

# 2.0: Financial Reality

## Mobility 2045 Supported Goals

Pursue long-term sustainable revenue sources to address regional transportation system needs.

Provide for timely project planning and implementation.

Develop cost-effective projects and programs aimed at reducing the costs associated with constructing, operating, and maintaining the regional transportation system.

## Introduction

Funding improvements to the region's multimodal transportation system is a complex undertaking. federal regulations require Metropolitan Transportation Plans be financially constrained to available resources. Projects and programs may only be included in the long-range plan if funding can be identified for their implementation. In other words, this plan only programs the amount of money it can reasonably expect to receive.

In addition to the requirement of financial constraint, the Metropolitan Transportation Plan must report financial information for total project costs and must use year-of-expenditure dollars to more accurately reflect the true cost of implementing programs and projects over time. Financial information in Mobility 2045 is adjusted for inflation and represents year-of-expenditure costs for the total project unless otherwise noted.

This financial plan considers general economic conditions, as well as regional needs, over the planning horizon. Nationwide, traditional federal and state revenues are declining because of inflation, rising construction costs, and increasing fuel efficiency. Locally, the Regional Transportation Council continues to take a leadership role in leveraging funds and pursuing sustainable long-term solutions for funding our region's transportation system.

### TRANSPORTATION FUNDING AT A GLANCE:

Four documents are important for funding transportation projects: the Metropolitan Transportation Plan, the Transportation Improvement Program, the 10-Year Plan, and the Unified Transportation Program. The Metropolitan Transportation Plan is a long-range planning document that acts like a budget. It serves as a guide for the projects and programs the region would like to implement over the life of the Metropolitan Transportation Plan. It also identifies potential ways in which the desired improvements could be funded. The 10-Year Plan identifies project staging during the first 10 years of the Metropolitan Transportation Plan.

The Transportation Improvement Program is a near-term planning document that acts like a checking account. It lists the specific projects that will be programmed for funding, typically within the next two to four years. For a project to be implemented, it must be in both the Metropolitan Transportation Plan and the Transportation Improvement Program.

The Unified Transportation Program is a 10-year programming document updated and adopted yearly by the Texas Transportation Commission. It lists funding for projects and programs over a 10-year time frame for the entire state, and is used to develop funding estimates for the North Central Texas region.

### IN THIS CHAPTER:

- Financial policies
- The financial planning process
- Regional revenue and expenditure estimates
- Long-term funding issues and solutions

### DID YOU KNOW ...

... current state fuel taxes are 20¢ per gallon and have not increased since 1991?

... federal fuel taxes are 18.4¢ per gallon for gasoline and 24.4¢ for diesel and have not increased since 1993?

... state and federal fuel taxes are assessed on a per-gallon basis? This means that no matter how much fuel costs, you are always paying the same 38.4 cents of tax for each gallon.

## Mobility 2045 Policies

Policies represent an important part of the planning process as they often set the tone for project or program development and delivery. The following policies are broad and meant to guide the financial aspects of transportation planning. These policies are not intended to address the specific allocation of funds or funding for individual projects and programs.

**F3-001:** The Regional Transportation Council will select and program projects within the guidelines established by the funding source. Programming and selection guidelines for Regional Transportation Council Local Funds are determined by the Regional Transportation Council.

**F3-002:** Incorporate sustainability and livability options during the project selection process. Include additional weighting or emphasis as appropriate and consistent with Regional Transportation Council policy objectives including, but not limited to, demand management, air quality, natural environment preservation, social equity, or consideration of transportation options and accessibility to other modes (freight, aviation, bicycle, and pedestrian).

**F3-003:** Ensure adequate funding for multimodal elements within implemented projects.

**F3-004:** Utilize project staging and phasing of Metropolitan Transportation Plan recommendations to maximize funding availability and cash flow.

**F3-005:** Ensure that adequate funding is given to maintenance and operations of the existing multimodal transportation system consistent with federal and/or state guidelines and recommendations.

**F3-006:** Pursue roadway and transit pricing opportunities to expedite project delivery.

**F3-007:** Pursue project cost reductions through value engineering, streamlined project development, and other activities.

**F3-008:** Pursue an increase in North Central Texas' share of state and federal allocated funds consistent with the Regional Transportation Council's legislative position.

