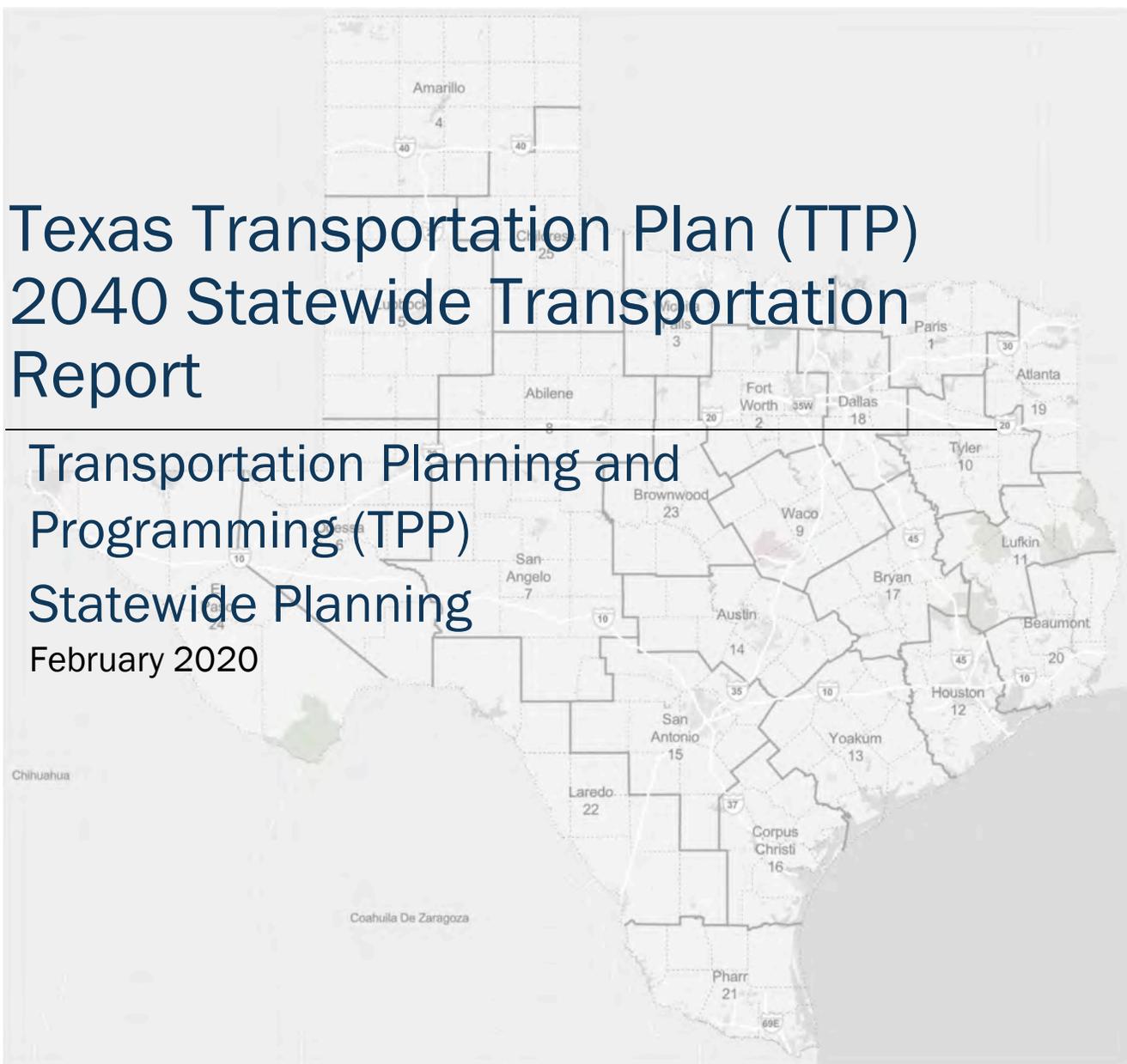




# Texas Transportation Plan (TTP) 2040 Statewide Transportation Report

Transportation Planning and  
Programming (TPP)  
Statewide Planning  
February 2020





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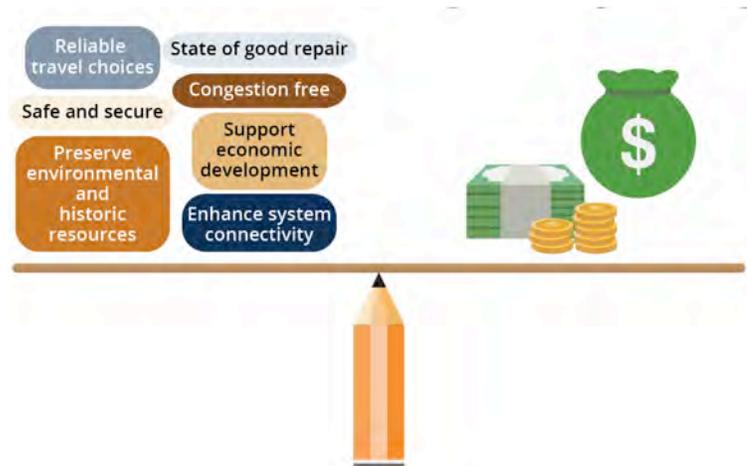
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## OVERVIEW

The Texas Department of Transportation's (TxDOT) goal is to keep Texas roads, structures, and facilities safe and secure, in a state-of-good-repair, increasing reliable travel choices free of congestion, supporting economic development, preserving environmental and historical resources, and enhancing connectivity for system users. Yet resources are limited. To help assure the maximum return-on-investment for transportation expenditures and make progress towards statewide goals, TxDOT has instituted data-driven project evaluation improvements as part of its performance-based planning and programming process.



**Figure 1. Performance-Based Planning and Programming: Balancing Needs with Available Resources**

In 2019, TxDOT started the development of the Texas Transportation Plan 2050. The Texas Transportation Plan 2050 implements the goals of the agency's Strategic Plan and builds on the work that was done in the development of the 2040 Statewide Long-Range Transportation Plan. The Texas Transportation Plan 2050 will summarize existing and future system conditions, needs, revenues, and supporting data sources for all modes.

This process begins with the development of a statewide long-range transportation plan (SLRTP). During the long-range planning process, the state establishes goals, develops performance measures, and establishes targets for the statewide transportation system, which set the direction for future infrastructure investment (**Figure 1**). The *Texas Transportation Plan 2040* (TTP 2040) is the current long-range plan. The TTP 2040 established the agency goals and objectives and detailed a performance-based planning framework (**Figure 2**) that empowers TxDOT to more effectively allocate resources towards achieving these goals and objectives.



Figure 2. Performance-Based Planning and Programming Framework

### What is the Unified Transportation Program?

The Unified Transportation Program (UTP) is TxDOT’s 10-year plan that guides programming and development of transportation projects across the state. The UTP, which is organized into 12 funding categories, authorizes the distribution of transportation dollars expected to be available over the next ten years. The UTP connects the TTP 2040’s statewide transportation goals and targets to the transportation projects that will be developed and constructed based on the forecasted funding.

This planning process serves as a guide for project programming – the process of matching projects to available funding. This programming is done through the Unified Transportation Program (UTP).

The strategic direction of the planning and programming process reflects the state’s priorities and is based on investment profiles that aim to achieve specific goals, system performance measures, and approved targets. Strategic direction is then translated into project evaluation criteria and metrics designed to identify projects that best align with those measures and targets. This alignment allows TxDOT to identify and invest in the best programs and projects to improve the state’s system.

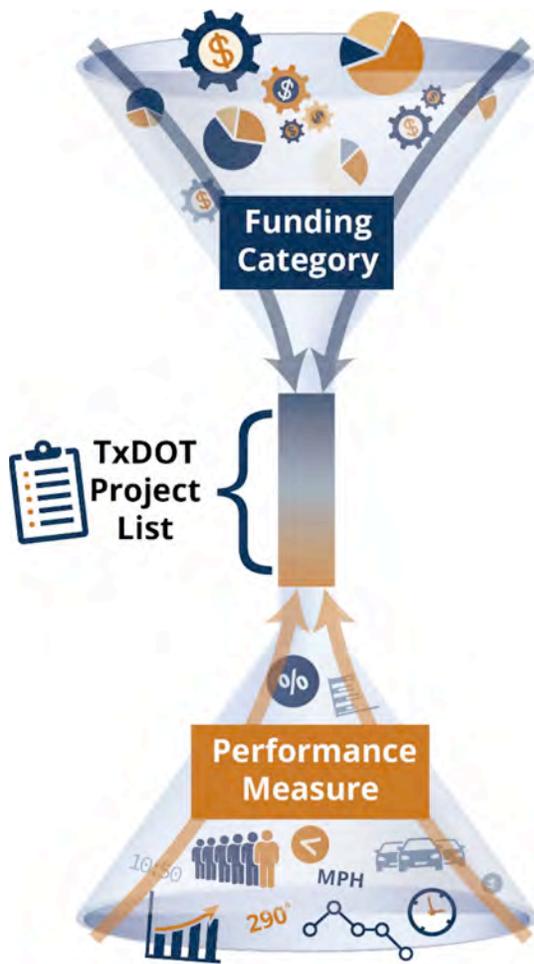


Figure 3. TxDOT's Hybrid Approach to the Development of the UTP

By using this iterative top-down and bottom-up approach, TxDOT can meet statutory requirements; provide overall system-level direction to achieve the performance measures and approved targets; and select projects that provide the best value, both statewide and locally. The “top-down/bottom-up” approach is discussed further in the section on “Analysis of Funding.”

This can be a “top-down” or a “bottom-up” process. The “top-down” process distributes funding through prescribed categories across the state. To be a purely performance-driven program, however, as was defined in the TTP 2040, the project selection process would work from the bottom up. That is, a financially unconstrained list of projects would be assessed, and those projects with the highest performance scores and return on investment would be selected. To be fair and equitable to all Texans across the state and because many of TxDOT’s funding category distributions are mandated by state law, a hybrid approach is necessary (see Figure 3).

This hybrid approach to the development of the UTP takes both a “top-down” and a “bottom-up” approach. Initially, the UTP is guided from the top as the Texas Transportation Commission distributes funding through prescribed UTP categories that target certain project types and system performance outcomes. Then the project selection process works from the bottom up, using multiple objective decision analysis to evaluate the benefits and impacts of candidate projects, selecting projects, and matching them with available funding.

#### Benefits of TxDOT Approach

- Improved coordination with state Metropolitan Planning Organizations (MPOs)
- Visibility in project assessment
- Compliance with federal and state requirements related to performance-based planning
- Establish TxDOT as a best-in-class transportation agency

## DISCUSSION OF PROGRESS TOWARDS STATEWIDE GOALS

201.809(a)(1): “[I]nformation about the progress of each long-term transportation goal that is identified by the statewide transportation plan....”

By applying a performance-based framework, TxDOT has been able to focus investment on the most impactful projects and maximize current funding levels. One of the biggest challenges identified in the TTP 2040 needs assessment was the ability to achieve desired performance levels for congestion and connectivity while also maintaining a state-of-good-repair (SGR). With more than \$5.5 billion in annual highway preservation needs (\$4 billion in pavement and \$1.5 billion in bridges and culverts) and \$9.2 billion in annual highway expansion needs<sup>1</sup> (annualized needs in 2014 dollars through 2040) compared to \$3.3 billion in annual multimodal funding as of 2014,<sup>2</sup> TxDOT demonstrated the need for significant additional funding to maintain the current performance of the transportation system. See **Figure 4**.

	 Highways — Pavement	 Highways — Bridge/Culvert	 Highways — Expansion
SGR Needs through 2040 (2014 Dollars)	\$103.7 BILLION	\$40.0 BILLION	\$239.2 BILLION
Dollars Per Year	4.0 BILLION	1.5 BILLION	9.2 BILLION
	 Transit (Excluding Passenger Rail)	 Passenger Rail	 Bicycle and Pedestrian
SGR Needs through 2040 (2014 Dollars)	\$101.2 BILLION	\$21.6 BILLION	\$2.19 BILLION
Dollars Per Year	3.9 BILLION	0.8 BILLION	0.08 BILLION
	 Aviation	 Intelligent Transportation Systems (ITS)	 Non-highway Freight
SGR Needs through 2040 (2014 Dollars)	\$20.4 BILLION	\$13.0 BILLION	\$5.7 BILLION
Dollars Per Year	0.8 BILLION	0.5 BILLION	0.22 BILLION

Figure 4. Texas Transportation System Needs

<sup>1</sup> Texas Department of Transportation. 2015. *Texas Transportation Plan 2040*, page 4-11, accessed 2/5/2020, <http://ftp.dot.state.tx.us/pub/txdot-info/tpp/2040/plan/chapter-4.pdf>.

<sup>2</sup> TxDOT. 2015. *Texas Transportation Plan 2040*, page 5-1, accessed 2/5/2020, <http://ftp.dot.state.tx.us/pub/txdot-info/tpp/2040/plan/chapter-5.pdf>.

