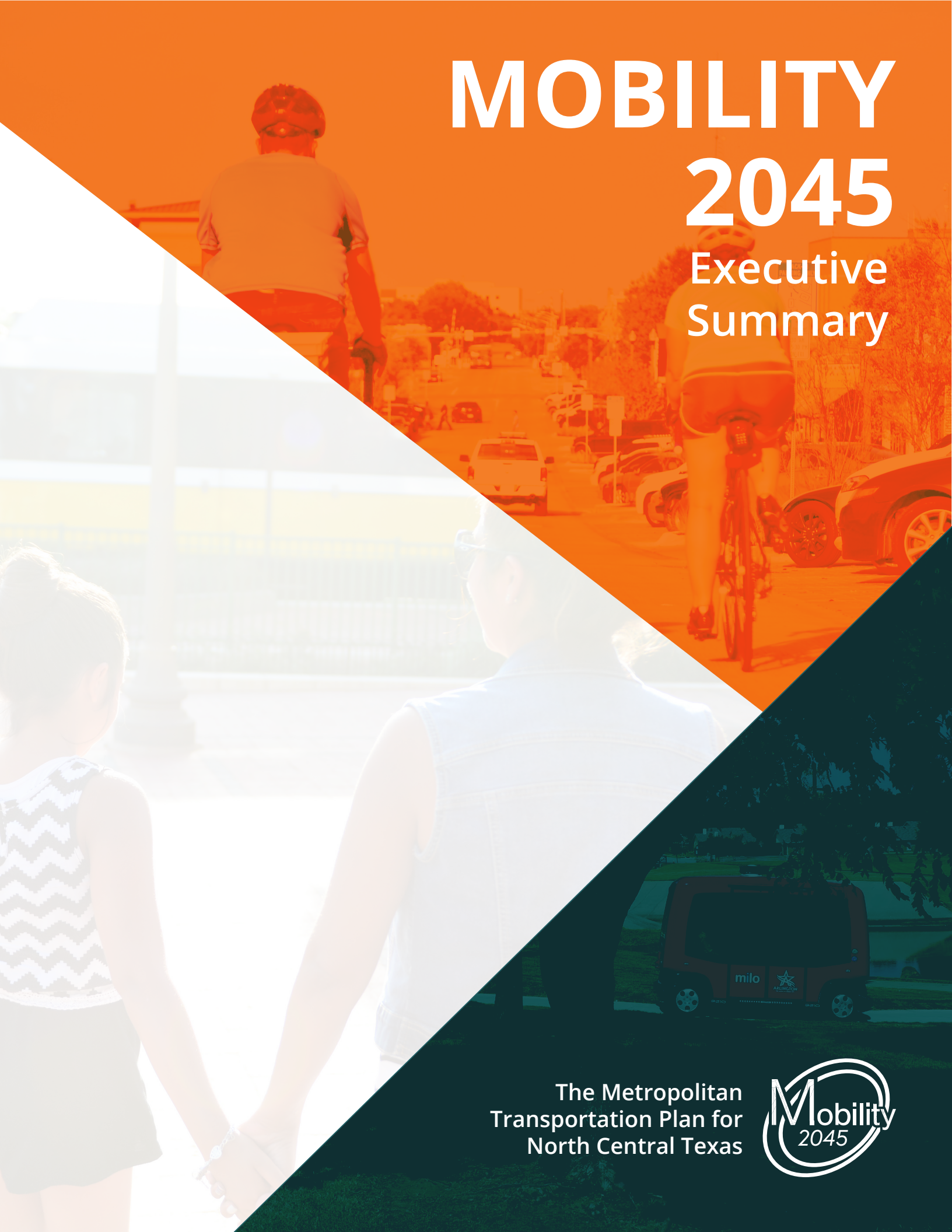


MOBILITY

2045

Executive Summary



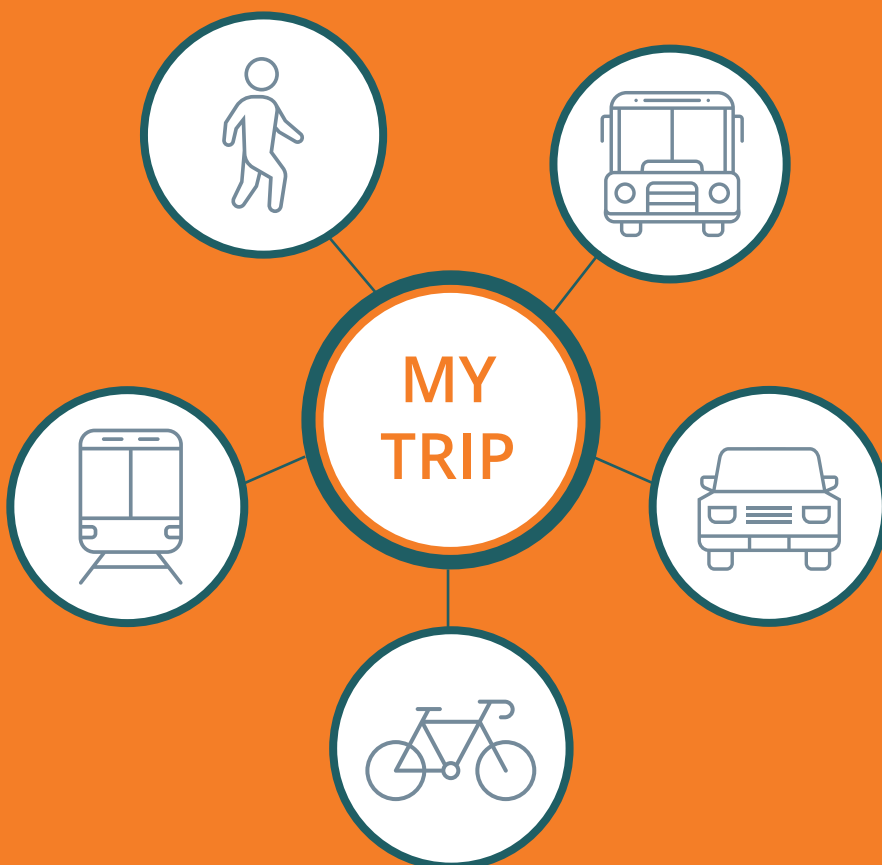
The Metropolitan
Transportation Plan for
North Central Texas



MOBILITY 2045

What is the Mobility 2045?

