

# Public Meeting

U.S. 50/400 Expansion  
to a 4-lane Expressway  
Finney & Gray counties

*November 16, 2023*



# Design Team

- KDOT
  - Ron Hall – SW District Engineer
  - Gary Bennett – SW District Project Development Engineer
  - Yazmin Moreno – SW District Public Affairs Manager
  - Sara Peters – Bureau Chief Traffic Engineering
- KDOT Design (IKE PMC)
  - Kim Restoff – Project Manager (Western Group: Aerodrome Road to 7 Road)
  - Eric Glover – Project Manager (Eastern Group: 7 Rd to WCL Cimarron)
- Design Consultants
  - Jon Marburger (JEO) – Project Manager (Aerodrome Road to Mennonite Road)
  - Justin Adams (TranSystems) – Project Manager (Mennonite Road to 7 Road)
  - Todd Jones (GBA) – Project Manager (7 Road to 12 Road)
  - Josh Beckman (Kirkham Michael) – Project Manager (12 Road to WCL Cimarron)

# Today's Meeting

- Introductions
- Project Overview
- Focus on Safety
- Preliminary Design Update
- Next Steps
- Questions/Answers



# U.S. 50/400 Expansion History & Overview



## WESTERN GROUP

- 1** U.S. 50/400, from Aerodrome Road east to Finney/Gray county line  
3.2 miles (KA-6023-01)
- 2** U.S. 50/400, from Finney/Gray county line east to CR 7 in Gray County  
6 miles (KA-6024-01)

## EASTERN GROUP

- 3** U.S. 50/400, from CR 7 to CR 12 in Gray County  
5.4 miles (KA-6025-01)
- 4** U.S. 50/400, from CR 12 to Cimarron west city limits in Gray County  
6.5 miles (KA-6026-01)

## IN CONSTRUCTION

- 5** U.S. 50/400, reconstruct to four-lane expressway in Gray County  
(KA-2383-01)
- 6** U.S. 50/400, reconstruct to four-lane expressway in Ford County  
(KA-2384-01)

# Expressway Expansion Goals

- Final Segments to Complete Expressway Expansion from Garden City to Dodge City (21 miles)
- Improve Safety and Connectivity
- Improve Truck Freight Mobility
- Promote Long-Term Regional Economic Growth
- 70 mph Corridor at Completion



# Expressway Expansion Typical Section

## Expressway Configuration

### Travel Lanes

- Expanded from 2 to 4 lanes to improve mobility and safer passing maneuvers
- Two eastbound and two westbound lanes
- All new pavement & wider shoulders

### Median

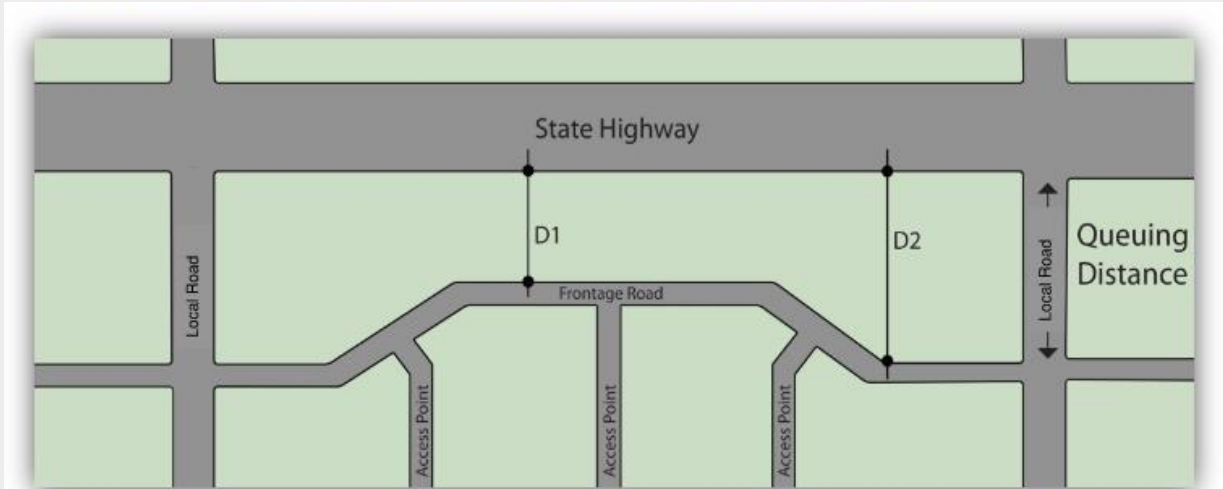
- Divided, grass median to reduce potential for head-on collisions
- Typical 60' width
- 150' width at intersections to accommodate trucks and queued vehicles
- 30' width to minimize environmental impacts



Expressway Example

# Expressway Expansion Access Management

- Consolidate number of intersections to improve safety
- 14 public road intersections
- Connected with Access Roads also known as frontage and backage roads
- Typical expressway goal: 2 to 4-mile spacing between intersections



Source: Modified version of figure in TRB Access Management Manual, 2003, p.194.

