



We are pleased to see you here this evening to learn more about the U.S. Highway 85 Corridor Study.

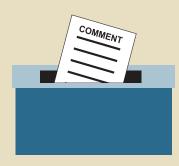
HOW TO GET THE MOST OUT OF THIS OPEN HOUSE MEETING:



Spend as much time with us as you'd like between 5:30-7:30 p.m.
Presentation will be at 5:45 p.m.



Review each display and talk with the project team to learn more and share your ideas.



Complete and submit a comment form.



ROUNDABOUTS

A roundabout is an unsignalized intersection that facilitates safe and efficient vehicle and pedestrian movements. A roundabout has three key design features:

- 1. Counterclockwise traffic flow around a raised center island
- 2. Splitter islands on the approaches to provide for proper vehicle speed reduction and pedestrian refuge
- 3. Yield control on the entry approaches

Roundabouts offer improved safety characteristics over traditional intersections in the following ways:

- Reduced number of vehicle-vehicle conflict points (8 for a roundabout vs 32 for traditional intersection) and vehicle-pedestrian conflicts points (8 for a roundabout vs 24 for traditional intersection)
- Reduced risk of severe crashes due to slower and consistent vehicle speeds
- One-way traffic flow

How to Safely Travel Through a Roundabout:

- Slow down to the advisory speed and obey all traffic signs.
- 2 Yield to pedestrians and bicyclists in the crosswalk as you enter the roundabout.
- Yield to traffic already circulating in the roundabout.
- 4 Enter the roundabout when there is a safe gap in traffic.
- Field to pedestrians and bicyclists in the crosswalk as you exit the roundabout.





REDUCED CONFLICT INTERSECTIONS (RCI)

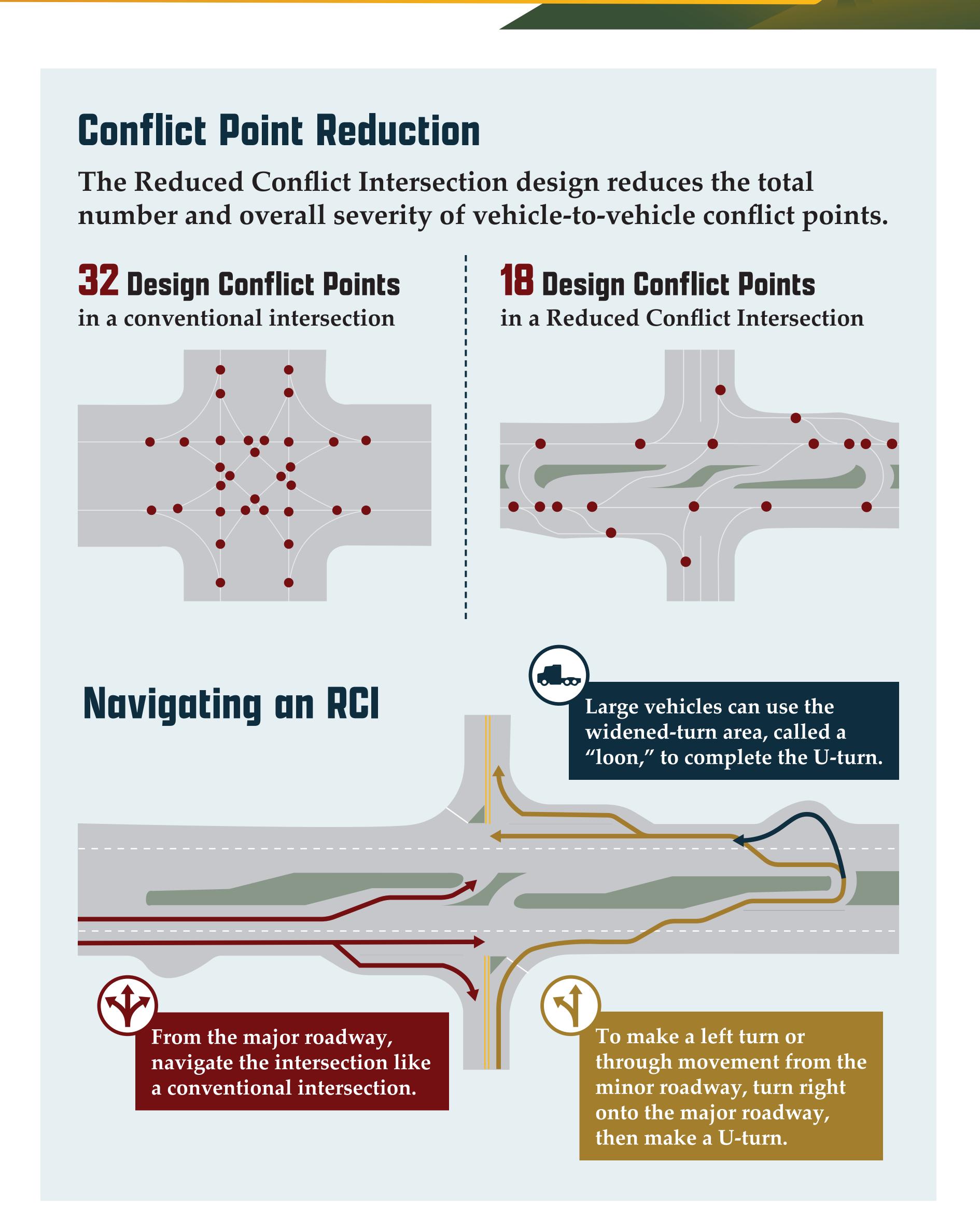
A Reduced Conflict Intersection (RCI) is an innovative intersection design that improves safety and operations by changing how minor roadway traffic crosses or turns left at a major roadway. At an RCI, drivers stopped on the minor roadway waiting to cross or turn left onto the major roadway no longer must navigate a complex, high-speed intersection.

