



★ REGIONAL ★
OUTER LOOP
IN DENTON COUNTY

Denton County Outer Loop

**Schematic Design &
Environmental Study**

Denton Mobility Committee

**October 30, 2024
MC24-035**



1 Introduction

2 Background and Study Purpose & Need

3 Study Tasks & Environmental Impact Statement Process

4 Alternatives Under Consideration

5 Questions & Discussion

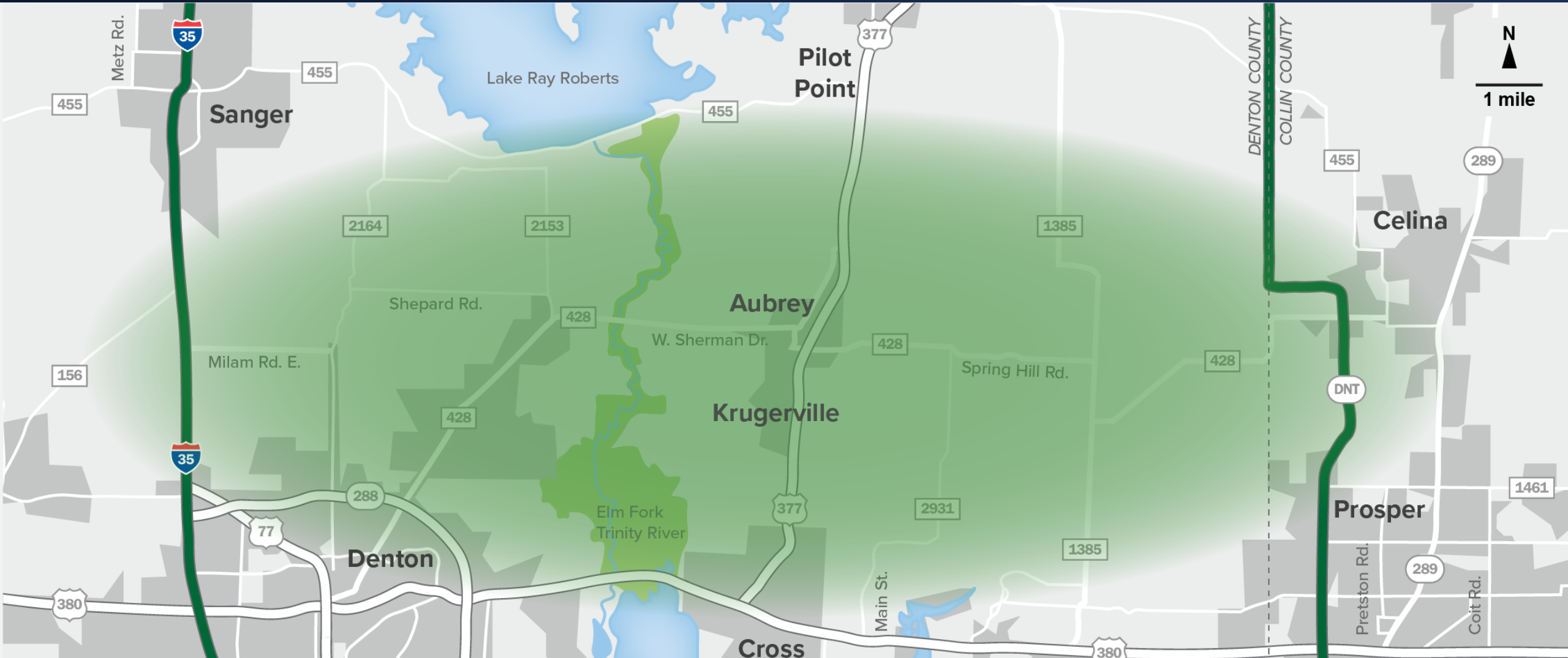


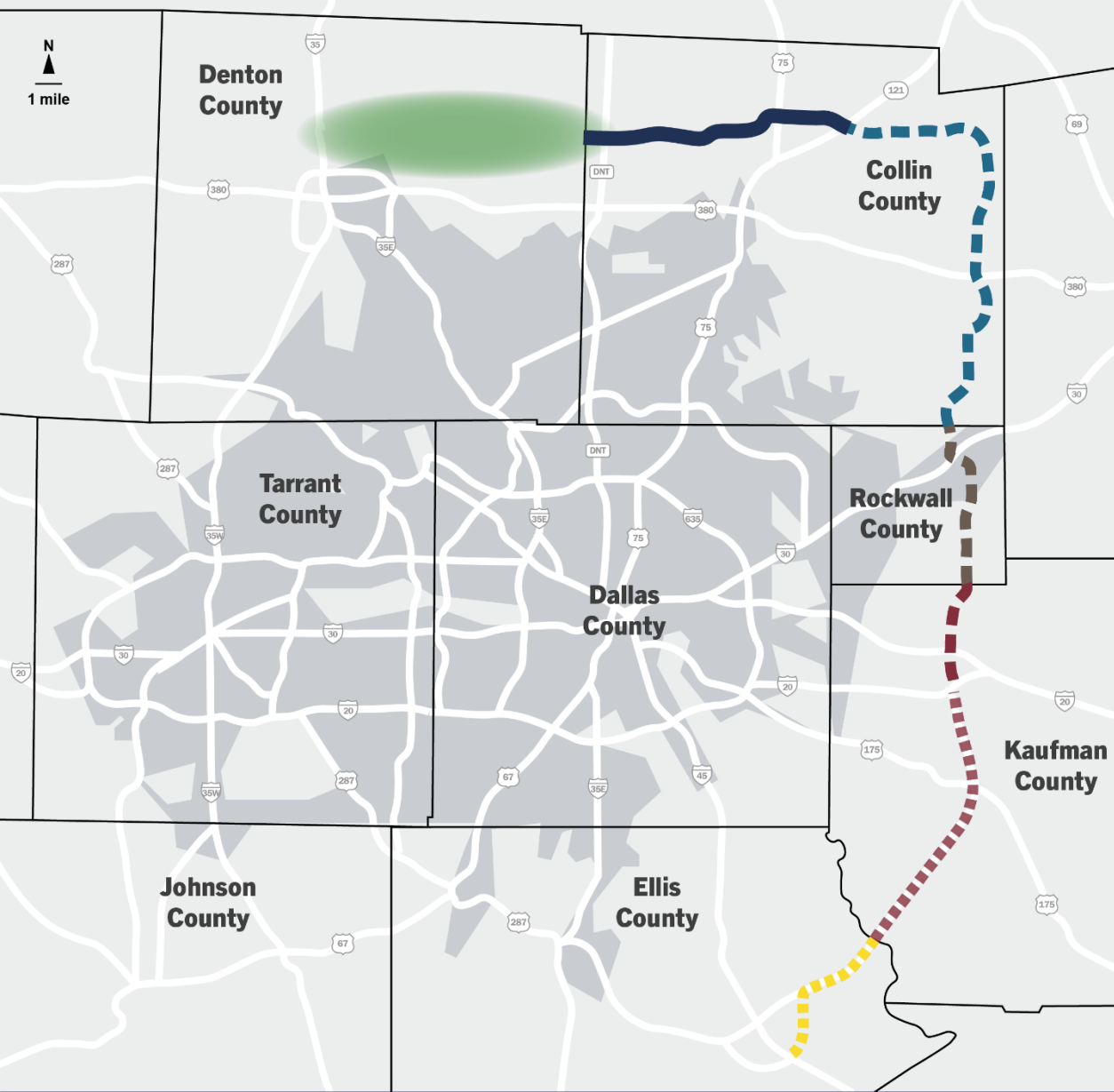
STUDY AREA

Schematic Design & Environmental Study

Study Limits:

- FM 455 to Loop 288
 - I-35 (Denton Co.) to Dallas North Tollway (DNT) (Collin Co.)*
- *Defined as logical termini. Determination made through consultation with Denton and Collin Counties.*





THE REGIONAL OUTER LOOP VISION

The Regional Outer Loop is envisioned to extend from Denton County, across Collin County, and then south through Rockwall, Kaufman, and possibly Ellis Counties.

