



# Annual Analysis of Progress on the Statewide Long-Range Transportation Plan

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## 2013 Statewide Transportation Report

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### Legislative Report

Transportation Planning and Programming Division

## **Introduction**

The following is the 2013 Statewide Transportation Report and analysis of the Texas Department of Transportation's (TxDOT) progress to meet the goals listed in the current statewide long-range transportation plan. The report also includes information regarding TxDOT's plan to meet performance measures proposed in the recently passed federal transportation legislation, Moving Ahead for Progress in the 21<sup>st</sup> Century (MAP-21).

## **Background**

Title 6, Subtitle A, Section 201.601 of the Texas Transportation Code (TAC) requires the State of Texas to develop a 24-year long-range transportation plan that contains transportation goals and measurable targets for each goal to meet the transportation needs of the state over the 24-year period. The Code also requires the submittal of an annual report on the progress being made to meet these goals and targets. Although the current statewide long-range transportation plan, Texas Statewide Long-Range Transportation Plan 2035 (SLRTP 2035), was developed prior to the change in statute requiring the development and use of goals and measurable targets, it contains several performance goals with measures. Targets are not defined for these goals and measures.

The SLRTP 2035 is currently being updated. As part of this update, the plan will be revised to contain goals and measurable targets as required by state law. The plan will also address the new performance measure requirements contained in MAP-21. In accordance with the federal legislation, performance measures are being developed to address safety, pavement condition, bridge condition, freight, national highway system performance and air quality. Once the measures have been developed and approved by the Federal Highway Administration, state departments of transportation and metropolitan planning organizations will develop individual targets for each measure. It should be noted that for some of the measures listed in this report, 2013 data is not yet available. In all instances, the most current data has been reported.

Section 201.809 of the TAC requires TxDOT to evaluate and report on major priority projects and statewide project implementation benchmarks. With adoption of the 2014 Unified Transportation Program, the department has begun developing a process to identify and evaluate major priority projects throughout the state.

## Goal 1: Enhance Safety for all Texas Transportation System Users

Safety is the top priority at TxDOT, for both the traveling public and TxDOT's workforce. The department takes safety seriously, and works daily to improve its processes and the state's transportation infrastructure to improve safety for all traveling Texans. In the SLRTP 2035, five performance measures were recommended to assess TxDOT's efforts to improve safety for the traveling public.

Table 1: Goal 1 - Enhance safety

SLRTP 2035 GOAL	PERFORMANCE MEASURES
<ul style="list-style-type: none"> <li>Enhance safety for all Texas transportation system users</li> </ul>	<ul style="list-style-type: none"> <li>Injuries and fatalities (number and rate)</li> </ul>
	<ul style="list-style-type: none"> <li>Percentage of two-lane highways with improved shoulders</li> </ul>
	<ul style="list-style-type: none"> <li>Reduction of work zone incidents</li> </ul>
	<ul style="list-style-type: none"> <li>Percentage of general aviation airports with safety improvements</li> </ul>
	<ul style="list-style-type: none"> <li>Percentage of railroad crossings with signalization</li> </ul>

### Measure: Reduction in Injuries and Fatalities

We have seen a steady decrease in the number of traffic deaths statewide in recent years with a corresponding improvement in the statewide fatality rate, the number of serious injuries, and the serious injury rate. From calendar year 2003 to 2012, the number of traffic deaths in Texas decreased from 3,822 to 3,399, approximately 11 percent. The 2011 fatality rate of 1.29 was the lowest ever recorded in the state. Both the nation's and Texas' 2012 safety numbers were not as positive.

Table 2: Texas Highway Fatalities

	Texas Highway Fatalities				
Calendar Year	2008	2009	2010	2011	2012
# of Fatalities	3479	3118	3060	3067	3399
Fatality Rate	1.48	1.34	1.31	1.29	1.41

Texas is a rapidly growing state with a vibrant business environment and a flourishing oil and gas industry. We know that we have significant challenges to maintain and improve transportation safety in the state. We are confident that transportation safety in Texas will continue to improve in the future.

Table 3: Texas Highway Serious Injuries

	Texas Highway Serious Injuries				
Calendar Year	2008	2009	2010	2011	2012
# of Serious Injuries	84,833	80,201	83,692	80,188	87,072
Serious Injury Rate	36.16	34.58	37.03	33.77	36.19

**Measure: Percentage of Two-Lane Roads with Improved Shoulders**

For several years, TxDOT has been adding shoulders to narrow two-lane roads throughout the state with the goal of improving safety along these routes. The steady increase in percentage of two-lane highways with improved shoulders is shown in Table 4. In 2012, a detailed analysis of 189 recent TxDOT road projects showed that adding pavement width, including shoulders, does make highways safer and results in fewer crashes.

TxDOT contracted with the Texas Transportation Institute (TTI) to analyze and review three years of pre- and post-improvement data on more than 1,000 miles of previously narrow two-lane highways that had recently been widened. The numbers show that on 1,159 miles highway with recently added shoulders, there were 133 fewer fatalities and 895 fewer injuries. These projects were largely funded through the Proposition 12 and Proposition 14 bond programs.

TTI has estimated that these types of projects could save up to 44 lives each year or 880 lives over 20 years, and prevent 298 injuries annually or 5,960 injuries over the same time period.

Table 4: Percentage of Two-Lane Highways with Improved Shoulders

	Two-Lane Highways with Improved Shoulders				
Calendar Year	2008	2009	2010	2011	2012
Percentage	55.94%	56.75%	59.73%	60.40%	61.90%

**Measure: Reduction in Work Zone Incidents**

In addition to the safety of the traveling public, TxDOT also strives to improve the safety of its men and women working in the field. The 2013 National Work Zone Awareness campaign theme was “We’re in this together.” Table 5 shows the total number of crashes that occurred in on-system work zones from 2008 to 2012.

Table 5: Total On-System Crashes in Work Zones

	Total On-System Crashes in Work Zones				
Calendar Year	2008	2009	2010	2011	2012
# of Crashes	14,065	10,964	9,525	10,670	12,428

**Measure: Percentage of General Aviation Airports with Safety Improvements**

Texas’ general aviation airports, critical components of the transportation system, receive funds for safety improvements through TxDOT-administered programs. While this year’s funding is slightly lower than last year, a majority of projects in the Aviation Division’s capital improvement program address safety improvements. This funding reduction is in no way due to a decreased focus on safety but indicates fewer safety focused improvements are needed as airports work to eliminate potential safety deficiencies.

Table 6: Percentage of General Aviation Airports with Safety Improvements

	General Aviation Airports with Safety Improvements	
Fiscal Year	2012	2013
Percentage	60.4%	54.9%

**Measure: Percentage of Railroad Crossings with Signalization**

Another area that has historically seen high numbers of fatalities is at-grade highway/railroad crossings; however, during the last 5 years, fatalities have decreased 33.65% from 143 to 104.

Table 7: Percentage of Railroad Crossings with Signalization

	Railroad Crossings With Signalization				
Fiscal Year	2009	2010	2011	2012	2013
Percentage	56.96%	58.40%	59.20%	60.00%	60.80%

As shown in Table 7, TxDOT has made a significant investment in railroad crossing signals such as flashers and “wig-wag” signs. Nearly 61 percent of grade crossings in Texas are now signalized. The remaining non-signalized crossings are typically on roads with low traffic volumes that cross tracks with low train volumes.

As TxDOT moves forward, we strive to achieve zero fatalities at all railroad/highway intersections. To achieve this, TxDOT will now focus on improving safety at more heavily used crossings. In light of this new focus this performance measure will no longer be reported.

Concerning our goal of enhancing safety for all Texans, there is still room for improvement. In 2012, statistics showed that a crash occurs every 75 seconds on Texas roads. In addition, approximately 30 percent of the 3,399 people killed on Texas roadways in 2012 were motorcyclists, pedestrians or bicyclists. Locations where travel modes interact have their own unique safety concerns.

### **MAP-21: Serious Injury and Fatality Performance Measures & Targets**

Making Texas highways safer is not a one-size-fits-all endeavour. Improvements in safety require a multi-faceted approach that includes both engineering solutions and educational outreach. For example, an engineering solution as simple as adding a few feet of pavement to narrow two-lane roads has been shown to dramatically reduce the number of fatal crashes. Similarly, activities such as widening shoulders and installing curbs and sidewalks improve safety in zones where pedestrians, bicyclists and automobiles interact. The agency's educational outreach programs are equally important. Along with on going public awareness campaigns related to bicycle and motorcycle awareness for drivers, programs aimed at changing human behaviour like driving without seatbelts, driving under the influence of intoxicants, and driving while distracted by cell phones have been enormously effective in saving lives.

Highways are not the only way of moving people and goods, and the department is continually researching and implementing innovative and cost effective methods to improve roadway, ferry, rail, transit, and general aviation safety. The engineering solutions and education programs go hand-in-hand in making Texas roads safer.

MAP-21 provides that the Secretary of Transportation (Secretary) shall establish performance measures that will assess serious injuries and fatalities per vehicle mile travelled, as well as the total number of serious injuries and fatalities. AASHTO (American Association of State Highway and Transportation Officials) has proposed the following safety related measures:

- Number of Fatalities - Five-year moving average of number of fatalities on all public roads for a calendar year;
- Fatality Rate - Five-year moving average of rate of number of fatalities per 100 million vehicle miles travelled (VMT) for a calendar year;
- Number of Serious Injuries - Five-year moving average of count of number of serious injuries on all public roads for a calendar year; and
- Serious Injury Rate - Five-year moving average of rate of number of serious injuries per 100 million VMT for a calendar year.

Below is TxDOT's recommended submittal and proposed targets based on AASHTO's proposed measures.

Table 8: National Performance Results and Proposed Targets: Serious Injuries & Fatalities

TxDOT Recommended Performance Measures	Latest Reporting Year	FY 2015 Target		
	Statewide	Urban	Rural	Statewide
Fatality Rate (5-year moving average)	1.41	0.91	2.26	1.40
Number of Fatalities (5-year moving average)	3,399	< 1,465	< 1,964	< 3,466
Serious Injury Rate (5-year moving average)	36.19	39.22	30.76	36.59
Number of Serious Injuries (5-year moving average)	87,072	< 63,193	< 26,712	< 90,712

## Goal 2: Maintain the Existing Texas Transportation System

The condition of our state's infrastructure is the foundation of a safe transportation system, and a key component to its being "best-in-class." Critical to economic development and quality of life, Texas' transportation network is also among the state's largest capital investments. As the transportation infrastructure ages, routine and preventative maintenance extends the life of the system and reduces long-term replacement costs. In the SLRTP 2035 two performance measures were recommended to assess maintenance of our transportation system.

Table 9: Goal 2 - Maintain existing transportation system

SLRTP 2035 GOAL	PERFORMANCE MEASURES
<ul style="list-style-type: none"> <li>Maintain the existing Texas transportation system</li> </ul>	<ul style="list-style-type: none"> <li>Percentage of transportation facilities in "Good" or better condition, or Texas Condition Assessment Program score</li> <li>Percentage of targets met in 4-year pavement management plans</li> </ul>

### Measure: Percentage of Transportation Facilities in "Good" or Better Condition

In FY 2012, TxDOT districts generally out-performed the spending-based projections in the Four-Year Pavement Management Plan, but only by a small percentage (Table 10). Limited funding for ongoing preventative maintenance has had an effect on pavement condition across the state. TxDOT's districts are out-performing predictions, but are still seeing a gradual decrease in pavement quality.

Table 10: Percent Lane-Miles in “Good” or Better Condition

	Lane-Miles in “Good” or Better Condition									
Fiscal Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Percent	87.02%	87.34%	86.69%	86.76%	86.27%	85.94%	86.97%	86.66%	86.47%	88.30%

**Measure: Percentage of Targets Met in Four-Year Pavement Management Plans**

As shown in Table 11, the percentage of four-year pavement plan targets met by TxDOT districts dropped dramatically from 2010 to 2012. In FY 2013 however, the statewide percentage of lane miles in “Good” or better condition increased, and the percentage of districts hitting their targets also increased. This is the first improvement in pavement condition percentage in the last four years and the highest since FY 2002 when the Texas Transportation Commission established the statewide pavement condition goal.