RCIs are typically used:

- On median-divided highways
- At intersections with heavy through and/or left-turn traffic volumes on the major roadway
- At intersections with low through and left-turn traffic volumes on the minor roadway

RCIs provide the following benefits to drivers:

- Significantly reduce the potential for severe crashes through a reduction in conflict points
- Increased efficiency each direction of the major roadway can operate independently, creating two one-way roadways and increasing the overall intersection capacity





CONTINUOUS GREEN T INTERSECTIONS (CGT)

What is a CGT?

A CGT is an intersection design where one major street direction of travel (the top side of the "T") can pass through the intersection without stopping and the opposite major street direction of travel is typically controlled by a traffic signal.

In a CGT, left-turn vehicles from the side street use a channelized receiving lane on the major street to merge onto the major street.

The intersection is typically signalized, but can also be designed without a traffic signal.

When should a CGT be considered?

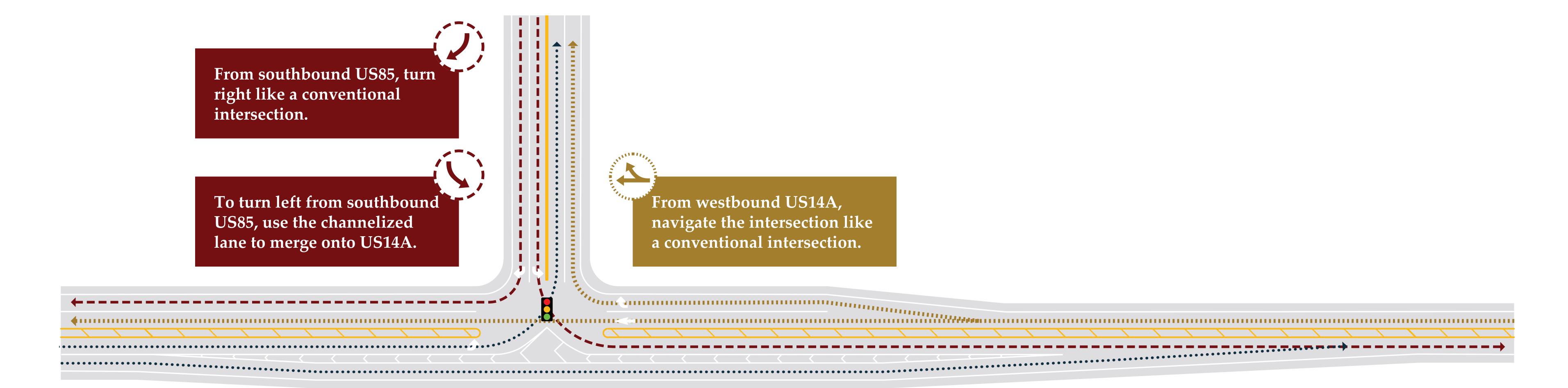
- At intersections with three legs
- At intersections with heavy through traffic volumes on the major street
- At intersections with low to moderate leftturn traffic volumes on the side street
- At intersections where there are no driveways along the major street opposite the side street
- At intersections with a limited number of pedestrian crossings across the major street or with an alternative pedestrian crossing location nearby

What are the benefits of a CGT?

Improved safety: channelization of left-turn vehicles from US85 reduces the potential for angle crashes.

Increased efficiency: because one direction of travel on the major street is free-flow (eastbound U.S. Highway 14A (US14A)), more green time can be provided to the other movements, reducing delay at the intersection.

Free-flow in one direction: one direction of travel (eastbound) on US14A never stops, reducing travel times.



To continue straight on eastbound US14A, pass through the intersection.

