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REGIONAL OUTER LOOP HISTORY
2011 Feasibility Study

• Regional Outer Loop
• Continuous loop not warranted
• Denton County portion warranted further study
• Population and employment growth
• $\geq$ 40,000 vehicles per day projected
2011 Meeting with USACE, TPWD

TPWD feedback/written comment:

• Alignment should be restricted to existing east-west corridor through Greenbelt
• Include TPWD, USACE in future planning
• Avoid, minimize impacts in Greenbelt on habitat, wildlife, park visitation, and use
• Integrate into early planning process mitigation opportunities and costs to offset impacts
Mobility 2040

• Current long-range transportation plan for North Central Texas

• Recommendations for Denton County Outer Loop
  • IH 35 to Dallas North Tollway
  • 2027: 2 continuous frontage lanes
  • 2037: 6 continuous frontage lanes
  • 2040: 6 freeway lanes and 6 continuous frontage lanes

• Mobility 2045 under development
FEASIBILITY STUDY
FOR DENTON COUNTY OUTER LOOP
PEL Study for Denton County Outer Loop

- Planning and Environment Linkages feasibility study
- East-west corridor in eastern Denton County
- Transportation need, alignments
- Environmental data
- Sustainability recommendations – FHWA grant and stakeholder input
DEED FOR FM 428
Deed/Right of Way for FM 428

Confirm 150-foot right of way?
AGENCY PRIORITIES
USACE Priorities

Input from USACE
TPWD Priorities

Input from TPWD
NCTCOG PRIORITIES

• Applicable legislated goals:
  • Safety
  • Congestion reduction
  • System reliability
  • Environmental sustainability

• Applicable Mobility 2040 goals:
  • Mobility
  • Quality of life
    • Preserve, enhance natural environment
    • Promote active lifestyles
Next Steps

Input from all agencies
Contact Information

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Dan Lamers – Mobility 2045 Recommendations
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Kate Zielke – Sustainability Recommendations
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The North Central Texas Council of Governments (NCTCOG), Texas Parks and Wildlife Department (TPWD), and US Army Corps of Engineers (USACE) met on Wednesday, August 2, 2017 at 10 am at the USACE Lewisville Lake Office in Lewisville, Texas. The following individuals were present:

Vicki Akers, USACE  
Art Archambeau, USACE  
Berrien Barks, NCTCOG  
Brandon Childers, TPWD  
Nathan Drozd, NCTCOG  
Brad Hood, TPWD  
Rob Jordan, USACE  
Craig Kislingbury, USACE  
Jennifer Linde, USACE  
Rich Mahoney, TPWD  
Randy Merchant, USACE  
Brandon Mobley, USACE  
Chris True, TPWD  
Marty Underwood, USACE  
Greg Webb, USACE  
Sandy Wesch, NCTCOG  
Kate Zielke, NCTCOG

Presentation
NCTCOG gave a presentation on the history of the Denton County Outer Loop project, which could potentially cross the Denton Greenbelt. The presentation described a 2011 feasibility study that found that an east-west route in Denton County may be warranted based on expected growth in population and employment. The 2011 feasibility study projected that more than 40,000 vehicles per day would travel this route. Kate Zielke described comments provided by TPWD during the 2011 study, which included:

- An alignment should be restricted to an existing east-west corridor through the Greenbelt  
- TPWD and USACE should be included in future planning  
- Impacts on habitat, wildlife, park visitation, and park use should be avoided and minimized  
- Mitigation opportunities and the cost to offset impacts should be integrated into the early planning process

Kate said the Denton County Outer Loop was included in Mobility 2040 as a freeway with six freeway lanes and six continuous frontage lanes. Mobility 2040 is the region’s long-range transportation plan. Kate discussed NCTCOG’s upcoming feasibility study on the Denton County Outer Loop. She said the study will include recommendations for sustainability best practices that will be identified using grant funding from the Federal Highway Administration. She said NCTCOG is meeting with non-profit
stakeholders and other parties interested in the Denton Greenbelt. Sandy Wesch said meetings with transportation stakeholders also would be conducted.

Kate described goals established by federal transportation legislation and Mobility 2040 that are compatible with conservation and recreation, including goals to preserve and enhance the natural environment and to promote active lifestyles.

**Stakeholders’ Priorities**

NCTCOG sought feedback from USACE and TPWD regarding the right-of-way identified in the deed for Farm-to-Market Road (FM) 428, an alignment that will be considered in the feasibility study. USACE representatives indicated that the Texas Department of Transportation (TxDOT) owns the right-of-way but may not know its width. USACE said they could assist in determining the width of the right-of-way if TxDOT does not know it. Sandy said she would follow up with TxDOT; she said the corridor could be kept mutable to create the least impact on the state park and USACE property.

NCTCOG also sought feedback from USACE and TPWD on their priorities in the corridor. It was noted that a historic bridge is located adjacent to FM 428 and that walking, biking, equestrian, and paddle trails would be crossed by the roadway. Representatives from TPWD expressed concern about wildlife crossings, noting that the Greenbelt is an important, continuous wildlife corridor. Chris True with TPWD said wildlife can cross the existing two lanes but would need accommodations to cross a six-lane roadway. The potential for elevating the roadway to allow animals to cross underneath and to accommodate a 100-year-flood were discussed. Sandy said the use of a guardrail would be preferred over the use of fences. Rich Mahoney of TPWD said he would send NCTCOG a trail map in GIS format. Sandy said designs would consider the egress required by 18 wheelers, which would cover the needs of horse trailers.

Marty Underwood said the corridor was bordered by fee land and agricultural land. Chris discussed relocating parking to the south side of the roadway. USACE said parking could be located on the fee land but not on the conservation easement. Sandy said space under the bridge could be used for parking. Kate said this may deter wildlife from traveling under the bridge.

The restrictions created by the conservation easement were discussed. The easement is in perpetuity and states that no roads would be allowed on the easement. Overcoming this easement may require efforts from Congress or the Secretary of the Army because the easement is unusually restrictive, attendees noted. It was noted that the easement would make it impossible to build outside the right-of-way. USACE provided a copy of the easement to NCTCOG.

TPWD discussed the process for Section 4(f) of the Department of Transportation Act, stating that typically TxDOT includes the 4(f) process concurrently with the environmental process. TPWD would like to see a more finalized design from TxDOT before signing off on any 4(f) for the Denton County Outer Loop. Impacts to the historic bridge would trigger reviews for Section 4(f) and Section 106 of the National Historic Preservation Act. The height of a bridge for the roadway also could trigger 4(f) if it creates a visual obstruction within the park; it also may create sound impacts. The shade created by the bridge could prevent the re-establishment of vegetation in that area; also, silt deposits must be managed. Brandon Mobley said the existing pedestrian bridge is located in the right-of-way.
Sandy said NCTCOG will conduct a feasibility study, not a National Environmental Policy Act (NEPA) study. The feasibility study will identify an alignment and the cost of the project; no money has been identified to construct the roadway. She said this timeline can provide a win-win by providing mitigation that enhances the park and parking area. Chris True said an expansion of the park would allow it to better serve the region’s growing population.