The passage of Proposition 1 in 2014 and Proposition 7 in 2015 provided an additional \$3.5 billion per year for the development and construction of highway projects. The 2020 UTP allocated more than \$77.5 billion across TxDOT's 12 funding categories to address mobility, preservation/rehabilitation, and safety needs.<sup>3</sup> See **Table 1**. Such an investment – more than twice that of the 2015 UTP – has made an immediate impact by funding many high-priority projects for development over the next ten years. However, continued investment is needed to keep pace with growing travel demand generated by the state's expected population increase of 37% between 2020 and 2040, from 29.7 million to 40.7 million.<sup>4</sup>

The 2020 UTP allocated more than \$77.5 billion to address mobility, preservation/rehabilitation, and safety needs. However, continued investment is needed to keep pace with growing travel demand generated by the state's expected population increase of 37%.

Information about the progress of each long-term transportation goal in the statewide transportation plan is summarized in the following subsections.

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<sup>3</sup> TxDOT. 2019. *2020 Unified Transportation Program (UTP)*, page 303, accessed 2/5/2020, <http://ftp.dot.state.tx.us/pub/txdot-info/tpp/utp/2018/utp-2018.pdf>.

<sup>4</sup> Texas Demographic Center. 2018 Texas Population Projections Data Tool Result, accessed 2/4/2020, <https://demographics.texas.gov/Data/TPEPP/Projections/Report.aspx?id=c56d03b775a0499688ee47cf259064ca>.

**Table 1. Distribution of UTP Funds by UTP Funding by Category, FY 2015-2020 (\$ billion)**

Funding Category	2015 UTP	2016 UTP	2017 UTP	2018 UTP	2019 UTP	2020 UTP	6-Yr Trend
1 - Preventive Maintenance and Rehabilitation	11.8	12.6	13.8	14.1	13.8	13.9	
2 - Metro and Urban Area Corridors	1.5	2.4	12.5	12.3	12.6	11.5	
3 - Non-Traditionally Funded Transportation Projects	7.3	5.4	4.6	5.2	5.4	6.1	
4 - Statewide Connectivity Corridors	0.0	0.6	11.6	11.6	12.1	11.2	
5 - Congestion Mitigation and Air Quality Improvement	1.5	1.6	2.2	2.2	2.2	2.2	
6 - Structures Replacement and Rehabilitation (Bridges)	3	3	3.2	3.4	3.5	3.6	
7 - Metropolitan Mobility and Rehabilitation	2.8	3	4.2	4.3	4.5	4.6	
8 - Safety	1.9	1.9	3.2	3.3	3.3	4.0	
9 - Transportation Enhancements	0.5	0.5	0.5	0.8	0.9	0.9	
10 - Supplemental Transportation Projects	0.7	0.7	0.6	0.6	0.5	0.6	
11 - District Discretionary	0.6	0.9	4	3.2	3.1	3.2	
12 - Strategic Priority	2.8	3.1	9.8	10.1	13.3	15.7	
<b>Total</b>	<b>34.5</b>	<b>35.6</b>	<b>70.2</b>	<b>71.2</b>	<b>75.4</b>	<b>77.5</b>	

## GOAL - PROMOTE SAFETY

*Reduce crashes and fatalities through targeted infrastructure improvements, technology applications, and education.*

Safety has always been the top priority at TxDOT. Safety measures identified in the TTP 2040 include statewide annual total fatalities and statewide annual total serious injuries. TxDOT's subsequent *Strategic Highway Safety Plan: 2017-2022*, or SHSP, includes these measures but adds measures of fatalities and serious injuries per 100 million vehicle miles traveled (VMT) and a measure of statewide annual combined total non-motorized fatalities and serious injuries; these additional measures match federally mandated national safety performance measures. TxDOT's safety measure performance, particularly for fatalities, correlates with VMT, which is growing at 1.8% annually across Texas. To counteract the adverse impact of VMT growth on safety performance, the 2018 UTP directed more funding to safety countermeasure projects in the emphasis areas identified as part of the SHSP, including those that address intersections, speeding, road and lane departures, and non-motorized crashes. Based on these investments, **Figures 5, 6, and 7** below depict the 2022 SHSP targets for safety performance.

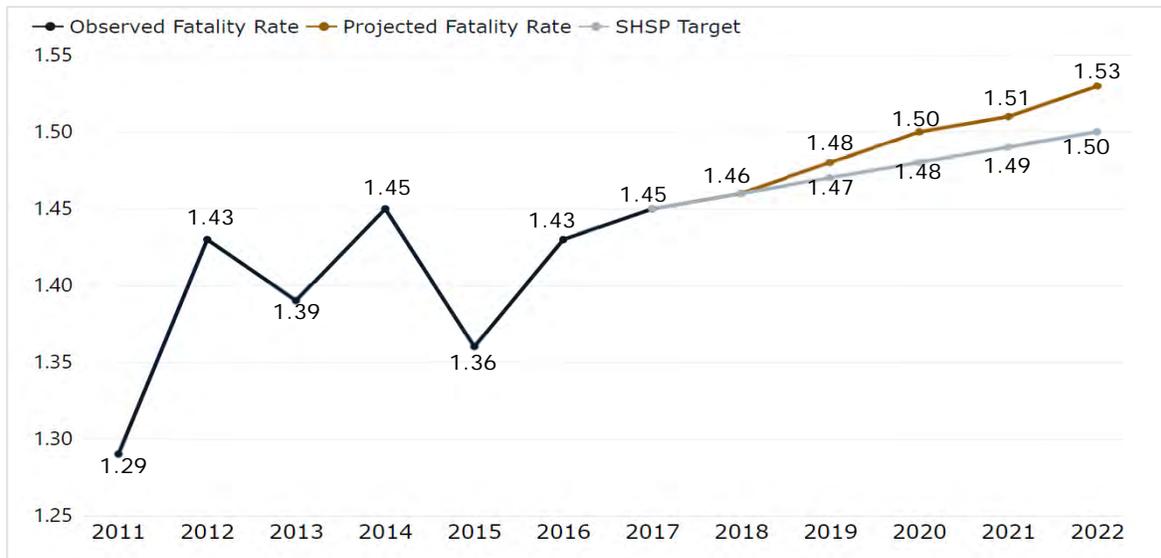


Figure 5. Annual Fatalities/100 Million Vehicle Miles Travelled<sup>5</sup>

<sup>5</sup> TxDOT. 2017. *Strategic Highway Safety Plan: 2017-2022*, page 21, accessed 2/5/2020, <https://ftp.dot.state.tx.us/pub/txdot-info/library/pubs/gov/shsp.pdf>.

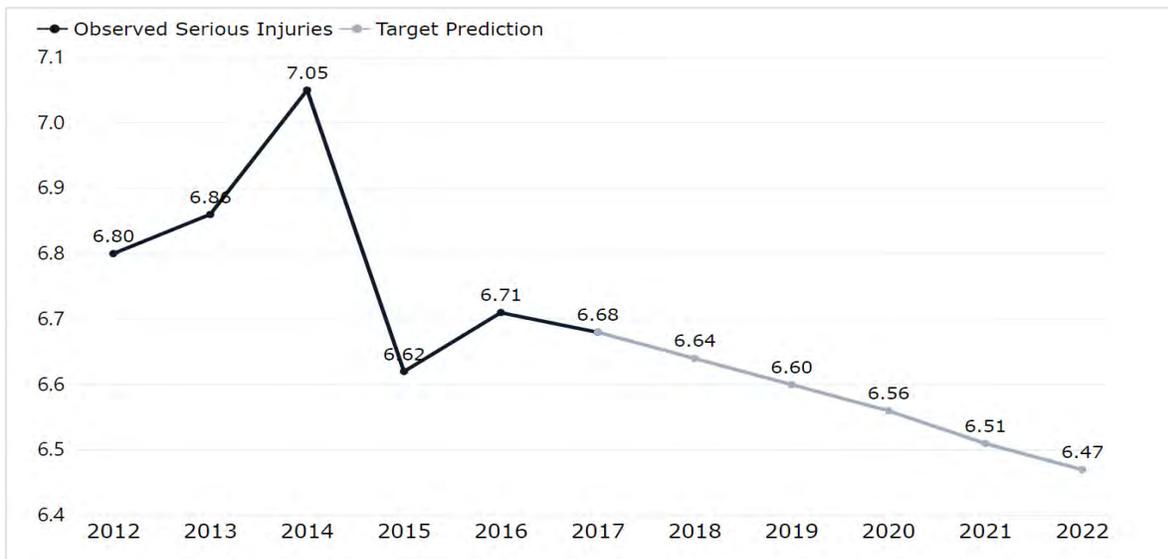


Figure 6. Annual Serious Injuries/100 Million Vehicle Miles Travelled<sup>5</sup>

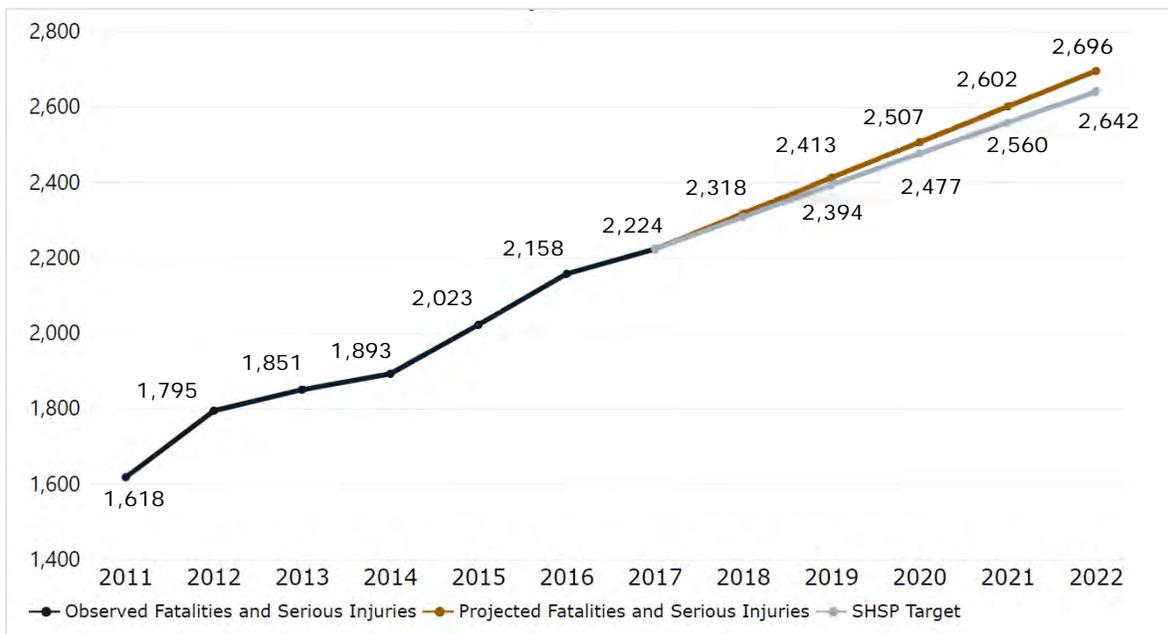


Figure 7. Annual Non-Motorized Fatalities and Serious Injuries<sup>5</sup>

On May 30, 2019, the Texas Transportation Commission adopted a goal of reducing the number of deaths on Texas roadways to zero by the year 2050 and directed TxDOT divisions and districts to develop and implement strategies to achieve that goal.<sup>6</sup> In support of the

<sup>6</sup> Texas Transportation Commission. 2019. Minute Order 115481, accessed 2/6/2020, <http://ftp.dot.state.tx.us/pub/txdot/commission/2019/0530/4.pdf>.

zero fatalities by 2050 goal, staff recommended that Category 8 Safety Funding receive an additional \$300 million in FY 2020 and \$300 million in FY 2021. Additionally, the Commission approved \$600 million from Category 12 over the next two fiscal years to be dedicated to projects in the Permian Basin.<sup>7</sup>

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<sup>7</sup> TxDOT. 2019. *2020 Unified Transportation Program (UTP)*, page 319, accessed 2/5/2020, <http://ftp.dot.state.tx.us/pub/txdot-info/tpp/utp/2018/utp-2018.pdf>.

## GOAL - PRESERVE OUR ASSETS

*Maintain and preserve system/asset conditions through targeted infrastructure rehabilitation, restoration, and replacement.*

### How Does TxDOT Measure Bridge Performance?

Prior to 2017, TxDOT's primary network performance measure was the statewide percent of "good" or "better" bridges. This measure had been used for several years as the principal decision-making aid to evaluate funding alternatives on a planning scale. A good or better bridge is one that is not classified as structurally deficient (SD), functionally obsolete (FO), or substandard for load only. The good or better bridges performance measure score is simply the percent of bridges (by count) classified as good or better. Historically, much of TxDOT's bridge funding has been directed toward improving this measure through replacing bridges not classified as good or better. Recently, the percent of good or better bridges has been replaced by a new measure based on condition criteria rather than service level.

