**TEXAS TRANSPORTATION COMMISSION**

ALL Counties

**MINUTE ORDER**



ALL Districts

Texas Government Code, Chapter 2056, requires that each state agency prepare a five-year strategic plan every biennium. The Texas Governor's Office and the Legislative Budget Board require certain items to be covered in the plan.

The strategic plan represents the commitment by the Texas Department of Transportation to provide for the safe and productive movement of people and goods.

The vision, mission, philosophy, goals, objectives, strategies, and measures contained in this plan focus on delivering the high quality, aesthetic and accessible transportation systems expected by the ultimate users of those systems.

IT IS THEREFORE ORDERED by the Texas Transportation Commission that the document entitled *Agency Strategic Plan for Fiscal Years 2011-2015,* as shown in Exhibit A, is adopted and approved for submission to the Governor's Office, the Legislative Budget Board and other required officials.

IT IS FURTHER ORDERED that the executive director or his designee is authorized to approve alterations to the plan if any such alterations are requested by the Legislative Budget Board.

IT IS FURTHER ORDERED that the executive director or his designee shall proceed with the publication and distribution to the public of the primary text of the plan as a separate document to present the agency's goals, objectives, strategies, and performance measures for more general public use.

Submitted and reviewed by:

Mary Meyland

Director, Strategic Policy and Performance Management Office

Recommended by:

Executive Director

112307 JUN 24 10

Minute Number | Date Passed

AGENCY STRATEGIC PLAN

FOR THE FISCAL YEARS 2011-2015 PERIOD

BY

TEXAS DEPARTMENT OF TRANSPORTATION

| Commission Member | Home Town | Dates of Term |
|---|---|---|
| Deirdre Delisi | Austin | 2008-2013 |
| Ned S. Holmes | Houston | 2007-2011 |
| Ted Houghton | El Paso | 2003-2015 |
| William Meadows | Fort Worth | 2008-2013 |
| Fred Underwood | Lubbock | 2007-2015 |

July 2, 2010

Signed: _____
Amadeo Saenz, Jr., P.E.
Executive Director

Approved: _____
Deirdre Delisi
Commission Chair

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# Letter from Texas Transportation Commission Chair

My Fellow Texans,

I am pleased to present the Texas Department of Transportation (TxDOT) 2011-2015 Strategic Plan. Significant effort went into developing this plan. The Texas transportation infrastructure represents a huge capital investment. Tight budgets and costly projects require us to make considered choices about the type and extent of improvements we pursue. This plan will guide us as we make these choices.

Events of the past two years have impacted our planning process. In 2008, TxDOT was evaluated by staff of the Sunset Advisory Commission. During TxDOT's review, state legislators called for reform, transparency, and accountability. We took the review seriously and resolved to improve. We held several public forums to obtain employee, customer, and stakeholder input, and we examined future trends to better understand where we should invest our resources.

The Texas Department of Transportation 2011-2015 Strategic Plan takes a comprehensive, forward-looking approach to address Texas' transportation needs over the next five years. The plan sets forth the principles that underlie our transportation investment decisions, provides strategies to achieve transportation goals, and incorporates many of the Legislature's proposed changes.

I am proud of the many accomplishments that TxDOT staff has achieved thus far in fulfilling our highest priorities: keeping motorists safe, increasing mobility, and ensuring that our transportation system is maintained to sustain Texas' economic vitality. We will continue working to improve all modes of transportation, and deliver the promise of safer, simpler, and smarter transportation solutions.

Sincerely,

Deirdre Delisi
Chair
Texas Transportation Commission

# Statewide Vision, Mission, and Philosophy

## *Texas State Government Mission*

Texas state government must be limited, efficient, and completely accountable. It should foster opportunity and economic prosperity, focus on critical priorities, and support the creation of strong family environments for our children. The stewards of the public trust must be men and women who administer state government in a fair, just, and responsible manner. To honor the public trust, state officials must seek new and innovative ways to meet state government priorities in a fiscally responsible manner.

Aim high . . .we are not here to achieve inconsequential things!

## *The Philosophy of State Government*

The task before all state public servants is to govern in a manner worthy of this great state. We are a great enterprise, and as an enterprise, we will promote the following core principles:

- First and foremost, Texas matters most. This is the overarching, guiding principle by which we will make decisions. Our state, and its future, is more important than party, politics, or individual recognition.
- Government should be limited in size and mission, but it must be highly effective in performing the tasks it undertakes.
- Decisions affecting individual Texans, in most instances, are best made by those individuals, their families, and the local government closest to their communities.
- Competition is the greatest incentive for achievement and excellence. It inspires ingenuity and requires individuals to set their sights high. Just as competition inspires excellence, a sense of personal responsibility drives individual citizens to do more for their future and the future of those they love.
- Public administration must be open and honest, pursuing the high road rather than the expedient course. We must be accountable to taxpayers for our actions.
- State government has a responsibility to safeguard taxpayer dollars by eliminating waste and abuse and providing efficient and honest government.
- Finally, state government should be humble, recognizing that all its power and authority is granted to it by the people of Texas, and those who make decisions wielding the power of the state should exercise their authority cautiously and fairly.

# Relevant Statewide Goals and Benchmarks

## *Economic Development*

### Priority Goal

To provide an attractive economic climate for current and emerging industries that fosters economic opportunity, job creation, capital investment, and infrastructure development by:

- Promoting a favorable and fair system to fund necessary state services;
- Addressing transportation needs;
- Promoting a favorable business climate; and
- Developing a well trained, educated, and productive workforce.

### Relevant Benchmarks

- Percentage of state highway system rated good or better based on the Pavement Management Information System Condition Score.
- Percentage reduction in traffic congestion using the Texas Transportation Institute's Travel Time Index.

## *Public Safety and Criminal Justice*

### Priority Goal

To protect Texans by:

- Preventing and reducing terrorism and crime;
- Securing the Texas/Mexico border from all threats;
- Achieving an optimum level of state wide preparedness capable of responding and recovering from all hazards; and
- Confining, supervising, and rehabilitating offenders.

### Relevant Benchmarks

- Number of traffic deaths per 100,000 population
- Number of traffic deaths per 100,000 population involving alcohol

## *Natural Resources and Agriculture*

To conserve and protect our state's natural resources (air, water, land, wildlife, and mineral resources) by:

- Providing leadership and policy guidance for state, federal, and local initiatives;
- To maintain Texas' status as a leader in agriculture; and
- Encouraging responsible, sustainable economic development.

**Relevant Benchmarks**

- Percentage of nitrogen oxide and criteria pollutants reduced in the air

# Agency, Mission, Vision, and Philosophy

## TxDOT Strategic Direction

The *TxDOT 2011-2015 Strategic Plan* is our response to the many transportation challenges we face. It defines our mission, vision and values that are the foundation of our commitment to the citizens and businesses of Texas, the Texas Legislature and our TxDOT employees. It identifies short-term goals, objectives and strategies that we will undertake to address the state's multimodal transportation needs. It also defines a set of agency-level performance measures that will hold us accountable for tracking our progress toward achieving the agency's goals. This plan provides a strategic framework to guide TxDOT's transportation planning activities, investments, and decision-making over the next five years.

### *Mission, Vision, and Philosophy*

**Our Mission** – Provide safe and efficient movement of people and goods, enhance economic viability, and improve the quality of life for the people that travel in the state of Texas by maintaining existing roadways and collaborating with private and local entities to plan, design, build, and maintain expanded transportation infrastructure.

**Our Vision** – To be a trusted, performance-driven organization committed to collaborating with internal and external partners to deliver a modern, interconnected, and multimodal transportation system that enhances the quality of life for Texas citizens and increases the competitive position for Texas industry.

**Our Philosophy**- TxDOT will:

- Honor our commitments to the citizens of Texas with accountability and transparency.
- Provide the best value for every dollar spent.
- Earn and maintain the respect and trust of Texas citizens by listening, seeking to understand, and being responsive to our customers and stakeholders.
- Promote innovation, creativity, and collaboration.
- Promote high ethical conduct and a commitment to compliance with the law with our employees and partners.
- Communicate openly and honestly.
- Protect the safety of the traveling public, our employees, and the workers who build, operate and maintain our transportation system.
- Value diversity through inclusion, opportunity, and respect.
- Support employee professional development.

# External/Internal Assessment

## Introduction

Highways have historically been the cornerstone of the Texas transportation system, moving our raw materials and produced goods, linking businesses to markets, and serving the growing needs of an ever-changing and diverse traveling public. As the linchpin of the state's economy, highways have made it possible for Texans, visitors, and businesses alike to travel safely and efficiently across Texas.

As Texas looks in the rearview mirror, the highway system that has fueled enhanced productivity and vigorous economic growth statewide has also created traffic congestion caused by the increased demands on our roads. Yet at the same time, investment in highway infrastructure has not matched these growing demands. In an environment of declining revenue sources, this presents TxDOT with several challenges, including:

- How to extend the expected service life of our existing transportation infrastructure?
- How to build, repair, rehabilitate, and eventually rebuild our aging infrastructure?
- How to maximize the costs and benefits of the repairs and improvements that we make?
- How to respond to these needs in an era of shrinking transportation funding?

In short, TxDOT must find ways to do more with less. The department developed this document, the *TxDOT 2011-2015 Strategic Plan*, to guide its policies and processes through the next five years. The Strategic Plan also serves as a management tool that TxDOT can use to continually assess its progress and performance toward meeting those goals.

To produce the Strategic Plan, the department actively sought input on these critical transportation issues from the public, TxDOT employees, and other transportation stakeholders. These outreach efforts revealed just how strongly Texans feel about preserving the existing transportation system. This will require a long-term commitment to ensure that roads are adequately maintained and that TxDOT continues to expand highway capacity.

But the Texas transportation system has evolved into more than just a system of highways. It is a highly sophisticated and multimodal transportation network – a system of systems. While maintaining and expanding our highways will remain TxDOT's primary emphasis, the department recognizes the valuable contributions made to Texas by all of our transportation modes -- rail, public transit, ports and waterways, and aviation.

Rail transportation minimizes the effects of high-volume truck traffic on the state highway system and helps alleviate capacity issues, particularly in our rural communities. Public transit services will become increasingly important in the future as our rural and urban populations increase and grow older. Texas ports, inland waterways, and aviation services also play a critical role because the cargo and people that they move helps support industrial, retail, and agricultural sectors throughout Texas, the nation, and the world.

Traffic congestion is more than an inconvenience. It can adversely affect business decisions, increase the cost of transporting goods, and can threaten Texas' ability to keep our economic engine producing at a high level. Through this new Strategic Plan, TxDOT believes it can apply its vision for the future, its experience, and its expertise to work with all stakeholders and transportation modes to ensure that Texas has a transportation network capable of accommodating our current and future needs.

## Texas' Transportation Challenges

Our critical transportation infrastructure (roads, rail, ports and waterways, airports, and public transportation facilities) is not an infinite resource. As these facilities age, maintenance becomes even more important. Yet maintenance costs are soaring while revenue sources are falling. Demands on all modes of transportation will continue as a result of current upward trends in population growth, passenger vehicle traffic, and freight traffic. Less revenue limits both infrastructure maintenance efforts and the improvements needed to sustain current customer service levels.

A successful strategic plan must start with a firm understanding of the state's critical transportation challenges and issues. In 2008, the Texas Transportation Commission appointed the 2030 Committee, a panel of 12 Texas business and civic leaders, to do an independent evaluation of the state's future transportation and funding needs.

The Committee's report, published in 2009, provided an analysis of transportation needs, anticipated costs and the benefits gained from highway maintenance (pavement and bridges), urban mobility, rural mobility and safety. The report, however, did not address specific projects or recommend specific funding sources.

Based on important assumptions about population growth and freight traffic movement between 2009 and 2030, the Committee's report concluded that Texas would need to invest $315 billion (in 2008 dollars) between 2009 and 2030. In reaching its conclusion, the Committee looked at the current and future challenges that will shape transportation in Texas and make traditional funding sources inadequate.

### *Population growth*

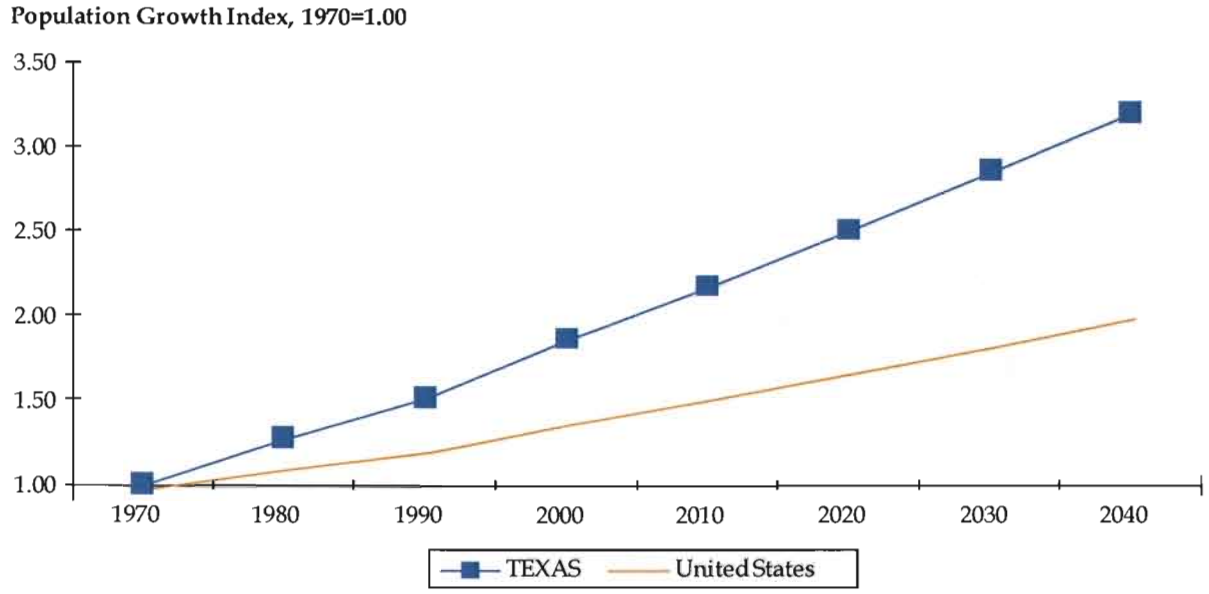
Every part of the state is experiencing rapid growth and it's driving up transportation demand. More people taking more trips mean more vehicles hitting the highways and more traffic congestion. Between 2000 and 2008, Texas ranked first in the nation for its pace of population increase, growing by 3.4 million people (the equivalent of adding all the people in the state of Connecticut over an eight-year period) to reach 24.3 million people in 2008.

Historically, Texas has been one of the fastest growing U.S. states and is expected to continue outpacing the nation by a wide margin through 2040 (**Figure 1**). The Texas State Data Center

projects that by 2040, Texas will be home to 35.8 million people, roughly the size of present-day California.[1]

But while the Texas population and vehicle miles traveled on the state's roadway network have both increased by nearly 30 percent during the last 15 years, Texas has increased its road capacity (number of lane miles) by a little more than four percent **(Figure 2)**.[2] Vehicle miles traveled calculates the total number of vehicle miles driven within a specific geographic area over a given period of time.

**Figure 1. Texas and National Population Growth Index**

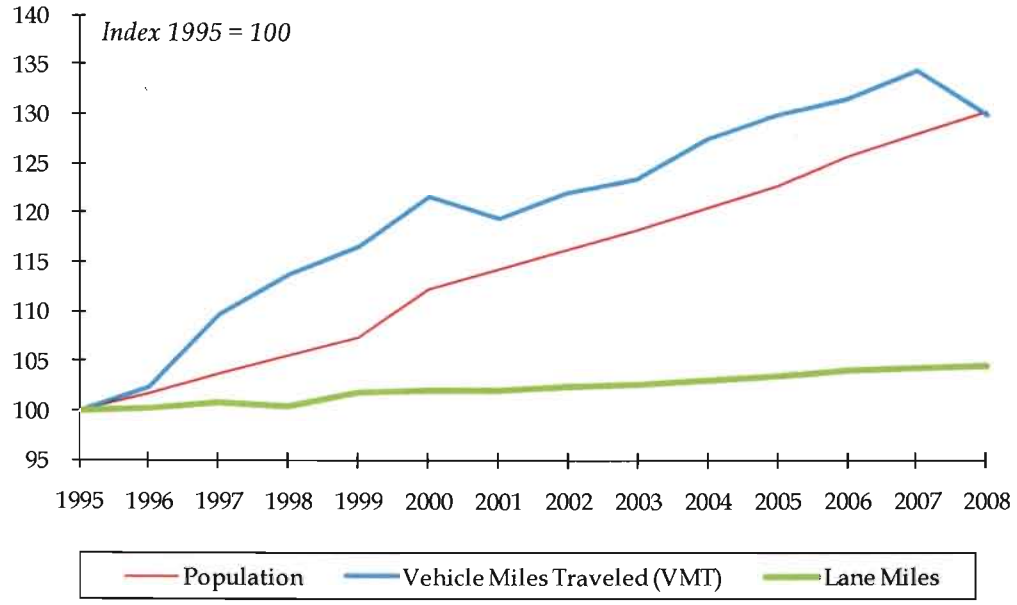



Source: U.S. Census Bureau and Texas State Data Center (Scenario 0.5, February 2009).

[1] The Texas State Data Center releases multiple population projections and recommends using the "0.5 Scenario" for long-term planning purposes. This scenario assumes that long-term in-migration will be half that of the 1990s, a period of high growth in the state.

[2] U.S. Department of Transportation, Federal Highway Administration, Highway Statistics, annual editions, available at http://www.fhwa.dot.gov/policy/ohpi/hss/index.cfm as of April 12, 2010.

**Figure 2 Texas Population, Vehicle Miles Traveled, and Lane Mile Growth Indices**




Source: U.S. Census Bureau, U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics*, annual editions

***Maintenance Challenges of an Aging Transportation Network***

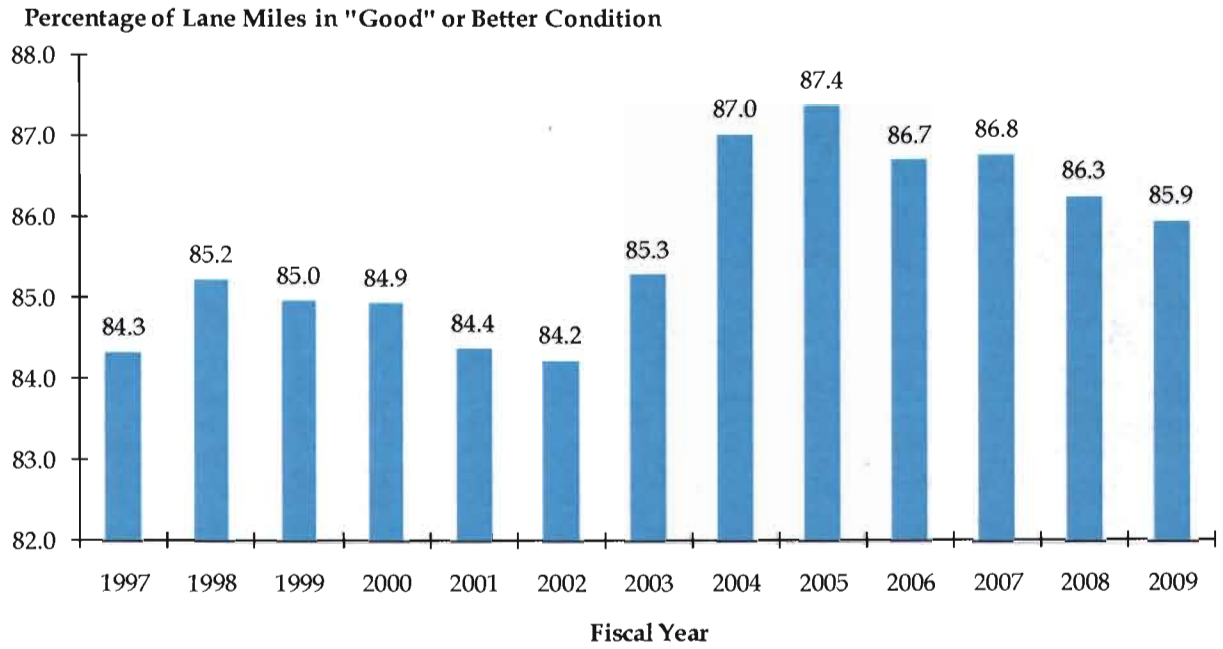
Why should people care about highway maintenance? Because the addition of new lane miles, more people on the roads, and the continued aging of the highway system all contribute to higher maintenance needs. Over the years, TxDOT has invested billions of dollars in building and enhancing roads, bridges, airports, and other elements of the transportation system. However, sufficient maintenance and improvements are necessary to keep these assets operating efficiently, extend their useful life, and delay the significant cost of reconstructing or replacing them.

**Pavement Condition**

TxDOT uses a pavement condition score, a hybrid measure that considers qualities such as potholes, patches, cracking and pavement smoothness, to evaluate statewide pavement condition. Pavement condition ratings range from "very good" to "very poor," where a rating of "good" or "very good" meets or exceeds all federal and state safety and structural requirements. In 2002, the Texas Transportation Commission established a goal that 90 percent of the pavement on state-maintained lane miles around Texas would be in "good or better" condition. In the years immediately after 2002, TxDOT's efforts to reach this goal produced tremendous improvements (**Figure 3**).

Since then, however, the amount of state fuel tax revenue going into the State Highway Fund has been less than the amount that was spent to maintain the more than 193,000 lane miles on the State Highway System. The "good or better" condition score has steadily declined because its limited financial resources have kept TxDOT from doing anything other than surface repairs to the highway pavement. For Fiscal Year 2009, 85.9 percent of the state-maintained highway lane miles were in "good or better" condition.

**Figure 3 Statewide Pavement Condition**
*FY 1997-2009*



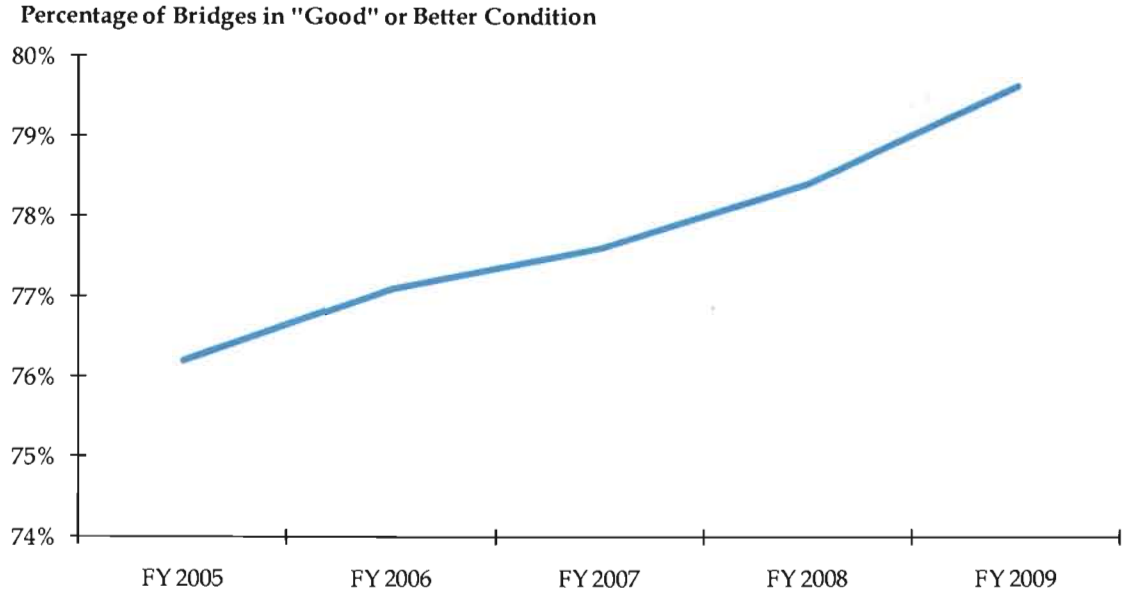

Source: TxDOT Maintenance Division

**Bridge Condition**

Likewise for its more than 50,000 public bridges, Texas is making progress on its bridge improvement programs, but more work is still needed. Of all Texas bridges, 79.7 percent had a "good or better" condition rating at the end of Fiscal Year 2009, up more than one percent from the previous year (**Figure 4**). This number, however, does not mean that Texas bridges are unsafe. Any bridge deemed unsafe is immediately closed to traffic.

Texas must aggressively invest more funding and efforts to maintain and preserve the transportation infrastructure to provide an acceptable level of service for present and future traffic.