Sandy said the width of the roadway through the Greenbelt could be restricted to the existing right-of-way by reducing the inside shoulder or other design techniques; however, outside the Greenbelt the roadway would include additional lanes. She said 40,000 vehicles per day could be accommodated by a four-lane roadway, but frontage lanes would provide an alternative if the main lanes were closed by an accident or other incident. USACE said a conservation easement may not allow a construction easement and a construction easement may not be allowed on fee land if it is a sensitive environmental area. Private property may need to be purchased to rebuild the park access road, which may currently be located in the TxDOT right-of-way. TPWD said state Parks and Wildlife Code Title 3 Chapter 26 addresses impacts to a park. Intensive archeological testing and digging may need to be conducted in the stream, which may contain archaeological deposits.

Sandy said that the project would likely require an Environmental Assessment (EA) instead of an Environmental Impact Statement. She said USACE may be asked to be a cooperating agency. She said the EA would identify the best way to accommodate wildlife crossings. USACE said it has purchased a flowage easement that provides flood storage capacity west of the Greenbelt. Sandy said plans will have to ensure a conveyance for flood water is provided.

Sandy described a network of trails in the Dallas-Fort Worth region that is known as the Veloweb. She said that the Greenbelt Trail could potentially be connected to the Veloweb.

TPWD discussed mitigation options that could address invasive species, including Chinese privet and feral hogs. Lewisville Lake Environmental Learning Area has researched methods to control privet. The project also needs to address freshwater mussels and invasive zebra mussels. Sandy said TxDOT would conduct a mussel survey.

Next steps were identified:
- NCTCOG will discuss the right-of-way with TxDOT.
- TPWD will provide NCTCOG GIS data of the trail system, including paddle trails.
- NCTCOG will seek comments from USACE and TPWD on the design of the roadway.
- Rob Jordan will serve as the primary point of contact for the project, and NCTCOG will notify him of future stakeholder meetings.
- USACE may want to initiate the EA at the beginning of the NEPA study.
- NCTCOG’s bicycle-pedestrian staff can look at opportunities to connect the Greenbelt trail with the Veloweb.
1. Introductions
2. NCTCOG’s role in transportation planning
3. Demand for the Outer Loop highway project
4. Sustainability and environmental stewardship
5. Stakeholders’ interests
   • Environmental priorities
   • Needs of hikers and equestrians
   • Future stakeholder meetings
These stakeholder meetings will identify sustainability and environmental stewardship needs in the Denton Greenbelt.

Representatives from:
- City of Dallas
- City of Denton
- Cross Timbers Equestrian Trails Association
- Greenbelt Alliance
- Lake Ray Roberts Equestrian Trails Association
- North Central Texas Council of Governments
- Texas Parks & Wildlife Department
- Upper Trinity Regional Water District
- US Army Corps of Engineers
- Venable Ranch
- Others?
The **North Central Texas Council of Governments** (NCTCOG) is the metropolitan planning organization for the 12-county Dallas-Fort Worth region. NCTCOG’s **Transportation Department** conducts long-range transportation planning for this region.
The Regional Transportation Council is the metropolitan planning organization’s policy board, and is composed of local elected officials.
Based on input from transportation partners, NCTCOG identifies the need for new transportation facilities or expanded transportation facilities.
These facilities are included in a metropolitan transportation plan, which is approved by the Regional Transportation Council.

Plans are refined with further studies and feedback from a variety of stakeholders.
NCTCOG and Transportation Planning

Regional Ecosystem Framework: Composite Map

NCTCOG seeks to address environmental concerns early in the planning process.
A Regional Outer Loop was conceptualized in the early 2000s. The new highway would encircle the Dallas-Fort Worth region.
Demand for Outer Loop

- NCTCOG completed a feasibility study on the project in 2011.
- The study found that only portions of the loop were warranted
  - Denton County
  - Collin County
- These facilities were included in Mobility 2040.
Highway Corridor Projects

Facility recommendations indicate transportation need. Corridor-specific alignment, design, and operational characteristics will be determined through ongoing project development.
## Demand for Outer Loop

### Population Growth

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### Employment Growth

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2017 Peak Hour Level of Service

Levels of Service
- ABC
- DE
- F

Dallas CBD

Fort Worth CBD

MOBILITY 2040

North Central Texas Council of Governments
June 2016
Demand for Outer Loop

Theoretical facility spacing:

- Freeways $\approx$ 10 miles
- Principal arterials $\approx$ 2 to 5 miles
Demand for Outer Loop

Proposed timeline for Denton County Outer Loop/Greenbelt Parkway:

- 2 lanes of continuous frontage roads by 2027
- 6 lanes of continuous frontage roads by 2037
- 6 lanes of freeway by 2040
Demand for Outer Loop

Plans for new feasibility study:

• Assess needs
• Identify solutions
• Preliminary-level review of the affected environment
• Incorporate sustainability and environmental stewardship best practices recommended by Federal Highway Administration sustainability tool, INVEST
The INVEST tool is used to address the economic, social, and environmental sustainability of transportation projects.

Goals:
- Reduce impacts to natural environment
- Increase social and economic benefits
• Address sustainability early in planning process to increase chance of success
• Prioritize suggestions because not all will be achievable
• Environmental priorities?
• Needs of hikers and equestrians?
• Frequency and timing of future stakeholder meetings?
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MEETING SUMMARY
Denton Greenbelt Stakeholders Meeting
Rancho de la Roca, 2459 Blackjack Road West, Aubrey, Texas
1 pm, Tuesday, June 6, 2017

The Denton Greenbelt Stakeholders met on Tuesday, June 6, 2017 at 1 p.m. at Rancho de la Roca in Aubrey, Texas. The following individuals were present:

Frank Abbott, Kimley-Horn
Blake Alldredge, Upper Trinity Regional Water District (UTRWD)
Katherine Barnett, City of Denton
Tim Beaty, Greenbelt Alliance
Ken Dickson, Greenbelt Alliance
Nathan Drozd, North Central Texas Council of Governments (NCTCOG)
Rob Jordan, US Army Corps of Engineers (USACE)
Jennifer Linde, USACE
Amanda Long-Rodriguez, NCTCOG
Rick Martino, Greenbelt Alliance
Linda Moore, Lake Ray Roberts Equestrian Trails Association (LRRETA)
Carol Nichols, Lake Ray Roberts Equestrian Trails Association (LRRETA)
Paul Nealy, USACE
Jason Pierce, UTRWD
Richard Rogers, Greenbelt Alliance
Kyle Roy, NCTCOG
Ben A. Stephenson, City of Dallas
Chris True, Texas Parks & Wildlife Department
Joe Tydlaska, Venable Ranch
Wes Tydlaska, Venable Ranch
Marty Underwood, USACE
Roy Wilshire, Kimley-Horn
Nick Wilson, USACE
Kate Zielke, NCTCOG

Presentation
Kate Zielke, a transportation planner with NCTCOG, said the stakeholder meeting sought to identify sustainability and environmental stewardship needs in the Denton Greenbelt. She said forecasted growth in population and employment in the area would create a need for a highway that would bisect the park. As a result, the Denton Counter Outer Loop/Greenbelt Parkway was included in Mobility 2040, the long-range transportation plan for the Dallas-Fort Worth region. Kate explained the role NCTCOG and the Regional Transportation Council (RTC), a policy board composed of local elected officials, play in transportation planning in the region.