Mobility 2045 is a blueprint for the region's transportation system that aims to respond to the regional mobility goals and guide the expenditure of federal and state transportation funds. The plan makes recommendations for all travel modes through policies to guide transportation infrastructure implementation, programs to improve mobility, and projects to increase transportation system capacity.



TRANSPORTATION SHOULD BE AN AFTERTHOUGHT

Transportation should work so well that you get where you need to go without even noticing it.

Whether you wish to travel by walking, bicycling, bus, train, or car, having an option is important for getting where you need to go.

DALLAS-FORT WORTH



7.4 MILLION PEOPLE IN 2018

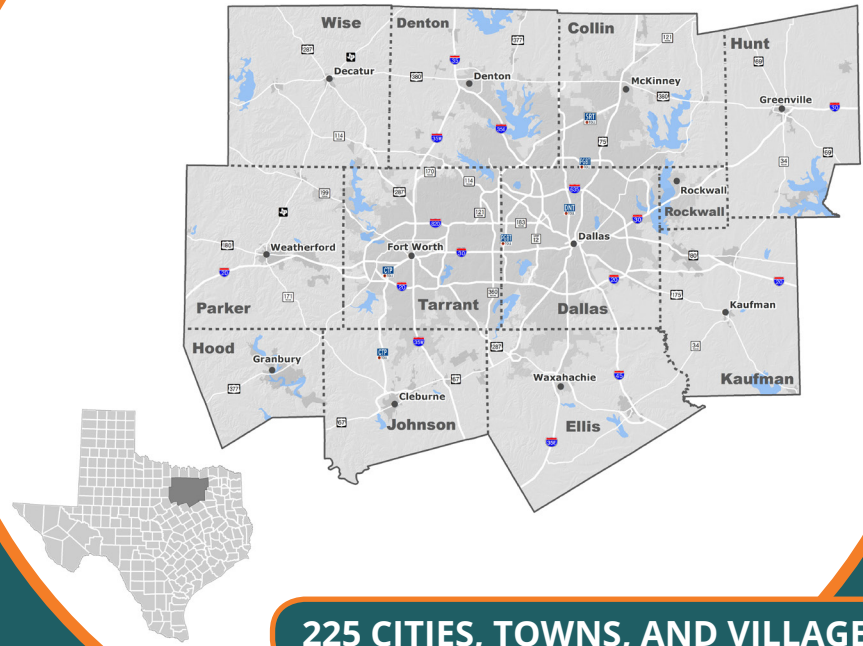
larger than 37 states in population



11.2 MILLION PEOPLE IN 2045 (FORECAST)

9,448 SQUARE MILES

12 COUNTIES



225 CITIES, TOWNS, AND VILLAGES

TOP LANGUAGES SPOKEN

hello!

ENGLISH

¡hola!

SPANISH

chào!

VIETNAMESE

4th largest metropolitan area in US

LARGER THAN **5** STATES IN LAND AREA



4.8 MILLION JOBS IN 2018

DFW makes up over 30% of Texas' economy



7.0 MILLION JOBS IN 2045

(FORECAST)

A SYSTEMATIC APPROACH TO SOLVING THE REGION'S CHALLENGES

GOALS: the path for solving the region's important transportation problems

MOBILITY

Improve transportation options
Support travel efficiency strategies
Ensure community access to system and process

QUALITY OF LIFE

Enhance environment and life styles
Encourage sustainable development

SYSTEM SUSTAINABILITY

Ensure adequate maintenance, safety, and reliability
Pursue long-term, sustainable financial resources

IMPLEMENTATION

Provide timely planning and implementation
Develop cost effective projects and programs

MOBILITY 2045

DEVELOPMENT PRINCIPLES: the basis of a strategic plan

1

INFRASTRUCTURE MAINTENANCE

Maintain what we have before building new infrastructure

2

MANAGEMENT & OPERATIONS

Ensure existing infrastructure is operating efficiently

3

GROWTH, DEVELOPMENT & LAND USE

Invest in low-cost options for people; transportation solves for inefficient land use

4

RAIL & BUS

Maximize air quality benefits associated with transit (moving more people at the same time)

5

HOV/MANAGED LANES

Make roadway system more efficient, give people choices, improve congestion and air quality