**Figure 4** **Percent of Bridges in "Good" or Better Condition**
*FY 2005-2009*




Source: TxDOT Bridge Division

***Moving More Freight on Our Transportation System***

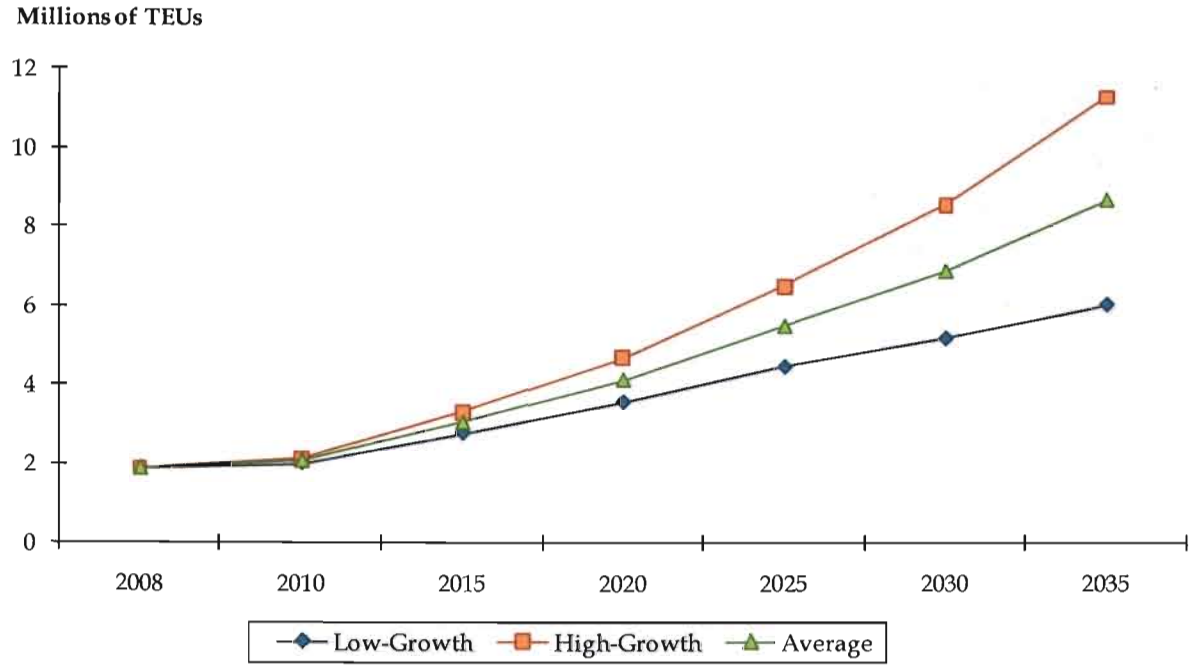
Texas' booming economy is due in large part to its existing infrastructure and geographic position as a transportation hub. It is clear that an interconnected transportation system is essential to economic prosperity and will allow the state to continue to compete in an increasingly global market.

The state's ports and waterways, freight rail, and highway systems all have an important role in the long-distance movement of goods on a local, statewide, national, and international scale. Despite the global economic recession that began in 2007, projections show that the overall demand on the Texas port and waterway system will grow significantly in the future. By 2035, general cargo tonnage at Texas seaports is expected to grow by nearly 63 percent, to nearly 866 million tons.[3]

Container movements through Texas seaports will grow even faster, more than quadrupling to almost 8.6 million TEUs (twenty-foot equivalent units) over the forecast horizon. **(Figure 5).** TEU is a measure of cargo capacity that describes the capacity of container ships and container terminals. Moreover, the Panama Canal expansion, scheduled for completion during the mid-2010s, is likely to alter world logistics patterns, stimulating container traffic on the Texas Gulf Coast. This would mean that freight movements become a larger part of the traffic mix within the Gulf Coast region, as these movements favor trucks and railroads as their primary mode of transportation.

[3] Cambridge Systematics, *Texas Waterborne Freight Corridor Study, Phase I Final Report,* prepared for the Texas Department of Transportation, January 2010.

**Figure 5 Statewide Container Forecasts Through Texas Seaports**
*2008-2035*



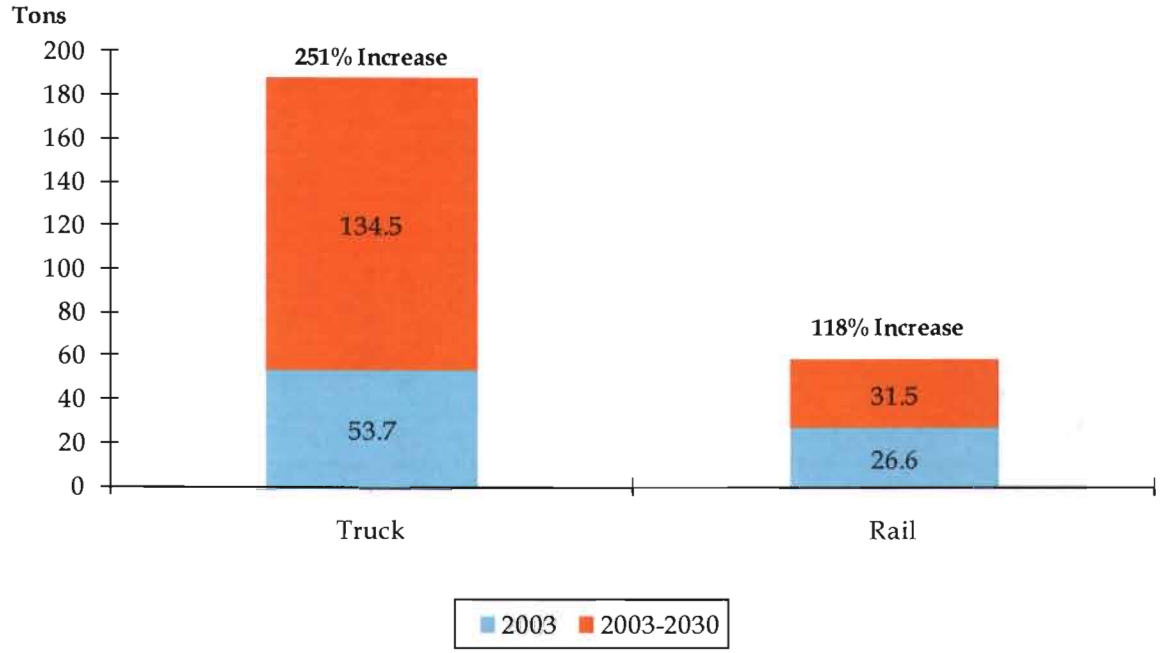

Source: Cambridge Systematics based on 2008 American Association of Port Authorities TEU data; TEU estimates from the Ports of Brownsville, Corpus, Orange, and Freeport; U.S. Army Corps of Engineers data, the TRANSEARCH La Quinta Market Potential Study, and the Ports of Las Angeles/Long Beach TEU Forecast

A 2007 study estimated that tonnage on Texas highways and railroads as a result of the North American Free Trade Agreement (NAFTA) will increase by nearly 207 percent through 2030, profoundly impacting the Texas highway and rail systems.[4] Truck tonnage is expected to grow by 251 percent while rail tonnage is forecast to increase by 118 percent (**Figure 6**). This growth translates to considerably more trucks on our highways and more hauls on our freight rail lines.

Strategic investments to expand today's transportation system and improve access to and from airports, waterways, rail facilities, and distribution points will provide for increased freight movement. Ultimately, these investments will make Texas more economically competitive and strengthen the state economy.

[4] Cambridge Systematics, et al, *Texas NAFTA Study Update,* prepared for the Texas Department of Transportation, February 2007.

**Figure 6** **NAFTA Growth on Texas Highway and Rail Systems**
*2003 to 2030 Millions of Annual Tons by Mode*




Source: Global Insight TRANSEARCH, 2006

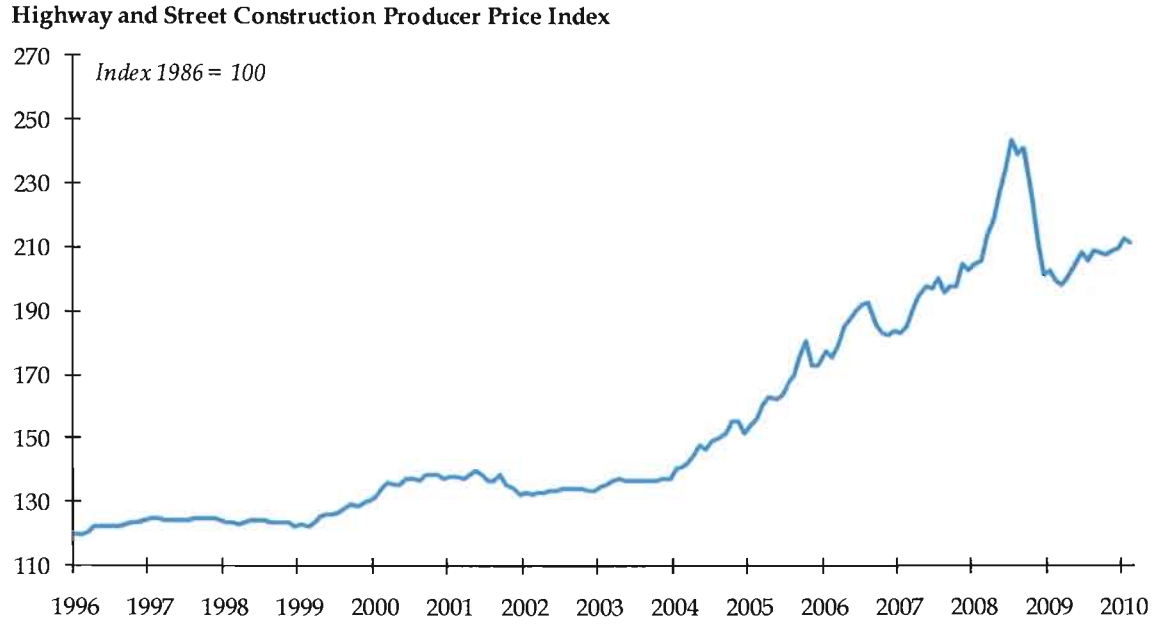
***Costs of Maintaining and Expanding the System***

Over the last several years, the construction industry has seen the prices spike for commonly used materials such as steel, asphalt, and concrete (**Figure 7**). Strong demand from rapidly developing countries and a short supply of raw materials have contributed to escalation of construction costs. Highway construction has been hit particularly hard by these price increases because it is so dependent on these materials and especially vulnerable to oil price increases. These rising prices will directly affect Texas' ability to improve its transportation network. In recent years, high construction costs have forced many states to seek new funding just to keep up on backlogged work and deliver planned projects, while others have had to scale-back, delay, or cancel their building plans altogether.

Between 2002 and 2008, construction inflation in Texas increased by 65 percent. While the sluggish national economy has actually caused prices to fall by 12 percent, once the economy recovers, these prices are likely to rise again and could continue to go up between 6 to 8 percent per year through 2012.

What this ultimately means for Texas is that available highway funding will only pay for so much construction and maintenance. As costs go up, the buying power of available highway funding goes down, thereby reducing the number and scope of projects that can be completed.

**Figure 7 Construction Cost Growth Index**



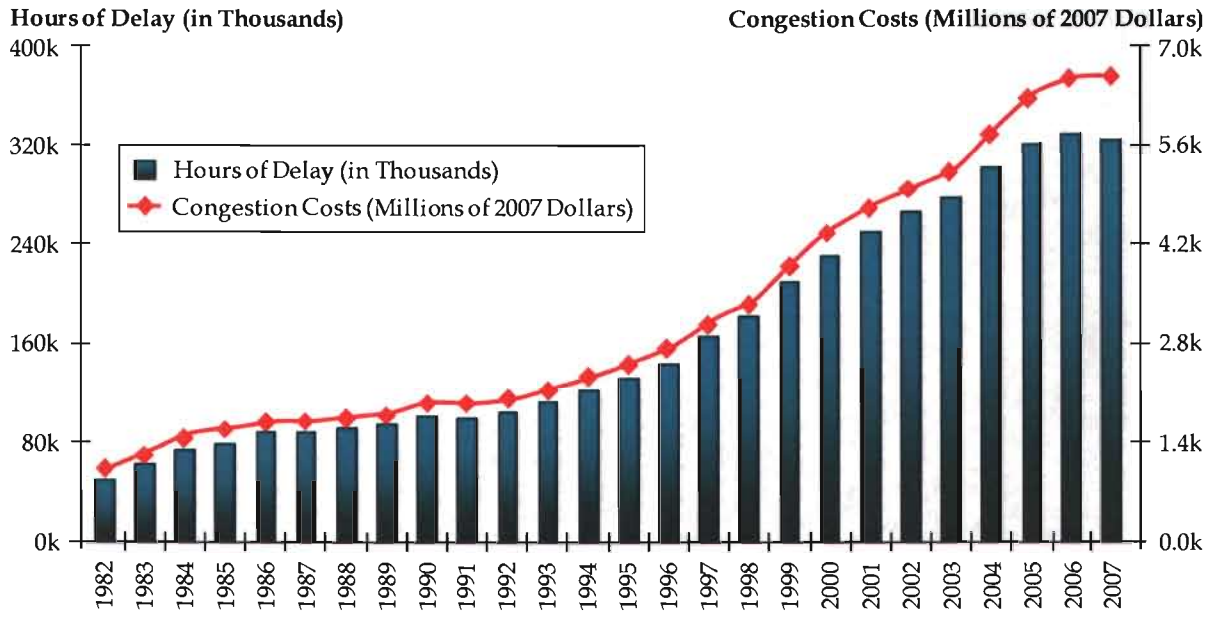

Source: U.S. Bureau of Labor Statistics

***Increasing Congestion in Urban and Rural Areas***

According to the 2030 Committee Report, an independent assessment of the state's 20-year transportation infrastructure and mobility needs, urban traffic delay has increased more than 500 percent in the last 20 years. Population growth and vehicle miles traveled in the state's largest metro areas have simply outpaced construction of highway miles. The cost of annual travel delay and extra fuel consumed in stop-and-go traffic by Texans was $6.7 billion in 2007 (**Figure 8**). The average urban Texas commuter spends an extra 32 hours in traffic each year—60 percent more than a decade ago.

Simply put, the Committee said that the $6.7 billion per year in travel delay and fuel expense was the equivalent of a "congestion tax" that averages $570 per commuter each year. In the large metropolitan regions, the cost per commuter is two to three times more. But traffic congestion can no longer be considered just a "big city problem." Many of Texas' growing cities and rural highways are experiencing their own traffic problems and will need added capacity to accommodate existing and future traffic. With the Texas population expected to increase by 48 percent to 35.8 million people by 2040, this means that congestion will affect even more people, cities, and regions in the years to come.

**Figure 8 Congestion Delay and Cost in Texas' Large Urban Areas**




Source: Texas Transportation Institute, Urban Mobility Report

***Concerns About Transportation Funding***

Every level of government – federal, state, and local – shares the responsibility for building, maintaining, preserving, and upgrading transportation infrastructure. But they also share a money problem: current revenues are below what is needed to make the appropriate improvements.

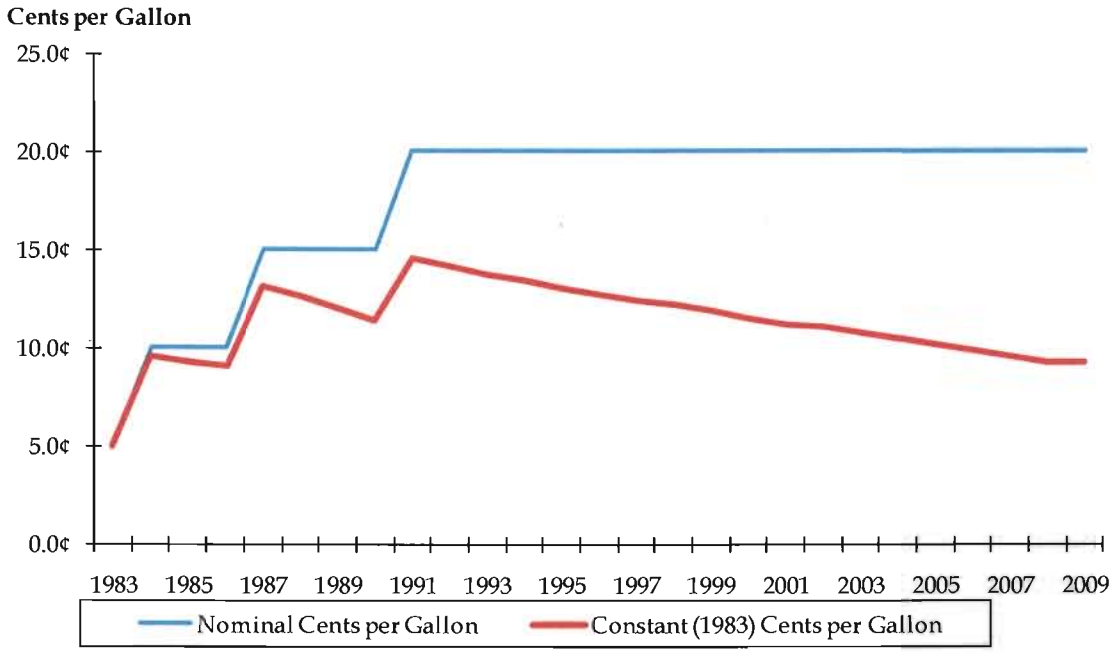
Like all states, the traditional sources of transportation revenue in Texas are federal and state excise taxes on motor fuel. The revenues collected are deposited in specific funds created by federal or state law to distribute among the states. In Texas, this fund is the State Highway Fund. At the federal level, it is the Highway Trust Fund (HTF), the primary source of revenue for the federal-aid highway program.

Federal funds are distributed to the states based on lane miles of roadway, vehicle miles of travel, diesel fuel used on roadways, population, and contributions to the HTF. Texas relies heavily on federal funds for its needs. However, the state only receives 70 percent back for highways from all the federal fuel taxes sent to Washington, D.C. With the pending insolvency of the HTF, it is uncertain what level of federal funding the state will receive in the future.

The current federal fuel tax rate of 18.4 cents per gallon was last raised in 1993. Texas's own fuel tax rate has remained at 20 cents per gallon since in 1991, despite subsequent increases in the price of gas. This means that whether you filled up your car with gas for $1.09 per gallon in 1993, $4.00 per gallon in the summer of 2008, or $2.65 per gallon in June 2010, two things have remained constant – only 18.4 cents of the price of each gallon went to the federal government and only 20 cents went to Texas to pay for roads, bridges, and other needs. And, as inflation has

increased since the early 1990s, the state's annual fuel tax revenue has lost more than half of its purchasing power (**Figure 9**) because the fuel tax is not indexed to inflation.

**Figure 9** **Texas Motor Fuel Tax Rate**
*1983 to 2009*




Source: U.S. Bureau of Labor Statistics

While the fuel tax has proven to be a relatively reliable revenue stream, it is far from perfect. Generally, a slow economy will have a negative effect on fuel tax revenues as people tend to drive less (irrespective of gas prices). As gas prices rise (in both good and bad economies), people tend to either drive less or switch to more fuel-efficient vehicles, including hybrid and alternative-fuel vehicles. This too translates to less gas consumption and less revenue for transportation agencies. And, even when gas prices rise, the amount of tax collected on each gallon purchased remains fixed.

## Border Issues

### Texas' Role in International Trade and the Importance of the Border

According to TradeStats Express, Texas has led the nation in exporting activities for eight consecutive years since 2002, with a total of $163 billion in revenue last year alone. Further the Business Roundtable (an association of chief executives of leading U.S. companies,) states that about 2.2 million Texas jobs, (1 in six), are linked to foreign trade. Additionally, Texas remains the top-ranked global destination for foreign direct investment, with an average $10.15 billion invested annually since 2003. (Financial Times – FDI Markets). The population growth in Texas, according to a U.S. Census Bureau press release in December 2009, estimated the population to have grown 1,327.7 people per day in the course of July1, 2008 to July 1, 2009. Hence today Texas stands strongly at the vanguard of global trade and Texas lives daily the reality of the importance of the rest of the world to its economy and population.

Given the aforementioned, it is not difficult to extrapolate that Texas, to continue to grow and profit from its fortuitous position, should be strongly focused on the further development of infrastructure and multi-modal transportation.

To support TxDOT in its planning processes and awareness of global developments, the IR has added to its focus gathering of information about important trade partners, developments in transportation modes, best practices and changing global trading trends. At the time of writing this report, top trading partners include: Canada, China, Mexico, Japan, Germany, UK, Netherlands, South Korea, France, Taiwan and the Netherlands. Closely following are Brazil, Italy, Singapore, Malaysia and Ireland.

### Texas/Louisiana Border

For the years 2011-2015, in addition to routine maintenance, there are approximately $221.4 million in mobility-related transportation projects that serve the Texas/Louisiana border region as defined by Government Code Chapter 2056. For Bowie county, there is approximately $26.2 million for a project to provide a passing lane on US 82, from SH 98 to RM 1840, a distance of approximately 8.7 miles. For Titus county, there are three projects for $195.2 million to provide a loop around Mount Pleasant. For Gregg county, there is $13.3 million for a railroad overpass project. For Rusk county, there is $6.0 million for a grade separation project and a road-widening project. For Smith county, there is $14.6 million for road-widening projects.

## Enhancing Military Facilities

For the years 2011-2015, there are approximately $574.7 million in transportation projects that will directly impact major military installations in Texas. Fort Bliss, in El Paso, has about $266.3 million; Dyess AFB, Abilene, $0.2 million; Goodfellows AFB, San Angelo, $10.0 million; Fort Hood, Killeen, $277.9 million; and Red River Army Deport, near Texarkana, $20.3 million.

## Technology Developments

### A. Impact of technology on current agency operations

TxDOT develops partnerships and processes between its Technology Services Division's (TSD) information technology (IT) staff and TxDOT division, district, office and regional (D/D/O/R) business areas. TxDOT also collaborates with city, county, other state agencies, and the federal government. This innovative performance-driven collaboration delivers cost effective IT services and solutions, enhances decision making and the flow of communications, and emphasizes efficient data and information sharing. It ensures that the data and information provided is secure, accurate, relevant, trustworthy, and easily accessible for integrated business solutions. This is an essential element of the IT vision at TxDOT. Innovative joint projects permit IT professionals to research, implement, and integrate IT solutions that serve as the foundation for TxDOT business decisions and operations. It is this integrated IT infrastructure that enables TxDOT to manage and deliver what it needs, when it needs it, to the citizens of Texas.

With this integrated approach, it is important to note that the Technology Services Division (TSD) is the current information technology service provider for both TxDOT and the Texas Department of Motor Vehicles (TxDMV). Protecting the data and investment in TxDOT's and TxDMV's Information Technology (IT) systems and applications has become one of the most critical issues for IT staff.

Internally, the development and continuous improvement of the TxDOT enterprise technology architecture, standards, and infrastructure are critical and essential elements of these IT business decisions, operations, and strategic IT objectives. These include processes that provide customers with secure and efficient application and data access across all technical platforms and integrate IT planning and budgeting. These processes reduce costs, improve efficiency, increase user satisfaction, reduce development and implementation timelines, and improve the quality, value, delivery, and accountability of IT services at TxDOT.

### B. Impact of anticipated technological advances

Critical IT success factors for the future involve ongoing support for doing business on the Web while focusing on transparency and accessibility; implementation of new technologies and procedures to effectively integrate geographic information systems (GIS) with business processes and applications; continued investigation into integrating GIS and global positioning data (GPS) with survey and engineering design; ongoing implementation and support of electronic document management, imaging, and electronic forms technologies; and, continued development of enterprise systems management.

In order to meet these needs, the department's strategic IT objectives include processes that:

- integrate IT planning and budgeting to improve agency performance;
- structure an environment of best practices to leverage delivery success;

- define and continuously enhance data, application, and technology architecture;
- research, evaluate, select, develop, and rapidly deliver new technologies;
- provide customers with secure, timely, and efficient application and data access across all technical platforms;
- provide appropriate tools for the development, maintenance, and enhancement of applications;
- enable single points of contact for end user and service provider problem resolution;
- enable a tiered support mechanism to provide department personnel solutions to IT challenges as related to their business needs;
- build capability to identify IT related training needs, design curricula, and deliver training for end users; and
- Continue to build upon the established project management and quality assurance processes that are integrated into IT projects, processes, and business decisions.

Focusing on these processes reduce costs, improve efficiency, improve user satisfaction, reduce development and implementation timelines for applications and new technologies, and improve the quality and delivery of IT at TxDOT.

**C. Degree of agency automation, telecommunications, etc.**

TxDOT has 384 (363 TxDOT, 21 TxDMV) software applications with associated databases or data stores, 49 (44 TxDOT, 5 TxDMV) are mission or agency critical. The agency supports 16,097 (includes 2,719 RTS) workstations statewide on the TxDOT/TxDMV domain.

There are 148 (137 TxDOT, 11 TxDMV) major software application systems that support the business and engineering functions of the agency. The majority of these applications were developed by TSD staff, although some were purchased from or developed by third party providers. These applications use one of the six supported operating systems, more than a dozen programming languages and over eight data management technologies on both mainframe and client/server platforms.