Kate said NCTCOG would conduct a study to assess transportation needs in the area, identify transportation solutions, and provide a preliminary-level review of environmental effects. She said NCTCOG would use an online tool created by the Federal Highway Administration to identify sustainability best practices to include as recommendations in the study. Kate stated sustainability
recommendations were more likely to be implemented if they were introduced early in the planning process.

**Stakeholders’ Priorities**

Stakeholders discussed their concerns and requests:

*Trails:* Hiking and equestrian trails should be open throughout construction, and users of the trails should not have to cross vehicle traffic. The trailhead at Farm-to-Market Road (FM) 428 should remain. Trails should be a priority because they are key to quality of life in the region. LRRTA has received grants from the Texas Parks and Wildlife Department (TPWD) to sustain the trail, but it needs constant maintenance. Access to fishing should still be possible. Steps should be taken to prevent flooding and sedimentation at the trailhead at US 380; these issues often close this trailhead.

*Horse trailers:* Trailhead parking lots should accommodate 20 horse trailers, though larger lots may be necessary as the region’s population grows. Roadway design should address safety concerns associated with horse trailers; long turn lanes should be considered.

*Wildlife:* Deer and turtles may not be able to cross FM 428 if traffic increases. Not disrupting the Greenbelt or wildlife is a priority of USACE, which owns the Greenbelt. A safe crossing for wildlife should be created.

*Noise pollution:* Noise pollution should be limited to preserve the natural sounds of the park. Sound impacts must be mitigated.

*Light pollution:* Light pollution should be limited to allow the park to maintain a natural night sky. Light pollution could affect migratory birds.

*Aesthetics:* The natural aesthetics of the park should be maintained. Because FM 428 is the “front door” to the Greenbelt, the aesthetics of the new roadway itself are important. Educational features describing the Greenbelt should be included.

*Ownership of land:* The Greenbelt is owned by USACE and is bordered by conservation easements held in perpetuity by USACE. The agency is not aware of ever authorizing construction on its easements. FM 428 is owned by the Texas Department of Transportation (TxDOT); a preliminary review of the deed shows it has a 150-foot right-of-way. Initial planning meetings should address these topics.

*Historic structures:* The historic Elm Fork Bridge is within the right-of-way.

*Access by utilities:* The planned roadway could open the Greenbelt to development by utility companies, which would be undesirable.

*Alternative alignments:* Alternatives will be identified further into the planning process. Alternatives are limited by the location of Ray Roberts Lake and Lewisville Lake. FM 455, which travels over a dam, would not be a possible alternative. Alternatives must be presented during a public meeting.

*Roadway footprint:* The six lanes of highway and six lanes of frontage roads recommended in Mobility 2040 would require at least 250 feet of right-of-way. Stakeholders sought information on when the footprint of the highway would be known, so trees could be planted as noise mitigation. An elevated highway could create sound impacts and affect the park’s aesthetics.
Mitigation: Stakeholders asked whether off-site mitigation was possible and offered to brainstorm mitigation ideas.

Water quality: The Elm Fork of the Trinity River is an important waterway. The use of oil-debris separators was suggested.

Future meetings: Quarterly meetings were suggested during the length of the project.

Similar projects: NCTCOG was asked to research similar projects across the nation to see how these issues have been addressed.
Promoting Sustainability in the Denton Greenbelt

Sustainability and environmental stewardship efforts such as the project being launched in the Denton Greenbelt are in step with the region’s transportation planning goals. The Dallas-Fort Worth region’s long-range Metropolitan Transportation Plan addresses federally required goals for transportation planning that include environmental sustainability. The plan also addresses local goals, including promoting active lifestyles and preserving and enhancing the natural environment.

The transportation planning process requires input from the public and from stakeholders affected by transportation plans. The North Central Texas Council of Governments is engaging stakeholders from non-profit groups, natural resource agencies, and municipalities to integrate their feedback into plans for a roadway that will cross the Denton Greenbelt.

Plans for this possible roadway also will include best management practices for sustainability. These practices will be identified using an online tool developed by the Federal Highway Administration. The tool, called INVEST, provides a means for agencies that plan or build transportation projects to evaluate the sustainability of new projects across all phases, from planning to construction to maintenance.

Transportation partners will consider the sustainability best management practices as they engineer and construct the roadway. They will work to avoid and minimize impacts to the environment, will identify strategies to mitigate impacts that occur, and may consider context-sensitive solutions that preserve the aesthetic and environmental qualities of the Denton Greenbelt.

Regional Transportation Council

The RTC sets transportation policy for NCTCOG. The 43-member board consists primarily of local elected officials.
Integrating Environmental Considerations into Transportation Planning

The natural environment has been a factor in planning at the North Central Texas Council of Governments (NCTCOG) since 2011, when the agency developed its Regional Ecosystem Framework (REF). This mapping tool, developed in partnership with the Environmental Protection Agency and other organizations, functions as an early screening tool to identify ecosystem priorities at the scale of the subwatershed. The REF focuses on three ecosystem-related categories:

- Water considerations
- Ecosystem value
- Green infrastructure

The tool is based on the Federal Highway Administration’s “Eco-Logical: An Ecosystem Approach to Developing Infrastructure Projects” and was developed with funding from that agency. An ecosystem approach calls for infrastructure and environmental agencies to work with each other and the public to integrate the agencies’ plans and to identify environmental priority areas.

The REF was used to identify potential conservation, preservation, and mitigation sites in the planned Loop 9 corridor in southern Dallas County. The tool also was used to conduct a comprehensive environmental analysis of alternative locations for Loop 9.

In addition, a REF website is publicly available and has been used by consultants to screen for potential environmental impacts. The website includes the Regional Ecosystem Framework and 40 additional layers of data related to the environment and historic properties.

Also, during the transportation planning process, NCTCOG consults with agencies that manage and regulate environmental resources. For example, in another past project, a stakeholder group of representatives from these agencies helped NCTCOG identify potential stream restoration sites, emphasizing sites where restoration would provide the greatest benefit to the environment. These sites could then be used to compensate for the impacts on streams created by future transportation projects.

For more information on these projects, please see www.nctcog.org/REF.