6

FREEWAYS, TOLLWAYS, & ARTERIALS

Conserve land; new capacity is a last resort

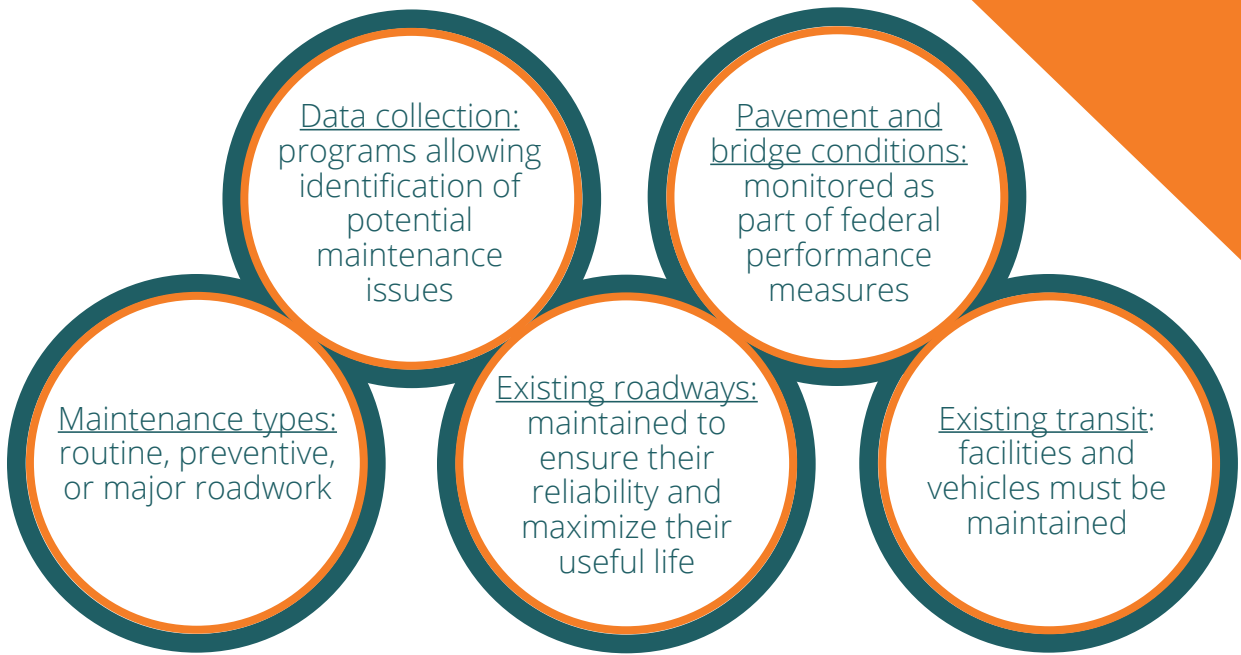
Maximize Existing Transportation Systems Strategies

Strategic Infrastructure Investment Strategies

INFRASTRUCTURE MAINTENANCE

1

\$36.8 billion



2

MANAGEMENT & OPERATIONS

\$9.5 billion

key strategies



Partner with local businesses to advocate for transportation issues in communities



Offer first responder safety education and training

TRAINING & COORDINATION

CONNECTIONS



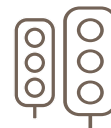
Encourage carpooling and transit use through park-and-ride facilities

Restriping, roundabouts, grade separations, and turn lanes



Analyze crashes to find room for safety improvement

Upgrade traffic signals



Conduct pilot programs for automated vehicles



TECHNOLOGY

Main principles of policies, programs, and projects

\$3.2 billion

ECONOMIC DEVELOPMENT

Transportation policies often drive the maintenance and construction of transportation systems, which impact economic development.

Transportation systems can impact:

- economy
- tourism
- consumer expenditures
- employment
- resource consumption
- productivity
- property values
- affordability
- wealth accumulation

ENVIRONMENTAL PROTECTION

Mobility 2045 aims to improve transportation systems without causing a heavy burden on the environment.

The type and location of infrastructure affect the transportation system process.

Transportation systems can impact:

- environmental resources
- air quality
- open space
- watersheds

SOCIAL EQUITY

Social equity is impacted when a variety of transportation systems, such as transit, sidewalks, and bike lanes, allow people to travel without the need for personal vehicles.

Social sustainability focuses on creating:

- affordable housing
- environmental justice
- fair housing choice
- infill housing
- revitalization
- redevelopment
- compliance with ADA
- improved health
- local food options

LAND USE - TRANSPORTATION CONNECTIONS PROGRAM

- Smart zoning ordinances and building codes
- Jobs/housing balance through strategic developments
- Financial incentives to promote sustainable developments

COMMUNITY SCHOOLS AND TRANSPORTATION PROGRAM

- Coordination and communication between school districts, local governments, and transportation agencies
- Enable more children to walk and bicycle to school through the Safe Routes to School funding program
- Sustainable school siting and facility planning

TRANSIT-ORIENTED DEVELOPMENT (TOD) PROGRAM

- Technical assistance to plan and implement TOD
- Regional coordination and data sharing
- Location of higher density, mixed income, and affordable housing options, as well as parking management