TxDOT has a site license for Bentley products which are used statewide (in all D/D/O/Rs) to provide support for TxDOT's construction letting and which are used in the planning, specifications and estimating process to assist with the preparation and development of future construction projects. TxDOT also has a site license for ESRI products which are used in spatial and GIS projects.

The TSD Photogrammetry Branch provides services which include assisting and providing district personnel with design-level mapping products and photo lab services for the daily engineering operations of the department. This process includes securing requests, scheduling flights, tasking the aerial contractor, approving the paneling, approving the photography, scanning the film, performing aerotriangulation, digitizing planimetrics and digital terrain models, generating orthophotography, delivering final mapping products, and archiving project data. Photo lab services include reproduction of photography, paper enlargements, contact prints,

and quality control for photogrammetric projects. Approximately 500 miles of roadway in TxDOT districts and over 8,500 photographic products such as enlargements, photo indexes, contact prints, negative map reproduction, and county aperture card maps are produced each year.

TxDOT's Global Positioning System (GPS) Network is currently comprised of 137 base stations collecting high accuracy reference data 24 hours a day, 7 days a week. Data is available via the TxDOT web site and is accessed by surveyors, geographic information system (GIS) professionals, engineers, and scientists. The TxDOT network served as a model for, and is a component of the National Geodetic Survey (NGS) Continuously Operating Reference Station (CORS) network that provides a high accuracy reference framework in support of positioning across the United States.

TxDOT's Core Technology Architecture defines the strategic direction for networking, telecommunications, operating systems, workstations, laptops, servers, mainframes, printers, plotters, database management systems, general purpose workstation software, groupware, enterprise system management, information systems security, and reliability and fault tolerance. The Core Technology Architecture and the associated technology infrastructure provide the foundation for all information resources and services at TxDOT.

The technology infrastructure is the result of the physical implementation of the core technologies identified in the Core Technology Architecture. The technology infrastructure consists of the specific components that make up the local area network, wide area network, servers, operating systems, common desktop software, and relational database management systems.

The Document Management Architecture provides the framework, principles, guidelines, standards, specifications, policies and procedures to direct the process of acquiring, constructing and enhancing applications that capture, store, access, and manage documents and related information. It is also being developed in conjunction with the Geographic Information System (GIS) Architecture to ensure that vector and raster engineering drawings, plan sheets, maps, orthophotography, and digital photo logs are addressed.

The Data Architecture is the description of how the data components of a computer system are organized and integrated. TxDOT's Data Architecture provides guidance for the data design process in the form of data naming, modeling, and dictionary standards, and provides a standard format for documenting system interfaces. To promote understanding and data sharing, TxDOT developed the Data and Application Inventory System (DAIS).

TxDOT's Database Architecture aids in the general understanding and the implementation of database management systems (DBMS) software and application databases as part of the Core Technology Architecture. The Database Architecture discusses the physical implementation of a structured collection of records/data stored within appropriate operating environments. The Database Architecture further addresses major database environments and activities and strategies not found in the Core Technology Architecture.

The Agency Configuration Management Plan provides overall definition and methods that form a configuration management environment for information technology assets. Configuration management provides for the identification, control, reporting, and auditing of selected configuration items.

The Application Architecture is the conceptual description of the organization and integration of computer programs. The TxDOT System Interface Diagrams (TSID) provides a graphical depiction of the application interfaces.

**D. Anticipated need for automation**

In order for TxDOT to complete projects and continue to take advantage of ever changing technological advances, the following critical success factors must be an integral part of all activities of the organization:

- maintaining a TxDOT IR organization that manages and readily adapts to continuous technological innovations and prevailing business trends;
- retaining qualified information resources professionals;
- improving IT project management and the development life cycle;
- improving the speed and efficiency of the procurement process and the accuracy and efficiency of the project planning process;
- delivering quality products promptly;
- researching, evaluating and implementing new technology;
- creating an enterprise computing environment that promotes cross platform migration, uniform development, and a comprehensive technology infrastructure; and,
- Improving services from the data center provider.

**Self-Evaluation and opportunities for improvement**

**E. Key obstacles (. . . technological)**

Key obstacles to consider are interoperability constraints that include systems or applications with which data must be integrated or shared with other public and private sector entities. These include bandwidth issues, cost considerations, and security/access issues. Data scheme differences between agencies present one of the greatest challenges for application development between agencies.

TxDOT currently deals with radio system incompatibilities with city traffic management systems which present significant constraints with sharing Intelligent Transportation Systems (ITS) data. Due to non-standard transponders used by the trucking industry, problems also occur when collecting and sharing data between DPS, TxDMV, TDI, TxDOT, and other states.

The most significant obstacle to the effective and efficient delivery of IT services to TxDOT and TxDMV customers is the inability of the data center services provider to fulfill the requirements of the contract.

**F. What key technological ... resources are, or might be available?**

Increasing our presence on the web will be a key factor in the future. TxDOT continues to increase its presence on the web each year by providing more information and online services related to the public, other governmental agencies and TxDOT business areas. There are over 45,000 documents on the web site. Currently, there are over 400,000 visitors to TxDOT's web site per month and 900 email requests for information are received monthly through the web. There is an average of 40 million "hits" to the web site each month. TxDOT also maintains Intelligent Traffic System (ITS) web sites for the Amarillo, Dallas, Fort Worth, El Paso, Houston, Laredo, Lubbock, San Antonio and Wichita Falls districts. These sites provide a variety of traffic related information to the public.

TxDOT has improved transparency and accountability by implementing new web based systems that detail design and construction costs and timelines. Further transparency is enhanced by the implementation of the TxDOT Tracker web site which shows agency performance measures.

The Texas Highways Travel Magazine web site provides information about cultural events, destinations, and other travel related information. The TxDOT GIS unit maintains a web portal which serves historical Right of Way maps and project control information to our external customers, this alone saves many hours of reproduction costs and enhances the ability for the public to have free unrestricted access to TxDOT information. Other community service sites such as My290.com and My35.org inform the public about transportation projects in their area.

TxDOT is participating with the Texas Comptroller of Public Accounts (CPA) in the implementation and deployment of the Statewide ERP System, ProjectONE. Upon implementation, this system will provide a "single set of books" for financial, human resources-related activities, and other functions in the future.

## Policy and Plan for Utilization of Historically Underutilized Businesses (HUBs)

In accordance with the Texas Government Code, Sections 2161.181-182 and Section 20.11 of the Texas Administrative Code (TAC), the Texas Department of Transportation (TxDOT) is committed to assisting Historically Underutilized Businesses (HUBs) in providing equal opportunities to compete for all procurement opportunities within the agency. TxDOT adopts the HUB rules under Section 2161.002 as the agency's own rules. It is TxDOT's policy to promote and encourage contracting and subcontracting opportunities for HUBs in all contracts and as such, TxDOT shall make a good faith effort to utilize HUBs in contracts for construction, commodities, and services, including professional and consulting services and encourage prime contractors to make a good faith effort to solicit and utilize certified HUB subcontractors.

In accordance with the State of Texas HUB Rules, 34 TAC 20.11-20.28 which encourages the use of HUBs by implementing policies through race, ethnic, and gender-neutral means, the TxDOT's General Service Division Business Outreach and Program Services Branch is responsible for coordinating business opportunities for HUBs as well as Disadvantaged Business Enterprises (DBEs) under the federal DBE Program and Small Business Enterprises (SBE) Program with prime contractors, TxDOT Purchasers and TxDOT Divisions/Districts contract staff.

### HUB Goals by Procurement Category

TxDOT has developed internal policies and coordinates activities to provide education, outreach, training and the dissemination of information to ensure increased HUB participation. TxDOT will demonstrate its good faith effort to utilize HUBs, striving to meet or exceed HUB program goals and objectives in all its procurement efforts in the applicable procurement categories identified below:

(1) 11.9% for heavy construction other than building contracts
(2) 26.1% for all building construction, including general contractors and operative builders' contracts
(3) 57.2% for all special trade construction contracts
(4) 20% for professional services contracts
(5) 33% for all other services contracts
(6) 12.6% for commodities contracts

It is the policy of TxDOT to achieve the annual program goals by contracting directly with HUBs or indirectly through subcontracting opportunities in accordance with the Texas Comptroller of Public Accounts HUB Rules, 34 TAC 20.13.

**Agency Use of HUBs by Procurement Category**

Of the six procurement categories, TxDOT largely expends funds in the "Heavy Construction Other than Building Contracts" category in which the agency primarily receives federal funding and facilitates contracting opportunities with minority contractors following the federal DBE Program guidelines. In the five remaining categories, TxDOT has implemented several internal procedures to aggresively promote contracting directly or indirectly with HUBs which includes the following:

On Professional Service Consulting Contracts with an HUB Subcontracting Plan (HSP), TxDOT does not accept Self Performance Plans as an option to submitting a Good Faith Effort.

On all solicitations under $25,000.00, TxDOT requires two of the three solicitations be from a State of Texas HUB vendor. In an effort to solicit a greater pool of responses from HUB vendors on solicitations under $25,000.00, TxDOT forwards the solicitation to all HUBs on the Centralized Master's Bidders List (CMBL) in the specified class and item code as a part of our Small Purchase Award Program.

**HUB Subcontracting Plan (HSP)**

In accordance with the Texas Government Code, Chapter 2161, Subchapter F, each state agency that considers entering into a contract with an expected value of $100,000 or more shall, before the agency solicits bids, proposals, offers, or other applicable expressions of interest, determine if subcontracting opportunities are probable under the contract.

If subcontracting opportunities are probable, the agency will state such probability and require submission of a HUB Subcontracting Plan (HSP) in all bids, proposals, offers, or other applicable expressions of interest. The HUB Subcontracting Plan, acceptable to the agency, will become a provision of the contract.

If the potential contractor/vendor response does not include or does not complete the HUB Subcontracting Plan (HSP), the potential contractor/vendor offer will be considered non-responsive and will be rejected. In accordance with the Texas Comptroller of Public Accounts HUB Rules, 34 TAC 20.13, TxDOT will use the HUB Subcontracting Plan which can be found on Texas Comptroller of Public Accounts website, TxDOT website and will be included as an attachment to all TxDOT bids and offers for which subcontracting opportunities are probable.

**Good Faith Effort Compliance**

To obtain HUB credit, TxDOT must report its HUB subcontracting expenditures to the Texas Comptroller of Public Accounts. Any contractor/vendor that seeks to satisfy the good faith effort requirement shall report to TxDOT the volume of work performed under the contract, the portion of the work that was performed with its employees, non-HUB contractors/vendors, and HUB contractors/vendors. Therefore, if TxDOT makes an award, the contractor/vendor will provide the HUB Subcontracting Plan (HSP) Prime Contractor Progress Assessment Report,

documenting all work performed by HUBs and Non-HUBs during that month in accordance with the HUB Subcontracting Plan as stipulated in the purchase order:

All required forms must be submitted to TxDOT in accordance with the contract specification. Failure to do so can result in non-payment and/or suspension of contract award. TxDOT may also request payment documentation in accordance with State HUB Rules, and the HUB Subcontracting Plan that confirms the performance of the contractor/vendor.

During the course of the contract, TxDOT shall monitor the good faith effort compliance of the contractor/vendor and document the contractor's/vendor's compliance in the contract file. TxDOT shall audit the contractor/vendor compliance with the HUB Subcontracting Plan. TxDOT shall give the contractor/vendor an opportunity to submit documentation and explain why failure to fulfill the HUB subcontracting plan should not be attributed to a lack of good faith effort. Any deficiencies will be identified by TxDOT and must be rectified prior to the next reporting period.

**Activities to Increase HUB Participation**

TxDOT coordinates several programs to assist HUB businesses with information, training on how to do business with TxDOT, as well as several outreach programs that inform minority-owned businesses about contracting opportunities with TxDOT. In addition, these programs link businesses, if necessary, with the appropriate agency staff to assist in providing information on contract opportunities and techncial assistance that improves technical business skills and knowledge about the agency procurement process. Agency efforts include:

- Sponsor, Co-Sponsor and participate in Economic Opportunity/HUB Forums
- One On One Business Appointment Program
- Learning Information Network Colloboration (LINC) Mentor Protégé Program
- Regional Industy Liasion Meetings
- Small Purchase Notification Program
- Sponsor, Co-Sponsor and Participate in Spot Bid Fairs
- Conduct Procurement and Marketing Presentations at Small & Minority Business Development Workshops and Conferences
- Establish Memorandum of Agreement with Texas Comptroller of Public Accounts to assist with the certification of qualified DBE's in the state HUB Program
- Provide training on State of Texas and TxDOT HUB Program Procedures
- Host Technical Business Development Workshops
- Signed Memorandum of Cooperation with Texas Association of African American Chamber of Commerce and the Texas Association of Mexican American Chamber of Commerce.
- Signed Memorandum of Cooperation with several industry partners to include the Dallas Fort Worth Minority Business Council, the Black Contractors Association, the Hispanic Contractors Association and the North Texas Small Business Development Center through partnership aggreements with the Texas Business Opportunity and Development Program (TBOD).

- Developed the Texas Business Opportunity & Development Program (TBOD) formerly (TBOWD), located in Lancaster, Texas at Cedar Valley College to promote and develop minority construction firm in the Dallas/Fort Worth Region. Two additional locations are slated for FY 2010 in Ausitn and El Paso.

TxDOT encourages the use of HUBs by partnering with other state agencies and with local, county and regional business development organizations whenever possible through formal and informal cooperative agreements and particpation on interagency committees and task forces that promote the TxDOT HUB Program and the utilization of HUBs.

**Overview of Outreach & Supportive Service Programs**

Technical Assistance Program (TAP)
Provides free business development and technical industry training to highway construction DBEs, which enhances the skills necessary to bid and perform on TxDOT contracts. Individualized, "hands on" technical assistance training in construction, bonding, bidding, accounting/financial management, business law/EEO, business management/marketing, computer, safety requirements, environmental and prequalification provides small businesses with a competitive edge when proposing and/or performing TxDOT projects.

TxDOT Small Business Briefings
TxDOT conducts Briefings around the state for small and minority-owned businesses providing contract opportunities and information on how to do business with TxDOT and the state of Texas. The briefings provide general industry sessions that include specific information on how to do business in the construction, goods and services, information technology and professional engineering service industries. Breakout sessions cover small and minority-owned business certifications, resources for small business development, business marketing for state contracts as well as information on TxDOT toll projects. Each briefing also includes a contracting opportunities showcase, an industry networking session, and a reception.

Learning, Information, Networking, Collaboration (LINC) Mentoring Program
LINC is a unique mentoring program in which TxDOT mentors small and minority businesses interested in doing business with TxDOT. There are four industry LINC Programs, including: Construction, Goods and Services, Information Technology and Professional Services

Program Objectives:
- Increase the number of small businesses bidding and performing on TxDOT contracts.
- Prepare DBEs, HUBs, and SBEs to bid and perform on TxDOT contracts through technical assistance training.
- Introduce companies to TxDOT Purchasing Department personnel, key TxDOT staff and other public and private organizations.
- Provide program participants with business development assistance needed to grow and expand their business.

DBE/HUB/SBE Industry Liaison Meetings
Industry meetings held in various TxDOT districts around the state, which provides information

about various programs, contract opportunities and key information that are of concern for TxDOT, prime contractors, small and minority businesses, and industry partners.

Specialized Workshops
In-depth workshops that provide an opportunity for small businesses to receive training on various business development and technical industry topics such as Bonding, Construction Management, Developing a Website, Developing a Business Plan, Construction Safety Training & Certification and Business Financial Management. These workshops are announced throughout the year and registration is required.

BOP Quarterly Road Lines Newsletter
Quarterly newsletter that provides information relevant to the minority, small business community as well as prime contractors and entities involved in procurement. The newsletter features key information about TxDOT contracting, as well as the following features: Message from the Director, DBE/HUB/SBE Feature Story, Industry Information, Calendar of Events, Frequently Asked Questions, Helpful Hints, District Feature Story, TxDOT on the Internet, Information Order Form.

Texas Business Opportunity Development Program (TBOD)
Is a federally funded program that utilizes community and industry business development resources that targets the needs of underutilized DBE firms through supportive services and training. The eventual goal of the program is to increase the number of minorities and women participating in the highway construction industry.

One-on-One Business Appointment Program
TxDOT coordinates and arranges appointments between businesses interested in working with TxDOT and the appropriate agency purchasers and/or contract management employees.

Economic Opportunity & HUB Outreach Forums
TxDOT participates in several outreach efforts around the state to solicit women and minority owned business participation in TxDOT programs, encourage participation in the State HUB Program and encourage bidding and participation on State of Texas procurements.

**Fiscal Year 2010 HUB Activity Plan**

| PROGRAM | ACTIVITY PLAN |
|---|---|
| Technical Assistance Program (TAP) | Provide technical and construction industry development assistance to certified DBEs. |
| TxDOT Small Business Briefings (SBB) | Host 3 Small Business Briefings<br>- El Paso<br>- Dallas<br>- Texarkana |

| | |
|---|---|
| Learning, Information, Networking, Collaboration (LINC) Mentoring Program | Host 4 Industry LINC Sessions<br>- Dallas<br>- Laredo<br>- Austin<br>- El Paso |
| DBE/HUB/SBE Industry Liaison Meetings | Host Industry Liaison Meetings to include participation on state, federal and local business development organizations. |
| Specialized Workshops/Business Development Webinars | Based on industry needs assessments, host specialized workshops that provide technical business development assistance and when possible provide technical subject matter by the use of webinars. |
| BOP Quarterly Road Lines Newsletter | Publish 4 newsletters on a quarterly basis each fiscal year. |
| Texas Business Opportunity Development Program (TBOD) | Provide development and technical assistance programs and activities as specified in the TBOD Work Plan. Open two additional TBOD Programs in FY 2010 to include El Paso and Austin. |
| One-on-One Business Appointment Program | Coordinate appointments between businesses and TxDOT procurement staff, prime contractors and industry partners |
| Economic Opportunity & HUB Outreach Forums | Participate in outreach efforts to solicit women and minority owned business participation in the State of Texas HUB Program and on state procurements |

## Contract Management:
## A Description of the Training of the Agency's Contract Managers

### Overview

Over the last twenty years, TxDOT has succeeded in outsourcing all or significant portions of many functions that were previously performed by agency employees. These functions include highway design, environmental review, right of way acquisition, planning, materials testing, landscaping, surveying, routine maintenance, logo sign management, bridge inspection, training, utility coordination, and some aspects of project management. With this increased emphasis on the use of the private sector to deliver services to the public, TxDOT has concurrently recognized the need for increased emphasis on the training of contract managers to ensure the timely and cost-effective delivery of these services.

TxDOT's extensive contracting program involves contracts entered under many different contracting statutes, all of which impose unique contracting requirements. The most important of these include:

- State Purchasing and General Services, Government Code, Subtitle D
- Professional and Consulting Services, Government Code, Chapter 2254
- Interagency Cooperation Act, Government Code, Chapter 771
- Interlocal Cooperation Act, Government Code, Chapter 791
- Administration of Aeronautics, Transportation Code, Chapter 21
- Rail Facilities, Transportation Code, Chapter 91
- General Provisions and Administration, Transportation Code, Chapter 201
- Bids and Contracts for Highway Projects, Transportation Code, Chapter 223
- State Financing of Public Transportation, Transportation Code, Chapter 456
- Transportation Research, Education Code, Chapter 150

The large number of contracts and the variety of statutory schemes demands an active and wide-ranging training program for TxDOT's contract managers. TxDOT has established a training program for contract managers that incorporate general contract training offered by the Comptroller of Public Accounts, additional mandatory training focused on the specific needs of TxDOT, and optional training that enables contract managers to maintain certifications and gain additional knowledge in specific subjects.

Professional Services and Other Negotiated Contracts

Professional services contracts include contracts with engineers, architects, surveyors, appraisers, landscape architects, accountants, private consultants, attorneys, and other professional services providers. Before performing any work on a contract, each contract manager is required to take a one-day introductory course, which is offered online and has been taken by 761 TxDOT employees. As soon as reasonably possible, each contract manager is required to take a comprehensive four-day course covering all aspects of the contracting process; 426 TxDOT employees have taken this comprehensive course. Contract managers on professional services

contracts are also required to take a minimum of six hours of contract training each year and to retake the comprehensive four-day course every five years. In addition, 31 TxDOT employees have attended contract manager training offered by the Comptroller and are qualified as Certified Texas Contract Managers.

Aside from the mandatory training, TxDOT offers a number of courses to provide additional training to contract managers on professional services and other negotiated contracts. These include overview courses on contracting with governmental entities and on contracting with private sector entities, which are each offered twice annually, as well as annual advanced courses on interagency contracts and advance funding agreements. An annual video teleconference on negotiated contracts is attended by more than 200 employees and explores issues that are common to negotiated contracts. Contract managers also benefit from more than 20 courses on various aspects of project management and from three online courses on different aspects of negotiating techniques.

Purchase Orders

Purchases over $25,000 made under the State Purchasing and General Services Act require the purchaser to be Texas state certified. Texas purchasing certification requires 24 contact hours of training each year. Additional training is provided in subjects such as negotiations. Currently, 69% of TxDOT purchasers statewide are state-certified to the first or second level of certification. Approximately 37% of TxDOT purchasing personnel statewide are also nationally certified. Within TxDOT's central purchasing staff, approximately 82% of purchasers are nationally certified, and 100% of the purchasing leads and purchasing managers are both state and nationally certified to the second level.

In addition to training required for state and national certifications, TxDOT offers a comprehensive three-day instructor-led course on contract management. This course is based on the state's Contract Management Guide, and it has been attended by 595 TxDOT employees. The course will be made even more accessible by adapting it as an online course. TxDOT purchasers may also attend informational briefings, monthly webinars, statewide conferences including contract management topics, and courses offered by private companies and public entities.

Construction and Maintenance Contracts

Construction and maintenance contracts are low-bid contracts for the performance of highway improvements. Performance of these contracts may be overseen by TxDOT personnel or by local governments. When a highway improvement contract is to be overseen by a local government, mandatory training is required for at least one representative of the local government. This requirement is satisfied by taking a course on Local Government Project Procedures. This course is also available to TxDOT personnel who oversee these projects, and approximately 60% of the persons taking the course are TxDOT employees.

When a highway improvement contract is to be overseen directly by TxDOT, the TxDOT personnel may also take one or more of several courses designed to provide training on these

projects. These courses include Construction Contract Administration, Introduction to Construction/Maintenance Inspection, and Materials Control and Acceptance. These various courses provide detailed guidance on a variety of necessary tasks, including the auditing of contract records, proper record-keeping, administration of contracts, identifying bid items and tolerances, ethics, environmental considerations, traffic control, lime and cement stabilization, seal coating, roadway striping, mathematical calculations underlying estimates, statistical sampling methodology, development and use of process control plans, and quality assurance systems.

## Discussion of Current Year Activities

"To link strategic plans to the state's fiscal cycle, ...the agency plan must briefly discuss any goals, objectives, or strategies to be accomplished in fiscal year 2010; however, the agency plans must emphasize the five years beginning with fiscal year 2011."

Activities undertaken/underway in FY 2010:

Goal 1 – Develop an organizational structure and strategies designed to address the future multimodal transportation needs of all Texans.

- Regionalization implementation
- Establishment of the Strategic Policy & Performance Management Office
- Initiation of more engaged strategic planning process
- Development of TxDOT Tracker website for performance reporting
- Development of Project Tracker website and Implementation of Primavera 6 software for recording and reporting on the project development process
- Conducting a series of Town Hall meetings across the state to discuss local and statewide transportation issues and concerns with local officials and the public
- Executive Director monthly information videos for employees, access to AskTxDOT e-mail for public and employee comments or questions of the TxDOT
- Transportation planning task force to develop draft project selection and planning process rules, currently awaiting commission adoption
- Implement new Planning Rules designed to streamline processes and deliver public project expectations
- Implementation of the Statewide Long Range Transportation Plan updated for the first time in over 14 years
- Publication of the first 24 month letting schedule
- Publication of the first four year work plan
- Implementation of organizational and process changes based on the implementation of Grant Thornton Management Organizational Report (MOR)

Goal 2: Enhance safety for all Texas transportation system users

- Implementation of FY 2010 activities outlined in the Strategic Highway Safety Plan
- Conducted emergency preparedness exercises
- Promoted Work Zone Safety Awareness Month activities

Goal 3: Maintain the existing Texas transportation system

- Development of 4-year pavement management/maintenance plans, with desired outcomes and objectives tied to available funding
- Continued implementation of new maintenance process and procedures to capitalize on regional resources and standardized project delivery expectations

Goal 4: Promote congestion relief strategies

- Development and posting of Top 100 Most Congested Roadway Segments list
- Devoting some Prop 12 funding to engineering for some of the Top 100 most congested roadway segments
- Development of new performance measures for congestion to be used at the corridor, regional, state, and national levels
- Directed Proposition 12 funding to important congestion relief projects such as IH-35 and the reconstruction of Houston's I-610/U.S. 290 interchange
- Effectively implemented the federal American Recovery and Reinvestment Act funds for needed maintenance and mobility improvement across the state

Goal 5: Enhance system connectivity

- Initiated update of the 14 year old Statewide Long-range Transportation Plan
- Provided assistance to metropolitan planning organizations to updates to regional long-range transportation plans and annual Transportation Improvement Programs

Goal 6: Facilitate the development and exchange of comprehensive multimodal funding strategies with transportation program and project partners

- Implemented improved cash forecasting mechanism
- Implemented TRENDS financial forecasting model at statewide and regional levels to provide consistency in MPO plan development
- Initiated development of the Statewide Long-range Transportation Plan
- Vigorously pursuing federal funding for rail through the new Rail Division

# Capital Improvements

## Capital Improvement Program for FY2012-2013

TxDOT facilities remain essential and valuable assets in support of the agency's mission, transportation functions and highway operations statewide.