Regional Ecosystem Framework: Composite
The North Central Texas Council of Governments (NCTCOG) met with transportation partners on Thursday, October 5, 2017 at 9:00 at NCTCOG’s offices in Arlington, Texas. The following individuals were present:

Todd Estes, PE, City of Denton
Pritam Deshmukh, PE, City of Denton
Noreen Housewright, PE, City of Denton

NCTCOG staff:
Michael Bridges
Patricia Rohmer
Sandy Wesch

Discussion
The City of Denton staff discussed current development and the following Capital Improvement Projects:

- The Bonnie Brae Street project will be widened from a 2-lane undivided facility to a 4-lane divided facility from Vintage Blvd. to IH35E; and from a 2-lane undivided facility to a 6-lane divided facility from IH 35W frontage road to US 377. The estimated schedule for Phase 1 is July 2017 to July 2019.
- Mayhill Road (Edwards Road to US380) will be widened from a 2-lane undivided facility to an ultimate 6-lane divided facility. The estimated schedule is September 2017 to March 2020.
- Water Works Park Additions located on the northeast quadrant of FM 428 and Loop 288
- Denton Soccer Complex Phase II Construction located east of Bonnie Brae Street, south of Loop 288.

Other improvements also were discussed:

- Texas Department of Transportation improvements on IH 35E are from Turbeville Road to US 380. The project is design-build.
- US 380 is under construction from Bonnie Brae Rd. to US 377, from 4-lane to 6-lane urban divided roadway.

Regarding Denton County Outer Loop, city staff indicated a route alternative from Aubrey along FM 428 (Sherman Drive) to Loop 288 and IH35E is preferable, rather than a route along Milam Road to IH35E. An extension of the Loop 288 corridor as a freeway west of the City of Denton between IH 35E and IH 35W is proposed, so a route along Loop 288 would be best. The use of Loop 288 would allow better connectivity with through the City of Denton with the predicted growth, especially from The University of North Texas.

Next Steps
A meeting with other transportation partners (Denton County/John Polster, HDR Consultants, City of Denton, and Texas Department of Transportation) should be scheduled. John Polster should be contacted for an updated Denton County Thoroughfare Plan.
People, wildlife, and water all travel, but what happens when their paths cross?

A new highway is being planned to help residents commute between Denton and Collin counties. This highway will cross the Denton Greenbelt, a conservation area that:

- Allows wildlife to travel between Lake Ray Roberts and Lewisville Lake
- Protects the water quality of the Elm Fork of the Trinity River
- Provides trails for hikers, bicyclists, equestrians, and paddlers.

How can so many things occur in one place? Planners are identifying sustainability practices that can balance the social, economic, and environmental effects of the highway on Denton County and the Greenbelt. They will study several highway routes to find the best path to get people where they need to go, in the most financially responsible way, while disturbing people and nature as little as possible. They are also seeking feedback from people passionate about the Greenbelt and those who travel in Denton County.
How can you be involved?

People can speak up about plans to balance the need for transportation with the need for conservation in the Greenbelt during stakeholder meetings with the North Central Texas Council of Governments. The next meeting will be on **Tuesday, December 5 at 1 p.m.** The meeting will take place at Rancho de la Roca in Aubrey.

If you can’t make the meeting, you can email your comments to **transinfo@nctcog.org** or fill out a public comment form. Progress on the project will be posted at [www.nctcog.org/REF](http://www.nctcog.org/REF) under the heading “INVEST.”

The North Central Texas Council of Governments is a voluntary association of local governments established in 1966 to assist local governments in planning for common needs, cooperating for mutual benefit and coordinating for sound regional development. Planners have met with Texas Parks & Wildlife Department and the US Army Corps of Engineers to discuss the new highway; they also will meet with representatives from local governments. This project is supported with a grant from the Federal Highway Administration.
Investing in Sustainability

Denton Greenbelt Stakeholder Meeting #2
December 5, 2017

North Central Texas Council of Governments
1. Introductions
2. Past and future outreach efforts
3. Case studies – segmented parks/natural areas
4. Feasibility study update
These stakeholder meetings will identify sustainability and environmental stewardship needs in the Denton Greenbelt.

Representatives from:

- City of Aubrey
- City of Dallas
- City of Denton
- Cross Timbers Equestrian Trails Association
- Greenbelt Alliance
- Lake Ray Roberts Equestrian Trails Association
- North Central Texas Council of Governments
- Texas Parks & Wildlife Department
- Upper Trinity Regional Water District
- US Army Corps of Engineers
- Venable Ranch
Outreach
Past Outreach – Environmental Stakeholders

Role of NCTCOG – transportation planning, environmental considerations

Need for east-west travel

Environmental and recreational priorities

Meeting summary
Past Outreach – USACE and TPWD

- Width of existing right-of-way
- Historic bridge
- Wildlife needs
- Conservation easements
- Park impacts
People, wildlife, and water all travel, **but what happens when their paths cross?**

A new highway is being planned to help residents commute between Denton and Collin counties. This highway will cross the Denton Greenbelt, a conservation area that:

- Allows wildlife to travel between Lake Ray Roberts and Lewisville Lake
- Protects the water quality of the Elm Fork of the Trinity River
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Case Studies
Requested by stakeholders during first meeting

Five case studies of parks/natural areas segmented by a roadway:

- Purpose and Need
- Park Segmented
- Impacts to the Environment
- Mitigation
- Result/Status
1. US 73-San Joaquin Tollroad

- Orange County, California, 1994
- San Joaquin Transportation Authority
- Expansion to 8 lanes

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<td>Reduce congestion</td>
<td>Laguna Greenbelt: 22,000 acres, 6 wilderness parks</td>
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<td>Access to recreational areas and University of California</td>
<td>1. Crystal Cove State Park</td>
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<td>2. Brommer-Shady Canyon Open Space</td>
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<td>6. Jim Dilly Preserve</td>
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## 1. US 73-San Joaquin Tollroad

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<td>• Wildlife corridors</td>
<td>• Wildlife under crossings, protective fencing</td>
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<td>• Habitat</td>
<td>• Avoided removal of native vegetation</td>
<td>• Project proceeded in 1994</td>
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<tr>
<td>• Streambed modifications</td>
<td>• Special grade and slope design</td>
<td></td>
</tr>
<tr>
<td>• Light/noise</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### 2. US 93 – The People’s Way

- Missoula and Lake counties, Montana, 2002-Present
- Montana Department of Transportation
- Expansion to 4 lanes with turn lanes

<table>
<thead>
<tr>
<th>Purpose and Need</th>
<th>Segmented Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>• A major north-south link abundant with tourism and resource industries</td>
<td>• Within Flathead Reservation, Land of the Confederated Salish and Kootenai Tribes</td>
</tr>
<tr>
<td>• Safety concerns for both humans and wildlife</td>
<td>• Between Lolo and Flathead National Forests</td>
</tr>
</tbody>
</table>
### 2. US 93 – The People’s Way

