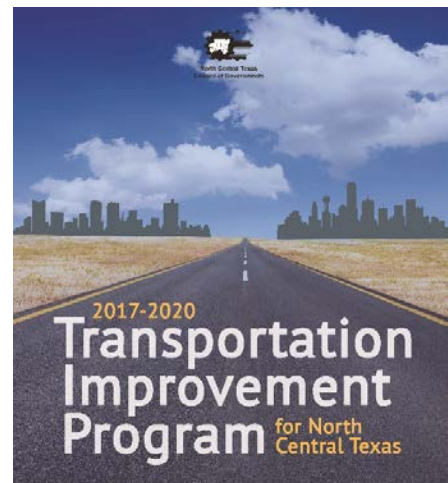


# Appendix C

## Summary of Metropolitan Transportation Plan



# Appendix C

## Summary of Mobility 2040: The Metropolitan Transportation Plan for North Central Texas

### INTRODUCTION

Mobility 2040: The Metropolitan Transportation Plan for North Central Texas (*Mobility 2040*) is the defining vision for transportation systems and services in the Dallas-Fort Worth (DFW) Metropolitan Area. The mobility plan was approved on March 10, 2016 by the Regional Transportation Council (RTC) and was endorsed by the North Central Texas Council of Governments (NCTCOG) Executive Board on March 24, 2016. The plan will guide the implementation of multi-modal transportation improvements, policies, and programs in the DFW Metropolitan Area through the year 2040.

### LEGISLATIVE BASIS FOR THE PLAN

Since the 1970s, Metropolitan Planning Organizations (MPOs) have been responsible for developing and maintaining a Metropolitan Transportation Plan. With the passage of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), the role of the Metropolitan Transportation Plan in the overall transportation planning process was greatly advanced. ISTEA called for the strengthening of the Metropolitan Transportation Plan, and as such, the plan would become a central mechanism for selecting investments to develop the metropolitan transportation system. The passage of the Transportation Equity Act for the 21st Century (TEA-21) continued this philosophy.

Building on the two previous laws, the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for User, or SAFETEA-LU, was signed into law in 2005. This act approved funding for surface transportation projects and also represented the largest surface transportation venture in the country to date. While SAFETEA-LU authorized funding for many transportation funding categories and specific projects, it also continued the concepts identified in ISTEA and TEA-21 regarding the cooperative, continuing, and comprehensive regional transportation planning process.

The *Mobility 2040: Metropolitan Transportation Plan for North Central Texas* was developed under current regulations and legislative intent of Moving Ahead for Progress in the 21<sup>st</sup> Century, or MAP-21 and Fixing America's Surface Transportation (FAST) Act. MAP-21, was signed into law on July 6, 2012. MAP-21 focused on streamlining the country's surface transportation programs and establishing performance-based metrics for many facets of the transportation system. MAP-21 established the following goals:

- **Safety:** To achieve a significant reduction in traffic fatalities and serious injuries on all public roads
- **Infrastructure Condition:** To maintain the highway infrastructure asset system in a state of good repair
- **Congestion Reduction:** To achieve a significant reduction in congestion on the National Highway System
- **System Reliability:** To improve the efficiency of the surface transportation system
- **Freight Movement and Economic Vitality:** To improve the national freight network, strengthen the ability of rural communities to

access national and international trade markets, and support regional economic development

- **Environmental Sustainability:** To enhance the performance of the transportation system while protecting and enhancing the natural environment
- **Reduced Project Delivery Delays:** To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices

While MAP-21 expired in October 2014, continuing resolutions passed by the US Congress extended its authorization through December of 2015. In December 2015, Congress passed a new five-year transportation funding bill called Fixing America's Surface Transportation Act, or the FAST Act. The FAST Act provides additional funding for transportation projects, and new planning requirements in the act will be taken into account in future updates or amendments to the mobility plan. *Mobility 2040* was developed to meet the legislative intent of MAP-21 and the FAST Act.