With limited funding available to meet transportation needs across the state, the primary goal for FY2012-2013 is to fund essential maintenance, emergency repairs and renovation of existing facilities that are substandard or with the greatest need.

Beginning in FY2012-2013, a 10 year Capital Improvement Plan (CIP) will be implemented based on the short and long term essential and critical statewide facility needs identified by the building condition score, structural integrity, health and life safety, and efficiency of building systems. New construction will be limited to facilities that are significantly substandard and functionally obsolete for current operations. Acquisition of land to replace new facilities will be limited with funding being requested in the biennium prior to or in conjunction with the funding for new construction.

The priorities for FY2012-2013 capital improvement projects are:

1. Essential Maintenance and major repairs, including life safety, building code, and regulatory compliance related projects required to provide for a safe and healthy working environment for employees and the public.
2. Renovation and Additions to existing facilities to extend the useful life of the asset.
3. Land Acquisitions for the expansion of existing facilities or construction of a new facility.
4. New Construction to replace obsolete facilities.

## TxDOT Strategic Direction

The *TxDOT 2011-2015 Strategic Plan* is our response to the many transportation challenges we face. It defines our mission, vision and values that are the foundation of our commitment to the citizens and businesses of Texas, the Texas Legislature and our TxDOT employees. It identifies short-term goals, objectives and strategies that we will undertake to address the state's multimodal transportation needs. It also defines a set of agency-level performance measures that will hold us accountable for tracking our progress toward achieving the agency's goals. This plan provides a strategic framework to guide TxDOT's transportation planning activities, investments, and decision-making over the next five years.

### *Mission, Vision, and Values*

**Our Mission** – Provide safe and efficient movement of people and goods, enhance economic viability, and improve the quality of life for the people that travel in the state of Texas by maintaining existing roadways and collaborating with private and local entities to plan, design, build, and maintain expanded transportation infrastructure.

**Our Vision** – To be a trusted, performance-driven organization committed to collaborating with internal and external partners to deliver a modern, interconnected, and multimodal transportation system that enhances the quality of life for Texas citizens and increases the competitive position for Texas industry.

**Our Values** - TxDOT will:

- Honor our commitments to the citizens of Texas with accountability and transparency.
- Provide the best value for every dollar spent.
- Earn and maintain the respect and trust of Texas citizens by listening, seeking to understand, and being responsive to our customers and stakeholders.
- Promote innovation, creativity, and collaboration.
- Promote high ethical conduct and a commitment to compliance with the law with our employees and partners.
- Communicate openly and honestly.
- Protect the safety of the traveling public, our employees, and the workers who build, operate and maintain our transportation system.
- Value diversity through inclusion, opportunity, and respect.
- Support employee professional development.

***Goals, Objectives, Strategies and Performance Measures***

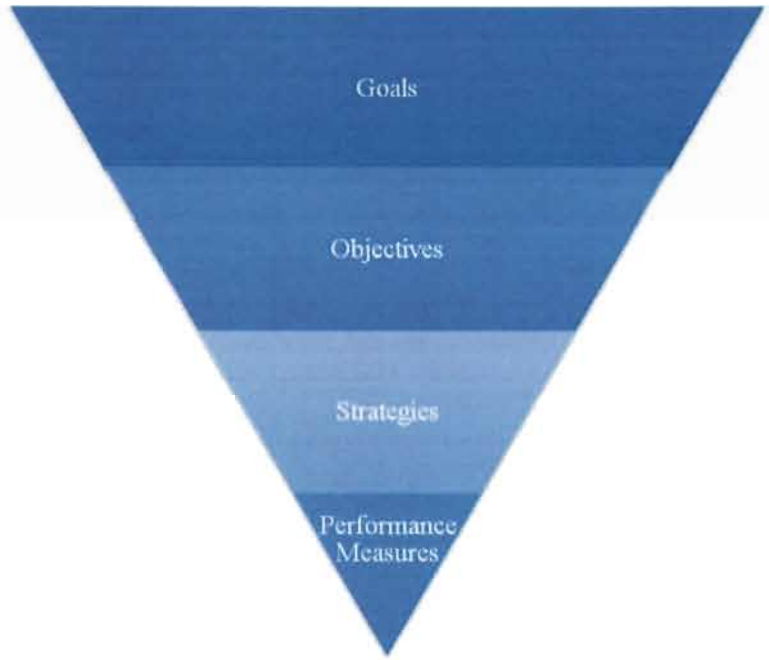
The Strategic Plan is organized around six goals that establish the most important areas for action and focus in fulfilling our mission over the next five years.

**Our Goals:**

- Goal 1 - Develop an organizational structure and strategies designed to address the future multimodal transportation needs of all Texans.
- Goal 2 - Enhance safety for all Texas transportation system users.
- Goal 3 - Maintain the existing Texas transportation system.
- Goal 4 - Promote congestion relief strategies.
- Goal 5 - Enhance system connectivity.
- Goal 6 - Facilitate the development and exchange of comprehensive multimodal transportation funding strategies with transportation program and project partners.

An important, yet underlying focus of each of these goals is to expand the state's economic opportunity while meeting the department's environmental responsibilities.

The following sections outline the specific objectives, strategies, and performance measures that we will use to help us achieve each goal. The figure below illustrates the relationship between each element of the strategic plan and explains the meaning of key terms. This hierarchy helps to translate broad policy goals and objectives into actionable programs, projects, and services. The Strategic Plan identifies many of the fundamental strategies that we will implement over the next five years. However, it is not an exhaustive list of the activities we will undertake in pursuit of our mission.




**Goals** establish the most important areas for action and focus to fulfill our mission and vision.

**Objectives** are specific, agency-level statements relating to the attainment of goals.

**Strategies** are examples of actions or activities that we will undertake to achieve the objectives.

**Performance measures** allow us to track our progress towards meeting each goal.

***Goal 1: Develop an organizational structure and strategies designed to address the future multimodal transportation needs of all Texans.***

As the needs of the traveling public continue to evolve, particularly as Texans demand access to more transportation options like intercity passenger rail, our organizational structure must be flexible and responsive to adjust to these changes. We believe that our organizational structure critically influences our ability to accomplish progress on the other goals and achieve our mission.

We also recognize the importance of maintaining the public's trust by efficiently and effectively managing the transportation decisions and resources for which we are held responsible. Being the best TxDOT we can be requires open and transparent communication with the public as well as with the Legislature. To build trust and credibility, we must be accountable for our actions by measuring our progress and reporting to our customers and stakeholders how we are performing.

Creating a 21st century department of transportation also requires proactive collaboration with local agencies and regional communities that are most familiar with their local transportation infrastructure needs and priorities. We understand the importance of obtaining guidance from local and regional communities and stakeholders when making transportation decisions across the state. We are committed to making these partnerships integral to our success.

Above all, we recognize that our more than 12,000 employees are our greatest assets. We value the contribution that each individual makes to our success and seek their input in shaping the department's direction. Without the dedication of our employees to deliver the highest quality products and services and our ability to attract and retain the transportation industry's best and brightest, we will be unable to achieve our mission.

**Objectives and Strategies**

**Objective**: Develop a proactive internal and external communication plan that fosters transparency.

**Strategies:**

- Establish guidance for ensuring proactive and transparent communication with the Legislature and citizens on agency program responsibilities, multimodal project selection, and resource allocation decisions at all levels of the organization.
- Ensure the timely flow of information to, from and among all TxDOT offices at all levels.

**Objective:** Develop a comprehensive performance management program to enhance program evaluation, decision making, resource utilization, and product delivery.

**Strategies:**

- Develop performance measures and reporting process for key goals and objectives.
- Create a performance driven and transparent project prioritization and selection process.
- Develop and implement a project selection and delivery process that encourages participation by the full range of transportation, environmental and community stakeholders (public and private) throughout the planning, design and implementation process, from project concept to project delivery.

**Objective:** Develop and nurture partnerships with communities, agencies and other transportation stakeholders.

**Strategies:**

- Collaborate with local and regional communities and stakeholders to plan, design, build, and maintain the state's transportation infrastructure.

**Objective:** Enhance workforce recruitment, retention, and leadership development efforts.

**Strategies:**

- Provide mentoring, formal and informal training, competitive compensation, and opportunities for professional growth to ensure that TxDOT attracts and maintains a highly skilled workforce.
- Actively seek and value the input of employees in shaping the direction of the agency.
- Review and update policies and procedures to ensure corporate knowledge transfer.
- Promote workforce diversity.

**Performance Measures**

The agency-level performance measures selected to support this goal embody the themes of efficient project delivery, funding for multimodal projects, customer satisfaction, employee retention and a commitment to performance reporting. The budgetary measures are formally included as part of the department's biennial budgeting process, while the other measures will also help tell the story of how we are accomplishing our strategic objectives.

- **Budgetary Performance Measures**
  - Percentage of construction projects completed on time.
  - Percentage of construction projects completed on budget.
  - Percentage of design projects delivered on time.
  - Percentage of design projects delivered on budget.
- **Other Performance Measures**
  - Percentage of funds available for projects that include more than one mode of transportation.
  - Number of projects let to construction with more than one mode of transportation.
  - Overall customer satisfaction rate (external customers & partners).
  - Employee retention rate.
  - Annual assessment of agency performance that identifies potential performance improvements.

**What is TxDOT Doing to Improve its Organizational Structure and Effectiveness?**

**Grant Thornton Management and Organizational Review** – In June 2009, per a recommendation from the Texas State Legislature, the Texas Transportation Commission hired and directed an independent audit firm, Grant Thornton, LLP, to conduct a top-down management and organizational review of the department. The final report, delivered to the Commission in May 2010, provides a wide range of recommendations to improve transparency, accountability, efficiency, and communications within the department, focusing primarily on TxDOT leadership, management, and specific business processes. The Commission, along with senior staff, will determine which recommendations to adopt and how best to proceed with implementation.

**TxDOT Tracker** – Our online performance reporting tool known as *TxDOT Tracker* provides an overview of the agency's strategic policies and performance measures. Publicly reporting our performance tells our story so that the citizens of Texas can easily understand what we are doing and how we are doing it. Internally, the TxDOT Tracker supports TxDOT management in making important transportation decisions. The online tool provides a detailed report that describes how we calculate each performance measure, the meaning of the results, and what the Department is doing to improve performance over time. The performance measures included in the TxDOT Tracker will be updated monthly, quarterly, or annually on a measure-by-measure basis as new performance data become available.

**Project Tracker** – *Project Tracker* is TxDOT's project information database, storing data on project costs and schedules. Project Tracker enables citizens, Legislators, and TxDOT leaders alike to monitor milestones and costs of funded transportation projects across the State. Ultimately, Project Tracker will serve as the gateway to all of TxDOT's project-related information.

**Regionalization** – The creation of four Regional Support Centers in Fort Worth, Houston, San Antonio, and Lubbock serves as a recent example of organizational restructuring we have undertaken to increase TxDOT efficiency, improve project development accountability, and enhance transparency. Consolidating redundant support services among the district offices has reduced the cost of operational support. Regionalization also has improved the Department's ability to manage the project development process and deliver more construction projects on time and within budget.

**One DOT Initiative** – Our new "One DOT" initiative describes our agencywide work sharing approach to more effectively and efficiently tackle transportation projects across the State. Our District Engineers and Regional Directors have prepared a "One DOT" field operations staffing plan to reallocate staff resources to operate more efficiently across district lines. The "One DOT" approach to balancing our workforce across the State will continue on an annual basis as new information on revenue forecasts, performance measures, and workload becomes available. *"When we work together, we can accomplish anything."* – David Casteel, Assistant Executive Director of Field and District Operations.

**Social Media** – To supplement traditional communication methods, we use a variety of social media outlets, including Facebook, Twitter, YouTube, and podcasts. These communication methods allow us to provide information about the Department's programs and activities to the public in a quick, accessible, and interactive way.

**Learn More and Follow Our Progress**

Project Tracker – http://www.dot.state.tx.us/project_information/project_tracker.htm.

TxDOT Tracker – http://www.txdot.gov/about_us/sppm/txdot_tracker.htm.

Social Media –

- Twitter – http://www.dot.state.tx.us/news/twitter_feeds.htm.
- Facebook – http://www.facebook.com/TxDOT.
- YouTube – http://www.youtube.com/user/TxDOTpio.
- Podcasts – http://www.txdot.gov/public_involvement/podcasts/statewide.htm.

***Goal 2: Enhance Safety for All Texas Transportation System Users***

TxDOT is committed to making travel as safe as possible for all users of the state's transportation system. While we continue to make progress in making our system safer, as indicated by a 19 percent reduction in the fatality rate over the last five years, safety remains a major concern. In 2008, a reportable crash occurred every 72 seconds on Texas roads, resulting in more than 3,400 fatalities and 242,700 injuries. Nearly one-third of those 3,400 people killed were motorcyclists, pedestrians, or bicyclists, and about 150 fatalities occurred in highway construction and maintenance zones.[5] In addition to the loss of life, motor vehicle crashes cost approximately $20 billion in economic loss each year and cause an estimated 40 to 50 percent of all unpredictable congestion.[6,7]

We work diligently to ensure the state's roadways and bridges are designed and maintained for safety, and continuously look for innovations and policies to enhance their performance. Through a combination of safety initiatives encompassing education, enforcement, and infrastructure investment, TxDOT is committed to reducing fatalities and serious injuries on our transportation system. We also recognize that our safety programs not only save lives, they help to support the state's economy and advance us toward achieving our mission..

In addition to enhancing safety on the state's roadways, TxDOT is responsible for administering federal and state grant programs to improve the safety of the rail, ferry, and general aviation systems in Texas. Our Rail Division improves highway-rail grade crossings by installing and maintaining signals and gates, improving crossing surfaces on state highways and consolidating crossings where possible. State rail safety inspectors also conduct safety inspections of railroad facilities and equipment with federal authorities as part of the rail safety program. The Maintenance Division is responsible for ensuring the safety of the state's ferry operations in Port Aransas and Galveston-Port Bolivar. The Aviation Division administers routine airport maintenance grants and assists general aviation airports meet federal airport pavement management program requirements.

TxDOT also maintains emergency response plans to ensure the safety of Texans in the event of natural or man-made disasters. The threat of emergencies such as hurricanes, flash floods, and terrorist attacks underscores the importance of our highways to the state's emergency evacuation system. When the safety of Texans is threatened, TxDOT and other emergency responders work around the clock to ensure a safe and efficient evacuation.

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[5] Texas Department of Transportation, *Texas Motor Vehicle Traffic Crash Highlights Calendar Year 2008*, June 2009.

[6] Texas Department of Transportation, *Comparison of Motor Vehicle Traffic Deaths, Vehicle Miles, Death Rates, and Economic Loss 2003 – 2008*, June 2009.

[7] American Automobile Association, *Crashes vs. Congestion: What's the Cost to Society?*, March 2008.

**Objectives and Strategies**

**Objective**: Reduce fatalities and serious injuries on the Texas transportation system.

**Strategies:**

- Identify and implement systemwide, corridor, and location-specific best practices for improving safety and develop an approach to guide investment decisions in the Strategic Highway Safety Plan.
- Influence driver behavior by supporting safety outreach programs proportionate to demonstrated safety problems.
- Assess the roadway system to enhance the safety of multimodal interfaces, including interactions between vehicles, pedestrians, bicycles, rail, and other alternative modes.

**Objective:** Partner with public and private entities to plan for, coordinate, and respond to disasters and emergencies.

**Strategies:**

- Partner with public and private entities to establish lines of communication, develop emergency management and response plans for a diverse array of disasters and emergencies, and periodically evaluate the effectiveness of response strategies.
- Provide public information on TxDOT's emergency services, using a variety of traveler information platforms.
- Conduct emergency preparedness exercises to practice response plan execution.

**Objective:** Promote work zone safety to protect roadway workers and the traveling public.

**Strategies:**

- Identify and implement best practices for work zone management including standards for the number, duration, and impact of work zones.
- Provide workforce training, improve contractor enforcement, and increase knowledge and safety awareness of work zones.
- Improve work zone traffic control devices and design practices.
- Improve driver compliance with work zone traffic controls through the use of law enforcement officers trained in enforcement procedures in work zones.

**Objective:** Measure, monitor, and report performance in improving safety.

**Strategies:**

- Establish appropriate performance measures for tracking safety results.

**Performance Measures**

Our agency-level performance measures are not limited to motor vehicles traveling on our state's highway system, but also include safety impacts to pedestrians, bicyclists, railroads, ferries and general aviation airports. We will use the following performance measures to plan safety projects and develop traffic safety initiatives across the state:

- **Budgetary Performance Measures** (formally included in the department's biennial budgeting process)
  - Number of fatalities per 100 million miles traveled.
  - Percent of railroad crossings with signalization.
  - Percent of two-lane highways with improved shoulders.
- **Other Performance Measures** (additional measures to track our progress toward achieving our goal)
  - Injuries and fatalities (number and rate):
    - Drivers/passengers,
    - Heavy trucks,
    - Pedestrians,
    - Bicycles,
    - Motorcycles,
    - Ferries,
    - Railroad, and
    - Rail/vehicle collision.
  - Work zone incident rate
  - Percent of general aviation airports with safety improvements.

### What is TxDOT Doing to Enhance Safety?

**Driver Awareness Campaigns** – TxDOT, working closely with our law enforcement, emergency services, state, and Federal partners, has initiated numerous driver awareness campaigns designed to improve the safety of the traveling public. Since our *Click It or Ticket* campaign began in 2002, increased seatbelt usage among Texans has saved nearly 2,000 lives and prevented an estimated 46,500 serious injuries. Thanks in part to our *Teens in the Driver Seat* program, the first peer-to-peer driving safety program for young drivers in Texas, the rate of fatal teen crashes is declining faster and more steadily in Texas than in any other state. We also are working to educate and raise awareness of safety precautions for workers and motorists in work zones through our *Give us a BRAKE* work zone warning signs, public safety announcements, and work zone awareness handouts. Through these and other community safety awareness campaigns, we strive to educate the public on what they can do to make travel safe for themselves and their families.

**Crash Data** – Crash records are essential for identifying problems, developing and evaluating countermeasures, and assessing the safety and progress of the highway system. Over the past several years, we have made significant improvements to our Crash Records Information System, the State's first comprehensive statewide crash data system. The crash data system allows us to electronically process all crash reports both on and off the state highway system. It also provides engineers, external traffic safety stakeholders, and the public access to the most up-to-date crash data, including crash locations and causes. We continue to advance the performance and quality of the state's traffic records data, allowing us to make more informed decisions on traffic safety measures.

**Texas Safety Bond Program** – In 2003, voters gave the Texas Transportation Commission the authority to issue bonds to pay for state highway improvements through the Proposition 14 bond program. At least 20 percent of the funds generated by the bond program, funded by state gas tax revenue, are designated for safety projects. Since 2004, the Commission has approved more than $1.2 billion in funding for almost 1,000 highway improvement projects to make Texas highways safer for the traveling public. The bond programs give TxDOT the tools to make substantial safety improvements throughout Texas. *"Safety is our number one priority. Each year more than 3,400 people are killed in traffic accidents in Texas. With the money from this program, TxDOT can make safety upgrades that have the potential to prevent thousands of accidents and save lives." – Amadeo Saenz, TxDOT Executive Director.*

### Learn More and Follow Our Progress

TxDOT Motor Vehicle Traffic Crash Data – http://www.txdot.gov/drivers_vehicles/crash_records/form.htm.

Click It or Ticket - http://www.texasclickitorticket.com.

Teens in the Driver Seat – http://t-driver.com.

Project Tracker, Proposition 14 Projects – http://apps.dot.state.tx.us/apps/project_tracker/prop14projects.htm.

TxDOT Tracker – http://www.txdot.gov/about_us/sppm/txdot_tracker.htm.

### *Goal 3: Maintain the Existing Texas Transportation System*

The Texas transportation system is among the state's largest capital investments. TxDOT is currently responsible for maintaining approximately 193,000 lane-miles of highways, maintaining and inspecting more than 33,500 on-system bridges, and inspecting more than 17,000 publicly-owned or off-system bridges (those owned by counties, cities, and some governmental agencies). The department also distributes state and federal grant funds for the operation and maintenance of more than 3,300 public transportation vehicles, approximately 300 reliever and general aviation airports and two ferry operations. We recognize that the need for maintenance and preservation of the existing system will continue to grow as a primary focus for the agency, and we have begun to transition some of our design and construction resources into maintenance functions to better support this emphasis.

As transportation infrastructure ages, routine and preventative maintenance helps to extend the life of system elements and reduce long-term costs. Examples of routine maintenance include pothole patching, crack sealing, and emergency repair of defects caused by crashes, disasters or other unforeseen events. Preventative maintenance includes treatments that preserve or improve a roadway, such as resealing paved roads or regraveling shoulders. Deteriorating roadways and bridges must be replaced or rebuilt at a much higher cost than that of regular maintenance.

Maintenance is only a part of the total costs of deteriorating infrastructure. Preserving the state's transportation assets and increasing their value to the public are critically important for the state's economic health, safety, and environmental stewardship. Poor road surfaces can cause additional wear and tear on vehicles. Similarly, vehicles often slow their speed to maneuver over rough pavement or around potholes, causing delay and contributing to congestion in heavy traffic. Rough roads can also present a safety hazard by decreasing a driver's ability to maneuver and stop. To minimize the costs of managing and maintaining the transportation system, we strive to preserve and restore the condition of the state's transportation infrastructure.

**Objectives and Strategies**

**Objective**: Develop optimal asset management programs to protect existing infrastructure investments.

**Strategies:**

- Identify, define, and implement best practices for routine maintenance to extend the useful life of system elements.
- Identify, define, and implement best practices for preventative maintenance to avoid and minimize the risk of future extensive rehabilitation.
- Identify, define, and implement best practices for substandard infrastructure rehabilitation to maintain the safe and efficient use of the system.
- Establish and implement environmental stewardship standards, based on best practices, within maintenance programs.

**Objective:** Ensure timely and effective emergency maintenance response and damage repair.

**Strategies:**

- Standardize emergency maintenance response strategies, including lines of communication, response protocols and staff responsibilities.
- Timely communicate to the public the nature and location of damaged infrastructure and the estimated time for repair.
- Identify and implement best practices to react more timely to damage from unforeseen events.

**Objective:** Measure, monitor, and report performance in maintaining the existing transportation system.

- Establish appropriate performance measures to track system maintenance results.

**Performance Measures**

Our maintenance performance measures evaluate the condition of the existing transportation system. They also compare actual improvement projects against planned targets to help us better manage maintenance expenditures.

- **Budgetary Performance Measures** (formally included in the department's biennial budgeting process)
  - Percent of bridges rated in good or better condition.
  - Statewide Maintenance Assessment Program (TxMAP) condition score (evaluates the condition of signs, work zones, railroad crossings, and other traffic elements).
  - Statewide Traffic Assessment Program (TxTAP) condition score (evaluates many roadside conditions such as vegetation, litter, trees and brush, and drainage).
- **Other Performance Measures** (additional measures to track our progress toward achieving our goal)
  - Percent of transportation facilities in good or better condition:
    - Pavements;
    - Transit Fleet; and
    - General Aviation Airport Pavements.
  - Percent of targets met in four-year pavement management plans.
  - Texas Condition Assessment Program (TxCAP) condition score (a composite measure of pavement condition and the TxMAP and TxTAP condition scores).
  - Percent of TxDOT ferry system planning improvements completed.

**What is TxDOT Doing to Maintain the Transportation System?**

**Four-Year Maintenance Plans –** Beginning in 2009, each of our districts has prepared a four-year maintenance plan that estimates funding allocations to routine, preventative, and rehabilitative maintenance activities. Based on these anticipated expenditure levels, the districts forecast the resulting condition of their pavements and bridges. By comparing actual expenditures to planned expenditures and actual system conditions to predicted conditions, district engineers are able to show what the public is getting for its money. The four-year maintenance plans also will help to communicate the condition implications of a range of potential funding allocations for maintenance.

**Airport Maintenance Programs –** Our Aviation Division administers Routine Airport Maintenance Program (RAMP) grants to help local governments make basic improvements to their community airports. The Aviation Division also helps general aviation airports develop and maintain pavement management programs to qualify for Federal airport improvement funds. We also prepare an Aviation Capital Improvement Program (CIP) for general aviation airport development in the State.

