NORTH/SOUTH ROADWAY NEEDS AND OPPORTUNITIES

February 16, 2017 – 1:00pm
McKinney City Hall
McKinney, Texas

COLLIN COUNTY ROADWAY ACTION PLAN

North Central Texas Council of Governments
WELCOME + INTRODUCTIONS

NCTCOG STAFF

Michael Morris, P.E. - Director of Transportation
Dan Lamers, P.E. - Senior Program Manager
Kevin Feldt, AICP - Program Manager
Jeff Neal - Program Manager
Chris Reed - Senior Transportation Planner
NCTCOG OVERVIEW

The North Central Texas Council of Governments (NCTCOG), through its Transportation Department, is the federally designated Metropolitan Planning Organization (MPO) that conducts regional transportation planning in North Central Texas.

MPO Activities are Led by:

- NCTCOG Executive Board – Fiscal Administration
- Regional Transportation Council (RTC) – Policy and Funding Administration
- Several Technical Committees

Major Responsibilities Include:

- Metropolitan Transportation Plan
- Transportation Improvement Program
- Unified Planning Work Program
- Congestion Management Process
- Air Quality Conformity
NCTCOG METROPOLITAN PLANNING AREA WITH 8-HOUR OZONE NONATTAINMENT AREA
TEN YEAR PLAN
PROJECT FUNDING
TEN YEAR PLAN (HOUSE BILL 20)

An annual collaborative performance-based apparatus for local governments and MPOs to assist the Texas Department of Transportation (TxDOT) in selecting and prioritizing roadway projects for the statewide Unified Transportation Program (UTP). The North Central Texas regional project list was approved by the RTC in December 2016.

**Collin County Roadway Action Plan Projects:**
- North/South Corridors – $200,000,000
- Regional Outer Loop (DNT – SH 121) – $100,000,000
- Regional Outer Loop (US 380 – Rockwall C/L) – $50,000,000
- US 380/McKinney Bypass – $252,000,000

**Complimentary Projects for North/South Corridors:**
- FM 2478 (FM 1461 – US 380) – $32,600,000
- FM 2514 (Lavon Pkwy. – Brown Street) – $26,796,024
- FM 2551 (FM 2170 – FM 2514) – $38,099,111
- SH 205 (SH 78 – Rockwall C/L) – $28,654,950
- SH 205 (Collin C/L – SH 66) – $32,115,673
STRATEGIC REVIEW

North/South Arterial and Intersection Projects
Collin and Rockwall Counties

**Completed/Under Construction**
1. SH 78 – Spring Creek Parkway to SH 205
   Widen to 6 lanes divided ($21,354,000)
   Completion Spring 2017
2. SH 78 – SH 205 to Business SH 78 (Lavon)
   Widen to 6 lanes divided ($14,630,307)
   Completion Fall 2016
3. SH 78 – Business SH 78 (Lavon) to FM 6
   Widen to 6 lanes divided ($9,993,504)
   Completion Fall 2016
4. SH 205 – Olive Street (N of SH 66) to Sids Road (Relocated SH 276)
   Widen to 0 lanes divided ($16,739,331)
   Completion Spring 2010

**Planned/Funded Construction**
1. SH 205 – SH 78 to Rockwall C/L
   Widen to 8 lanes divided
   FY 2017-2026 10-Year Plan ($20,654,950)
2. SH 205 – Rockwall C/L to Olive Street (N of SH 66)
   Widen to 6 lanes divided (N of John King Blvd)
   Widen to 4 lanes divided (S of John King Blvd)
   FY 2017-28 10-Year Plan ($32,115,673)

**Unfunded Need**
1. SH 78 – US 380 to FM 1778
   Widen to 6 lanes divided
2. SH 78 – FM 1778 to FM 6
   Widen to 6 lanes divided
3. SH 78 @ SH 205 Intersection
   Construct grade separation
4. John King Boulevard – SH 205 to IH 30
   Widen to 6 lanes divided
5. John King Boulevard – UP RR Crossing
   Construct grade separation

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Freeway
Arterial Roads
County Line
Project Limit Lines

DRAFT

Date: 2/14/20117
2017 Levels of Congestion/Delay

Congestion Index:
- No Congestion
- Light Congestion
- Moderate Congestion
- Severe Congestion

Major Roads

Dallas CBD

Fort Worth CBD

Cost of Congestion/Delay: $10.7 billion
*Congestion Index is based on a percent increase in travel time.
2040 Levels of Congestion/Delay
No-Build Scenario

Congestion Index*

- No Congestion
- Light Congestion
- Moderate Congestion
- Severe Congestion
- Major Roads

Cost of Congestion/Delay: $43.9 billion

*Congestion Index is based on a percent increase in travel time.
2040 Levels of Congestion/Delay