Table 11: Percent Districts Meeting Predicted Performance in Four-Year Pavement Management Plan

	Districts Meeting Predicted Performance in Four-Year Pavement Management Plan			
Fiscal Year	2010	2011	2012	2013
Percentage	88.0%	80.0%	68.0%	92.0%

Even though increased oil and gas development significantly affected the state’s transportation infrastructure, TxDOT achieved the highest statewide percentage of lane miles in “Good” or better condition continuing by improving pavement management practices. These improved pavement management, maintenance and rehabilitation techniques have allowed TxDOT to treat additional lane miles with the same available funding, keep the pavement network in better overall condition, and “more importantly” reduce the long-term cost of maintenance. In addition to improving pavement management practices, TxDOT also increased pavement maintenance investment by approximately \$100 million in FY 2013.

**MAP-21: Pavement Condition Performance Measures & Targets**

MAP-21 provides requirements related to the National Highway Performance Program. With regard to pavement condition, the act requires the Secretary to establish:

- Measures for states to assess:
  - Condition of pavements on the Interstate system;
  - Condition of pavements on the National Highway System (NHS) (excluding the Interstate);
- Minimum levels for the condition of pavement on the Interstate System; and
- Elements necessary to collect and maintain standardized data to carry out a performance-based approach.

In addition, MAP-21 provides that, “in establishing minimum condition levels, if the Secretary determines that various geographic regions of the United States experience disparate factors contributing to the condition of pavement on the Interstate System in those regions, the Secretary may establish different minimum levels for each region.”

Because transportation agencies are already required to collect the data for Highway Performance Management System (HPMS) reporting, AASHTO recommends use of the International Roughness Index (IRI) for pavement condition measures, including:

- Interstate Pavement in “Good,” “Fair” and “Poor” condition based on the IRI - Percentage of 0.1 mile segments of Interstate pavement mileage in Good, fair and poor condition based on the following criteria: “Good” if IRI <95, “Fair” if IRI is between 95 and 170, and “Poor” if IRI is greater than 170.
- Non-Interstate NHS Pavement in “Good,” “Fair” and “Poor” condition based on the IRI - Percentage of 0.1 mile segments of non-Interstate NHS pavement mileage in “Good,” “Fair” and “poor” condition based on the following criteria: “Good” if IRI <95, “Fair” if IRI is between 95 and 170, and “Poor” if IRI is greater than 170.
- Pavement Structural Health Index - Percentage of pavement which meet minimum criteria for pavement faulting, rutting and cracking.

Texas reports IRI data to the federal government through HPMS. The results shown in Table 12 reflect the current Texas pavement performance and its proposed statewide target.

Table 12: National Performance Results and Proposed Targets: Pavement Condition

TxDOT Recommended Performance Measures	Latest Reporting Year			FY 2015 Target
	Urban	Rural	Statewide	Statewide
Interstate Pavement in “Good” Condition (IRI <95)	57.03%	82.73%	70.86%	68.43%
Interstate Pavement in “Fair” Condition (IRI 95 - 170)	36.23%	15.98%	25.33%	28.46%
Interstate Pavement in “Poor” Condition (IRI >170)	6.74%	1.92%	3.81%	3.11%
Non-Interstate NHS Pavement in “Good” Condition (IRI <95)	44.38%	64.92%	54.60%	51.99%
Non-Interstate NHS Pavement in “Fair” Condition (IRI 95 - 170)	43.08%	32.30%	37.72%	41.22%
Non-Interstate NHS Pavement in “Poor” Condition (IRI > 170)	12.54%	2.77%	7.68%	6.79%

In addition to pavement performance measures, MAP-21 provides requirements for bridge condition. The act requires the Secretary establish measures for states to assess the condition of bridges on the NHS. In addition, the act provides for a penalty if more than 10 percent of the total deck area of a state’s bridges on the NHS have been classified as structurally deficient.

In response, AASHTO developed the following recommended performance measures:

- Percentage of Deck Area on Structurally Deficient Bridges - NHS bridge deck area on structurally deficient bridges as a percentage of total NHS bridge deck area.
- NHS Bridges in “Good,” “Fair” and “Poor” Condition based on Deck Area - Percentage of NHS bridges in good, fair and poor condition weighted by deck area.

Table 13: National Performance Results and Proposed Targets: Bridge Condition

	Latest Reporting Year	FY 2015 Target
TxDOT Recommended Performance Measures	Statewide	Statewide
% Structurally Deficient Deck Area on NHS Bridges - Based on total NHS Deck Area	1.7%	1.3%
% Structurally Deficient Deck Area on non-NHS Bridges - Based on total non-NHS Deck Area	1.8%	1.4%
Count of Bridges (Entire Inventory) with Cyclic Maintenance Needs	28,026	28,000
% Bridges (Entire Inventory) by Deck Area with Cyclic Maintenance Needs	54.1%	53.4%
Count of Bridges (Entire Inventory) with Preventative Maintenance Needs	23,268	25,000
% Bridges (Entire Inventory) by Deck Area with Preventative Maintenance Needs	44.3%	45.3%
Count of Bridges (Entire Inventory) with Rehabilitation or Replacement Needs	933	780
% Bridges (Entire Inventory) by Deck Area with Rehabilitation or Replacement Needs	1.6%	1.3%

**Goal 3: Promote Congestion Relief Strategies**

With each passing year, the most congested metropolitan highways in Texas are becoming more crowded, resulting in wasted time, wasted fuel, reduced quality of life and economic growth. As shown in Table 14, increased congestion on Texas roadways is driven by significant growth in population and VMT combined with very little growth in highway capacity, and measured by added lane miles. TTI estimates the value of lost time and wasted fuel in Texas tops \$10 billion per year. Further, two-thirds of Texas residents live in urban areas that TTI ranked in the 40 most congested U.S. metropolitan areas, with three areas (Houston, Dallas-Fort Worth and Austin) in the top 15.

Table 14: Daily Vehicle Miles Travelled, Lane Miles & Population; 1985-2035

Year	VMT, Lane Miles and Population; 1985-2035										
	1985	1990	1995	2000	2005	2010	2015*	2020*	2025*	2030*	2035*
Daily VMT in Millions	394.7	440.5	496.4	586.8	641.7	641.8	708.4	781.9	863.0	952.6	1,051.4
Lane Miles in Thousands	606.0	647.1	626.0	639.4	649.1	670.7	684.8*	699.2	713.8	728.8	744.2
Population in Millions	16.3	17.0	18.7	20.9	23.0	25.2	26.3	27.4	28.4	29.3	30.1

\*2015 - 2035 Daily VMT & Lane Miles projections based on avg. calculated % growth of 10.38%.

Table 15: Goal 3 - Congestion Relief

SLRTP 2035 GOAL	PERFORMANCE MEASURES
<ul style="list-style-type: none"> <li>Promote congestion relief strategies</li> </ul>	<ul style="list-style-type: none"> <li>Reduction in large- and small-urban area congestion (total travel delay, travel delay per commuter and congestion costs)</li> <li>Effectiveness of multimodal congestion management projects and strategies in large urban areas</li> <li>Progress on top 100 congested roadway segments</li> <li>Fraction of work trips that use single-occupancy vehicles (SOVs)</li> </ul>

**Measure: Reduction in Large and Small Urban Area Congestion**

Traffic congestion impacts motorists in many ways. Not only does it require extra travel time and more fuel, there are associated financial costs, as well.

Table 16: Annual Hours of Delay

Area	Annual Hours of Delay				
	2008	2009	2010	2011	2012
Very Large Urban Areas	300,240,000	295,279,000	307,720,000	313,550,000	320,500,000
Large Urban Areas	72,318,000	74,515,000	76,421,000	78,305,000	80,500,000
Medium Urban Areas	26,552,000	25,780,000	26,876,000	27,459,000	28,250,000
Small Urban Areas	12,790,000	13,196,000	13,974,000	14,136,000	14,350,000
All Urban Areas Reported	411,900,000	408,770,000	424,991,000	433,450,000	443,600,000

The Travel Time Index measures congestion. It is the ratio of travel time during congested conditions (e.g. morning commute times) to travel in free-flow conditions. Table 17 below shows the Travel Time Index for various size cities in Texas from 2008 through 2012.

Table 17: Travel Time Index

Area	Travel Time Index				
	2008	2009	2010	2011	2012
Very Large Urban Areas	1.25	1.24	1.25	1.25	1.32
Large Urban Areas	1.22	1.23	1.24	1.24	1.37
Medium Urban Areas	1.15	1.17	1.19	1.19	1.21
Small Urban Areas	1.09	1.10	1.10	1.10	1.13
All Urban Areas Reported	1.23	1.22	1.24	1.24	1.30

**Measure: Effectiveness of Multimodal Congestion Management Projects and Strategies in Large Urban Areas**

There is general consensus among decision-makers that building more highways is not the only or best solution to the congestion problem in Texas. TxDOT uses a number of different strategies to promote congestion relief. A balanced and varied approach that incorporates travel demand management solutions along with multimodal solutions will allow TxDOT to address congestion.

Public Transportation

Urban transit in Texas includes fixed-route and demand-response bus systems, trolley systems and urban rail systems. Urban transit systems in Texas consist predominantly of fixed-route bus service. Urban rail systems exist in the cities of Austin, Dallas and Houston, and trolley/streetcar systems exist in Dallas and Galveston.

Rural transit systems provide the general public with both fixed-route and demand-response services. In Texas, rural transit systems are generally regional systems serving multiple counties, although some systems serve only one county or even sections of a county. Several rural transit systems provide service and connections to nearby larger metropolitan areas through established fixed route service with transfer points. Rural transit agencies also provide demand-response transit services. This type of bus service helps meet the needs of lower density rural areas of Texas. Most demand-response trips tend to be taken by the elderly, lower income and rural residents who require transportation assistance getting to medical appointments, employment, shopping and other services. In many rural areas, demand-response service is also available during evening hours to serve customer needs after established fixed-route service ends.

Table 18: Transit Program Ridership

Program	Transit Program Ridership			
	2009	2010	2011	2012
Metropolitan Transit Authorities	261,566,425	243,799,069	252,717,548	267,513,764
Urbanized Areas	18,754,210	21,292,163	22,291,873	22,742,716
Non-Urbanized Areas	4,906,223	5,072,004	5,825,030	7,023,436
Elderly Individuals and Individuals with Disabilities Program	1,387,753	1,221,697	1,037,421	914,020
Job Access and Reverse Commute	1,120,885	1,329,006	1,697,260	1,858,331
New Freedom	19,042	64,669	97,507	75,794

### Dynamic Rerouting

Dynamic rerouting is being examined under the Mobility Investment Priorities (MIP) project as a way to alleviate severe congestion on I-45 in Houston. It consists of dynamic messaging signs that present drivers with viable alternate highway routes when their normal route is severely congested as a result of a traffic incident, special events, construction or other abnormal traffic conditions. The alternate route is determined by prevailing traffic conditions along nearby highways. This method benefits drivers by shortening travel time and limiting corridor congestion. Compared with building additional capacity, it can be implemented quickly and is relatively inexpensive. TxDOT has successfully deployed this strategy as a short-term solution for work zone management using portable solar-powered monitors, signs and cameras in a smart rural work zone system on I-35 in Hillsboro.

### Demand-based Pricing

Under demand-based pricing the cost of tolled or managed lanes varies with levels of traffic congestion in order to maintain a minimum travel speed for managed-lane users. That is, the heavier the traffic, the higher the toll. TxDOT and its partners are introducing this concept with the DFW Connector Project in the Dallas/Ft.Worth Metroplex and the MOPAC Improvement Project in Austin.

### Traffic Management

Traffic management is essential to relieving congestion. It can improve the efficiency of the existing highway system by more effectively managing traffic flow. For example, staging tow trucks so that collisions and stalled vehicles can be rapidly cleared, or improving signal coordination so drivers experience green lights as they move in the peak travel direction are among low-cost, high-impact traffic management strategies. TxDOT has recently worked to expand the scope of rapid-response wrecker programs in the largest metropolitan areas.

