Society of American Military Engineers

Imagine Future Infrastructure, Technology, Research and People

Kevin Feldt
North Central Texas Council of Governments
Regional Perspective

Population
- 2018: 7.4 Million
- 2045: 11.2 Million
- 4th Largest Metropolitan Area by Population
- 1 Million+ People Added per Decade Since 1960

Area
- 12 Counties
- 2nd Largest Metropolitan Planning Area by Land Area

Economy
- Home to 22 Fortune 500 Firms
- Projected to be Ranked 11th Globally in Metro GDP
- Represents 32% of State’s Economy

Lane Miles
- Freeways: 4,707 in 2018 - 6,066 by 2045
- Priced Facilities: 1,078 in 2018 - 1,825 by 2045
Travel Demand

• VMT
  • 212 million miles in 2018
  • 331 million miles in 2045

• Vehicle Hours of Delay
  • 1.7 million hours in 2018
  • 3.8 million hours in 2045

• Cost of Congestion
  • $12 billion in 2018
  • $27 billion in 2045

• Existing Funding Sources Unable to Keep Pace
What Is The Metropolitan Transportation Plan?

- Required by Law
- Referred to as The Mobility Plan

1. Represents a Blueprint for the Region’s Multimodal Transportation System
2. Covers at Least a 20-Year Timeframe
3. Responds to Goals
4. Identifies Policies, Programs, and Projects for Continued Development
5. Guides the Expenditure of Federal and State Funds
Mobility 2045 – Focus on Connections

• Regional Passenger Rail
• Non-Motorized Connections
• Tolled Managed Lane **System**
• Emerging Technologies
• Freight
• High-Speed Rail
Mobility Plan Development

Maximize Existing System
- Infrastructure Maintenance
  - Maintain & Operate Existing Facilities
  - Bridge Replacements
- Management, Operations, and Technology
  - Improve Efficiency & Remove Trips from System
  - Traffic Signals and Bicycle & Pedestrian Improvements

Growth, Development, and Land Use Strategies
- More Efficient Land Use & Transportation Balance
Mobility Plan Development

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Strategic Infrastructure Investment
- Rail and Bus
  - Induce Switch to Transit
- HOV/Managed Lanes
  - Increase Auto Occupancy
- Freeways/Tollways and Arterials
  - Additional Roadway Capacity
Mobility 2045 Expenditures

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Total Expenditures

Notes:
1 Actual dollars, in billions. Values may not sum due to independent rounding.
2 Balances to reasonably expected revenue, demonstrating financial constraint.
Regional Roadway Funding

Major Roadway Recommendations

Roadway Expenditures
$ 53 B

Regional Roadway Needs
$ 389 B

Shortfall
$ 326 B
SPRAWL vs INFILL
Suburban and CBD Buffer Areas

Dallas CBD

Fort Worth CBD

North Central Texas Council of Governments

August 2019
## Suburban/Urban Population

<table>
<thead>
<tr>
<th>Data Source</th>
<th>Year</th>
<th>CBD</th>
<th>Suburban</th>
<th>Total</th>
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<tbody>
<tr>
<td>Decennial Census</td>
<td>1990</td>
<td>43,388</td>
<td>1,134,423</td>
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<td>Decennial Census</td>
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<td>145,769</td>
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### Annualized Population Growth Rates

![Annualized Population Growth Rates](image)
## Suburban/Urban Employment

<table>
<thead>
<tr>
<th>Data Source</th>
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<th>CBD</th>
<th>Suburban</th>
<th>Total</th>
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<tbody>
<tr>
<td>Demographic Forecast</td>
<td>2018</td>
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<td>670,580</td>
<td>1,811,726</td>
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</table>

### Annualized Employment Growth Rates

- **Near CBDs**
- **Near Suburban Fringe**
- **Region Total**

![Annualized Employment Growth Rates Graph](graph.png)
Regional Veloweb

Facility recommendations indicate transportation need. Corridor-specific alignment, design, and operational characteristics for the Regional Veloweb system will be determined through ongoing project development.
Facility recommendations indicate transportation need. Corridor-specific alignment, design, and operational characteristics will be determined through ongoing project development.
Regionally Significant Arterial Improvements

Lines on this map depict arterials with funds for improvement. Facility recommendations indicate transportation need. Corridor-specific alignment, design, and operational characteristics will be determined through ongoing project development.

North Central Texas Council of Governments
August 2015
Major Roadway Recommendations

Facility recommendations indicate transportation need. Corridor-specific alignment, design, and operational characteristics will be determined through ongoing project development.
Toll Managed Lane System Policy Boundary

Cost of Congestion/Delay: $12.1 billion

Congestion Index is based on a percent increase in travel time.
Technology Initiatives

• Technology Chapter

• New Policies
  • Encourage Data Sharing
  • Encourage Automated Vehicles
  • Support Infrastructure Maintenance
  • Encourage Ridesharing
  • Increase Average Vehicle Occupancy
  • Reliable and Robust Wireless Communications
Unknown Impacts

• Ride Hailing and Car Sharing Services
  • Car Ownership Rates
  • Transit Use
  • Vehicle Miles of Travel

• Future Technologies
  • Uber Elevate
  • Hyperloop
  • Automated Vehicles
Unknown Impacts

• Goods and Services Distribution
  • Online Shopping

• Technology Absorption Rate
  • Older Populations May be Low

• Mobile Devices
  • Waze
  • Uber/Lyft Applications
  • Google Maps
Contact

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