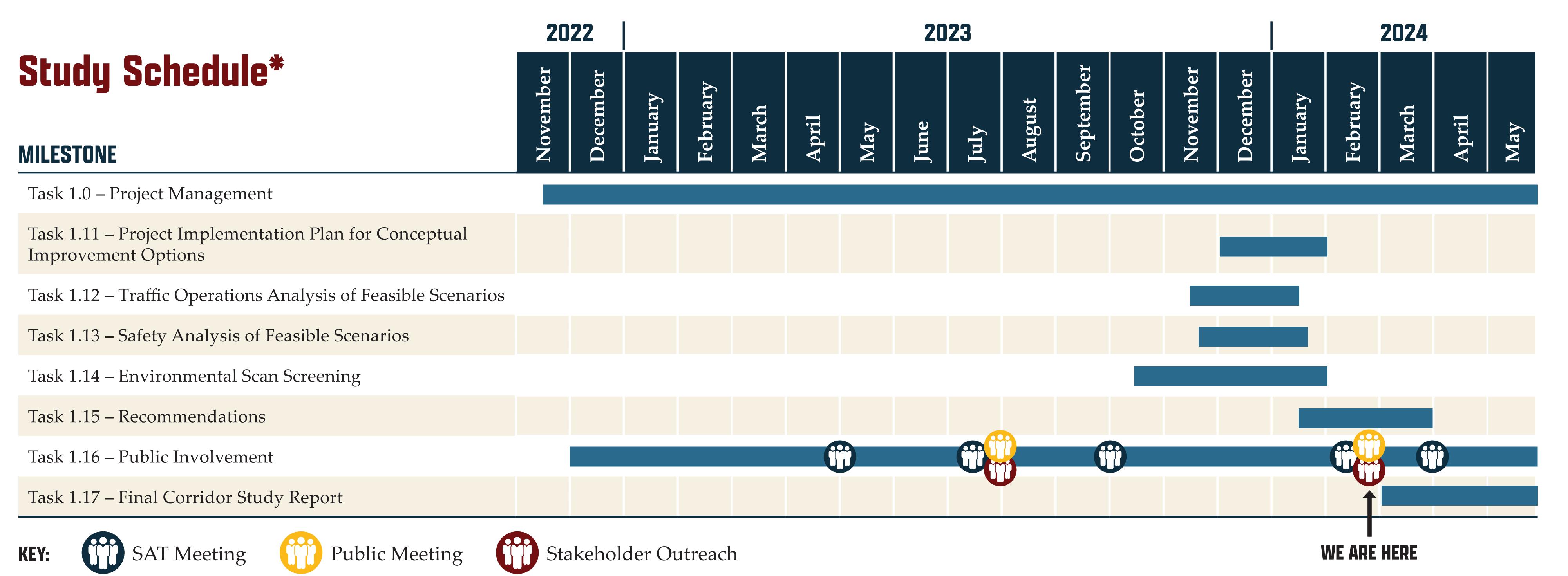


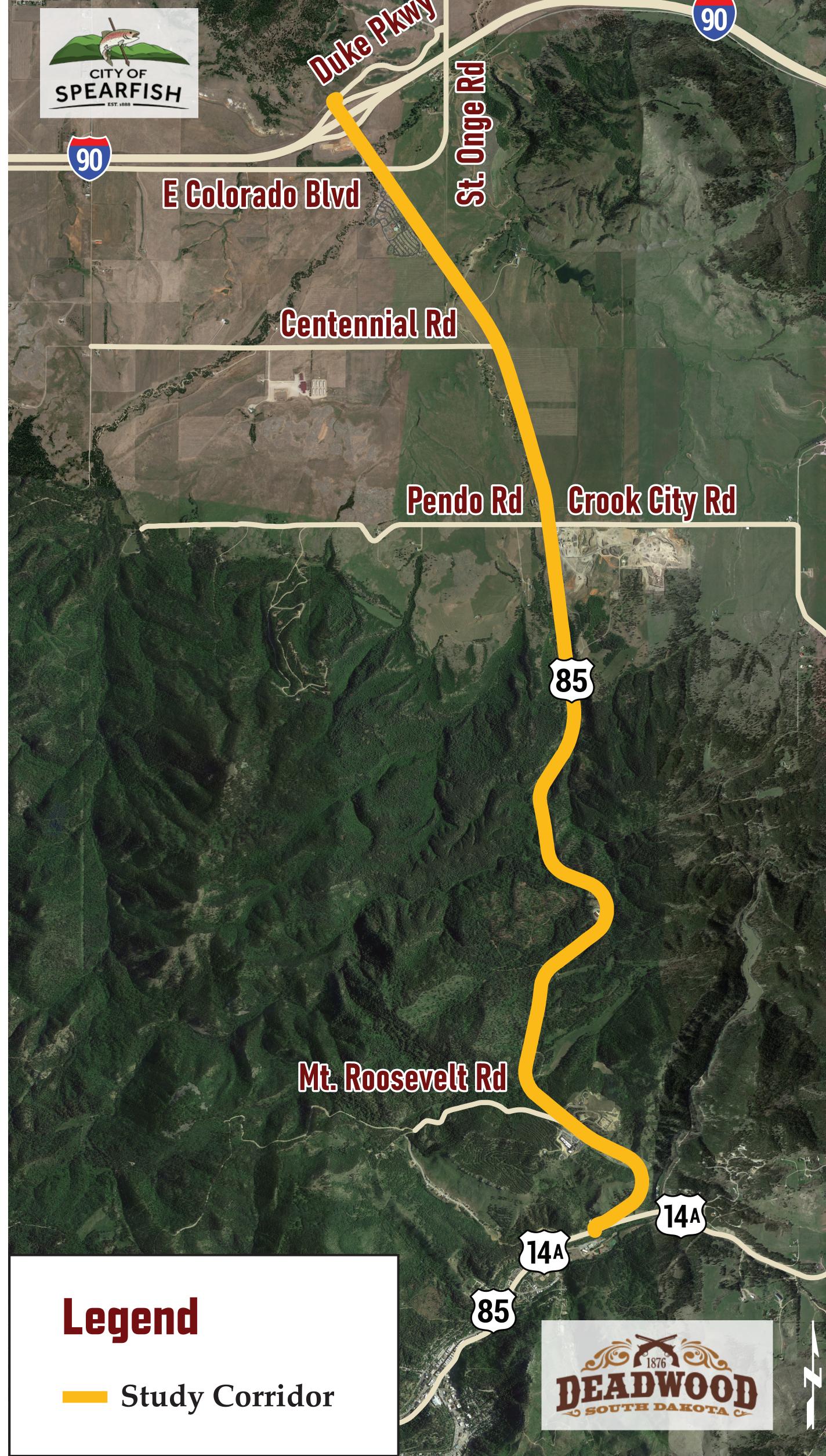
PROJECT OVERVIEW

The purpose of the U.S. Highway 85 (US85) Corridor Study is to evaluate existing and anticipated future conditions of the corridor and identify potential improvements related to roadway conditions, traffic operations, and safety.

Note: Potential improvements displayed this evening are conceptual and would require further evaluation and design before implementation.

Work on the corridor study began in winter 2022/2023. A final report, including the improvement recommendations, is anticipated to be completed in spring 2024.





■ The study corridor begins at Duke Parkway, just north of Interstate 90 (I-90) at Exit 17 in Spearfish, and continues south to the junction with U.S. Highway 14 Alternate (US14A) in Deadwood.