In June 2012, TxDOT launched an online map application, Drive Texas™ (www.drivetexas.org) that provides the traveling public with real-time traffic conditions, traffic and weather feeds, as well as links to other useful travel information. Drive Texas™ displays statewide conditions affecting travel such as construction, lane closures and accidents; as well as a live weather feed that allows drivers to check conditions along their route. Motorists can plot a course of travel by entering their start and end cities. They can view highway conditions and locate TxDOT Safety Rest Areas or Texas Travel Information Centers. In select cities, motorists can also view images from traffic cameras, messages posted on dynamic message signs and other detailed information.

Although highway condition information has been available to the public for years on www.TxDOT.gov, Drive Texas™ puts information right at the user's fingertips in an easy-to-find format. The site features a robust user-friendly interface, making it easier for the traveling public to access real-time conditions affecting travel across Texas. The application can be found at www.DriveTexas.org, or by clicking on the "Highway Conditions" link on the TxDOT homepage at www.TxDOT.gov. For those on the go, a mobile-friendly version is also available.

### Travel Options

Reducing single occupant vehicle trips by encouraging practices such as ridesharing and vanpooling can reduce roadway congestion. Private companies play a key role in offering employee options, such as flexible work hours, compressed work weeks, and telecommuting. Shipping companies may also participate by choosing to transport goods overnight in an effort to reduce roadway congestion during peak travel periods, while simultaneously meeting delivery deadlines. While these efforts do not always reduce the number of trips, they do disperse them out throughout the day allowing more efficient use of the transportation system.

### **Measure: Progress on Top 100 Congested Roadways**

In September 2011, TxDOT contracted with TTI to begin the MIP project. The project had several goals, including documenting best practices in public engagement, developing traffic management strategies, and optimizing use of existing capacity. The primary goal, however, is to advance development of high-impact projects on the state's most congested road segments. \$300 million was allocated to fund engineering and design work, environmental studies and right of way acquisition to prepare high-impact projects in Houston, Dallas, Austin and San Antonio. The results of this work range from accelerating construction on already-planned projects to developing completely new congestion relief concepts. Detailed information about the MIP activities can be found at: <http://mobility.tamu.edu/mip/>.

Projects selected for development under the MIP are on the state’s most congested roadways based on TxDOT’s annual 100 Most Congested list. Since the list was first published, TxDOT has dedicated significant funds to improvement roads on the list. In FY 2013, TxDOT let \$3.163 billion in construction contracts to improve most congested roadway segments.

In addition to TxDOT’s funding of congestion-relieving projects along the most congested roadways in the state, many of the Comprehensive Development Agreements (CDAs) authorized under Senate Bill 1420 (82<sup>nd</sup> Texas Legislature) leverage additional funding for much-needed improvements. These additional funds are included in the \$3.163 billion figure provided above.

**Measure: Fraction of Work Trips that Use SOVs**

On many of the state’s most congested roads, traffic occurs in a distinctive pattern. There is a sharp increase in congestion and decrease in travel speeds during the morning and evening rush hours. Commuters can employ a number of strategies to reduce congestion during these times. Strategies include use of high-occupancy vehicle (HOV) and high-occupancy toll (HOT) lanes, carpooling, vanpooling, mass transit including buses and rail, as well as telecommuting. As shown in Table 19, the number of work trips from SOV use has not increased. To help reverse this trend, TxDOT is making significant investments to improve HOV and HOT facilities in the Houston and Dallas-Fort Worth areas. Further, TxDOT is working with local partners to plan highway improvements that complement the use of non-highway modes such as commuter and light-rail, bus-rapid-transit and park-and-ride facilities.

Table 19: Percentage of Work Trips that Use Single Occupancy Vehicles

	Work Trips that Use Single Occupancy Vehicles				
Fiscal Year	2008	2009	2010	2011	2012
Percentage	78.35%	79.58%	79.81%	79.79%	Not Reported

## MAP-21: Freight Movement & National Highway System Performance Measures & Targets

MAP-21 requires the Secretary of Transportation to “establish measures for states to use to assess freight movement on the Interstate System” as well the performance of the Interstate and the NHS. AASHTO focused its recommendations for these system performances on delay and reliability.

- Annual Hours of Truck Delay - Travel time above the congestion threshold in units of vehicle-hours for trucks on the Interstate Highway System
- Truck Reliability Index - Defined as the ratio of the total truck travel time needed to ensure on-time arrival to the agency-determined threshold travel time (e.g., observed travel time or preferred travel time).
- Annual Hours of Delay - Travel time above a congestion threshold (defined by State DOTs and MPOs) in units of vehicle hours of delay on Interstate and NHS corridors.
- Reliability Index - Defined as the ratio of the 80th percentile travel time to the agency-determined threshold travel time.

Table 20: National System Performance Results and Proposed Targets: Freight & NHS

TxDOT Recommended Performance Measures	Latest Reporting Year			FY 2015 Target		
	Urban	Rural	Statewide	Urban	Rural	Statewide
<b>Freight:</b>						
Annual Hours of Truck Delay - Interstates (millions)	9.2	1.5	10.7	10.6	1.6	12.9
Truck Reliability Index	1.83	1.08	1.57	1.9	1.09	1.62
<b>National Highway System Performance:</b>						
Annual Hours of Delay - NHS (millions)	270.3	25.5	295.8	312.5	27.7	338.1
Annual Hours of Delay - Interstates (millions)	105.7	5.6	111.3	122.2	6.0	127.2
Annual Hours of Delay - Non-Interstate NHS	164.6	20.0	184.6	190.3	21.6	211.0
Reliability Index - NHS	1.92	1.15	1.67	1.89	1.15	1.65
Reliability Index - Interstates	1.83	1.08	1.57	1.89	1.08	1.61
Reliability Index - Non-Interstate NHS	1.85	1.22	1.65	1.9	1.22	1.68

## Goal 4: Enhance System Connectivity

Connectivity is critical to the efficient movement of people and goods. In rural Texas, maintaining connection between Texas communities means maintaining access to medical care, education, and commerce. In urban Texas, it means a reliable trip to and from work and school.

Table 21: Goal 4 - System Connectivity

	SLRTP 2035 GOAL	PERFORMANCE MEASURES
	<ul style="list-style-type: none"> <li>▪ Enhance system connectivity</li> </ul>	<ul style="list-style-type: none"> <li>▪ Satisfaction rates on industry access to international markets and gateways via the Texas transportation system</li> <li>▪ Percentage of Texas population within a 30-minute drive of an airport</li> <li>▪ Percentage of Texas communities of 50,000 or more with public transportation services</li> <li>▪ Percentage of Texas population with access to rural public transportation services</li> <li>▪ Reduction in the number of bottlenecks on economically critical road and freight corridors</li> <li>▪ Percentage of high volume rural roads with super-2 or 4-lane divided facilities</li> </ul>

**Measure: Satisfaction Rates on Industry Access to International Markets and Gateways via the Texas Transportation System**

TxDOT is currently working with industry representatives, transportation stakeholders and the public to assess the state’s freight transportation network, including access to international markets and gateways. This effort includes stakeholder and public meetings throughout the state. Both the updated long-range transportation plan and the Texas Freight Advisory Committee’s final report will include an assessment of the infrastructure system and its ease of use.

**Measure: Percentage of Texas Population within a 30-Minute Drive of an Airport**

The 2010 Census population figures indicate that 20.8 million Texans live within a 20-mile radius of a municipal airport. Variations in travel patterns make a 20-mile distance a sufficient measure for a 30-minute travel time to an airport.

**Measure: Percentage of Texas Population with Access to Public Transportation Services**

TxDOT’s Public Transportation Division administers and oversees federal and state public transportation grant programs, and provides guidance on public transportation asset management and replacement, training and technical assistance to transit providers throughout the state. One of its key duties is fostering access to rural public transportation services by administering federal grant programs. In FY 2013, 100 percent of Texas communities with a population over 50,000 reported being served by public transportation. Table 22 details the percentage of rural Texans with access to public transportation services.

Table 22: Percentage of Texas Population with Access to Rural Public Transportation Services

Fiscal Year	Population with Access to Rural Public Transportation Services				
	2009	2010	2011	2012	2013
Percentage	95.10%	96.06%	95.10%	96.06%	96.06%

**Measure: Reduction in the Number of Bottlenecks on Economically Critical Road and Freight Corridors**

Bottlenecks are “spot” problems where traffic demand exceeds capacity, resulting in extremely slow travel speeds. Bottlenecks are typically found at locations where the number of lanes suddenly decreases and where large numbers of cars enter roads. Simple, low-cost fixes such as re-striping to add lanes for short distances or modifying interchanges and entrance ramps can yield dramatic improvements at these locations. The department is currently developing methods to identify problem areas and best practices to address them.

**Measure: Percentage of High Volume Rural Roads with Super-2 or 4-Lane Divided Facilities**

In June, 2012 the Texas Transportation Commission adopted the Texas Rural Transportation Plan 2035 (TRTP), establishing a rural component of the state’s broader long-range planning efforts and providing a blueprint for the development of a safer, more efficient and less congested transportation network between population centers.

The TRTP laid the groundwork for review of rural roadways needs throughout the state. “High volume” on the State’s rural roadway system is defined as having an annual average daily traffic volume of 5,000 vehicles or higher. In 2012, 71.1 percent of Texas’ high volume rural roadways were either Super-2 or 4-lane divided facilities.

**Goal 5: Facilitate the Development and Exchange of Comprehensive Multimodal Transportation Funding Strategies with Transportation Program and Project Partners**

Like U.S. DOT and most state and local transportation agencies, TxDOT faces severe financial constraints. Despite increased demand for new transportation system capacity and for preserving transportation assets, transportation funds are decreasing. Many factors contribute to this trend. State and federal fuel taxes are a fixed amount per gallon. Thus, as vehicles become more fuel efficient, less revenue is raised per VMT. In addition, fuel taxes are not indexed to the rate of inflation, causing fuel-related transportation revenues to lose value over time relative to the cost of preserving, enhancing or expanding the transportation system.

Table 23: Goal 5 - Comprehensive multimodal transportation funding strategies

	SLRTP 2035 GOAL	PERFORMANCE MEASURES
	<ul style="list-style-type: none"> <li>▪ Facilitate the development and exchange of comprehensive multimodal transportation funding strategies with transportation program and project partners</li> </ul>	<ul style="list-style-type: none"> <li>▪ Percentage of projects and programs using alternative financing</li> </ul>

Traditional transportation funding methods in Texas have left a large gap between what is available and what is necessary to address future transportation challenges. Over the years, the Texas Legislature has enacted laws that provide opportunities for TxDOT to fill that gap, and the agency has diligently pursued these options to address safety and mobility goals. These alternative project development and financing methods include bonding, pass through financing and CDAs.

CDAs use a procurement process that allows TxDOT to select the proposal that provides the best value to the state. The agency uses two types of CDAs: design-build and concession or public-private partnerships.

Design-build contracts are essentially “turnkey” contracts. They provide a single point of responsibility for property acquisition, design and construction. They do not include private-sector financial participation or the long-term lease of the facility to a private partner. This type of contract expedites project delivery because stages of the project may occur concurrently.

A concession CDA (public-private partnership) authorizes the developer to perform the development, design, construction, financing, operation and maintenance of the facility for a fixed period of time, not to exceed 52 years. In exchange, the developer receives some type of ongoing revenue stream, typically from tolls collected from facility users.

Major benefits in utilizing a concession CDA include:

- Developer assumes the risk for cost, schedule, traffic and revenue, financing and quality control/assurance; and
- Project may be built years sooner than it would have using traditional funding.