D1 = Minimum midblock separation  $\geq 25$  feet

D2 = Minimum separation at intersection  $\geq 300$  ft

Access Management with Frontage Road

# Focus on Safety: Drive to Zero



2022 Kansas Crash Summary Dashboard Statewide



# Focus on Safety: Drive to Zero



5-year Crash Summary Dashboard Garden City Airport to Cimarron



# Strategic Highway Safety Plan/Safe System Approach



**KANSAS**

**Strategic Highway Safety Plan**

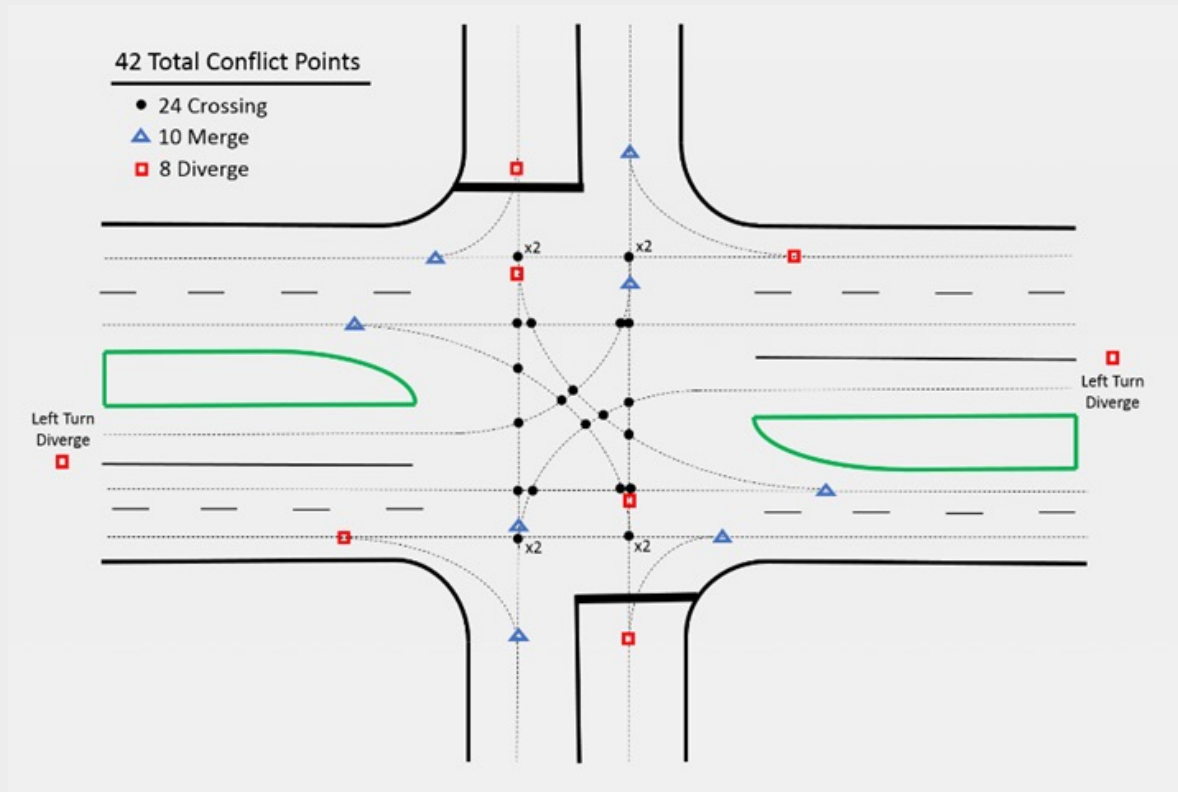
**2020-2024**



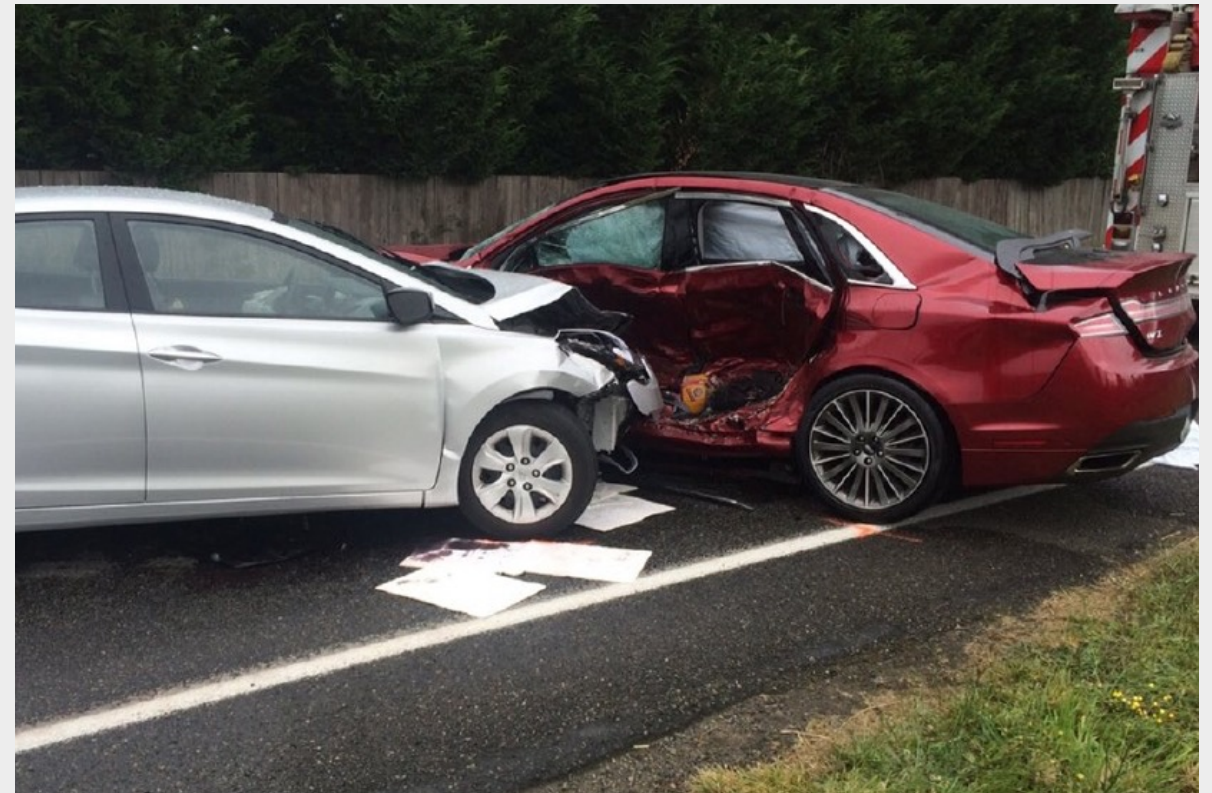
# Focus on Safety

- |                                     |                                     |  |
|-------------------------------------|-------------------------------------|--|
| <input checked="" type="checkbox"/> | Divided, grass median               | Reduce risk for head-on collisions     |
| <input checked="" type="checkbox"/> | Wider shoulders, flatter slopes     | Reduce risk for roll over              |
| <input checked="" type="checkbox"/> | Additional lanes                    | Safer passing maneuvers                |
| <input checked="" type="checkbox"/> | Dedicated left and right turn lanes | Reduce risk for rear-end collisions    |
| <input checked="" type="checkbox"/> | Access management                   | Minimize turning conflicts             |
| <input checked="" type="checkbox"/> | Consolidate at-grade RR crossings   | Reduce risks at crossings              |
| <input checked="" type="checkbox"/> | Innovative intersections            | Reduce risk for side-impact collisions |

