What is Mobility 2010?

**Mobility 2010: The Regional Transportation Plan for North Central Texas** is a 20-year plan for guiding the implementation of roadway and transit improvements in the Dallas-Fort Worth metropolitan area. The Plan is based on regional transportation needs identified through the process of forecasting future travel demand, evaluating system alternatives, and selecting those options which best meet the mobility needs of the region. Mobility 2010, prepared by NCTCOG, is the product of a coordinated effort among local governments, transit authorities, and the Texas State Department of Highways and Public Transportation (SDHPT).

Transportation improvements identified in the Plan include the following:

- New Freeways and Improvements to Existing Freeways
- Rail Transit and General Transit Service Improvements
- High Occupancy Vehicle (HOV) Lanes
- Strategic Regional Arterials and Local Arterial Improvements

The Regional Transportation Plan was adopted by the Regional Transportation Council (RTC) and the North Central Texas Council of Governments' (NCTCOG) Executive Board in August 1990 to guide the expenditure of federal, State, and local funds for regional transportation improvements. This Plan is required under federal law for transportation projects receiving federal financial assistance.

**What are the Goals of the Mobility 2010 Plan?**

The Mobility 2010 Plan is a guideline for improving transportation in the Dallas-Fort Worth metropolitan area. The following represent goals by which this Plan was established:

- Develop a comprehensive transportation plan which meets the anticipated mobility needs of the region over the next 20 years
- Promote participation of local governments, transit authorities, and SDHPT in the regional transportation planning process
- Identify a cost-effective roadway and transit system which provides levels of service and mobility equal to those experienced in the region in 1980 based on annual delay per capita
- Provide a regional transportation plan which maintains and promotes the economic and environmental quality of the region
- Document funding requirements to develop the needed transportation system
- Maintain a regional transportation plan which guides the expenditure of local, State, and federal funds toward implementation of projects included in the Plan
What are the Recommendations of the Plan?

The Plan lists four major categories of improvements needed to maintain mobility in the year 2010. The recommended improvements are expected to decrease the percentage of roadways congested by 24 percent from 1986 levels. In addition to these physical improvements, the Plan recommends developing a Congestion Management System as an additional effort for relieving future traffic congestion.

Freeway Improvements

The Plan calls for a total of 5,200 lane miles of freeways to be operating in the region by the year 2010. (In 1986 there were 2,950 freeway lane miles.) Mobility 2010 identifies a series of improvements to existing freeways. These widening recommendations are based on year 2010 traffic projections, available right-of-way, and maintaining reasonable peak-hour traffic flow on the facility. New Freeways in the Plan are recommended based on traffic volume forecasts warranting freeway construction and operation by the year 2010. Future Freeway designations represent proposed freeway facilities where traffic volume projections warrant only frontage roads by the year 2010. Right-of-way in the Future Freeway corridors should be preserved for eventual construction of the freeways. New and Future Freeway locations illustrated in the Plan are shown to demonstrate travel corridor needs. The final location must be determined through location and design studies. The following New Freeways are included in the Plan:

- Trinity Freeway connecting both U.S. 175 and I.H. 30 in Dallas to S.H. 360 in Arlington
- S.H. 161 from S.H. 190 in Carrolton to I.H. 20 in Grand Prairie
- S.H. 190 from I.H. 35E in Carrolton to I.H. 30 in Garland
- Dallas North Tollway extension from Briar Grove Road in Dallas to S.H. 121 in Collin County
- S.H. 121 from I.H. 35W north of the Fort Worth CBD to F.M. 1187 in Tarrant County
- S.H. 360 north extension from S.H. 183 in Euless to S.H. 121 in Grapevine
- S.H. 114 extension from Grapevine to I.H. 35W in Denton County
- South Dallas County Freeway from U.S. 287 to U.S. 67
- S.H. 121 in Grapevine north of D/FW Airport to U.S. 75 in McKinney
- S.H. 199 from downtown Fort Worth northwest to the Transportation Study Area boundary
- U.S. 67 from the Dallas County line southwest to the Transportation Study Area boundary

The following Future Freeways are identified in the Plan:

- Trinity Freeway from S.H. 360 in Arlington to I.H. 820 on the east side of Fort Worth
- S.H. 360 south extension from I.H. 20 in Arlington to U.S. 287 in Ellis County
- S.H. 170 from S.H. 114 in Roanoke to I.H. 35W in Fort Worth
- North Tarrant County Freeway from I.H. 35W to U.S. 377 connecting to the proposed North Tarrant County Parkway, a Strategic Regional Arterial
- South Tarrant County Freeway from I.H. 35W to U.S. 287
- South Dallas County Freeway from U.S. 67 to I.H. 35E

The final freeway designation is Local Government Preservation of Right-of-Way. These roadways are proposed freeway facilities where traffic volume projections do not warrant construction of a new freeway or frontage roads by the year 2010. In order to allow for future construction, local governments need to designate these freeway facilities on thoroughfare plans and preserve right-of-way.