**Bridge Condition Ratings –** TxDOT evaluates and classifies the condition of the state's bridges using data collected during regularly scheduled bridge safety inspections. The Federal Highway Administration (FHWA) uses the terms "structurally deficient" and "functionally obsolete" to classify bridges for Federal funding eligibility. TxDOT goes beyond the FHWA standards by using an additional designation, "substandard for load only," to identify bridges that are not structurally deficient or functionally obsolete but are load restricted. Load restricted means that a bridge's posted load capacity is less than the maximum load permitted by state law and could potentially impede the passage of school buses and emergency or commercial vehicles. While "substandard for load only" bridges do not qualify for Federal funding, TxDOT developed the additional category to provide a truer picture of the bridges needing improvement.

**Learn More and Follow Our Progress**

Pavement Condition Scores in Texas – http://apps.dot.state.tx.us/apps/rider55/default.aspx.

Maintenance Plans by District – http://apps.dot.state.tx.us/apps/rider55/list.htm.

TxDOT Tracker – http://www.txdot.gov/about_us/sppm/txdot_tracker.htm.

### *Goal 4: Promote Congestion Relief Strategies*

Traffic congestion is not just frustrating, it impacts the economy by wasting time, resources, and productivity. In 2007, congestion on the roadways in our urban areas cost Texans $6.7 billion in wasted time and fuel.[8] Idling cars burn more fuel, increasing emissions and worsening air pollution. Business deliveries and industry shipments stuck in traffic reduce productivity and increase costs. Unreliable shipment delivery times cause problems for producers, suppliers and shippers, while stop-and-go traffic can cause collisions that worsen conditions.

Even in times of a national recession, Texas has been fortunate to experience both economic and population growth. This growth, however, is not without consequences. While our state's largest cities have experienced increasing congestion for more than two decades, congestion is getting worse in our medium and small cities as well. Given the expectation that the Texas population will grow by 48 percent to 35.8 million people over the next 30 years,[9] we must make the most of limited resources by planning projects wisely and targeting the worst traffic flow chokepoints on the state's highway system. Funding constraints and competing safety and system maintenance priorities, however, may limit our ability to effectively address the state's congestion challenge.

Although congestion levels are significantly affected by actions and events beyond the immediate control of TxDOT, we are working to manage and mitigate congestion in several ways. We are committed to partnering with local communities and regional planning authorities in urban areas to manage congestion growth and to ensure the state is supporting regional efforts. We are also working to implement operational and technological solutions to make our existing system work more efficiently and reliably. Most importantly, we recognize that adding roadway capacity cannot be our only solution to the state's growing congestion problem. Instead, our mission includes improving and expanding the state's multimodal infrastructure, including passenger and freight rail, public transportation and intercity bus connectivity to offer Texans more transportation options.

**Objectives and Strategies**

**Objective**: Implement multimodal infrastructure, operational and technological solutions to address congestion and mobility needs.

**Strategies:**

- Work with partners to develop regional congestion management plans.
- Consider operational, technology and policy strategies to address congestion prior to investing in new capacity.
- Work with local and regional partners to improve incident management strategies to combat non-recurring congestion impacts.

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[8] Texas Transportation Institute, *2009 Urban Mobility Report*, July 2009.

[9] Texas State Data Center, *Projections of the Population of Texas and Counties in Texas by Age, Sex and Race/Ethnicity for 2000-2040*, Scenario 0.5, February 2009.

**Objective:** Focus congestion relief efforts on the most severely congested elements of the state transportation system.

**Strategies:**

- Develop and implement a process to prioritize congestion relief projects, taking into consideration regional differences as well as mobility, economic, environmental, and social costs, benefits and impacts.

**Objective:** Measure, monitor, and report performance in providing congestion relief.

**Strategies:**

- Establish appropriate performance measures to track congestion relief results.

**Performance Measures**

These performance measures will allow us to assess congestion levels in the state's urban areas and track changes over time. Also, measuring the effectiveness of multimodal congestion management projects and reporting those impacts to the public provide the opportunity to refine our congestion management strategies and build additional support for multimodal projects.

- **Budgetary Performance Measures** (formally included in the department's biennial budgeting process)
  - Urban congestion index.
  - Statewide congestion index.
- **Other Performance Measures** (additional measures to track our progress toward achieving our goal)
  - Large urban areas congestion (regions with populations of 500,000 or more)
    - Travel delay;
    - Travel delay per commuter; and
    - Congestion costs.
  - Large urban areas congestion (regions with populations less than 500,000)
    - Travel delay;
    - Travel delay per commuter; and
    - Congestion costs.
  - Progress on top 100 most congested roadway segments in Texas.
  - Effectiveness of multimodal congestion management projects and strategies in large urban areas.

**What is TxDOT Doing to Promote Congestion Relief?**

**100 Most Congested Texas Road Segments –** At the request of the Texas Legislature, TxDOT and Texas Transportation Institute worked together to produce the list of the top 100 most congested roadway segments in Texas, ranked by total hours of delay. All of these roadway segments are located in the five largest urban areas in the State. An interactive online tool maps the location of each congested segment and estimates the economic cost of delays. The tool also provides summary information on state and regional plans to address the congestion.

**The Role of Texas Rail –** *"Rail is going to be an important part of the solution. For many, many years, really since the creation of the Texas Department of Transportation, roads were seen as the only solution and we're learning very quickly that...we need to be thinking more of a multimodal approach. We're behind in Texas, relative to other states that have more of a robust rail infrastructure. But we're aggressively pursuing it where it makes sense, where it's feasible, where folks want it and where it makes good economic sense."* – Texas Transportation Committee Chair Deirdre Delisi.

**Intelligent Transportation Systems –** In partnership with regional planning and operations agencies, we use Intelligent Transportation Systems (ITS) to monitor and manage traffic flows on major freeways in real time. These include corridor management systems, emergency response systems, and electronic freight management. When problems are detected, operators may use remote controls to redirect traffic, inform motorists (through the use of dynamic message signs) and notify emergency response services as appropriate. Our ITS services are designed to maximize the safety and mobility of the traveling public.

**Learn More and Follow Our Progress**

100 Most Congested Texas Road Segments in Texas – http://apps.dot.state.tx.us/apps/rider56/list.htm.

Texas Transportation Institute's Annual Urban Mobility Report – http://mobility.tamu.edu/ums/.

### *Goal 5: Enhance System Connectivity*

Covering an area of 268,000 square miles – about seven percent of the nation's total area – Texas is the largest state in the continental United States. The state's population of 24 million people and growing depends on the state's transportation infrastructure to keep our communities connected and our economy growing. Texas' highways, ports and waterways, rail lines, bus services, and airports provide critical intercity connections and access to markets and international gateways. Our goal of enhancing system connectivity strives to strengthen the economic growth and vitality of Texas, sustain the human environment, and protect the state's environmental assets.

The connectivity needs of rural areas differ from those in urban areas. Access to four-lane divided highways, airports, intercity passenger rail, and bus service provides mobility for rural populations. Without this connectivity, rural areas face longer travel times, higher fuel costs, and increased cost of goods. To help manage congestion in urban areas, system connectivity enhancements may include reliever routes, multimodal intercity connections, and system expansion. To account for the differences between urban and rural areas, we recognize that specific projects must emerge from working with local and regional partners. A "one size fits all" approach will not meet the connectivity needs of our great state.

**Objectives and Strategies**

**Objective**: Ensure Texas industries can efficiently access statewide, regional, national, and international markets and gateways.

**Strategies:**

- Identify the existing and emerging industries, gateways, and facilities that contribute most to current and future economic vitality.
- Develop a process to prioritize connectivity improvements for Texas industries and gateways.

**Objective:** Provide coordinated, multimodal transportation facilities and networks to connect all statewide population, economic, recreational, and cultural centers.

**Strategies:**

- Work with local and regional stakeholders to identify the population, economic, recreational, and cultural centers that contribute most to statewide and regional quality of life.
- Develop a process to prioritize regional and statewide connectivity improvements, taking into consideration mobility, economic, environmental, and social costs, benefits, and impacts.

**Objective:** Measure, monitor, and report performance in enhancing system connectivity.

**Strategies:**

- Establish appropriate performance measures to track the results of enhancing system connectivity.

**Performance Measures**

The following connectivity performance measures consider the extent to which the Texas transportation system serves the needs of Texas businesses and residents. The measures seek to define customer satisfaction through periodic surveys of the business community and quantify the percent of the Texas population served by various modes of transportation.

- **Budgetary Performance Measures** (formally included in the department's biennial budgeting process)
  - Percent change in the number of public transportation trips.
- **Other Performance Measures** (additional measures to track our progress toward achieving our goal)
  - Satisfaction rates on industry access to international markets and gateways via the Texas transportation system.
  - Percent of the Texas population within a 30-minute drive of an airport capable of supporting business jet aircraft.
  - Percent of Texas communities of 50,000 population or more with:
    - Intercity bus service;
    - Small urban local bus service;
    - Elderly and disabled bus service; and/or
    - Passenger rail service.
  - Percent of the Texas population with access to TxDOT-sponsored rural public transportation services.
  - Percent of high volume (average daily traffic volumes greater than 5,000 vehicles) rural roads with Super 2 or 4-lane divided facilities.[10]

[10] A highway designated as a "Super 2" has two lanes (one lane in each direction) with hard shoulders and occasional passing lanes. Passing lanes allow the passing of slower vehicles, improving the safety and efficiency of the road segment.

**What is TxDOT Doing to Enhance System Connectivity?**

**Texas Rail System Plan –** An update of the Texas Rail System Plan (TRSP) currently is underway with a focus on both freight and passenger rail. It will identify specific freight rail projects to improve system capacity, bottlenecks, and grade crossings. It will also begin the process of identifying priority corridors for expanding the intercity passenger rail system, including preliminary ridership and revenue analyses. Overall, the TRSP is aimed at connecting the state's largest economic and population centers to improve freight and passenger mobility and provide Texans with more modal choices.

**Texas Airport System Plan –** The Aviation Division documents its ongoing aviation planning efforts through periodic updates to the Texas Airport System Plan (TASP). The primary goals of the TASP are to develop a statewide airport system to provide adequate access by air to the population and economic activity centers of the state and to provide timely development and maintenance of the airport system. The plan identifies the airports that are considered vital to meeting the goal of providing adequate statewide air transportation access.

**Rural Public Transportation Grants –** The Public Transportation Division administers several Federal grant programs for public transportation, including the Rural Public Transportation grants program. This program helps people in rural areas access health care, shopping, education, employment, and recreation. Currently, there are 39 operators providing public transportation in rural areas and small cities with populations under 50,000.

**Citizens' Advisory Committees –** The I-35 and I-69 Corridor Advisory committees have been established to enhance participation and input between TxDOT and affected communities, governmental entities, and interested parties. The committees are charged with studying the current and future needs of the two corridors and making recommendations on corridor planning, development and public involvement. The citizen advisory committees will support TxDOT in developing regional transportation blueprints to promote corridor-wide mobility while ensuring that communities are fully engaged in the planning and decision-making process.

**Learn More and Follow Our Progress**

2010 Texas Airport System Plan Update – http://www.txdot.gov/business/aviation/system_plan.htm.

Citizens' Advisory Committees – http://www.txdot.gov/public_involvement/committees/.

***Goal 6: Facilitate the development and exchange of comprehensive multimodal funding strategies with transportation program and project partners.***

One of the biggest challenges facing the department is acquiring the resources needed to make real progress on the goals to fulfill our mission. While the agency continues to enhance its management and accountability processes to improve decision making, resource allocation, and project delivery, these efforts cannot make up for insufficient funding. State and federal motor fuel taxes have supported the costs of building and maintaining the state's transportation system for many years. However, Texas - like most states - is discovering that this once proven method of financing cannot keep pace with demand. With the increasing use of hybrid and fuel efficient vehicles, aging transportation infrastructure, rising construction costs, and inflation, the fuel tax revenues have declined and are quickly becoming inadequate to meet future highway needs. In the absence of significant fuel tax increases in the near future, this gap is likely to grow.

To make up the shortfall, TxDOT is committed to working with the Legislature and transportation program and project partners to seek innovative solutions, establish partnerships, and empower local communities to address their transportation challenges. Our role is to provide the state Legislature and voting public with the information they need to make important decisions about transportation funding strategies. In order to make the case for more resources, however, we must reestablish trust and credibility with the Legislature, the citizens of Texas and other stakeholders. We intend to restore this trust by providing unbiased information and expertise on creative financing mechanisms to pay for state transportation infrastructure. Potential alternative financing options may include leveraged funding, cost-sharing, or other partnering agreements. Clearly communicating the state's transportation system needs, explaining the consequences of financing that falls short, and providing objective information on potential solutions will help to reaffirm our position as a trusted and credible steward of the state's transportation resources.

**Objectives and Strategies**

**Objective:** Assess and document transportation system needs and available revenues in periodic updates of the long-range Texas Transportation Plan.

**Strategies:**

- Provide regular updates of needs, revenue estimates, and forecasts and communicate with internal and external stakeholders.

**Objective**: Explore all available multimodal financing options while not recommending any particular strategy.

**Strategies:**

- Work with stakeholders to develop likely alternative funding scenarios and describe potential mobility, safety, system condition, economic development, and environmental impacts.

**Objective:** Regularly communicate with the Texas public about the program results that come from maximizing existing funding levels as well as the consequences of alternative future funding levels.

**Strategies:**

- Summarize and communicate information about the full set of potential funding and financing options available to Texas and best practices from other states.

**Performance Measures**

The following performance measures will hold us accountable for reporting our progress:

- **Budgetary Performance Measures** (formally included in the department's biennial budgeting process)
  - None.
- **Other Performance Measures** (additional measures to track our progress toward achieving our goal)
  - Percentage of projects and programs using alternative financing.
  - Timeliness and frequency of reporting transportation finance information.

**What is TxDOT Doing to Develop Multimodal Funding Strategies?**

**Texas Transportation Plan** –The next update of the Texas Transportation Plan, estimated for completion by the end of 2010, will include an analysis of future funding using the TRENDS (Transportation Revenue Estimator and Needs Determination System) model. This model is designed to provide transportation planners, policy makers and the public with a tool to forecast TxDOT revenues and expenses from 2010 through 2035.

**Proposition 12** – In 2007, Texas voters authorized the Legislature to authorize up to $5 billion in general obligation bonds – bonds supported using general revenue, rather the traditional fuel tax revenue – to be spent on transportation projects. Since that time, the Texas Legislature has authorized TxDOT to identify up to $2 billion of non-tolled highway projects for construction. While the Proposition 12 general obligation bonds will not provide a long-term source of transportation funding for the state, the bonds will help to supplement the state's fuel tax revenues to fund rehabilitation, safety, corridor, and mobility projects throughout the state in the short term.

**Highway User Fee Exploratory Committee** – The Texas Transportation Committee has convened a Highway User Fee Exploratory Committee charged with investigating the long-term viability of vehicle mileage fees as a potential alternative to replacing the fuel tax for funding highways. The mileage fees would be an electronically collected charge on in-state mileage, imposed on the distance a vehicle travels on the highway system. The Committee is conducting an independent assessment of the merits, obstacles and public policy concerns related to transitioning to a vehicle-based fee system in Texas and will report its findings to the Commission. While the study is not an indicator that the state will enact a mileage-based system, it will provide information on one alternative financing option for the Commission and the Legislature to consider.

**Learn More and Follow Our Progress**

Proposition 12 – http://www.dot.state.tx.us/project_information/prop12.htm.

## Traveling in a New Direction

The strength of the Texas economy is dependent upon our transportation system. By maintaining and improving the state's transportation system, we are securing our status as one of the world's best places to do business. As we implement our strategy, however, thoughtful consideration of environmental stewardship will be important to preserve and protect our state for future generations.

This Strategic Plan provides TxDOT with a renewed focus by establishing the primary strategic initiatives that the department will undertake over the next five years to achieve the agency mission. Our ambitious goals reflect a move toward becoming a more multimodal agency to serve the mobility needs of our diverse customers. By becoming a more performance-driven agency, we will be able to track and evaluate if and how our activities are achieving our strategic goals, objectives, and ultimately our mission.

Our work, however, is far from done. Implementation of the Strategic Plan requires that our mission, vision, values and goals find a home in everything that we do. Our strategic goals will provide the foundation for our new Statewide Long-Range Transportation Plan 2035 and on-going updates to the state's system planning efforts for roadways, rail, aviation, public transportation, ports and waterways, pedestrians and bicycles. We will also develop action plans to translate the Strategic Plan's goals and objectives into small, everyday actions to show how each employee has a real impact on the agency's performance. Overall, we are committed to maintaining a collaborative, transparent and accountable agency that instills public trust and confidence, while building and maintaining a safe transportation system that will make all Texans proud.

# Agency Goals

- Goal 1 - Develop an organizational structure and strategies designed to address the future multimodal transportation needs of all Texans.
- Goal 2 - Enhance safety for all Texas transportation system users.
- Goal 3 - Maintain the existing Texas transportation system.
- Goal 4 - Promote congestion relief strategies.
- Goal 5 - Enhance system connectivity.
- Goal 6 - Facilitate the development and exchange of comprehensive multimodal transportation funding strategies with transportation program and project partners.

# Objectives and Outcome Measures

| Goal | | Objective | | Outcome | |
|---|---|---|---|---|---|
| 1 | Provide Transportation Planning | 1 | Effective Planning & Design | 1 | Percent of Design Projects Delivered On Time |
| | | | | 2 | Percent of Design Projects Delivered On Budget |
| 2 | Implement Transportation Improvements | 1 | Construction and Reconstruction | 1 | Percent of Construction Projects Completed On Budget |
| | | | | 2 | Percent of Two-Lane Highways with Improved Shoulders |
| | | | | 3 | Percent of Railroad Crossings with Signalization |
| | | | | 4 | Percent of Construction Projects Completed On Time |
| | | | | 5 | Percent of General Aviation Airport Pavement in Good or Better Condition |
| 3 | Preserve the Transportation System | 1 | System Maintenance | 1 | Percent of Bridges Rated in Good Condition or Higher |
| | | | | 2 | Statewide Maintenance Assessment Program Condition Score |
| | | | | 3 | Statewide Traffic Assessment Program Condition Score |
| 4 | Optimize Services and Systems | 1 | Support Enhanced Public Transportation | 1 | Percent Change in the Number of Public Transportation Trips |
| | | 2 | Enhance Public Safety and Security | 1 | Number of Fatalities per 100 Million Miles Traveled |

# Strategies and Output, Efficiency, and Explanatory Measures

| Goal | | Objective | | Strategy | | Measure | | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | Provide Transportation Planning | 1 | Effective Planning & Design | 1 | Plan/Design/Manage | 1 | Number of Construction Projects Preliminary Engineering Plans Completed | OP |
| | | | | | | 2 | Dollar Volume of Construction Contracts Awarded in Fiscal Year | OP |
| | | | | | | 3 | Number of Projects Awarded | OP |
| | | | | | | 4 | Dollar Volume of Pass-through Financing Agreements Entered into During Each Fiscal Year | OP |
| | | | | | | 5 | Percent of MPO Funds Allocated to Improve the Top 100 Most Congested Roadway Segments | OP |
| | | | | | | 6 | Percent of Non-MPO Funds Allocated to Improve the Top 100 Most Congested Roadway Segments | OP |
| | | | | | | 7 | Dollar Volume of Construction Contracts Let Improving the Top 100 Most Congested Roadway Segments in a Fiscal Year | OP |
| | | | | | | 8 | Large Urban Congestion Index | EX |
| | | | | | | 9 | Small Urban Congestion Index | EX |
| 2 | Implement Transportation Improvements | 1 | Construction and Reconstruction | 4 | Aviation Services | 1 | Number of Airports Selected for Financial Assistance | OP |
| 3 | Preserve the Transportation System | 1 | System Maintenance | 2 | New Maintenance Contracts | 1 | Number of Lane Miles Contracted for Resurfacing | OP |
| | | | | 4 | Routine Maintenance | 1 | Number of Oversize/Overweight Permits Issued | OP |
| | | | | | | 2 | Average Number of General Single Trip Routed (STR) Permits Issued by a Permit Specialist Per Work Hour | EF |
| | | | | | | 3 | Number of Highway Lane Miles Resurfaced by State Forces | OP |
| 5 | Enhance Rail Transportation | 1 | Enhance Rail Transportation | 6 | Rail Safety | 1 | Number of Federal Railroad Administration (FRA) Units Inspected | OP |

# Technology Resource Planning

## Technology Assessment Summary

- Provide a brief description of the planned technology solutions that respond to the key factors that will affect the agency. Consider how those solutions align with the statewide technology goals reflected in the State Strategic Plan for Information Resources *(Advancing Texas Technology)*.

In order for TxDOT to complete projects and continue to take advantage of changing technological advances, the following critical success factors must be an integral part of all activities of the organization; maintaining an IT organization that manages and readily adapts to continuous technological innovations and prevailing business trends; retaining qualified IT professionals; improving the procurement and project planning processes; and, creating an enterprise computing environment that promotes cross platform migration, uniform development, and a comprehensive technology infrastructure.

Critical IT success factors for the future involve ongoing support for doing business on the Web while focusing on transparency and accessibility; implementation of new technologies and procedures to effectively integrate geographic information systems (GIS) with business processes and applications; continued investigation into integrating GIS and global positioning data (GPS) with survey and engineering design; ongoing implementation and support of electronic document management, imaging, and electronic forms technologies; and, continued development of enterprise systems management.

- Provide agency descriptions related to each statewide technology goal listed below. The criteria for these descriptions appear after each goal and are labeled 1.a, 1.b, 2.a, and so forth.

**Statewide Technology Goal 1**

Strengthen and Expand the Use of Enterprise Services and Infrastructure

1.1 Enhance Capabilities of the Shared Infrastructure
- Data Center Infrastructure
- Communications Technology Infrastructure
- Statewide Portal Infrastructure

1.2 Leverage Shared Applications
- Enterprise Resource Planning (ERP)
- Email Messaging

1.3 Leverage the State's Purchasing Power
- Product and Services Portfolio Expansion

1.a Describe agency plans to strengthen and/or expand its capabilities through the initiatives described in Statewide Technology Goal 1.

Internally, the development and continuous improvement of the TxDOT enterprise technology architectures, standards, and infrastructure are critical and essential elements of IT business decisions, operations, and strategic IT objectives. These include processes that provide customers with secure and efficient application and data access across all technical platforms and integrate IT planning and budgeting. These processes reduce costs, improve efficiency, increase user satisfaction, reduce development and implementation timelines, and improve the quality, value, delivery, and accountability of IT services at TxDOT.

Another critical factor is data sharing and partnering. TxDOT develops partnerships and processes between IT providers, and TxDOT business areas with collaborative and innovative projects. TxDOT also collaborates with city, county, other state agencies, and the federal government. This partnering ensures that the information provided is secure, accurate, relevant, trustworthy, and easily accessible for integrated business solutions.

1.b Describe agency plans to strengthen and/or expand its capabilities through other initiatives that leverage enterprise or multi-agency services and infrastructure, including managed services, shared applications, internal consolidation efforts, and procurement strategies.

TxDOT's Technology Services Division (TSD) is the current information technology service provider for the Texas Department of Motor Vehicles (TxDMV). Protecting the data and investment in TxDOT's/TxDMV's Information Technology (IT) systems and applications has become one of the most critical issues for IT staff. During this interim period, TxDOT IT staff will also be assisting TxDMV with support for its IT systems, applications, and operations. TxDOT's Information Resources Manager (IRM) also serves as the agency's Chief Information Officer (CIO), and Information Security Officer (ISO). TxDOT's IRM also fills these positions for TxDMV on an interim basis.

TxDOT collaborates with the Texas Department of Insurance (TDI) and Texas Department of Public Safety (TxDPS) on the Financial Responsibility Verification Project, also known as TexasSure. TxDOT also collaborates with TxDPS on the Crash Records Information System (CRIS). TxDOT participates in the Data Center Services Project and supplies map data to the TNRIS GIS data clearing house. TxDOT collaborates with city, county, state, and federal governments on many projects dealing with Intelligent Transportation Systems (ITS) and Global Positioning Systems (GPS). Collaboration is also ongoing with other state agencies, universities, and research laboratories such as the University of Texas, Texas Tech, Texas A&M, and the Southwest Research Institute. TxDOT also participated with DIR on the eGrants project. TxDOT also participates in the National 511 Coalition Project.

TxDOT is participating with the Texas Comptroller of Public Accounts (CPA) in the

implementation and deployment of the statewide ERP system, ProjectONE. Upon implementation, this system will provide a "single set of books" for financial and human resources-related activities.