Federal planning regulations require a long-range plan for each metropolitan area be prepared and updated periodically. *Mobility 2040* has been developed in accordance with the following planning guidelines and requirements:

- Long-range plans identify transportation facilities (multi-modal, intermodal, pedestrian, and bicycle) that function as an integrated transportation system; include a financial plan that demonstrates how the plan can be implemented, assess capital investment, and other measures to preserve the existing transportation system and make the most of the existing transportation facilities to relieve

traffic congestion; and must indicate appropriate transportation enhancement activities.

- Reasonable opportunity for public comment on the plan before approval.
- Consistency with Title VI of the Civil Rights Act of 1964 and Executive Order 12898 on Environmental Justice ensuring that no person is excluded from participation in, denied benefits of, or discriminated against in planning efforts, including the development of the metropolitan transportation plan.
- The development of the plan in nonattainment areas for ozone and carbon monoxide must be coordinated with the development of Transportation Control Measures for the State Implementation Plan (SIP) required under the Clean Air Act activities.

In 1997, the United States Department of Transportation (US DOT) issued its Environmental Justice order, US DOT Order 5610.2, to Address Environmental Justice in Minority Populations and Low-Income Populations to summarize and expand upon the requirements of Executive Order 12898 on Environmental Justice. The US DOT Order clarifies and reinforces Title VI responsibilities, and addresses effects on low-income populations. Environmental Justice and Title VI are not new requirements, and have always been considered throughout the planning process, including the development of the metropolitan transportation plan. A technical analysis of Title VI and Environmental Justice has been included in *Mobility 2040*.

With the signing of the Clean Air Act Amendments of 1990 (CAAA) into law, the counties of Collin, Dallas, Denton, and Tarrant were designated as nonattainment areas for exceeding the 1-Hour Ozone National Ambient Air Quality Standard. In May 2012, the Environmental Protection Agency classified the ten-county area of Collin, Dallas,

Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant, and Wise County as nonattainment for exceeding the 8-Hour Ozone National Ambient Air Quality Standard. Section 176(c)(4) of the Act required the Environmental Protection Agency (EPA) to finalize the rule-making on conformity determinations for transportation plans and programs. This rule, titled Criteria and Procedures for Determining Conformity to State or Federal Implementation Plans of Transportation Plans, Programs, and Projects Funded Under Title 23 U.S.C or the Federal Transit Act, requires MPOs to make conformity determinations on metropolitan transportation plans and transportation improvement programs before they are approved in nonattainment areas. A conformity determination was conducted for *Mobility 2040* and is anticipated to be approved in June 2016.

#### **ECONOMIC AND ENVIRONMENTAL BASIS FOR THE PLAN**

North Central Texas is a major economic, social, and political center of both Texas and the United States. The region represents 30 percent of the state's gross domestic product and is the 12<sup>th</sup> largest metropolitan economy in the world. The region supports a diverse economy and is home to 18 Fortune 500 companies.<sup>1</sup> By the year 2040, the region is expected to experience a 48 percent increase in population and a 46 percent increase in employment. The transportation system is central to this growth, because it allows for the efficient movement of people and goods. Without adequate transportation funding to ensure a high level of mobility, the region will face challenges in sustaining

economic growth. This predicament is an important reality for the region and should be a priority for the state.

*Mobility 2040* considers the effect of an expanding transportation system on the environmental resources that support both humans and wildlife. The plan shows the scores received by counties in the region for eight public health indicators where transportation is a factor, including days with unhealthy levels of air pollution. While some emissions have declined, ten counties in North Central Texas are in nonattainment for ozone. *Mobility 2040* recommends programs and policies intended to reduce the emissions of pollutants and improve air quality.

The plan also describes an ecosystem approach to developing transportation infrastructure. This approach can help conserve wildlife habitat in keeping with the goals of stakeholders from resource agencies and conservation groups. The ecosystem approach promotes planning that avoids and minimizes the transportation system's impacts on the natural environment and that compensates for any impacts that are unavoidable.