The location shown for the Trinity Freeway in the Mobility 2010 Plan map is symbolic, as are all New and Future Freeways indicated in Mobility 2010. The final location of this or any roadway will depend on resolution of environmental, developmental, and flooding concerns such as those described by the City of Fort Worth in their Trinity Corridor Position Paper and those described in federal and/or State environmental impact guidelines.

Rail Transit and General Transit Service Improvements

The Plan calls for 103 miles of passenger rail service including the 66 miles of light rail contained in the Dallas Area Rapid Transit (DART) System and 37 miles of commuter rail. Based on patronage forecasts, the Plan delineates Phase I corridors to be constructed and operational prior to Phase II corridors. In every light rail corridor, express bus service should be provided until light rail service is operational. The Mobility 2010 rail recommendations include the following:

- Phase I Light Rail on 40 miles within the DART system
- Phase II Light Rail on 26 miles within the DART system
- Commuter Rail on the RAILTRAN line between Dallas and Fort Worth Central Business Districts including service to the Dallas/Fort Worth International Airport

In addition to these rail facilities, all existing railroad rights-of-way should be monitored for potential future transportation corridors. The RTC recognizes that DART is working toward the goal of implementing a regional transit system, applauds their efforts, and encourages them to move forward as expeditiously as possible.
Included in the Mobility 2010 Plan are the local and express services proposed by DART and the Fort Worth Transportation Authority (FWTA). The DART Transit System Plan calls for expanding the bus system to support the light rail, commuter rail, and high occupancy vehicle lanes. In addition, bus service will be expanded into areas not served by the fixed guideway facilities. Express bus service will be expanded in conjunction with construction of HOV facilities from 730 route miles in 1986 to 860 route miles in 2010. Local bus route service is planned to expand from 2,500 route miles in 1986 to 3,200 route miles in 2010. In addition to bus service, the DART Transit System Plan includes: demand-response services for mobility-impaired citizens, activity center circulators to improve mobility within activity centers, and local assistance program funding to assist local governments with arterial street projects to improve bus operations.

In Fort Worth, local bus and park-and-ride bus services will be continued as provided today. These facilities are aimed at improving mobility and providing service to transit dependents. In addition, express bus service is planned to be expanded from 120 route miles in 1986 to 400 route miles by 2010. In conjunction with expansion of express bus service will be the construction of several park-and-ride facilities serving high-density activity centers. FWTA plans to continue with its Mobility-Impaired Transportation Service, RideShare Program, and subscription bus service to several major employers in Fort Worth.

High Occupancy Vehicle Lanes

The Plan also calls for a 134-mile Regional High Occupancy Vehicle (HOV) Lane System for preferential use by carpools, vanpools, and buses. While the exact location and operation of these facilities must be determined through future feasibility and design studies, HOV is recommended in the following freeway corridors:

- I.H. 30 (East R.L.T.) from I.H. 635 to the Dallas CBD
- Trinity Freeway from I.H. 30 (East R.L.T.) south of the Dallas CBD to S.H. 183
- U.S. 67 from I.H. 20 to the I.H. 35E/U.S. 67 merge
- I.H. 35E (South R.L.T.) from the I.H. 35E/U.S. 67 merge to the Dallas CBD
- I.H. 30 from I.H. 820 in Tarrant County to the Dallas CBD
- S.H. 183/S.H. 121 from I.H. 820 in Tarrant County to the Trinity Freeway
- I.H. 35E (Stemmons) from F.M. 1171 north of S.H. 121 to Loop 12
- Loop 12 from I.H. 35E (Stemmons) to S.H. 183
- S.H. 161 from I.H. 635 to I.H. 30
- U.S. 75 from F.M. 544 north of S.H. 190 to I.H. 635
- H. 635 from S.H. 161 east to H. 30 (East R.L.T.)