<table>
<thead>
<tr>
<th>Significant Impacts</th>
<th>Mitigation</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cultural, spiritual (Salish and Kootenai tribes)</td>
<td>Extensive consultation with tribal peoples: “Spirit of Place”</td>
<td>Project construction began in 2002</td>
</tr>
<tr>
<td>Listed species (grizzly bear, Canada lynx, bull trout)</td>
<td>42 fish and wildlife crossings and 15 miles of fencing</td>
<td>Wildlife crossings are extensively studied</td>
</tr>
<tr>
<td>Wildlife mortality and habitat fragmentation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3. SR 84/I 75 – Alligator Alley

- Collier and Broward counties, southern Florida, 1993
- Florida Department of Transportation
- Expansion from 2 to 4 lanes

<table>
<thead>
<tr>
<th>Purpose and Need</th>
<th>Segmented Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>• To link the east with a quickly developing and growing west</td>
<td>• Fakahatchee Strand State Preserve</td>
</tr>
<tr>
<td>• Safety concerns of existing road</td>
<td>• Florida Panther National Wildlife Refuge</td>
</tr>
<tr>
<td></td>
<td>• Big Cypress National Park</td>
</tr>
<tr>
<td></td>
<td>• Everglades National Preserve</td>
</tr>
<tr>
<td></td>
<td>• Miccosukee Reservation</td>
</tr>
</tbody>
</table>
3. SR 84/I 75 – Alligator Alley

<table>
<thead>
<tr>
<th>Significant Impacts</th>
<th>Mitigation</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Habitat and wildlife mortality</td>
<td>• 23 wildlife crossings, 65 miles of fencing, 12 bridge extensions,</td>
<td>• Opened in 1993</td>
</tr>
<tr>
<td>• Listed species (alligator and panther)</td>
<td>protective land purchase, educational campaign</td>
<td>• Crossings installed on US-93</td>
</tr>
<tr>
<td>• Wetlands</td>
<td>• Consultation with tribal peoples</td>
<td></td>
</tr>
<tr>
<td>• Cultural, spiritual</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Seminole and Miccosukee tribes)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
4. I-270/US 15 Multimodal Corridor

- Frederick and Montgomery counties, Maryland, present
- Maryland Department of Transportation
- Expansion depends on location

<table>
<thead>
<tr>
<th>Purpose and Need</th>
<th>Segmented Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Vital connection from Maryland into the D.C. metropolitan area</td>
<td>• 13 parks or recreation areas directly impacted including</td>
</tr>
<tr>
<td>• Expected population and employment growth</td>
<td>• Seneca Creek State Park and Monocacy National Battlefield Park</td>
</tr>
<tr>
<td>• High existing congestion and unreliable transit</td>
<td></td>
</tr>
</tbody>
</table>
4. IH 270/US 15 Multimodal Corridor

<table>
<thead>
<tr>
<th>Significant Impacts</th>
<th>Mitigation</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>• 77 water bodies, including Seneca Creek and Monocacy River</td>
<td>• Compensatory wetland mitigation</td>
<td>• Under design phase as of fall 2015</td>
</tr>
<tr>
<td>• Wetlands</td>
<td>• Maryland Forest Conservation Act</td>
<td></td>
</tr>
<tr>
<td>• Forest land</td>
<td>• Best Management Practices</td>
<td></td>
</tr>
<tr>
<td>• Wildlife including threatened fish species (pearl dace and comely shiner)</td>
<td>• Stream closures</td>
<td></td>
</tr>
<tr>
<td>• Historic sites</td>
<td>• Slope design</td>
<td></td>
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</tbody>
</table>
5. SH 100 – Ocelot

- Cameron County, Texas, present
- Texas Department of Transportation
- Concrete traffic barrier

### Purpose and Need

<table>
<thead>
<tr>
<th>Purpose and Need</th>
<th>Segmented Park</th>
<th>Significant Impacts</th>
<th>Mitigation</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety issues</td>
<td>Laguna Atascosa National</td>
<td>Mortality of ocelot, jaguarundi, both listed endangered</td>
<td>4 under crossings, fencing, and cattle guards</td>
<td>Planned 2016-2017</td>
</tr>
</tbody>
</table>
Feasibility Study
Preliminary factors identified by INVEST process:

- Long-term financial cost
- Traffic congestion
- Air quality
- Integration of non-roadway modes of transportation
- Resiliency of roadway
- Safety
- Natural environment, including ecological connectivity, scenic and recreational qualities
- Historic components
Continuity of Planning Process

Future goals identified by INVEST process:

- Improve continuity with transportation partners
- Overcome temporal disconnect between planning, construction
Feasibility Study Components

Feasibility study: should project move forward?
• Alignments (potential routes)
• Traffic
• Environmental factors
• Feasibility of project
Planning and Environment Linkages (PEL):
  • Purpose and need
  • Land use
  • Population, employment
  • Potential environmental effects, mitigation
Width of corridor in Greenbelt:
• Right-of-way width
• Plan view
• Cross section
FM 428 at West Fork Trinity River
Cross Section

Cross-section thru Existing and Proposed Bridges at Elm Fork Trinity River

NOTE: Horizontal Position of Existing Bridges Relative to ROW is Estimated from FM 428 As-Built drawings
Denton County Meeting

Possible alignments
  • Preferences
  • Limitations

Plans for future development
  • Sports complex
  • City water facility
Updated demographics
  • Result of new development
  • Impact on traffic demand
Connectivity
Land use
New traffic model
Updates to Environmental Data

Environmental is currently being updated from original 2011 Regional Outer Loop Study.

Information is being updated if available or replaced if unavailable or new data is more refined.

Sections currently being updated include:

• Land Use, Farmland, Private Property, and Parks
• Aesthetics, Noise, Air Quality, Utilities, and Hazmat
• Demographics, Employment, Cultural Resources, and Community Effects
Next Steps for Feasibility Study

Meeting with technical committee
- Texas Department of Transportation
- Denton County
- City of Denton
- Consultant

Address access to park – engineering phase
Access to Park
Feedback from Stakeholders
Next Stakeholder Meeting

Tentatively June 2018:

• Final identification of sustainability, stewardship factors
• Outcome of meeting with technical committee
• Draft of feasibility study
Contact Information

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Transportation Program Assistant
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Greenbelt Stakeholder Meeting October 31, 2017

Meeting GOAL = To Identify and Prioritize Mitigation Actions for the Damages to the Greenbelt by the Widening of Hwy 428

Agenda

1. Lunch
2. Participants introductions
3. What are the potential damages caused by the 428 highway widening across the Greenbelt?
4. What ideas do each of you think would be appropriate to mitigate some of the damages to the Greenbelt caused by the highway project?
5. A discussion of how to prioritize the mitigation actions that are identified.
6. What are the top three mitigation actions?
7. Other Agenda Items?