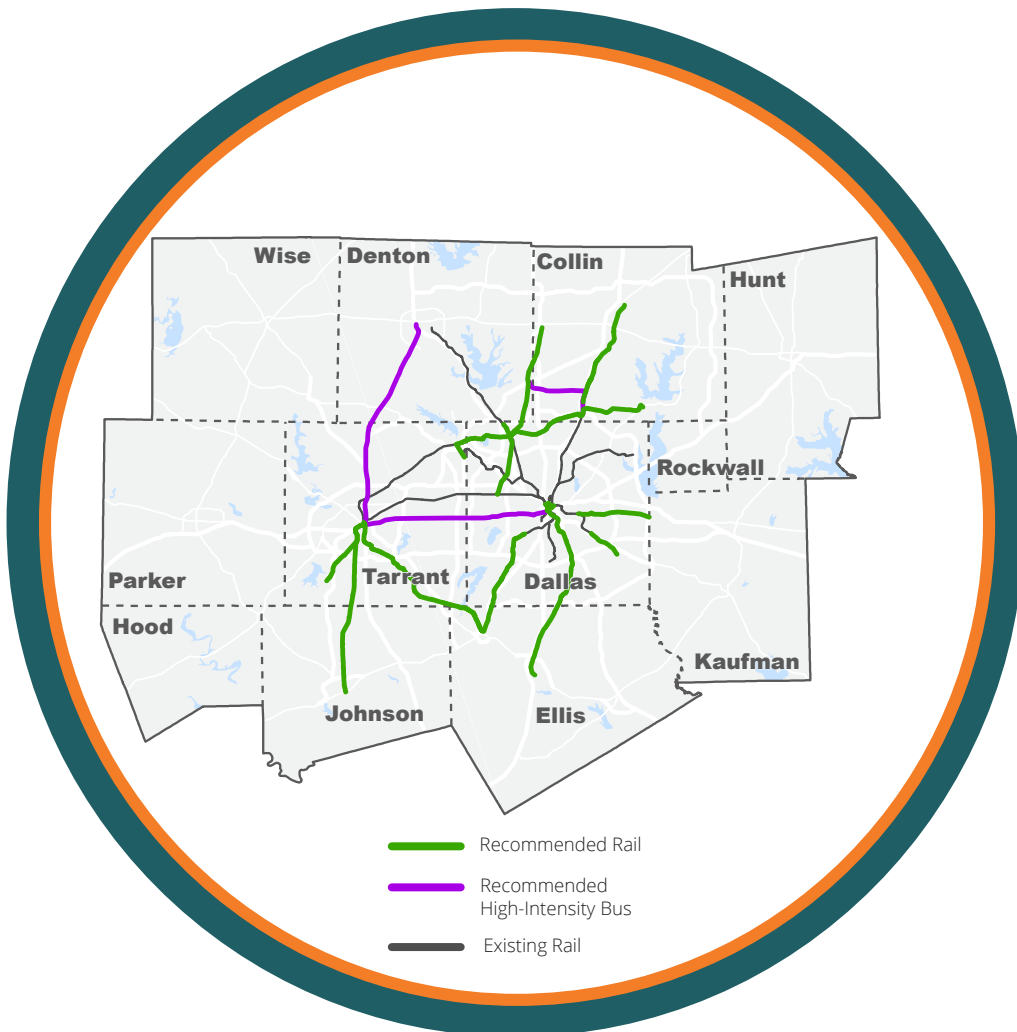


Public transportation provides thousands of people in North Central Texas with daily access to life-essential opportunities, reduces the number of cars on the roads, relieves congestion for people who drive, and improves air quality for all.

Mobility 2045 includes policies and programs that guide future public transportation investments and outlines opportunities to cost-effectively expand and modernize public transportation service throughout the region.

EXPANSION PLANS

- New service in high-intensity transit corridors.
- Extensions of transit lines in emerging transit markets.
- Expansions that increase core capacity aimed at improving overall system capacity.
- Transit lines that connect communities.



3 TRANSIT AGENCIES



all roadway expenditures \$53.6 billion



Congestion Reduction

Managed lanes add capacity alongside non-tolled lanes.

HOV lanes encourage carpooling by allowing vehicles with 2+ people to use the lane.



Economic Development

Improved corridors create:

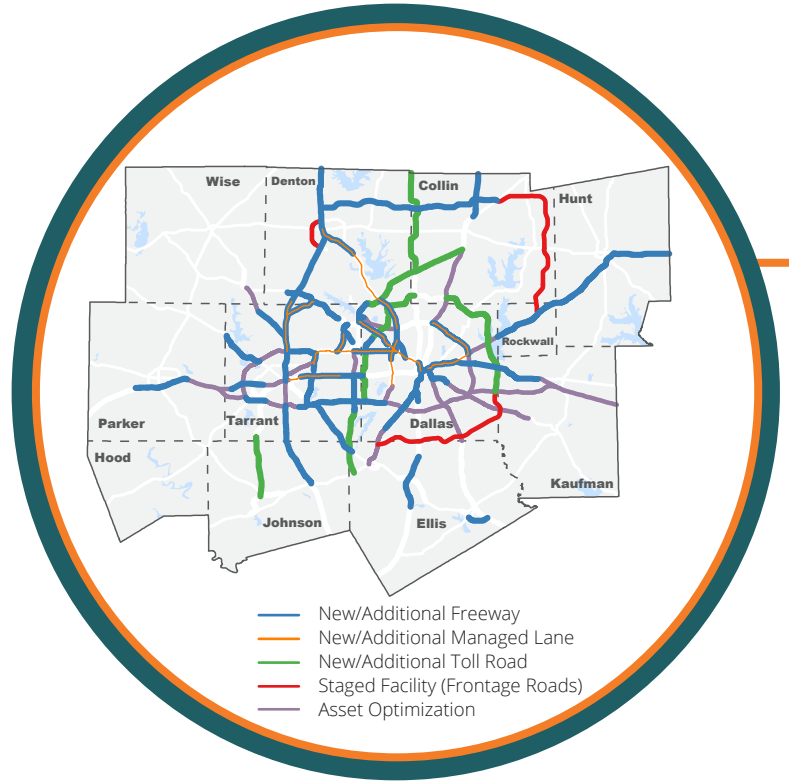
- Economic development
- Increased property values
- Additional tax revenues