Senate Bill 1730 (83<sup>rd</sup> Texas Legislature) authorized TxDOT to procure the following CDAs:

- SH 99 (Grand Parkway - Houston);
- I-35E in Dallas and Denton Counties from 635 to US 380;
- I-35W in Tarrant County from I-30 to SH 144;
- SH 183 managed lanes in Tarrant and Dallas Counties from SH 121 to I-35E;
- 35E/U.S. 67 Southern Gateway in Dallas County, including:
  - 35E from 8th Street to I- 20; and
  - U.S. 67 from I- 35E to FM 1382 (Belt Line Road);

- SH 288 from U.S. 59 to south of SH 6 in Brazoria and Harris counties;
- I-820 from SH 183 to Randol Mill Road;
- SH 290 in west Houston from LP 610 to the Grand Parkway;
- SH 114 in Dallas County from SH 121 to SH 183;
- LP 12 in Dallas County from SH 183 to I-35E;
- LP 9 in Dallas and Ellis Counties from I-20 to U.S. 67; and
- U.S. 181 Harbor Bridge in Nueces County between U.S. 181 at Beach Avenue and I-37.

In addition, the department or a regional mobility authority may enter into a CDA to develop the following:

- LP 1 (MoPac Improvement) from FM 734 to Cesar Chavez Street;
- U.S. 183 (Bergstrom Expressway) from Springdale Road to Patton Avenue;
- LP 49 project from I-20 to U.S. 69 (Lindale Relief Route) and from SH 110 to U. S. 259 (Segments 6 and 7);
- LP 375 Border Highway West in El Paso County from Race Track Drive to U. S. 54;
- Northeast Parkway in El Paso County from LP 375 east of the Railroad Drive overpass to the Texas-New Mexico border;
- LP 1604 in Bexar County;
- Hidalgo County Loop;
- International Bridge Trade Corridor; and
- A project consisting of the construction of:
  - Outer Parkway Project in Cameron County from U.S. 77 to FM 1847; and
  - South Padre Island Second Access Causeway Project from SH 100 to Park Road 100.

Other funding options, aside from the traditional pay-as-you-go model, include state-backed bonds, tax-exempt municipal bonds, pass-through financing and other types of public-private partnerships.

Table 24: Percentage of Projects and Programs Using Alternative Financing

Fiscal Year	Projects and Programs Using Alternative Financing	
	2012	2013
Percentage	33.59%	50.09%

## INFORMATION ABOUT THE ACCURACY OF PREVIOUS DEPARTMENTAL FINANCIAL FORECASTS

### Purpose of Measuring Variance

Measuring the variance between projected and actual revenues allows TxDOT to evaluate whether its current forecasting methodology is accurate. It can also indicate if any recent changes to the methodology have affected the forecasting accuracy. It is important that TxDOT be accurate in its projections so that the department can plan budgets and project schedules to make full use of available funds. The target of no more than +/- a three percent variance between projected and actual revenues is set by TxDOT's executive administration.

Table 25: Measuring Accuracy of Fund 6 Revenue Forecasts

Fiscal Year	Estimated Revenues	Actual Revenues	\$ Variance	% Variance
2004	\$3,131,433,249	\$3,146,400,997	\$14,967,748	0.48%
2005	\$3,226,654,465	\$3,216,016,718	(\$10,637,747)	-0.33%
2006	\$3,321,232,692	\$3,336,035,971	\$14,803,279	0.45%
2007	\$3,379,691,985	\$3,462,302,026	\$82,610,041	2.44%
2008	\$3,616,074,195	\$3,606,191,586	(\$9,882,609)	-0.27%
2009	\$3,694,693,140	\$3,588,831,382	(\$105,861,758)	-2.87%
2010	\$3,585,809,711	\$3,602,469,423	\$16,659,712	0.46%
2011	\$3,676,875,066	\$3,754,454,445	\$77,579,379	2.11%
2012	\$3,728,145,430	\$3,913,019,796	\$184,874,366	4.96%
2013	\$3,977,198,078	\$4,082,138,868	\$104,940,790	2.64%

### Data Source/Methodology

The revenues included in this estimate include revenues from state motor fuels taxes, state motor vehicle registration and title fees, interest, motor lubricant sales taxes, and various other state revenues. The estimate does not include any federal or local funds or any bond proceeds.

The department develops a fiscal year revenue estimate in September of each year and uses the forecast to determine how much money is expected to be available to support highway construction, maintenance, and departmental operations. The department considers current law, economic indicators, historical trends, information from other agencies, and other factors in developing its forecast of available revenue. The accuracy of the revenue estimate is essential to effective and efficient project scheduling.

The department analyzes its actual revenues compared to the estimates on a monthly basis to ensure that the department does not overextend its monthly obligations.

Data on revenues is collected, on a monthly basis, by the Budget and Forecasting branch of TxDOT's Finance Division from the Comptroller's Uniform Statewide Accounting System (USAS) and TxDOT's Financial Information System (FIMS). The variance is calculated by:

$$\text{Actual Revenues} - \text{Projected Revenue} = \text{Revenue Variance}$$

### **Recent Performance Results and What They Mean**

The department's target is to have its annual revenues estimate within 3.0 percent of actual revenues. During nine of the previous ten fiscal years, the department's estimates have been accurate within the plus or minus 3.0 percent target.

In FY 2012, the department began utilizing a vehicle registration fee estimate from TxDMV. Due to statutory changes to the registration fee structure and a new provision for registration removal on dealer trade-in vehicles, vehicle registration fees brought in \$140M more than that estimate, and the overall target was not met for FY 2012. Excluding increases to vehicle registration fees, actual revenues received were just 1.74 percent higher than the department's estimate.

In mid-FY 2012, the department recognized through its trend analysis that increased collections from the statutory changes were likely to result in substantially higher revenues than had been estimated, and the department began working with TxDMV to revise the estimate. In the April 2012 Cash Forecast, the department began allowing the estimate to grow while continuing to work with TxDMV on a revised estimate. A revised estimate within 0.3 percent of the actual fiscal year total was used in the June 2012 Cash Forecast. The use of ongoing monthly analysis rather than waiting until the end of the fiscal year to update projections allowed the department to submit a 2014-2015 Legislative Appropriation Request that reflected the additional future revenue.

By reviewing the forecast on a monthly basis and making appropriate adjustments, the department was also able to avoid over-obligating the department in any given month and maximize the use of available funding. For FY 2013\*, with a variance of 2.64 percent from the estimate, TxDOT returned to performing within the expected range.

*\*FY 2013 Actual Revenues exclude reimbursements from the Grand Parkway Transportation Corporation for prior work performed by TxDOT on Segments D, E, F-1, F-2 and G of the Grand Parkway project. Due to the accounting procedures involved in the transaction, these reimbursements were reflected as revenue rather than as a reduction of prior TxDOT expenditures on the project.*

The department is continually identifying methods to improve the accuracy of the department's revenue estimate. For example, the staff routinely performs monthly trend analysis, closely monitors state motor fuels tax and vehicle registration receipts, discusses findings with the CFO(Chief Financial Officer) in monthly forecast meetings, and researches past and future trends utilizing economic data obtained through a contract with IHS Global Insight, Inc. and Moody's, Inc. The department will continue to work with other agencies to further enhance the accuracy of the forecast and monitor its methodology to maintain a +/- 3.00 percent variance in its annual revenue estimate.

## APPENDIX A:

## PERCENT OF LANE-MILES WITH PAVEMENT IN GOOD OR BETTER CONDITION (FY 2013)

County	TxDOT District	Lane Miles in Good or Better Condition	Total Lane Miles in County	Percent Lane Miles Good or Better
ANDERSON	Tyler	962.7	995.5	96.71%
ANDREWS	Odessa	544.8	559.4	97.39%
ANGELINA	Lufkin	841.0	906.3	92.79%
ARANSAS	Corpus Christi	184.6	204.1	90.45%
ARCHER	Wichita Falls	514.0	548.2	93.76%
ARMSTRONG	Amarillo	332.8	369.2	90.14%
ATASCOSA	San Antonio	809.0	979.8	82.57%
AUSTIN	Yoakum	577.8	622.6	92.80%
BAILEY	Lubbock	427.2	479.6	89.07%
BANDERA	San Antonio	418.2	421.2	99.29%
BASTROP	Austin	669.6	749.4	89.35%
BAYLOR	Wichita Falls	443.0	478.6	92.56%
BEE	Corpus Christi	576.2	675.7	85.27%
BELL	Waco	1399.6	1535.1	91.17%
BEXAR	San Antonio	2736.8	3405.8	80.36%
BLANCO	Austin	411.0	461.6	89.04%
BORDEN	Abilene	325.6	336.8	96.67%
BOSQUE	Waco	649.5	695.3	93.41%
BOWIE	Atlanta	981.3	1088.4	90.16%
BRAZORIA	Houston	1156.4	1350.7	85.61%
BRAZOS	Bryan	798.4	948.7	84.16%
BREWSTER	El Paso	605.2	620.4	97.55%
BRISCOE	Childress	303.8	325.2	93.42%
BROOKS	Pharr	233.2	265.6	87.80%
BROWN	Brownwood	695.0	771.2	90.12%
BURLESON	Bryan	470.4	534.4	88.02%
BURNET	Austin	752.8	804.8	93.54%
CALDWELL	Austin	515.8	579.0	89.08%
CALHOUN	Yoakum	375.4	407.0	92.24%
CALLAHAN	Abilene	665.9	740.3	89.95%
CAMERON	Pharr	1530.1	1798.2	85.09%
CAMP	Atlanta	225.0	232.6	96.73%
CARSON	Amarillo	477.8	553.4	86.34%
CASS	Atlanta	933.2	971.4	96.07%
CASTRO	Lubbock	478.6	534.6	89.52%
CHAMBERS	Beaumont	751.8	805.1	93.38%
CHEROKEE	Tyler	1116.2	1157.3	96.45%

CHILDRESS	Childress	427.2	450.6	94.81%
CLAY	Wichita Falls	709.0	768.8	92.22%
COCHRAN	Lubbock	458.2	470.2	97.45%
COKE	San Angelo	353.7	368.3	96.04%
COLEMAN	Brownwood	723.3	754.9	95.81%
COLLIN	Dallas	1216.4	1501.2	81.03%
COLLINGSWORTH	Childress	416.8	439.6	94.81%
COLORADO	Yoakum	667.2	725.8	91.93%
COMAL	San Antonio	610.1	681.6	89.51%
COMANCHE	Brownwood	715.0	745.2	95.95%
CONCHO	San Angelo	473.5	482.5	98.13%
COOKE	Wichita Falls	778.3	834.9	93.22%
CORYELL	Waco	609.7	692.6	88.03%
COTTLE	Childress	378.6	387.8	97.63%
CRANE	Odessa	314.6	319.6	98.44%
CROCKETT	San Angelo	754.0	774.6	97.34%
CROSBY	Lubbock	520.6	566.6	91.88%
CULBERSON	El Paso	687.2	736.2	93.34%
DALLAM	Amarillo	541.8	665.8	81.38%
DALLAS	Dallas	2332.8	3180.7	73.34%
DAWSON	Lubbock	592.1	712.7	83.08%
DEAF SMITH	Amarillo	525.4	604.0	86.99%
DELTA	Paris	283.0	328.8	86.07%
DENTON	Dallas	1255.8	1552.8	80.87%
DEWITT	Yoakum	529.6	642.6	82.42%
DICKENS	Childress	431.0	470.0	91.70%
DIMMIT	Laredo	339.9	469.5	72.40%
DONLEY	Childress	400.6	456.4	87.77%
DUVAL	Laredo	588.6	630.2	93.40%
EASTLAND	Brownwood	969.2	1012.6	95.71%
ECTOR	Odessa	918.4	955.6	96.11%
EDWARDS	San Angelo	463.6	480.4	96.50%
EL PASO	El Paso	1374.1	1560.2	88.07%
ELLIS	Dallas	1183.7	1482.6	79.84%
ERATH	Fort Worth	784.3	814.3	96.32%
FALLS	Waco	642.7	728.7	88.20%
FANNIN	Paris	829.7	956.9	86.71%
FAYETTE	Yoakum	868.7	969.1	89.64%
FISHER	Abilene	514.4	552.4	93.12%
FLOYD	Lubbock	557.6	626.2	89.05%
FOARD	Childress	271.6	297.6	91.26%