Congestion Index*
- No Congestion
- Light Congestion
- Moderate Congestion
- Severe Congestion
- Major Roads

Cost of Congestion/Delay: $25.3 billion
*Congestion Index is based on a percent increase in travel time.
2040 PM Peak Period Travel Times from McKinney

Travel Times from McKinney
- 0 to 15 Minutes
- 15 to 30 Minutes
- 30 to 45 Minutes
- 45 to 60 Minutes
- 60 to 75 Minutes
- 75 to 90 Minutes
- 90 to 105 Minutes
- 105 to 120 Minutes

- McKinney
- DFW Airport
- Dallas Love Field

Contours based on modeled average peak period speeds in 2040.
Roadway Action Plan for Collin County

**Corridor 1 (Near Term):**
US 75
- Widening in Allen
- PGBT Interchange Ramp Improvement
- Widen Plano Parkway and DART rail bridges
- Technology Lane

**Corridor 2 (Near Term):**
Collin County Outer Loop
Staged construction of frontage roads

**Corridor 3 (Near Term):**
US 380
- Countywide Study
- McKinney Bypass

**Corridor 4 (Longer Term):**
Collin County Strategic Transportation Initiative
Study of non-tolled north/south roadway needs and opportunities

Toward President George Bush Turnpike
Lavon Lake
# Roadway Action Plan for Collin County

<table>
<thead>
<tr>
<th>Corridor</th>
<th>Project</th>
<th>Description</th>
<th>Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1) US 75 (Near Term)</strong></td>
<td>Widening in Allen</td>
<td>Widen freeway to a continuous 8-lane section through Allen</td>
<td>TxDOT: Kelly Selman</td>
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<tr>
<td></td>
<td>PGBT interchange ramp improvement</td>
<td>Widen ramps from PGBT to northbound US 75 and US 75 southbound to PGBT</td>
<td>NTTA:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>TxDOT: Kelly Selman</td>
</tr>
<tr>
<td></td>
<td>Widen Plano Parkway and DART rail bridges</td>
<td>Widen narrow section on US 75 by expanding Plano Parkway and DART rail bridges</td>
<td>TxDOT: Kelly Selman</td>
</tr>
<tr>
<td></td>
<td>Technology Lane</td>
<td>Remove HOV lane and pylons and allow usage of the lane during peak hours and for incident management</td>
<td>NCTCOG: Natalie Bettger</td>
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<td></td>
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<td>TxDOT: Kelly Selman</td>
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<tr>
<td><strong>2) Collin County Outer Loop (Near Term)</strong></td>
<td>Staged construction of frontage roads</td>
<td>Construct one side of frontage road between DNT and SH 121</td>
<td>NCTCOG: Sandy Wesch</td>
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<tr>
<td></td>
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<td>Collin County: Clarence Daugherty</td>
</tr>
<tr>
<td><strong>3) US 380 (Near Term)</strong></td>
<td>Countywide study</td>
<td>Study needs on US 380 from Denton County line to Hunt County line</td>
<td>TxDOT: Kelly Selman</td>
</tr>
<tr>
<td></td>
<td>McKinney Bypass</td>
<td>Study potential of a bypass around northern McKinney for US 380</td>
<td>TxDOT: Kelly Selman</td>
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<tr>
<td><strong>4) Collin County Strategic Transportation Initiative (Longer Term)</strong></td>
<td>Study of non-tolled north/south roadway needs and opportunities</td>
<td>Study north/south transportation needs in the southeastern part of Collin County to enhance the non-tolled roadway grid around Lavon Lake and connections southward to PGBT</td>
<td>NCTCOG: Dan Lamers</td>
</tr>
</tbody>
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NORTH/SOUTH ROADWAY NEEDS AND OPPORTUNITIES
### North/South Roadway Model Assumptions

<table>
<thead>
<tr>
<th>Classification</th>
<th>Lanes</th>
<th>Speed (MPH)</th>
<th>Limited Access</th>
<th>Future Freeway</th>
<th>Tolled</th>
<th>North Terminus</th>
<th>South Terminus</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>West Corridor</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Principal Arterial</td>
<td>6</td>
<td>45</td>
<td>Potential</td>
<td>Potential</td>
<td>No</td>
<td>US 75</td>
<td>PGBT</td>
</tr>
<tr>
<td><strong>Lake Corridor</strong></td>
<td></td>
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</tr>
<tr>
<td>Principal Arterial</td>
<td>6</td>
<td>45</td>
<td>Potential</td>
<td>Potential</td>
<td>No</td>
<td>Outer Loop/SH 121</td>
<td>PGBT</td>
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<tr>
<td><strong>SH 78/SH 205/John King</strong></td>
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<td></td>
</tr>
<tr>
<td>Principal Arterial</td>
<td>6*</td>
<td>45-65</td>
<td>Potential</td>
<td>Potential</td>
<td>No</td>
<td>Outer Loop</td>
<td>IH 30</td>
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<tr>
<td><strong>Collin County Outer Loop</strong></td>
<td></td>
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<td></td>
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<tr>
<td>Frontage (Staged Facility Configuration)</td>
<td>4</td>
<td>55</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>SH 121</td>
<td>IH 30</td>
</tr>
</tbody>
</table>