# Side-Impact 'T-Bone' Style Crashes

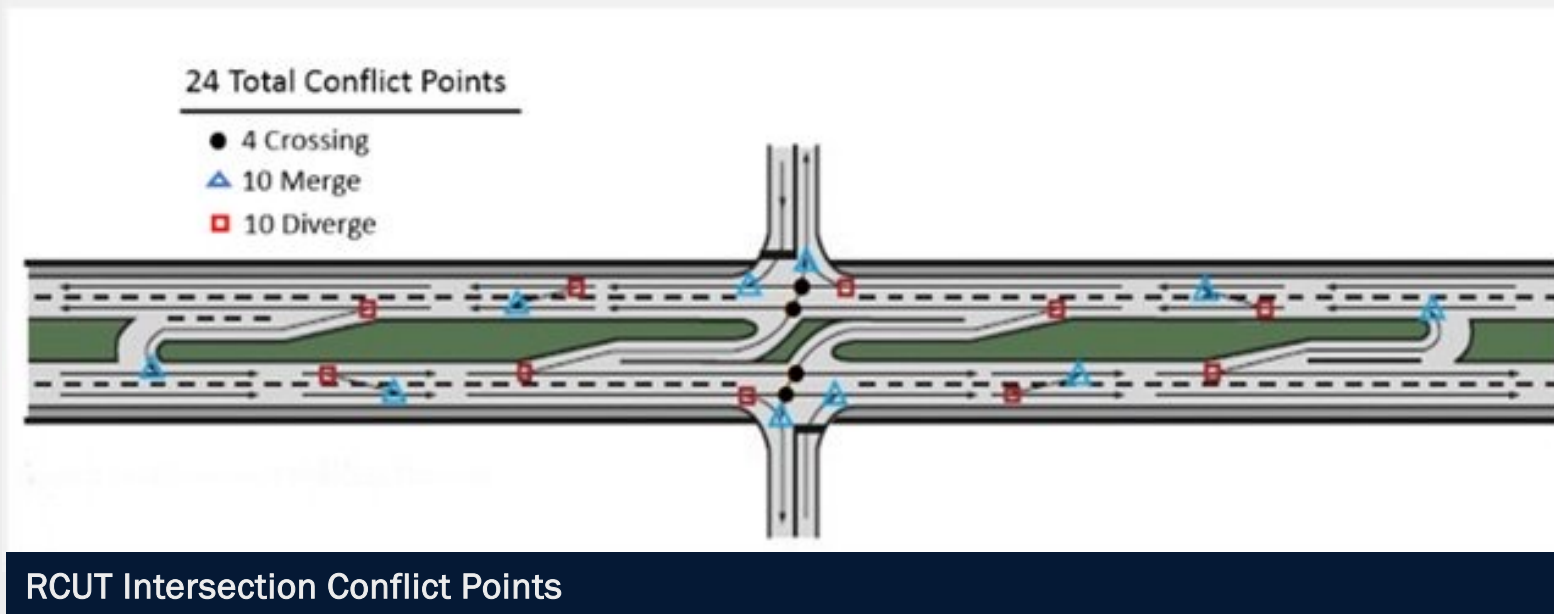


Conventional Intersection Conflict Points



Side-Impact Crash

# Predicted RCUT Crash Reductions



Intersections	Predicted 20-Year Crash Reductions at Proposed RCUTs		
	Reduced Fatal/Injury	Reduced PDO Crashes	Reduced Total Crashes
6 Rd E (Charleston)	1.59	2.51	4.08
13 Rd/Main St (Ingalls)	4.34	4.64	8.96
M Rd/2 <sup>nd</sup> Ave (Ingalls)	2.01	2.61	4.59
<b>Total</b>	<b>7.94</b>	<b>9.76</b>	<b>17.63</b>


# Restricted Crossing U-Turn Intersection RCUT



U.S. Department of Transportation  
Federal Highway Administration



Restricted Crossing U-Turn Video – Courtesy of FHWA YouTube

A man, Gary Leu, is seated in the driver's seat of a truck. He is wearing a white polo shirt with a blue logo on the chest and a blue patch on the left sleeve. The truck's interior, including the steering wheel and dashboard, is visible. The background shows a blurred outdoor scene through the windshield.