#### **REGIONAL GROWTH**

A key element of planning and travel forecasting is the development of accurate demographic forecasts. Demographic projections drive the travel forecasting process, because they provide information regarding potential locations of increased residential and employment centers, which generate increased travel and traffic. The 2010 Census lists the Dallas-Fort Worth Metropolitan Area as the fourth largest urban area in the country with a growth rate more

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<sup>1</sup> North Texas Commission, 2015 Profile of North Texas, <http://ntc-dfw.org/wp-content/uploads/2014/09/2015-NTX-Profile-web.pdf>

than twice that of the eight larger areas. By 2040, the region is expected to be home to nearly 10.7 million residents and have approximately 6.7 million jobs. Planning the development of an efficient, effective transportation system must be a top priority in order to maintain the region's quality of life and economic vitality.

#### **FINANCIAL CONSTRAINT AND REVENUE INITIATIVES**

*Mobility 2040* is required to be financially constrained, which means that projects and programs can only be included as a recommendation in the plan if funding is anticipated to be available throughout the life of the plan. Financial constraint represents one of the most significant limitations to long-range solutions, because many projects, while needed, cannot be included or constructed until funding is identified. As part of a long-range, needs-based analysis, it has been determined that the Dallas-Fort Worth area needs approximately \$431.5 billion to alleviate the most severe levels of congestion by the year 2040. However, federal law requires the long-range plan to be based on revenue sources that are "reasonably expected to be available." In order to determine what sources the region could expect to be available for funding, financial models that evaluate historic trends, the current state of transportation funding, and the plausibility of future funding increases are used to generate revenue forecasts. The financial plan illustrates that the region could anticipate receiving \$118.9 billion, in actual dollars, in revenue to fund transportation projects from now until 2040.

The financial constraint approach does not tie the plan to any specific revenue generation strategy, such as gas tax increases or percentage of gas tax revenue returned to the state. This system allows for a more flexible approach to financial planning. While flexible in its approach, this practice also puts an increasing burden on the RTC to monitor the

financial situation of the plan on a regular basis and make adjustments accordingly.

It is proposed that the following strategies be implemented to ensure that projected revenue forecasts are reached:

- Continue RTC/Texas Transportation Commission partnerships to leverage available funding
- Utilize innovative project financing tools made available by the State Legislature
- Decrease project costs through value engineering and project development streamlining
- Pursue legislative actions aimed at increasing revenue through additional initiatives identified by the RTC
- Pursue the region's fair share of transportation revenues

The financial status of the plan will be reviewed prior to each Texas legislative session. The RTC will monitor federal, state, and local legislative initiatives and develop policy positions which support the financial goals of *Mobility 2040*. This legislative monitoring effort will be coordinated with those of other metropolitan planning organizations, local and state governments, and other agencies and interest groups such as the National Association of Regional Councils, the Association of Metropolitan Planning Organizations, the National League of Cities, and others as appropriate.

#### **GOALS**

The development of *Mobility 2040* was directed by a set of adopted goals. These goals define the purpose of *Mobility 2040* and were used to guide efforts to accommodate the multi-modal mobility needs of a growing region. The adopted goals support and advance the development of a transportation system that contributes to the region's mobility, quality of life, system sustainability, and continued project

implementation. The adopted goals are shown in Exhibit C-1.

**Exhibit C-1 -- Mobility 2040 Goals**

<p><b>Mobility</b></p> <ul style="list-style-type: none"><li>• Improve the availability of transportation options for people and goods</li><li>• Support travel efficiency measures and system enhancements targeted at congestion reduction and management</li><li>• Ensure all communities are provided access to the regional transportation system and planning process</li></ul> <p><b>Quality of Life</b></p> <ul style="list-style-type: none"><li>• Preserve and enhance the natural environment, improve air quality, and promote active lifestyles</li><li>• Encourage livable communities which support sustainability and economic vitality</li></ul> <p><b>System Sustainability</b></p> <ul style="list-style-type: none"><li>• Ensure adequate maintenance and enhance the safety and reliability of the existing transportation system</li><li>• Pursue long-term sustainable revenue sources to address regional transportation system needs</li></ul> <p><b>Implementation</b></p> <ul style="list-style-type: none"><li>• Provide for timely project planning and implementation</li><li>• Develop cost-effective projects and programs aimed at reducing the costs associated with constructing, operating, and maintaining the regional transportation system</li></ul>
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**PLAN DEVELOPMENT PROCESS**