Strategic Regional Arterials

Mobility 2010 identifies over 400 miles of Strategic Regional Arterials as candidate facilities for construction or other capacity improvement in arterial street corridors by the year 2010. The level and type of improvement on each facility are subject to feasibility and design studies. Types of improvements to facilitate traffic flow include grade separations, median and curb access controls, parking restrictions, signal progression, and other traffic engineering enhancements.

The Plan also includes 5,400 lane miles of arterial street improvements identified by local governments to be in place by the year 2010. The recommended Strategic Regional Arterials and local arterial improvements will be evaluated and refined in the development of the 2010 Regional Thoroughfare Plan, a follow-up effort to Mobility 2010.

Unmet Roadway Needs

Illustrated in the Mobility 2010 Plan along several major freeway corridors are Unmet Roadway Needs. These locations are shown to identify freeway corridors where sufficient right-of-way is not available for at-grade widening to serve projected 2010 traffic. Traffic forecasts indicate that in several of these corridors, express freeway lanes or parallel capacity improvements are warranted. Feasibility and design studies must be conducted to determine the appropriate freeway design in these locations and the feasibility and cost effectiveness of parallel improvements.
Why is the Regional Transportation Plan Important?

The rapid growth of the Dallas-Fort Worth region in the past decade has led to increasing transportation problems. An encouraging business environment, tax advantages, a favorable climate, and available land continue to attract many businesses to the region. While growth has many benefits, the recent rate of growth has urbanized land so quickly and has so overloaded our transportation system that available financial resources to improve transportation have not kept pace.

In 1986 congestion occurred in nearly all of the northern portions of Dallas County and portions of eastern, northeastern, and western Tarrant County. Implementing the Mobility 2010 Plan will reduce congestion; however, portions of northern Dallas County are expected to remain congested even with the Plan in place.

With new business comes increases in employment and population. Employment for the year 2010 is expected to reach 3.2 million. This is a 53 percent increase over 1986 levels. In addition, people try to live within reasonable commuting distance of their jobs. In 1986, 3.3 million people lived in the NCTCOG Transportation Study Area. By the year 2010, over 4.5 million persons are expected to live in the region (comprising Dallas, Tarrant, and parts of Denton, Collin, Rockwall, Kaufman, Ellis, Johnson, and Parker Counties).

The forecast growth translates into more cars and trucks on the roads. By 2010, residents and employers in the region will own almost 4 million passenger vehicles, 75 percent more than in 1986. While this is good for many local businesses, it poses some stiff challenges for maintaining quality of life in the region.

Transportation problems associated with rapid growth are extensive. First, and most obvious, is traffic congestion. Increased numbers of vehicles and trips result in restricted traffic flow, reduced mobility, longer trips, greater demand, and more conflicts and traffic accidents.
Congestion decreases an area’s attractiveness and can lead to relocation of population and employment and loss of business; this congestion makes serving clients difficult and causes higher, unproductive labor costs when workers are delayed in traffic. The regional total cost of congestion today is estimated at $2.2 billion a year; by 2010, this cost will exceed $6.2 billion annually without the Mobility 2010 Plan. Implementing Mobility 2010 will reduce 2010 congestion costs by $5.1 billion annually.

Vehicle miles of travel (VMT) is a measure of the total daily miles traveled by all vehicles. In 1986 there were nearly 78 million vehicle miles of travel in the region each day. The forecast for 2010 indicates that daily travel will approach 124 million vehicle miles each weekday, a 59 percent increase. VMT in suburban areas is expected to increase by 68 percent and in rural areas by 95 percent, as development in the region continues to expand and grow into suburban and outlying areas.

To serve this increased traffic, the region will need to build new facilities, as well as rehabilitate and reconstruct aging roads and bridges. Also needed will be more traffic signals and complex control systems to ease traffic flow, and additional parking facilities. NCTCOG projections indicate that an expenditure of $15.8 billion for new roadway construction will be required regionwide before the year 2010 to maintain the current level of service. Yet only $9 billion is currently programmed. Rapid growth also brings problems such as increased noise from heavy truck traffic and increased traffic accidents. The use of open space for highways and interchanges is also an issue, as are the lurking problems of foreign oil dependency and possible supply disruptions.

Increasing numbers of commuters will seek relief from roadway congestion and other problems by using transit. In 1986 daily transit ridership for the region was 174,000; by 2010 this figure would increase to 208,000 with committed improvements and to 240,000 with improvements outlined in the Plan.