Project Contacts:

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- *Kaufman County Outer Loop* – Brian Swindell, connect@kaufmanouterloop.com



DRAFT PURPOSE & NEED

Purpose and Need is the factual foundation to screen and compare design alternatives and demonstrate – through measurable and quantifiable metrics – where improvements are needed.

NEED FOR THE PROJECT

The need for the proposed project was identified and refined through background research, traffic modeling, and stakeholder and public engagement throughout the Feasibility Phase of the study. The need is driven by:



**RAPID CURRENT AND
PROJECTED POPULATION
AND TRAFFIC GROWTH**



**HIGHER CRASH RATES
THAN THE STATEWIDE
AVERAGE**



**LIMITED MOBILITY
DUE TO LACK OF
CONTIGUOUS EAST-WEST
ARTERIALS**

PURPOSE FOR THE PROJECT

The purpose of the proposed project within the project limits is to:



**ADDRESS POPULATION
AND TRAFFIC GROWTH**



**SUPPORT SAFE AND
RESILIENT EAST-WEST
MOBILITY AND CONNECTIVITY**

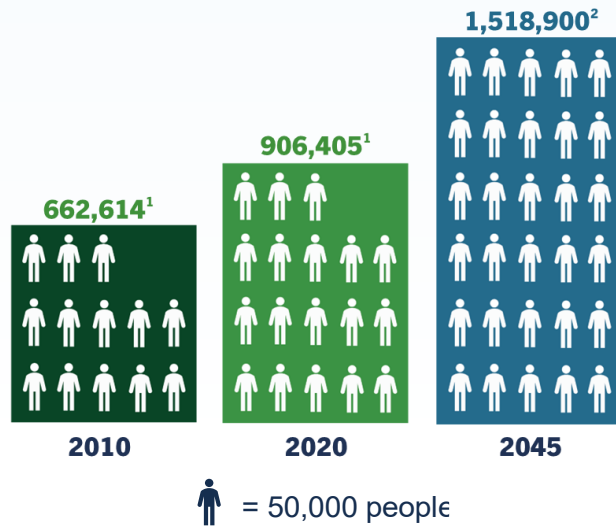


View the Purpose and Need Memorandum at www.DentonCountyOuterLoop.com

DRAFT PURPOSE & NEED



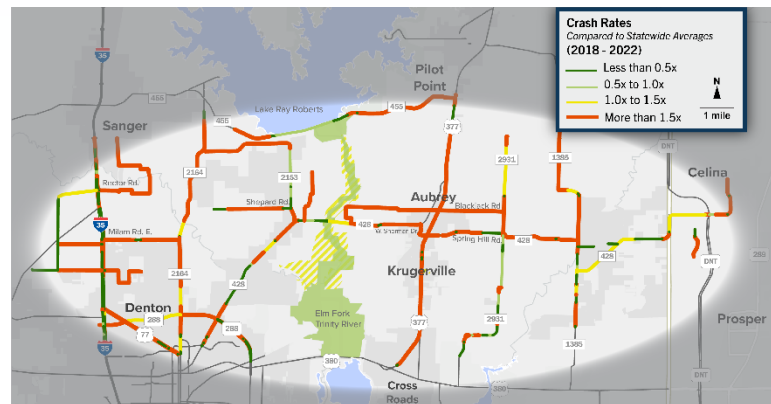
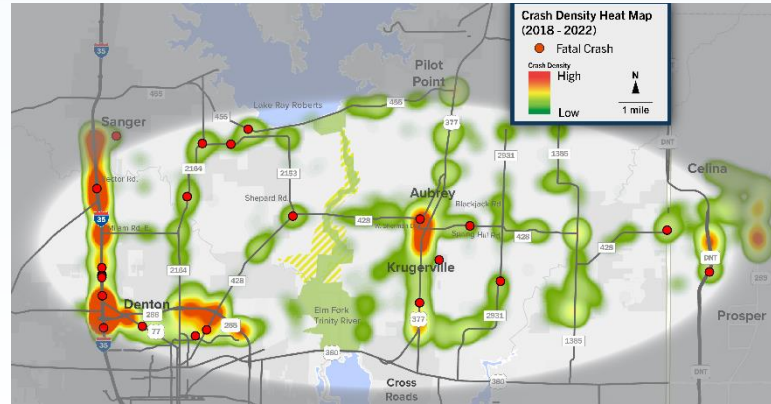
RAPID CURRENT AND PROJECTED POPULATION AND TRAFFIC GROWTH



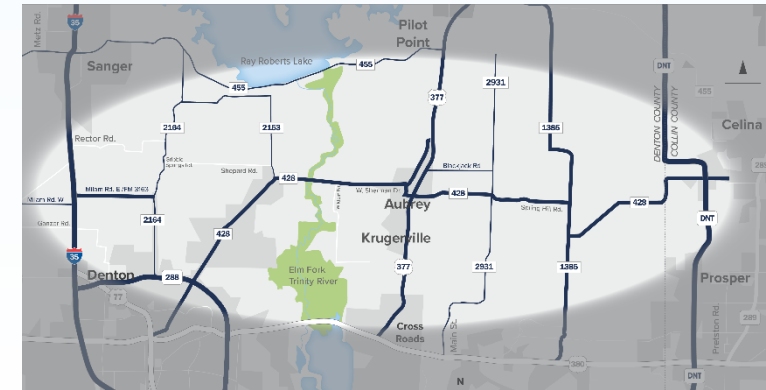
¹ Source: 2010 and 2020 US Decennial Census
² Source: North Central Texas Council of Governments 2045 Demographic Forecasts (2022)



HIGHER CRASH RATES THAN THE STATEWIDE AVERAGE



LIMITED MOBILITY DUE TO LACK OF CONTIGUOUS EAST-WEST ARTERIALS



Review more detailed information on the Purpose & Need on the exhibit boards and at:

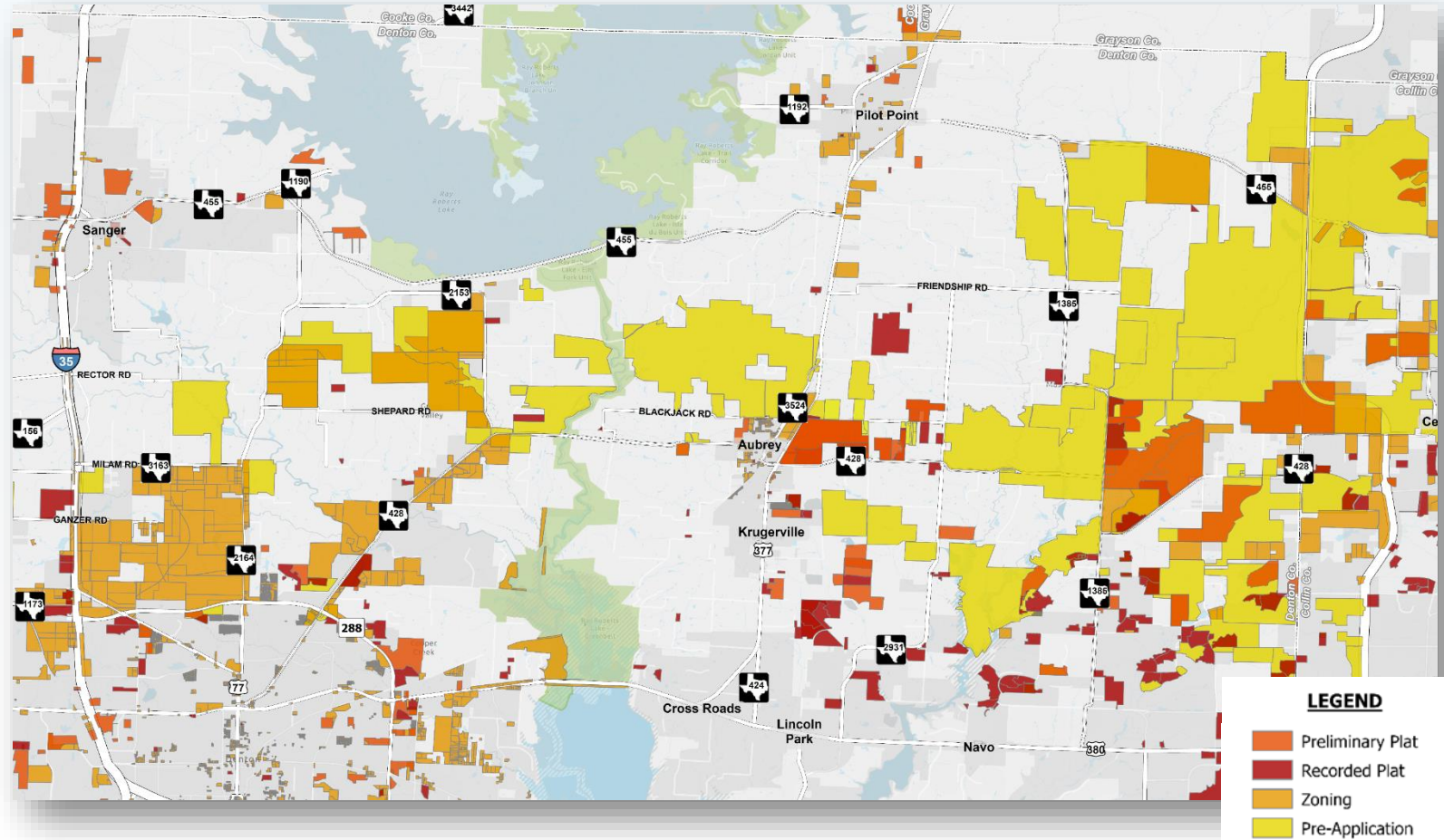
www.DentonCountyOuterLoop.com



LAND IS BEING DEVELOPED QUICKLY

Between 2015 & 2021, **more than 20,000*** acres of farm, ranch, timber, and vacant land have been converted to single family or commercial use in Denton County.

Land Development



Almost **5,000** acres of additional land within the study area are planned for development.

*Source: US 380 Denton County Feasibility Study (2020)



BACKGROUND

Building off previous efforts

2007 - 2011

A **Feasibility Study for a Regional Outer Loop** around the DFW metroplex was conducted. It found that an east-west route in Denton County may be warranted based on expected growth.

2016 & 2021

NCTCOG recommended the **Denton County Outer Loop** as an eventual six-lane freeway in Mobility 2040 and again in Mobility 2045, the region's long-range transportation plan.

2019

The **Denton Greenbelt Corridor Feasibility Study** identified the viability of the Outer Loop across northeast Denton County. It determined the Outer Loop is warranted.

2013

The Outer Loop was added to the **Denton County 2013 Thoroughfare Plan** update, which identifies long-range county transportation vision and direction.

2017

The **Denton County 2017 Thoroughfare Plan** included additional analysis that validated the need for US 380 and the Outer Loop as higher-capacity east-west connectors.

OVERVIEW OF STUDY TASKS



▶ Conduct Environmental Studies

Field Studies and Development of an Environmental Impact Statement (EIS) document.



▶ Develop the Schematic Design of Alternatives

Develop and analyze roadway alignments and perform preliminary engineering tasks.

ENVIRONMENTAL IMPACT STATEMENT (EIS)

National Environmental Policy Act (NEPA)

- ▶ **The National Environmental Policy Act (NEPA)** requires federal agencies to assess the environmental effects of their proposed actions prior to making decisions. If a project is to receive federal funding, it must adhere to NEPA.
- ▶ **An Environmental Impact Statement (EIS)** is the most rigorous level of environmental review under NEPA and is prepared when it is anticipated a proposed project could significantly affect the quality of the **human and natural environment**.
- ▶ Denton County intends to **obtain environmental clearance** for the project from TxDOT through the NEPA process in order to use federal funds to construct the proposed roadway.
- ▶ Based on the NEPA process, TxDOT determined that the project will now be classified and prepared as an EIS that will **evaluate a range of build and a no-build alternative**.

SCOPING AND THE EIS PROCESS

FEASIBILITY PHASE



FEASIBILITY PHASE

- Began in 2022
- Identified feasible alignments for further study
- Concluded in Spring 2024

EIS DEVELOPMENT



SCOPING

- Host Agency and Public Scoping meetings
- Present and gather input on Scoping documents
- Issue Notice of Intent (NOI)



ANALYSIS & PUBLIC MEETING

- Analyze alternatives for potential impacts
- Further develop schematic design
- Host public meeting to present analysis of alternatives



DRAFT EIS & PUBLIC HEARING

- Identify Preferred Alternative
- Further develop schematic design
- Host public hearing to gather input on Draft EIS document