*SH 205 south of John King Blvd is assumed as 4 lanes per the Rockwall County Thoroughfare Plan.
**Collin County North/South Roadway Opportunities**

**West Corridor as an Arterial**

**Draft Document**

**Infrastructure**

- **Screenline 1**
  - Daily Volume: 549,000
  - 1% Decrease from Mobility 2040 Baseline

- **Screenline 2**
  - Daily Volume: 445,000
  - 1% Decrease from Mobility 2040 Baseline

- **Screenline 3**
  - Daily Volume: 533,000
  - 1% Decrease from Mobility 2040 Baseline

- **Screenline 1 (To Hunt Co. Line)**
  - Daily Volume: 144,000
  - 4% Increase from Mobility 2040 Baseline

- **Screenline 2 (To Hunt Co. Line)**
  - Daily Volume: 226,000
  - 4% Increase from Mobility 2040 Baseline

- **Screenline 3 (To Hunt Co. Line)**
  - Daily Volume: 517,000
  - 1% Increase from Mobility 2040 Baseline

**Functional Classification**

- Freeway, Tollway, Express Lane
- Principal Arterial
- Minor Arterial
- Collector
- Frontage/Service
- Lakes
- County Line

**North Central Texas Council of Governments**
COLLIN COUNTY
North/South Roadway Opportunities
SH 78/SH 205 Corridors
DRAFT DOCUMENT

Infrastructure

Eastern Screenline 1 (From SH 5)
Daily Volume: 144,000
4% Increase from Mobility 2040 Baseline

Daily Volume: 22,000
15% Decrease from Mobility 2040 Baseline

Eastern Screenline 2 (From SH 5)
Daily Volume: 226,000
4% Increase from Mobility 2040 Baseline

Daily Volume: 38,000
14% Decrease from Mobility 2040 Baseline

Eastern Screenline 3 (From SH 5)
Daily Volume: 517,000
1% Increase from Mobility 2040 Baseline

Daily Volume: 61,000
9% Decrease from Mobility 2040 Baseline

Daily Volume: 23,000
5% Decrease from Mobility 2040 Baseline
Infrastructure

Collin County

North/South Roadway Opportunities
Collin County Outer Loop

Draft Document

Eastern Screenline 1 (From SH 5)
Daily Volume: 144,000
4% Increase from Mobility 2040 Baseline

Daily Volume: 9,000
13% Decrease from Mobility 2040 Baseline

Eastern Screenline 2 (From SH 5)
Daily Volume: 226,000
4% Increase from Mobility 2040 Baseline

Daily Volume: 9,000
10% Decrease from Mobility 2040 Baseline

Eastern Screenline 3 (From SH 5)
Daily Volume: 517,000
1% Increase from Mobility 2040 Baseline

Daily Volume: 9,000
11% Decrease from Mobility 2040 Baseline

Daily Volume: 26,000
2% Decrease from Mobility 2040 Baseline

Functional Classification
- Freeway, Tollway, Express Lane
- Principal Arterial
- Minor Arterial
- Collector
- Frontage/Service
- Lakes
- County Line
ADDITIONAL PLANNING CONSIDERATIONS
SH 121 EASTERN ALIGNMENT

Roadway Model Assumptions

6 Lane Freeway
70 Miles per Hour
Non-Tolled Facility

From US 75/Sam Rayburn Tollway to US 380 East of the City of Princeton

Modeled alignment based on preliminary design by Halff Associates for the City of McKinney (August 2016)

Awaiting TxDOT determination regarding interface with proposed FM 546 project between SH 5 and Airport Drive
Eastern Screenline 1 (From SH 5)
Daily Volume: 143,000
<1% Decrease with SH 121 Extension

Eastern Screenline 2 (From SH 5)
Daily Volume: 222,000
2% Decrease with SH 121 Extension

Eastern Screenline 3 (From SH 5)
Daily Volume: 516,000
<1% Decrease with SH 121 Extension

Daily Volume: 34,000
55% Increase

Daily Volume: 38,000
0% Decrease

Daily Volume: 56,000
8% Decrease

Daily Volume: 23,000
0% Decrease
NEXT STEPS
NEXT STEPS

Meet with elected officials.

Analyze potential refined alternatives.

Proceed with strategic review to identify possible expedited projects.
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# EXPANDED CONTACT INFORMATION

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<th>Email</th>
</tr>
</thead>
<tbody>
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