Gary Leu  
Professional Outfitter

Restricted Crossing U-Turn Video – Courtesy of MoDOTCentral YouTube

## SAFETY BENEFITS

70% Fatal crash reduction

40% Injury crash reduction

50% Total crash reduction

Reduced left turn conflict points  
from 24 → 4

Reduced high risk maneuvers =  
Fewer 'T-Bone' style crashes

Simplified decision making = Motorist  
focus on one direction of traffic

Reduced wait time for two smaller  
maneuvers = Fewer risky maneuvers

Reduced time exposed to conflict =  
Decreased risk of collision

## INCONVENIENCES

Increased Travel up to 1 mile for 10%  
of traffic

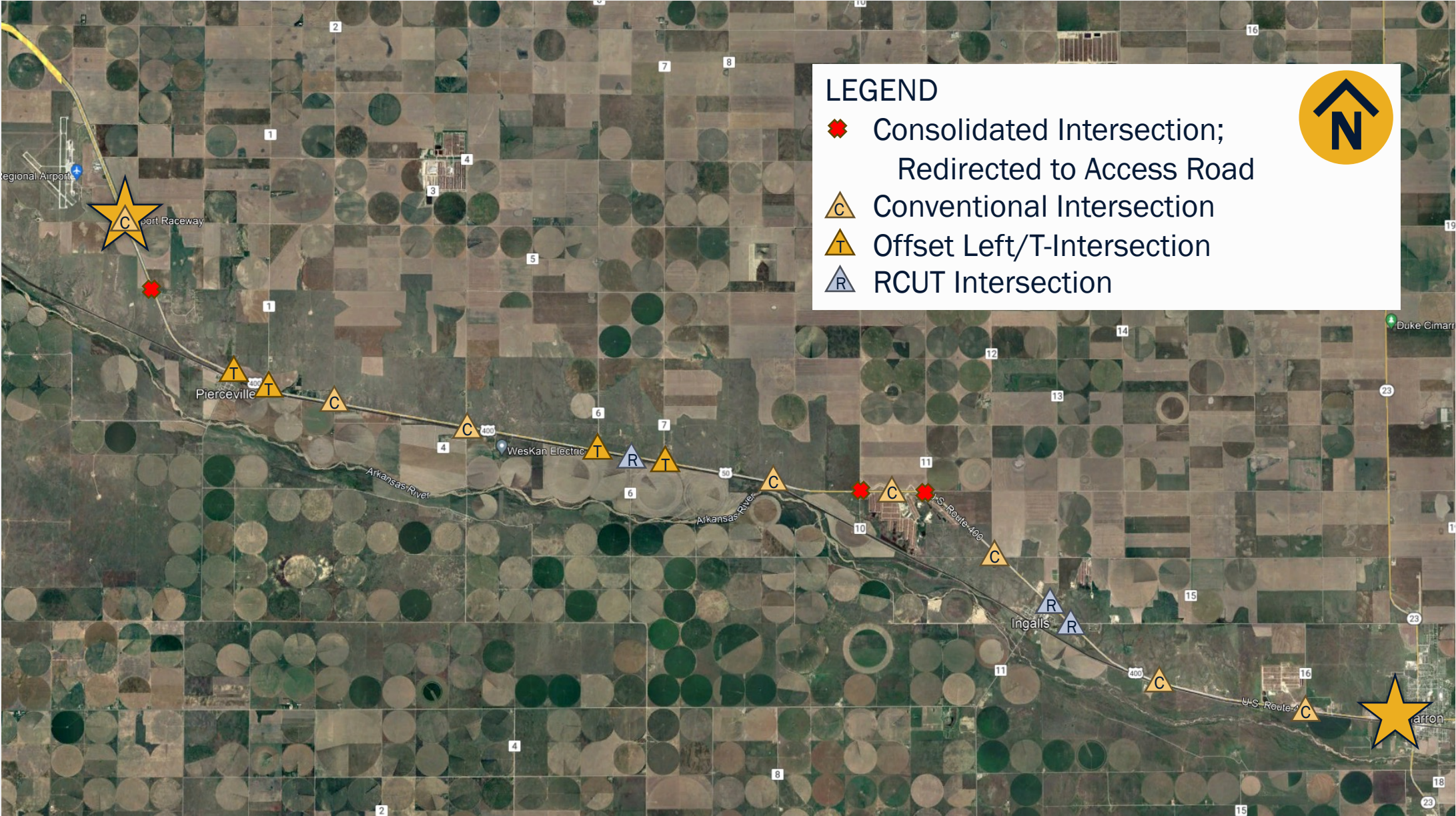
Increased Travel Time up to 1 or 2  
minutes for 10% of Traffic