**Bridges**<sup>8</sup> – TxDOT's Bridge Division is responsible for bridge network performance reporting to inform five key stakeholders: TxDOT's Administration, the Texas Transportation Commission, TxDOT districts, Federal Highway Administration (FHWA), and the public. Recently, the Bridge Division replaced the percent of "good" or "better" bridges performance measure (a service level measure) by a new measure based on condition criteria. The Bridge Condition Score is intended to capture overall network health more directly than the percent of good or better bridges.

The Bridge Condition Score is based on the most severe primary component condition rating. A composite score for the network is calculated as the average of each individual bridge's numeric score, weighted by deck area. This new measure has been used to forecast network performance and explore funding levels for the development of the 2020 UTP, primarily applied to the statewide bridge inventory. **Table 2** defines each condition group, their minimum component rating, and their corresponding numeric score.

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<sup>8</sup> TxDOT. 2019. *Texas Transportation Asset Management Plan*, accessed 2/5/2020, <http://ftp.dot.state.tx.us/pub/txdot-info/brg/tamp.pdf>.

Table 2. TxDOT Bridge Condition Score Groups

Most Severe Component Rating	Letter Grade Score	Numeric Score
7 or greater	A	95
6	B	85
5	C	75
3 or 4	D	65
2 or less	F	50

Figure 8 shows that almost 90% of Texas' bridges have a Bridge Condition Score of 85 or 95 (i.e., Grade A and B). Only 0.2% have a Bridge Condition Score of 50 (Grade F).

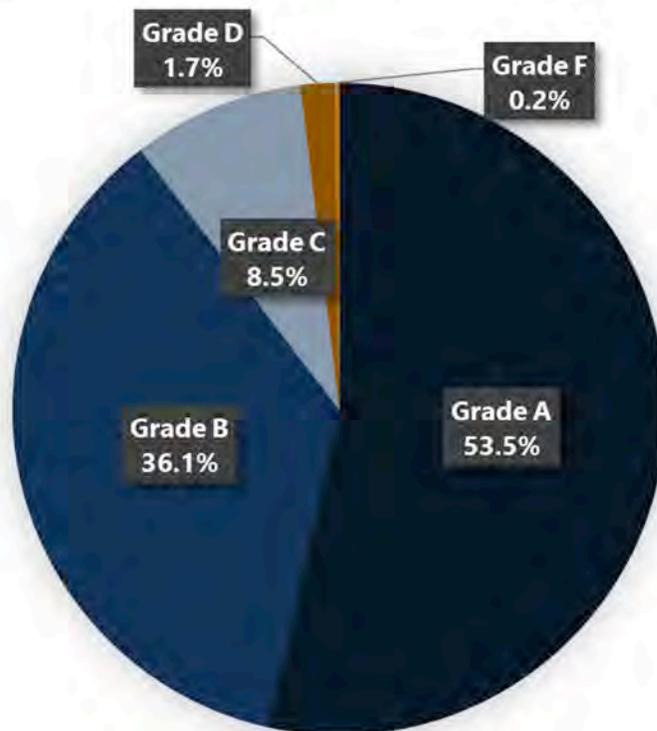
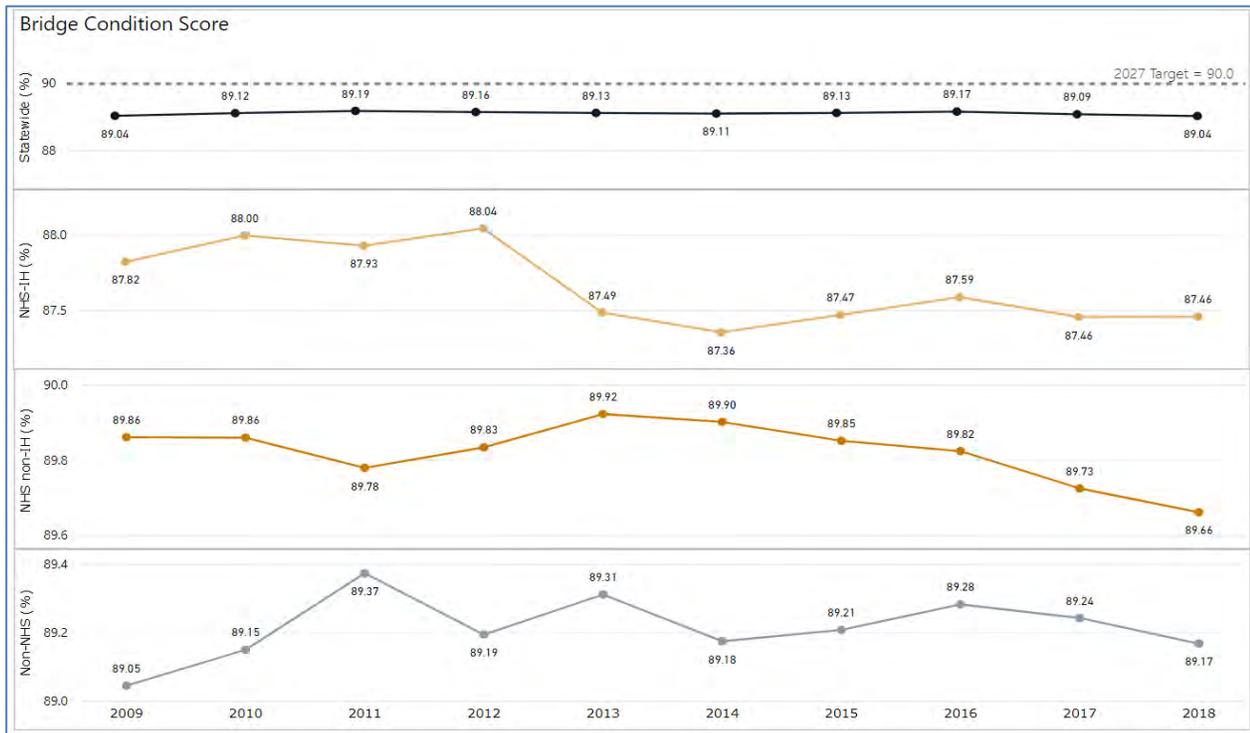


Figure 8. Percentage of Texas Bridges by Condition Score

Figure 9 provides the 2027 Bridge Condition Score target for Texas' bridges approved by the Texas Transportation Commission in February 2018<sup>9</sup> and incorporated as a 10-year target in the *Texas Transportation Plan 2040*. Figure 9 also shows TxDOT's progress towards

<sup>9</sup> Texas Transportation Commission. 2018. Minute Order 115152, accessed 2/6/2020, <http://ftp.dot.state.tx.us/pub/txdot/commission/2018/0222/3.pdf>.

achieving this target, according to TxDOT’s Performance Dashboard.<sup>10</sup> Specifically, **Figure 9** shows the condition of all bridges on the TxDOT system, the condition of the interstate highway bridges on the NHS, the condition of non-interstate NHS bridges, and the condition of non-NHS bridges. Traditionally, TxDOT has not explicitly considered NHS designation when programming bridge preservation activities.



NHS = National Highway System. I= Interstate Highway.

**Figure 9. Texas’ Bridge Condition Score**

The recent increase in UTP funding has enabled TxDOT to mitigate risk associated with high priority structures while applying timely, preventive maintenance treatments to a strategic subset of Texas bridges and culverts to extend infrastructure service life at the lowest practicable cost. TxDOT will need to remain vigilant however, because 56% of the state’s on-system structures were constructed before 1970<sup>11</sup> and a wave of

The maximum allowable NHS deck area in poor condition when determined by FHWA methodology is 10% according to FHWA regulations. Texas’ bridge condition falls well below this threshold as measured by the TxDOT methodology of determining bridge condition, with only about 1% of deck area classified as poor.

<sup>10</sup> TxDOT. Performance Dashboard: Preserve our Assets, accessed 2/6/2020, <http://www.dot.state.tx.us/dashboard/preserving-our-assets.htm#bcs>.

<sup>11</sup> TxDOT. 2018. *Report on Texas Bridges*, page 6, accessed 2/6/2020, <http://ftp.dot.state.tx.us/pub/txdot-info/library/reports/gov/bridge/fy16.pdf>.

preservation needs is expected as these bridges reach the end of their design lives, which is typically 50-60 years.<sup>12</sup> About \$1.5 billion (2014 dollars) in bridge investments will be required annually to keep pace with condition declines for aging Texas structures.<sup>13</sup>

**Pavement** – Texas maintains and operates more than 196,000 lane-miles of pavement, far exceeding the scale of any other state’s roadway network.<sup>14</sup> Ensuring a smooth ride for Texas transportation system users and sufficient structural pavement integrity for freight traffic on such a vast network is a continual and growing challenge as new highway capacity is added. The pavement preservation measures identified in TxDOT’s TTP are a percentage of lane miles on the National Highway System (NHS) and non-NHS with a “good” or “better” International Roughness Index (IRI) and overall pavement condition score, which combines IRI data with a pavement distress score. National pavement measures established by FHWA combine similar data to rate pavement as “good,” “fair,” or “poor.” With the additional UTP funding, TxDOT has been able to keep 91.8% of all NHS and 88.1% of all non-NHS state system roads in “good” or “better” rated condition<sup>15</sup> (see Error! Reference source not found.), which is similar to the federal definition of “good” pavement performance.

Over time Texas has been slowly losing ground to an estimated \$4.0 billion in annual pavement needs through 2040 (2014 dollars).<sup>16</sup> However, an influx of funding has served as a stop-gap, as “good” or “better” rated pavement lane-miles have increased by nearly 1.6% statewide and by 0.8% on energy sector routes between 2017 and 2018 (Error! Reference source not found.).<sup>17</sup>

Overall, however, Texas has been slowly losing ground to an estimated \$4.0 billion in annual pavement needs through 2040 (2014 dollars)<sup>1</sup>. An influx of funding has served as a stop-gap, as “good” or “better” rated pavement lane-miles have increased by nearly 1.6 percent statewide and by 0.8 on energy sector routes between 2017 and 2018.

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<sup>12</sup> National Cooperative Highway Research Program. 2012. Report 713: *Estimating Life Expectancies of Highway Assets, Volume I: Guidebook*, page 68, accessed 2/5/2020, <http://www.trb.org/Main/Blurbs/167189.aspx>.

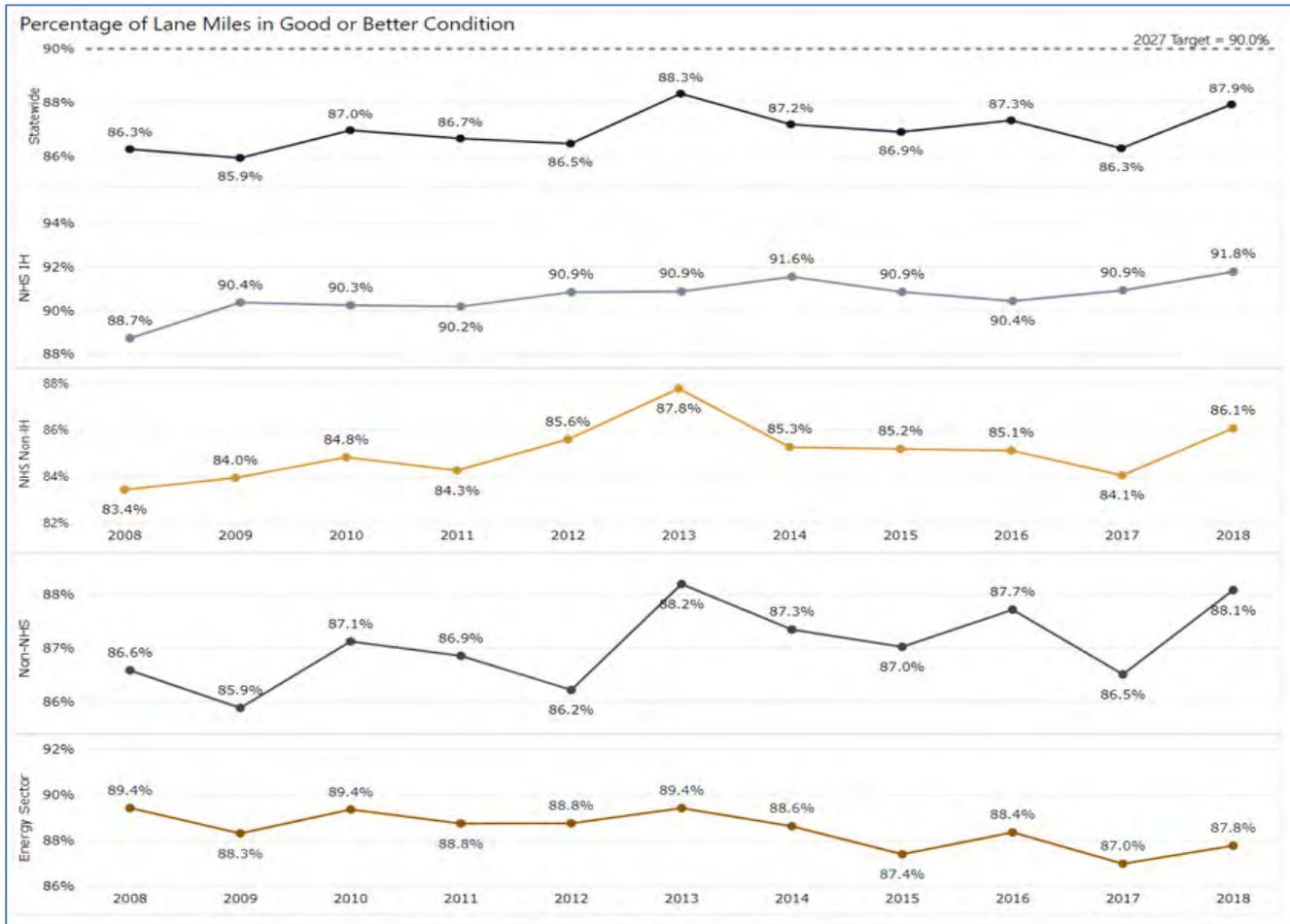
<sup>13</sup> TxDOT. 2015. *Texas Transportation Plan 2040*, page 4-11, accessed 2/5/2020, <http://ftp.dot.state.tx.us/pub/txdot-info/tpp/2040/plan/chapter-4.pdf>.