*Mobility 2040* was developed amid growing concern about increased congestion, more restrictive air quality requirements, and the balance of tax and toll-funded projects. *Mobility 2040* also accounts for additional revenue sources that were identified by the State Legislature in the 2013 and 2015 Legislative Sessions and approved by Texas voters through the Proposition 1 and Proposition 7 initiatives. In order to make the most efficient use of available funds, *Mobility 2040* recommendations were prioritized to first maximize the existing

transportation system, then invest strategically in infrastructure improvements. The principles used to allocate financial resources include:

- Maintain and operate existing facilities
- Improve efficiency of existing facilities
- Reduce single-occupancy trips
- Improve land use-transportation connection
- Increase transit trips
- Increase auto occupancy
- Increase system capacity for autos

A diagram outlining this philosophy is shown in Exhibit C-2. Through this process, projects, programs, and policies were developed to target traffic congestion and improve air quality in the Dallas-Fort Worth area. During the development of the *Mobility 2040* recommendations, considerations were made regarding air quality impacts, financial feasibility, environmental justice effects, environmental stewardship, transportation system safety and security, and intermodal planning efforts.

**MOBILITY 2040 HIGHLIGHTS**

A number of important planning elements played a role in the development of the recommendations contained in *Mobility 2040*. The major sections of the plan reflect these elements and emphasize their importance in providing a comprehensive strategy that supports a quality transportation system.

- **Financial Reality:** Reduces use of tolls in proportion to new revenue made available from recent legislative action.
- **Social Considerations:** Emphasizes transportation choice for a diverse and growing region.
- **Environmental Considerations:** Strengthens the connection between environmental and transportation planning.
- **Operational Efficiency:** Continues programs aimed at reducing travel and creating an efficient transportation system.

- **Mobility Options:** Supports multi-modal transportation solutions, including bicycle and pedestrian facilities, roadways, transit, high speed rail, aviation, and freight accommodations.

- **Regional Performance:** Documents performance measures to track system performance over time.

**Exhibit C-2 – Plan Development Process**



**PLAN PERFORMANCE**

Current travel trends brought about by the growth in population and employment in the DFW Metropolitan Area have led to increased travel, which has translated into increased traffic

congestion. Since the region is projected to continue growing, travel and associated congestion will also increase into the foreseeable future. This situation is evident by continued growth in weekday vehicle miles of travel (VMT) on the region’s roadways.

Total VMT for the region was estimated at 187 million in 2014, meaning that on a typical weekday, area residents travel approximately 187 million miles on area freeways, arterials, and local streets. VMT is expected to steadily increase from 187 million in 2014 to 319 million in 2040, representing a 71 percent increase over a 26-year period.

While the region is growing, revenues to support construction and maintenance of the transportation system have not kept pace with transportation needs. The imbalance between travel demand and roadway supply has resulted in a significant increase in congestion and maintenance needs. Exhibit C-3 graphically shows congestion levels in the region. Currently, the annual cost of congestion of approximately \$10.7 billion. This exhibit also shows what the congestion levels are expected to be if the recommendations of the plan are implemented, resulting in an annual cost of \$25.3 billion in 2040. While considerable growth in congestion is anticipated over time, if the recommendations in *Mobility 2040* were not implemented, the annual cost of congestion would be \$43.9 billion in 2040.

