The metropolitan transportation plan for north central Texas executive summary

Region of transportation choice
THE METROPOLITAN TRANSPORTATION PLAN

Mobility 2040 is the latest iteration of the long-range Metropolitan Transportation Plan (MTP) for North Central Texas. It serves as a blueprint for improvements to the region’s transportation system. Mobility 2040 recommends policies, programs, and projects to meet the region’s transportation goals. It includes recommendations for many modes of transportation, including travel by automobile, public transit, bicycle, and walking. The recommendations in the MTP will be implemented by 2040.

MOBILITY 2040 GOALS

**MOBILITY**
- Improve the availability of transportation options for people and goods.
- Support travel efficiency measures and system enhancements targeted at congestion reduction and management.
- Ensure all communities are provided access to the regional transportation system and planning process.

**QUALITY OF LIFE**
- Preserve and enhance the natural environment, improve air quality, and promote active lifestyles.
- Encourage livable communities that support sustainability and economic vitality.

**SYSTEM SUSTAINABILITY**
- Ensure adequate maintenance and enhance the safety and reliability of the existing transportation system.
- Pursue long-term, sustainable revenue sources to address regional transportation system needs.

**IMPLEMENTATION**
- 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.

The Mobility 2040 Goals guide the development of the MTP’s recommendations.
A GROWING AND DIVERSE REGION

The Dallas-Fort Worth area is the fourth largest metropolitan region in the country in terms of population – and it is growing. With a current population of 7 million, the area adds approximately 1 million people every decade. By 2040, the region will be home to nearly 10.7 million people and will provide 6.7 million jobs.

<table>
<thead>
<tr>
<th>CURRENT POPULATION:</th>
<th>7.0 MILLION</th>
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<tbody>
<tr>
<td>2040 POPULATION:</td>
<td>10.7 MILLION</td>
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<tr>
<td>CURRENT EMPLOYMENT:</td>
<td>4.6 MILLION</td>
</tr>
<tr>
<td>2040 EMPLOYMENT:</td>
<td>6.7 MILLION</td>
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The region’s population and employment are expected to grow by 53 percent and 47 percent, respectively. This growth will increase demand on the region’s already congested transportation system.

Covering about 9,500 square miles, the region's landscape ranges across dense urban areas to suburban development, small town centers, and rural ranch and farm land. Multiple transportation options are needed to help the region's diversity of residents reach their destinations.
Despite nearly $18 billion in new funding for transportation that is expected to be available through state Constitutional Amendments, the region still lacks the necessary funding to fully implement needed transportation improvements. Mobility 2040 identifies options – from roadways to trails to passenger rail – to provide the region’s residents with choices when they travel. Current estimates indicate that the region would need to spend $431.5 billion by 2040 to eliminate the worst levels of congestion. However, the MTP is not a wish list of improvements. It can only include recommendations for projects for which funding is expected to be available. Recent state Constitutional Amendments have provided additional transportation funding, and Mobility 2040 identifies $118.9 billion in transportation improvements. But these expected funds will meet less than 30 percent of the region’s transportation needs.

Because transportation needs are outpacing available funding, Mobility 2040 prioritizes projects that maximize the existing transportation system, then strategically invests in new infrastructure.

Mobility 2040 is the product of a comprehensive, cooperative, and continuous planning effort. The recommendations in Mobility 2040 seek to meet the transportation demands of a diverse and growing region.

Despite nearly $18 billion in new funding for transportation that is expected to be available through state Constitutional Amendments, the region still lacks the necessary funding to fully implement needed transportation improvements.

Mobility 2040 Expenditures

- Infrastructure Maintenance: Maintain & Operate Existing Facilities ($37.4 billion)
- Management & Operations: Improve Efficiency & Remove Trips from System ($7.2 billion)
- Growth, Development, & Land Use Strategies: More Efficient Land Use & Transportation Balance ($3.6 billion)
- Rail & Bus: Induce Switch to Transit ($27.2 billion)
- HOV/Managed Lanes: Increase Auto Occupancy ($43.4 billion)
- Freeways/Tollways & Arterials: Additional Vehicle Capacity

MOBILITY 2040 EXPENDITURES: $118.9 billion

*Actual dollars, in billions. Values may not sum due to independent rounding.
MAXIMIZING THE EXISTING SYSTEM

To make the most of the existing transportation system, Mobility 2040 focuses on the following recommendations. These typically cost less than building new road and rail infrastructure, and they offer a high return on investment.