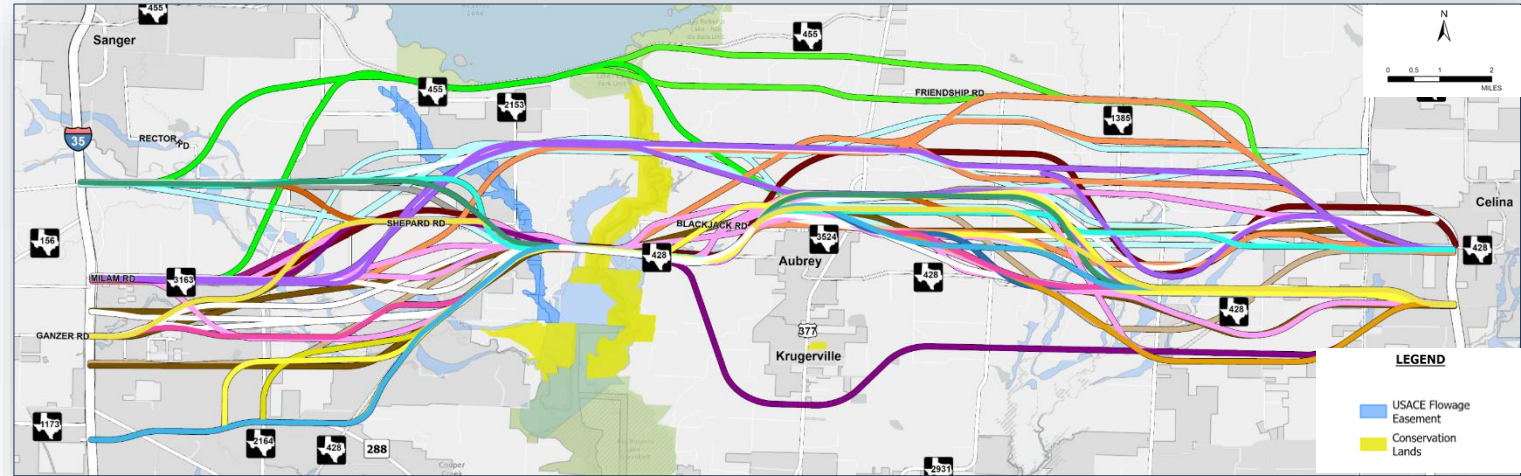
FINAL EIS & RECORD OF DECISION

- Respond to comments on the draft EIS
- Finalize EIS
- Issue Record of Decision

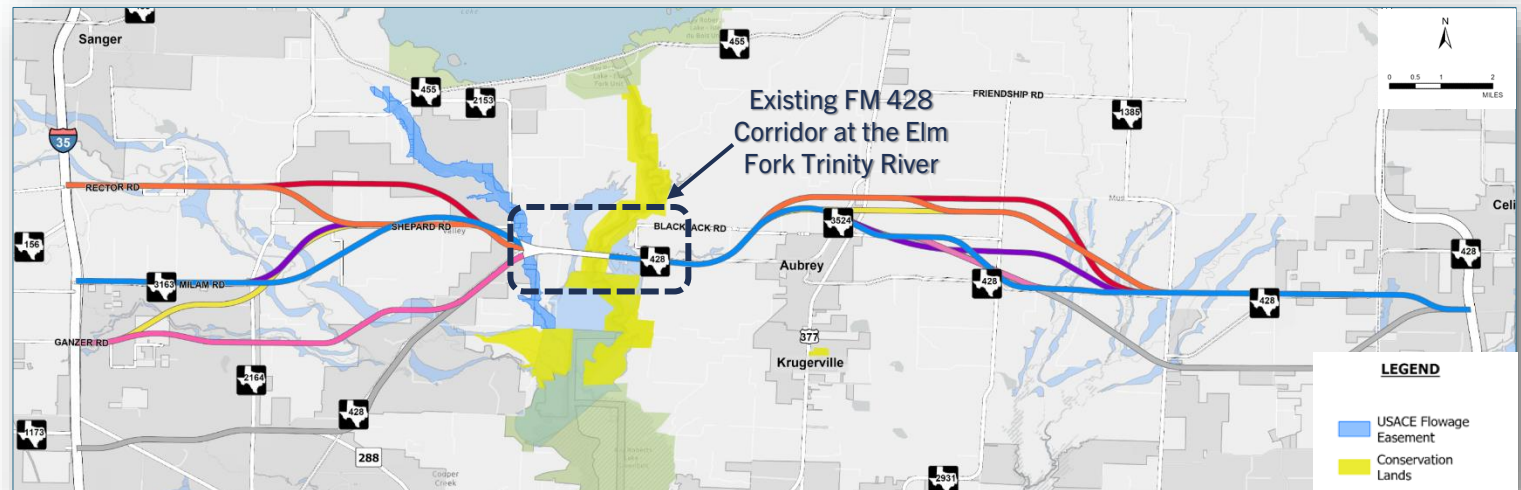
FEASIBILITY STUDY HIGHLIGHTS

JANUARY 2023 Conceptual Alignments

*Including alignments
 identified in previous studies*



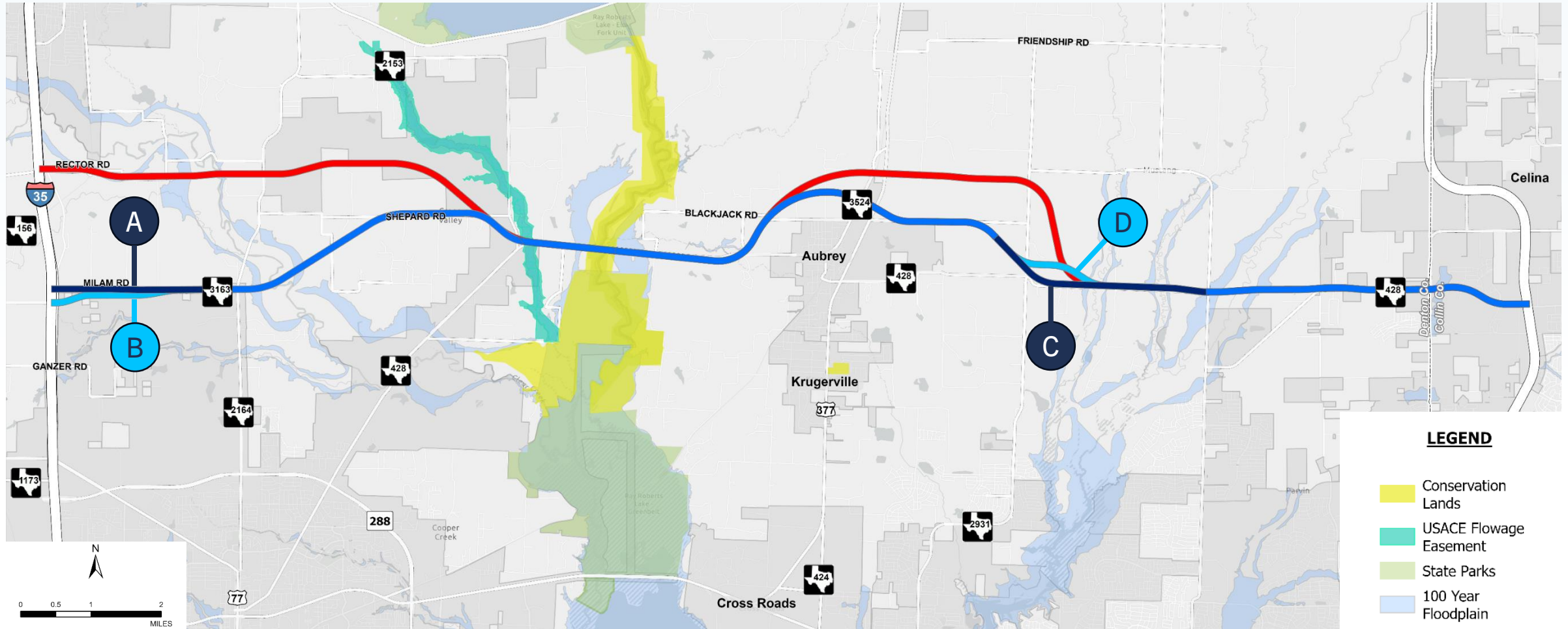
MAY 2023 Public Meeting #1 Alignments after initial screening



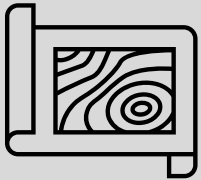
FEASIBILITY STUDY

ALIGNMENTS RECOMMENDED FOR FURTHER STUDY

Alignments were evaluated based on a set of high-level criteria (presented in Nov. 2023).



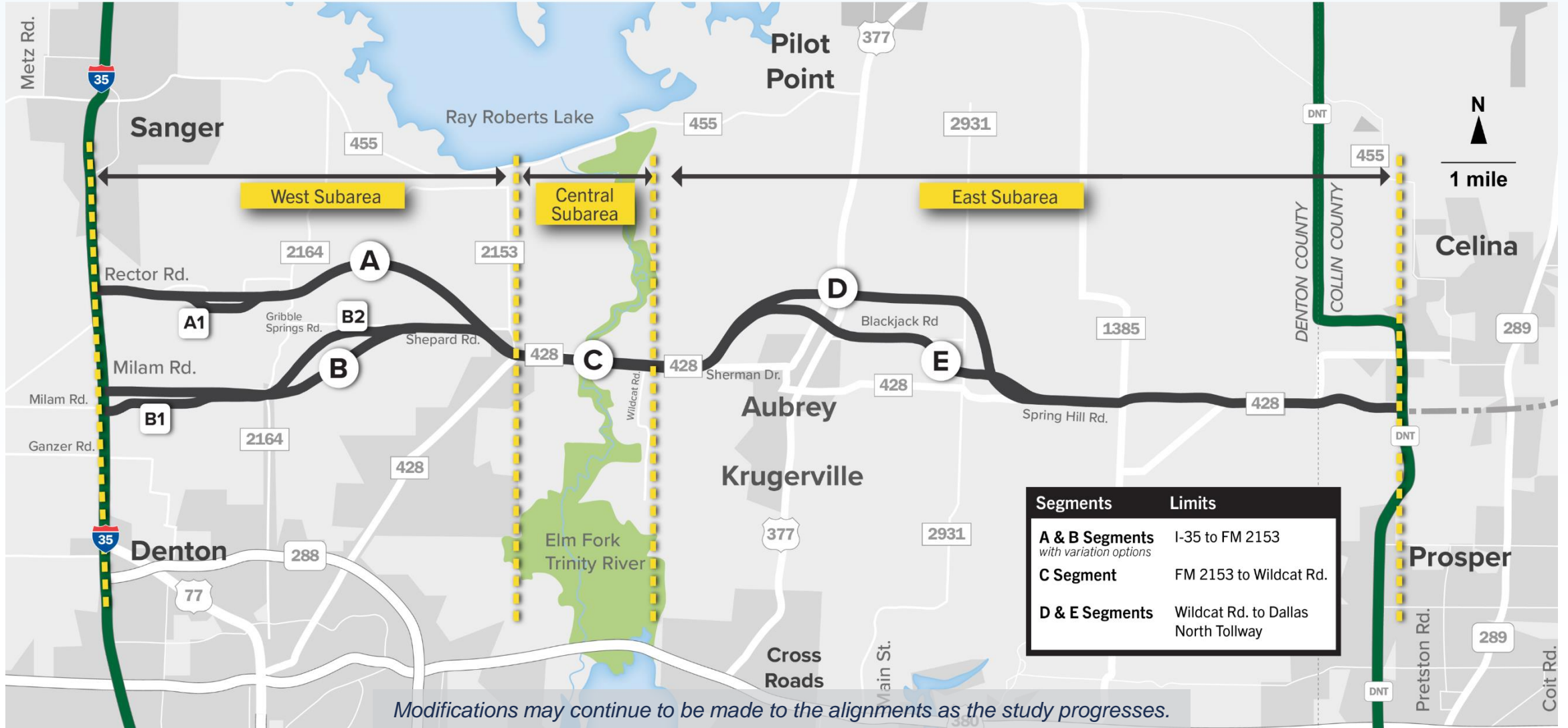
Study Task: **IDENTIFY REASONABLE ALTERNATIVES**