<sup>14</sup> TxDOT. 2019. *Texas Transportation Asset Management Plan*, page 28, accessed 2/6/2020, <http://ftp.dot.state.tx.us/pub/txdot-info/brg/tamp.pdf>.

<sup>15</sup> TxDOT. Performance Dashboard: Preserve our Assets, accessed 2/6/2020, <http://www.dot.state.tx.us/dashboard/preserving-our-assets.htm#lane-miles>.

<sup>16</sup> TxDOT. 2015. *Texas Transportation Plan 2040*, page 4-11, accessed 2/5/2020, <http://ftp.dot.state.tx.us/pub/txdot-info/tpp/2040/plan/chapter-4.pdf>.

<sup>17</sup> TxDOT. Performance Dashboard: Preserve our Assets, accessed 2/6/2020, <http://www.dot.state.tx.us/dashboard/preserving-our-assets.htm#lane-miles>.



NHS = National Highway System. I= Interstate Highway.

Figure 10. Percentage of Texas' Lane Miles in Good or Better Condition

## GOAL - OPTIMIZE SYSTEM PERFORMANCE

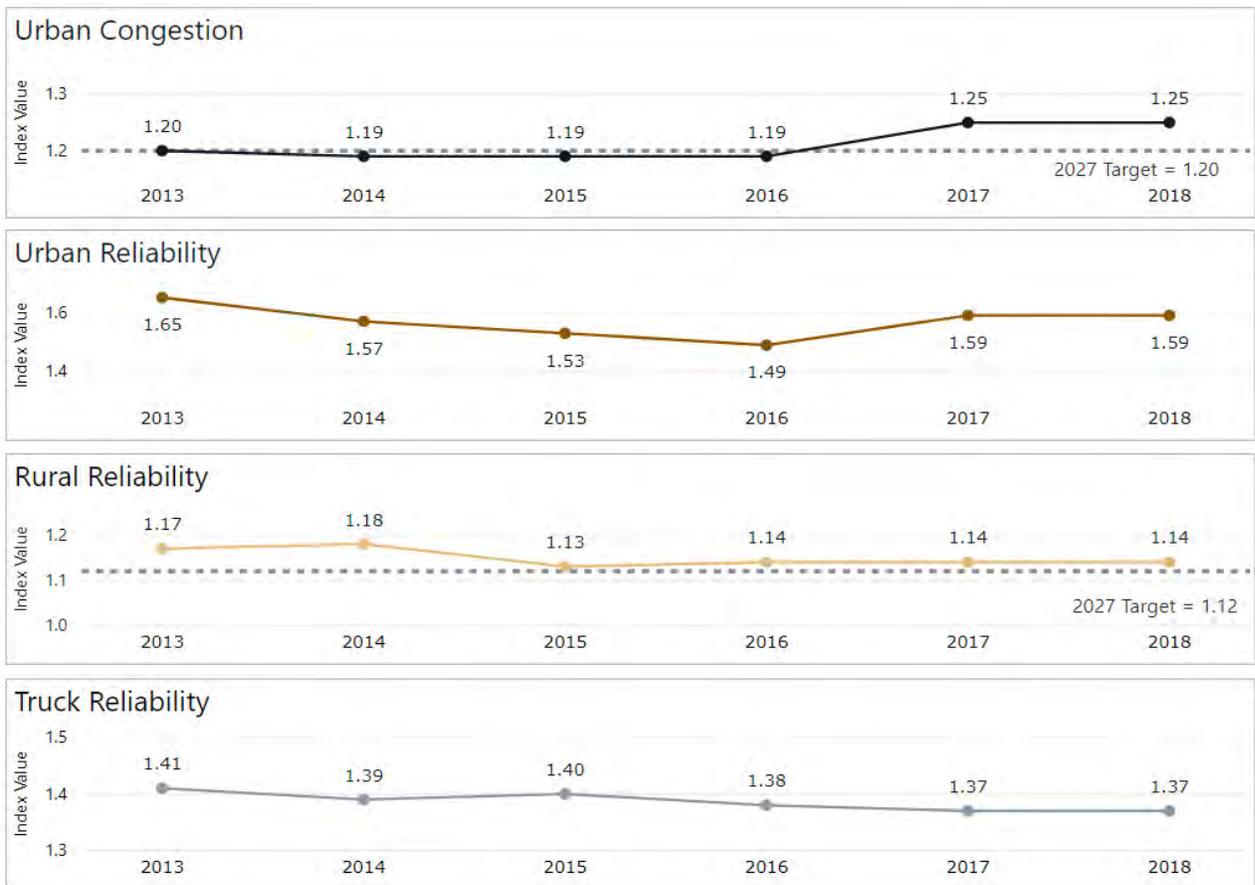
*Enhance mobility, reliability, connectivity, and mitigate congestion through targeted infrastructure and operational improvements.*

Measurable congestion relief on a statewide scale requires considerable time to achieve. Nonetheless, TxDOT has made investments designed to better manage system performance since the adoption of the TTP 2040, which identified level of service, total delay, and a Congestion Severity Index as measures for urban and rural areas of the state. In 2017, FHWA finalized national performance measures for travel time reliability on the NHS, and TxDOT is taking steps to integrate these national measures with its own system performance goal and measures. TxDOT's Performance Dashboard tracks several system performance measures, including:

- Urban congestion (ratio of average travel time to free-flow travel time),
- Urban travel time reliability (ratio of 95<sup>th</sup> percentile travel time to free-flow travel time),
- Rural travel time reliability (for areas with populations of less than 50,000),
- Truck travel time reliability (for commercial trucks only), and
- Average annual delay per person.

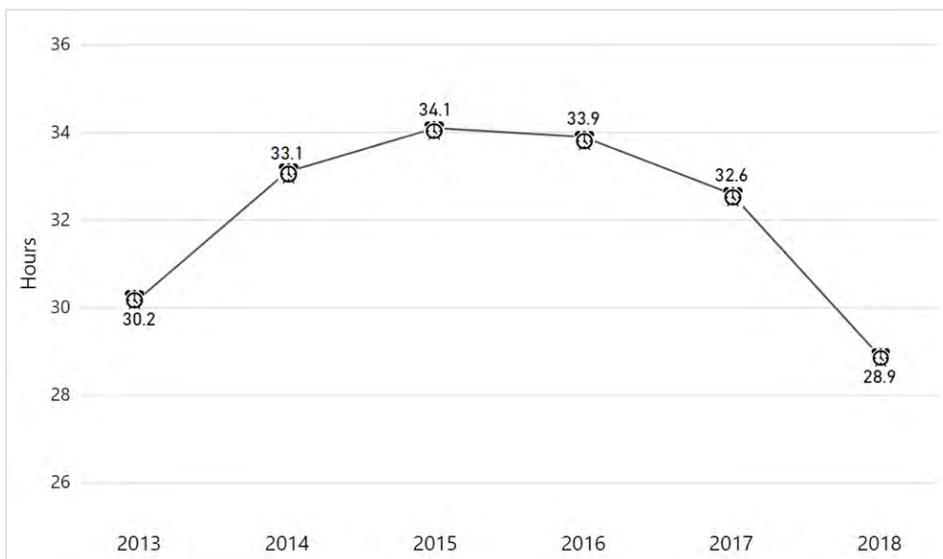
Data for TxDOT's system Performance Dashboard measures (**Figure 11** and **Figure 12**) suggest urban, rural, and truck system performance in terms of congestion and travel reliability remained constant in 2018 compared to 2017, whereas average annual delay per person (all vehicles – statewide) decreased to the lowest level in five years, possibly due to TxDOT's focus on congestion. As population growth and urbanization trends within the Texas triangle continue upward, system performance will face continued pressure. "Smart" cities and technologies are currently being evaluated by TxDOT to help make progress in urban areas given the high costs, limited right-of-way, and technical challenge of adding capacity in confined spaces.

Urban, rural, and truck congestion and travel reliability remained constant in 2018 compared to 2017, whereas average annual delay per person (all vehicles – statewide) decreased to the lowest level in five years. However, as population growth and urbanization trends within the Texas triangle continue upward, system performance will face continued pressure.



The Optimal Index value is 1.0 which would represent traffic is flowing at the posted speed limit. 2027 targets approved by the Texas Transportation Commission in February 2018 and incorporated as 10-year targets into the *Texas Transportation Plan 2040*. Analysis calendar year based.

**Figure 11. Reliability Measures**



**Figure 12. Average Annual Delay Per Person (All Vehicles - Statewide)**

## **GOAL - OPTIMIZE MULTIMODAL CONNECTIVITY**

*Provide transportation choices and improve system connectivity for all passenger and freight modes*

*Provide and improve access to jobs, transportation choices, and services for all Texans*

*Provide safe and convenient travel choices for all Texans with a focus on the complete trip*

*Support the efficient and coordinated movement of goods and services between freight modes to facilitate statewide, national, and global commerce*

*Support multimodal and intermodal planning, project development, and investments*

*Improve connectivity between urban, suburban, and rural areas and between travel modes*

The Texas Transportation Commission targeted \$11.2 billion for ten years in Category 4 - Statewide Connectivity in the 2020 Unified Transportation Program.

The Texas Transportation Commission targeted \$11.2 billion for ten years in Category 4 - Statewide Connectivity Category in the 2020 Unified Transportation Program. This includes both urban and rural (regional) areas. Projects were selected in part using predictive performance analysis to “score” each project. Included in the total scoring criteria is the “Enhance Connectivity”

criterion. This criterion focuses on whether the roadway to be improved is on the Texas Trunk System (see **Figure 13**) and if it is an intermodal connector. The criterion also looks at how the proposed improvements will affect access and reliability of the system and any additional lane miles that may be added.

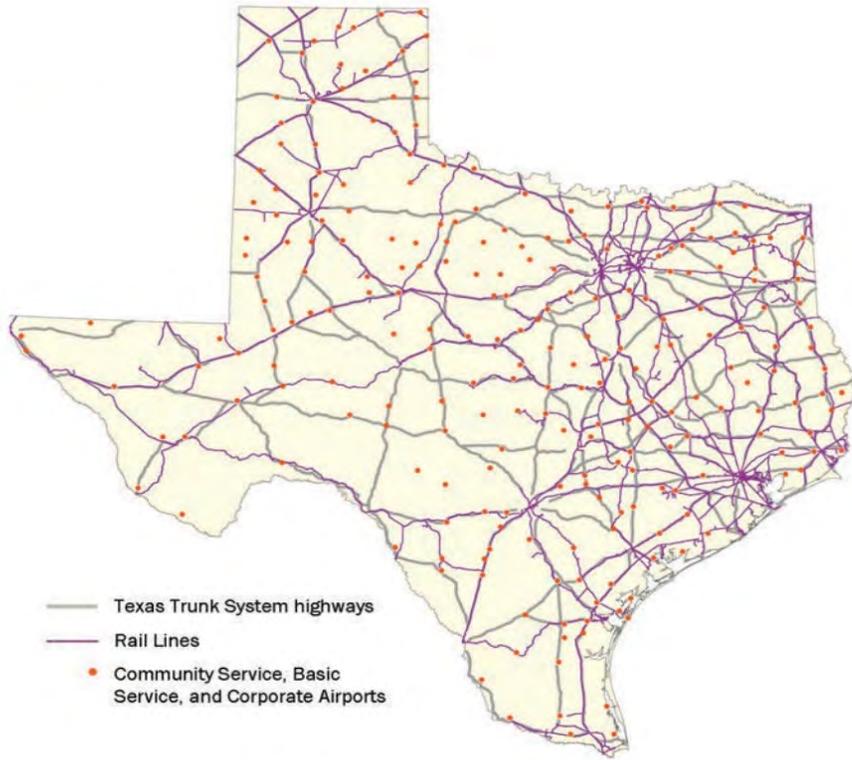


Figure 13. Texas' Trunk System

## GOAL - FOSTER STEWARDSHIP

*Manage resources responsibly and be accountable and transparent in decision-making*

*Identify sustainable funding sources and leverage resources wisely to maximize the value of investments and minimize negative impacts*

*Develop and implement a project development process that recognizes quality-of-life concerns for all system users and future generations of Texans*

*Link transportation planning with land use - Reduce project delivery delays - Coordinate project planning and delivery with all planning partners and stakeholders*

*Minimize impacts to natural, cultural, and historic resources and promote sustainability in project design and delivery*

TxDOT uses multi-objective decision analysis tools to prioritize and select projects that will optimize system performance focusing on statewide goals.