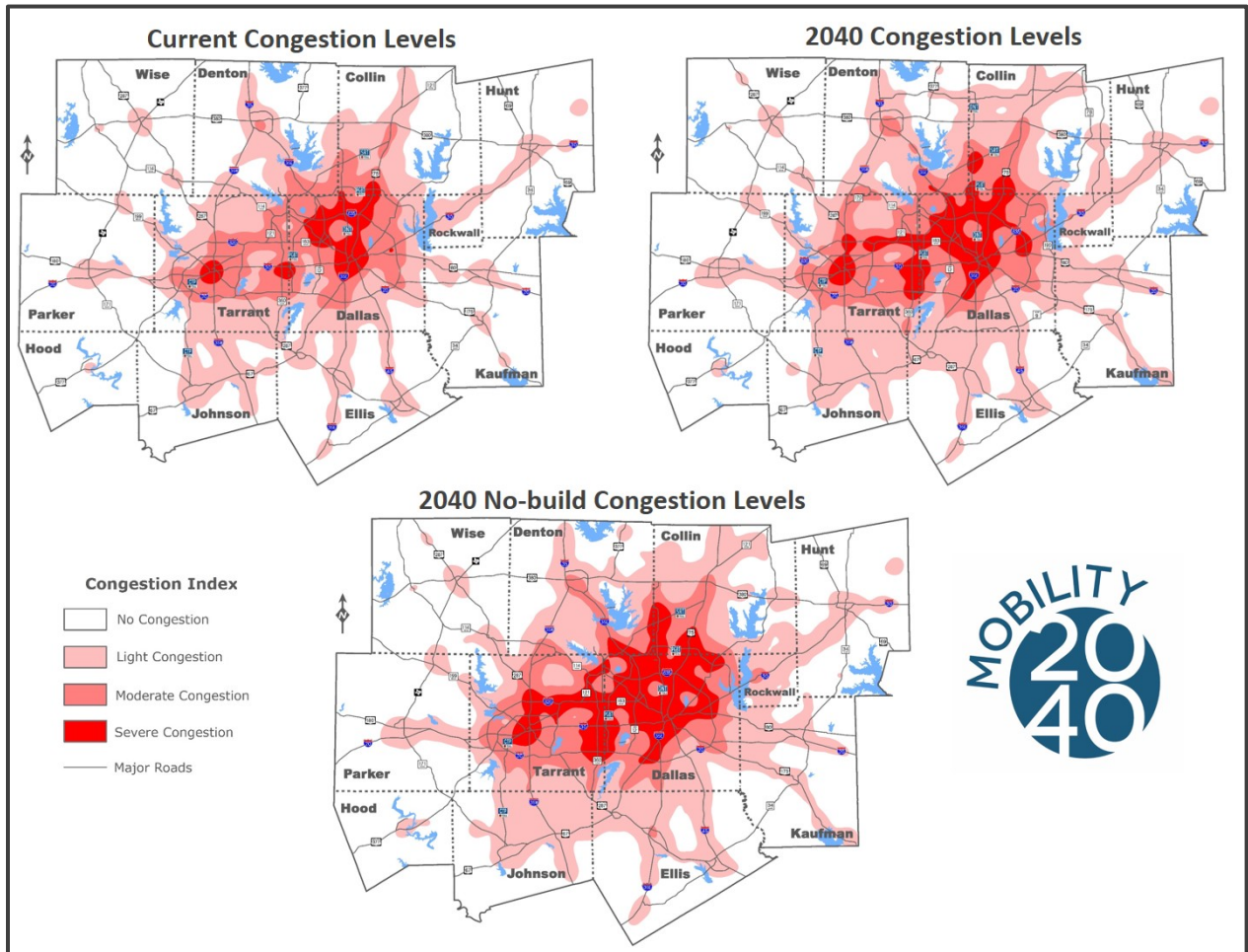
#### **TRANSPORTATION BEYOND 2040**

While *Mobility 2040* recommends strategic programs and projects that provide transportation improvements throughout the region, the ultimate transportation needs of North Central Texas will still not be met. Unfunded transportation needs may be addressed through a variety of modal and management solutions aimed at providing residents choices as they travel in the region. As part of a continuous planning process, the recommendations in the plan will be monitored and evaluated as they approach implementation. The planning process is designed to account for changes in demographics, financial assumptions, project design concept and scope, local priorities, and legislative direction.

The need for additional funding and continued use of strategic efforts to manage transportation demands in North Central Texas is evident. Providing a transportation system that supports continued opportunities for economic growth and an enhanced quality of life for North Central Texas residents remains a priority of the Regional Transportation Council and the Metropolitan Planning Organization.



Exhibit C-3 – System Performance Levels of Congestion



To access the complete  
*Mobility 2040* document, please visit:  
[www.nctcog.org/mobility2040](http://www.nctcog.org/mobility2040)