**F3-009:** Pursue legislative actions aimed at increasing revenue through initiatives identified by the Regional Transportation Council.

**F3-010:** Leverage traditional and non-traditional transportation funding to expand services across the region.

**F3-011:** Utilize multiple funding sources, including innovative funding methods, as appropriate to fully fund projects.

**F3-012:** Support planning activities, including studies, data collection, surveys, and analyses to advance transportation policies, programs, and projects.

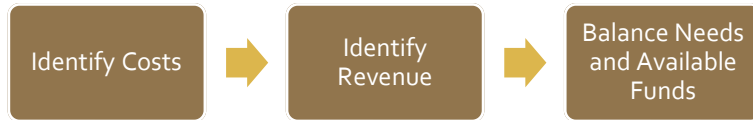
## Financial Planning Process

This section outlines the methodology used to financially constrain the Metropolitan Transportation Plan (MTP). In the financial planning process, recommendations are first developed based on the goals of the MTP, and costs to implement the recommendations are estimated and summed. Next, revenue sources are identified and projected through the plan horizon year of 2045. Then revenues are allocated to recommendations as allowed by constraints on those revenues. Revenues are then compared to projected expenditures. When expenditures do not exceed available revenue, the MTP is financially constrained.

This plan also analyzes funding allocations to assess whether they create an appropriate level-of-service. In other words, the last part of the financial planning process is to adjust funding for the different categories to reflect the goals and policies outlined in the MTP. It is important to note that some sources of revenue for transportation improvements can only be spent on specified modes of transportation such as roadways or rail.

**Exhibit 2.0-1** is an overview of the financial planning process for Mobility 2045. A more detailed description of the financial constraint process can be found in **Appendix A: Financial Reality**.

**Exhibit 2.0-1: Financial Planning Process**



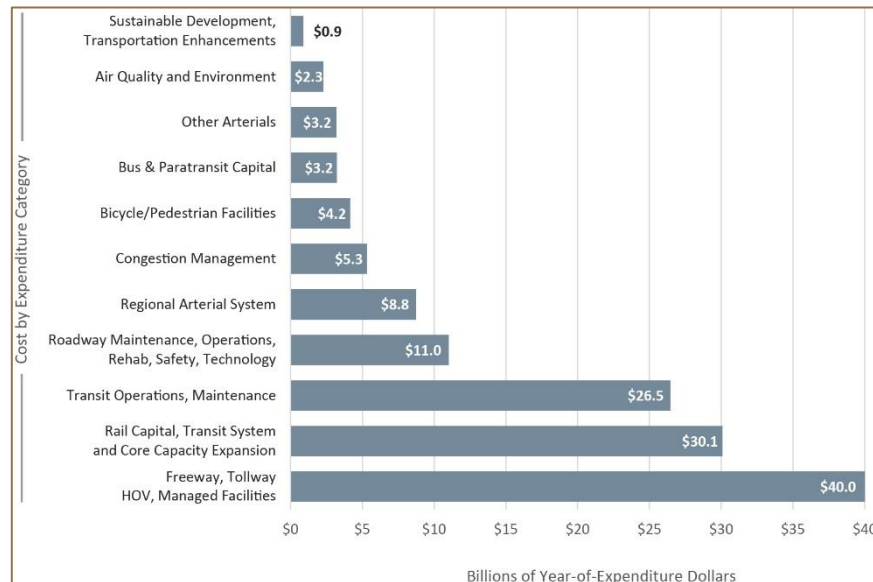
Once all costs are estimated and summed, they are matched with an available revenue source. Balanced revenues and expenditures are reported in **Exhibit 2.0-5**.

## Mobility 2045 Revenue and Expenditure Estimates

### Costs

The costs for individual projects and programs were estimated in two ways. Direct costs for known individual projects were provided by the projects' implementing agencies. If direct costs were not available, unit costs were used to calculate total project costs. All costs are presented in year-of-expenditure dollars and represent the total cost associated with each project. Costs for recommended programs and project categories are reported in **Exhibit 2.0-2**.