TxDOT uses multi-objective decision analysis tools to prioritize and select projects that will optimize system performance, focusing on statewide goals. The analysis tools provide a consensus-based approach to setting measures and targets while maximizing the value of the investment. Several training sessions throughout the state have occurred, ensuring that not only

TxDOT divisions and districts have been trained on and provided the analytical tools, but MPOs and Council of Governments have been given the opportunity to prioritize projects in a fiscally constrained approach. The data-driven approach creates accountability and transparency in project selection by optimizing trade-offs required to reach statewide performance targets. Early project selection can begin to set the stage for a meaningful project development process by increasing project coordination and selecting projects that include benefits to all system users. **Figure 14** shows the project scoring methodology for statewide funding categories.

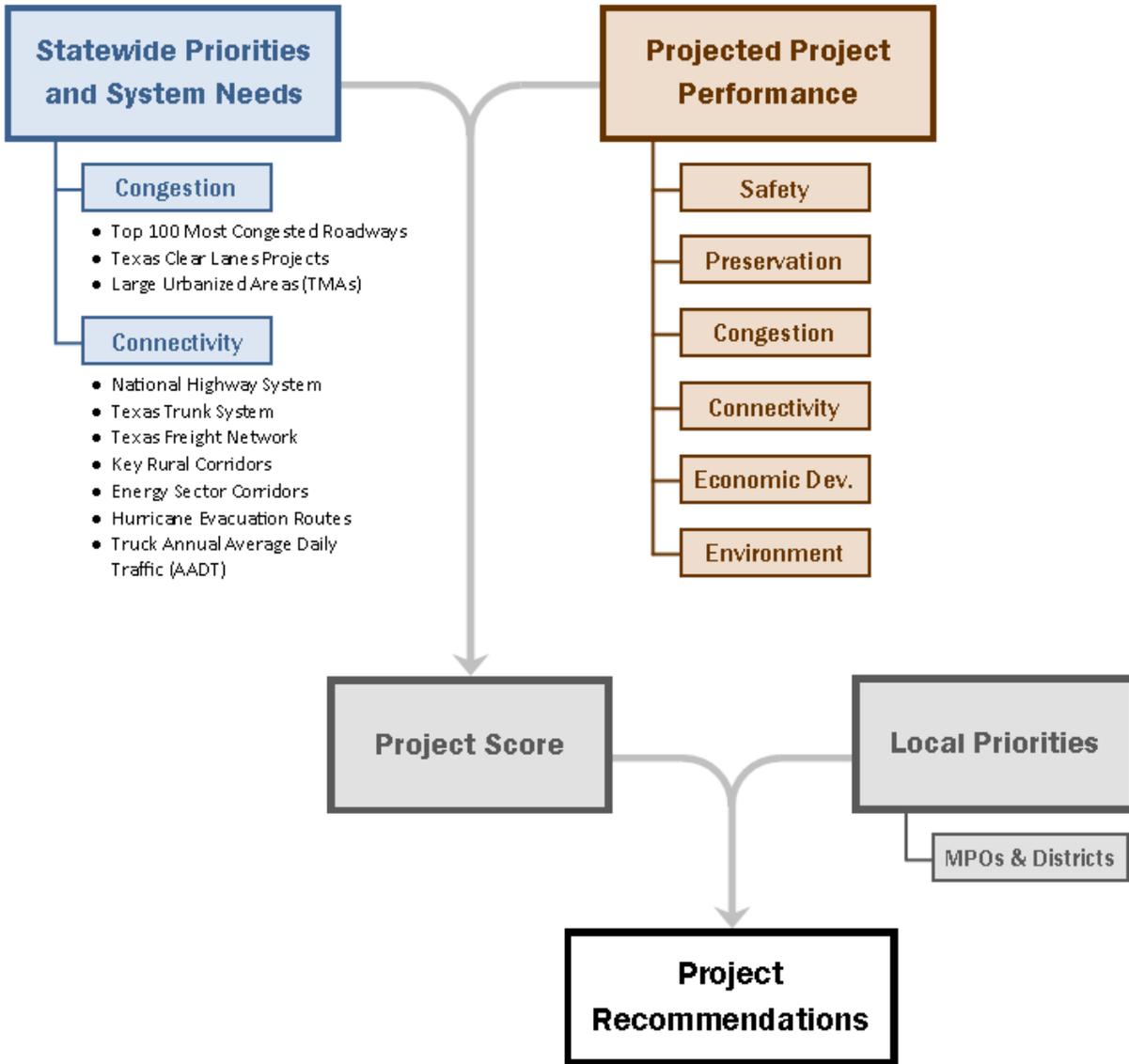


Figure 15. Project Scoring Methodology for Statewide Funding Categories

## GOAL - FOCUS ON THE CUSTOMER

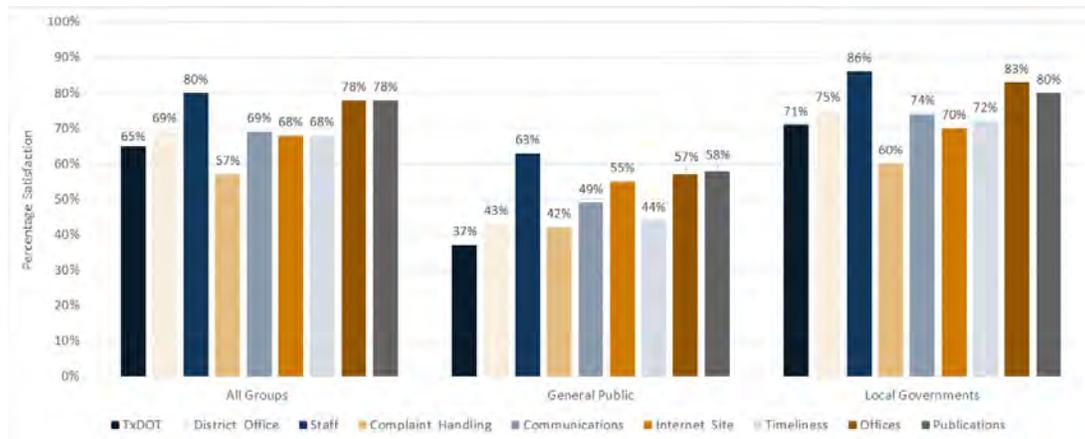
*Understand and incorporate customer desires in decision processes and be open and forthright in all agency communications*

*Collect and integrate feedback using innovative engagement techniques and technology*

*Promote and enable public participation in project planning and development - Improve the accessibility of information through innovative, understandable, and relatable communication techniques*

*Educate the public and stakeholders on transportation costs, funding availability, and investment tradeoffs*

TxDOT had a third-party conduct an anonymous customer satisfaction survey to collect feedback on the public's satisfaction with TxDOT's business services, including customer service. See **Figure 15**. According to a survey conducted in April 2018, all average satisfaction scores are above 60%. However, input from the general public shows the need for more effective public engagement.<sup>18</sup>



All Groups include 11 responses received at TxDOT's Travel Information Centers (walk-in visitors), 208 responses received from subscribers to and advertisers in *Texas Highway* magazine, and 63 responses received from attendees of TxDOT districts' public involvement meetings.

**Figure 16. Customer Satisfaction Survey**

<sup>18</sup> TxDOT. May 2018. Customer Satisfaction Survey, page 7, accessed 2/5/2020, <http://ftp.dot.tx.us/pub/txdot-info/sla/satisfaction-survey-2018.pdf>.

## **GOAL - MAINTAIN SUSTAINABLE FUNDING:**

*Identify and sustain funding sources for all modes*

*Identify and document costs to meet the state's future transportation needs - Consider all funding sources to fill the needs-to-revenues gap*

*Educate the public and stakeholders on the costs associated with constructing and preserving the system*

*Evaluate the feasibility of innovative financing solutions*

*Improve predictive capabilities for revenue forecasting and long-term needs assessments*

Throughout the SLRTP planning process, TxDOT had engaged the public to educate them on the costs associated with maintaining and improving the system. As a result of developing scenarios for TTP 2040, Propositions 1 and 7 were passed to help make an immediate impact on the rising demands of the highway system (**Figure 16**). With a diminishing value of fuel tax revenues, TxDOT will need to consider other innovative financial strategies for further study in the TTP 2050. Newly implemented technology utilizes scenario planning, helping to assure the highest priority needs are met, including expanded predictive capabilities to understand what is bought by TxDOT programs. TxDOT is also tracking the stewardship of investments to ensure that usage of funds delivers projects on time and according to budget.

Newly implemented technology utilizes scenario planning ensuring the highest priority needs are met, including expanded predictive capabilities to understand what is 'bought' by TxDOT programs.

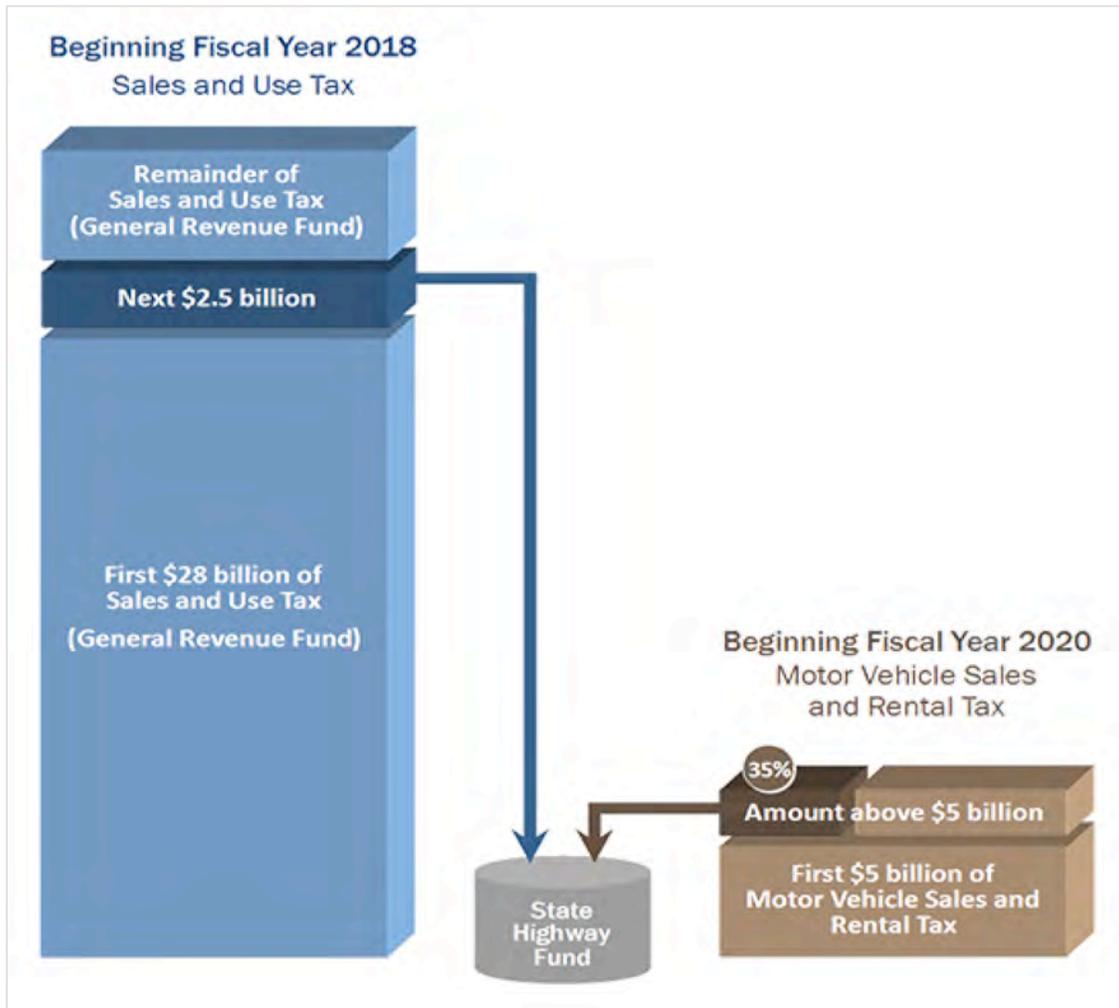


Figure 17. Proposition 7 Funding

## ANALYSIS OF FUNDING

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*201.808(i)(1): “Conduct a comprehensive analysis regarding the effect of funding allocations made to funding categories described by Section 201.991(b) and project selection decisions on accomplishing the goals described in the statewide transportation plan under Section 201.601....”*

TxDOT uses the UTP to look ahead at the next decade of forecasted transportation funding to prepare the right volume and types of projects for construction. TxDOT updates the UTP annually to reflect the latest funding estimate for the next 10-year period. As the outlook for state and federal transportation revenue changes, TxDOT’s forecasted funding may go up or down. In turn, the total dollar amount available in the UTP is a direct reflection of this financial forecasting.