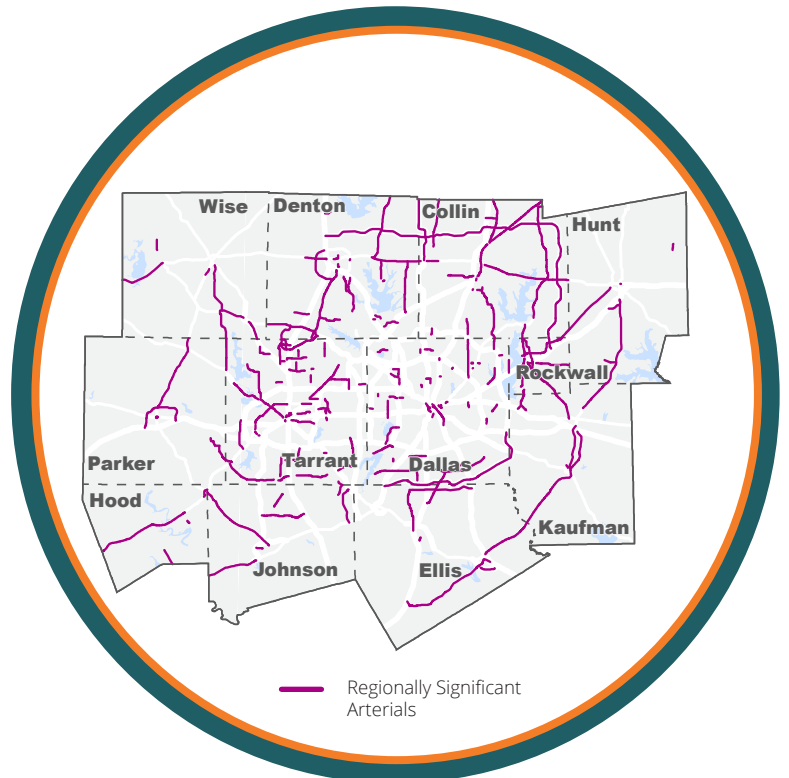
Air Quality

Less stop-and-go traffic conditions + reducing vehicle emissions = improved air quality

Recommended major roadway improvements: asset optimization, NTTA projects, and congestion alleviation.



Recommended arterial improvements: context-sensitive design approach compatible with the community



MOBILITY 2045 CHOICES

transportation challenges + options
= comprehensive solution

98% of drivers use  as-needed.

The average TollTag user chooses the TEXpress Lanes occasionally.

1 in 5 trips are on TEXpress Lanes.

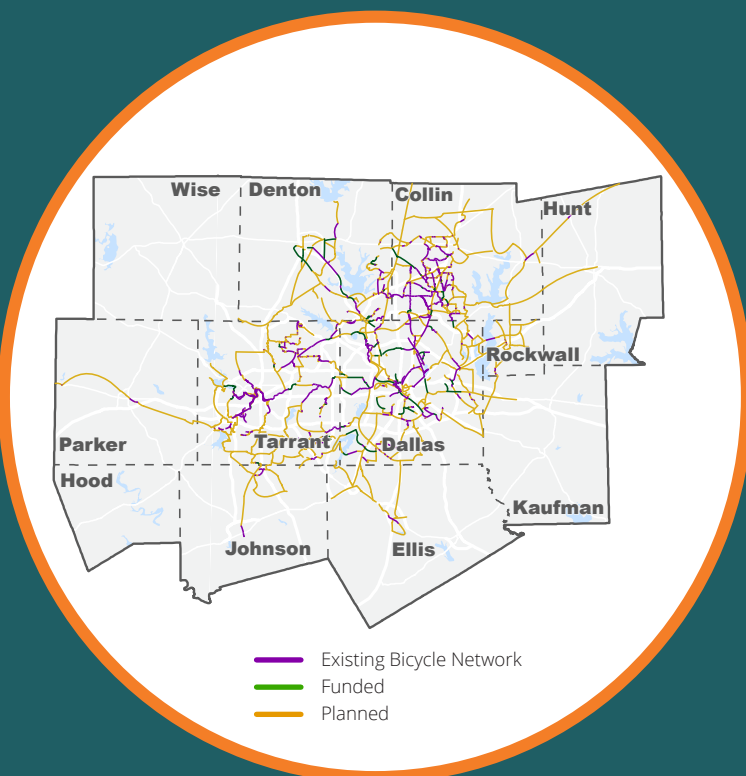
The average TollTag user chooses the TEXpress Lanes for 20% of trips.

What happens when travel choices are created?

- Everyone has a low-cost option: transit, walk, bicycle
- Less demand on local roads and highways
- Travel times can be more reliable
- Communities are more livable, safe, and cost-efficient
- Lower traffic congestion and better air quality



What solutions are available?



- Transit and bicycle/pedestrian facilities constructed through available federal, state, and local funding
- Policies in urbanized areas that roadways should be designed and constructed to accommodate at least three modes of transportation
- Projects should implement a context-sensitive design approach compatible with the community
- Tolled managed lanes give drivers the choice to travel for free or pay

LIMITED FUNDING = innovative solutions + prioritizing investments



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 includes projects and programs for which receiving funds is a reasonable expectation.

Current resources are at risk due to:

- inflation
- rising construction costs
- recent gains in vehicle fuel efficiency