**Exhibit 2.0-2: Mobility 2045 Costs by Category**



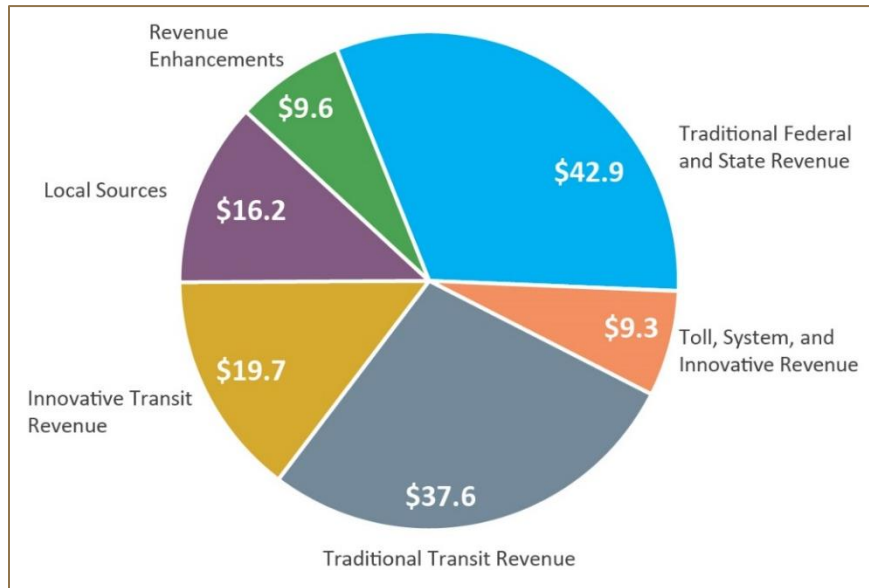
### Revenues

A number of revenue sources are available to build and maintain the multimodal transportation system; however, many revenue streams are restricted to certain uses. This means only particular types of improvements can be funded with a given source. Additional detail about specific funding sources can be found in Appendix **A: Financial Reality**.

Funds available for implementing projects and programs are estimated using financial forecasting models. Because the future is anything but certain, looking to the past is a good start for determining how much revenue the region can reasonably expect. The financial models used by the North Central Texas Council of Governments track and project revenue based on historical trends and anticipated future growth. State legislative action in the 2013 and 2015 sessions allowed for the additional transportation revenue approved by voters as Proposition 1 and Proposition 7. The Texas Department of Transportation allocates these new sources of revenue within various categories in their funding document, called the Unified Transportation Program. Along with new funds, the financial forecasts in Mobility 2045 include the following sources:

- Federal and state motor fuels taxes
- State vehicle registration revenues
- Other federal and state taxes
- Revenue from the region's toll and managed lane system
- Local funds
- Sales tax collected by transit authorities
- Proposition 1 funds
- Proposition 7 funds

**Exhibit 2.0-3: Mobility 2045 Revenue Sources, in Billions**



As seen in **Exhibit 2.0-3**, the greatest funding source for roadway projects is traditional state and federal sources, which come from motor fuel taxes and vehicle registration fees. Other revenue sources include toll user fees, state and local bond programs, and local governments’ general funds or capital improvement funds. Transit in the region is largely funded by sales taxes that are collected within a transit authority’s service area. Other transportation improvements like bicycle/pedestrian facilities and congestion management tools can also be funded through these sources. As will be discussed later in this chapter, traditional federal and state revenues are projected to be lower in the future because of inflation and increasing fuel efficiency of vehicles.

**Mobility 2045 Financial Plan Summary**

After evaluating historic trends, the current state of transportation funding, and the plausibility of future funding, a revenue estimate of \$135.4 billion was developed for Mobility 2045. **Exhibit 2.0-4** summarizes the major expenditure categories where revenue is anticipated to be spent to implement Mobility 2045 recommendations. Expenditures are listed in the order set by the goals and policies of Mobility 2045. Note that the priority of each category does not necessarily correspond to a higher or lower funding amount. This is because some high-priority improvements, such as management of the system, may

have a relatively low cost. Additionally, some revenue sources are restricted to certain uses, like road or rail.