The UTP encompasses all projects that TxDOT is developing and preparing for construction over the next 10 years. Each year, as hundreds of projects exit the development pipeline and enter the construction phase, the UTP authorizes new projects to begin development, based on later funding forecast. TxDOT works closely with local transportation planning partners, including MPOs, at all stages of the UTP development process, from the formation of the funding distribution strategy to the selection of specific transportation projects.

The UTP development process takes both a “top-down” and a “bottom-up” approach. From the top, the Texas Transportation Commission distributes the available UTP funding into 12 categories that address specific project types. In this step, the Commission sets broad investment levels for the UTP to achieve statewide performance measures and approved targets. At the same time, individual transportation projects are selected from the bottom up using performance-based measures, as TxDOT and planning partners around the state continually gather information on local transportation needs and priorities. TxDOT evaluates numerous candidate projects at the local level and selects projects for funding based on scoring, identified priorities, and other qualitative factors. This approach makes the UTP performance-driven, based on projected improvements to the transportation system. As the process continues, TxDOT matches selected projects with available funding in the 12 UTP categories. Since each category has defined uses and established funding levels, TxDOT must prioritize selected projects to fit the funding distribution authorized by the Texas Transportation Commission. In this way, the top-down and bottom-up approaches meet in the middle to shape the UTP (see **Figure 17**).

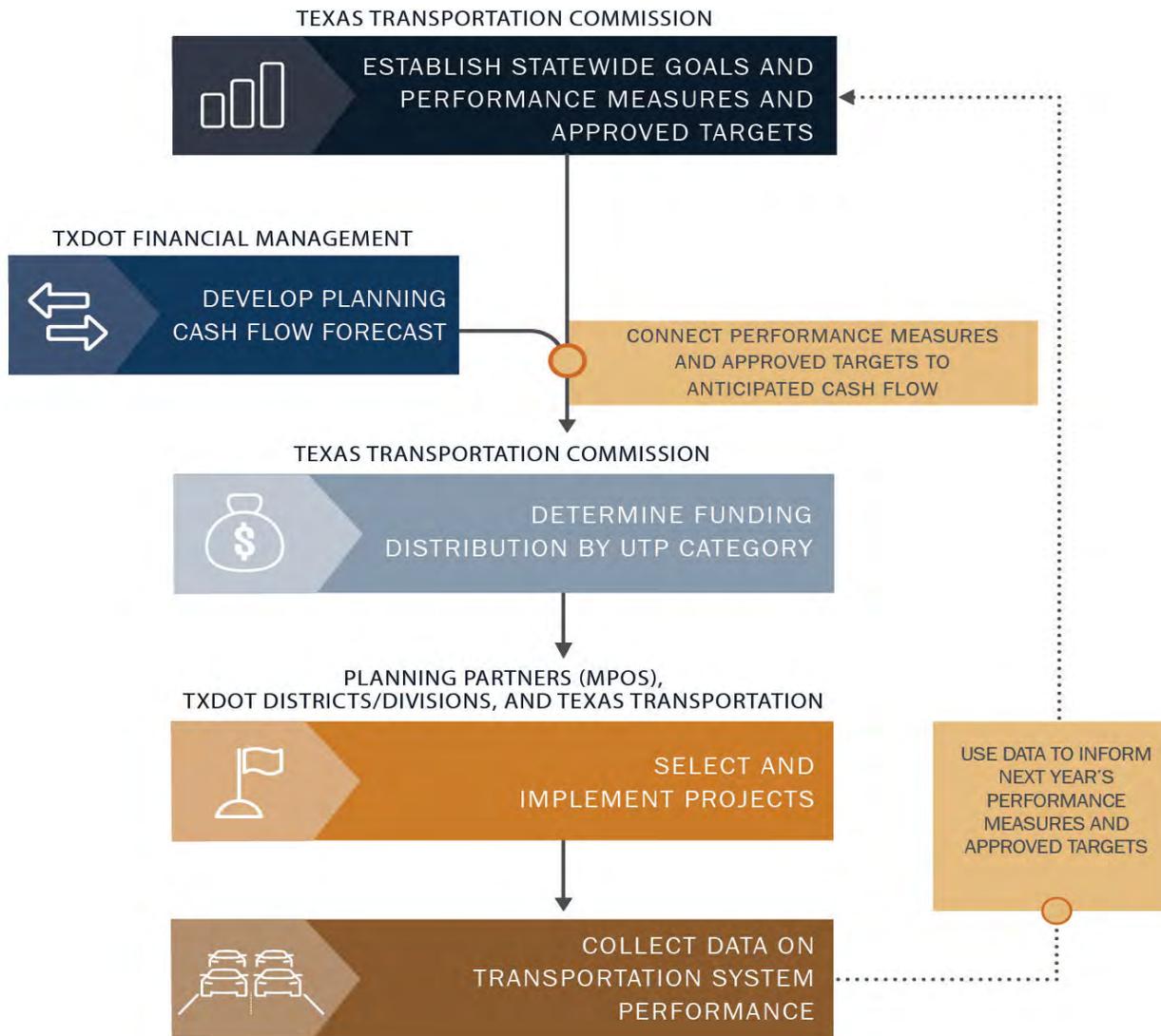


Figure 187. UTP Development Process

The next sections describe the steps involved in the UTP development process, including the analysis pertaining to the funding allocations to the UTP funding categories and the project selection decisions pertaining to the accomplishment of the statewide goals, performance measures, and approved targets.

### Establish Strategic Goals, Performance Measures, and Approved Targets

TxDOT’s statewide long-range transportation plan (SLRTP) sets the long-term transportation priorities for the state. The SLRTP defines three statewide strategic goals for the transportation system:

- promote highway safety,
- preserve existing infrastructure assets, and
- optimize system performance for drivers in urban and rural areas.

The SLRTP also establishes six performance measures and approved targets to achieve these goals (see **Table 3**). As the foundation of the UTP development process, these goals, performance measures, and approved targets drive all subsequent funding distribution and project selection in the UTP.

**Table 3. Performance Measures and Approved Targets for the Transportation System**

STRATEGIC PLAN GOAL	PERFORMANCE VISION	PERFORMANCE MEASURES	2028 TARGET
 <b>PROMOTE SAFETY</b>	Reduce crashes and fatalities through targeted infrastructure improvements, technology applications, and education	<b>SAFETY: FATALITIES/YR</b>	<b>3,708</b>
		<b>SAFETY: FATALITY RATE</b>	<b>1.16</b>
 <b>PRESERVE OUR ASSETS</b>	Maintain and preserve system/asset conditions through targeted infrastructure rehabilitation, restoration, and replacement	<b>PRESERVATION: PAVEMENT CONDITION</b>	<b>90%</b>
		<b>PRESERVATION: STATEWIDE BRIDGE CONDITION SCORE</b>	<b>90%</b>
 <b>OPTIMIZE SYSTEM PERFORMANCE</b>	Enhance mobility, reliability, connectivity, and mitigate congestion through targeted infrastructure and operational improvements	<b>CONGESTION: URBAN CONGESTION</b>	<b>1.20</b>
		<b>INDEX CONNECTIVITY: RURAL RELIABILITY INDEX</b>	<b>1.12</b>

### Develop the Planning Cash Forecast

The projected revenue in the first 10 years of this forecast forms the foundation of the UTP. The UTP is fiscally constrained by this planning cash forecast, meaning the state can only develop projects it can reasonably expect to implement with the anticipated funding levels.

Most of TxDOT’s revenue comes from a mix of state funds appropriated by the Texas Legislature (including, state motor fuels taxes, sales taxes, and vehicle registration fees) and federal highway funds appropriated by Congress. Given that many factors could change over the course of a decade, TxDOT must make assumptions about future funding amounts when generating this forecast.

### What is Proposition 1?

Texas voters passed Proposition 1 in November 2014.

Proposition 1 was a constitutional amendment to provide for the transfer of certain general revenue to the Economic Stabilization Fund and to the SHF, and for the dedication of the revenue transferred to the SHF to assist in the completion of transportation construction, maintenance, and rehabilitation projects, not to include toll roads.

In general, the traditional funding sources, such as the state's motor fuel tax, follow a stable trend from year to year. However, some newer sources, such as oil and gas drilling taxes under Texas Proposition 1 are more susceptible to fluctuations in the economy or the state budget.

The Financial Management Division balances the risk of unpredictable cash flow with the need to realistically prepare for future funding. Although the more conservative baseline cash forecast accounts for funding sources that are relatively predetermined, the planning cash forecast incorporates additional assumptions that allow TxDOT to plan for less predictable funding sources and to be prepared if eventual funding levels exceed the baseline projections.

### Determine the UTP Funding Distribution Strategy

The Texas Transportation Commission sets broad investment levels for the UTP by distributing the anticipated funding across the 12 UTP categories, which address diverse types of projects or ranges of eligible activities.

Guided by strategic goals, performance measures, and approved targets laid out in Step 1, the Commission determines the dollar amounts needed in each UTP category to best achieve those approved targets. With a limited amount of funding set by the planning cash forecast, the distribution strategy must weigh the competing needs of the three strategic goals.

All 12 UTP funding categories contribute toward all three strategic goals to varying degrees. For example, although Category 1 – Preventive Maintenance and Rehabilitation focuses on roadway preservation, a project funded through Category 1 may also improve aspects of highway safety and mobility. The strategic goals, performance measures, and approved targets are not isolated from one another, and a single project may address several of them simultaneously (see **Table 4**).

Table 4. Connecting UTP Funding Categories to Strategic Goals

	% OF PROGRAMMED FUNDS	STRATEGIC GOALS		
		PROMOTE SAFETY	PRESERVE OUR ASSETS	OPTIMIZE PERFORMANCE
<b>CATEGORY 1 - PREVENTIVE MAINTENANCE AND REHABILITATION</b>				
Roadway resurfacing	43%	●	●	●
Roadway rehabilitation and restoration	40%	●	●	●
Added passing lanes (Super 2)	5%	●	●	●
Signals, lighting, signs, striping, etc.	4%	●	●	●
All other project types	8%	●	●	●
<b>CATEGORY 2 - METROPOLITAN AND URBAN CORRIDORS</b>				
Road widening (freeway or non-freeway)	70%	●	●	●
Interchange improvements	13%	●	●	●
Roadway operational improvements	6%	●	●	●
Roadway resurfacing or rehabilitation	6%	●	●	●
All other project types	5%	●	●	●
<b>CATEGORY 4 - CONNECTIVITY CORRIDORS</b>				
Road widening (freeway or non-freeway)	66%	●	●	●
Interchange improvements	15%	●	●	●
New-location roadway	7%	●	●	●
Roadway operational improvements	5%	●	●	●
Added passing lanes (Super 2)	4%	●	●	●
All other project types	3%	●	●	●
<b>CATEGORY 5 - CONGESTION MITIGATION AND AIR QUALITY</b>				
Intersection or interchange improvements	49%	●	●	●
Local transit, commute alternatives	18%	●	●	●
Bike and pedestrian infrastructure	17%	●	●	●
Traffic management technology	8%	●	●	●
HOV/Managed lanes	5%	●	●	●
All other project types	3%	●	●	●
<b>CATEGORY 6 - STRUCTURES (BRIDGE)</b>				
Bridge structure replacement	84%	●	●	●
Bridge repair or maintenance	8%	●	●	●
Bridge rehabilitation or widening	5%	●	●	●
Road widening (freeway or non-freeway)	2%	●	●	●
<b>CATEGORY 7 - METROPOLITAN MOBILITY AND REHABILITATION</b>				
Road widening (freeway or non-freeway)	53%	●	●	●
New-location roadway	11%	●	●	●
Roadway resurfacing or rehabilitation	8%	●	●	●
Interchange improvements	7%	●	●	●
Local transit, commute alternatives	7%	●	●	●
All other project types	14%	●	●	●
<b>CATEGORY 8 - SAFETY</b>				
Medians, shoulders, pavement width	29%	●	●	●
Signals, lighting, signs, etc.	24%	●	●	●
Guard rails and safety grates	22%	●	●	●
Rumble strips and pavement markings	13%	●	●	●
Grade separations and rail crossings	13%	●	●	●
<b>CATEGORY 9 - TRANSPORTATION ALTERNATIVES</b>				
Bike and pedestrian infrastructure	85%	●	●	●
Safety rest areas	12%	●	●	●
All other project types	2%	●	●	●
<b>CATEGORY 10 - SUPPLEMENTAL TRANSPORTATION PROGRAMS</b>				
Border highway infrastructure	24%	●	●	●
State park road maintenance	17%	●	●	●
Emergency repairs	15%	●	●	●
Bike and pedestrian infrastructure	13%	●	●	●
Ferry boats and facilities	8%	●	●	●
All other project types	24%	●	●	●
<b>CATEGORY 11 - DISTRICT DISCRETIONARY</b>				
Roadway resurfacing or rehabilitation	59%	●	●	●
Added passing lanes (super 2)	15%	●	●	●
Road widening (non-freeway)	10%	●	●	●
Roadway operational improvements	7%	●	●	●
All other project types	10%	●	●	●
<b>CATEGORY 12 - STRATEGIC PRIORITY</b>				
Road widening (freeway or non-freeway)	76%	●	●	●
Interchange improvements	13%	●	●	●
New-location roadway	6%	●	●	●
All other project types	5%	●	●	●

●	PRIMARY GOAL ADDRESSED
●	SECONDARY GOAL ADDRESSED

Given funding constraints, it may not be possible to fully attain all six approved targets within a single UTP. As a result, the funding distribution strategy may change from year to year to focus on diverse needs or address changing conditions in the field. Ultimately, the Commission weighs the options and selects the distribution strategy that will provide a balance of estimated outcomes.