FORT BEND	Houston	1007.9	1211.9	83.17%
FRANKLIN	Paris	300.6	331.0	90.82%
FREESTONE	Bryan	665.5	804.7	82.70%
FRIO	San Antonio	633.8	713.6	88.82%
GAINES	Lubbock	586.0	663.6	88.31%
GALVESTON	Houston	863.4	1072.0	80.54%
GARZA	Lubbock	439.0	458.4	95.77%
GILLESPIE	Austin	640.8	665.6	96.27%
GLASSCOCK	San Angelo	259.4	290.0	89.45%
GOLIAD	Corpus Christi	509.8	534.4	95.40%
GONZALES	Yoakum	656.1	856.3	76.62%
GRAY	Amarillo	653.1	759.6	85.98%
GRAYSON	Paris	973.3	1206.9	80.64%
GREGG	Tyler	717.9	788.7	91.02%
GRIMES	Bryan	451.6	540.4	83.57%
GUADALUPE	San Antonio	798.8	930.2	85.87%
HALE	Lubbock	933.7	1013.3	92.14%
HALL	Childress	445.3	456.9	97.46%
HAMILTON	Waco	537.6	584.8	91.93%
HANSFORD	Amarillo	391.4	527.2	74.24%
HARDEMAN	Childress	399.2	464.0	86.03%
HARDIN	Beaumont	529.2	549.8	96.25%
HARRIS	Houston	4344.3	5366.6	80.95%
HARRISON	Atlanta	1010.6	1118.7	90.34%
HARTLEY	Amarillo	381.0	539.4	70.63%
HASKELL	Abilene	608.6	663.0	91.79%
HAYS	Austin	649.9	712.3	91.24%
HEMPHILL	Amarillo	309.3	390.7	79.17%
HENDERSON	Tyler	958.5	979.9	97.82%
HIDALGO	Pharr	2142.6	2387.7	89.73%
HILL	Waco	945.7	1067.7	88.57%
HOCKLEY	Lubbock	641.2	747.0	85.84%
HOOD	Fort Worth	365.4	386.4	94.57%
HOPKINS	Paris	749.4	869.0	86.24%
HOUSTON	Lufkin	780.2	884.2	88.24%
HOWARD	Abilene	697.3	827.4	84.28%
HUDSPETH	El Paso	748.7	799.7	93.62%
HUNT	Paris	1093.8	1219.4	89.70%
HUTCHINSON	Amarillo	433.0	484.8	89.32%
IRION	San Angelo	236.2	245.0	96.41%
JACK	Fort Worth	522.0	572.2	91.23%

JACKSON	Yoakum	510.7	589.1	86.69%
JASPER	Beaumont	719.7	761.3	94.54%
JEFF DAVIS	El Paso	420.0	470.0	89.36%
JEFFERSON	Beaumont	932.4	1055.4	88.35%
JIM HOGG	Pharr	262.4	289.6	90.61%
JIM WELLS	Corpus Christi	496.2	670.8	73.97%
JOHNSON	Fort Worth	842.2	944.8	89.14%
JONES	Abilene	834.4	993.4	83.99%
KARNES	Corpus Christi	397.4	680.0	58.44%
KAUFMAN	Dallas	844.4	1152.6	73.26%
KENDALL	San Antonio	386.1	415.3	92.97%
KENEDY	Pharr	150.8	163.6	92.18%
KENT	Abilene	297.6	322.0	92.42%
KERR	San Antonio	641.4	709.0	90.47%
KIMBLE	San Angelo	667.8	683.8	97.66%
KING	Childress	179.6	181.8	98.79%
KINNEY	Laredo	384.6	398.2	96.58%
KLEBERG	Corpus Christi	320.0	371.2	86.21%
KNOX	Childress	438.0	467.8	93.63%
LAMAR	Paris	857.8	949.2	90.37%
LAMB	Lubbock	690.4	788.4	87.57%
LAMPASAS	Brownwood	482.9	502.0	96.20%
LASALLE	Laredo	342.8	585.0	58.60%
LAVACA	Yoakum	549.0	652.8	84.10%
LEE	Austin	456.2	527.6	86.47%
LEON	Bryan	749.8	822.6	91.15%
LIBERTY	Beaumont	737.4	797.6	92.45%
LIMESTONE	Waco	664.5	768.3	86.49%
LIPSCOMB	Amarillo	321.6	417.6	77.01%
LIVE OAK	Corpus Christi	794.7	1001.0	79.39%
LLANO	Austin	492.0	504.0	97.62%
LOVING	Odessa	66.0	68.0	97.06%
LUBBOCK	Lubbock	1381.3	1545.4	89.38%
LYNN	Lubbock	654.6	699.6	93.57%
MADISON	Bryan	435.8	564.4	77.21%
MARION	Atlanta	312.9	328.9	95.14%
MARTIN	Odessa	526.2	569.8	92.35%
MASON	Austin	392.1	418.7	93.65%
MATAGORDA	Yoakum	655.4	690.4	94.93%
MAVERICK	Laredo	364.2	440.4	82.70%
MCCULLOCH	Brownwood	584.4	610.7	95.69%

MCLENNAN	Waco	1388.3	1688.7	82.21%
MCMULLEN	San Antonio	226.4	290.0	78.07%
MEDARD	San Antonio	723.8	769.5	94.06%
MEDINA	San Angelo	337.0	347.6	96.95%
MIDLAND	Odessa	864.7	1047.2	82.57%
MILAM	Bryan	584.3	686.3	85.14%
MILLS	Brownwood	442.4	451.0	98.09%
MITCHELL	Abilene	604.0	634.8	95.15%
MONTAGUE	Wichita Falls	759.8	834.0	91.10%
MONTGOMERY	Houston	1170.8	1218.6	96.08%
MOORE	Amarillo	317.4	362.2	87.63%
MORRIS	Atlanta	320.7	355.3	90.26%
MOTLEY	Childress	296.8	302.8	98.02%
NACOGDOCHES	Lufkin	896.7	985.1	91.03%
NAVARRO	Dallas	942.2	1185.0	79.51%
NEWTON	Beaumont	541.6	549.4	98.58%
NOLAN	Abilene	588.3	678.7	86.68%
NUECES	Corpus Christi	1167.1	1465.5	79.64%
OCHILTREE	Amarillo	298.0	391.8	76.06%
OLDHAM	Amarillo	410.0	466.2	87.95%
ORANGE	Beaumont	551.5	615.9	89.54%
PALO PINTO	Fort Worth	720.7	806.1	89.41%
PANOLA	Atlanta	647.4	786.5	82.31%
PARKER	Fort Worth	771.0	849.4	90.77%
PARMER	Lubbock	457.0	603.8	75.69%
PECOS	Odessa	1663.2	1678.6	99.08%
POLK	Lufkin	784.0	854.0	91.80%
POTTER	Amarillo	625.6	828.8	75.48%
PRESIDIO	El Paso	502.4	546.2	91.98%
RAINS	Paris	224.8	257.4	87.33%
RANDALL	Amarillo	712.4	846.3	84.18%
REAGAN	San Angelo	300.8	320.8	93.77%
REAL	San Angelo	268.2	284.0	94.44%
RED RIVER	Paris	655.6	729.4	89.88%
REEVES	Odessa	1081.8	1164.4	92.91%
REFUGIO	Corpus Christi	375.4	463.2	81.04%
ROBERTS	Amarillo	200.6	241.7	83.00%
ROBERTSON	Bryan	590.2	629.4	93.77%
ROCKWALL	Dallas	197.0	331.7	59.39%
RUNNELS	San Angelo	687.4	727.2	94.53%
RUSK	Tyler	1105.8	1198.2	92.29%

SABINE	Lufkin	451.7	486.0	92.94%
SAN AUGUSTINE	Lufkin	507.4	541.0	93.79%
SAN JACINTO	Lufkin	494.5	511.5	96.68%
SAN PATRICIO	Corpus Christi	827.0	976.4	84.70%
SAN SABA	Brownwood	402.4	440.4	91.37%
SCHLEICHER	San Angelo	351.0	362.4	96.85%
SCURRY	Abilene	616.4	666.0	92.55%
SHACKELFORD	Abilene	330.0	352.6	93.59%
SHELBY	Lufkin	793.3	874.0	90.77%
SHERMAN	Amarillo	293.0	404.8	72.38%
SMITH	Tyler	1515.6	1602.1	94.60%
SOMERVELL	Fort Worth	180.8	195.0	92.72%
STARR	Pharr	437.6	478.8	91.40%
STEPHENS	Brownwood	494.0	557.4	88.63%
STERLING	San Angelo	239.9	279.4	85.86%
STONEWALL	Abilene	308.4	328.6	93.85%
SUTTON	San Angelo	571.7	588.9	97.08%
SWISHER	Lubbock	648.8	778.6	83.33%
TARRANT	Fort Worth	2657.2	3079.2	86.30%
TAYLOR	Abilene	973.0	1190.9	81.70%
TERRELL	Odessa	369.9	372.1	99.41%
TERRY	Lubbock	555.4	629.8	88.19%
THROCKMORTON	Wichita Falls	318.0	326.0	97.55%
TITUS	Atlanta	463.1	507.1	91.32%
TOM GREEN	San Angelo	962.9	1024.0	94.03%
TRAVIS	Austin	1845.4	2044.2	90.27%
TRINITY	Lufkin	413.6	438.4	94.34%
TYLER	Beaumont	499.9	521.3	95.89%
UPSHUR	Atlanta	708.6	758.4	93.43%
UPTON	Odessa	379.2	393.4	96.39%
UVALDE	San Antonio	613.9	708.1	86.70%
VAL VERDE	Laredo	625.7	685.7	91.25%
VAN ZANDT	Tyler	993.8	1064.6	93.35%
VICTORIA	Yoakum	704.5	807.4	87.26%
WALKER	Bryan	710.6	770.4	92.24%
WALLER	Houston	518.3	587.3	88.25%
WARD	Odessa	639.4	658.6	97.08%
WASHINGTON	Bryan	557.0	655.2	85.01%
WEBB	Laredo	970.7	1168.0	83.11%
WHARTON	Yoakum	771.5	872.7	88.40%
WHEELER	Childress	654.0	674.0	97.03%

WICHITA	Wichita Falls	1012.9	1115.4	90.81%
WILBARGER	Wichita Falls	686.1	699.4	98.10%
WILLACY	Pharr	469.6	511.4	91.83%
WILLIAMSON	Austin	1334.5	1571.4	84.92%
WILSON	San Antonio	670.8	744.2	90.14%
WINKLER	Odessa	256.8	295.8	86.82%
WISE	Fort Worth	822.4	894.6	91.93%
WOOD	Tyler	831.7	906.5	91.75%
YOAKUM	Lubbock	402.8	430.4	93.59%
YOUNG	Wichita Falls	660.5	705.3	93.65%
ZAPATA	Pharr	210.0	228.2	92.02%
ZAVALA	Laredo	338.2	545.0	62.06%
STATEWIDE TOTAL		168,219.0	190,501.1	88.30%