RCUT SAFETY BENEFITS OUTWEIGH

INCONVENIENCES



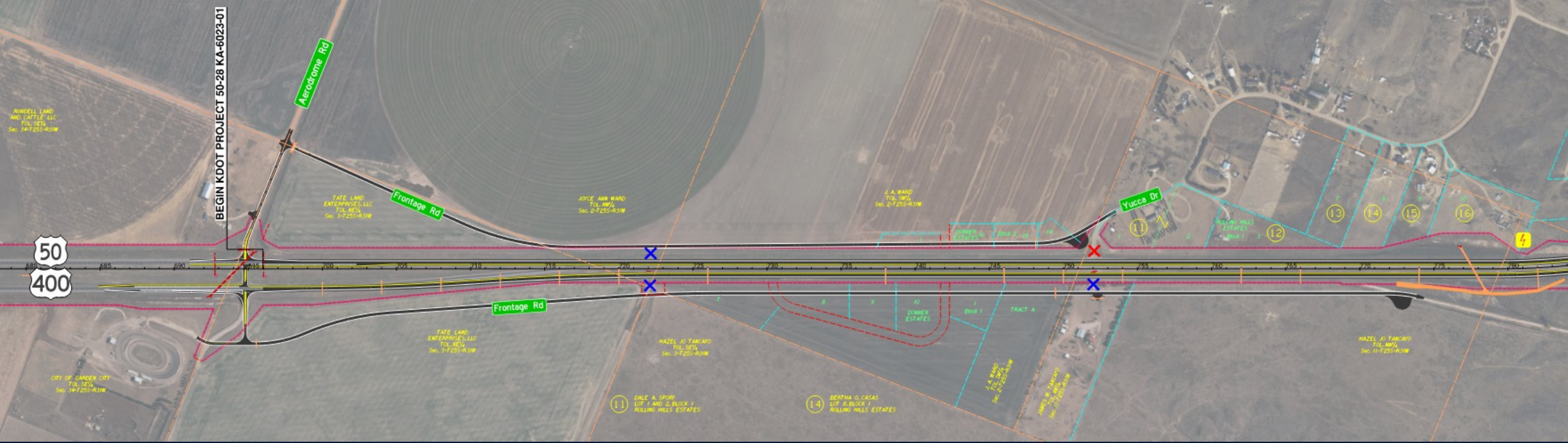
# U.S. 50/400 Expressway Intersections



# PRELIMINARY DESIGN UPDATE



# Yucca Drive Access



Yucca Drive frontage road connection to Aerodrome Road

50-28 KA-6023-01



# Main St. and Mennonite Rd (County Rd 1) Intersection

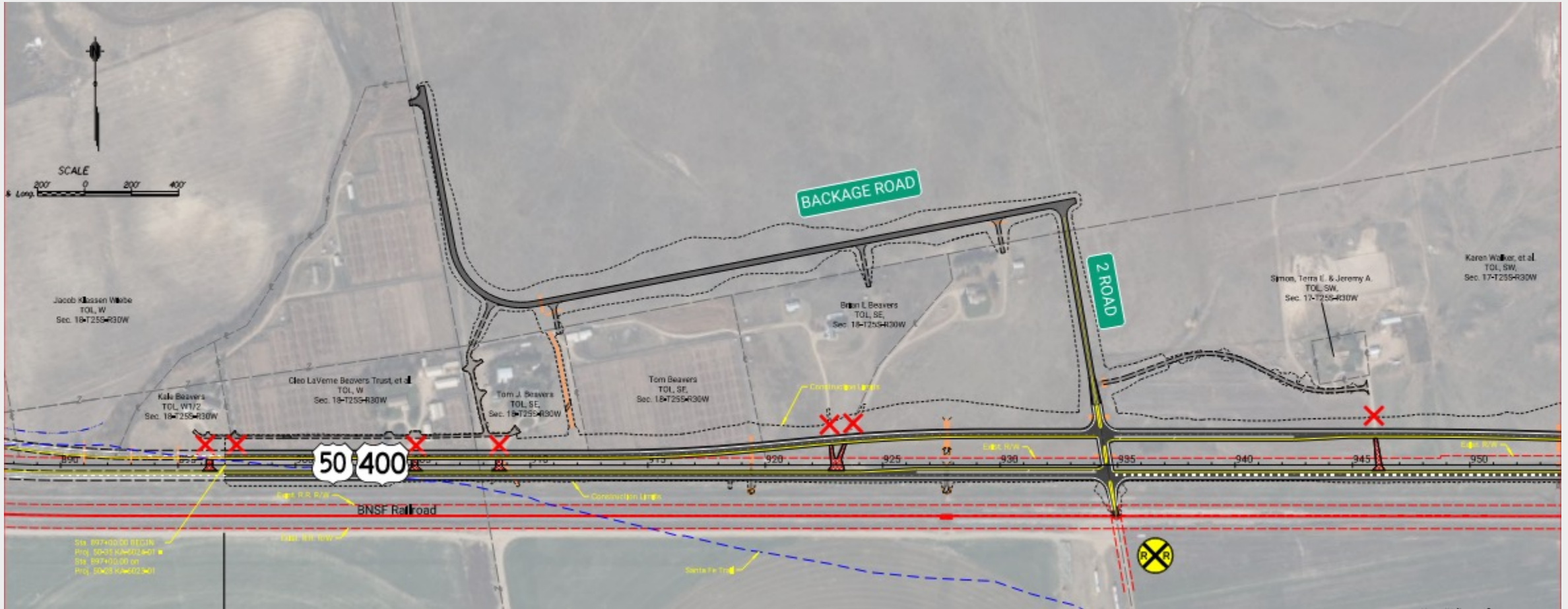


Mennonite Rd (Co. Rd. 1) and backage road to Main Street in Pierceville

50-28 KA-6023-01



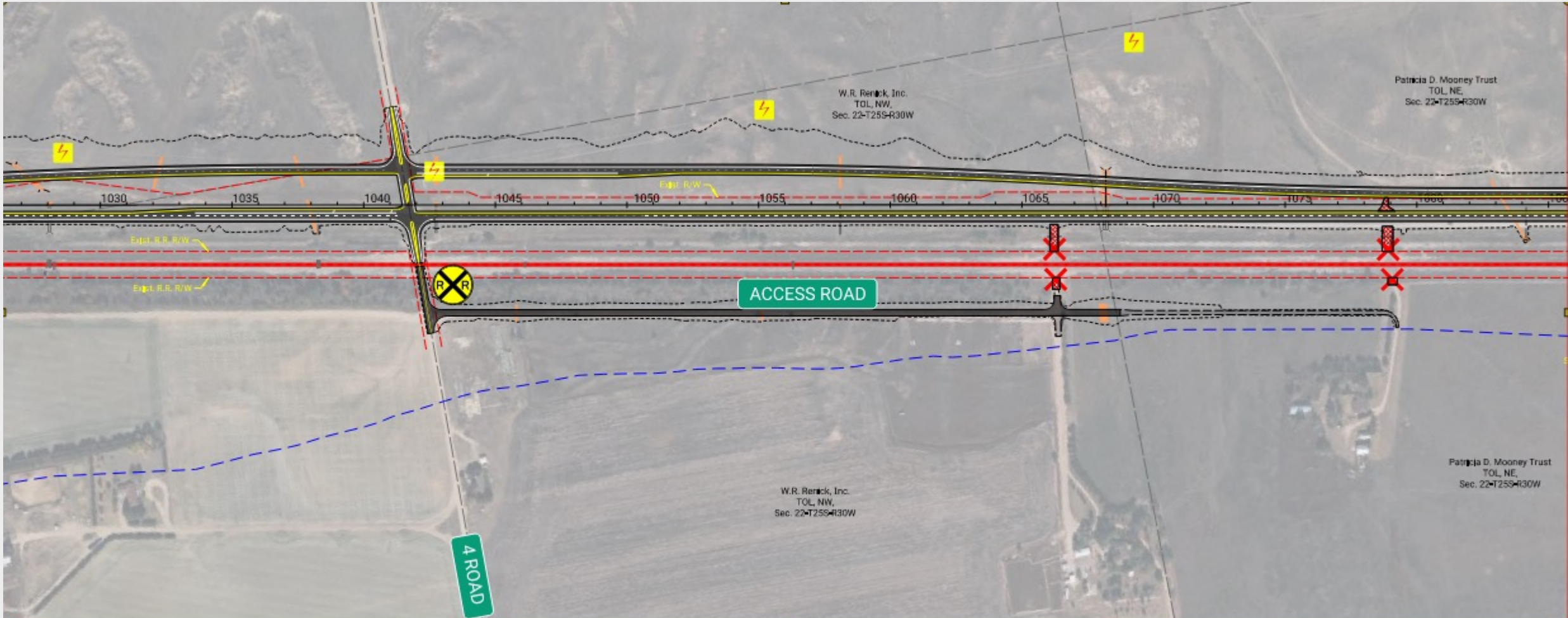
# 2 Road/Beavers Game Farm Access



U.S. 50 expressway with 60' median transitioning to 150' median at 2 Rd intersection with proposed backage road at Beavers Game Farm

50-35 KA-6024-01