It must be emphasized, however, that all the transportation problems brought on by growth cannot be solved; the growth has occurred too quickly. Rather, the situation can be prevented from deteriorating further. This is what the Regional Transportation Plan is intended to do.

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**What impact will the Plan have on Air Quality?**

In order to measure the air quality impacts of the Mobility 2010 Plan, the recommended transportation system was evaluated using the U.S. Environmental Protection Agency MOBILE4 computer software. This was done to ensure that the Mobility 2010 Plan would not result in increased nonmethane hydrocarbon emissions. The analysis included a comparison of projected emissions from the Plan with estimates from both the 1986 Baseline and the 2010 Do-Nothing alternative, which assumed no improvements would be made to the transportation system. The results of this evaluation indicated that implementation of the Mobility 2010 Plan would reduce nonmethane hydrocarbon emissions below either the 1986 or Do-Nothing alternative levels. Based on this analysis, the Mobility 2010 Plan is anticipated to conform with air quality plans set forth for the Dallas-Fort Worth Metropolitan Area.

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**Mobility 2010 Conformity Evaluation**

**Projected Weekday Nonmethane Hydrocarbon Emissions (TONS)**

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<thead>
<tr>
<th>Year</th>
<th>Emissions</th>
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<tr>
<td>1986 Base Year</td>
<td>400</td>
</tr>
<tr>
<td>2010 Do-Nothing</td>
<td>143</td>
</tr>
<tr>
<td>2010 Plan</td>
<td>116</td>
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How was the Regional Transportation Plan Developed?

The process to develop the Mobility 2010 Plan began with the completion of the NCTCOG/SDHPT/DART travel model validation. The travel models were validated for years 1980, 1984, and 1986. The next step of the process was to develop year 2010 baseline traffic and transit ridership forecasts on the year 2010 committed transportation system. A detailed assessment of the 2010 baseline forecast was done to identify future congested locations and transportation system needs. The results of the baseline forecast were presented to local governments, planning agencies, and SDHPT in order to determine future needs and develop transportation system alternatives for evaluation in the Mobility 2010 planning process.

One of the goals of the Mobility 2010 planning process was to identify a system of improvements which would reduce traffic congestion back to or below those levels experienced in the region in 1980. The degree to which this goal was accomplished was determined through a series of performance measures including the percentage of roadways congested during peak travel periods, travel speeds, and the amount of travel time spent in congestion.

Following the diagnostic analysis of the 2010 baseline, a series of travel forecasts was prepared to evaluate system alternatives. Beginning with freeways, additional lanes were evaluated where needed and determined feasible based on existing right-of-way. New freeways and regional rail lines were then added and evaluated based on the traffic projections and ridership estimates. Those facilities attracting sufficient patronage to be considered effective solutions were retained as part of the Plan. High occupancy vehicle lanes and strategic regional arterials were then added to the system to address remaining congestion along major freeway corridors. In several locations, strategic regional arterials were included as options to new freeway construction. Finally, in severely congested freeway corridors, express freeway lanes were also evaluated as a means of addressing future travel demand.

Who is Responsible for Regional Transportation Policy?

As a result of this planning process, the Mobility 2010 Plan represents a composite system of freeways, rail transit, general transit services, high occupancy vehicle lanes, strategic regional arterials, and local arterial improvements identified to maintain regional mobility by the year 2010. Implementing the proposed Plan meets the goal identified at the outset of the process to maintain and improve upon 1980 levels of mobility in our region.

How was the Plan Approved?


Adoption of the Plan culminated a two-year process of evaluation and analysis guided by the RTC. Technical support was provided by NCTCOG’s Transportation Department, the Regional Planning Office of SDHPT, FWTA, DART, and local government staff professionals.

Mobility 2010 Process

In accordance with federal law, the North Central Texas Council of Governments (NCTCOG) is designated by the Governor of Texas as the Metropolitan Planning Organization (MPO) for transportation planning in the Dallas-Fort Worth metropolitan area. NCTCOG’s Executive Board establishes overall policy for comprehensive planning coordination for the region; whereas the role of the Regional Transportation Council (RTC) is to provide a single policy direction for multimodal transportation planning and development.

NCTCOG’s transportation staff reports through the Executive Director to the Executive Board on policy decisions relative to the transportation budget, appointments of technical committees, consulting contracts, and the relationships of transportation planning with comprehensive planning. The transportation staff also provides staff support to the RTC.