Community
input is a critical
consideration
in the study's
evaluation of
improvements
along the
corridor. You
are invited to
provide input on
design concept
alternatives.



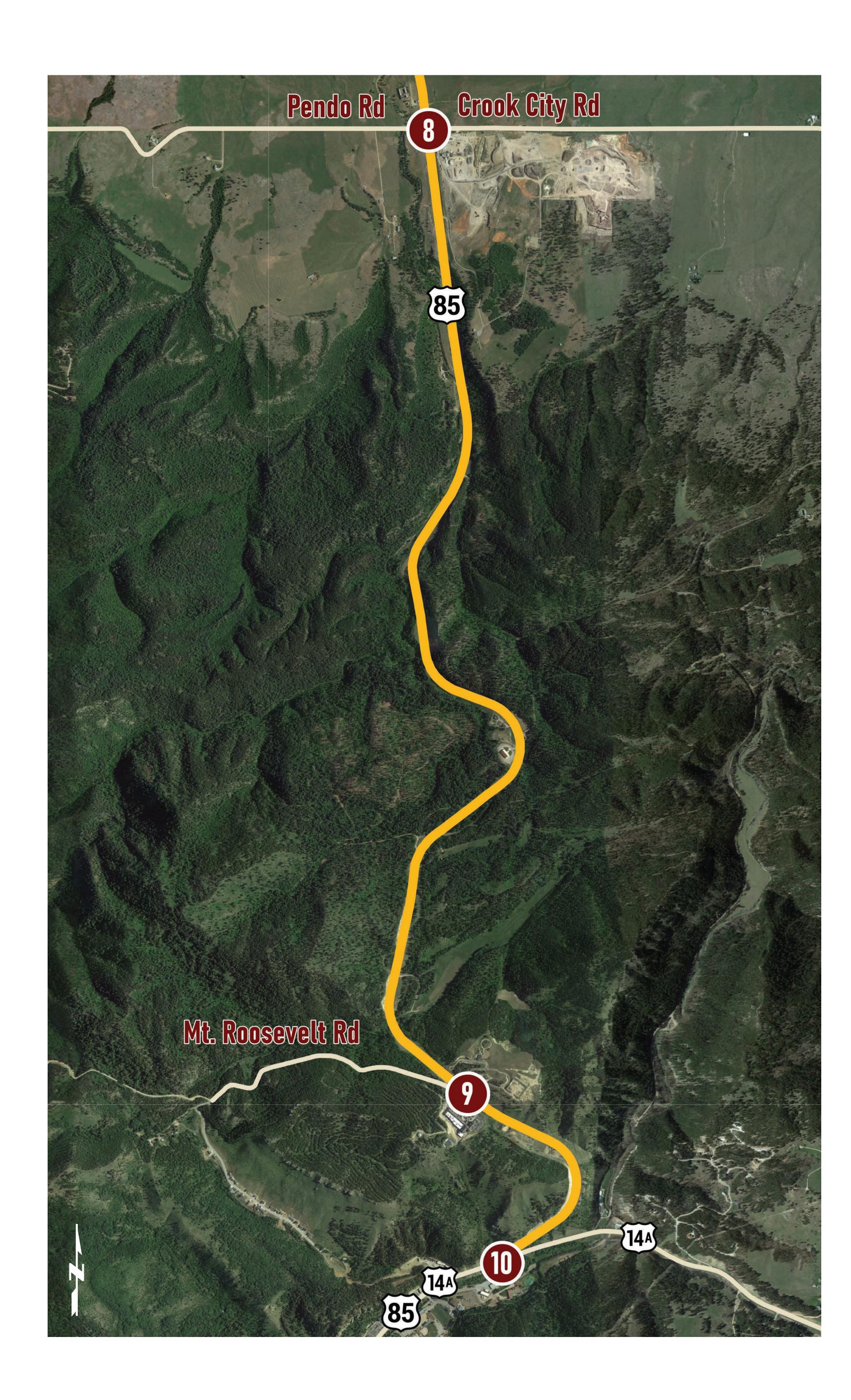
^{*} Abbreviated project schedule of remaining tasks to project completion.

CORRIDOR SEGMENTS & IDENTIFIED NEEDS



- 1 Duke Parkway/park & ride driveway
 - Access to future development
 - Retain park & ride lot
- **Exit 17 Westbound ramp terminal** *Intersection not included in this study*
- Exit 17 Eastbound ramp terminal

 Intersection not included in this study
- Colorado Loop (Cenex driveway)
- E. Colorado Boulevard/St. Onge Road
 - Existing and future traffic operations deficiencies
 - Deficient intersection geometry
 - Recurring vehicle crashes
- Elkhorn Ridge RV Resort driveway
 - Safety enhancements to address future traffic volumes
- **C**entennial Road
 - Deficient intersection geometry
 - Traffic operations and safety improvements to accommodate future traffic volume growth, including potential expansion of City of Spearfish transportation network



Crook City Road/Pendo Road

• Traffic operations and safety improvements to accommodate future traffic volume growth

Mt. Roosevelt Road

• Traffic operations and safety improvements to accommodate future traffic volume growth