For the 2020 UTP, the Commission selected a distribution strategy consistent with the investments of the previous UTP. The decision to maintain current investment levels was made because programs and projects with previously identified categorical funding require several years to develop and construct. Maintaining consistent funding levels allows TxDOT to deliver these projects, measure their impact on system performance, and further evaluate the distribution strategy’s effectiveness at achieving the approved targets and realizing the three strategic goals.

### Release the UTP Planning Targets

Based on the proposed funding distribution strategy, TxDOT determines a total dollar amount for each UTP funding category. These totals, referred to as UTP planning targets, set the amount available for planned projects from each category (see **Table 5**). To attain regional equity, the UTP allocates some category funding around the state by formula, based on factors such as regional population and vehicle miles traveled. The UTP also distributes funding in other categories on a project-specific basis, rather than geographically. TxDOT’s TPP Division provides each TxDOT district and MPO in the state with localized planning targets that identify the dollar amounts by category that each district and MPO can attach to planned projects.

**Table 5. 2020 UTP Funding Distribution by Category**

Funding Category	\$ (millions)
1 – Preventative Maintenance and Rehabilitation	13.9
2 – Metropolitan and Urban Area Corridor Projects	11.5
3 – Non-traditionally Funded Transportation Projects	6.1
4 – Statewide Connectivity Corridor Projects	11.2
5 – Congestion Mitigation and Air Quality Improvement	2.2
6 – Structures Replacement and Rehabilitation	3.6
7 – Metropolitan Mobility and Rehabilitation	4.6
8 – Safety	4.0
9 – Transportation Alternatives	0.9
10 – Supplemental Transportation Projects	0.6

11 – District Discretionary	3.2
12 – Strategic Priority	15.7
<b>Total</b>	<b>77.6</b>

### **Prioritize and Select Transportation Projects Locally**

The diverse geographic regions of Texas have different transportation needs. Accordingly, TxDOT districts and MPOs customize their own metrics for identifying the most important transportation projects in their respective regions. However, all evaluation criteria must align with statewide strategic goals, performance measures, and approved targets for the transportation system.

TxDOT provides its districts and partnering MPOs with a software application to compare candidate projects based on their projected benefits to the Texas transportation system. The application evaluates each project’s impact on highway safety, preservation, congestion, and connectivity, as well as its economic and environmental effects. TxDOT uses this data-driven approach to select the right projects based on performance scores and expected return on investment.

### **Identify Funding for the Transportation Projects**

Once a project is selected, TxDOT refines the construction cost estimate and identifies potential funding. The process of matching selected transportation projects to available funds is known as programming. Adhering to the UTP planning targets, TxDOT districts collaborate with the MPOs to assign funding from each applicable UTP category to the priority projects in their regions. A project may be programmed with dollars from multiple UTP categories if the project type is eligible. However, the UTP planning targets limit the dollar amount that each district or MPO can program from certain categories. At this point, projects are also assigned a preliminary construction date within the UTP’s 10-year time frame.

### **Prioritize and Select Transportation Projects at the State Level**

Projects funded through certain statewide categories are selected by TxDOT divisions with corresponding specializations. For example, TxDOT's Bridge Division manages Category 6 - Bridge based on measures of bridge conditions around the state. For statewide categories in which the Texas Transportation Commission selects projects, TxDOT’s TPP Division ranks candidate projects submitted by TxDOT districts to determine which ones best accomplish the state’s strategic goals, performance measures, and approved targets, and address various logistical and strategic considerations. The Commission uses this information to inform its final selection decisions.

## **Produce the UTP Document and Project Listing**

TxDOT's TPP Division produces the draft UTP document, which lists the projects funded through Categories 2, 4, 12, and 10 (Coordinated Border Infrastructure, or CBI) – including those previously authorized in past years and newly submitted for approval.

## **Conduct Statewide Public Involvement**

TxDOT actively engages the public to gather comments before the UTP is approved. TxDOT offers many opportunities for public involvement, including public meetings and hearings. During these events, members of the public can learn more about the UTP and submit comments on any aspect of the plan.

## **Texas Transportation Commission Adopts the UTP**

TxDOT staff formally presents the final proposed UTP for adoption at a scheduled meeting of the Texas Transportation Commission. Per the *Texas Administrative Code*, the Commission must adopt the UTP no later than August 31 each year and authorize all proposed programming of funds from Categories 2, 4, 12, and 10 CBI.

## STATUS OF MAJOR PROJECTS

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201.809(a)(2): “[T]he status of each project identified as a major priority....”

Major project meets one or more of these criteria:

- The project has a total estimated cost of \$500 million or more in year of expenditure dollars.
- There is a high level of public or legislative interest in the project.
- The project includes a significant level of local or private entity funding.
- The project is unusually complex.
- The project satisfies a time sensitive critical need of the department related to safety, system connectivity, a hurricane evacuation route, reconstruction of a large infrastructure facility, or other similar need.<sup>19</sup>

Currently there are two UTP projects that meet one of these criteria: SH 99 (Grand Parkway) Segments H, I-1, and I-2; and U.S. 281 (segment between Loop 1604 and Bexar/Comal County Line).

### **SH 99 (Grand Parkway) Segments H, I-1, and I-2**

Grand Parkway is a proposed 180-mile loop around the greater Houston area to improve connectivity with other Houston roadways, relieve congestion, encourage economic growth, and improve safety and reliability. Grand Parkway is being developed and constructed in 11 segments. Segments H, I-1, and I-2 (see **Figure 18**) will increase capacity by providing:

- A new two-lane controlled-access facility from U.S. 59/I-69 North to I-10 (Segments H and I-1).
- Four additional toll lanes from FM 1405 to SH 146 (Segment I-2B).
- Upgraded tolling equipment to existing facility from I-10 to FM 1405 (Segment I-2A).

Segment H, I-1, and I-2 represent 52.8 miles of the 180-mile SH 99 (Grand Parkway) loop, stretching from U.S. 59/I-69 in New Caney (north) to SH 146 in Baytown (south). The cost of the project is estimated at \$894 million. SH 99 Grand Parkway Segments H, I-1, and I-2 are expected to be substantially completed 2022.

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<sup>19</sup> Title 43, Rule 16.106, of the *Texas Administrative Code*, at [https://texreg.sos.state.tx.us/public/readtac\\$ext.TacPage?sl=R&app=9&p\\_dir=&p\\_rloc=&p\\_tloc=&p\\_ploc=&pg=1&p\\_tac=&ti=43&pt=1&ch=16&rl=106](https://texreg.sos.state.tx.us/public/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=43&pt=1&ch=16&rl=106).

Major progress on this project includes:

- Closing on the TIFIA loan.
- Establishing field offices and laboratories, as well as calibrating testing equipment.
- Initiating ROW acquisition for the east part of Segment H and all of Segment I-1.
- Initiating construction in July 2018. Specifically, construction work began on the embankment, drainage, utility adjustment, and bridges in the western part of Segment H. Construction also began on the embankment, drainage, utility adjustment, and bridges in Segments I-2A and I-2B.

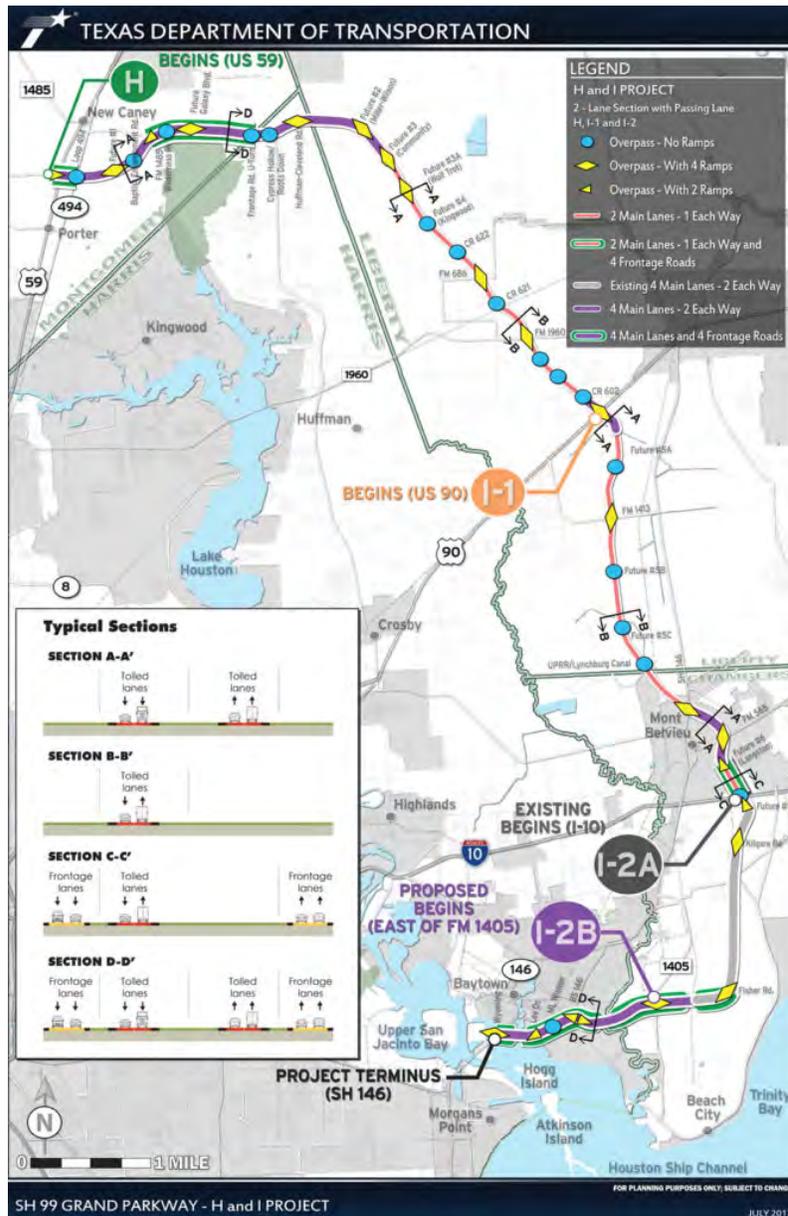


Figure 198. SH 99 (Grand Parkway) Segments H, I-1, and I-2

## U.S. 281 (Segment Between Loop 1604 and Bexar/Comal County Line)

U.S. 281 from Loop 1604 to the Bexar/Comal County line is one of the most congested roads in San Antonio and one of the 50 most congested corridors in Texas. TxDOT has been improving an 8-mile stretch of U.S. 281 from Loop 1604 to Borgfeld Drive in Bexar County

(see **Figure 19**). The U.S. 281 North project involves:

- Bicycle and pedestrian facilities
- Direct connection to the new VIA Metropolitan Transit U.S. 281 Park and Ride at Stone Oak Parkway
- Two general-purpose lanes and one HOV lane in each direction
- Necessary transition and auxiliary lanes
- Remaining four interchange direct connectors at Loop 1604

U.S. 281 is being constructed in two segments:

- Segment 1: Loop 1604 to North of Stone Oak Parkway
- Segment 2: North of Stone Oak Parkway to Borgfeld Drive.

Construction on Segment 2 began in 2019.