## APPENDIX B:

## CONDITION OF BRIDGES ON THE STATE HIGHWAY SYSTEM – BY COUNTY (FY 2013)

County	Not Structurally Deficient	Percent Not Structurally Deficient	Structurally Deficient	Percent Structurally Deficient	Functionally Obsolete	Percent Functionally Obsolete	Total
ANDERSON	107	96.40%	1	0.90%	3	2.70%	111
ANDREWS	1	100.00%	0	0.00%	0	0.00%	1
ANGELINA	100	93.46%	0	0.00%	7	6.54%	107
ARANSAS	16	94.12%	1	5.88%	0	0.00%	17
ARCHER	93	98.94%	0	0.00%	1	1.06%	94
ARMSTRONG	11	100.00%	0	0.00%	0	0.00%	11
ATASCOSA	145	96.03%	0	0.00%	6	3.97%	151
AUSTIN	98	92.45%	1	0.94%	7	6.60%	106
BAILEY	4	100.00%	0	0.00%	0	0.00%	4
BANDERA	45	80.36%	0	0.00%	11	19.64%	56
BASTROP	116	89.92%	2	1.55%	11	8.53%	129
BAYLOR	44	89.80%	0	0.00%	5	10.20%	49
BEE	105	96.33%	2	1.83%	2	1.83%	109
BELL	340	88.31%	0	0.00%	45	11.69%	385
BEXAR	1,084	85.90%	0	0.00%	178	14.10%	1,262
BLANCO	45	81.82%	0	0.00%	10	18.18%	55
BORDEN	48	97.96%	0	0.00%	1	2.04%	49
BOSQUE	105	93.75%	1	0.89%	6	5.36%	112
BOWIE	244	95.31%	0	0.00%	12	4.69%	256
BRAZORIA	292	94.50%	2	0.65%	15	4.85%	309
BRAZOS	181	90.50%	0	0.00%	19	9.50%	200
BREWSTER	90	98.90%	0	0.00%	1	1.10%	91
BRISCOE	14	100.00%	0	0.00%	0	0.00%	14
BROOKS	31	100.00%	0	0.00%	0	0.00%	31
BROWN	125	98.43%	0	0.00%	2	1.57%	127
BURLESON	63	84.00%	0	0.00%	12	16.00%	75
BURNET	66	80.49%	0	0.00%	16	19.51%	82
CALDWELL	141	92.76%	2	1.32%	9	5.92%	152
CALHOUN	74	94.87%	3	3.85%	1	1.28%	78
CALLAHAN	134	97.10%	1	0.72%	3	2.17%	138
CAMERON	226	93.78%	0	0.00%	15	6.22%	241
CAMP	36	100.00%	0	0.00%	0	0.00%	36
CARSON	31	93.94%	0	0.00%	2	6.06%	33
CASS	131	99.24%	0	0.00%	1	0.76%	132
CASTRO	9	90.00%	0	0.00%	1	10.00%	10
CHAMBERS	112	94.92%	0	0.00%	6	5.08%	118

CHEROKEE	115	95.83%	0	0.00%	5	4.17%	120
CHILDRESS	66	98.51%	0	0.00%	1	1.49%	67
CLAY	114	94.21%	2	1.65%	5	4.13%	121
COCHRAN	0	0.00%	0	0.00%	0	0.00%	0
COKE	81	98.78%	0	0.00%	1	1.22%	82
COLEMAN	101	95.28%	0	0.00%	5	4.72%	106
COLLIN	334	81.07%	1	0.24%	77	18.69%	412
COLLINGSWORTH	40	86.96%	1	2.17%	5	10.87%	46
COLORADO	134	88.74%	0	0.00%	17	11.26%	151
COMAL	127	92.03%	0	0.00%	11	7.97%	138
COMANCHE	101	87.07%	2	1.72%	13	11.21%	116
CONCHO	65	97.01%	1	1.49%	1	1.49%	67
COOKE	131	94.93%	1	0.72%	6	4.35%	138
CORYELL	120	92.31%	0	0.00%	10	7.69%	130
COTTLE	50	89.29%	0	0.00%	6	10.71%	56
CRANE	18	100.00%	0	0.00%	0	0.00%	18
CROCKETT	156	98.11%	1	0.63%	2	1.26%	159
CROSBY	12	100.00%	0	0.00%	0	0.00%	12
CULBERSON	133	99.25%	0	0.00%	1	0.75%	134
DALLAM	21	95.45%	0	0.00%	1	4.55%	22
DALLAS	1,144	72.27%	12	0.76%	427	26.97%	1,583
DAWSON	3	100.00%	0	0.00%	0	0.00%	3
DEAF SMITH	18	81.82%	0	0.00%	4	18.18%	22
DELTA	63	92.65%	1	1.47%	4	5.88%	68
DENTON	374	80.95%	8	1.73%	80	17.32%	462
DEWITT	140	93.96%	1	0.67%	8	5.37%	149
DICKENS	59	98.33%	0	0.00%	1	1.67%	60
DIMMIT	64	88.89%	0	0.00%	8	11.11%	72
DONLEY	58	96.67%	0	0.00%	2	3.33%	60
DUVAL	117	100.00%	0	0.00%	0	0.00%	117
EASTLAND	163	95.88%	0	0.00%	7	4.12%	170
ECTOR	107	94.69%	0	0.00%	6	5.31%	113
EDWARDS	25	96.15%	0	0.00%	1	3.85%	26
EL PASO	366	82.06%	4	0.90%	76	17.04%	446
ELLIS	371	82.26%	0	0.00%	80	17.74%	451
ERATH	116	97.48%	1	0.84%	2	1.68%	119
FALLS	152	95.60%	0	0.00%	7	4.40%	159
FANNIN	148	90.80%	3	1.84%	12	7.36%	163
FAYETTE	213	92.61%	2	0.87%	15	6.52%	230
FISHER	72	92.31%	0	0.00%	6	7.69%	78
FLOYD	8	80.00%	0	0.00%	2	20.00%	10

FOARD	46	93.88%	2	4.08%	1	2.04%	49
FORT BEND	246	92.83%	0	0.00%	19	7.17%	265
FRANKLIN	48	96.00%	0	0.00%	2	4.00%	50
FREESTONE	91	77.78%	2	1.71%	24	20.51%	117
FRIO	115	91.27%	0	0.00%	11	8.73%	126
GAINES	0	0.00%	0	0.00%	0	0.00%	0
GALVESTON	166	84.26%	4	2.03%	27	13.71%	197
GARZA	47	97.92%	0	0.00%	1	2.08%	48
GILLESPIE	77	84.62%	0	0.00%	14	15.38%	91
GLASSCOCK	18	100.00%	0	0.00%	0	0.00%	18
GOLIAD	76	92.68%	2	2.44%	4	4.88%	82
GONZALES	205	88.36%	1	0.43%	26	11.21%	232
GRAY	55	94.83%	0	0.00%	3	5.17%	58
GRAYSON	232	87.88%	1	0.38%	31	11.74%	264
GREGG	122	89.05%	0	0.00%	15	10.95%	137
GRIMES	101	85.59%	1	0.85%	16	13.56%	118
GUADALUPE	225	95.34%	1	0.42%	10	4.24%	236
HALE	41	91.11%	0	0.00%	4	8.89%	45
HALL	85	95.51%	1	1.12%	3	3.37%	89
HAMILTON	79	97.53%	0	0.00%	2	2.47%	81
HANSFORD	27	90.00%	0	0.00%	3	10.00%	30
HARDEMAN	52	96.30%	0	0.00%	2	3.70%	54
HARDIN	115	97.46%	0	0.00%	3	2.54%	118
HARRIS	1,307	74.60%	11	0.63%	434	24.77%	1,752
HARRISON	203	95.75%	0	0.00%	9	4.25%	212
HARTLEY	17	100.00%	0	0.00%	0	0.00%	17
HASKELL	64	95.52%	0	0.00%	3	4.48%	67
HAYS	102	82.93%	1	0.81%	20	16.26%	123
HEMPHILL	31	100.00%	0	0.00%	0	0.00%	31
HENDERSON	158	95.18%	1	0.60%	7	4.22%	166
HIDALGO	214	90.68%	1	0.42%	21	8.90%	236
HILL	216	91.14%	6	2.53%	15	6.33%	237
HOCKLEY	3	100.00%	0	0.00%	0	0.00%	3
HOOD	55	91.67%	0	0.00%	5	8.33%	60
HOPKINS	154	87.50%	7	3.98%	15	8.52%	176
HOUSTON	93	95.88%	0	0.00%	4	4.12%	97
HOWARD	87	79.82%	0	0.00%	22	20.18%	109
HUDSPETH	123	94.62%	0	0.00%	7	5.38%	130
HUNT	291	93.57%	1	0.32%	19	6.11%	311
HUTCHINSON	39	97.50%	1	2.50%	0	0.00%	40
IRION	50	100.00%	0	0.00%	0	0.00%	50

JACK	73	96.05%	0	0.00%	3	3.95%	76
JACKSON	124	99.20%	1	0.80%	0	0.00%	125
JASPER	123	91.79%	1	0.75%	10	7.46%	134
JEFF DAVIS	122	91.04%	0	0.00%	12	8.96%	134
JEFFERSON	239	85.36%	7	2.50%	34	12.14%	280
JIM HOGG	27	93.10%	0	0.00%	2	6.90%	29
JIM WELLS	130	92.86%	0	0.00%	10	7.14%	140
JOHNSON	186	88.15%	2	0.95%	23	10.90%	211
JONES	115	98.29%	0	0.00%	2	1.71%	117
KARNES	91	88.35%	1	0.97%	11	10.68%	103
KAUFMAN	322	87.26%	2	0.54%	45	12.20%	369
KENDALL	69	86.25%	0	0.00%	11	13.75%	80
KENEDY	15	100.00%	0	0.00%	0	0.00%	15
KENT	24	96.00%	0	0.00%	1	4.00%	25
KERR	128	90.14%	2	1.41%	12	8.45%	142
KIMBLE	136	93.15%	0	0.00%	10	6.85%	146
KING	39	97.50%	1	2.50%	0	0.00%	40
KINNEY	34	94.44%	0	0.00%	2	5.56%	36
KLEBERG	50	94.34%	1	1.89%	2	3.77%	53
KNOX	42	97.67%	1	2.33%	0	0.00%	43
LAMAR	156	88.14%	5	2.82%	16	9.04%	177
LAMB	11	100.00%	0	0.00%	0	0.00%	11
LAMPASAS	70	92.11%	1	1.32%	5	6.58%	76
LASALLE	105	96.33%	0	0.00%	4	3.67%	109
LAVACA	119	93.70%	0	0.00%	8	6.30%	127
LEE	52	78.79%	0	0.00%	14	21.21%	66
LEON	119	90.84%	1	0.76%	11	8.40%	131
LIBERTY	146	96.69%	2	1.32%	3	1.99%	151
LIMESTONE	129	97.73%	0	0.00%	3	2.27%	132
LIPSCOMB	35	97.22%	1	2.78%	0	0.00%	36
LIVE OAK	193	94.15%	0	0.00%	12	5.85%	205
LLANO	66	86.84%	2	2.63%	8	10.53%	76
LOVING	4	100.00%	0	0.00%	0	0.00%	4
LUBBOCK	188	88.68%	0	0.00%	24	11.32%	212
LYNN	3	60.00%	0	0.00%	2	40.00%	5
MADISON	82	79.61%	0	0.00%	21	20.39%	103
MARION	40	86.96%	1	2.17%	5	10.87%	46
MARTIN	14	100.00%	0	0.00%	0	0.00%	14
MASON	66	88.00%	2	2.67%	7	9.33%	75
MATAGORDA	81	94.19%	1	1.16%	4	4.65%	86
MAVERICK	93	97.89%	0	0.00%	2	2.11%	95

MCCULLOCH	87	94.57%	0	0.00%	5	5.43%	92
MCLENNAN	371	86.08%	1	0.23%	59	13.69%	431
MCMULLEN	53	100.00%	0	0.00%	0	0.00%	53
MEDARD	61	100.00%	0	0.00%	0	0.00%	61
MEDINA	152	95.00%	0	0.00%	8	5.00%	160
MIDLAND	86	92.47%	0	0.00%	7	7.53%	93
MILAM	106	83.46%	4	3.15%	17	13.39%	127
MILLS	51	96.23%	0	0.00%	2	3.77%	53
MITCHELL	93	79.49%	3	2.56%	21	17.95%	117
MONTAGUE	97	97.98%	0	0.00%	2	2.02%	99
MONTGOMERY	256	96.60%	2	0.75%	7	2.64%	265
MOORE	22	91.67%	1	4.17%	1	4.17%	24
MORRIS	47	95.92%	0	0.00%	2	4.08%	49
MOTLEY	39	90.70%	2	4.65%	2	4.65%	43
NACOGDOCHES	107	83.59%	1	0.78%	20	15.63%	128
NAVARRO	206	87.66%	2	0.85%	27	11.49%	235
NEWTON	102	90.27%	1	0.88%	10	8.85%	113
NOLAN	117	89.31%	2	1.53%	12	9.16%	131
NUECES	300	91.46%	1	0.30%	27	8.23%	328
OCHILTREE	23	95.83%	0	0.00%	1	4.17%	24
OLDHAM	50	98.04%	0	0.00%	1	1.96%	51
ORANGE	98	88.29%	7	6.31%	6	5.41%	111
PALO PINTO	177	97.79%	1	0.55%	3	1.66%	181
PANOLA	129	100.00%	0	0.00%	0	0.00%	129
PARKER	152	93.25%	4	2.45%	7	4.29%	163
PARMER	21	100.00%	0	0.00%	0	0.00%	21
PECOS	464	99.57%	1	0.21%	1	0.21%	466
POLK	106	89.83%	3	2.54%	9	7.63%	118
POTTER	136	85.53%	5	3.14%	18	11.32%	159
PRESIDIO	70	95.89%	0	0.00%	3	4.11%	73
RAINS	33	97.06%	1	2.94%	0	0.00%	34
RANDALL	70	86.42%	1	1.23%	10	12.35%	81
REAGAN	28	100.00%	0	0.00%	0	0.00%	28
REAL	22	78.57%	0	0.00%	6	21.43%	28
RED RIVER	114	95.80%	4	3.36%	1	0.84%	119
REEVES	203	97.60%	0	0.00%	5	2.40%	208
REFUGIO	99	92.52%	2	1.87%	6	5.61%	107
ROBERTS	21	100.00%	0	0.00%	0	0.00%	21
ROBERTSON	82	84.54%	3	3.09%	12	12.37%	97
ROCKWALL	41	78.85%	0	0.00%	11	21.15%	52
RUNNELS	102	88.70%	0	0.00%	13	11.30%	115