**Statewide Technology Goal 2**
Secure and Safeguard Technology Assets and Information
2.1 Align the State's Approach to Enterprise Security with other State and National Strategies
- State Enterprise Security Plan
- Vulnerability to Cyber Attacks
- Response and Recovery Capabilities

2.2 Integrate Identity Management, Credentialing, and Access Privileges
- Identity Management Services

2.a Provide an update on the agency's progress in implementing strategies to align with the *State Enterprise Security Plan.*

TxDOT's security program includes a comprehensive security policy for the agency located in the department's Information Security Manual. The manual is updated annually to ensure it is current and aligned with state laws and regulations. TxDOT also has training initiatives for employees concerning security issues. TxDOT requires that all new employees receive New Employee Orientation (NEO) training which includes a module on TxDOT's security policies and security awareness.

TxDOT works closely with the Data Center Services (DCS) provider to ensure all TxDOT systems meet the current ISeC (Information Security Policies) mandated by the DCS contract. TxDOT is also a member of the DIR Computer Security Incident Response Team (CSIRT).

TxDOT performs an annual penetration test to ensure network and public facing applications are properly protected. TxDOT also uses intrusion prevention systems to monitor and filter inbound and outbound Internet traffic. The agency has implemented a vulnerability management system to ensure workstations and other LAN attached IT resources are properly patched.
TxDOT uses an enterprise class anti-virus and anti-malware solution on all workstations and servers to reduce the risk of virus or malware infection. Agency staff currently are evaluating enhanced security controls for mobile devices (such as laptop computers) to build upon the defense in depth approach and provide additional protection for data stored on these mobile devices.

2.b Describe the agency's identity management strategies in place or planned.

TxDOT uses multiple identify management tools to protect TxDOT IT resources. For all environments except the mainframe, TxDOT has implemented the standard industry protocol LDAP (Lightweight Directory Access Protocol) to provide identity management. For the mainframe environment, TxDOT utilizes the TopSecret product for identity management. TxDOT has on ongoing project to add legacy applications into the identity management system.

TxDOT maintains detailed access criteria documentation for all production applications which map job functions to application and data access level. These documents are used by TxDOT security administrators to provide guidance in defining a user's access to applications and data.

TxDOT has implemented a comprehensive compliance monitoring system that continuously monitors both the LDAP and TopSecret user data to ensure identity data is accurate and up-to-date. This includes validating that terminated employees are removed and leveraging the access criteria data to ensure that an employee's job functions properly align with their data access.

**Statewide Technology Goal 3**
Serve Citizens Anytime, Anywhere
3.1 Expand and Enhance Access to Agency Services
- Multi-Channel Access
- Rural Broadband Expansion

3.2 Facilitate Open and Transparent Government
- Best Practices for Information Assets

3.a Describe the agency's plans to expand or enhance access to its services and promote citizen engagement through online services and emerging technologies.

TxDOT uses social media platforms such as FaceBook, Twitter, and YouTube to help disseminate important transportation-related information to the public, to supplement traditional communication methods and to facilitate an immediate response and information-sharing. Using these sites lets TxDOT establish a dialogue and engage the public on transportation issues. It provides TxDOT with another avenue to share what TxDOT does with the public. It allows the media and public to easily access additional information, such as photos, videos or podcasts. Social media provides interaction with the agency, and a way for people to be heard and be a part of the decision-making process. Social media allows TxDOT to highlight the department's programs and activities in a quick, accessible, personable, and transparent manner. It allows TxDOT to actively seek out customer service opportunities through monitoring its social media channels. It provides timely and accurate information about department programs and activities.

3.b Describe initiatives planned or in process that will facilitate access to agency information and public data.

Sending out tweets on critical weather updates on flash flooding and safety messages is an excellent way to quickly assist the driving public and possibly save lives. TxDOT is also showing spots on YouTube concerning Work Zone Safety, Click It or Ticket, and other safety relates campaigns.
TxDOT social media sites: www.twitter.com/txdot, www.youtube.com/txdotpio.

**Statewide Technology Goal 4**
Pursue Excellence and Foster Innovation across the Enterprise
4.1 Link Technology Solutions to Workplace Innovations
- Workplace Productivity and Collaboration

4.2 Pursue Leading-Edge Strategies for Application Deployment
- Cloud Computing
- Specifications, Toolkits, and the Application Marketplace
- Legacy Systems Modernization

4.3 Optimize Information Asset Management
- Best Practices for Managing Digital Information

4.4 Promote the Use and Sharing of Information
- Health Information Exchange
- Statewide Communications Interoperability
- Justice Information System Integration
- Enterprise Geospatial Services

4.a Describe agency plans to implement or enhance workplace productivity and to leverage collaboration tools.

TxDOT is in the process of implementing a new software configuration management tool, MKS Integrity ALM software. This new tool allows many developers to work collaboratively on a development effort. Program code is managed centrally while allowing many developers to check out code for modification. Checking back in of code is managed and merged so that no effort is lost.

TxDOT's standard collaboration tool is Microsoft's SharePoint. SharePoint is used internally to collaborate on project activity (construction, maintenance, and information technology) and to provide technical reference resources for IT troubleshooting. SharePoint will be used to collaborate with external educational and private sector partners for research activities and project communication.

WebEx and other virtual meeting tools are used to collaborate with internal and external entities.

4.b Describe agency strategies to develop and deploy applications more efficiently (i.e., through Cloud Computing, Software as a Service, Application Toolkits, Legacy System Modernization).

TxDOT has many large and core legacy systems that can not be replaced quickly. To make the core agency data that resides in these systems more accessible, the legacy data has been replicated into relational databases either on a SQL server platform or on an Oracle platform. The replicated data is available to new systems and for ad hoc reporting. Bing Maps, software as a service application, is used by various mapping applications within TxDOT. TxDMV uses a vehicle pricing service from an external vendor.

4.c Describe agency strategies to enhance information asset management practices.

Technology assets are tracked and monitored using a variety of automated and manual processes. TxDOT uses a mainframe-based property inventory system for financial reporting of capital assets and for reporting to the Comptroller SPA system. Desktop management products are used for a portion of asset management for desktop computers. Software licenses are controlled by the offices of primary responsibility through manual tracking methods. The usage and status of service contracts are monitored through an Access database program. NetTrack is an in-house developed automated system used for discovery, tracking, and managing network hardware assets. The Automated Purchasing System is used to track software licenses purchased by TxDOT. In-scope assets are tracked via the DCS ticket tracking software Remedy.

Applications and their associated data are tracked in TxDOT's Data and Application Inventory System (DAIS). A description of the application, details about the application, status, and metadata about the associated database or data store are maintained. TxDOT System Interface Diagrams (TSIDs) are also maintained in DAIS. TSIDs provide a graphical depiction of the interfaces of TxDOT applications with other TxDOT applications as well as external applications and reporting. DAIS provides planners, project teams, programmers, and auditors with a tool to decrease their workload while increasing their effectiveness.

TxDOT is currently evaluating a more robust automated desktop management solution to improve asset tracking and software license management.

4.d Describe agency practices or plans to enhance the use and sharing of information with agency business partners.

TxDOT uses existing web sites such as Project Tracker, Electronic Bidding System, Plans Online, and other collaboration tools to facilitate communication with partners such as research institutions and private sector highway construction and maintenance vendors.

# Technology Initiative Alignment

| TECHNOLOGY ALIGNMENT FOR TxDOT | | | | | |
|---|---|---|---|---|---|
| **TECHNOLOGY INITIATIVE** | **RELATED AGENCY OBJECTIVES/ GOALS** | **RELATED SSP STRATEGY(IES)** | **STATUS CURRENT OR PLANNED** | **ANTICIPATED BENEFIT(S)** | **INNOVATION, BEST PRACTICE, BENCHMARKING** |
| Support TxDOT's engineering and business needs with the highest and most secure level of information technology through the implementation and application of a well developed technology infrastructure. | All Goals | 2.1, 2.2, 3.1, 3.2, 4.1, 4.2, 4.3, 4.4 | Current | The timely and relevant support of the statewide transportation plan and implementation of appropriate technology will result in improved transparency and accountability. | Best Practice: TxDOT continues to provide one of the best transportation systems in the country. Web access for customers. |
| Support technology initiatives through partnering and participating in managed services. | All Goals | 1.1, 1.2, 1.3, 2.1, 2.2, 3.1, 3.2, 4.1, 4.2, 4.3, 4.4 | Current | Participation in TEX-AN communications services, Texas Online; participating with the Texas Comptroller of Public Accounts in the implementation and deployment of the Statewide ERP System, ProjectONE will result in lower costs, improved services, better technology, and standardization. | |
| Continue to partner with other state and federal agencies to share technology, information, resources, and data. | All Goals | 1.1, 1.2, 1.3, 3.1, 3.2 | Current | Continued collaboration with other state and federal agencies will result in effective and efficient use of state resources and improved technology, safety, and accountability. | |
| TxDOT is the current IT service provider for the Texas Department of Motor Vehicles (TxDMV). TxDOT will support all IT projects including Vision 21 to replace or update the existing Registration & Title System (RTS). | All Goals | 1.1, 1.2, 1.3, 2.1, 2.2, 3.1, 3.2, 4.2, 4.3, 4.4 | Current | Provide the motoring public with improved access to vehicle information; improve responsiveness to law enforcement requests; increase the efficiency of revenue collection; enhance system security and data integrity; and improve law enforcement safety. | Best Practice: Web access for customers. |

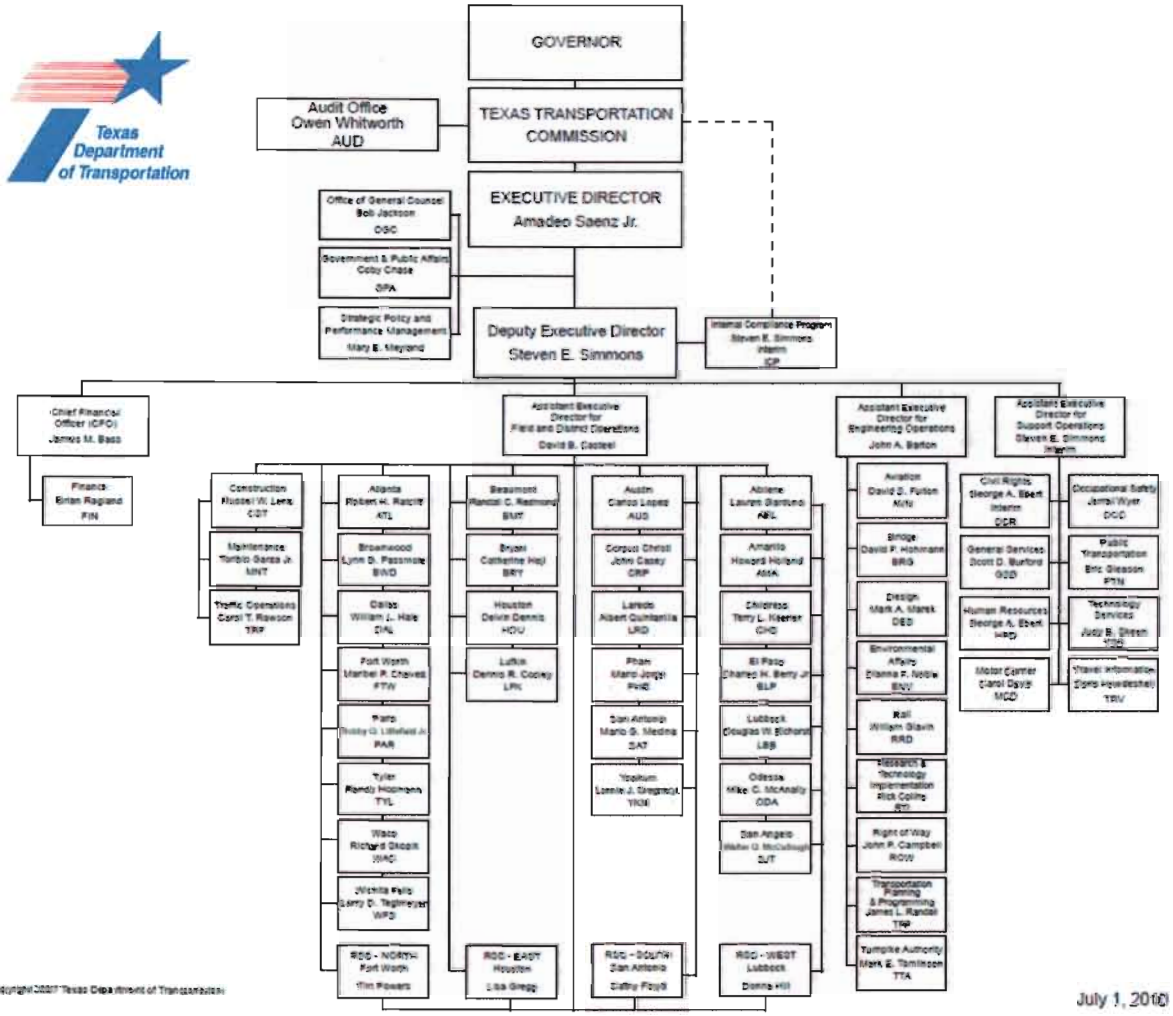
| | | | | | |
|---|---|---|---|---|---|
| Upgrade the railroad crossing inventory database to interface with vehicle crash records information and GIS applications. (TxRAIL II) | All Goals | 1.1, 1.2, 2.1, 3.1, 3.2, 4.1, 4.3, 4.4 | Current | Enhanced accuracy and timeliness of railroad crossing information to federal, state, local entities, and railroad companies for improved safety at highway-rail crossings. | Best Practice: Web access for customers; and GIS integration.<br><br>Innovation: Enable direct updates to the Federal Railroad Administration and integrate GIS into the existing system. |
| Provide automated routing for the movement of oversize and overweight loads on the state's highways. (TxPROS) | All Goals | 1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 4.1, 4.3, 4.4 | Current | Improve highway safety due to enhanced accuracy of mapping/routing; reduce wear and damage on state highways because of reduced errors in routing; improve service to motor carrier industry; and improve ability to meet customer demands for permits. | Best Practice: Web access for customers, and GIS integration. |
| Enhance the software application designed to automate and augment traffic monitoring processes under federal guidelines. (STARS II) | All Goals | 1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 4.3, 4.4 | Current | Increased efficiency through elimination of manual processes; clients will gain online access to traffic data, and the ability to produce adhoc reports; and the reliability of data will be increased. | Best Practice: Production of automated reports for FHWA; Web based application; GIS spatial data analysis. |
| Modernize and enhance the Maintenance Management System (MMS) application. (Compass) | All Goals | 1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 4.2, 4.3, 4.4 | Current | Eliminate duplicate information and provide a more cost effective system for maintenance managers to use statewide. | Best Practice: Web access for customers. |

# Appendix A: Agency Planning Process

Over the past year, the SPPM team, assisted by Cambridge Systematics and the Texas Transportation Institute, has conducted the following strategic planning activities:

- Received direction from the commission related to the draft mission, vision, values, and goal statements via two strategic planning workshops in August and September of 2009.
- Facilitated five regional strategic planning workshops to solicit input from department district, division, and office representatives, as well as selected representatives of transit providers and MPOs.
- Held a series of public focus groups in the fall of 2009 and spring of 2010.
- Conducted a statewide electronic poll on Texas transportation, the department, and the state's transportation priorities and needs.
- Conducted two additional strategic planning workshops with a core employee group to develop the draft objectives and strategies for the plan.
- Facilitated an online public and employee survey in October and November of 2009 to solicit comments and opinion on the draft strategic direction statements (mission, vision, values, and goals).
- Received direction from the commission related to the draft goals, objectives, performance measures, and strategies in the December 2009 discussion workshop.
- Posted the draft 2011-2015 TxDOT Strategic Plan on the agency website to solicit public comments.

# Appendix B: Current Organizational Chart



# Appendix C: Five-Year Projections for Outcomes

**Projected Outcomes**
**Fiscal Years 2011-2015**

| Outcome | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|
| Percent of Design Projects Delivered On Time | 90.0 | 91.0 | 92.0 | 93.0 | 94.0 |
| Percent of Design Projects Delivered On Budget | 35.0 | 36.0 | 37.0 | 38.0 | 39.0 |
| Percent of Construction Projects Completed On Budget | 92.3 | 91.0 | 95.0 | 97.0 | 100.0 |
| Percent of Two-Lane Highways with Improved Shoulders | 57.7 | 58.2 | 58.7 | 59.2 | 59.7 |
| Percent of Railroad Crossings with Signalization | 58.2 | 60.0 | 60.8 | 61.6 | 62.4 |
| Percent of Construction Projects Completed On Time | 81.0 | 60.0 | 64.0 | 68.0 | 72.0 |
| Percent of General Aviation Airport Pavement in Good or Better Condition | 75.0 | 75.5 | 76.0 | 77.0 | 78.0 |
| Percent of Bridges Rated in Good Condition or Higher | 81.1 | 81.8 | 82.5 | 82.3 | 82.0 |
| Statewide Maintenance Assessment Program Condition Score | 78.0 | 77.0 | 76.0 | 75.0 | 74.0 |
| Statewide Traffic Assessment Condition Score | 86.7 | 86.8 | 86.9 | 87.0 | 87.1 |
| Percent Change in the Number of Public Transportation Trips | 2.0 | 1.5 | 1.0 | 1.0 | 1.0 |
| Number of Fatalities per 100 Million Miles Traveled | 1.33 | 1.30 | 1.28 | 1.25 | 1.23 |

# Appendix D: List of Measure Definitions

The department submits performance measure definitions separately to the Legislative Budget Board and the Governor's Office of Budget, Planning, and Policy.

# Appendix E: Workforce Plan

### Anticipated Changes Over The Next Five Years

Historically, the Texas transportation system has served the state well. However in recent decades it has been challenging to keep pace with the state's population growth, increased road usage, new trade agreements, changing trends in business practices, and the need for additional funding and revenue sources. The transportation infrastructure, much of it built many decades ago, is now badly in need of rehabilitation and reconstruction. Consequential mobility needs are at a critical point, some requiring immediate infrastructure improvements while at the same time promoting long-term economic prosperity, and a sustained ability to provide a safer transportation system and cleaner air to all Texans.

The State's economic prosperity and all Texans' quality of life are inextricably tied to the value and convenience of the state's transportation systems. Infrastructure improvements, whether to existing systems or through new alternatives, are needed to address congestion, efficiency and safety and will promote sustainable job growth in Texas. Also, coupled with escalating highway construction and automobile fuel costs has made other transportation modes more favorable as transit options; therefore, expanding transportation planning into areas such as commuter and freight rail. Texas must have multi-modal transportation systems that can economically move people and goods throughout the state. This is essential to support long-term economic vitality, quality of life, the natural environment, U.S. military preparedness, and to minimize dependency on foreign energy.

The department employed close to 14,000 state workers annually and exercises control over a multi-billion budget for state transportation needs. Emerging technologies, consumer demand for viable transportation options and the necessity for the right mix of workforce skills, competencies and experiences are redefining TxDOT's role and responsibility as the state's transportation leader and partner in the national/international commerce scene.

A system whereby the department can attract competent labor and develop well-trained and productive transportation-focused employees must include innovative foresight for progressive advancement in acquiring skills, abilities and knowledge competencies. Strategic workforce planning will allow the department to proactively integrate organizational processes that avoid labor surpluses, mitigate talent shortages (panic hirings), and establish opportunities for competent employees to advance and maintain business readiness and flexibility.

The following workforce plan examines the department's current workforce skills level, assesses required future worker competencies and advocates for a progressive succession system, which will enhance the department's efforts in cultivating talent workers capable of meeting the challenges of the department.

## Current Workforce Profile (Supply Analysis)

### A. Critical Workforce Skills

The department employs qualified individuals in a myriad of program disciplines. Strong employee competencies are critical to meet ongoing business objectives and goals. Current critical workforce skills include the following:

Leadership/Management
Transportation Federal/State Laws
Information Technology Engineering/Design
Roadway System Maintenance
Finance
Human Capital Management
Aviation/Waterway/Rail Operations
Customer Service Assistance
Environmental/Archeological
Contract Negotiation/Administration
Project Management

### B. Workforce Demographics

#### Gender, Age, Diversity

In FY2009, the department employed an average workforce population of 13,354 employees. Of that total, there were 3,205 females (24%) and 10,149 males (76%). The mean age was 46.3 years and 75% of the workforce population was 40 years old or older.

#### Tenure

Of the department employees, 6,356 (47.6%) have less than 10 years of department service. There are 2,233 (16.7%) employees with 10 to 15 years service while 4,765 (35.68%) employees have 15+ years. The average length of department service time is 13.2 years while the overall state government longevity time is 14 years.

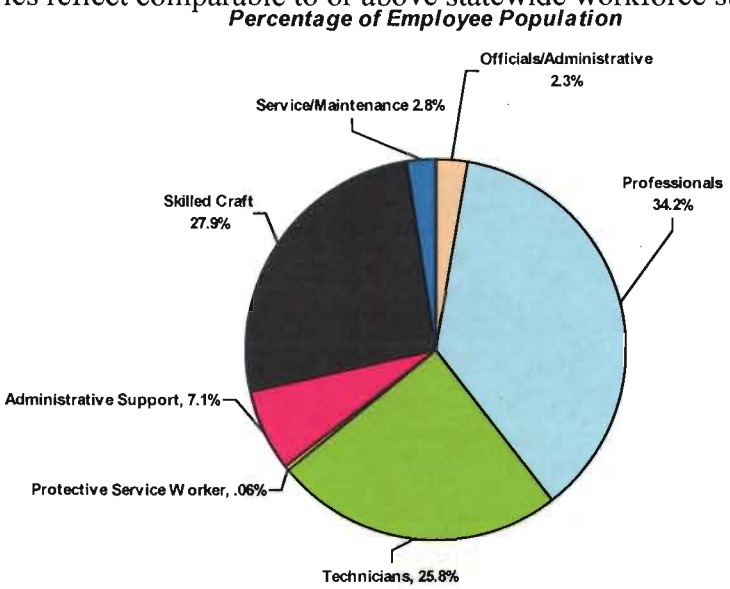
With slightly less than half of the workforce with 10 years or less department experience, the number of employees who possess the seasoned expertise and process "wisdom" is in short supply. The data clearly shows the tenure accruing 10 to 15 years is represented by a smaller employee group and gives credence to the prevailing trend that these employees will leave state government to pursue more lucrative compensation packages during their wealth building years.

Worker knowledge and experience development (beyond entry-level and basic process understanding) is the cornerstone to succession planning. Without planning it only serves to further exacerbate the loss of institutional knowledge and expertise as aging department employees retire and younger potentials seek the better job and/or career offers. It is critical

to implement strategies that increase employee job satisfaction, build loyalty, and foster long-term employer-employee relationships with high demand and exceptional performing employees. Through these strategies the department can cultivate a skilled workforce composed of subject matter experts and leaders in the transportation field.

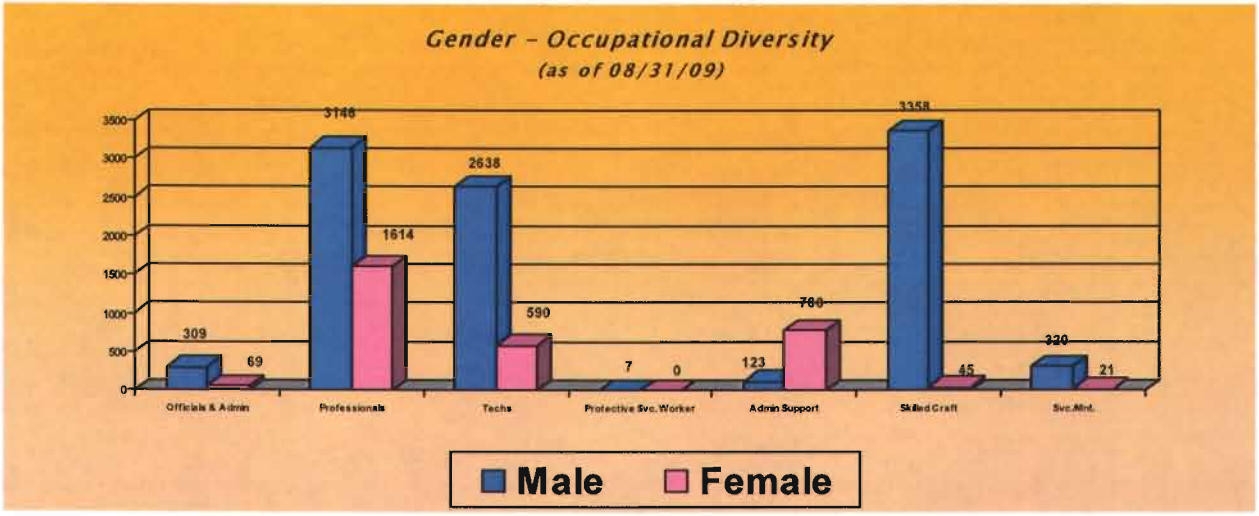
**Job Categories**

Three main job categories comprise the largest number of department employees (87.9%). The categories, *"Professionals, Technicians, and Skilled Craft,"* underscore the broad range of competencies utilized in accomplishing the department's mission. Department data in most of the job categories reflect comparable to or above statewide workforce statistics.