**Exhibit 2.0-4: Major Expenditures**

Mobility 2045 Planning Approach	
Infrastructure Maintenance*	\$37.5
Management and Operations	\$9.5
Growth, Development, and Land Use Strategies	\$3.2
Rail & Bus**	\$33.3
HOV/Managed Lanes + Freeways/Tollways and Arterials	\$51.9
<b>Total, Actual \$, Billions</b>	<b>\$135.4</b>

*Values may not sum due to independent rounding*

\*Includes transit system maintenance

\*\*Transit capital expenditures, including those using innovative revenue sources such as public-private partnerships

The financial plan is largely dependent on national, state, and local funding policies, and the estimates prepared for Mobility 2045 are based on funding sources that can reasonably be expected to be available for transportation uses. The following financial assumptions are utilized in Mobility 2045:

- Proposition 1 and Proposition 7 funds will be available through the MTP horizon year of 2045.
- The diversion of funds from the state highway fund, except those funds constitutionally protected for education, have ended and those funds will remain available through 2045.
- There will be additional revenue in amounts equivalent to the federal fuel tax increasing by \$0.05 in 2025 and \$0.05 in 2035.
- There will be additional revenue in amounts equivalent to the state fuel tax increasing by \$0.05 in 2025 and \$0.07 in 2035.
- Starting in 2025, there will be additional revenues in amounts equivalent to a \$10 local option vehicle registration or mobility fee that will be assessed within the 12-county Metropolitan Planning Area boundary. An additional \$10 increase will be assessed beginning in 2035.
- As with the previous plan, Mobility 2040, there is still a reliance on tolls and private sector partnerships to fund appropriate projects in certain corridors and areas.

- Over the life of the MTP, regional transportation partners will continue to implement projects.
- There will be an increasing need to balance public and private sector funding, including determining reduction of public sector risk when appropriate.
- The region will continue to leverage funds in order to implement programs and projects.

Funding is allocated across each line into the expenditure categories and is balanced to indicate financial constraint is achieved. In other words, revenues match expenditures, showing that Mobility 2045 only includes projects and programs for which there is funding.

To read the revenue and expenditure chart (**Exhibit 2.0-5**) below, revenues are located in the first column, while expenditures are located in the top row.

**Exhibit 2.0-5: Total Mobility Plan Revenues and Expenditures**

<b>Mobility 2045 Revenue and Expenditures</b>  <i>All values in millions Values may not sum due to independent rounding</i>	Roadway Maintenance, Operations, Rehab, Safety and Technology	Freeway, Tollway, HOV/Managed Facilities	Regional Arterial System	Other Arterials	Congestion Management	Air Quality and Environment	Bicycle/ Pedestrian Facilities	Sustainable Development and Transportation Enhancements	Transit Operations, Maintenance	Rail Capital, Transit System and Core Capacity Expansion, Other Transit Capital	Bus & Paratransit Capital	Total
<b>Traditional Federal &amp; State Revenue</b>												<b>\$42,911.8</b>
Commission Funds (Cat. 12)		\$3,243.3	\$170.7									\$3,414.0
Metro and Urban Corridors (Cat. 2)	\$478.0	\$7,766.7	\$3,704.1									\$11,948.8
STBG (Cat. 7)		\$2,628.7	\$239.0		\$1,194.9	\$478.0	\$239.0					\$4,779.5
CMAQ (Cat. 5)					\$1,365.6	\$1,024.2	\$1,024.2			\$74.0	\$10.0	\$3,498.0
Other TxDOT/Federal	\$9,303.0	\$6,612.7	\$2,912.0		\$102.4			\$341.4				\$19,271.5
<b>Local Revenue</b>												<b>\$16,208.1</b>
Local Funds		\$154.2	\$1,631.1	\$3,148.3	\$1,145.9		\$1,941.9	\$163.7				\$8,185.2
Local Match Funds*	\$116.5	\$5,414.3	\$94.1		\$1,144.2	\$582.0	\$294.5	\$377.4				\$8,022.9
<b>System Revenue</b>												<b>\$9,308.2</b>
Toll Revenue		\$8,308.2										\$8,308.2
Surplus Managed Lane Toll Revenue		\$1,000.0										\$1,000.0
<b>Traditional Transit Revenue</b>												<b>\$57,388.0</b>
Transit Public Private Partnership								\$65.2	\$19,662.8	\$20.0		\$19,748.0
Transit Sales Tax	\$37.0						\$3.0	\$16,777.4	\$6,786.8	\$2,098.7		\$25,702.9
FTA 5307								\$2,056.4	\$80.0	\$657.2		\$2,793.6
FTA 5309									\$359.0	\$9.0		\$368.0
Other Transit	\$2.0							\$7,562.9	\$775.4	\$435.2		\$8,775.5
<b>Revenue Enhancements</b>												<b>\$9,580.0</b>
Federal/State Revenue Enhancements	\$1,089.6	\$4,872.2		\$37.4	\$361.3	\$215.9	\$650.4					\$7,226.8
Local Option Vehicle Registration										\$2,353.2		\$2,353.2
<b>Total</b>	<b>\$11,026.0</b>	<b>\$40,000.3</b>	<b>\$8,751.1</b>	<b>\$3,185.8</b>	<b>\$5,314.3</b>	<b>\$2,300.0</b>	<b>\$4,153.0</b>	<b>\$882.5</b>	<b>\$26,461.9</b>	<b>\$30,091.2</b>	<b>\$3,230.1</b>	<b>\$135,396.1</b>