# 4 Road Access



U.S. 50 expressway with 60' median transitioning to 150' median at 4 Rd intersection with proposed access road south of railroad

50-35 KA-6024-01

# Charleston Intersection

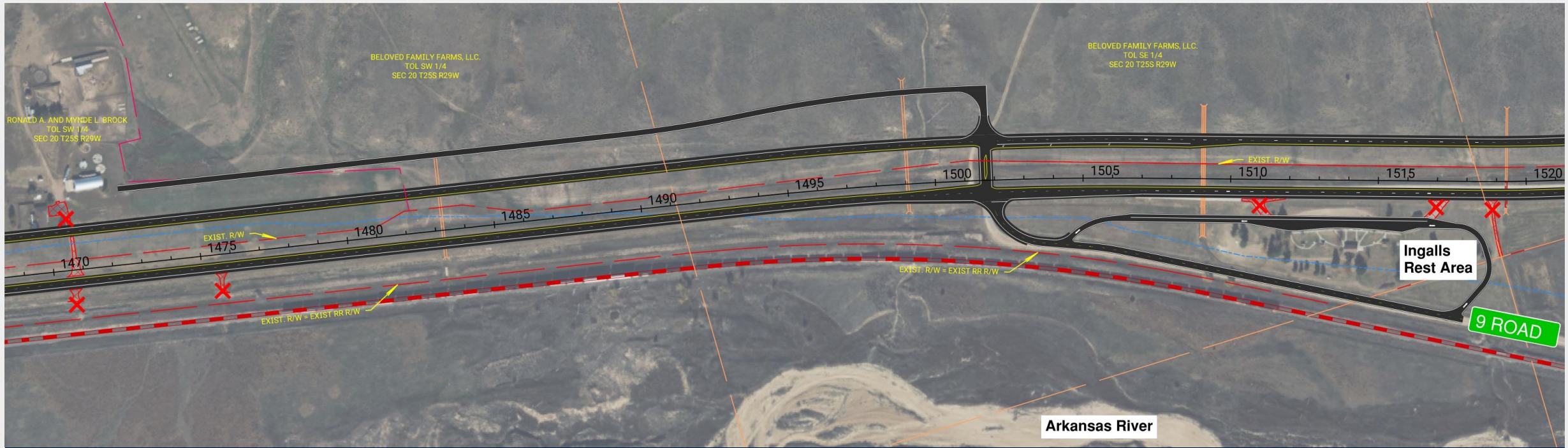


U.S. 50 expressway with variable width median; RCUT intersection at 6 Road E with U-turn opportunities at 6 Road W and 7 Road

50-35 KA-6024-01



# 9 Road Intersection



US-50 Expressway with 150' Median; Intersection at 9 Road with Rest Area Entrance

50-35 KA-6025-01



# 10 Road Intersection



50-35 KA-6025-01

# 11 Road Intersection

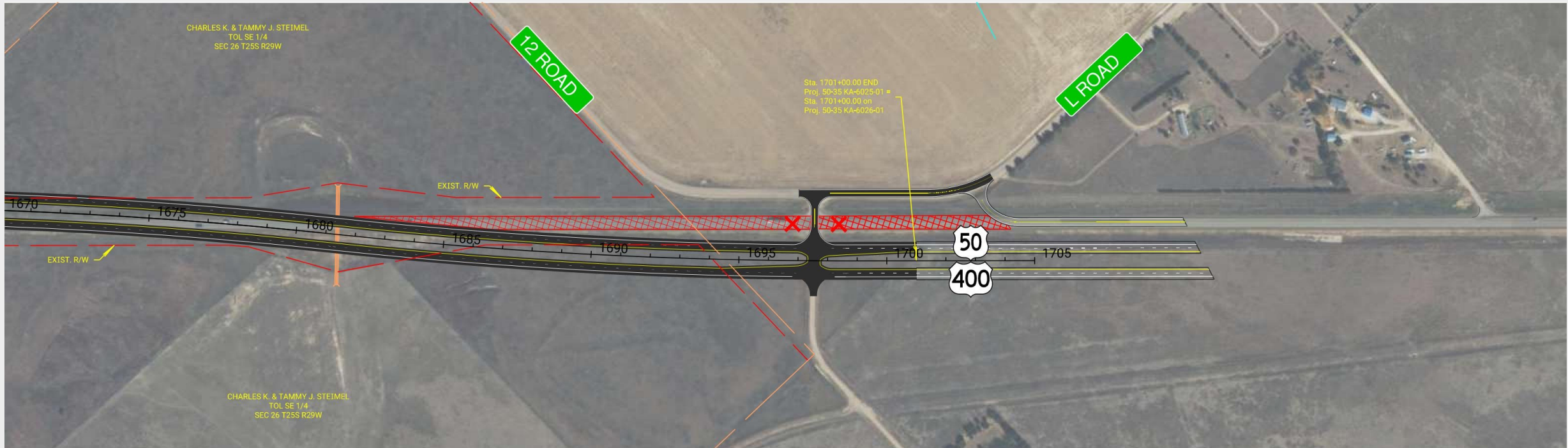


US-50 Expressway with 150' Median; Intersection at 11 Road and Irsik & Doll Feed Lot Entrance