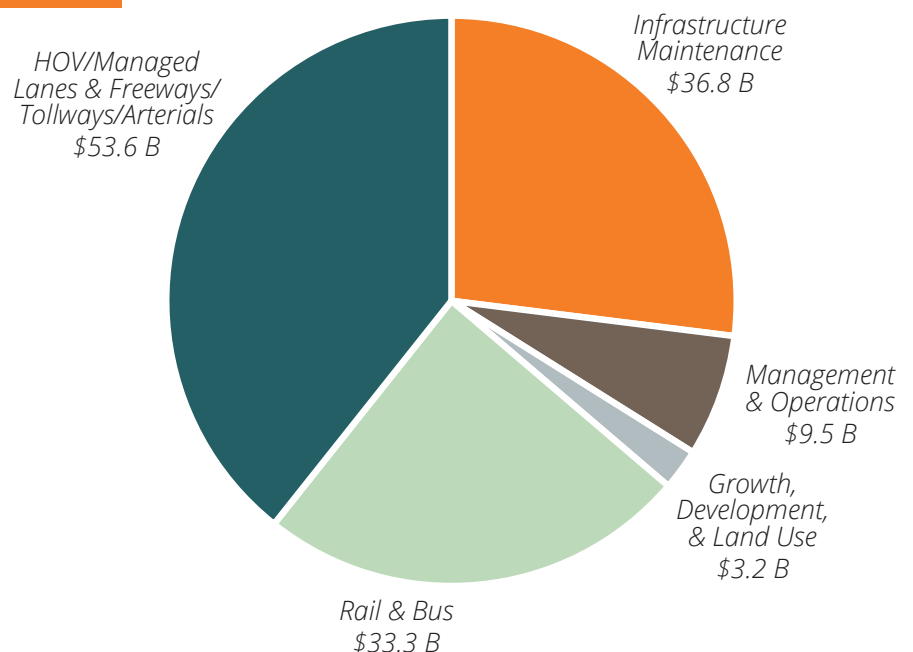
State and federal gas taxes have not been raised in more than two decades.

FUNDING: \$56.6 billion available out of of \$389.9 billion needed to eliminate congestion



What are some funding solutions?

- Invest strategically to lower construction costs
- Fight for fair and innovative funding solutions at the regional and state level
- Investigate options:
 - local option registration fees
 - vehicle miles travelled fee
 - indexing motor fuel tax
- Pursue low-cost transportation solutions like bicycle and pedestrian infrastructure

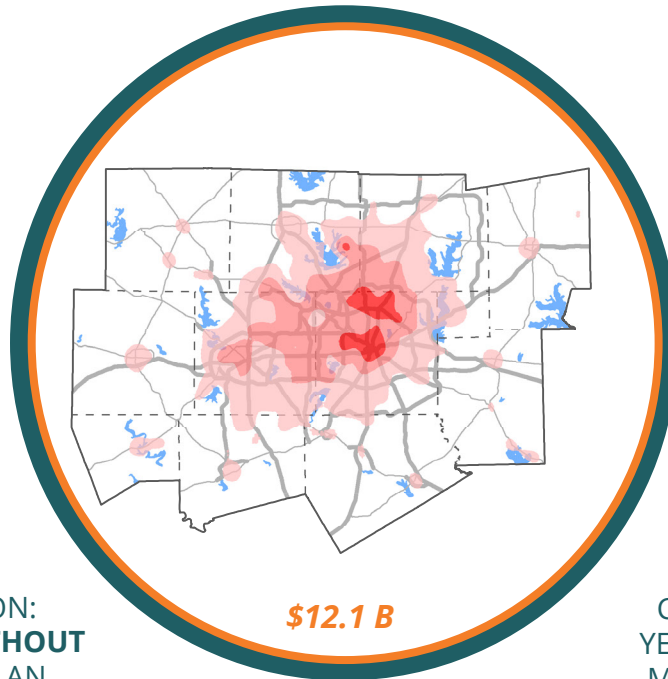


CONGESTION



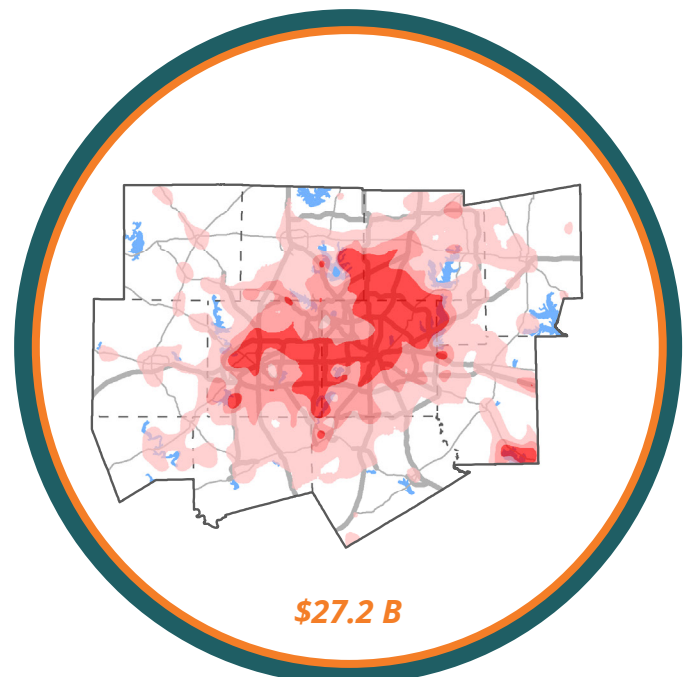
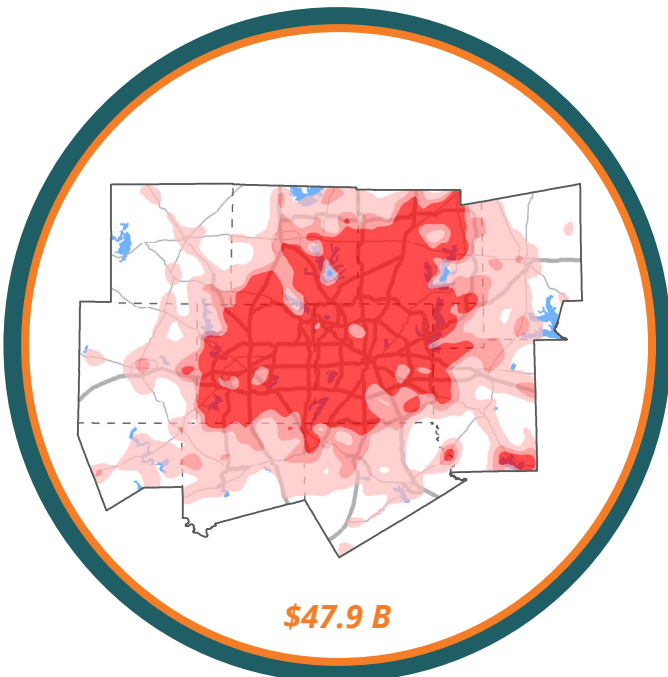
The Dallas-Fort Worth area is required by federal law to develop a congestion management process because it is an urbanized area with a population over 200,000. Traffic congestion increases travel times and causes people to use more fuel. Mobility 2045 addresses both congestion and air quality through various projects, programs, and policies.

