Future Mobility in Collin County

Presented by
Collin County Commissioners Court

Spring, 2016
Collin County Growth

• High growth rate sustained over last 40 years
• 6th Largest County in Texas
• Population at “build-out” estimated to be 2.1 M - 3.4 M
What should the transportation system in Collin County look like for over 2 million people?
What do the systems of “limited access roadways” (LARs) look like in Dallas and Tarrant Counties?
LARs Comparison

1,959,449

2,496,859
LARs Network Planning in Dallas Co

Dallas Co. Population
1950: 614,799
1957: 850,508 est.
1960: 951,527
Existing and Currently-Planned LARs
### Traffic: Today and Tomorrow

Examples of 6-lane arterials

<table>
<thead>
<tr>
<th>Capacity</th>
<th>Current</th>
<th>Build-out</th>
</tr>
</thead>
<tbody>
<tr>
<td>US 380</td>
<td>45,000</td>
<td>50,000</td>
</tr>
<tr>
<td>SH 78</td>
<td>45,000</td>
<td>22,000</td>
</tr>
</tbody>
</table>

vehicles per day
Traffic: Today and Tomorrow

Build-out?
How do we determine what the transportation system should be?
Strategic Planning

Take **strategic** steps forward

What are those steps?
Planning Strategically

- Resist the urge to plan for tomorrow or even 2035 or 2040. Think “BUILD-OUT” when planning.
- Analyze traffic demand at build-out
Planning Strategically

• Partner with TxDOT, cities, transit agencies and NCTCOG to develop build-out plan

• It will appear to be an overwhelming task – will require EVERYONE to accomplish it
Planning Strategically

• Take a lesson from planning in Dallas County before the 50s
• Identify major roadway “backbone” for the mobility system
Efforts To-Date

• 2014 Update to Mobility Plan included first demographic scenario
  • 2.1M population
  • 1.2M employment
Efforts To-Date

• Developed second demographic scenario
  • Assumed east side will develop same as west side
  • Along Outer Loop, included typical development for a LAR
**2<sup>nd</sup> Scenario Results:**

- 3.44M Pop
- 1.6M Empl
Efforts To-Date

- Ran build-out travel demand models for both scenarios
Candidates for LARs

Blue roads - exceed capacity of 6-lanes
Planning Strategically

**LARs**
1. US 380
2. SH 78
3. N-S Road betw US 75 & Lake Lavon
4. Outer Loop
Planning Strategically

Long-term planning and working together can prevent THIS
Planning Strategically

And provide THIS
Planning Strategically

Beyond congestion, what impact will each of these conditions have on our economy?
From the dawn of civilization, transportation has been the defining force in economic progress. The earliest settlements were concentrated along the great navigable waterways of the world, and trails and trade routes determined commerce for millennia. Over time, railroads, highways, and, more recently, airports have been added to the infrastructure complex of the world. As at the beginning, modern economies are defined by accessibility and logistics, and superior transportation offerings are a critical factor in the competitiveness and success of a region.

Dr. M. Ray Perryman, March 21, 2016
Economic Impact

Thoroughfares generally only support “local” retail and commercial
Economic Impact

But limited access roadways support larger regional commercial like THIS
Economic Impact

or THIS
Economic Impact

or THIS
A very important question must be answered now:

Will the “economic engine” that has made Collin County what it is today be maintained – or left to grind to a halt?
Economic Engine

DNT - Taxable Sales (1-Mile Corridor Buffer)

2004 - 2014

$0.0 - $1.5

$0.0

$0.5

$1.0

$1.5

+73%
Economic Engine

US 75 - Taxable Sales (1-Mile Corridor Buffer)

2004: 1.0 Billion
2005: 1.2 Billion
2006: 1.7 Billion
2007: 1.5 Billion
2008: 2.0 Billion
2009: 2.1 Billion
2010: 2.2 Billion
2011: 2.3 Billion
2012: 2.4 Billion
2013: 2.5 Billion
2014: 2.5 Billion

+63% increase from 2004 to 2014
Economic Engine

5.5 Miles: PGBT-SRT
2014 Taxable Sales per Mile: $209.6 Million
Avg. Yearly Growth per Mile: $15.2 Million

18 Miles: I-635-SRT
2014 Taxable Sales per Mile: $143.6 Million
Avg. Yearly Growth per Mile: $9 Million
Estimated Funding Needed for LARs and Principal Arterials (blue) to 2040

- **Outer Loop**
  - Rockwall Co to Denton Co
  - 4 main lanes
  - 4 service road lanes
  - $2.4 billion

- **US 75 Re-build**
  - H 635 to SRT
  - $3 billion

- **US 75 Widening**
  - OL to Co Line
  - $190 million

- **US 78 as a LAR**
  - PGBT to FM 6
  - $790 million

- **US 380 as a LAR**
  - US 75 to Preston Rd/SH 289
  - $535 million

- **LAR Parallel to US 75**
  - from Laud Howell/FM 543 to PGBT
  - $1.1 billion

- **DNT Extension and Widening**
  - $1.6 billion

- **SRT Widening**
  - includes Denton Co
  - $110 million

- **PGBT Widening**
  - including Dallas and Denton Co
  - $78 million

- **Collin Co Mobility Plan Principal Arterials**
  - $1.3 billion

**TOTAL 2040 NEEDS**

- $11.103 billion
### Estimated Funding Available to 2040

<table>
<thead>
<tr>
<th>Category</th>
<th>MPA</th>
<th>Collin**</th>
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</thead>
<tbody>
<tr>
<td><strong>Infrastructure Maintenance</strong></td>
<td>$37.4</td>
<td>$4.0</td>
</tr>
<tr>
<td>• Maintain &amp; Operate Existing Facilities</td>
<td></td>
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<tr>
<td>• Bridge Replacements</td>
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<tr>
<td><strong>Management and Operations</strong></td>
<td>$7.2</td>
<td>$0.9</td>
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<tr>
<td>• Improve Efficiency &amp; Remove Trips from System</td>
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<tr>
<td>• Traffic Signals and Bicycle &amp; Pedestrian Improvements</td>
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<tr>
<td><strong>Growth, Development, and Land Use Strategies</strong></td>
<td>$3.6</td>
<td>$0.5</td>
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<tr>
<td>More Efficient Land Use &amp; Transportation Balance</td>
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<tr>
<td><strong>Rail and Bus</strong></td>
<td>$27.2</td>
<td>$2.4</td>
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<td>Induce Switch to Transit</td>
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<td><strong>HOV/Managed Lanes</strong></td>
<td>$43.4</td>
<td>$8.3</td>
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<tr>
<td>Increase Auto Occupancy</td>
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<tr>
<td><strong>Freeways/Tollways and Arterials</strong></td>
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<td>Additional Vehicle Capacity</td>
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### Mobility 2040 Expenditures

- **$118.9***
- **$16.1***

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*Actual dollars, in billions. Values may not sum due to independent rounding.

**Estimated values, actual figures will be determined by ongoing project and program implementation.
Collin County Estimated Gap Through 2040

Needs $11.1B
Available $ 8.3B
Gap $ 2.8B

Over 25 years, per year is $112M
For 5 years, that is $560M
Next Steps

- Develop process for cities, TxDOT, transit agencies and NCTCOG to work together on build-out plan
Cities and County agree where LARS should go in order to maximize larger commercial development as opposed to neighborhood commercial
Work together to find routes through our fast-growth county now in order to preserve ROW
Questions?