50-35 KA-6025-01



# 12 Road Intersection



US-50 Expressway with 60' Median; Intersection at 12 Road and L Road

50-35 KA-6025-01

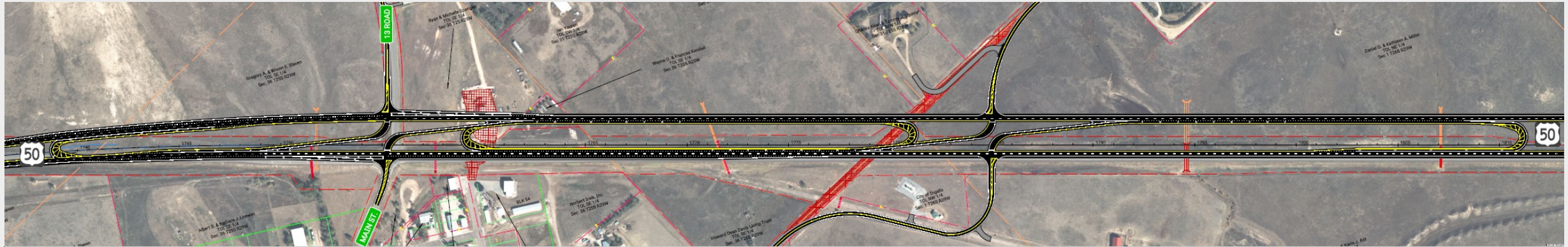
# Cemetery Access



US-50 Expressway with 60' Median; Cemetery Access Road Connection to L Road

50-35 KA-6026-01

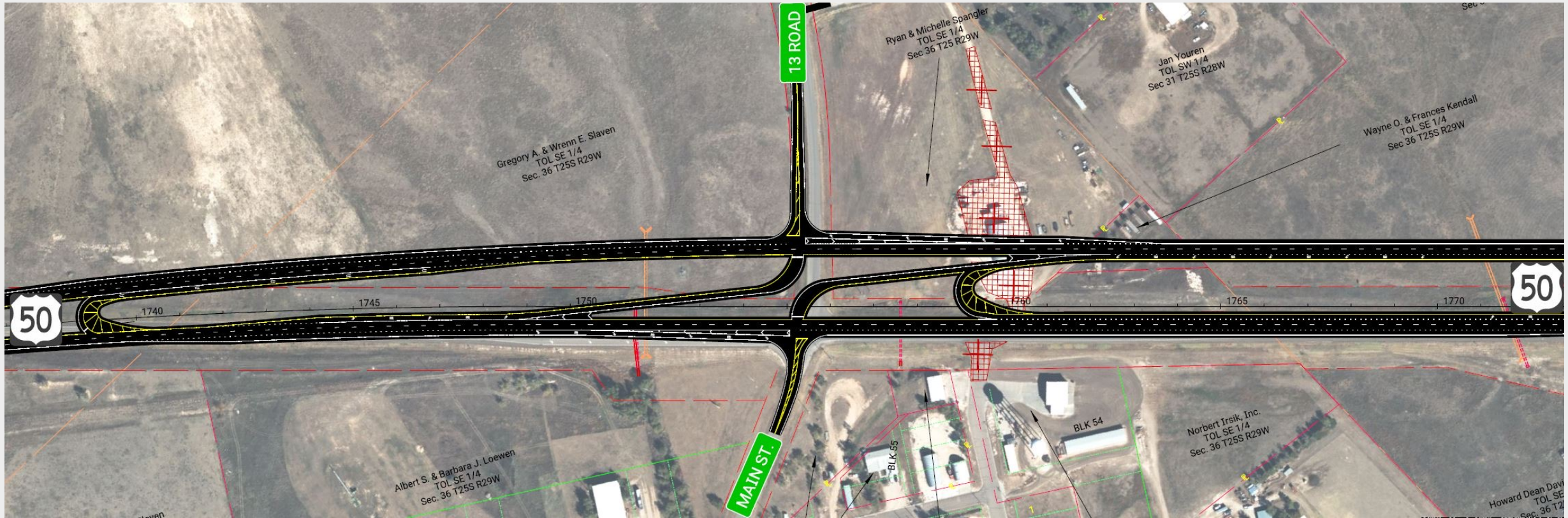
# Ingalls Intersections



US-50 Expressway with 150' Median; RCUT Intersection at Main St./13 Road and 2<sup>nd</sup> Ave./M Road at Ingalls

50-35 KA-6026-01

# Ingalls Main St./13 Road Intersection



US-50 Expressway with 150' Median; RCUT Intersection at Main St./13 Road at Ingalls

50-35 KA-6026-01

# 2<sup>nd</sup> Ave./M Road Intersection



US-50 Expressway with 150' Median; RCUT Intersection at 2<sup>nd</sup> Ave./M Road at Ingalls