COST OF CONGESTION: TODAY



CONGESTION:
YEAR 2045 **WITHOUT**
MOBILITY PLAN

CONGESTION:
YEAR 2045 **WITH**
MOBILITY PLAN



AIR QUALITY



The region is in nonattainment of federal air quality standards. Air quality is vital to a community's overall quality of life, but the negative impacts of polluted air can more adversely affect sensitive populations such as children and the elderly.

Failure to meet federal air quality standards could result in additional emission control requirements negatively impacting local businesses, as well as a freeze on all federally funded transportation projects.

Projects, programs, and policies in Mobility 2045 aim to address congestion and reliability, improve air quality, and seek innovative ways to use our limited means.

Air Quality and Congestion Solutions

PROJECTS

- Build transit
- Build active transportation facilities
- Ensure construction of multimodal system
- Improve traffic flows through design
- Eliminate bottlenecks
- Operational improvements
- Build HOV/Managed Lanes
- Build additional capacity

PROGRAMS

- Community Access Transit Program
- Last Mile Transit Connections Program
- Carpool/vanpool programs
- Park and Ride
- Technology programs for data collection and sharing

POLICIES

- Provide technical assistance to plan and implement transit-oriented development
- Tolloed managed lane policy area
- Evaluate and implement Asset Optimization to improve traffic flows while utilize existing infrastructure
- Truck lane restrictions

TECHNOLOGY



Technologies such as automated vehicles, connected vehicles and data are evolving rapidly, and present opportunities to make traveling safer and more equitable. A great deal of uncertainty is associated with these new technologies; however, they may contribute to some of the following benefits and opportunities:

- Improved air quality through vehicle electrification
- Reduced demand on roadways due to shared mobility
- Increased access for people who don't drive, through autonomous vehicles
- Improved safety when vehicles, traffic signals, and alert systems communicate with each other

Safety Solutions as a Priority

Transportation technologies offer opportunities to improve safety. Other programs included in Mobility 2045 aim to increase safety by finding problem areas, enhancing warning systems, and training first responders.

- Eliminate problems in design that lead to crashes
- Enhance dispatch of response vehicles
- Implement safety controls for trains (called Positive Train Control)
- Ensure safety of first responders and construction crews through training
- Enhance lighting
- Pursue technology, like vehicles connected to the internet, to collect data on travel conditions
- Explore new technology such as in-vehicle safety warnings

TRANSPORTATION IS FOR EVERYONE

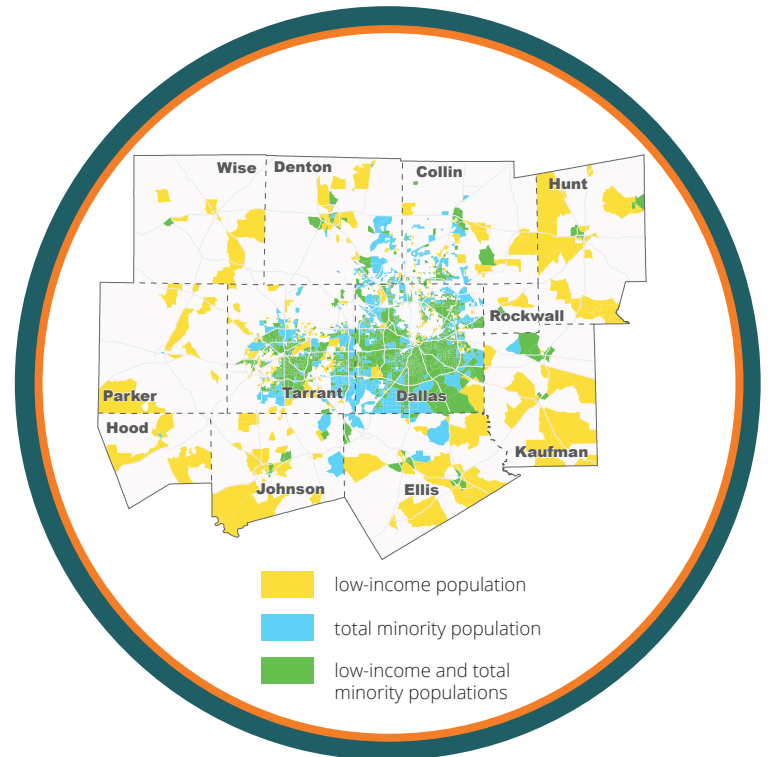
Mobility 2045 includes an analysis of all its recommendations to ensure equitable benefits are provided to residents of North Texas. Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with regard to the development and implementation of plans, policies, and programs.