US14A

 Traffic operations improvements to accommodate future traffic volume growth



COLORADO BOULEVARD INTERSECTION - PROPOSED ALTERNATIVES



The Colorado Boulevard/St. Onge Road intersection is being evaluated

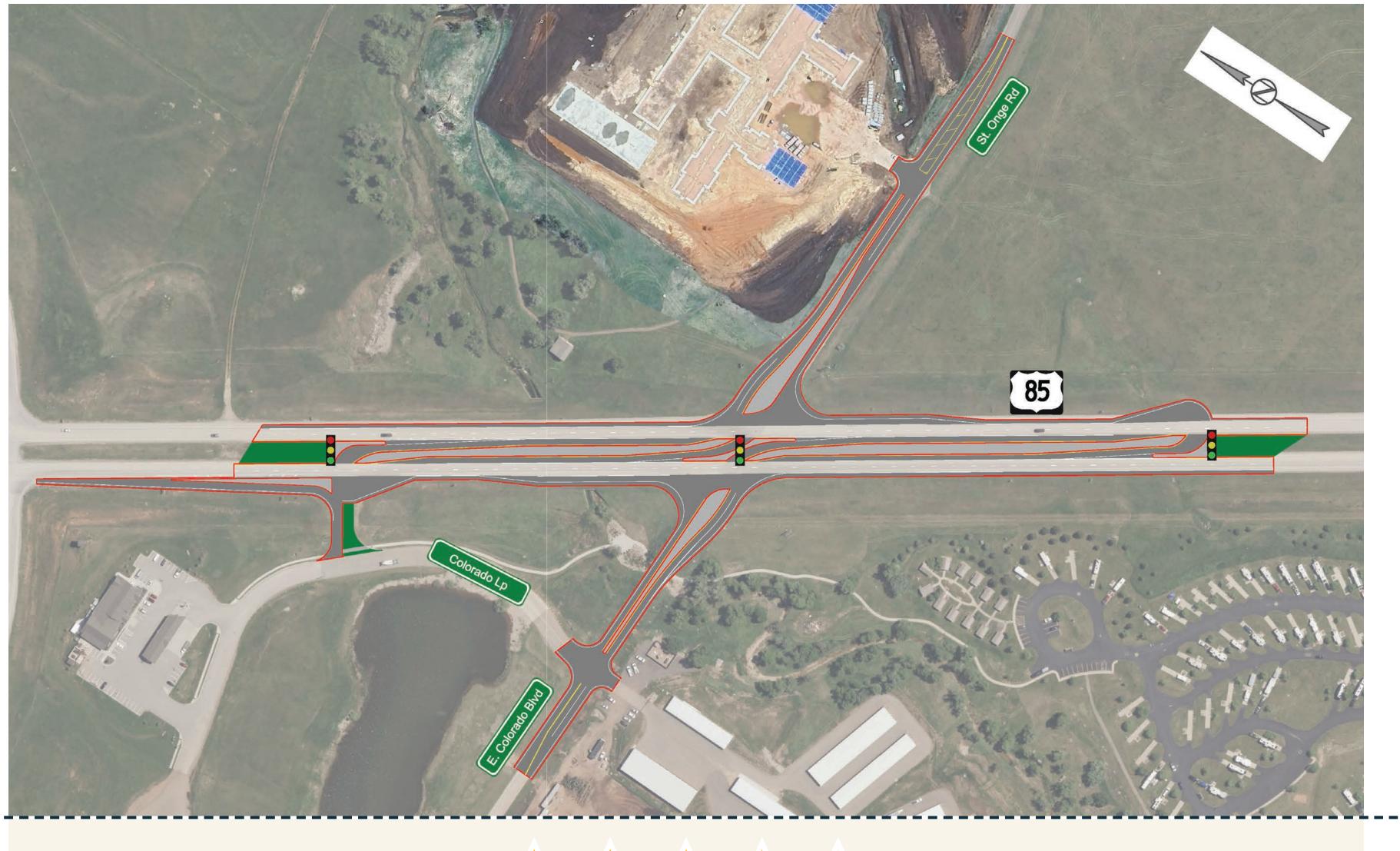
Traffic Signal

The all-way stop currently in place would be replaced by a traffic signal.



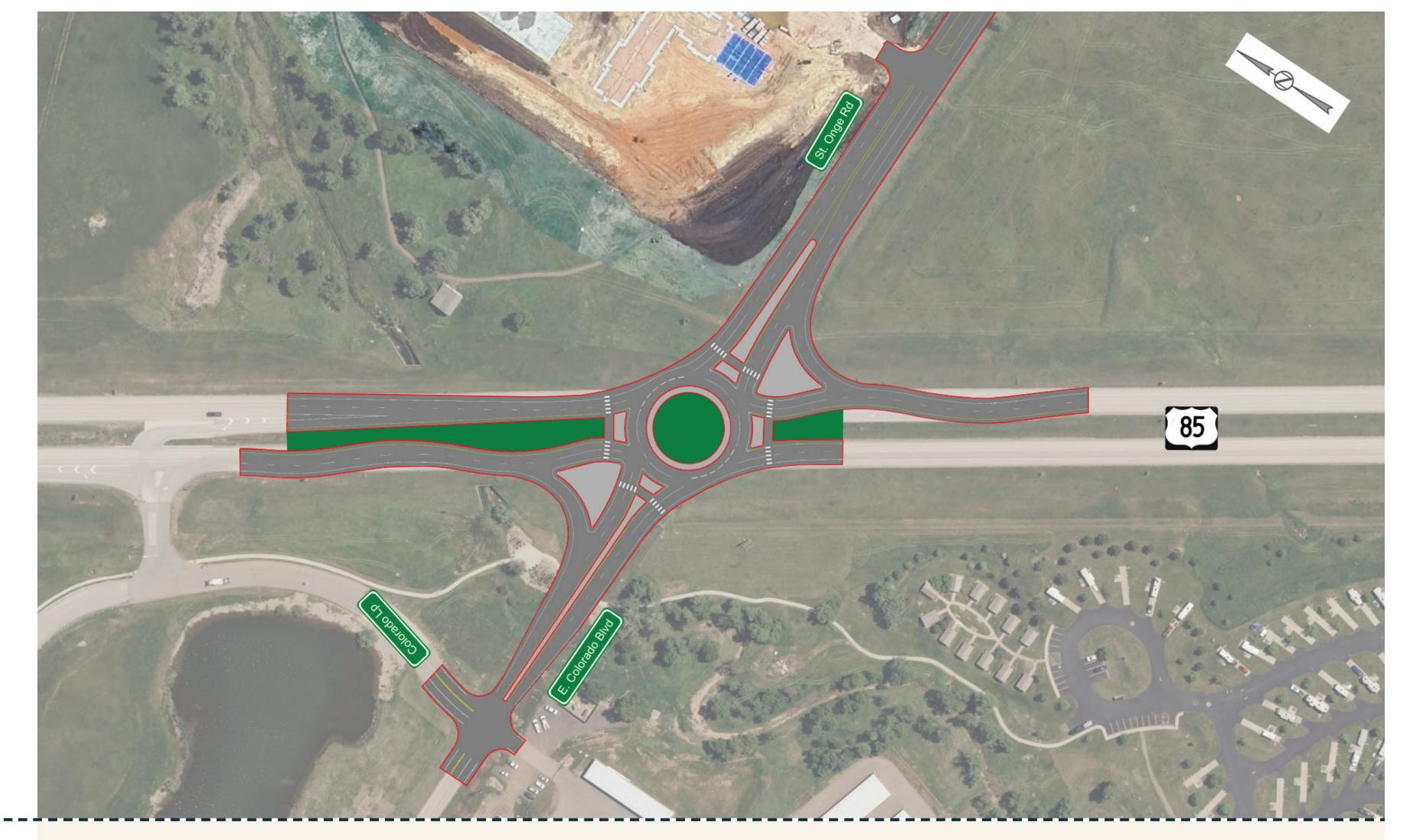
Reduced Conflict Intersection (RCI)