RUSK	159	98.15%	1	0.62%	2	1.23%	162
SABINE	62	98.41%	1	1.59%	0	0.00%	63
SAN AUGUSTINE	67	93.06%	1	1.39%	4	5.56%	72
SAN JACINTO	48	90.57%	0	0.00%	5	9.43%	53
SAN PATRICIO	180	97.30%	0	0.00%	5	2.70%	185
SAN SABA	63	91.30%	0	0.00%	6	8.70%	69
SCHLEICHER	28	100.00%	0	0.00%	0	0.00%	28
SCURRY	84	88.42%	1	1.05%	10	10.53%	95
SHACKELFORD	66	98.51%	0	0.00%	1	1.49%	67
SHELBY	94	94.00%	1	1.00%	5	5.00%	100
SHERMAN	25	100.00%	0	0.00%	0	0.00%	25
SMITH	232	93.17%	1	0.40%	16	6.43%	249
SOMERVELL	23	88.46%	0	0.00%	3	11.54%	26
STARR	50	100.00%	0	0.00%	0	0.00%	50
STEPHENS	78	93.98%	1	1.20%	4	4.82%	83
STERLING	51	98.08%	0	0.00%	1	1.92%	52
STONEWALL	35	100.00%	0	0.00%	0	0.00%	35
SUTTON	86	95.56%	0	0.00%	4	4.44%	90
SWISHER	65	98.48%	0	0.00%	1	1.52%	66
TARRANT	944	84.74%	8	0.72%	162	14.54%	1,114
TAYLOR	287	88.58%	1	0.31%	36	11.11%	324
TERRELL	53	100.00%	0	0.00%	0	0.00%	53
TERRY	5	100.00%	0	0.00%	0	0.00%	5
THROCKMORTON	45	100.00%	0	0.00%	0	0.00%	45
TITUS	85	87.63%	0	0.00%	12	12.37%	97
TOM GREEN	240	91.95%	0	0.00%	21	8.05%	261
TRAVIS	569	81.52%	2	0.29%	127	18.19%	698
TRINITY	55	94.83%	0	0.00%	3	5.17%	58
TYLER	66	89.19%	1	1.35%	7	9.46%	74
UPSHUR	127	96.95%	0	0.00%	4	3.05%	131
UPTON	39	100.00%	0	0.00%	0	0.00%	39
UVALDE	85	90.43%	2	2.13%	7	7.45%	94
VAL VERDE	90	92.78%	0	0.00%	7	7.22%	97
VAN ZANDT	159	92.44%	0	0.00%	13	7.56%	172
VICTORIA	191	95.02%	2	1.00%	8	3.98%	201
WALKER	108	92.31%	1	0.85%	8	6.84%	117
WALLER	116	94.31%	0	0.00%	7	5.69%	123
WARD	52	96.30%	0	0.00%	2	3.70%	54
WASHINGTON	91	90.10%	0	0.00%	10	9.90%	101
WEBB	243	93.10%	0	0.00%	18	6.90%	261
WHARTON	164	93.71%	3	1.71%	8	4.57%	175

WHEELER	84	97.67%	1	1.16%	1	1.16%	86
WICHITA	271	88.85%	0	0.00%	34	11.15%	305
WILBARGER	111	94.07%	0	0.00%	7	5.93%	118
WILLACY	54	96.43%	0	0.00%	2	3.57%	56
WILLIAMSON	393	90.14%	2	0.46%	41	9.40%	436
WILSON	86	88.66%	0	0.00%	11	11.34%	97
WINKLER	1	100.00%	0	0.00%	0	0.00%	1
WISE	122	93.85%	0	0.00%	8	6.15%	130
WOOD	89	85.58%	3	2.88%	12	11.54%	104
YOAKUM	0	0.00%	0	0.00%	0	0.00%	0
YOUNG	83	98.81%	0	0.00%	1	1.19%	84
ZAPATA	33	89.19%	0	0.00%	4	10.81%	37
ZAVALA	63	88.73%	0	0.00%	8	11.27%	71
<b>GRAND TOTAL</b>	<b>30,838</b>	<b>89.33%</b>	<b>221</b>	<b>0.64%</b>	<b>3,462</b>	<b>10.03%</b>	<b>34,521</b>

## APPENDIX C:

## CONDITION OF BRIDGES OFF THE STATE HIGHWAY SYSTEM – BY COUNTY (FY 2013)

County	Not Structurally Deficient	Percent Not Structurally Deficient	Structurally Deficient	Percent Structurally Deficient	Functionally Obsolete	Percent Functionally Obsolete	Total
ANDERSON	36	61.02%	11	18.64%	12	20.34%	59
ANDREWS	0	0.00%	0	0.00%	0	0.00%	0
ANGELINA	46	82.14%	2	3.57%	8	14.29%	56
ARANSAS	2	66.67%	0	0.00%	1	33.33%	3
ARCHER	26	89.66%	1	3.45%	2	6.90%	29
ARMSTRONG	0	0.00%	1	100.00%	0	0.00%	1
ATASCOSA	25	100.00%	0	0.00%	0	0.00%	25
AUSTIN	84	85.71%	8	8.16%	6	6.12%	98
BAILEY	0	0.00%	0	0.00%	0	0.00%	0
BANDERA	7	63.64%	0	0.00%	4	36.36%	11
BASTROP	78	78.00%	3	3.00%	19	19.00%	100
BAYLOR	4	40.00%	6	60.00%	0	0.00%	10
BEE	13	56.52%	1	4.35%	9	39.13%	23
BELL	160	76.92%	6	2.88%	42	20.19%	208
BEXAR	714	78.29%	6	0.66%	192	21.05%	912
BLANCO	5	83.33%	0	0.00%	1	16.67%	6
BORDEN	3	100.00%	0	0.00%	0	0.00%	3
BOSQUE	26	76.47%	4	11.76%	4	11.76%	34
BOWIE	38	69.09%	3	5.45%	14	25.45%	55
BRAZORIA	215	76.79%	28	10.00%	37	13.21%	280
BRAZOS	118	92.91%	1	0.79%	8	6.30%	127
BREWSTER	7	87.50%	0	0.00%	1	12.50%	8
BRISCOE	4	100.00%	0	0.00%	0	0.00%	4
BROOKS	5	71.43%	2	28.57%	0	0.00%	7
BROWN	67	70.53%	13	13.68%	15	15.79%	95
BURLESON	34	70.83%	6	12.50%	8	16.67%	48
BURNET	23	88.46%	1	3.85%	2	7.69%	26
CALDWELL	35	76.09%	4	8.70%	7	15.22%	46
CALHOUN	14	60.87%	6	26.09%	3	13.04%	23
CALLAHAN	13	68.42%	5	26.32%	1	5.26%	19
CAMERON	94	87.04%	3	2.78%	11	10.19%	108
CAMP	4	100.00%	0	0.00%	0	0.00%	4
CARSON	0	0.00%	0	0.00%	2	100.00%	2
CASS	10	83.33%	0	0.00%	2	16.67%	12
CASTRO	0	0.00%	0	0.00%	0	0.00%	0
CHAMBERS	14	87.50%	0	0.00%	2	12.50%	16

CHEROKEE	44	62.86%	2	2.86%	24	34.29%	70
CHILDRESS	21	87.50%	2	8.33%	1	4.17%	24
CLAY	8	66.67%	3	25.00%	1	8.33%	12
COCHRAN	0	0.00%	0	0.00%	0	0.00%	0
COKE	15	83.33%	0	0.00%	3	16.67%	18
COLEMAN	36	85.71%	0	0.00%	6	14.29%	42
COLLIN	405	78.49%	1	0.19%	110	21.32%	516
COLLINGSWORTH	18	94.74%	1	5.26%	0	0.00%	19
COLORADO	85	90.43%	2	2.13%	7	7.45%	94
COMAL	27	75.00%	0	0.00%	9	25.00%	36
COMANCHE	74	75.51%	11	11.22%	13	13.27%	98
CONCHO	4	80.00%	1	20.00%	0	0.00%	5
COOKE	124	88.57%	2	1.43%	14	10.00%	140
CORYELL	25	89.29%	2	7.14%	1	3.57%	28
COTTLE	22	88.00%	1	4.00%	2	8.00%	25
CRANE	0	0.00%	0	0.00%	0	0.00%	0
CROCKETT	0	0.00%	0	0.00%	0	0.00%	0
CROSBY	1	25.00%	2	50.00%	1	25.00%	4
CULBERSON	1	100.00%	0	0.00%	0	0.00%	1
DALLAM	0	0.00%	0	0.00%	0	0.00%	0
DALLAS	877	64.72%	10	0.74%	468	34.54%	1,355
DAWSON	0	0.00%	0	0.00%	0	0.00%	0
DEAF SMITH	5	83.33%	0	0.00%	1	16.67%	6
DELTA	17	60.71%	8	28.57%	3	10.71%	28
DENTON	218	79.56%	5	1.82%	51	18.61%	274
DEWITT	88	78.57%	6	5.36%	18	16.07%	112
DICKENS	7	58.33%	4	33.33%	1	8.33%	12
DIMITT	2	100.00%	0	0.00%	0	0.00%	2
DONLEY	9	69.23%	2	15.38%	2	15.38%	13
DUVAL	2	100.00%	0	0.00%	0	0.00%	2
EASTLAND	53	82.81%	4	6.25%	7	10.94%	64
ECTOR	28	100.00%	0	0.00%	0	0.00%	28
EDWARDS	0	0.00%	0	0.00%	0	0.00%	0
EL PASO	187	86.18%	1	0.46%	29	13.36%	217
ELLIS	115	62.84%	6	3.28%	62	33.88%	183
ERATH	57	77.03%	3	4.05%	14	18.92%	74
FALLS	101	63.92%	41	25.95%	16	10.13%	158
FANNIN	83	56.46%	29	19.73%	35	23.81%	147
FAYETTE	69	51.11%	7	5.19	59	43.70	135
FISHER	32	43.24%	27	36.49	15	20.27	74
FLOYD	1	100.00%	0	0.00	0	0.00	1