Here are the Greenbelt stakeholders that attended the meeting: Chris True, Ken Dickson (moderator), Linda Moore, Roy Wilshire, Frank Abbott, Rick Martino, Richard Rogers, Tracy Mattern, Carol Nichols, Chuck Manning, Tim Beaty, and Janet Meyers.
Potential Mitigation Actions Identified by the Participants

1. Construction of Noise Buffers from the traffic at the Greenbelt Park

2. Trail Repair and Maintenance

3. Bridge construction on erosion problem sites on horse trail

4. Restrooms renovation

5. Erosion Control and Bank Stabilization on the trails

6. Landscaping with shade trees at Greenbelt Park

7. Expansion/Enhancements of 428 Greenbelt Park

8. Significantly increase the horse trailer parking area at 428 Trail head

9. Replace the steps at the canoe access with a ramp at Greenbelt Park

10. Provide night lighting at Greenbelt Park

11. Build a horse tunnel at 428

12. Build a bicycle lane and walking path parallel to the FM 428 expansion from the Greenbelt Park to Aubrey. This would give Aubrey residents access to the Greenbelt without increasing traffic.
13. Put a hard surface on the Greenbelt trail for the first 3 miles north of Highway 380. This would allow silt from flooding to be easily cleared away allowing that stretch of the trail to be opened using a Bobcat.

14. Develop a plan to remedy the flooding problem and silt problem at the start of the Greenbelt at the 380 access point to the Greenbelt. Goal is to keep the Greenbelt trail open for use. Currently flooding and silt cause frequent trail closure for extended periods.

15. Use the name “Greenbelt Parkway” for the 428 expansion between the Dallas North Tollway and Interstate I 35. This will signify the importance to our community of the Greenbelt and highlight the marquee status of the Greenbelt as an integral feature of the expansion.

**Top Priority Mitigations**

Each Stakeholder at the meeting was asked to identify their three (3) highest priorities for mitigation of damages to the Greenbelt by widening of Hwy 428 at the Greenbelt Park. They are:

1. This mitigation includes **expansion and enhancement of the Greenbelt Park at 428.**
This mitigation includes significantly increasing the size of the parking area (doubling or tripling) to provide for future park usage brought on by the road expansion and population growth. It also includes providing more parking for horse trailers, restroom renovation and enlargement, providing shade for users by landscaping with shade trees and covered tables, and providing night lighting and other amenities for users of all ages.

2. This mitigation includes repair and enhancement of trails between FM 428 and HW 380 on the Greenbelt by upgrading them to all weather trail status. This mitigation also includes implementing erosion controls and bank stabilization techniques at the 428 bridge site and other Greenbelt trail sites needing erosion and stabilization. The trails between FM 428 and HW 380 are currently closed due to flooding conditions which occur regularly. Use of the Greenbelt will be greatly enhanced by reopening the trailhead on 380 which is the closest access point to Denton.
3. This mitigation requires **construction of noise buffers** from the increased traffic noise at the Greenbelt Park. We discussed the extensive planting and cultivation of trees strategically placed to dampen noise at the 428 entrance site. Preferably planting would take place as soon as plans are finalized so growth could start as soon as possible.
The Denton Greenbelt Stakeholders met on Tuesday, December 5, 2017 at 1 pm at Rancho de la Roca in Aubrey, Texas. The following individuals were present:

Frank Abbott, Kimley-Horn
Blake Alldredge, Upper Trinity Regional Water District (UTRWD)
Sue Allison, Allison Engineering
Katherine Barnett, City of Denton
Tim Beaty, Greenbelt Alliance
Glenna Butler, Citizen
Ken Dickson, Greenbelt Alliance
Rob Jordan, US Army Corps of Engineers (USACE)
Mark Kaiser, City of Aubrey
Kevin Lee, The Spinistry
Rick Martino, Greenbelt Alliance
Jeff Miller, Aubrey City Council
Sid Puder, US Fish & Wildlife
Richard Rogers, Greenbelt Alliance
Aaron Shine, USACE
Ben A. Stephenson, City of Dallas
Marty Underwood, USACE
Roy Wilshire, Kimley-Horn

North Central Texas Council of Governments (NCTCOG) staff:
Carli Baylor
Michael Bridges
Nathan Drozd
Amanda Long-Rodriguez
Patricia Rohmer
Kate Zielke

Presentation
Kate Zielke presented a summary of NCTCOG’s recent stakeholder outreach efforts and coordination with the USACE and the Texas Parks & Wildlife Department (TPWD). Preliminary factors identified by NCTCOG’s use of the INVEST sustainability tool include long-term financial costs, traffic congestion, air quality, safety, natural environment, historic components, and the integration of non-roadway modes of transportation.

Per a request from stakeholders at the June meeting, Amanda Long-Rodriguez presented case studies of parks and natural areas segmented by a roadway. The projects included US 73 in California, US 93 in Montana, SR 84/IH 75 in Florida, IH 270/US 15 in Maryland, and SH 100 in Cameron County, Texas.
Kate Zielke and Patricia Rohmer presented an update on the feasibility study for the Greenbelt project. Kate stated future goals identified by the INVEST process include improving continuity with transportation partners and overcoming the disconnect between planning and construction. Patricia said the feasibility study will address preservation of the historic bridge. Park access will be addressed during the engineering phase of the project. She showed images of plans for the new roadway that would run south of the bridge but within the existing right-of-way (ROW). She also reported that a recent planning meeting with Denton County resulted in a new preferred alignment connecting to Loop 288. Environmental data is currently being updated from the original 2011 Regional Outer Loop Study. Next steps include a technical meeting with the Texas Department of Transportation (TxDOT), city of Denton, Denton County, and consultants.

Stakeholders’ Priorities
Stakeholders discussed their concerns and requests:

Bridges: A meeting attendee asked whether it might be possible to move the historic bridge. NCTCOG staff explained that while it would be technically feasible, it would be very difficult and might not even be necessary if future traffic volumes don’t justify expanding the roadway beyond four lanes.

Park access: Meeting attendees asked how the facility would provide access to the park, as this location is the preferred access point for equestrians. NCTCOG staff replied there would be four lanes with a divided median and turn lanes. Meeting attendees expressed concerns that the conservation easement prevents the construction of ramps adequate for horse trailers to safely enter or exit the park. They also observed that the parking lot is near capacity for trailers and may need to be expanded. NCTCOG staff responded that multiple options exist for creating access to the east or west of the easement. In response to a suggestion of routing traffic under the bridge, NCTCOG staff noted that it would be necessary to acquire additional ROW, which would again be affected by the conservation easement. As the parking lot is on federal land leased to the state, TxDOT is not responsible for building roads within the park. TxDOT engineers will complete a more thorough study of park access than can be included in this preliminary feasibility study. NCTCOG will share stakeholder feedback about access issues with TxDOT through a recommendations chapter in the feasibility study and through the agency’s regular coordination meetings with TxDOT. One meeting attendee inquired whether park access is affected by flood events. Stakeholders responded that flooding impacts the east side of the park.