Left-turn movements would be allowed from US85 to E Colorado Boulevard and St Onge Road; however, movements from the east and west legs of the intersection would be restricted to right-turn movements only.



Roundabout

Reconstruct the intersection as multi-lane (2x2) roundabout.



Operations	
Motorist Delay/Travel Time	

2027	
2040	







Conflicts/Severe & Fatal Crashes





Pedestrian Safety







Project Implementation Cost (2027) Design, Construction, ROW, Utilities

\$13.4-14.3 million

\$7.8 million

\$7.5 million

Other Considerations

- Improved skew angle of intersection; results in additional property impacts
- Intersection can be operated initally with a single left-turn lane on eastbound approach
- Increased travel times due to out-of-direction travel
- Intersection can be operated initally with single right-turn lanes and without signalization at U-turn locations

• Intersection can be operated initally as a 2x1 roundabout with single lanes on the eastbound and westbound approaches

Ratings on a scale of 1-5 stars, with 5 being the best.



CROOK CITY ROAD/PENDO ROAD INTERSECTION - PROPOSED ALTERNATIVES

Roundabout Signalization City Road and Pendo Road; however, movements from the North and Southbound Right-Turn Lanes east and west legs of the intersection would be restricted to Replaces stop-controlled conditions with a traffic signal and Reconstruct the intersection as multi-lane (2x1)Add north and southbound offset right-turn lanes. includes the right-turn lanes. right-turn movements only. roundabout. The Crook City Road/Pendo Road intersection is being evaluated due to high truck traffic and future traffic volume growth. 2027 2027 2027 2027 Operations 2040 2040 2040 **Motorist Delay/Travel Time** Vehicle Safety Conflicts/Severe & Fatal Crashes \$1.7 million \$7.6 million \$5.6 million \$2.9 million Design, Construction, ROW, Utilities Increased travel times due to out-of-direction Other Considerations

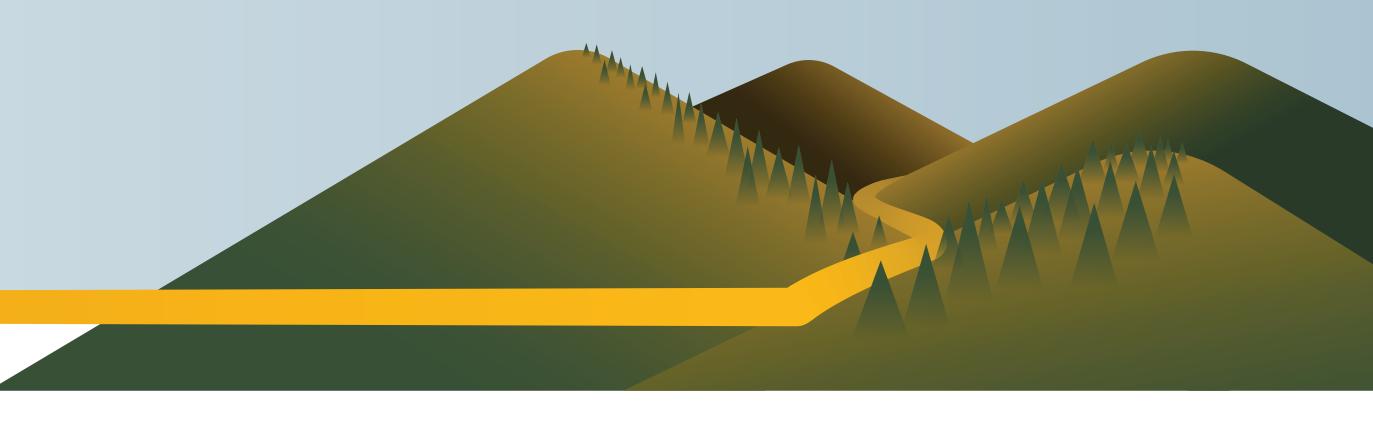
Reduced Conflict Intersection (RCI)

Left-turn movements would be allowed from US85 to Crook

Ratings on a scale of 1-5 stars, with 5 being the best.