**Gender**

The department female population is represented mostly in the *"Professional, Technicians and Administrative Support"* job categories. The categories *"Skilled Craft and Service/maintenance"* have historically been occupied by males, and we continue to experience little interest by the female population to apply or engage in this kind of work.



### *C.* Employee Turnover and Projected Attrition

During the last decade TxDOT has enjoyed one of the lowest turnover rates when compared to other state agencies and the statewide workforce. This has been a testament to its good fortune even though it continued to lose some of its more seasoned experienced workers to the private sector.

However, the growing trend appears to be that employees are leaving state employment for more lucrative positions in transportation industry-related firms and comparable private sector organizations. In FY2009, approximately 33% of the state workforce turnover occurred in the 16 to 29 years age group, followed by the 30 to 39 age group at 14%.

In the Texas State Auditor's FY2009 Employee Turnover Statistics report, there was discussion about the inverse relationship between the state's unemployment rate and state government's turnover rate. The past five years has shown whenever the unemployment rate decreased, the turnover rate increased and vice versa. Data figures released show statewide turnover has averaged around 16% for the last five years. With the onset of the recession since December 2007, Texas has experienced higher unemployment rates due to loss of jobs in sectors that are comparable to department jobs. This has contributed to lower turnover in all department organizational functional areas but state economic indicators are forecasting a rebound and expansion again in 2010.

In an era where more department employees are retirement eligible and fewer workers stay long term with state government, the attraction of top talent to public service is restrained by limited competitive compensation and benefit packages, these key challenges become heightened by impending labor shortages fueled by a recovering economy.

High profile news media coverage of the imminent talent shortage and emerging market opportunities clearly underscores the need to drive and mold an organization strategy for long lasting impact on the department's workforce. The department, through carefully directed workforce strategies, can position itself for a strong future by attracting and retaining optimal staff.

**EMPLOYEE TURNOVER**
***FIVE-YEAR TREND***

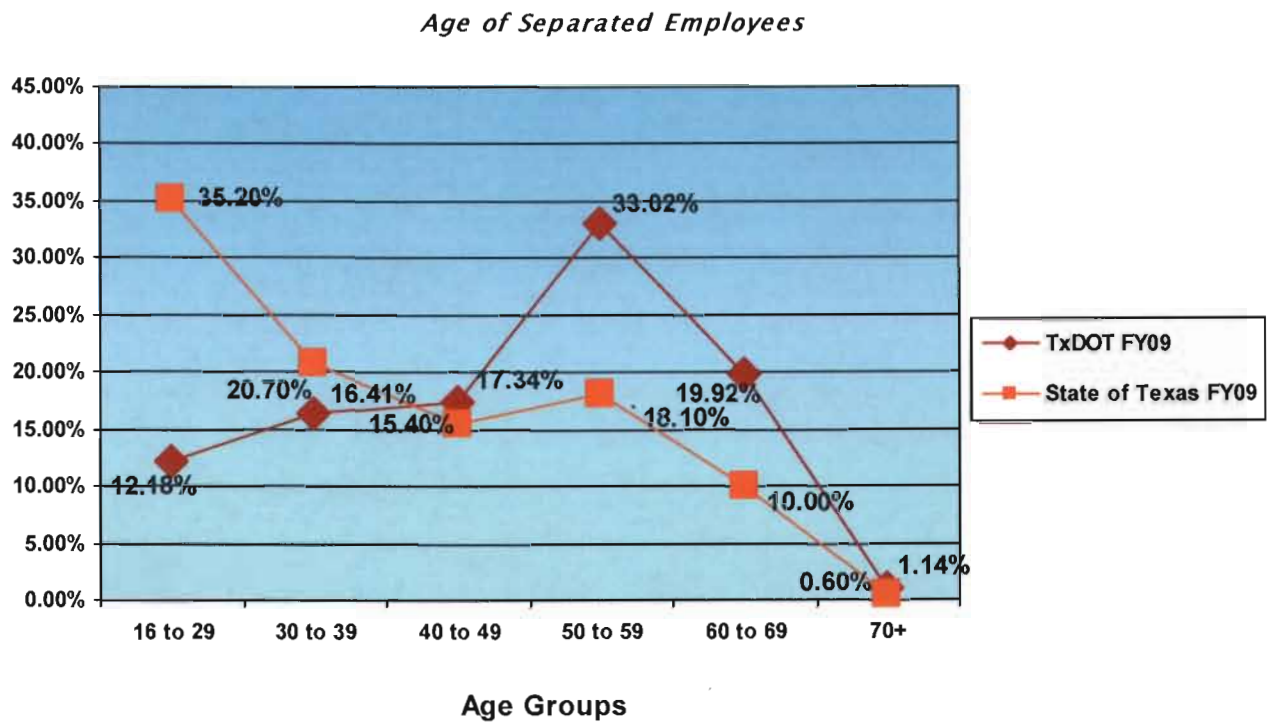
| Fiscal Year | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|
| TxDOT | 10.4 % | 9.7% | 10.8% | 11.7% | 7.3% |
| All Agencies | 17% | 16% | 17% | 17% | 14% |

*Length of Service*

| Tenure of Separating Employees Compared to Tenure of All Employees * FY2009 | | | | |
|---|---|---|---|---|
| **Tenure in Years** | **# Separating Employees** | **% Separating Employees** | **All Employees** | **% All Employees** |
| 0 – 4 | 326 | 33.64% | 3,161 | 24.28% |
| 5 – 10 | 182 | 18.78% | 3,109 | 23.88% |
| 11 – 15 | 80 | 8.26% | 2,125 | 16.32% |
| 16 – 20 | 64 | 6.60% | 1,467 | 11.27% |
| 21 -25 | 100 | 10.32% | 1,869 | 14.35% |
| 26 - 30 | 136 | 14.04% | 903 | 6.94% |
| 31 & above | 81 | 8.36% | 386 | 2.96% |
| **Total** | **969** | **100%** | **13,020** | **100%** |

*Data comparison based on number of employees active on 08/31/2009.

*Age*



**Occupations**

During the past five years the department maintained a consistent cyclical turnover rate.

| BUSINESS JOB CATEGORIES | FY05 %T/O RATE | FY06 %T/O RATE | FY07 %T/O RATE | FY08 %T/O RATE | FY09 %T/O RATE |
|---|---|---|---|---|---|
| A-EXECUTIVE / ADMINISTATIVE / CLERICAL / LEGAL | 10.3% | 8.4% | 10.3% | 10.% | 8.8% |
| B-FINANCE/ACCOUNTING | 6.6% | 7.9% | 9.1% | 11.0% | 7.6% |
| C-INFORMATION TECHNOLOGY | 7.3% | 8.5% | 9.4% | 10.5% | 7.4% |
| D-ARCHITECTURE | 8.5% | 6.1% | 5.6% | 13.7% | 4.4% |
| E-ENGINEERING/ENGR. SUPPORT | 8.2% | 8.4% | 9.9% | 9.4% | 5.8% |
| G-CIVIL RIGHTS/BUSINESS OPPORTUNITY | 14.5% | 14.8% | 10.2% | 12.8% | 6.2% |
| H-HUMAN RESOURCES | 8.3% | 6.9% | 6.3% | 7.2% | 4.6% |
| I-OCCUPATIONAL SAFETY | 5.0% | 1.6% | 9.5% | 10.9% | 10.0% |
| J-GENERAL SERVICES CONTRACTS/PURCHASING | 9.7% | 7.0% | 9.1% | 12.7% | 6.3% |
| K-MAINTENANCE/SKILLED CRAFT/FERRY OPERATIONS | 12.3% | 11.2% | 12.2% | 12.4% | 8.0% |
| L-LABORATORY/MATERIALS | 11.6% | 7.4% | 6.9% | 7.1% | 5.6% |
| M-MOTOR VEHICLE/VEHICLE TITLE & REGISTRATION | 11.4% | 9.9% | 11.1% | 7.4% | 9.7% |
| N-PLANNING / ENVIRONMENTAL / AVIATION / PUBLIC TRANSPORTATION / LEGISLATIVE | 12.7% | 18.6% | 16.0% | 47.4%* | 9.3% |
| P-RIGHT OF WAY | 11.0% | 12.9% | 13.1% | 8.1% | 6.5% |
| Q-TRAVEL/PUBLIC INFORMATION | 10.1% | 7.6% | 9.8% | 15.9% | 7.8% |
| V-ENVIRONMENTAL | 18.7% | 8.1% | 5.6% | 9.0% | 8.0% |
| Z-NOT DEFINED | 5.3% | 15.0% | 20.3% | 5.1% | 12.3% |
| **TOTAL** | **10.04%** | **9.7%** | **10.8%** | **11.7%** | **7.3%** |

* Higher than normal attrition due to the legislatively mandated transfer of 186 PTN employees to HHSC.

*D.* **Retirement Eligibility**

Loss of institutional knowledge and expertise due to retirement is important to department operations. It affects succession planning levels the department should embark upon to ensure the attraction of the "right mix" of new employees and the training development of existing staff in key competencies.

The chart below depicts the actual projected increases in the number of employees eligible to retire. Current data projects that approximately 25% of the department's workforce will be eligible to retire by FY2012. In FY2009, the mean age of retiring employees was 58 years with 23.4 years of TxDOT service time and a 24.2 overall state government time.

**Retirees by Job Category**

By FY2014, the department's workforce will have 35% eligible for retirement. This large scale retirement turnover will have enormous impact on the department's organizational structure and service delivery.

| BUSINESS TITLE CATEGORY RETIREMENT ELIGIBILITY | % FY 2009 or Before | % FY10 or Before | % FY11 or Before | % FY12 or Before | % FY13 or Before | % FY 14 or Before |
|---|---|---|---|---|---|---|
| A-EXECUTIVE/ADMINISTRATIVE/CLERICAL/LEGAL | 14.83% | 19.37% | 24.35% | 28.97% | 33.33% | 39.18% |
| B-FINANCE/ACCOUNTING | 13.64% | 17.36% | 23.14% | 30.58% | 34.30% | 40.50% |
| C-INFORMATION TECHNOLOGY | 10.27% | 13.81% | 18.05% | 23.89% | 27.61% | 33.81% |
| D-ARCHITECTURE | 13.64% | 18.18% | 29.55% | 40.91% | 52.27% | 59.09% |
| E-ENGINEERING/ENGR. SUPPORT | 10.31% | 14.34% | 19.53% | 24.39% | 29.84% | 36.13% |
| G-CIVIL RIGHTS/BUSINESS OPPORTUNITY | 26.47% | 26.47% | 32.35% | 38.24% | 41.18% | 47.06% |
| H-HUMAN RESOURCES | 16.11% | 22.82% | 26.17% | 28.86% | 34.23% | 40.94% |
| I-OCCUPATIONAL SAFETY | 18.18% | 23.64% | 29.09% | 34.55% | 43.64% | 49.09% |
| J-GENERAL SERVICES/CONTRACTS/PURCHASING | 16.29% | 23.44% | 28.35% | 34.15% | 38.39% | 43.30% |
| K-MAINTENANCE/SKILLED CRAFT/FERRY OPERATIONS | 10.02% | 13.70% | 18.71% | 22.80% | 26.99% | 31.37% |
| L-LABORATORY/MATERIALS | 12.29% | 18.27% | 22.92% | 29.57% | 32.23% | 37.54% |
| M-MOTOR VEHICLE/VEHICLE TITLE & REGISTRATION | 17.31% | 22.12% | 27.24% | 30.45% | 34.29% | 39.10% |
| N-PLANNING/AVIATION/PUBLIC TRANS./LEGISLATIVE | 13.01% | 17.12% | 22.60% | 28.42% | 33.90% | 37.67% |
| P-RIGHT OF WAY | 14.97% | 21.39% | 26.20% | 35.29% | 38.50% | 44.92% |
| Q-TRAVEL/PUBLIC INFORMATION | 12.66% | 15.82% | 22.15% | 27.22% | 36.71% | 39.87% |
| S-STUDENT/CO-OP/ INTERN | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| V-ENVIRONMENTAL | 9.02% | 11.28% | 15.04% | 18.80% | 23.31% | 27.82% |
| Z-NOT DEFINED | 21.74% | 30.43% | 30.43% | 34.78% | 47.83% | 52.17% |
| **Total** | 11.42% | 15.56% | 20.60% | 25.35% | 30.02% | 35.33% |

While the supervisory, midlevel and executive employees collectively make up a small percentage of those eligible to retire, forecast eligibility data indicates the department could experience a 35% turnover rate in all management levels between now and FY2014. And there could be significant supervisory and upper management staffing adequacy issues (25%) by FY2015, if appropriate succession planning strategies are not executed timely to provide optimum staffing acquisition, training, and development transition.

**Percentage of Management Staff eligible to retire within the next five years**

| MANAGER/WORK LEVEL | FY09 OR BEFORE | FY10 OR BEFORE | FY11 OR BEFORE | FY12 OR BEFORE | FY13 OR BEFORE | FY14 OR BEFORE |
|---|---|---|---|---|---|---|
| SUPERVISOR | 19% | 26% | 32% | 38% | 45% | 55% |
| BRANCH | 15% | 22% | 33% | 40% | 49% | 60% |
| SEC/STAFF | 21% | 26% | 35% | 44% | 53% | 64% |
| EXEC MGR | 24% | 28% | 50% | 53% | 71% | 83% |
| EXEC DIR | 100% | 100% | 100% | 100% | 100% | 100% |
| **TOTAL** | **11%** | **16%** | **21%** | **25%** | **30%** | **35%** |

**Projected Attrition**

A review of employee turnover examines the reasons for leaving, length of department service and employment movement within occupational categories. An analysis of the data available through the State of Texas Employee Exit Survey show retirement, better pay/benefits and poor working conditions/environment as the top reasons for state employment departures.

Typically, the department employee exit survey response rate averages about 24% with pay ranking as the number one motivating factor for separation of employment. Also, these same employees tell us they are going to the private sector with possibly a $5,000 or more increase in annual salary. While the majority of exiting employees state they would work for the department in the future, they cite changes in compensation and benefits (43%) as the areas most in need of improvement.

Turnover in business title categories range from less than 10% to a high of 15%, all dependent on various influencing factors such as the employee group size, legislative restructuring and general labor market conditions occurring during any given fiscal year. In the past the department has done well with balancing the retention of core competencies against the normal retirement and attrition. However, a critical department workforce shortage will rise as top management and seasoned professionals leave, taking with them much needed technical expertise and long term organizational knowledge.

As the department examines workforce trends and its needs, the use of technology-driven systems assistance in carrying out critical functions will become paramount. Efficient service delivery will require employees to possess a wide range of competencies, much in the self service environments being able to handle a wide array of business functions. Future directives will adjust employee required skills sets (includes both cultural and business) and a

sound general understanding by employees of the department's mission is essential in accomplishing positive transportation solutions for Texas communities and its citizens.

## Future Workforce Profile (Demand Analysis)

### *A.* Future Staffing Outlook

A surging population growth in Texas and shifting demographic trends will increase the state's demand for efficient movement of goods and people. Five years ago it was estimated that two-fifths of state and local government employees would be eligible to retire in 15 years. HR strategists had predicted that beginning in the year 2008 a wealth of skills and experience will begin to disappear from the job market.

A workforce crisis may also be triggered by the convergence of two demographic trends: the growing number of aging Baby Boomers exiting and the much smaller number of available younger people who follow behind them. Competition for younger knowledge workers trained in "hard skill" disciplines such as science and engineering will become very competitive in the marketplace.
Certain clusters of occupational groups will see a dramatic increase in vacancies due to employee retirements including executive, administrative and managerial occupations. Some of the fastest growing occupations in Texas will require high levels of education and skills while also demanding higher wages. According to the Bureau of Labor Statistics (BLS), professional and technical occupations such as engineers, architects, and environmentalists are expected to grow faster and open more new positions than any other occupations.

Higher-skilled professions will require more education and better communication, math, information technology, and reasoning skills. The department has already identified potential problems in recruiting engineering graduates as the number of students graduating with engineering degrees has been on the decline. Demographics show not only will more skills and education be needed, but that the workforce will be less skilled and less educated due to waning student interest in science and engineering coupled with academia's inability to keep pace with the rapid technology expansion and complexity. Additionally, the hiring of other types of engineers, i.e., petroleum, and higher starting salaries in the private sector, has exacerbated the problem in hiring newly graduated and/or licensed engineers.

Texas' population is expected to grow to more than 25 million and the Lone Star state continues to buck national recession trends with continued city growth in Dallas-Fort Worth, Houston, Austin and San Antonio according to recently released census estimates. A Moody's report stated Texas cities will outpace the rest of the country in coming out of the recession and will be one of the first regions to achieve a new employment peak. Though current recession related economic woes has created a relatively flat labor market, no real industry job gains but no significant losses either, Texas is already studying and looking at the emerging demand between skilled workers and the state's ability to supply them.

Jobs once considered "blue collar" now involve sophisticated, highly specialized technology, field certifications and knowledgeable workers. The Texas Workforce Commission, says,

"When we look at high-demand occupations, no longer is it sufficient to have a strong back and a good heart to earn a good wage. Today's employers require specific skills." Capital investments occurring in oil refineries and advanced manufacturing technologies has launched tremendous focus on skilled talent development for these and other evolving economic opportunities in Texas. Compensation packages for workers with a high school education and post-secondary training in manufacturing jobs could earn about $47,000 annually. In-demand occupations in welding, construction and oil occupations will offer very high wages and great benefit packages. This data illustrates emerging labor market opportunities and reflects Texas' growth as the next center of trade is strong.

### *B.* Gap Analysis

Faced with potential significant changes in the labor market, the department will be challenged to acquire, develop, deploy and retain a competent workforce. The department's Standing Committee on Training (SCOT) is working towards a comprehensive strategic training program that will address and sustain a management and technical training program. The strength of an engaged workforce is a continual part of any business strategic plan.

Workplace knowledge and skill alignment:

| | | |
|---|---|---|
| Leadership | International Relations | Information Technology |
| People Management | Engineering/Design | Roadway Maintenance |
| Finance/Asset Management | Human Capital Management | Customer Relations Management |
| Natural/Cultural Resources | Contract Administration | Aviation / Rail / Waterway Operations |
| Marketing/Negotiation | Project Management | Multimodal Transportation |
| Research/Development | Government Rules/Regulation | Community/Citizen Outreach |
| Multi-lingual | Business Acumen | Performance Metrics |

### *C.* Strategy Development

For TxDOT to be competitive in the talent pool market war, a renewed emphasis on employee engagement will be necessary. Research studies routinely survey employees about their expectations from their employers. The top three responses were interesting, challenging work, open two-way communication and opportunities for growth and development.

These responses mirror The *Survey of Organizational Excellence*, conducted by the School of Social Work of the University of Texas at Austin of state agencies. Survey results also showed fair pay as an area for concern based on low scoring by employees. Scoring levels indicate employee viewpoints regarding the competitiveness of the total compensation package and it also addresses how well the package "holds up" when employees compare it to similar jobs in their communities.

Such responses could become conventional employee attitude, thus the focus of our attraction, motivation, and retention strategies, will be on the flexibility to shift with marketplace demands in a recovering economy. Most common retention strategies often fall short of resolving turnover issues and fail to recognize the things that generate the most value and matter most to employees.

Job rotation and cross training programs (in-house talent cultivation) and the feasibility of a succession planning program, an entry-level engineer's program, and developing career progression models (management, leadership and technical) are all examples of workforce strategies that lend itself to building and strengthening the department's core business units. A look at certification programs is needed to equip employees with increased skills in the area of project management and other technical areas.

The SCOT is dedicated through its efforts to address critical training needs in technical areas. The department is considering adopting a uniform and well communicated plan for the development, tracking, delivery and evaluation of all department training delivered or attended. This measurement allows the department to take a pro-active stance to addressing immediate training and development needs as they occur rather than being reactive to documented trends.

TxDOT continues to work with local Texas Prefreshman Engineering Programs (TexPREP), an eight-week academic enrichment program for middle and high school students that encourage students to pursue careers in transportation. Also, department personnel work with colleges and universities by providing input into school curriculum development to assure students have the foundation knowledge needed for successful careers in transportation.

TxDOT already offers a myriad of talent-market programs that drive its organizational success through attraction and retention of transportation knowledge-based workers. These programs include accelerated hiring processes, high school or college summer employment opportunities, a balanced work and life environment, flexible work schedules, career development programs, temporary recruitment programs, job rotation/cross training, executive training, tuition assistance, award and recognition programs, recruitment and retention bonuses.

The department has also joined the ranks of other state transportation agencies in implementing a new initiative called Knowledge Management. This project involves a visionary approach to identifying, collecting and cataloging "legacy and present knowledge" into one repository capable of providing information through decentralized networks to users. The idea behind the approach is to provide information tools that capture critical business knowledge while at the same time create an environment which can facilitate learning by employees from in-house professionals, support continued knowledge development and provide a forum for sharing best practices.

The influx of workers into the state can provide TxDOT with a greater talent pool to draw from when job opportunities exist within the department. However, the real challenge lies in

our talent management strategy to ensure us, as a Texas employer, provide collaborative partnerships with higher education institutions and businesses that help us build TxDOT's workforce with sustaining, long term skill development. As technologies change, so too will workplace skills; we must poise the department to be a competitive employer.

If forecast trends hold true and the labor pool begins to tighten, TxDOT will need to assess its competitive position and align its recruiting, hiring and training programs. It must offer competitive salaries and promote employees to higher salary ranges (within budget constraints) to align employee engagement with business performance. The development and promotion of in-house talent will be essential for long term mission objectives.

Now is the time to establish organization career progression academies for the next TxDOT leadership generation. Data and demographics can offer guidance in determining employee retirements and targeted areas for organizational change, and showcase business needs for creative recruitment strategies. Competition for the same pool could become fierce between the private sector, government and not-for-profit organizations. Ensuring employee competency readiness from policy levels to execution levels sustains the department with the most productive and efficient workforce.

Attracting and retaining critical work segments in our department will require positioning our agency as top draw in the public sector transportation world. Future employee development programs must have a central focus on maximizing already acquired employee knowledge, skills and abilities and cultivating additional strengths to enhance the full suite of management skills, abilities and technical expertise. Management leadership must propel the push towards stronger analytical and business intelligence capabilities. This means a greater investment in capturing and harnessing information necessary to facilitate sound, well-reasoned decision making processes, financial management, public-private collaborations and customer service.

Integrating staff development with flexible, mobile career ladders, advocating work/life balance programs, offering competitive salaries coupled with pay for performance incentives, as well as supportive employee recognition programs, are all employee-focused recruitment and retention preparedness strategies. New hire quality imperatives and optimum organization workforce management "think tanks" that dominate the employer-employee work relationship will serve to position the department for business success and meet Texas' future transportation realities.

# Appendix F: 2010 Survey of Employee Engagement

*Survey of Employee Engagement*

Texas Department of Transportation

*Executive Summary*

2010

ID: 601

# Executive Summary
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Institute for Organizational Excellence
1 University Station
D3500
Austin, Texas 78712

www.survey.utexas.edu
soe@uts.cc.utexas.edu
Phone (512) 471-9831
Fax (512) 471-9600

# Introduction

**Thank you** for your participation in the Survey of Employee Engagement (SEE). We trust that you will find the information helpful in your leadership planning and organizational development efforts. As an organizational climate assessment, the SEE represents an employee engagement measurement tool based on modern organizational and managerial practice and sound theoretical foundations. In short, the SEE is specifically focused on the key drivers relative to the ability to engage employees towards successfully fulfilling the vision and mission of the organization.

Participation in the SEE indicates the willingness of leadership and the readiness of all employees to engage in meaningful measurement and organizational improvement efforts. The process is best utilized when leadership builds on the momentum initiated through the surveying process and begins engagement interventions using the SEE data as a guide. Contained within these reports are specific areas of organizational strengths and of organizational concern.

**The SEE framework** initially consists of a series of items to ascertain the demography of the respondents. The purpose is to measure whether or not a representative group of respondents participated. The second section contains 71 primary items. These are used to assess essential and fundamental aspects of how the organization functions, the climate, potential barriers to improvement, and internal organizational strengths. The items are all scored on a five-point scale from Strongly Disagree(1) to Strongly Agree(5) and are averaged to produce various summary measures - Constructs, Climate indicators, and the Synthesis Score.

The SEE has 14 Constructs which capture the concepts most utilized by leadership and those which drive organizational performance and engagement. These constructs are: Supervision, Team, Quality, Pay, Benefits, Physical Environment, Strategic, Diversity, Information Systems, Internal Communication, External Communication, Employee Engagement, Employee Development, and Job Satisfaction. In the Climate section of the reports are the Climate indicators: Atmosphere, Ethics, Fairness, Feedback, and Management.

The overall survey score, or Synthesis score, is a broad indicator for overall comparison with other entities and when available, over time.

## Survey Administration Profile:

**Collection Period:**
01-25-2010 through 02-19-2010

**Collection Method:**
1720 online surveys, 3679 paper surveys

**Additional Items and Categories** (if applicable) may be used to target areas specific to the organization. Refer to the Appendix of the Data Report for a complete listing.