ROW width: One meeting attendee commented that the planned 10-foot shoulder is not wide enough for road bicyclists. NCTCOG staff explained that the ROW cannot be widened due to the conservation easement. They suggested rerouting the bike route over the historic bridge, and then have the route return to the roadway shoulder beyond the point where the conservation easement ends. When asked if the easement could be narrowed, NCTCOG staff replied that in the past, USACE staff have communicated that the easement can only be modified through an act of Congress.

NCTCOG staff were asked whether the facility would have six lanes but drop down to four lanes within the greenbelt. They responded that project construction would not begin for another 15 or 20 years, and traffic conditions at that time might not warrant more than four lanes. If studies show that traffic volumes increase greatly in the coming decades, it might be necessary to negotiate expansion of the ROW with the USACE. One attendee asked whether the planned survey of the ROW might yield results
that would alter the roadway design, and NCTCOG staff replied that they did not expect the survey to reveal major differences in the ROW.

**Impact Mitigation:** One attendee suggested proactive tree planting in the ROW, so that the trees will be full grown and act as a noise buffer when the roadway is built. NCTCOG staff replied that the required depth (200 feet) is not available for a vegetative buffer to reduce noise, so TxDOT could not use trees as sound mitigation. TPWD can plant trees but will not be able to use them to satisfy federal noise mitigation requirements.

Two meeting attendees commented on the need to consider and accommodate wildlife traveling through the greenbelt. NCTCOG staff said that bridges could be designed to meet those needs; the design details will be worked out later in the engineering phase of the project. They also requested that interested community members share any information they have about wildlife pathways in the greenbelt. When asked whether mitigation could be done outside of the road area, NCTCOG staff related that TxDOT approves off-site mitigation on a case-by-case basis. To help preserve the existing greenbelt, meeting attendees suggested keeping the trail between US 380 and FM 428 open and raising public awareness by incorporating “greenbelt” into the name of the new roadway.

**Bicycle and Pedestrian Facilities:** In response to a suggestion of building a bike or foot path to Aubrey, NCTCOG staff said that TxDOT facilities do require bicycle and pedestrian access, and federal funds could be used for construction. However, this would be evaluated more closely in a later phase.

**Other Alignment Issues:** A meeting attendee asked why Denton County altered the facility’s preferred alignment to connect with Loop 288. NCTCOG staff replied that the county made the change to accommodate other development plans in the area. When asked if any alternative alignments would be studied, NCTCOG staff responded that they would.

One meeting attendee suggested moving the existing ROW to accommodate a frontage road, but NCTCOG staff replied that doing so would infringe upon the existing conservation easements. The roadway design is restricted to the land already owned by TxDOT.

NCTCOG staff were asked whether an alternative existed that did not cross the park, to which they replied that the geographic constraints posed by US 380 and the dam made it necessary to cross the greenbelt.

One meeting attendee commented that there is a need to address congestion where the road meets US 377. NCTCOG staff replied that traffic will be considered in the feasibility study and in consultation with local and state government partners. The details will be designed later, in the engineering phase of the project.
MEETING SUMMARY
Denton Greenbelt Corridor Feasibility Study Meeting
North Central Texas Council of Governments, 616 Six Flags Drive, Centerpoint Two, Arlington, Texas
1:30 pm, Tuesday, January 30, 2018

North Central Texas Council of Governments (NCTCOG) staff met with representatives of the City of Denton and Denton County on Tuesday, January 30, 2018 at 1:30 pm at NCTCOG’s offices in Arlington, Texas. The following individuals were present:

Katherine Barnett, City of Denton
Pritam Deshmukh, PE, City of Denton
John Polster, Denton County

North Central Texas Council of Governments (NCTCOG) staff:
Michael Bridges
Nathan Drozd
Patricia Rohmer
Sandy Wesch, PE
Kate Zielke

Discussion
John Polster stated Denton County’s opposition to the City of Denton’s proposal for routing the Outer Loop to Loop 288 via FM 428 (Sherman Drive). He explained that Denton County favors the original proposal to route the corridor along Milam Road to I-35; that alignment had consensus agreement from stakeholders in the County’s 2017 thoroughfare plan. John also argued that the original alignment meets the needs of the City of Aubrey and the City of Denton.

John noted that the County included the Outer Loop in its thoroughfare plan because funding for the project was incorporated into NCTCOG’s 10-year plan. While the facility is needed, the County would prefer that other projects (e.g. I-35) be constructed first. NCTCOG staff responded that they preferred to include Outer Loop funding in the 10-year plan to facilitate the environmental review process (not yet begun). The environmental study will look at more than one alternative alignment.

Denton City staff accepted the County’s proposal to revert to the original preferred alignment. NCTCOG staff suggested that the Outer Loop could also be connected to Loop 288 by constructing a spur to the south. The City expects rapid development along US-377; that facility may be expanded.

John noted that in the County’s 2017 thoroughfare plan, the Outer Loop is categorized as limited access. The meeting attendees discussed establishing a larger right of way but limiting the number of lanes and including a large grassy median that could later be converted into a controlled access facility.

The stakeholders agreed that no City or County plans call for the Outer Loop to extend further west than I-35; oil and gas development in that area is a significant barrier.

With regard to the Outer Loop corridor, John suggested that NCTCOG might draw lessons from the easement negotiations for the FM 2499 project near Lewisville Lake. Katherine Barnett noted that there might be available right of way between the historic bridge and the northern edge of the conservation easement.
Cross-section thru Existing and Proposed Bridges at Elm Fork Trinity River

NOTE: Horizontal Position of Existing Bridges Relative to ROW is Estimated from FM 428 As-Built drawings.
What is the Metropolitan Transportation Plan?

- Represents a Blueprint for the Region’s Multimodal Transportation System
- Covers at Least a 20-Year Timeframe
- Responds to Goals
- Identifies Policies, Programs, and Projects for Continued Development
- Guides the Expenditure of Federal and State Funds
Major Roadway Recommendations

Facility recommendations indicate transportation need. Corridor-specific alignment, design, and operational characteristics will be determined through ongoing project development.
### 2015 Level of Service Analysis