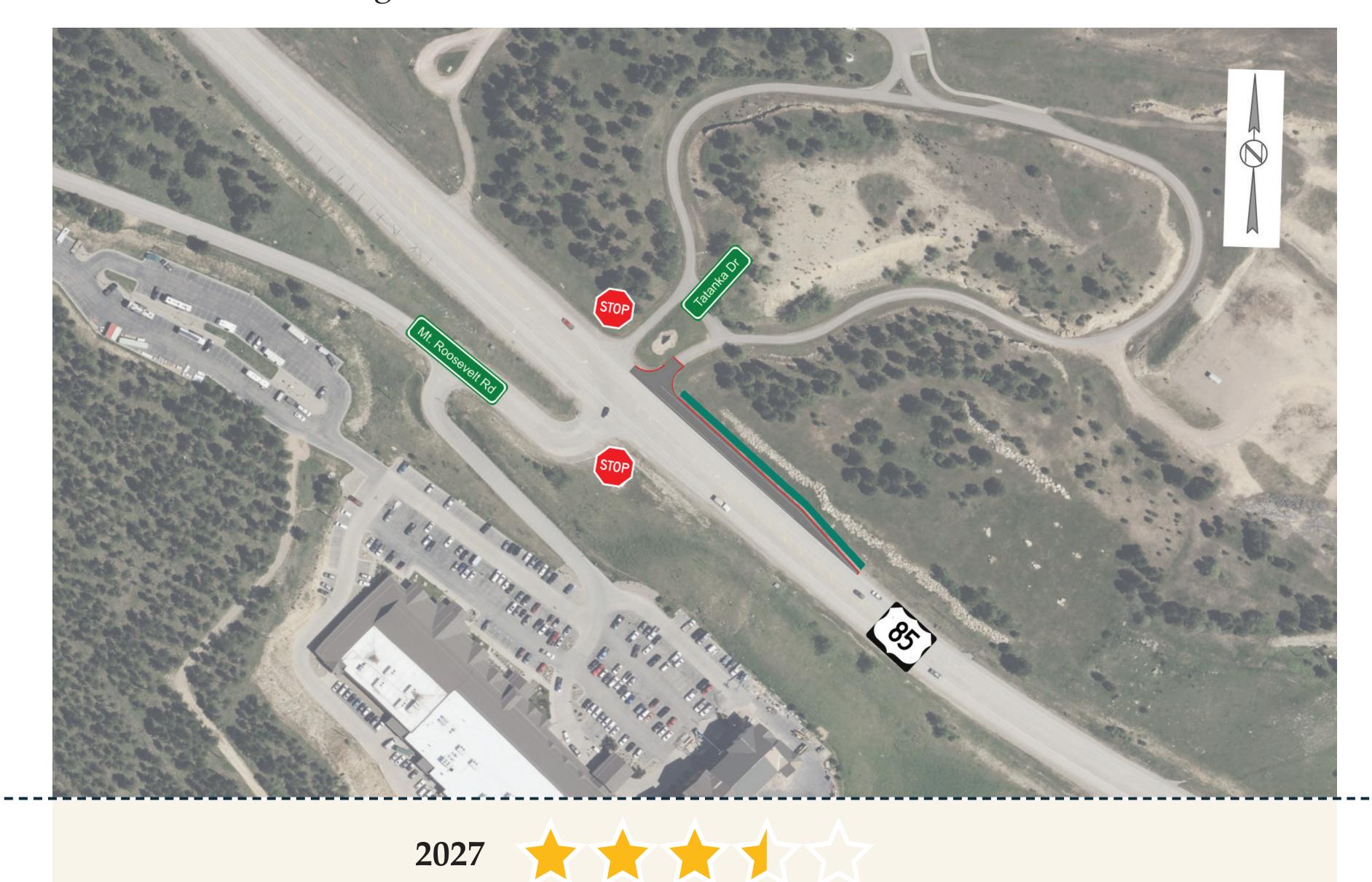
MT. ROOSEVELT ROAD INTERSECTION - PROPOSED ALTERNATIVES



The Mt. Roosevelt Road intersection is being evaluated to future traffic volume

Northbound Right-Turn Lane

Add a northbound right-turn lane.