\*Local match amounts for transit CMAQ funds are included in the Transit Sales Tax and Other Transit funding amounts.

## Revenue Initiatives

Demonstrating financial constraint does not bind Mobility 2045 to any specific strategy to generate revenue. The financial assumptions contained within Mobility 2045 are merely an example of what could reasonably be expected to happen in the future. This allows a more flexible approach to financial planning. However, while flexible, it increases the burden on the Regional Transportation Council (RTC) to monitor the financial situation of the plan on a regular basis and to adjust accordingly. This is particularly true for traditional transportation funding sources like motor fuel taxes, which are anticipated to stagnate over time despite increasing need. The RTC will continue to monitor state and federal initiatives regarding replacements for revenues from fuel tax. The RTC also will encourage the development of alternative funding options. In addition to the RTC's current legislative program, it is proposed that the following strategies be acted upon to ensure that projected revenue are realized:

- Continue RTC/Texas Transportation Commission Partnership Program to leverage available funding.
- Utilize innovative project financing using tools made available by the State Legislature, when appropriate.
- Decrease project costs through value engineering and project development streamlining.
- Continue to pursue legislative actions aimed at increasing revenue through additional initiatives identified by the RTC.
- Continue to pursue the region's fair share of transportation revenues.
- Explore alternatives to the motor fuel tax structure, such as mileage-based fees or electric and hybrid vehicle fees.

## The Region's Financial Reality

The Metropolitan Planning Organization recognizes the region's transportation needs far exceed the ability to pay for the improvements. Likewise, federal planning regulations require financial constraint be exercised in the MTP. It is estimated that the North Central Texas region would need approximately \$390 billion to eliminate the worst levels of congestion<sup>1</sup>.

---

<sup>1</sup> NCTCOG modeled the costs to improve all roadway facilities with a level of service of F, as well as operations and maintenance costs, non-capacity improvement needs, and inflation. Combined, this represents the total cost of eliminating the worst levels of congestion in the region by 2045.

Mobility 2045 identifies approximately \$135.4 billion in resources to fund transportation improvements in the region through the year 2045; about \$51 billion of these resources address roadway project needs. This represents an approximate shortfall of \$339 billion for roadway projects alone.

Mobility 2045 does not represent a wish list of transportation improvements, but instead is an inventory of the most needed projects and programs that best meet the region's transportation goals within available funding constraints. Despite the \$135.4 billion in transportation improvements identified in the MTP and increased revenue from recent legislative action, by 2045 the region will continue to fall substantially behind in its ability to keep pace with a growing population and the resulting congestion. Additional resources will be needed in the future to address the region's growing transportation needs.

## Resources at Risk

Federal and state revenues, mostly funded by motor fuel taxes, are at significant risk of decline due to price stagnation, inflation and rising costs, and fuel efficiency. The majority of transportation investment has historically been funded through federal and state motor fuel taxes. However, federal tax rates have not increased since 1993, and state tax rates have not increased since 1991. In the meantime, construction costs and inflation have reduced the purchasing power of the gas tax by over 41 percent; \$0.384 in 1993 dollars is able to buy only \$0.226 worth today<sup>2</sup>. To keep pace with inflation, combined state and federal gas taxes would need to be increased to \$0.651. Even if increased to this amount, variable construction costs and increasing fuel efficiency would continue to erode the buying power of the increased revenues over time.