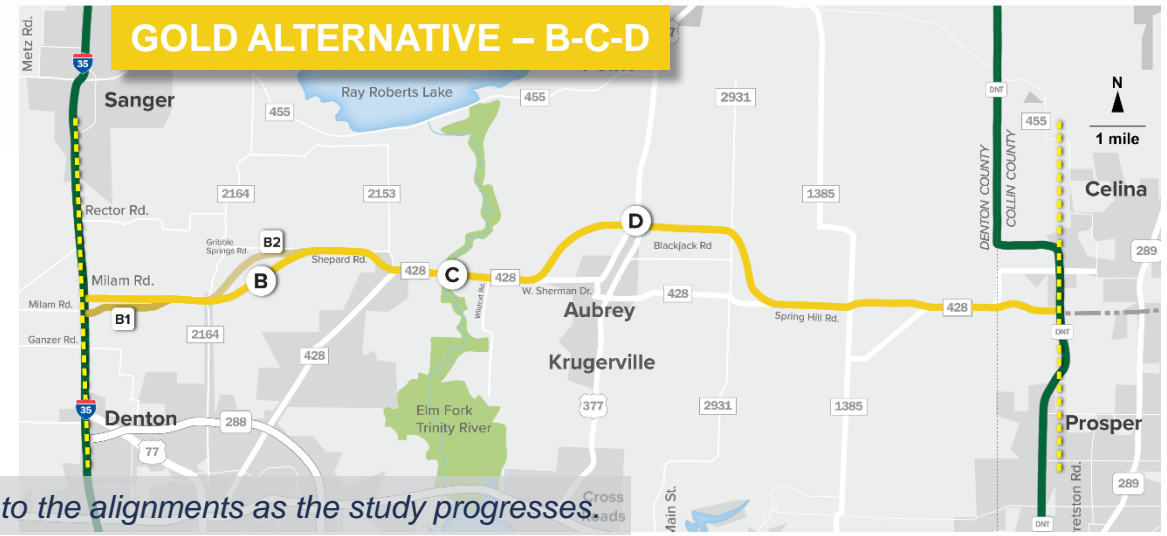
Denton County and TxDOT have identified the reasonable alternatives to evaluate during this phase of project development:

- ✓ Denton County and TxDOT must identify an alternative that would best accomplish the project's Purpose & Need.
- ✓ The **“Build” Alternative Segments** shown on the next slide are based on the data collected during the Feasibility Phase of the study and the alignments recommended for further study.
- ✓ Combinations of these segments make up **four end-to-end “Build” Alternatives** to be evaluated in the EIS process.
- ✓ Evaluation of a **“No Build” Alternative** will look at the impact of what will happen if no freeway is built, but projected population and traffic continue to grow. It will also account for other roadway improvements in the study area.
- ✓ **Modifications may continue to be made** to the alternatives as the study progresses.

EIS BUILD ALTERNATIVE SEGMENTS



FOUR BUILD ALTERNATIVES



Modifications may continue to be made to the alignments as the study progresses.

METHODOLOGY TO ANALYZE ALTERNATIVES

An initial analysis of the alternatives using the criteria below will be presented for public comment at a public meeting expected to be held in Summer 2025.

PURPOSE & NEED

HOW WELL DOES ALTERNATIVE ADDRESS IDENTIFIED NEED

- RAPID CURRENT AND PROJECTED POPULATION AND TRAFFIC GROWTH
- HIGHER CRASH RATES THAN THE STATEWIDE AVERAGE
- LIMITED MOBILITY DUE TO THE LACK OF CONTIGUOUS EAST-WEST ARTERIALS

PUBLIC INPUT

- PUBLIC AND STAKEHOLDER INPUT, COMMENTS, FEEDBACK, AND ACCEPTANCE

ENGINEERING

- TOTAL LENGTH ALONG CENTERLINE (I-35 TO DNT)
- MAJOR UTILITY CONFLICTS
- ESTIMATED CONSTRUCTION COST - PER MILE (INSTALLED FACILITY)
- ESTIMATED CONSTRUCTION COST (INSTALLED FACILITY, ROW, UTILITY RELOCATIONS, ETC.)
- TOTAL LENGTH OF ELEVATED STRUCTURES (E.G., BRIDGES, DECKED ROADWAYS)
- NUMBER OF NEW GRADE-SEPARATED INTERCHANGES

ENVIRONMENTAL

- RESIDENTIAL DISPLACEMENTS
- BUSINESS DISPLACEMENTS
- LAND USE
- FARMLAND IMPACTS
- FARMLAND IMPACTS (SEPARATION OF FARMLAND FROM HOMESTEAD)
- COMMUNITY DEMOGRAPHICS AND SERVICES (ENVIRONMENTAL JUSTICE [EJ], LIMITED ENGLISH PROFICIENCY [LEP], TITLE VI CONSIDERATIONS)
- BICYCLE AND PEDESTRIAN FACILITIES
- SECTION 303(D) IMPAIRED WATERS
- FLOODPLAINS (100-YEAR) AND FLOODWAYS
- IMPACTS TO VEGETATION/HABITAT
- IMPACTS TO WILDLIFE
- THREATENED, ENDANGERED, OR CANDIDATE SPECIES
- STATE SPECIES OF GREATEST CONSERVATION NEED (SGCN)
- AIR QUALITY
- HISTORIC PROPERTIES
- PROTECTED LANDS (SECTION 4(F), SECTION 6(F), CHAPTER 26 PROPERTIES, CONSERVATION EASEMENTS)
- WATERS OF THE US - STREAMS AND RIVERS
- WATERS OF THE US - WETLANDS
- INDIRECT AND CUMULATIVE EFFECTS
- INDUCED GROWTH
- VISUAL/AESTHETIC IMPACTS

- COMMUNITY FACILITIES (SCHOOLS, PLACES OF WORSHIP, LIBRARIES, ETC.)
- ARCHAEOLOGICAL SITES AND CEMETERIES
- HAZARDOUS MATERIALS
- TRAFFIC NOISE

The full Methodology and Level of Detail for Analyzing the Alternatives can be viewed at:



www.DentonCountyOuterLoop.com

Study Task: **MORE DETAILED DESIGN**

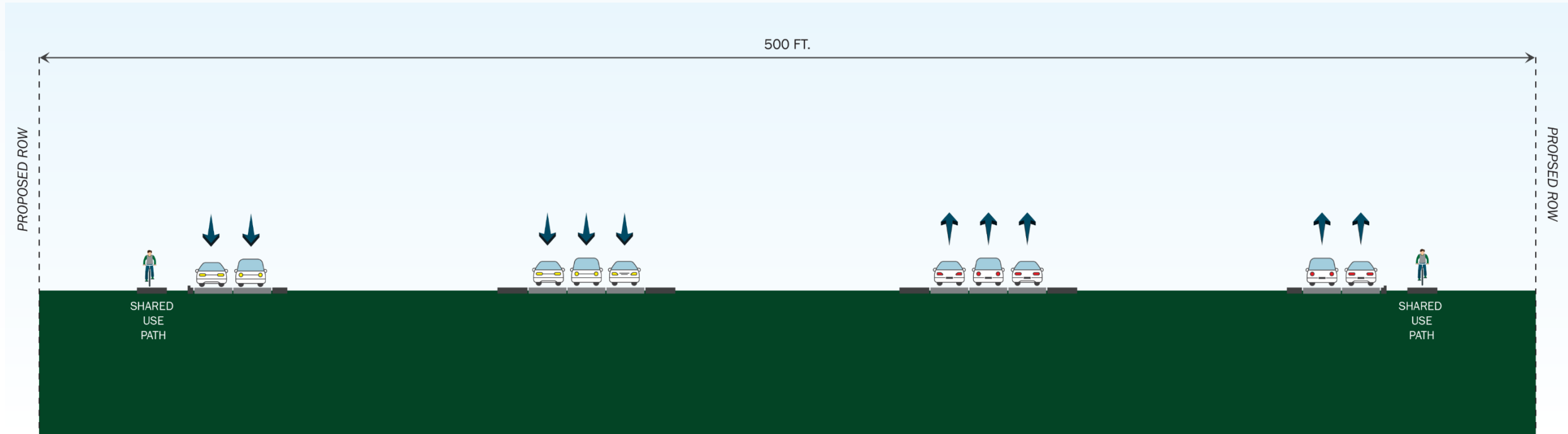


Denton County and TxDOT will complete a more detailed schematic design of the roadway during this phase of project development. Preliminary engineering tasks include:

- ✓ Determining how much right-of-way is needed.
- ✓ Refining typical sections for specific locations along the project corridor.
- ✓ Developing ramp locations and interchange configurations.
- ✓ Determining the constructability of the project.
- ✓ Calculating a more detailed cost estimate.
- ✓ Completing drainage design.
- ✓ Considering and designing bicycle and pedestrian accommodations and connections.