FOARD	8	72.73%	2	18.18	1	9.09	11
FORT BEND	261	71.90%	12	3.31	90	24.79	363
FRANKLIN	18	75.00%	3	12.50%	3	12.50%	24
FREESTONE	35	71.43%	5	10.20%	9	18.37%	49
FRIO	13	81.25%	2	12.50%	1	6.25%	16
GAINES	0	0.00%	0	0.00%	0	0.00%	0
GALVESTON	102	82.93%	6	4.88%	15	12.20%	123
GARZA	0	0.00%	1	100.00%	0	0.00%	1
GILLESPIE	20	57.14%	3	8.57%	12	34.29%	35
GLASSCOCK	0	0.00%	0	0.00%	0	0.00%	0
GOLIAD	37	86.05%	2	4.65%	4	9.30%	43
GONZALES	36	64.29%	12	21.43%	8	14.29%	56
GRAY	14	58.33%	6	25.00%	4	16.67%	24
GRAYSON	193	76.89%	9	3.59%	49	19.52%	251
GREGG	63	82.89%	2	2.63%	11	14.47%	76
GRIMES	50	54.95%	6	6.59%	35	38.46%	91
GUADALUPE	40	93.02%	0	0.00%	3	6.98%	43
HALE	0	0.00%	1	50.00%	1	50.00%	2
HALL	24	82.76%	5	17.24%	0	0.00%	29
HAMILTON	27	69.23%	7	17.95%	5	12.82%	39
HANSFORD	9	90.00%	0	0.00%	1	10.00%	10
HARDEMAN	20	86.96%	3	13.04%	0	0.00%	23
HARDIN	40	93.02%	1	2.33%	2	4.65%	43
HARRIS	953	51.10%	27	1.45%	885	47.45%	1,865
HARRISON	37	82.22%	3	6.67%	5	11.11%	45
HARTLEY	0	0.00%	0	0.00%	0	0.00%	0
HASKELL	11	84.62%	0	0.00%	2	15.38%	13
HAYS	41	91.11%	0	0.00%	4	8.89%	45
HEMPHILL	3	100.00%	0	0.00%	0	0.00%	3
HENDERSON	14	45.16%	1	3.23%	16	51.61%	31
HIDALGO	129	76.33%	7	4.14%	33	19.53%	169
HILL	114	75.00%	21	13.82%	17	11.18%	152
HOCKLEY	0	0.00%	0	0.00%	0	0.00%	0
HOOD	22	95.65%	1	4.35%	0	0.00%	23
HOPKINS	43	60.56%	15	21.13%	13	18.31%	71
HOUSTON	57	60.64%	13	13.83%	24	25.53%	94
HOWARD	8	88.89%	0	0.00%	1	11.11%	9
HUDSPETH	1	100.00%	0	0.00%	0	0.00%	1
HUNT	116	82.27%	19	13.48%	6	4.26%	141
HUTCHINSON	11	100.00%	0	0.00%	0	0.00%	11
IRION	0	0.00%	0	0.00%	0	0.00%	0

JACK	46	76.67%	3	5.00%	11	18.33%	60
JACKSON	27	58.70%	8	17.39%	11	23.91%	46
JASPER	31	70.45%	0	0.00%	13	29.55%	44
JEFF DAVIS	0	0.00%	0	0.00%	0	0.00%	0
JEFFERSON	116	73.42%	3	1.90%	39	24.68%	158
JIM HOGG	0	0.00%	0	0.00%	0	0.00%	0
JIM WELLS	26	78.79%	4	12.12%	3	9.09%	33
JOHNSON	113	88.98%	1	0.79%	13	10.24%	127
JONES	45	90.00%	2	4.00%	3	6.00%	50
KARNES	30	78.95%	3	7.89%	5	13.16%	38
KAUFMAN	30	61.22%	5	10.20%	14	28.57%	49
KENDALL	16	64.00%	3	12.00%	6	24.00%	25
KENEDY	0	0.00%	0	0.00%	0	0.00%	0
KENT	6	75.00%	1	12.50%	1	12.50%	8
KERR	14	51.85%	0	0.00%	13	48.15%	27
KIMBLE	2	66.67%	0	0.00%	1	33.33%	3
KING	4	80.00%	0	0.00%	1	20.00%	5
KINNEY	2	100.00%	0	0.00%	0	0.00%	2
KLEBERG	1	50.00%	1	50.00%	0	0.00%	2
KNOX	5	71.43%	1	14.29%	1	14.29%	7
LAMAR	97	74.62%	14	10.77%	19	14.62%	130
LAMB	0	0.00%	0	0.00%	0	0.00%	0
LAMPASAS	12	80.00%	0	0.00%	3	20.00%	15
LASALLE	23	88.46%	1	3.85%	2	7.69%	26
LAVACA	68	51.52%	7	5.30%	57	43.18%	132
LEE	53	72.60%	1	1.37%	19	26.03%	73
LEON	24	80.00%	2	6.67%	4	13.33%	30
LIBERTY	26	65.00%	3	7.50%	11	27.50%	40
LIMESTONE	71	46.41%	38	24.84%	44	28.76%	153
LIPSCOMB	3	100.00%	0	0.00%	0	0.00%	3
LIVE OAK	8	50.00%	6	37.50%	2	12.50%	16
LLANO	6	60.00%	2	20.00%	2	20.00%	10
LOVING	0	0.00%	0	0.00%	0	0.00%	0
LUBBOCK	6	75.00%	1	12.50%	1	12.50%	8
LYNN	0	0.00%	0	0.00%	0	0.00%	0
MADISON	11	40.74%	7	25.93%	9	33.33%	27
MARION	9	75.00%	2	16.67%	1	8.33%	12
MARTIN	0	0.00%	0	0.00%	0	0.00%	0
MASON	5	45.45%	2	18.18%	4	36.36%	11
MATAGORDA	90	89.11%	7	6.93%	4	3.96%	101
MAVERICK	24	92.31%	0	0.00%	2	7.69%	26

MCCULLOCH	21	80.77%	1	3.85%	4	15.38%	26
MCLENNAN	200	79.68%	8	3.19%	43	17.13%	251
MCMULLEN	4	100.00%	0	0.00%	0	0.00%	4
MEDARD	0	0.00%	2	66.67%	1	33.33%	3
MEDINA	36	78.26%	3	6.52%	7	15.22%	46
MIDLAND	17	85.00%	0	0.00%	3	15.00%	20
MILAM	34	61.82%	5	9.09%	16	29.09%	55
MILLS	11	73.33%	4	26.67%	0	0.00%	15
MITCHELL	19	76.00%	3	12.00%	3	12.00%	25
MONTAGUE	90	70.31%	5	3.91%	33	25.78%	128
MONTGOMERY	142	77.60%	11	6.01%	30	16.39%	183
MOORE	2	100.00%	0	0.00%	0	0.00%	2
MORRIS	14	66.67%	1	4.76%	6	28.57%	21
MOTLEY	7	87.50%	0	0.00%	1	12.50%	8
NACOGDOCHES	85	74.56%	2	1.75%	27	23.68%	114
NAVARRO	65	69.15%	10	10.64%	19	20.21%	94
NEWTON	32	74.42%	7	16.28%	4	9.30%	43
NOLAN	33	91.67%	1	2.78%	2	5.56%	36
NUECES	143	89.94%	5	3.14%	11	6.92%	159
OCHILTREE	8	100.00%	0	0.00%	0	0.00%	8
OLDHAM	0	0.00%	0	0.00%	0	0.00%	0
ORANGE	39	65.00%	5	8.33%	16	26.67%	60
PALO PINTO	44	77.19%	5	8.77%	8	14.04%	57
PANOLA	6	37.50%	0	0.00%	10	62.50%	16
PARKER	136	85.53%	5	3.14%	18	11.32%	159
PARMER	5	100.00%	0	0.00%	0	0.00%	5
PECOS	2	66.67%	1	33.33%	0	0.00%	3
POLK	40	42.55%	33	35.11%	21	22.34%	94
POTTER	17	80.95%	1	4.76%	3	14.29%	21
PRESIDIO	0	0.00%	0	0.00%	1	100.00%	1
RAINS	11	61.11%	1	5.56%	6	33.33%	18
RANDALL	5	83.33%	0	0.00%	1	16.67%	6
REAGAN	0	0.00%	0	0.00%	0	0.00%	0
REAL	0	0.00%	0	0.00%	0	0.00%	0
RED RIVER	32	68.09%	11	23.40%	4	8.51%	47
REEVES	3	60.00%	1	20.00%	1	20.00%	5
REFUGIO	21	75.00%	2	7.14%	5	17.86%	28
ROBERTS	0	0.00%	0	0.00%	0	0.00%	0
ROBERTSON	34	77.27%	6	13.64%	4	9.09%	44
ROCKWALL	14	100.00%	0	0.00%	0	0.00%	14
RUNNELS	25	55.56%	6	13.33%	14	31.11%	45

RUSK	97	90.65%	1	0.93%	9	8.41%	107
SABINE	20	68.97%	7	24.14%	2	6.90%	29
SAN AUGUSTINE	17	73.91%	5	21.74%	1	4.35%	23
SAN JACINTO	21	91.30%	2	8.70%	0	0.00%	23
SAN PATRICIO	43	82.69%	4	7.69%	5	9.62%	52
SAN SABA	15	75.00%	3	15.00%	2	10.00%	20
SCHLEICHER	5	100.00%	0	0.00%	0	0.00%	5
SCURRY	42	97.67%	1	2.33%	0	0.00%	43
SHACKELFORD	8	72.73%	2	18.18%	1	9.09%	11
SHELBY	43	57.33%	20	26.67%	12	16.00%	75
SHERMAN	5	100.00%	0	0.00%	0	0.00%	5
SMITH	121	82.88%	12	8.22%	13	8.90%	146
SOMERVELL	2	100.00%	0	0.00%	0	0.00%	2
STARR	9	69.23%	1	7.69%	3	23.08%	13
STEPHENS	22	66.67%	4	12.12%	7	21.21%	33
STERLING	0	0.00%	2	100.00%	0	0.00%	2
STONEWALL	17	100.00%	0	0.00%	0	0.00%	17
SUTTON	1	50.00%	0	0.00%	1	50.00%	2
SWISHER	2	50.00%	2	50.00%	0	0.00%	4
TARRANT	690	67.91%	27	2.66%	299	29.43%	1,016
TAYLOR	71	83.53%	1	1.18%	13	15.29%	85
TERRELL	0	0.00%	0	0.00%	0	0.00%	0
TERRY	0	0.00%	0	0.00%	0	0.00%	0
THROCKMORTON	7	87.50%	1	12.50%	0	0.00%	8
TITUS	39	86.67%	2	4.44%	4	8.89%	45
TOM GREEN	33	84.62%	0	0.00%	6	15.38%	39
TRAVIS	527	80.95%	0	0.00%	124	19.05%	651
TRINITY	19	86.36%	2	9.09%	1	4.55%	22
TYLER	49	84.48%	0	0.00%	9	15.52%	58
UPSHUR	8	100.00%	0	0.00%	0	0.00%	8
UPTON	0	0.00%	0	0.00%	0	0.00%	0
UVALDE	7	100.00%	0	0.00%	0	0.00%	7
VAL VERDE	6	50.00%	2	16.67%	4	33.33%	12
VAN ZANDT	48	63.16%	11	14.47%	17	22.37%	76
VICTORIA	83	68.03%	8	6.56%	31	25.41%	122
WALKER	27	87.10%	2	6.45%	2	6.45%	31
WALLER	51	80.95%	11	17.46%	1	1.59%	63
WARD	0	0.00%	0	0.00%	0	0.00%	0
WASHINGTON	90	75.00%	7	5.83%	23	19.17%	120
WEBB	61	62.24%	1	1.02%	36	36.73%	98
WHARTON	147	77.37%	33	17.37%	10	5.26%	190

WHEELER	15	83.33%	1	5.56%	2	11.11%	18
WICHITA	68	73.91%	3	3.26%	21	22.83%	92
WILBARGER	29	85.29%	3	8.82%	2	5.88%	34
WILLACY	53	91.38%	4	6.90%	1	1.72%	58
WILLIAMSON	441	90.00%	5	1.02%	44	8.98%	490
WILSON	23	69.70%	0	0.00%	10	30.30%	33
WINKLER	0	0.00%	0	0.00%	0	0.00%	0
WISE	100	80.00%	8	6.40%	17	13.60%	125
WOOD	10	76.92%	1	7.69%	2	15.38%	13
YOAKUM	0	0.00%	0	0.00%	0	0.00%	0
YOUNG	22	81.48%	2	7.41%	3	11.11%	27
ZAPATA	0	0.00%	0	0.00%	0	0.00%	0
ZAVALA	1	100.00%	0	0.00%	0	0.00%	1
<b>GRAND TOTAL</b>	<b>13,017</b>	<b>72.26%</b>	<b>973</b>	<b>5.40%</b>	<b>4,025</b>	<b>22.34%</b>	<b>18,015</b>