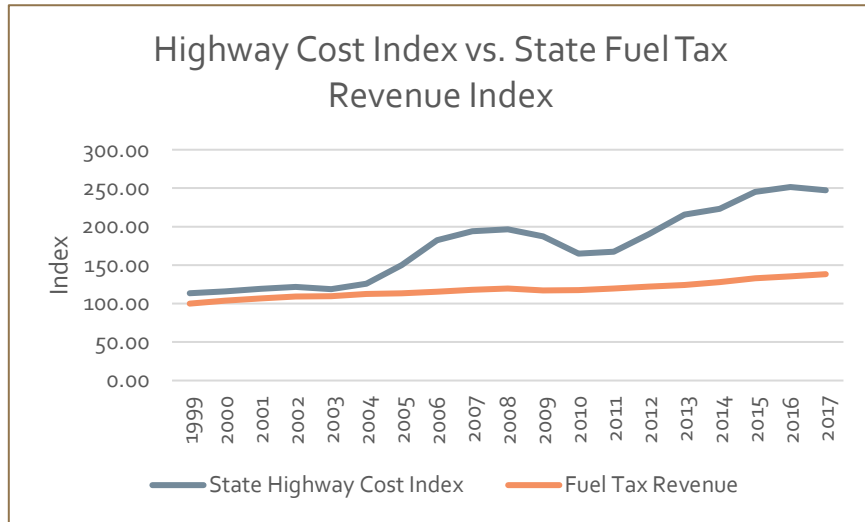
**Exhibit 2.0-6** shows the relationship between the costs of building transportation improvements compared to gas tax revenue. The Highway Cost Index measures fluctuating construction costs, and the State Fuel Tax Revenue Index measures the receipt of fuel tax revenue over time. As costs rise,

<sup>2</sup> Source: Calculated by NCTCOG using the Bureau of Labor Statistics Consumer Price Index



revenues remain stagnant, resulting in risk of the region falling further behind in its ability to mitigate congestion and implement needed projects.

**Exhibit 2.0-6: Transportation Construction Costs vs. State Gas Tax Revenue**



Source: Texas Comptroller of Public Accounts, Revenue by Source for Fiscal Year 2017, [comptroller.texas.gov/transparency/reports/revenue-by-source/](http://comptroller.texas.gov/transparency/reports/revenue-by-source/)

Texas Comptroller of Public Accounts, Texas Net Revenue by Source – Fiscal 1978-2016, [comptroller.texas.gov/transparency/reports/revenue-by-source/history.php#2015](http://comptroller.texas.gov/transparency/reports/revenue-by-source/history.php#2015)

Texas Department of Transportation, Highway Cost Index Report (2012 Base), February 2018, [ftp.dot.state.tx.us/pub/txdot-info/cst/hci-binder.pdf](http://ftp.dot.state.tx.us/pub/txdot-info/cst/hci-binder.pdf); Texas Department of Transportation, Highway Cost Index (1997 Base) Index Report for June 2012, [https://ftp.dot.state.tx.us/pub/txdot-info/cst/est/hci\\_binder.pdf](https://ftp.dot.state.tx.us/pub/txdot-info/cst/est/hci_binder.pdf)

Another factor in declining revenues is fuel efficiency. As cars become more efficient, people purchase less fuel to travel the same distance. This trend ultimately helps to improve air quality in the region; however, it also puts traditional state and federal funds at risk. The less fuel purchased, the less revenue there is to distribute back to the region. In fact, the federal government has had to cover shortfalls in the Highway Trust Fund by transferring nearly \$150 billion from the General Fund since 2008<sup>3</sup>. Because of stagnating revenues and inflation, increasing fuel efficiency, and rising construction costs, it will be necessary to pursue sustainable funding solutions in the future. Thus, there is now increased attention on finding ways to

