The Metropolitan Transportation Plan for the Dallas-Fort Worth Region

Mobility 2030
2009 AMENDMENT

North Central Texas Council of Governments
What is the Metropolitan Transportation Plan?

• Represents a **blueprint** for a multimodal transportation system

• Responds to **adopted goals**
  - Increased/improved mobility
  - Quality of life
  - Financial/air quality

• Identifies **policies, programs, and projects** for continued development

• Guides **expenditures** for federal and state funds
MTP vs. TIP

There are two major transportation plans for the Dallas-Fort Worth Region

• The Metropolitan Transportation Plan (MTP)
  - Long range vision for region’s transportation system
  - Identifies sources of revenue based upon reasonable assumptions
    → think “Savings Account”

• The Transportation Improvement Program (TIP)
  - Includes specific projects, programs, etc. to be funded in the near term
  - Lists specific revenue sources to fund transportation projects, programs, etc.
    → think “Checking Account”

The MTP and TIP are dependent on each other
Prioritization of Improvements

**Infrastructure Maintenance**
- Maintain & Operate Existing Facilities

**Management & Operations** (ITS, TSM, TDM, Bike/Pedestrian)
- Improve Efficiency of Existing Facilities
- Remove Trips from System

**Rail & Bus**
- Induce Switch to Transit

**HOV/Managed Lanes**
- Increase Auto Occupancy

**Freeway/Tollway & Arterial**
- Additional Vehicle Capacity

Air Quality Impacts and Financial Constraint are Considered Throughout the Process

Policy Discussions
- Intermodal Planning Efforts
- System Safety
- System Security
- Alternative Land Use & Growth Scenarios

Mobility 2030 – 2009 Amendment
Financial Constraint Summary

The MTP is not a “wish list” of projects for the region, it must be constrained to available resources

<table>
<thead>
<tr>
<th>Description</th>
<th>Mobility 2030 - 2009 Amendment (Billions, Actual Dollars)</th>
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</thead>
<tbody>
<tr>
<td>Operations, Maintenance, Rehabilitation, Safety, Facility Reconstruction</td>
<td>$19.8</td>
</tr>
<tr>
<td>Transit Operations, Maintenance</td>
<td>$16.4</td>
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<tr>
<td>Congestion Management Process, Alternative Fuels</td>
<td>$3.1</td>
</tr>
<tr>
<td>Bicycle, Pedestrian, Transportation Enhancements</td>
<td>$2.1</td>
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<tr>
<td>Rail Capital*</td>
<td>$21.6</td>
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<tr>
<td>Bus, Paratransit Capital</td>
<td>$2.7</td>
</tr>
<tr>
<td>Regional Arterial System</td>
<td>$7.0</td>
</tr>
<tr>
<td>Other Arterials</td>
<td>$5.9</td>
</tr>
<tr>
<td>Freeway, Tollway, HOV, Managed System</td>
<td>$66.9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$145.5</strong></td>
</tr>
</tbody>
</table>

Costs are adjusted for “total project cost” and “year of expenditure” consistent with SAFETEA-LU planning requirements. “Actual Dollars” reflects the effect of inflation over time. *Includes potential Revenue from Rail North Texas/Texas Local Option Transportation Act.
Air Quality Analysis

The Metropolitan Transportation Plan

Transportation Conformity Analysis
For the North Central Texas Nonattainment Area

The Metropolitan Transportation Plan anticipates a favorable Air Quality Conformity determination by the United States Department of Transportation in July 2009.

EMISSIONS OF NITROGEN OXIDES (NOx)

- Regional Transportation Council Initiatives = 12.47 tons/day
- 2009 Attainment Demonstration NOx Motor Vehicle Emission Budget = 166.91 tons/day

EMISSIONS OF VOLATILE ORGANIC COMPOUNDS (VOC)

- Regional Transportation Council Initiatives = 4.88 tons/day
- 2009 Attainment Demonstration VOC Motor Vehicle Emission Budget = 99.09 tons/day

Each conformity analysis year emissions must be less than the 2009 attainment demonstration State Implementation Plan (SIP) emission budget for VOC and NOx.