- 5 additional items
- Category 1 (17 codes)
- Category 2 (56 codes)

**Survey Liaison:**
Stephanie Baggett (512) 486-5369
Human Resources Specialist
125 E. 11th Street
Austin, TX 78701

sbagget@dot.state.tx.us

*Survey of Employee Engagement*

# Organization Profile

## Texas Department of Transportation

### Organizational Leadership:

ID: 601

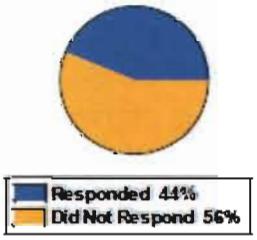
- Amadeo Saenz, Jr., P.E., Executive Director

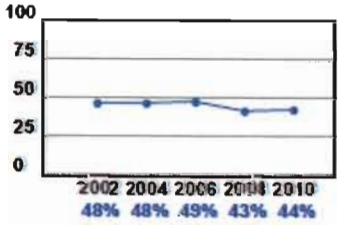
### Synthesis Score: 3.37

The Synthesis Score is an average of all survey items and represents the overall score for the organization. For comparison purposes, Synthesis scores typically range from 3.25 to 3.75.

## Response Rates

**Overall Response Rate**
Out of the 12228 employees who were invited to take the survey, 5399 responded. As a general rule, rates higher than 50 percent suggest soundness. Rates lower than 30 percent may indicate problems.
At 44%, your response rate is considered average. Average rates mean that many employees have a reasonable investment in the organization, want to see the organization improve and generally have a sense of responsibility to the organization. Other employees may suffer from feelings of alienation or indifference.



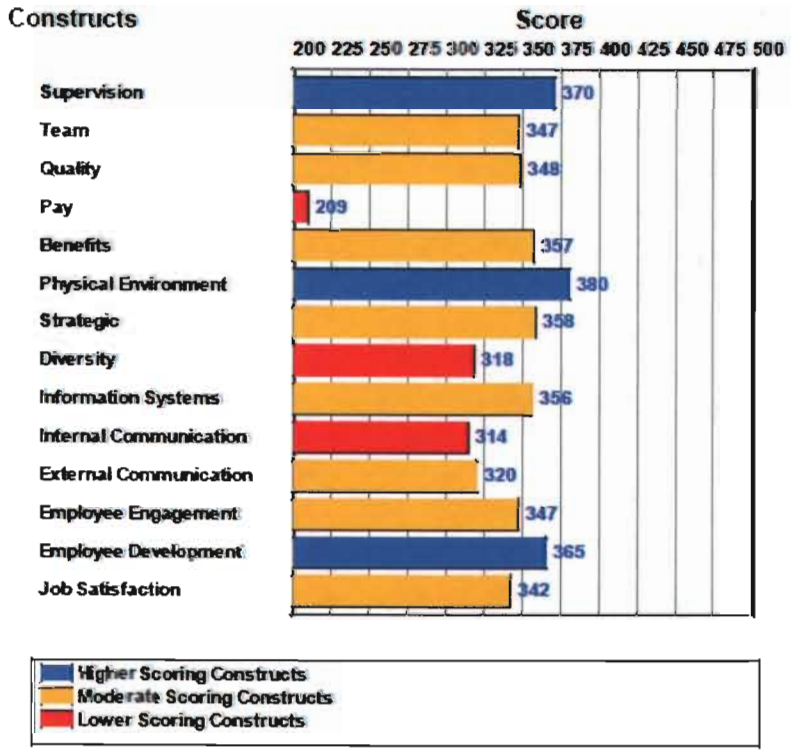

**Response Rate Over Time**
One of the values of participating in multiple iterations of the survey is the opportunity to measure organizational change over time. In general, response rates should rise from the first to the second and succeeding iterations. If organizational health is sound and the online administration option is used, rates tend to plateau around the 60 to 65 percent level. A sharp decline in your response rate over time can be a significant indicator of a current or potential developing organizational problem.

*Survey of Employee Engagement*

# Construct Analysis

Constructs have been color coded to highlight the organization's areas of strength and areas of concern. The 3 highest scoring constructs are blue, the 3 lowest scoring constructs are red, and the remaining 8 constructs are yellow.

Each construct is displayed below with its corresponding score. Highest scoring constructs are areas of strength for this organization while the lowest scoring constructs are areas of concern. Scores above 350 suggest that employees perceive the issue more positively than negatively, and scores of 375 or higher indicate areas of substantial strength. Conversely, scores below 350 are viewed less positively by employees, and scores below 325 should be a significant source of concern for the organization and should receive immediate attention.



# Organizational Typology: Areas of Strength

**The following Constructs are relative strengths for the organization:**

**Physical Environment** **Score: 380**

The Physical Environment construct captures employees' perceptions of the total work atmosphere and the degree to which employees believe that it is a 'safe' working environment. This construct addresses the 'feel' of the workplace as perceived by the employee.

High scores indicate that employees view their work setting positively. It means that the setting is seen as satisfactory, safe, and that adequate tools and resources are available.

**Supervision** **Score: 370**

The Supervision construct provides insight into the nature of supervisory relationships within the organization, including aspects of leadership, the communication of expectations, and the sense of fairness that employees perceive between supervisors and themselves.

No area in an organization is more important and often more resistant to change than the middle areas of the organization. Improving average Supervision scores requires careful study to determine the correct causative factors, which may include the supervisory selection process, availability of support services, and opportunities for leadership and professional training. A frequent problem with supervisors is that those tasks a person may be successful with are not the same tasks that are required when one is promoted to supervision. Use feedback sessions to discuss the results with employees to make a more complete determination of the factors that influence your score.

**Employee Development** **Score: 365**

The Employee Development construct is an assessment of the priority given to employees' personal and job growth needs. It provides insight into whether the culture of the organization sees human resources as the most important resource or as one of many resources. It directly addresses the degree to which the organization is seeking to maximize gains from investment in employees.

Average scores suggest employees feel that minimum needs are being met for personal development and enhancement of job skills. Scores at this level provide opportunities for the organization to increase the skills, abilities, and satisfaction of employees through training and educational opportunities.

# Organizational Typology: Areas of Concern

**The following Constructs are relative concerns for the organization:**

**Pay** **Score: 209**

The Pay construct addresses perceptions of the overall compensation package offered by the organization. It describes how well the compensation package 'holds up' when employees compare it to similar jobs in other organizations.

Low scores suggest that pay is a central concern or reason for satisfaction or discontent. In some situations pay does not meet comparables in similar organizations. In other cases individuals may feel that pay levels are not appropriately set to work demands, experience and ability. Cost of living increases may cause sharp drops in purchasing power, and as a result, employees will view pay levels as unfair. Remedying Pay problems requires a determination of which of the above factors are serving to create the concerns. Triangulate low scores in Pay by reviewing comparable positions in other organizations and cost of living information. Use the employee feedback sessions to make a more complete determination for the causes of low Pay scores.

**Internal Communication** **Score: 314**

The Internal Communication construct captures the organization's communications flow from the top-down, bottom-up, and across divisions/departments. It addresses the extent to which communication exchanges are open, candid, and move the organization toward goal achievement.

Low scores suggest that employees feel information does not arrive in a timely fashion and often it is difficult to find needed facts. In general, Internal Communication problems stem from these factors: an organization that has outgrown an older verbal culture based upon a few people knowing "how to work the system", lack of investment and training in modern communication technology and, perhaps, vested interests that seek to control needed information. Triangulate low scores in Internal Communication by reviewing existing policy and procedural manuals to determine their availability. Assess how well telephone systems are articulated and if e-mail, faxing, and Internet modalities are developed and in full use.

**Diversity** **Score: 318**

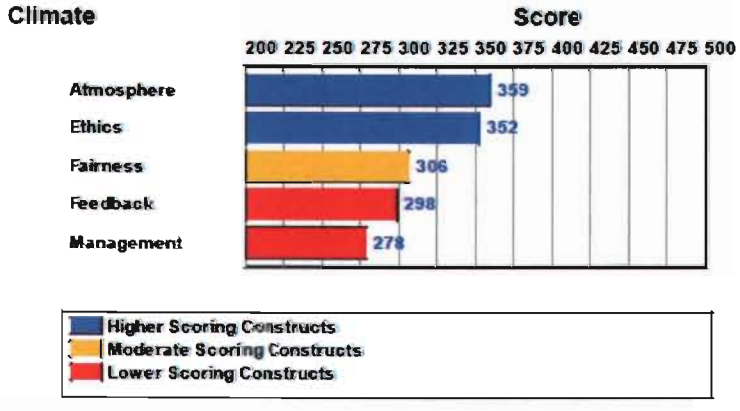
The Diversity construct addresses the extent to which employees feel personal differences, such as ethnicity, social class or lifestyle, may result in alienation from the larger organization and missed opportunities for learning or advancement. It examines how the organization understands and uses creativity coming from individual differences to improve organizational effectiveness.

Remedying Diversity problems requires careful review of the organization's demographic numbers as well as how representative various groups are within the hierarchy of the organization. Consider recruitment procedures and training programs for persons that are underrepresented to improve size of candidacy pools for hiring and promotion; conduct community outreach, including recruitment programs with high schools and colleges; establish mentor programs to encourage the development of opportunities for underrepresented groups. Failure to successfully remedy diversity concerns is one of the more serious mistakes leadership can make.

# Climate Analysis

The climate in which employees work does, to a large extent, determine the efficiency and effectiveness of an organization. The appropriate climate is a combination of a safe, non-harassing environment with ethical abiding employees who treat each other with fairness and respect. Moreover, it is an organization with proactive management that communicates and has the capability to make thoughtful decisions. Climate Areas have been color coded to highlight the organization's areas of strength and areas of concern. The 2 highest scoring climate areas are blue (Atmosphere, Ethics), the 2 lowest scoring climate areas are red (Management, Feedback), and the remaining climate area is yellow (Fairness).

Each Climate Area is displayed below with its corresponding score. Scores above 350 suggest that employees perceive the issue more positively than negatively, and scores of 375 or higher indicate areas of substantial strength. Conversely, scores below 350 are viewed less positively by employees, and scores below 325 should be a significant source of concern for the organization and should receive immediate attention.




**Climate Definitions:**

Atmosphere: The aspect of climate and positive Atmosphere of an organization must be free of harassment in order to establish a community of reciprocity.

Ethics: An Ethical climate is a foundation of building trust within an organization where not only are employees ethical in their behavior, but that ethical violations are appropriately handled.

Fairness: Fairness measures the extent to which employees believe that equal and fair opportunity exists for all members of the organization.

Feedback: Appropriate feedback is an essential element of organizational learning by providing the necessary data in which improvement can occur.

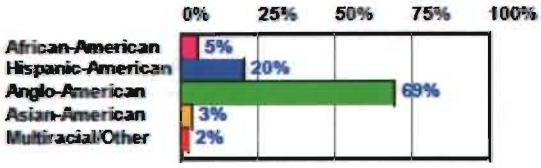
Management: The climate presented by Management as being accessible, visible, and an effective communicator of information is a basic tenant of successful leadership.

# Participant Profile

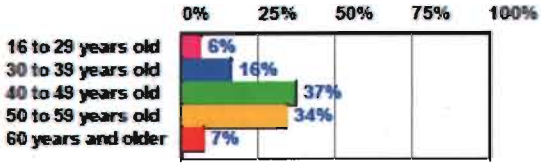
Demography data help one to see if the Survey response rate matches the general features of all employees in the organization. It is also an important factor in being able to determine the level of consensus and shared viewpoints across the organization. It may also help to indicate the extent to which the membership of the organization is representative of the local community and those persons that use the services and products of the organization. Charts and percentages are based on valid responses.

***Please note that there may be a slight variation between the percentages presented here and those found in the Data Report. This is due to respondents who chose not to answer particular demographic items. All available demographic responses are reported in your Data Report.**

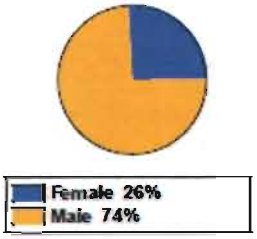
**Race/Ethnic Identification**
Racial/Ethnic diversity within the workplace provides resources for innovation. A diverse workforce helps ensure that different ideas are understood, and that the community sees the organization as representative of the community.




**Age**
Age diversity brings different experiences and perspectives to the organization, since people have different challenges and resources at various age levels. Large percentages of older individuals may be a cause of concern if a number of key employees are nearing retirement age.




**Gender**
The ratio of males to females within an organization can vary among different organizations. However, extreme imbalances in the gender ratio when compared to actual gender diversity within your organization should be a source of concern and may require immediate attention as to why one group is responding at different than anticipated rates.



# Benchmark Data and Other Resources

## Benchmark Categories:

**Benchmark Data** composed of the organizations participating in the survey are provided in your reports. Benchmarks are used to provide a unit of comparison of organizations of similar mission and size. If you selected to use organizational categories, internal benchmarks between categories as well as over time data illustrate differences and changes along item and construct scores. Our benchmark data are updated every two years and are available from our website at www.survey.utexas.edu. The most current benchmark data are provided in your report. To get a better idea of how this organization compares to others like it, we provide three types of benchmark data: organizations with a similar size, similar mission, and organizations belonging to a special grouping. **The Benchmark Categories for this organization are:**

**Organization Size:** Size category 6 includes organizations with greater than 10,000 employees.

**Mission Category:** Mission 7 (Business and Economic Development)
The Business and Economic Development category includes organizations involved in workforce, transportation, economic, and overall development of the communities they serve.

**Special Grouping:** None

## Reporting and Other Resources:

**A Data Report** accompanies this summary. The data report provides greater detail than the executive summary. The data report is largely a quantitative report of the survey responses. Demographic data are presented in percentages and real numbers. Construct means and benchmark comparison numbers are provided on all variables. Item data are broken into mean, frequency counts, standard deviations, and number of respondents. Item benchmark data are also displayed.

**Electronic Reports** are provided in two formats. First, all executive and data reports are included in pdf files for ease in distribution and for clear printability. This file format is widely used, and a free pdf reader called Adobe Acrobat reader is available from www.adobe.com. The second type of electronic reports are in Microsoft Excel format. These reports are construct and item survey data in a flat spreadsheet format. This allows the user to sort highs and lows, search for individual items, or create custom reports from the survey data.

**Using the Survey as a Catalyst** for organizational improvement is essential to the survey process. The survey creates momentum and interest. At the end of the executive summary report is a series of suggested next steps to assist in these efforts. Also, we have captured several presentations from other organizations that have used the data in strategic planning, organizational improvement, and employee engagement initiatives. Please visit us at www.survey.utexas.edu for additional survey resources.

**Additional Services** are available from our group. We conduct 360-Degree leadership and supervisory evaluations, special leadership assessments, customer and client satisfaction surveys along with the ability to create and administer a variety of custom hardcopy and online survey instruments. Consultation time for large presentations, focus groups, or individual meetings is available as well. For additional information, please contact us at anytime.

# Next Steps: Interpretation and Intervention

After the survey data has been complied, the results are returned to the survey liaison, executive director, and board or commission chair approximately one to two months after data collection stops. These individuals are strongly encouraged to share results with all survey participants in the organization. Survey results are provided in several formats to provide maximum flexibility in interpreting the data and sharing the data with the entire organization. The quick turnaround in reporting allows for immediate action upon the results while they are still current.

The Executive Summary provides a graphical depiction of the data. Graphical data can easily be reproduced in a company newsletter or website. For additional detailed data, the Data Report is useful for examining survey data on the individual item level. Response counts, averages, standard deviations, and response distributions are provided for each item. Excel files provide electronic access to scores. Scores can be sorted in various ways to help determine strengths and areas of concern. The electronic data can also be used by Excel or other software to create additional graphs or charts. Any of these formats can be used alone or in combination to create rich information on which employees can base their ideas for change.

Benchmark data provide an opportunity to get a true feel of the organization's performance. Comparing the organization's score to scores outside of the organization can unearth unique strengths and areas of concern. Several groups of benchmarks are provided to allow the freedom to choose which comparisons are most relevant. If organizational categories were used, then internal comparisons can be made between different functional areas of the organization. By using these comparisons, functional areas can be identified for star performance in a particular construct, and a set of "best practices" can be created to replicate their success throughout the organization.

These Survey Data provide a unique perspective of the average view of all that took the Survey. It is important to examine these findings and take them back to the employees for interpretation and to select priority areas for improvement. This also provides an opportunity for the organization to recognize and celebrate areas that members have judged to be areas of relative strength. By seeking participation and engaging people on how the organization functions, you have taken a specific step in increasing organizational capital. High organizational capital means high trust among employees and a greater likelihood of improved efforts and good working relationships with clients and customers.

**Ideas for getting employees involved in the change process:**

- Hold small focus groups to find out how the employees would interpret the results
- Conduct small customized follow-up surveys to collect additional information including comments
- Provide employees with questionnaires/comment cards to express their ideas

**Ideas for sharing data with the organization:**

- Publish results in an organizational newsletter or intranet site
- Discuss results in departmental meetings
- Create a PowerPoint presentation of the results and display them on kiosks

# Timeline

## April and May: Interpreting the Data

- Data are returned to survey liaisons, executive directors and board members
- Review Survey data including the Executive Summary with executive staff
- Develop plans for circulating all the data sequentially and provide interpretations for all staff

## June: Distributing Results to the Entire Organization

- Implement the plans for circulating the data to all staff
- Create 3 to 4 weekly or monthly reports or organization newsletters
- Report a portion of the constructs and items, providing the data along with illustrations pertinent to the organization
- Select a time to have employees participate in a work unit group to review the reports as they are distributed to all staff, with one group leader assigned to every group. The size of the groups should be limited to about a dozen people at a time. A time limit should be set not to exceed two hours.

## July: Planning for Change

- Designate the Change Team composed of a diagonal slice across the organization that will guide the effort
- Identify Work Unit Groups around actual organizational work units and start each meeting by reviewing strengths as indicated in the data report. Brainstorm on how to best address weaknesses
- Establish Procedures for recording the deliberations of the Work Unit Group and returning those data to the Change Team
- Decide upon the Top Priority Change Topic and Methods necessary for making the change. Web-based Discussion Groups and Mini-Surveys are convenient technologies
- First change effort begins
- Repeat for the next change target

## August and Beyond: Implementation and Interventions

- Have the Change Team compile the Priority Change Topics and Methods necessary for making the change and present them to the executive staff
- Discuss the administrative protocols necessary for implementing the changes
- Determine the plan of action and set up a reasonable timeline for implementation
- Keep employees informed about changes as they occur through meetings, newsletters, or intranet publications
- Resurvey to document the effectiveness of the change

# Appendix G: Glossary

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| 2030 Committee | A committee of 12 experienced and respected business leaders appointed by the Texas Transportation Commission Chair Deirdre Delisi, at the request of the Texas Governor Rick Perry, to provide an independent, authoritative assessment of the state's transportation infrastructure and mobility needs from 2009 to 2030. |
| Accountability | The acknowledgment and assumption of responsibility for actions, decisions or policies with an obligation to report, explain and be answerable for resulting consequences. |
| Asset management | A strategic and systematic process of operating, maintaining, upgrading, and expanding transportation assets effectively through their life cycle. |
| Aviation Capital Improvement Program (CIP) | A plan for general aviation airport development in Texas that includes a detailed listing of potential projects based on the anticipated Federal and state funding levels. |
| Budgetary performance measure | A measure formally submitted by TxDOT to the Legislative Budget Board for inclusion in the department's biennial budget structure. |
| Connectivity | A measure of a transportation network's ability to link people to their origins (starting points) and destinations using one or more transportation modes. |
| FHWA | Federal Highway Administration |
| Functionally obsolete bridge | A bridge where the deck geometry (e.g., lane width), load carrying capacity, clearance, or approach roadway alignment no longer meet the criteria for the system of which the bridge is a part. |
| General aviation | Consists of all flying that is not scheduled commercial service or military. General aviation airports make up nearly 92 percent of the facilities in the Texas Airport System Plan (TASP). |
| General obligation bonds | A common type of municipal bond that is secured by a state or local government's pledge to use legally available resources, including tax revenues, to repay bond holders. |

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| Highway Trust Fund (HTF) | An account established by law to hold Federal highway user taxes that are dedicated for highway and transit-related purposes. The HTF has two accounts: the Highway Account and the Mass Transit Account. |
| Intelligent Transportation Systems (ITS) | The application of advanced technologies to improve the efficiency and safety of transportation systems. |
| Lane-miles | Computed by multiplying roadway length by the number of lanes in the roadway. |
| Multimodal | The availability of transportation options using different modes (automobiles/trucks, rail, aviation, transit, bicycle/pedestrian facilities, ferries, etc.) within a system or corridor. |
| Partners | A wide range of agencies and organizations with which TxDOT works to plan, design, implement, and construct transportation projects and programs throughout the state. Public partners include Federal, state, regional, and local agencies such as the Federal Highway Administration, Texas Department of Public Safety, metropolitan planning organizations, regional mobility authorities, and city and county governments. Private sector partners include contractors and developers. |
| NAFTA | North American Free Trade Agreement |
| Off-system bridge | A bridge under the jurisdiction of the local government such as a county, city or other political subdivision of the state that is not part of the designated state highway system or TxDOT's direct responsibility. |
| On-system bridge | A bridge located on the designated state highway system that falls within TxDOT's responsibility. |
| Performance management | An ongoing business practice that links an organization's goals and objectives to resources and results. The outcomes of performance management include more efficient distribution of limited resources and a focus on decision-making accountability. |
| Preventative maintenance | A schedule of planned maintenance activities aimed at preserving, improving, or slowing the deterioration of a roadway. Examples include joint and crack sealing, pavement overlays, and regraveling shoulders. |

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| Proposition 12 | A constitutional amendment approved by Texas voters in 2007 authorizing the Legislature to authorize up to $5 billion in general obligation bonds – bonds supported using general revenue, rather than fuel tax revenues - to be spent for highway improvements. |
| Proposition 14 | A constitutional amendment approved by Texas voters in 2003 authorizing TxDOT to issue revenue bonds backed by the state highway fund to advance the construction of transportation-related projects across the state. |
| Reliever airport | An airport located with the state's major metropolitan areas capable of relieving congestion at commercial service airports by providing alternative general aviation facilities. |
| Routine Airport Maintenance Program (RAMP) | A TxDOT-administered program which matches local government grants up to $50,000 for basic airport improvements such as parking lots, fencing or other airside and landside needs. |
| Routine maintenance | Day-to-day, scheduled maintenance activities whose timing is within the control of maintenance personnel. Examples include mowing and cleaning roadsides, painting pavement markings and pruning trees. |
| Strategic Highway Safety Plan (SHSP) | A Federally-required, statewide-coordinated safety plan that provides a comprehensive framework for reducing highway fatalities and serious injuries on all public roads. The SHSP strategically establishes statewide goals, objectives, and key emphasis areas developed in consultation with Federal, state, local, and private sector safety stakeholders. |
| Structurally deficient bridge | A bridge with a restricted or reduced load carrying capacity that is currently closed or requires immediate rehabilitation to remain open. |
| Substandard for load only bridge | A bridge that has a load-carrying capacity less than that required to carry routinely the maximum loads permitted by state law on public roads and highways. These bridges are not considered to be structurally deficient or functionally obsolete under federal definitions. |
| Super 2 Highway | A highway with two lanes (one lane in each direction) with hard shoulders and occasional passing lanes. |

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| Texas Airport System Plan (TASP) | A statutorily-required plan that identifies the development requirements and investment benefits of providing adequate access by air for the state. |
| Texas Condition Assessment Program (TxCAP) | A composite measure of pavement condition; roadside conditions (vegetation, litter, drainage, etc.); and the condition of signs, work zones, railroad crossings, and other traffic elements. It combines information from the Pavement Management Information System, TxMAP, and TxTAP to get an overall picture of state roads. |
| Texas Maintenance Assessment Program (TxMAP) | Evaluates many roadside conditions such as vegetation, litter, trees and brush, and drainage. |
| Texas Traffic Assessment Program (TxTAP) | Evaluates the condition of signs, work zones, railroad crossings, and other traffic elements. |
| Texas Rail System Plan (TRSP) | A plan guided by federal and state regulations that identifies current and proposed rail projects (both freight and passenger rail), determines infrastructure and capacity constraints on the system, and develops an awareness of the issues and process by which to address them. |
| Texas Transportation Commission | The five-member governing body for TxDOT. Commission members serve overlapping six-year terms and are appointed by the governor with the advice and consent of the Texas Senate. |
| Texas Transportation Plan 2035 | TxDOT's long-range, multimodal statewide transportation plan resulting from statewide collaboration and consensus on the state's transportation system. |
| Transparency | The act of openly providing information about decisions, including the related inputs, outputs, and outcomes that led to or were affected by those decisions. |
| Travel delay | Total extra travel time compared to a specified standard. |
| Vehicle miles traveled (VMT) | A common measure used to describe automobile use on a daily or annual basis. In measures the total number of vehicle miles driven within a specific geographic area over a given period of time. |