PROPOSED TYPICAL SECTION

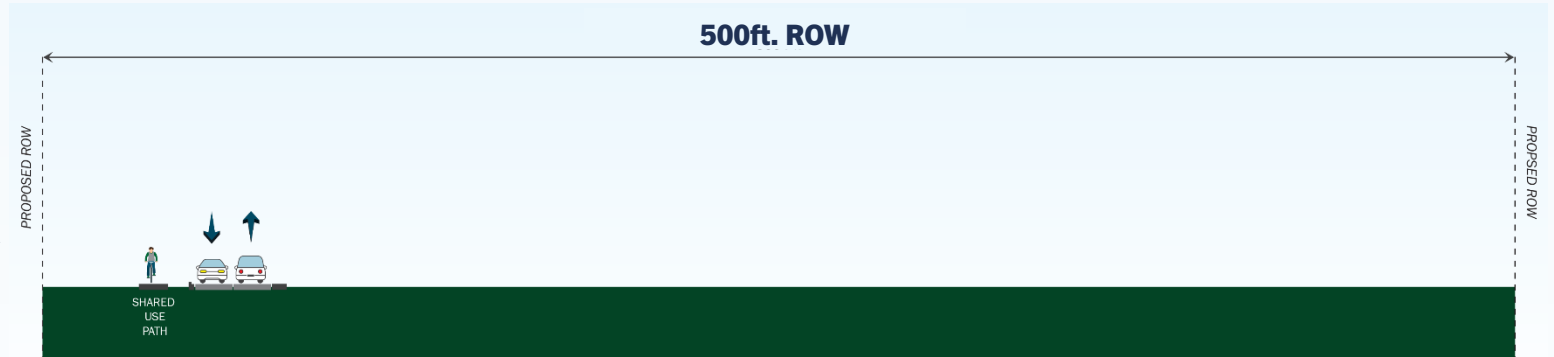
500-foot-wide ROW



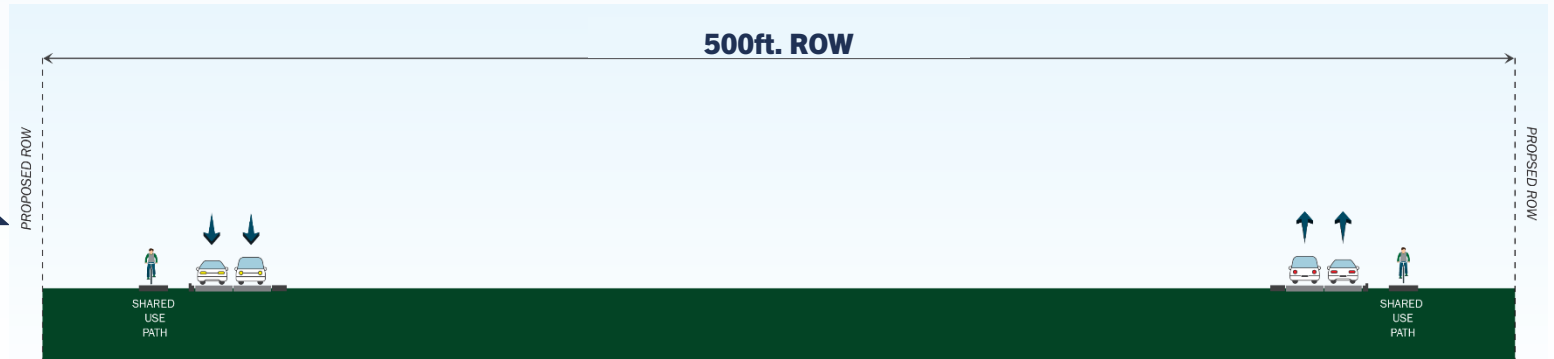
Modifications may continue to be made to the alignments as the study progresses.

PHASED PROJECT CONSTRUCTION

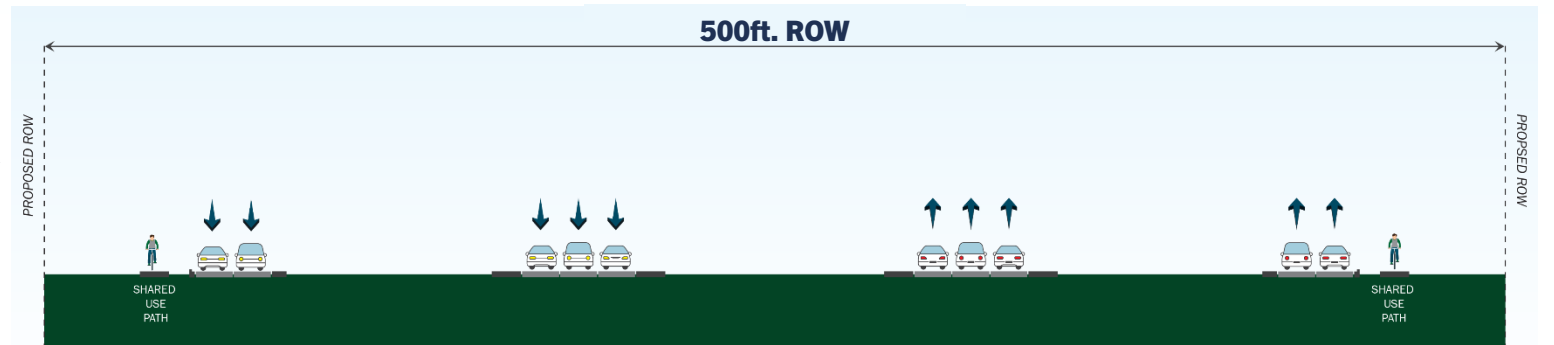
Phase 1 – Construction of frontage road along one side



Phase 2 – Construction of frontage road along the other side



Phase 3 – Construction of the main lanes



Modifications may continue to be made to the alignments as the study progresses.