**INFRASTRUCTURE MAINTENANCE**
- Road maintenance and rehabilitation
- Transit maintenance and operations
- Safety improvements
- Transit core capacity

**MANAGEMENT & OPERATIONS STRATEGIES**
- Intersection improvements
- Traffic signal improvements
- Bottleneck removals
- Trip reduction programs
- Freeway incident management
- Regional mobility assistance patrol

**GROWTH, DEVELOPMENT, & LAND USE STRATEGIES**
- Sustainable development initiatives
- Bicycle and pedestrian improvements
- Air quality improvement efforts
- Environmental stewardship

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**REGIONAL VELOWEB: OFF-STREET BICYCLE & PEDESTRIAN FACILITIES**

The Regional Veloweb is a network of off-street, shared-use paths designed for bicyclists, pedestrians, and users of other non-motorized forms of transportation. 32 percent of trips made in the region are 3 miles or less, making them ideal for biking or walking.

Facility recommendations indicate transportation need. Corridor-specific alignment, design, and operational characteristics will be determined through ongoing project development.
STRATEGICALLY INVESTING IN INFRASTRUCTURE

After the incorporation of lower-cost improvements into the MTP, major infrastructure investments are still necessary to address the region’s transportation needs. Mobility 2040 focuses on:

- Rail and bus to increase the availability of transit options.
- HOV/managed lanes that provide an incentive for higher auto occupancy or guarantee faster travel in exchange for a toll.
- Freeways, tollways, and arterials that increase the number of vehicles the transportation system can carry.

These improvements will create a transportation system that serves a variety of travel needs. The recommendations in the MTP take steps toward allowing the region’s residents to choose how they want to travel to their destination. Providing choices can improve quality of life for the region’s residents.

MAJOR TRANSIT RECOMMENDATIONS

MAJOR ROADWAY RECOMMENDATIONS
Factors beyond operations and infrastructure must be considered when creating a robust transportation system. Mobility 2040 also addresses the following elements:

**Air Quality:** Mobility 2040 includes programs and projects that reduce air pollution generated by the transportation sector. Many of these programs and projects target ground-level ozone because 10 counties in the Dallas-Fort Worth region are in nonattainment for air quality standards set by the Environmental Protection Agency. Efforts to address air pollution include reducing the number of miles that vehicles travel, reducing emissions-causing congestion, and public education campaigns.

**Environmental:** Natural areas provide services such as parks and clean water for people and habitat for wildlife. Transportation projects can be designed to reduce people’s impacts on these areas. Each roadway and rail corridor in Mobility 2040 has been scored on its potential impact on the environment.

**Social:** Mobility 2040 recommendations are analyzed to determine how they affect and benefit communities, including low-income residents and those who have been historically discriminated against. Participation from the public was actively sought during development of Mobility 2040.
Regional System Performance

Performance measures are used to demonstrate whether the recommendations in the MTP will generate the intended benefits. Performance measures compare simulated travel conditions for 2017 and for two 2040 scenarios: one that assumes the Mobility 2040 recommendations are implemented and one that assumes the Mobility 2040 recommendations are not implemented. The latter scenario is known as the No-Build scenario. The regional performance measures show that travel conditions in the region will decline even if the Mobility 2040 recommendations are implemented. This decline will occur because of continued growth and inadequate financial resources; however, the decline would be greater in the No-Build scenario.

