated with revenues.
- Conduct a formal review and approval process to ensure that assumptions used in its tax gap calculation methodology are consistent throughout the Department.

## Management's Response

*We agree with the recommendations in this section and we have already begun to revise the tax gap methodology to reflect the recommendations noted in the audit report. We have also begun evaluating options for the appropriate consideration of reconstruction costs, depending on the analysis period being considered.*

*We are taking the following actions to address some of the areas of improvement identified in this report:*

1. ***Continuing development:*** *TxDOT has further refined the revenue portion of the tax gap analysis. This was motivated by the fact that the motor vehicle fleet fuel efficiency is the single most uncertain critical variable in the tax-gap analysis, given the potential technological improvements (such as plug-in hybrids) over the coming decades. TxDOT has constructed a 25-year model of Texas vehicle fleet efficiency, including confidence intervals. Likewise, our model includes vehicle registration fee revenues based on Texas State Data Center population forecasts.*

*TxDOT also has developed a high-precision model of our long-term cash flow to allow better estimates of funds available for building new capacity given alternative scenarios of fuel tax revenues, bond financing options, and non-mobility expenses, among other variables. We will integrate the refined revenue models mentioned above with this larger model.*

2. ***Other measures:*** *A TxDOT task force has been working over the past year to develop indices for the other four TxDOT strategic goals. TxDOT*

*district engineers are currently evaluating these proposed indices for practicality, and a five-month research project with the Texas Transportation Institute has begun to refine the index relating to the economic opportunity goal.*

- 3. Cost definitions:** *TxDOT will make sure all cost definitions are in alignment with the analytical model and establish an appropriate analysis timeframe to include reconstruction costs.*
- 4. Formal review:** *The TxDOT Government and Business Enterprises Division will produce a written procedure explaining the tax-gap analytical methodology and the assumptions used.*

# Appendices

## Appendix 1

### *Objective, Scope, and Methodology*

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#### Objective

The objective of this audit was to determine whether the \$86 billion funding gap and related tax gap information that the Department of Transportation (Department) has reported are based on a sound methodology using verifiable data and reasonable, supportable assumptions.

#### Scope

The scope of this audit included the Department's estimated funding gap and tax gap reported in 2004. Auditors reviewed the Department's process for estimating the funding gap, including its guidance, review, and interaction with the eight largest metropolitan planning organizations. Auditors visited the metropolitan planning organizations in Houston, Dallas, and Austin and also contacted the metropolitan planning organizations in El Paso, San Antonio, Lubbock, Corpus Christi, and Hidalgo County. In addition, auditors reviewed the Department's process for estimating the tax gap for a specific road segment. Auditors also reviewed the Department's process and data used to estimate the tax gap associated with five specific road segments.

#### Methodology

The audit methodology included interviewing staff, examining Department policies, reviewing support documentation, and reviewing metropolitan planning documentation.

Information collected and reviewed included the following:

- Department policies and procedures for traffic planning and forecasting.
- Working group meeting minutes, and correspondence exchanged between the Department, the Texas Transportation Commission, the Texas Transportation Institute, metropolitan planning organizations, and the Office of the Governor.
- Tax gap data and calculations for five road segments.
- The Texas Congestion Index guidance and methodology manuals produced by the Texas Transportation Institute.

Procedures and tests conducted included the following:

- Conducted interviews of key staff from the Department, metropolitan planning organizations, and the Texas Transportation Institute regarding the supporting data and assumptions used in the funding gap and tax gap estimates.
- Analyzed the tax gap model for accuracy and consistency in the calculations used in the model.
- Analyzed eight metropolitan planning organizations' Texas Metropolitan Mobility Plans for consistency of content and support for the regions' portions of the funding gap.
- Reviewed funding gap supporting data for content and accuracy of calculations of the cost estimates for additional lane miles, right of ways, and freeway-to-freeway interchanges.
- Traced funding gap amounts from the support provided by the Department to the Texas Metropolitan Mobility Plan for each metropolitan planning organization and reviewed available data from the metropolitan planning organizations to support the Texas Metropolitan Mobility Plan.

Criteria used included the following:

- Department guidance for the preparation of Texas Metropolitan Mobility Plans.
- The Department's methodology for calculating the tax gap.

### **Project Information**

Audit fieldwork was conducted from November 2006 through February 2007. This audit was conducted in accordance with generally accepted government auditing standards.

The following members of the State Auditor's staff performed the audit:

- Bruce W. Dempsey, CIA (Project Manager)
- Stacey A. Williams, CGAP (Assistant Project Manager)
- Kathy Aven, CIA, CFE
- Thomas W. Howe, Jr., MPAff
- Bruce Lawrence
- Barbette Mays

- Shelby Cherian MBA (Information Systems Audit Team)
- Serra Tamur, MPAff, CISA, CIA (Information Systems Audit Team)
- Dennis Ray Bushnell, CPA (Quality Control Reviewer)
- Michael C. Apperley, CPA (Assistant State Auditor)

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07-007	A Report on the Audit of the Department of Transportation's Texas Mobility Fund Financial Statements for the Fiscal Year Ended August 31, 2006	December 2006
07-001	An Audit Report on Flight Services Provided by the Department of Transportation's Aviation Division Flight Services Section	September 2006
06-041	An Audit Report on the Department of Transportation's Purchase of the Camino Colombia Toll Road	June 2006
06-034	An Audit Report on Routine Maintenance Contracts at the Department of Transportation	April 2006

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The Honorable Warren Chisum, House Appropriations Committee  
The Honorable Jim Keffer, House Ways and Means Committee

### **Office of the Governor**

The Honorable Rick Perry, Governor

### **Department of Transportation**

Members of the Texas Transportation Commission

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