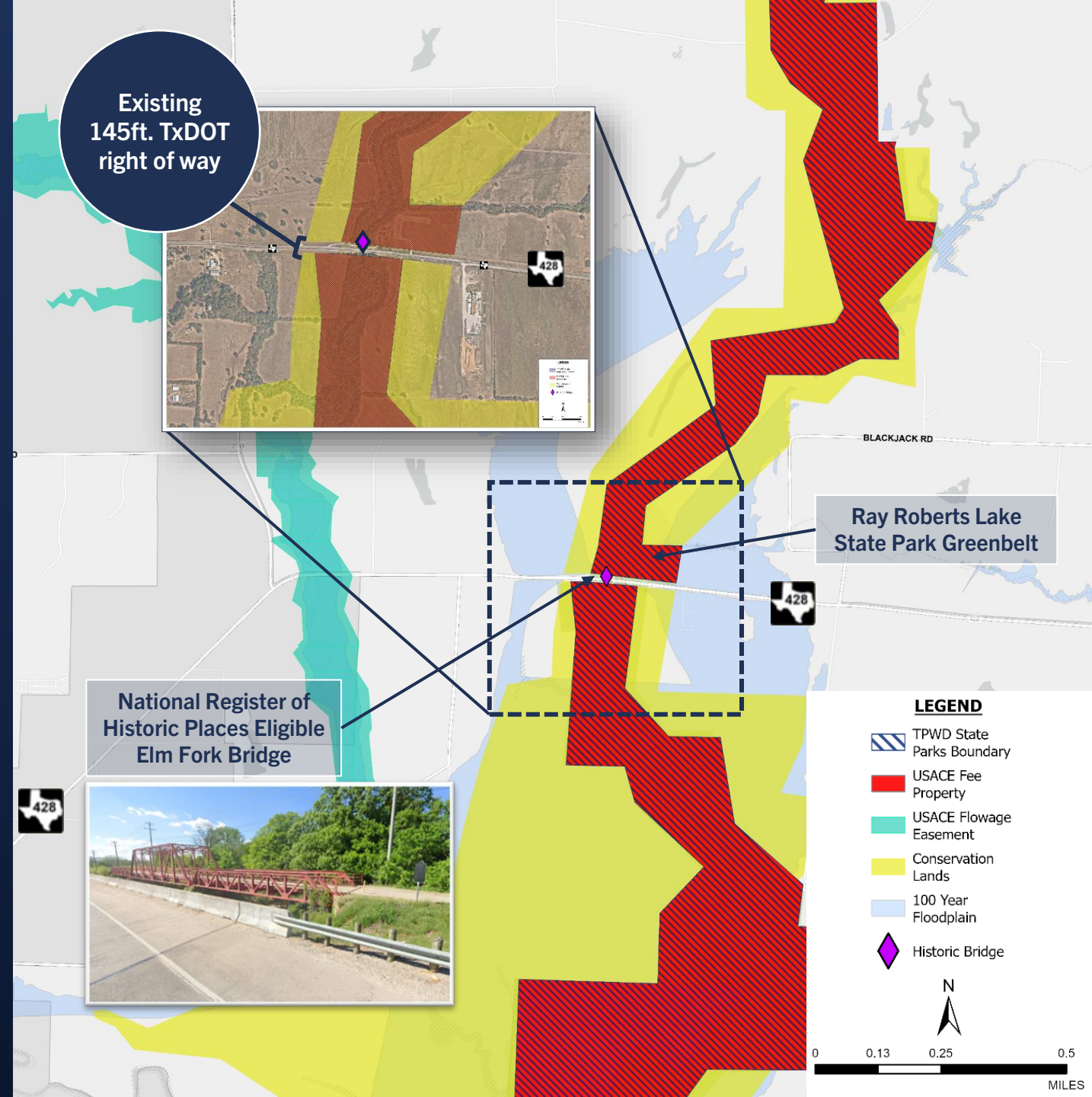
GREENBELT AREA IN FOCUS

High-Risk Constraints

Several high-risk constraints exist in the Greenbelt Corridor area.

Federal Conservation Easements	USACE Owned Property
Historic Bridge	Ray Roberts Lake State Park Greenbelt Trails
USACE Flowage Easements, Regulatory Floodways, and Floodplains	

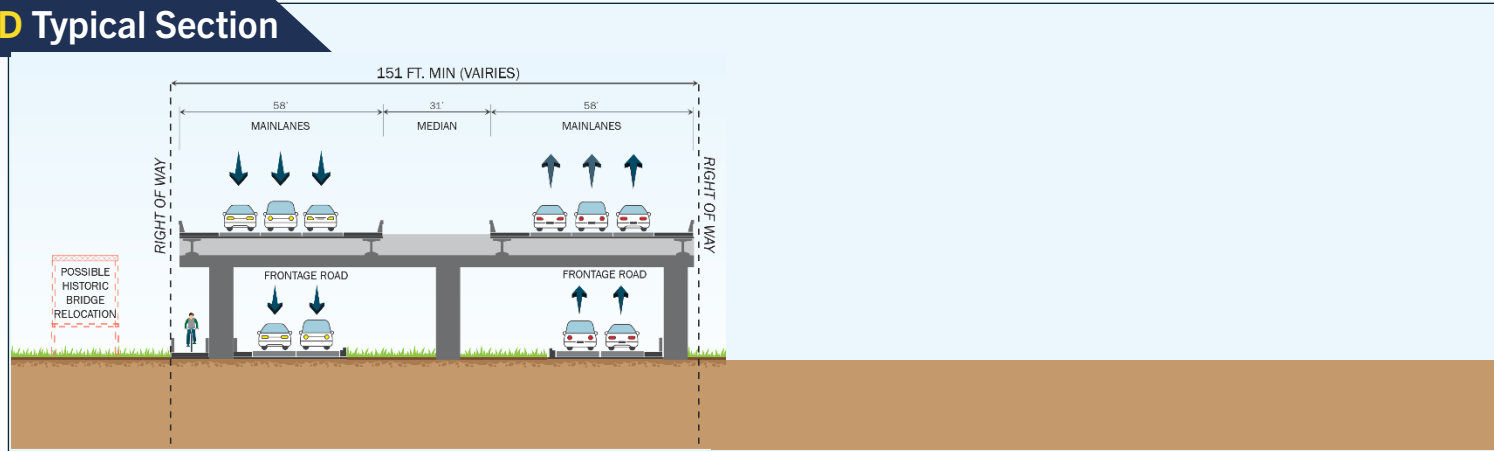
An alignment along FM 428 was initially identified as the most feasible location to cross the Greenbelt Corridor because it would utilize existing TxDOT right of way and minimize impacts to the identified constraints.



GREENEBELT CROSSING

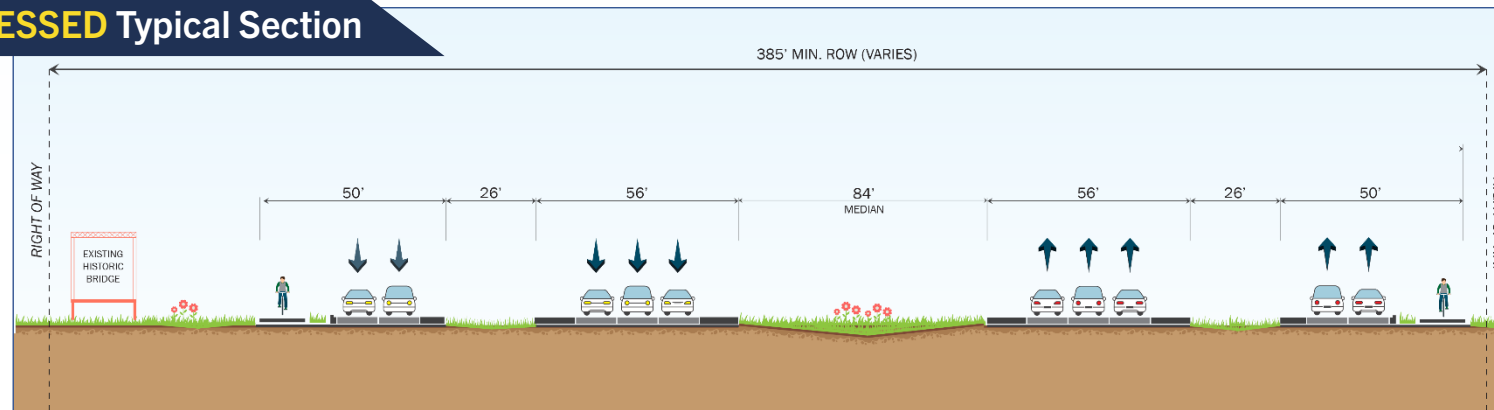
Due to the challenging constraints at the FM 428 crossing of the Greenbelt Corridor, compressed and stacked typical sections are being developed and assessed to minimize impacts.

STACKED Typical Section



- Multi-level bridge with frontage roads underneath main freeway lanes and incorporates possible shared-use path.
- Utilizes existing TxDOT right-of-way along FM 428 to minimize impacts at the current crossing. Federal Conservation Easements are not impacted by this option.
- Future location of the historic Elm Fork Bridge to be evaluated.