### Regional Performance Measures

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<tr>
<th></th>
<th>2017</th>
<th>2040</th>
<th>No-Build</th>
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<tbody>
<tr>
<td>Population</td>
<td>7,235,508</td>
<td>10,676,844</td>
<td>10,676,844</td>
</tr>
<tr>
<td>Employment</td>
<td>4,584,235</td>
<td>6,691,449</td>
<td>6,691,449</td>
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<tr>
<td>Vehicle Miles of Travel (Daily)</td>
<td>206,162,076</td>
<td>319,470,644</td>
<td>320,119,945</td>
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<tr>
<td>Annual Hours Spent in Delay (Per Person)</td>
<td>72</td>
<td>114</td>
<td>198</td>
</tr>
<tr>
<td>Vehicle Hours Spent in Delay (Daily)</td>
<td>1,521,068</td>
<td>3,587,038</td>
<td>6,198,230</td>
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<tr>
<td>Increase in Travel Time Due to Congestion</td>
<td>38.2%</td>
<td>58.4%</td>
<td>98.2%</td>
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<tr>
<td>Annual Cost of Congestion (Billions)</td>
<td>$10.7</td>
<td>$25.3</td>
<td>$43.9</td>
</tr>
</tbody>
</table>

Continual review and monitoring of the transportation system’s performance will be necessary to select and implement projects that offer travel, air quality, and other benefits to the region.

Lane Miles at Level of Service ABC, DE, and F

Level of Service (LOS) is a term used to gauge the flow of traffic. The scale ranges from free-flowing (ABC) to stopped (F). By 2040, the number of lane miles in the region earning an LOS score of F will increase.
INNOVATING TO MEET DEMAND

Mobility 2040 recognizes that innovative solutions are needed to achieve the goals outlined in the plan, solutions beyond traditional improvements to increase capacity. The plan identifies the following alternatives:

**CAPITAL/OPERATIONS ASSET MANAGEMENT**

This program seeks to relieve congestion and enhance mobility by implementing lower-cost solutions, typically within the transportation system's existing right-of-way. These improvements can be made without completely reconstructing corridors and can extend the useful life of the region's transportation infrastructure.

**HIGH-INTEGRITY BUS**

This service will link communities to destinations across the region. High-Intensity Bus can be used to introduce transit into corridors that will be served by rail in the future, or it can be implemented in place of a rail line. It may be implemented in highly traveled corridors that feature managed lanes – those lanes where travel speeds are guaranteed through active management by transportation agencies. High-Intensity Bus service can help commuters reach their destinations more quickly than driving alone and will provide them with amenities such as a wireless connection to the Internet.

**POLICY BUNDLE**

These policies can be voluntarily adopted by local governments and transportation agencies to address issues that affect transportation in the region. The policies cover a number of topics such as the locations of new schools, strategies that guide land use, and implementation of transit service. By voluntarily adopting 50 percent of these policies, participating agencies will receive assistance in funding federal transportation projects.

These are just a few of examples of innovative approaches outlined in Mobility 2040 to improve transportation in the region.
SUMMARY

Many factors contributed to the recommendations in Mobility 2040. People wish to travel through, to, from, and within the region. As a region of transportation choice, people would like the option of traveling using more than one mode of transportation. The MTP addresses several outcomes including improved safety, reliability, and air quality. As a result, Mobility 2040 relies on both traditional and innovative solutions to meet the transportation needs of a growing region.

HIGH-SPEED RAIL

High speed rail enhances transportation choices when traveling through, to, from, and within North Central Texas and beyond.

Facility recommendations indicate transportation need. Corridor-specific alignment, design, and operational characteristics will be determined through ongoing project development.

We’d love to hear any questions or comments you have about the transportation planning process. We have several channels through which you can communicate with us since continuous communication is crucial. Public meetings offer the opportunity to voice your opinion about a project in your neighborhood. The Regional Transportation Council conducts these meetings regularly at locations throughout the region to encourage wider participation and attract residents who would be most affected by proposed projects. Information on upcoming meetings is available at www.nctcog.org/meetings. Additionally, we offer other options for sharing your opinions if attending public meetings is not feasible or convenient for you. Connect with us through any of the mediums below.

transinfo@nctcog.org | 817-695-9240 | nctcog.org/mobility2040
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