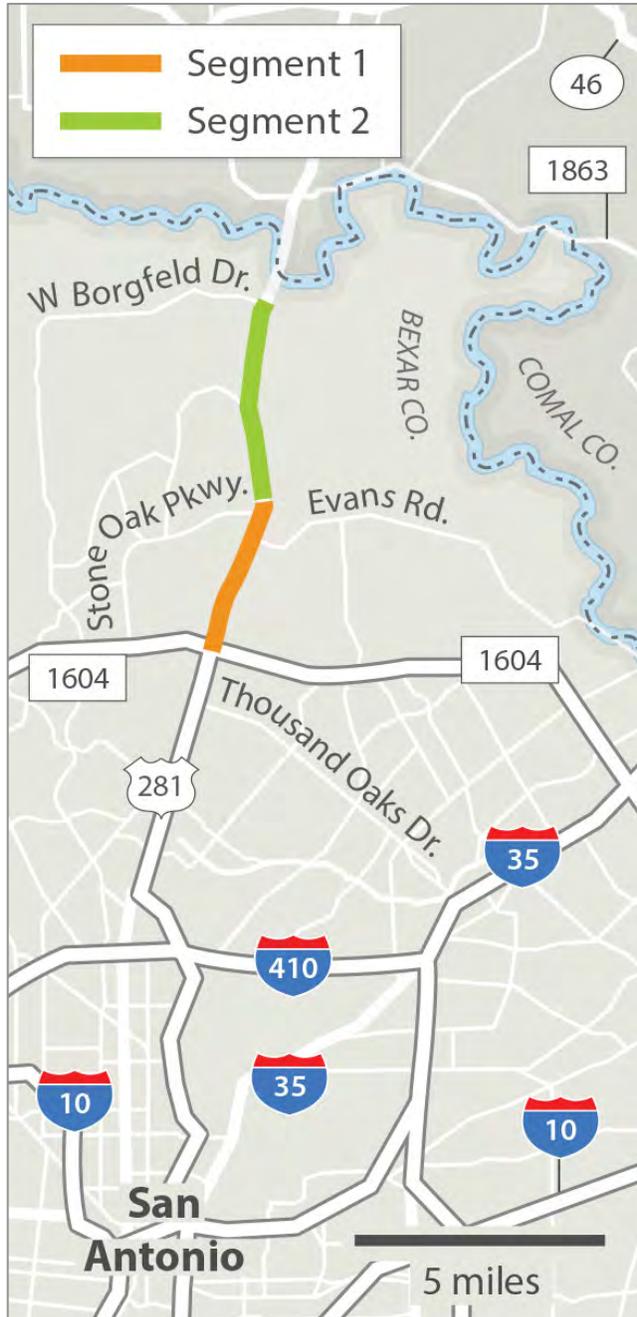


Figure 20. U.S. 281 (Segment Between Loop 1604 and Bexar/Comal County Line)

## SUMMARY OF PROJECT IMPLEMENTATION BENCHMARKS

201.809(a)(3): “[A] summary of the number of statewide project implementation benchmarks that have been completed....”

**Table 6** contains the benchmark counts for each district for those tasks necessary for a project to go to letting. This includes:

- The completion of environmental documentation,
- Purchase of needed right of way,
- Utility adjustment,
- Plans, specifications, and estimate, and
- Schematic designs.

**Table 6. Quarterly Review Process 2019 Benchmark Status Counts**

District Name	ENV Complete	ROW Complete	UTL Complete	PS&E Complete	Schematic Complete
Abilene	9	0	2	12	0
Amarillo	11	0	0	20	0
Atlanta	63	2	6	77	0
Austin	29	1	1	44	13
Beaumont	78	0	0	1	0
Brownwood	18	3	16	0	1
Bryan	84	1	0	11	0
Childress	0	1	1	0	0
Corpus Christi	44	0	0	49	0
Dallas	116	12	6	37	78
El Paso	30	4	3	30	0
Fort Worth	22	11	19	5	0
Houston	86	33	4	17	2
Laredo	13	8	0	2	0
Lubbock	1	0	0	2	0
Lufkin	51	1	1	89	2
Odessa	62	0	0	34	18
Paris	146	10	2	2	0

District Name	ENV Complete	ROW Complete	UTL Complete	PS&E Complete	Schematic Complete
Pharr	53	11	12	20	2
San Angelo	50	0	0	49	0
San Antonio	78	6	6	57	26
Tyler	51	1	2	51	0
Waco	21	0	5	16	0
Wichita Falls	55	7	0	10	0
Yoakum	48	2	0	118	0
<b>Total</b>	<b>1,219</b>	<b>114</b>	<b>86</b>	<b>753</b>	<b>142</b>

ENV=environmental clearance

ROW=right of way

UTL=utilities

PS&E=plans, specifications, and estimate

## ACCURACY OF FINANCIAL FORECAST

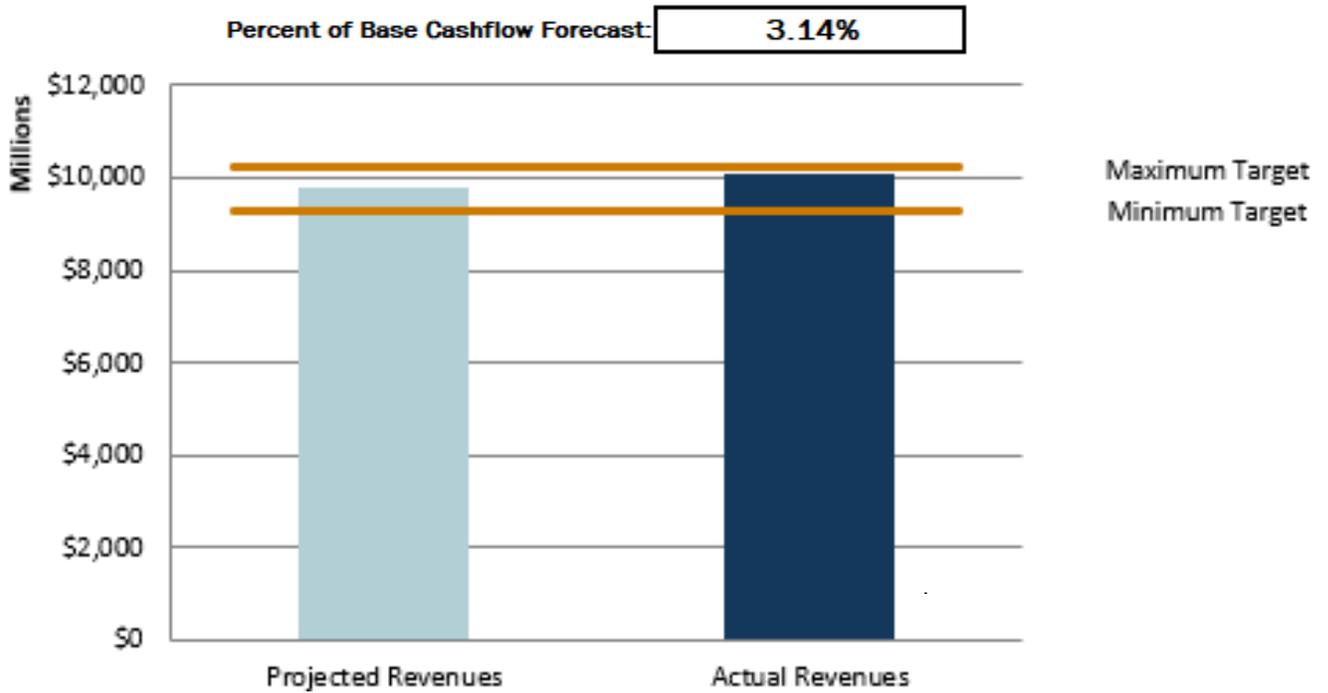
201.809(a)(4): “[I]nformation about the accuracy of previous department financial forecasts....”

TxDOT’s Revenue Projections Attainment performance measure shows the accuracy of the Cash Forecast in projecting State Highway Fund (SHF) revenue. The performance measure calculates the actual SHF revenue received during the fiscal year (FY) as a percentage of the projected revenue from the beginning FY September Cash Forecast. The data come from the September Cash Forecast, the Comptroller’s revenue estimates, the Comptroller’s Uniform Statewide Accounting System, and the State Internet Reporting System. Federal and local reimbursements are excluded because they are tied to project activity. FIN quantifies the measure annually and reports it to TxDOT Administration.

The alignment between projected and actual revenue assists in the overall planning process for availability of funding for operations, project development, and project letting. The goal is to align the actual fiscal year revenue to within +/-5% of the September Cash Forecast. The outcome of 3.14% was within the ideal range of +/-5% of the projected revenues; therefore, the revenue projections attainment goal to the performance measure was met (**Figure 20**).

The **projected revenue** matches SHF non-reimbursement-based revenue projections by the Cash Forecast team at the beginning of the fiscal year (September Cash Forecast report). This revenue includes Proposition 1 and Proposition 7 transfers and excludes SHF concession and toll revenue subaccounts. Revenue is influenced primarily by economic and population factors. **Actual revenue** equals SHF non-federal/local cash revenue plus Proposition 1 and Proposition 7 transfers collected during the fiscal year. It excludes SHF concession and toll revenue subaccounts.

Target (+/-)	Projected Revenues	Actual Revenues	Minimum Target (Projected Revenues Minus 5%)	Maximum Target (Projected Revenue Plus 5%)
5%	\$9,765,455,311	\$10,071,801,234	\$9,277,182,546	\$10,253,728,077



\* Actual revenues include state motor fuel tax, vehicle registration fees, lubricant sales tax, other agency revenue, and miscellaneous revenue. Ninety percent of the total revenue is from the top four items listed.

Figure 210. Revenue Projections Attainment for FY 2019.

## Appendix A – Estimate of Effective Investment in Performance-Areas

### Estimate of Effective Investment in Performance Areas

#### *Investment Crosswalk*

TxDOT has 12 funding categories, some of which are further subdivided, and four areas of project performance measures. Therefore, a “crosswalk” was developed based on historical data to evaluate the effective contribution that each category of funding provides to each performance measure. For example, although Category 12 Texas Clear Lanes focuses on congestion mitigation, Texas Clear Lanes projects will also contribute to improving safety, preservation, and other measures. The aggregated crosswalk of effective investment in each performance area is used to predict the total performance outcome. This crosswalk is then used to help determine the investment levels needed in each category to best address the performance targets approved by the Commission in the Statewide Long-Range Transportation Plan.

The four primary performance areas that TxDOT has established to focus on with respect to making project investment decisions are:

- Safety
- System Preservation
- Congestion Mitigation
- Enhanced Connectivity

TxDOT evaluated the 2019 UTP portfolio of projects and determined how investments in each category mapped to the four key performance areas. The result was the Investment Crosswalk matrix in the table below (Table 7).

**Table 7. Investment Crosswalk Matrix**

Category	Safety	Bridge Preservation	Pavement Preservation	Congestion Reduction	Enhance Connectivity	Other	Total
1	7%	2%	75%	14%	0%	2%	100%
2	1%	1%	2%	94%	2%	1%	100%
3	2%	3%	7%	85%	0%	2%	100%
4 Regional	3%	1%	8%	71%	16%	3%	100%
4 Urban	3%	1%	8%	71%	16%	3%	100%

<b>5</b>	6%	4%	13%	63%	1%	13%	100%
<b>6</b>	1%	90%	1%	6%	1%	1%	100%
<b>7</b>	4%	3%	11%	76%	0%	6%	100%
<b>8</b>	90%	0%	3%	4%	0%	2%	100%
<b>9</b>	21%	5%	15%	25%	4%	29%	100%
<b>10</b>	3%	3%	8%	66%	6%	13%	100%
<b>11</b>	6%	3%	31%	56%	3%	2%	100%
<b>12 Strategic Priority</b>	2%	6%	10%	80%	0%	1%	100%
<b>12 Clear Lanes</b>	2%	6%	10%	80%	0%	1%	100%

For the 2020 UTP, the total estimated investment for each performance area was calculated by apportioning each category funding to each of the performance areas. This was done by multiplying the category funding amount by the crosswalk percentages shown in **Table 7** above. The total estimated investment for the individual performance areas is then the sum of each of the contributing category apportionments (see **Table 8** for an example).

**Table 8. Example Investment Crosswalk**

Funding Category	Estimated Equivalent Investment in Key Performance Area (\$B)				
	10-Year Planning Targets	Safety	Preservation	Congestion Reduction	Enhance Connectivity
<b>1</b>	13.80	4.00	6.20	0.40	3.20
<b>2</b>	12.60	5.20	2.40	3.00	2.00
<b>3</b>	5.40	1.10	1.10	1.70	1.60
<b>4 Regional</b>	6.70	2.90	1.20	0.00	2.60
<b>4 Urban</b>	5.40	2.10	1.20	0.50	1.60
<b>5</b>	2.20	1.20	0.40	0.40	0.20
<b>6</b>	3.50	1.90	0.10	0.00	1.40
<b>7</b>	4.50	2.60	0.90	0.50	0.50

8	3.30	3.10	0.10	0.00	0.20
9	0.90	0.70	0.20	0.00	0.00
10	0.50	0.40	0.00	0.00	0.10
11	3.10	1.10	1.10	0.10	0.80
12 Clear Lanes	5.00	2.10	1.00	1.20	0.80
12 Strategic Priority	8.30	3.20	1.80	0.80	2.50
<b>Total</b>	<b>75.40</b>	<b>31.30</b>	<b>17.70</b>	<b>8.80</b>	<b>17.60</b>

The total estimated investment percentages for safety, preservation, and connectivity were then applied, based on the given investment to determine the anticipated performance for those areas.