The RTC receives advice for policy direction from three technical advisory committees representing public transportation, highway transportation, and air transportation interests. These committees are represented by local government professionals, public transportation providers, private sector representatives, and representatives of state and federal agencies.

The Regional Transportation Council’s primary function is to assure coordination among transportation modes, local governments, and planning activities. RTC responsibilities include approval of the Regional Transportation Plan, the Transportation Improvement Program, and the United Planning Work Program.

Transportation policy for North Central Texas is established through the institutional base of the North Central Texas Council of Governments and its Executive Board — with the Regional Transportation Council serving as an independent policy body for regional transportation improvements.
What will the Regional Transportation Plan Cost?

Implementing all needed projects identified in the Regional Transportation Plan will cost approximately $18.5 billion in 1990 dollars. Of this amount, $10.4 billion will be for freeways, $2 billion for strategic regional arterials, $3.4 billion for arterial streets, $1.4 billion for rail, and $1.3 billion for preferential facilities (HOV lanes). Estimates place the annual travel time savings of the Plan at $5.1 billion, compared to the Plan’s annualized cost of $1.85 billion.

Cost estimates prepared for the Plan were based on unit costs. Unit costs for freeways and arterials were developed based on information in the Transportation Improvement Program and the SDHPT 10-Year Project Development Plan. HOV and rail costs were developed based on DART’s 1989 Transit System Plan.

What Approach Should be Used to Implement the Plan?

A Congestion Management System represents a promising opportunity for addressing some of the transportation needs of the region. While the rapid growth of our area over the past decade has resulted in positive changes in the quality of life and the economy, traffic congestion resulting from this growth has created many new challenges. Designing a transportation system which conforms to the needs of an expanding metropolitan area combined with increasingly limited financial resources remains a major issue facing our region. To address this challenge, congestion management along with the physical improvements in the Mobility 2010 Plan is proposed. This approach is based on identifying existing congestion levels and locations, monitoring changes in these levels, predicting future conditions, and developing and implementing strategies to relieve congestion.

The implementation of major improvements should be based upon cost-effective solutions including operational considerations, such as transportation system management actions and demand reduction strategies used in travel demand management. This approach can increase the operational capacity of the existing system, reduce demand, and complement major capital improvements.

Examples of transportation system management options include the following:

- Encourage traffic signal timing and coordination
- Expand traffic surveillance systems and emergency road patrols
- Promote arterial traffic engineering enhancements such as one-way streets, left turn bays, continuous turn lanes, and improved intersections
- Enhance freeway improvement plans to mitigate traffic congestion during construction
- Promote incident management which minimizes traffic delay

Examples of travel demand management options include the following:

- Encourage land use and developments which may be served through public transit, vanpooling, and carpooling
- Coordinate rideshare programs among local governments, planning agencies, transit authorities, and major employers
- Promote flexible work hours to reduce the concentration of travel during peak travel periods

The private sector plays an important role in congestion management because coordination of transportation services with new development requires commitment by private enterprise. In light of funding restrictions, the traditional notion that transportation is solely the responsibility of government must be discarded. A joint public/private partnership can alleviate the problem of limited public resources and can deal with transportation needs better than government alone. Such a partnership is advantageous to the private sector because transportation services affect business. Working together can also avoid confrontations by resolving conflicts before they occur.

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See inside of document for Mobility 2010 maps.
What Is NCTCOG?

The North Central Texas Council of Governments is a voluntary association of cities, counties, school districts, and special districts — established in January 1966, to assist local governments in planning for common needs, cooperating for mutual benefit, and coordinating for sound regional development.

North Central Texas is a 16-county metropolitan region centered around the two urban centers of Dallas and Fort Worth. Currently, the Council has 213 members, including 16 counties, 154 cities, 23 independent school districts, and 20 special districts. The area of the region is approximately 12,800 square miles, which is larger than nine states, and the population of the region is over 4.1 million, which is larger than 29 states.

The structure of NCTCOG is relatively simple — a General Assembly composed of one voting representative from the governing body of each member government. These voting representatives make up the General Assembly which annually elects an 11-member Executive Board (9 local elected officials and 2 regional citizens). The Executive Board is the policy approval board for all activities undertaken by the Council of Governments, including program activities and decisions, regional plans, and fiscal and budgetary policies. The Executive Board is supported by study committees, technical advisory committees, policy development committees (such as the Regional Transportation Council), and a professional staff. Through this process, hundreds of citizens and local officials are involved in formulating the regional policies which assist the sound and orderly growth and development of the North Central Texas region.