Without Regional Transportation Council Initiatives in 2009 the region would not have passed Air Quality Conformity.
Regional Air Quality Program Targets

- High-Emitting Vehicles
- Vehicle Cold Starts
- Hard Accelerations
- Excessive Idling
- High Speeds
- Low Speeds
- Diesel Engines
- High Level of Vehicle Miles Traveled
Bicycle and Pedestrian Facilities

Legend

Recommended Veloweb Routes
- Completed: 112 miles
- Funded: 34 miles
- Needed: 289 miles

Candidate Veloweb Routes
- Completed: 7 miles
- Needed: 202 miles

- Freeways
- County Boundaries
- Metropolitan Planning Area Boundary
- Major Lakes

New facility locations indicate transportation needs and do not represent specific alignments.

All existing railroad rights-of-way should be monitored for potential future transportation corridors.

All Veloweb routes should be targeted for right-of-way preservation.
Passenger Rail Recommendations

Legend

- Light Rail
- Light Rail - New Technology
- Regional Rail
- Regional Rail - Special Events Only
- Existing Rail Corridors
- Highways
- Modern Streetcar

The Dallas and Fort Worth Streetcar systems are included in the plan and final alignments will be determined by each city.

Corridor specific design and operation characteristics for the Intercity Passenger, Regional Passenger and Freight Rail Systems will be determined through capacity evaluation and ongoing project development. Refined rail forecasts are necessary to determine technology and alignment in Future Rail corridors.

All existing railroad right-of-way should be monitored for potential future transportation corridors. New facility locations represent transportation needs and do not reflect specific alignments.

Institutional structure being reviewed for the region.

The need for additional rail capacity in the Dallas CBD, Fort Worth CBD, DFW International Airport, and other inter-modal centers will be monitored. A grade separation is needed for the Dallas CBD second alignment.

April 09, 2009

The Cotton Belt Corridor between DFW International Airport and PGE includes $50 million worth of mitigation expenses to curb impacts such as noise, vibration, and visual impacts. Connection to DFW from the Cotton Belt and DART Orange Line will continue to be refined to reduce cost, limit impacts to security, improve mobility and regional economic development opportunities.

DART’s proposed West Dallas rail service will be evaluated in conjunction with the Union Pacific rail line between Fort Worth and Dallas. Further evaluation is needed to prevent duplication of service, determine alignment, vehicle technology, connectivity and staging.

DART’s proposed SouthPort rail line extension will be evaluated in conjunction with the Dallas to Waxahachie rail service. Further evaluation is needed to prevent duplication of service, determine alignment, vehicle technology, connectivity and staging.
Rail Lines Under Consideration

Legend
- Existing Service, Programmed Projects and Projects Under Development
- Projects Pending Alternative Funding
- Cotton Belt- Potential Funding through Public Private Partnership
- Existing Rail Corridors
- Highways

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251 Rail Miles Pending Funding

February 09, 2009
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The need for additional rail capacity in the Dallas CBD, Fort Worth CBD, DFW International Airport, and other inter-modal centers will be monitored. A grade separation is needed for the Dallas CBD second alignment.

(1) Represents additional transportation needs above and beyond those of the financially constrained recommendations.
Corridor specific design and operational characteristics for the Freeway/Tollway system will be determined through ongoing project development.

Additional and improved Freeway/Tollway interchanges and service roads should be considered on all Freeway/Tollway facilities in order to accommodate a balance between mobility and access needs.

All Freeway/Tollway corridors require additional study for capacity, geometric, and safety improvements related to truck operations.

New facility locations indicate transportation needs and do not represent specific alignments.

Operational strategies to manage the flow of traffic should be considered in the corridors where additional freeway or tollway lanes are being considered.
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**Priced Facilities**

**Legend**
- **Existing Toll Facilities**
- **Future Toll Facilities**
- **Future HOV/Managed Facilities**
- **Freeways/Tollways**

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* Existing lanes in corridor remain free. Toll charged on new capacity only and will include HOV Incentives.

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$17.9 Billion of Innovative Funding Strategies (2006$)

North Central Texas Council of Governments
Transportation

April 9, 2009
**The Metropolitan Transportation Plan**

**Regionally Significant Arterials**

**Legend**
- **Freeways / Tollways**
- **Regionally Significant Arterials**

*Regionally Significant Arterials are derived from the following sources:

1) The National Highway System and National Highway System Intermodal Connectors (1995);

2) The Federal Functional Classification System (1997 Update) in addition to the locally approved (2005 Update); and

3) Regional Arterials as defined and adopted in NCTCOG's Regional Thoroughfare Plan (Amended May 10, 2001).