Equity in North Texas

Highlights from the Regional Environmental Justice Analysis

- Analyzed:
 - The number of jobs accessible by auto and transit within 30 and 60 minutes, respectively
 - Population within 30 minutes of universities and regional shopping centers
 - Population within 15 minutes of hospitals
- Measured congestion and average travel time
- All groups of people in the analysis were expected to see increases to travel times due to congestion; however, the recommendations in the plan offset the increases compared with a no-build scenario.

Environmental Justice Index



Public Involvement

Equity considerations play an integral role in NCTCOG's efforts to continuously improve the outreach methods outlined in its Public Participation Plan and Language Assistance Plan.

NCTCOG strives to go beyond requirements to ensure all residents are provided an opportunity to participate in the planning process and are informed.

Outreach efforts include:

- Hosting public meetings
- Opinion polls
- Participation in community events
- Online advertising
- Press releases to spread the word
- Translating materials into other languages



NCTCOG Executive Board 2017-2018

President
Tom Lombard
Councilmember, City of North Richland Hills

Vice President
Kevin Strength
Mayor, City of Waxahachie

Secretary-Treasurer
J.D. Clark
County Judge, Wise County

Past President
Lissa Smith
Former Mayor Pro Tem, City of Plano

Director
Kelly Allen Gray
Councilmember, City of Fort Worth

Director
Douglas Athas
Mayor, City of Garland

Director
Clay Lewis Jenkins
County Judge, Dallas County

Director
Lee M. Kleinman
Councilmember, City of Dallas

Director
Curtistene McCowan
Mayor, City of Desoto

Director
Bobbie Mitchell
Commissioner, Denton County

Director
Nick Sanders
Mayor, Town of Trophy Club

Director
Keith Self
County Judge, Collin County

Director
Ray Smith
Mayor, Town of Prosper

Director
Paul Voelker
Mayor, City of Richardson

Director
B. Glen Whitley
County Judge, Tarrant County

Director
Kathryn Wilemon
Councilmember, City of Arlington

Director
Bruce Wood
County Judge, Kaufman County

Ex Officio, Non-Voting Member
Ron Simmons
Texas House of Representatives

Executive Director
R. Michael Eastland

Regional Transportation Council 2017-2018

Rob Franke, P.E., Chair
Mayor, City of Cedar Hill

Gary Fickes, Vice Chair
Commissioner, Tarrant County

Andy Eads, Secretary
Commissioner, Denton County

Tennell Atkins
Councilmember, City of Dallas

Richard E. Aubin
Councilmember, City of Garland

Sue S. Bauman
Board Chair, Dallas Area Rapid Transit

Mohamed "Mo" Bur, P.E.
District Engineer, Texas Department of Transportation, Dallas District

Carol Bush
County Judge, Ellis County

Loyl C. Bussell, P.E.
District Engineer, Texas Department of Transportation, Fort Worth District

Rickey D. Callahan
Councilmember, City of Dallas

Mike Cantrell
Commissioner, Dallas County

David L. Cook
Mayor, City of Mansfield

Rudy Durham
Mayor, City of Lewisville

Charles Emery
Chairman, Denton County Transportation Authority

Kevin Falconer
Mayor, City of Carrollton

George Fuller
Mayor, City of McKinney

Sandy Greyson
Councilmember, City of Dallas

Jim Griffin
Mayor, City of Bedford

Mojoy Haddad
Board Member, North Texas Tollway Authority

Roger Harmon
County Judge, Johnson County

Clay Lewis Jenkins
County Judge, Dallas County

Ron Jensen
Mayor, City of Grand Prairie

Jungus Jordan
Councilmember, City of Fort Worth

Lee M. Kleinman
Councilmember, City of Dallas

Harry LaRosiliere
Mayor, City of Plano

David Magness
Commissioner, Rockwall County

Scott Mahaffey
Chairman, Trinity Metro

B. Adam McGough
Councilmember, City of Dallas

William Meadows
Board Chair, Dallas Fort Worth International Airport

Steve Mitchell
Councilmember, City of Richardson

Cary Moon
Councilmember, City of Fort Worth

Stan Pickett
Mayor, City of Mesquite

Mark Riley
County Judge, Parker County

John Ryan
Councilmember, City of Denton

Will Sowell
Councilmember, City of Frisco

Stephen Terrell
Mayor, City of Allen

T. Oscar Trevino, Jr., P.E.
Mayor, City of North Richland Hills

William Tsao, P.E.
Citizen Representative, City of Dallas

Oscar Ward
Councilmember, City of Irving

Duncan Webb
Commissioner, Collin County

B. Glen Whitley
County Judge, Tarrant County

Kathryn Wilemon
Councilmember, City of Arlington

W. Jeff Williams
Mayor, City of Arlington

Ann Zadeh
Councilmember, City of Fort Worth

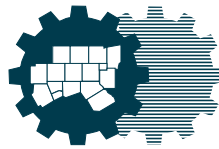
Michael Morris, P.E.
Director of Transportation, NCTCOG

Surface Transportation Technical Committee

Todd Plesko, Chair
Vice President of Planning and Development,
Dallas Area Rapid Transit

Mobility 2045 was approved and adopted by the
Regional Transportation Council on June 14, 2018.

The contents of this report reflect the views of the authors who are responsible for the opinions, findings and conclusions presented herein. The contents do not necessarily reflect the views or policies of the Federal Highway Administration, the Federal Transit Administration or the Texas Department of Transportation. This document was prepared in cooperation with the Texas Department of Transportation and the US Department of Transportation, Federal Highway Administration, and Federal Transit Administration.



**North Central Texas
Council of Governments**

616 Six Flags Drive, Arlington, Texas 76011
transinfo@nctcog.org | 817-695-9240

@NCTCOGtrans



nctcog.org/mobility2045