COMPRESSED Typical Section

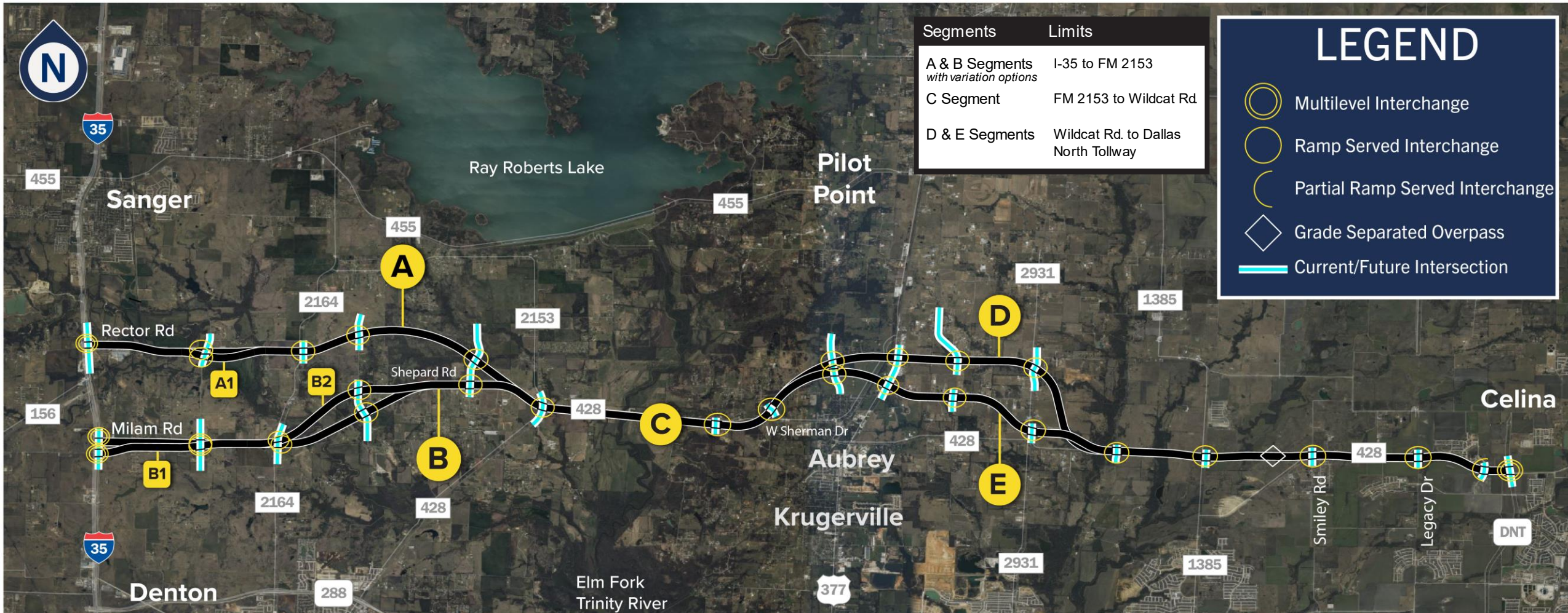


- Generally utilizes 385 ft. right-of-way width.
- Consists of continuous outside frontage roads, shared use path and main freeway lanes at-grade.
- Impacts USACE Property, State Park and Federal Conservation Easements.

Diagrams are **for illustration purposes only** and do not represent the final design or lane configuration for the roadway. Modifications to the lane configuration and ROW width may occur as the study progresses.

PRELIMINARY INTERCHANGE LOCATIONS

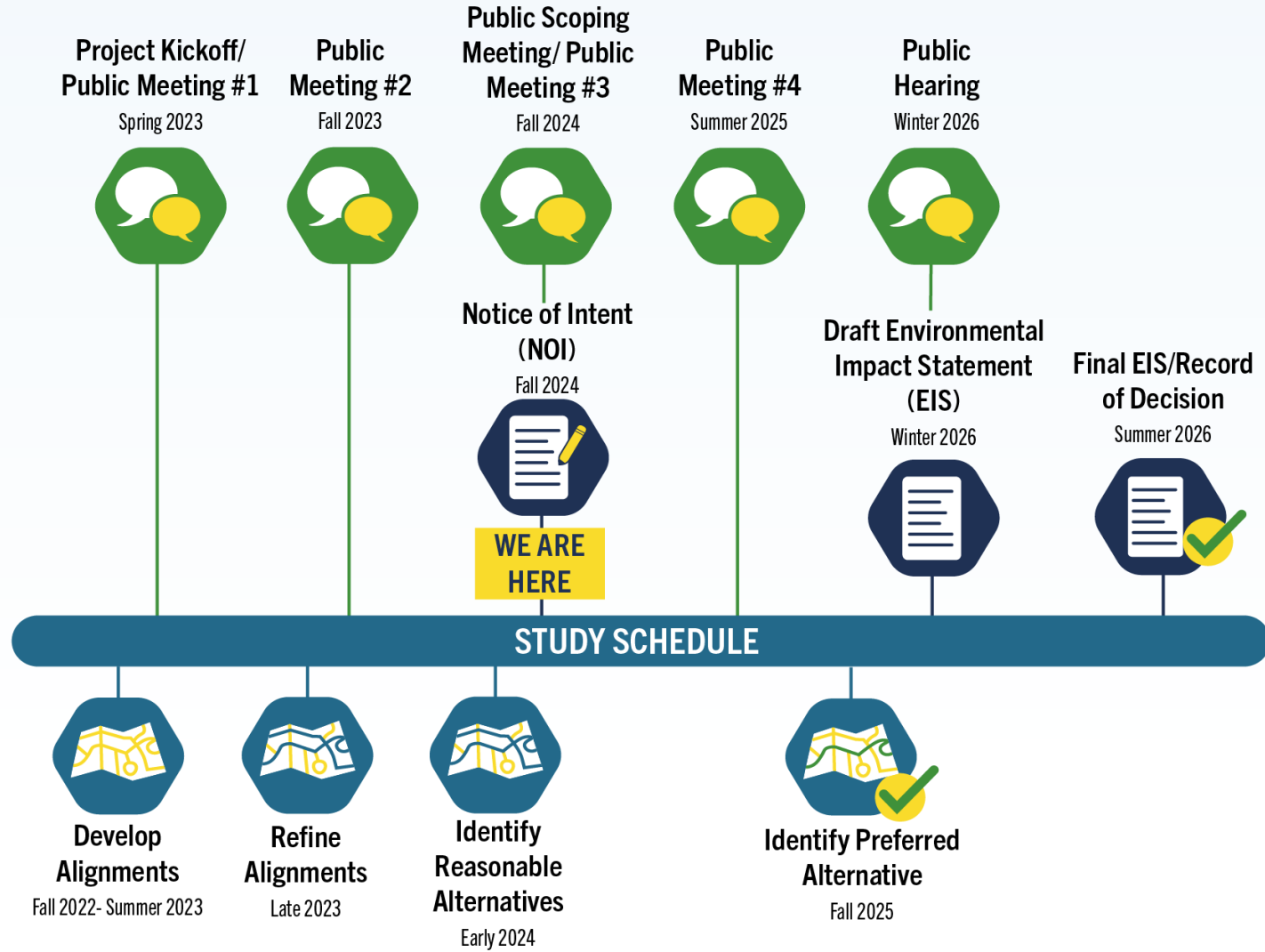
Preliminary interchange locations are proposed at key intersections. In some cases, these interchanges are located at crossings with future roads that do not yet exist but are identified in local thoroughfare plans for future construction.



PROJECT DEVELOPMENT PROCESS



NEXT STEPS



*All dates are subject to change



PUBLIC SCOPING MEETINGS

The purpose of these meeting is to:

- **Update** the public about the Denton County Outer Loop study
- **Present** Public Scoping Documents as part of the EIS development
- **Share** information about the alternatives under consideration
- **Invite** the public to provide comment



Tuesday, Oct 29
5:30 p.m. - 7:30 p.m.

AUBREY/ PILOT POINT

Midway Church (Gymnasium)

9540 US 377

Pilot Point, TX 76258

October 30, 2024



Wednesday, Oct 30
5:30 p.m. - 7:30 p.m.

DENTON

Denton Convention Center
(Embassy Suites)

3100 Town Center Trail
Denton, TX 76201

MC 24-035



Oct 29 - Nov 29, 2024


VIRTUAL

DentonCountyOuterLoop.com

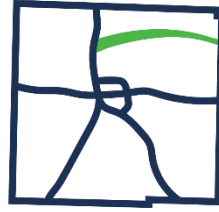
Materials posted Oct 29 at
8 a.m. through Nov 29

**Not a live event*

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DISCUSSION & QUESTIONS



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THANK YOU

Project Contacts

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For more information and project updates:
www.DentonCountyOuterLoop.com