New facility locations indicate transportation needs and do not represent specific alignments.
**The Metropolitan Transportation Plan**

**Additional Roadway System Needs**

**Legend**
- Red: Unfunded Projects: Previously funded in Mobility 2025, 2005 Amendment
- Orange: Other Unfunded Corridor Needs
- Black: Freeways/Tollways

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(1) Represents additional needs above and beyond those of the financially-constrained recommendations.
(2) Projects that are funded in Mobility 2025, 2005 Amendment, however, due to financial constraint issues, will be deferred until after 2030 ($2.2 Billion deferred).
(3) General Transportation Corridors requiring additional capacity as identified in 2005 TIP.

Needs do not represent specific alignments or modes.

Estimated Costs: $1.95 - $2.29 billion dollars.
Regional Outer Loop Staging

Section Staging
- Operational By 2019
- Operational By 2025
- Operational By 2030
- Further Evaluation Needed
- North/South Interregional Corridors
- Section Dividers
  - Year 2030 Freeway Network
  - A - North Collin County Outer Loop
  - B - North/East Collin County Outer Loop
  - C - East Collin County Outer Loop
  - D - Rockwall/Kaufman County Outer Loop
  - E - Loop 9 - Dallas/Ellis/Kaufman County
  - F - F.M. 917 Corridor
  - G - Southwest Corridor Outer Loop
  - H - Parker County Outer Loop
  - I - Wise County Outer Loop
  - J - S.H. 170 / I.H. 35 Corridor*
  - K - Northern Denton County Outer Loop

*The S.H. 170 / I.H. 35 Corridor can be developed as an Interim Regional Outer Loop section until section "I" is warranted.

New facility locations indicate transportation needs and do not represent specific alignments.

Approximately 240 Center Main Line Miles
Approximately 1440 Main Lane Miles

April 9, 2009
Truck Lane Recommendations

Legend
- **Recommended Near-term Truck Lane Restrictions**
- **Potential Long-term Intercity Truck Lane Restrictions**

- Freeways
- Major Roadways
- Regional Arterials
- County Boundaries
- Metropolitan Planning Area Boundary
- Major Lakes

Recommendations Include:
- 3+ lanes
- Moderate to High Truck Volumes
- Continuous system

Further site specific study needed to evaluate:
- Segments with geometric constraints
- Current or pending reconstruction
- Capacity and congestion levels
- Public opinion

New facility locations indicate transportation needs and do not represent specific alignments

April 9, 2008
## Performance Measures

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<tr>
<th>Performance Measure</th>
<th>2007</th>
<th>Mobility 2030 - 2009 Amendment</th>
<th>Percent Change</th>
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<tr>
<td>Population</td>
<td>5,856,432</td>
<td>8,503,146</td>
<td>45.2%</td>
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<tr>
<td>Employment</td>
<td>3,664,954</td>
<td>5,256,667</td>
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<td>Lane Miles</td>
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<td>Vehicle Miles of Travel (Daily)</td>
<td>151,392,421</td>
<td>242,006,657</td>
<td>59.9%</td>
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<td>Vehicle Hours Spent in Delay (Daily)</td>
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<td>1,667,797</td>
<td>62.4%</td>
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<tr>
<td>% Increase in Travel Time Due to Congestion</td>
<td>34.32%</td>
<td>36.11%</td>
<td>-</td>
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<td>Annual Cost of Congestion (Billions)</td>
<td>$4.17</td>
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The Metropolitan Transportation Plan

System Performance
Levels of Congestion

- Areas with No Congestion
- Areas with Light Congestion
- Areas with Moderate Congestion
- Areas with Severe Congestion

Roadways

2007
Annual Cost of Congestion $4.2 Billion

2030
Annual Cost of Congestion $6.5 Billion

North Central Texas Council of Governments Transportation

April 9, 2009
### Regional Congestion Summary

#### Performance Measure 2007 Mobility 2030 – 2009 Amendment

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#### Mapping Region

- **2007**
- **Mobility 2030 – 2009 Amendment**

- **Areas with No Congestion**
- **Areas with Light Congestion**
- **Areas with Moderate Congestion**
- **Areas with Severe Congestion**