50-35 KA-6026-01

# Soule Canal Historic Outlook Access

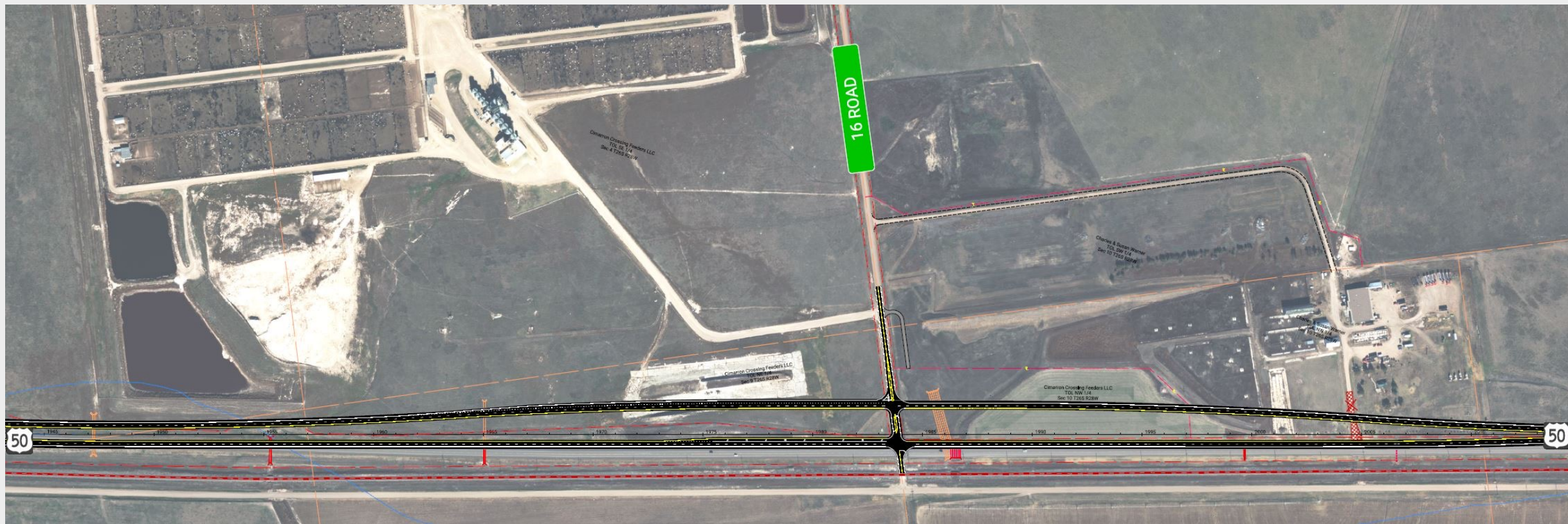


US-50 Expressway with Variable Width Median; Soule Canal Outlook Access

50-35 KA-6026-01



# 16 Road Intersection



US-50 Expressway with 150' Median; Intersection at 16 Road

50-35 KA-6026-01

# Fairgrounds Access



US-50 Expressway Variable Width Median Transitioning to Undivided Section; Fairgrounds Entrance with Turn Lanes at Cimarron

50-35 KA-6026-01

# Next Steps

## PROPOSED SCHEDULE

<b>Preliminary Plans</b>	<b>Right-of-Way Acquisition</b>	<b>Final Plans</b>	<b>Contractor Selected</b>
2022 - 2023	2024 - 2025	2023 - 2026	2026
Develop preliminary plans for the U.S. 50 expansion projects	Acquire right-of-way and easements for the proposed improvements	Develop final plans for the U.S. 50 expansion project	Bid and letting for contractor construction
Community engagement	Appraisal, acquisition, and negotiations		Construction access coordination

**Thank you!**

**Questions/Answers**

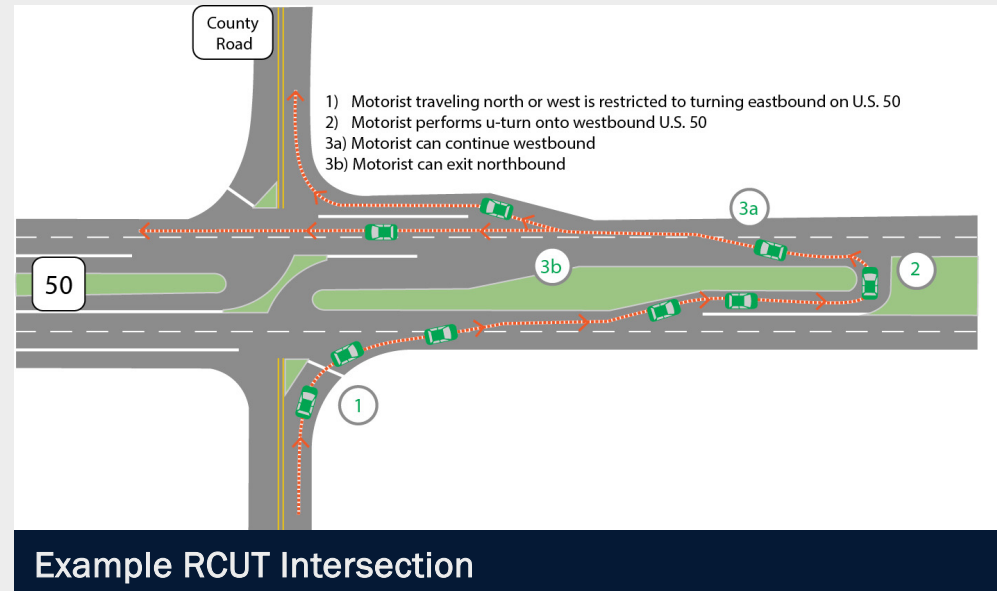
**For More Information**

[ike.ksdot.gov/US50-Expansion](http://ike.ksdot.gov/US50-Expansion)



# U.S. 50/400 Proposed RCUT Intersections

- 6 Rd E at Charleston
- 13 Rd/Main St. at Ingalls
- M Rd/2<sup>nd</sup> Ave. at Ingalls



# RCUT Benefits



Shown to reduce **fatal crashes by 70%, injury crashes by 40%, and total crashes by 50%.**



Designed to help prevent severe broadside or “T-bone” crashes.



Simplifies decision making by allowing drivers to focus only on on-coming traffic from one direction.



Eliminates or reduces the highest risk movements – directly crossing multiple lanes of traffic and left turns from the side road.



Eliminates the potential for head-on crashes from the side street.

# RCUT Benefits



Reduces the number of conflict points where vehicles cross paths.



Divides time exposed to conflicts into two smaller periods which decreases the risk of collision.



Increases efficiency by moving more cars through the same space more quickly.



Decreases the amount of time cars wait at an intersection.



Last a long time, so they don't need to be rebuilt when communities grow and urbanize.