#### Dallas District

<table>
<thead>
<tr>
<th>ID</th>
<th>Facility</th>
<th>From</th>
<th>To</th>
<th>Ave Daily Vol</th>
<th>Ave Pk Vol/Ln</th>
<th>Ave Pk Cap/Ln</th>
<th>Pk Hr LOS</th>
<th>Lanes</th>
<th>Lanes Warranted</th>
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</thead>
<tbody>
<tr>
<td>110.20.1</td>
<td>Collin County Loop (North)</td>
<td>US 75</td>
<td>Dallas North Tollway</td>
<td>68,700</td>
<td>2,032</td>
<td>2,300</td>
<td>E</td>
<td>4/8</td>
<td>6</td>
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<td>110.30.1</td>
<td>Collin County Loop (North)</td>
<td>US 75</td>
<td>SRT (SH 121)</td>
<td>46,300</td>
<td>1,368</td>
<td>2,167</td>
<td>C+</td>
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<td></td>
<td><strong>DALLAS NORTH TOLLWAY</strong></td>
<td></td>
<td></td>
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<tr>
<td>21.10.1</td>
<td>Dallas North Tollway</td>
<td>FM 121</td>
<td>FM 428</td>
<td>1,600</td>
<td>28</td>
<td>2,071</td>
<td>C+</td>
<td>6/8</td>
<td>2</td>
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<td>21.10.2</td>
<td>Dallas North Tollway</td>
<td>FM 428</td>
<td>US 380</td>
<td>28,600</td>
<td>828</td>
<td>2,229</td>
<td>C+</td>
<td>6/8</td>
<td>4</td>
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<td>21.10.4</td>
<td>Dallas North Tollway</td>
<td>Rockhill Road</td>
<td>SRT (SH 121)</td>
<td>122,600</td>
<td>2,876</td>
<td>2,388</td>
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<td>10</td>
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<td>21.20.1</td>
<td>Dallas North Tollway</td>
<td>SH 121</td>
<td>Parker Road</td>
<td>199,000</td>
<td>3,726</td>
<td>2,263</td>
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<td>6/10</td>
<td>14</td>
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<td>21.20.2</td>
<td>Dallas North Tollway</td>
<td>Parker Road</td>
<td>PG85T</td>
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<td>3,571</td>
<td>2,371</td>
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<td>6/10</td>
<td>12</td>
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<td>21.20.3</td>
<td>Dallas North Tollway</td>
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<td>Beltline Road</td>
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<tr>
<td>21.20.4</td>
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<td>Beltline Road</td>
<td>Royal Lane</td>
<td>156,000</td>
<td>3,229</td>
<td>2,114</td>
<td>F</td>
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<td>10</td>
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<td>Dallas North Tollway</td>
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<td>Mockingbird Lane</td>
<td>140,600</td>
<td>3,601</td>
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<td>6</td>
<td>10</td>
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<td>21.20.6</td>
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<td>Mockingbird Lane</td>
<td>IH 35E</td>
<td>119,700</td>
<td>3,265</td>
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<td>6</td>
<td>10</td>
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<tr>
<td></td>
<td><strong>DENTON COUNTY LOOP (NORTH)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>Dallas North Tollway</td>
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<td>1,658</td>
<td>2,071</td>
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<tr>
<td></td>
<td><strong>IH 20</strong></td>
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<td>30.70.2</td>
<td>IH 20</td>
<td>Great Southwest Parkway (Tarrant County Line)</td>
<td>PG85T WE (SH 161)</td>
<td>272,500</td>
<td>3,640</td>
<td>2,140</td>
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Facility recommendations indicate transportation need. Corridor-specific alignment, design, and operational characteristics will be determined through ongoing project development.
The North Central Texas Council of Governments (NCTCOG) met with transportation partners on Monday, October 22, 2018 at 2:30 at NCTCOG’s offices in Arlington, Texas. The following individuals were present:

Pete Anaya, Town of Prosper
Tracy Beck, City of Denton
Ann Boulden, Denton County Transportation Authority (DCTA)

NCTCOG staff:
Berrien Barks
James Dam
Brian Flood
Mike Johnson
Kevin Kokes
Amanda Long-Rodriguez
Jeff Neal
Patricia Rohmer
Sarah Wraight
Jing Xu
Kate Zielke

Presentation
Jeff Neal provided some context for the Denton Greenbelt Corridor Feasibility Study by noting its origins in the 2011 Regional Outer Loop Corridor Feasibility Study, and describing the planning and staged construction work underway on Collin County’s Outer Loop. The US Army Corps of Engineers has stipulated that there should be no new crossings of the Greenbelt. Of the three existing crossings, FM 455 cannot be expanded and the proposed expansion of US 380 may not be sufficient to handle future traffic volumes. This study proposes utilizing the existing FM 428 crossing to build a 4-lane facility. Jeff noted that it’s unclear whether additional lanes would be needed in future. Facility expansion would be challenging because of the Greenbelt’s conservation easements and the presence of a historic bridge in the corridor.

Kate Zielke said that a Federal Highways Administration (FHWA) grant has supported NCTCOG staff in engaging stakeholders and considering a suite of sustainability elements that were adapted from FHWA’s Infrastructure Voluntary Evaluation Sustainability Tool, known as INVEST. Brian Flood reported that the Denton Greenbelt corridor is listed as a 6-lane freeway in the Metropolitan Transportation Plan (MTP), which matches traffic volume projections and the Denton County Thoroughfare Plan. Transit options for this corridor will require further study.
Discussion
Ann Boulden noted that DCTA had planned for transit to be integrated either into the Denton Greenbelt corridor or US 380. She asked whether the Denton Greenbelt corridor could include a dedicated express bus lane, possibly to be converted to rail in future. Jeff responded that transit should be considered in this feasibility study. The main obstacle would be the conservation easements at the Greenbelt crossing; there are only 150 feet of right-of-way (ROW). The meeting attendees discussed potentially working with Union Pacific to use existing freight lines for passenger rail. Pete Anaya and Ann expressed interest in vertically stacking transportation facilities in the Greenbelt crossing. Jeff observed that it might be possible, but visual and other environmental impacts would need to be evaluated. Also, interchanges would have to be built on either side of the Greenbelt. Kate explained that the easement crossing may be between 400 and 600 feet long (east-west). Tracy Beck asked whether it might be possible to tunnel under the easement.

Tracy stated that the city of Denton prefers Alignment 2 (following Milam Road to IH 35). Alignment 1 (routing to Loop 288 via FM 428) does not meet the city’s needs. Ann commented that there is also opposition to routing the 380 expressway through the city.

Kevin Kokes commented that the MTP doesn’t call for any east-west bicycle/pedestrian trails in northern Denton County. He asked whether this project could incorporate a Veloweb path following the highway. Ann expressed her support, adding that the trail could cross the historic bridge within the Greenbelt (already used by bicyclists and pedestrians as part of the park trail system). Patricia Rohmer noted that the city of Aubrey is also interested in bicycle/pedestrian trails in the corridor, and she stated that NCTCOG can include an east-west bicycle/pedestrian trail in the scope of the project.

Tracy observed that moving a historic bridge is a lengthy and complicated process regardless of the relocation distance. She suggested maximizing use of the ROW for cars and moving the bridge to a location outside of the Greenbelt crossing.

Mike Johnson noted that the facility is likely to receive truck traffic regardless of the alignment chosen, so it should be made as truck-friendly as possible. Tracy asked whether the trucks would be carrying hazardous material, and Mike responded that was a possibility that warranted future discussion.