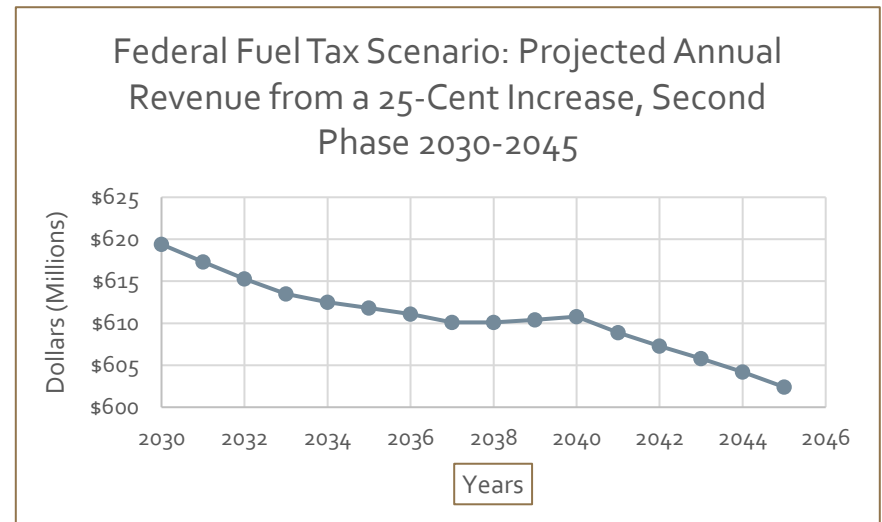
<sup>3</sup> Tax Policy Center at the Urban Institute & Brookings Institution (2016)

increase funding. Proposed strategies include increasing motor fuel taxes or implementing new road usage charges to replace the gas tax altogether.

### Exploring Solutions

An often-mentioned way to increase needed revenue streams is to increase motor fuel taxes. Several states have already passed increases to the state fuel tax, while the White House and Congress are debating an increase at the federal level. Increasing fuel taxes would help ease the instability of the revenue stream by compensating for lost value caused by inflation. An increase to the federal fuel tax of \$0.25, phased in over time, would measure a cumulative amount of about \$11 billion to North Central Texas by 2045.<sup>4</sup> However, as shown in **Exhibit 2.0-7**, any increase to the fuel tax would still decrease year-over-year because of the increasing fuel efficiency of vehicles. Because of this, increasing fuel taxes would not ensure viability of transportation revenue in the long term.

**Exhibit 2.0-7: Federal Fuel Tax Scenario**



<sup>4</sup> Source: TTI TRENDS model & NCTCOG financial forecast model (2017-18)

To move toward a sustainable funding model, a few states are testing systems that would charge drivers on a per-mile basis, also known as a VMT (vehicle miles traveled) fee. Instead of taxing drivers based on how much fuel they purchase, the VMT fee would charge drivers based on how many miles they drive. States like California, Washington, Oregon, Iowa, Nevada, Minnesota, and others have begun to implement pilot programs to study elements of the system, such as ways people can submit miles traveled, how to collect the fee, and how to operate the system between regions and states<sup>5</sup>. States are also testing ways to protect citizens' privacy.

VMT fees could address declining revenues and would replace the gas tax with a more equitable and sustainable source of funding, because those driving hybrid and electric vehicles currently pay fewer or no fuel taxes. Under a user charge system, all drivers would contribute the same amount per mile. VMT fees could be a flat rate, such as \$0.015 per mile, or variable based on time of day to help manage traffic congestion. Because of the unsustainable nature of the gas tax in the future, strategies like VMT fees would help create an

equitable solution to the maintenance and development of the region's transportation system.

## Summary

A foundation of a strong region is a well-maintained, mobile, and accessible transportation system. Mobility 2045 represents a \$135.4 billion blueprint for the continued maintenance and development of the North Central Texas region's transportation system over 20-plus years. The plan also highlights the financial planning process and discusses long-term funding issues and solutions. Mobility 2045 complies with all state and federal financial requirements for Metropolitan Transportation Plans, and **Exhibit 2.0-5** summarizes the anticipated revenues and expenditures. The source of funds for any given expenditure may change as projects develop. As North Central Texas continues to increase in population, additional solutions will be imperative to comprehensively address ever-increasing transportation needs. Mobility 2045 is a step forward in implementing the strong transportation foundation needed for the region's future.

---

<sup>5</sup> Federal Highway Administration (2016), California Department of Transportation (2017), and Congressional Research Service (2016)