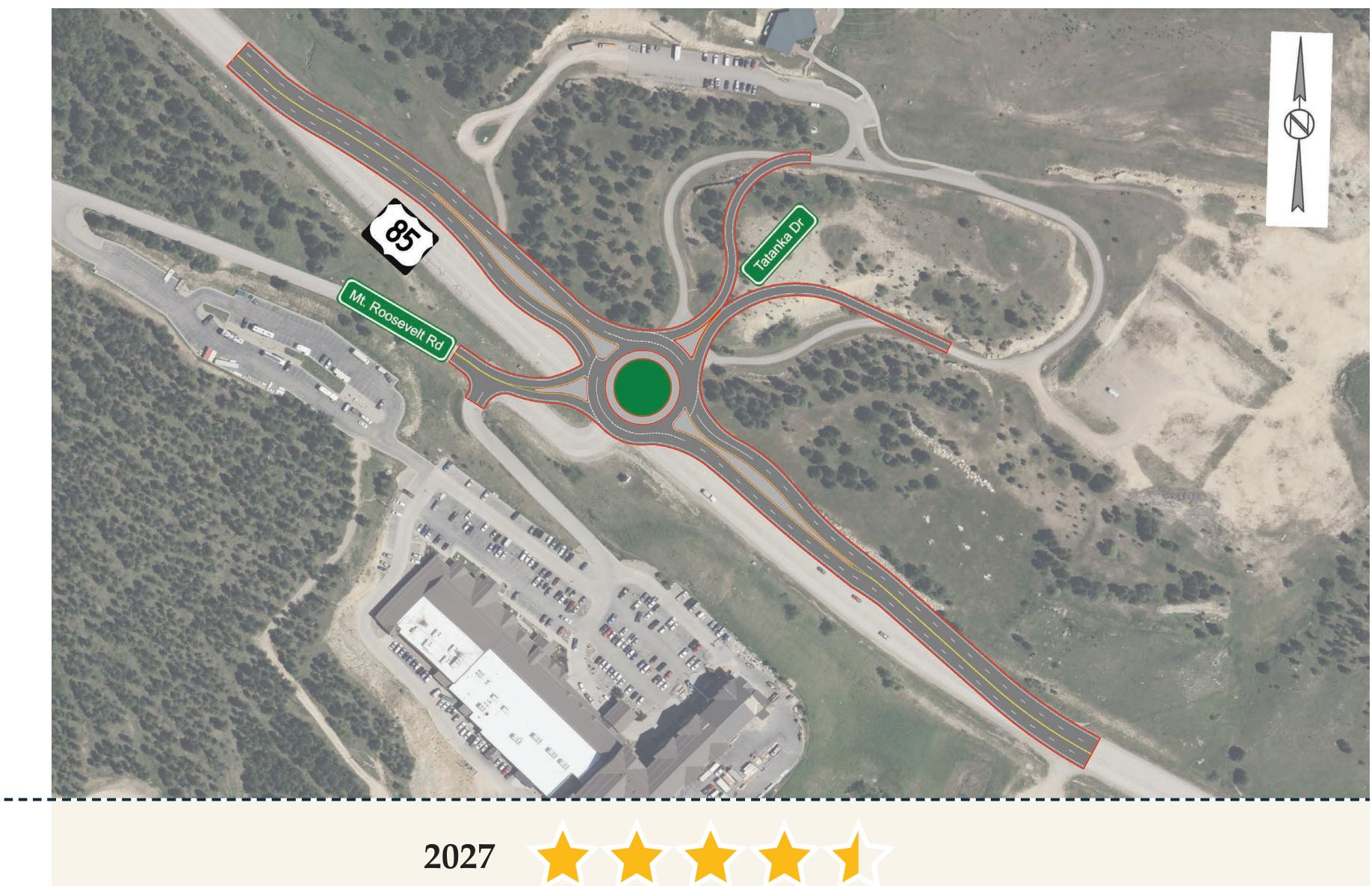
Signalization (with northbound right-turn lane)

Replaces stop-controlled conditions with a traffic signal and includes the northbound right-turn lane.



Roundabout

Reconstruct the intersection as multi-lane (2x1) roundabout.



Operations	
Motorist Delay/Travel Time	

Vehicle Safety

Conflicts/Severe & Fatal Crashes

Pedestrian Safety

Design, Construction, ROW, Utilities

2027 2040

2040



\$5.4 million

- Steep grades (~9%) on west leg
 Challenging southbound to westbound right-turn movement

Ratings on a scale of 1-5 stars, with 5 being the best.

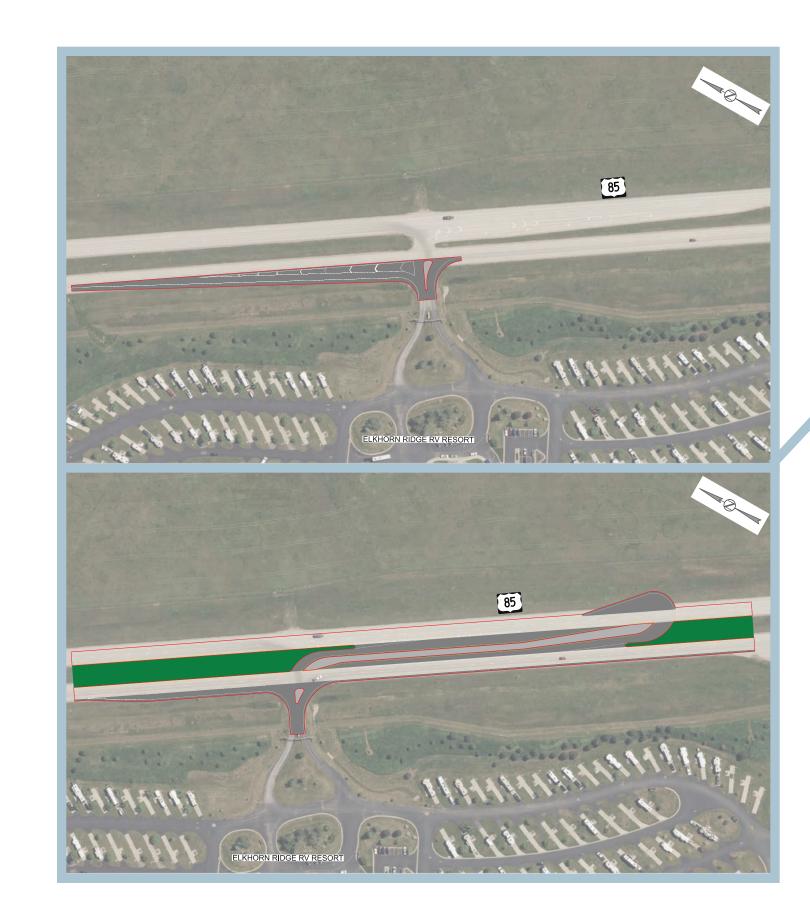


ADDITIONAL CORRIDOR ALTERNATIVES



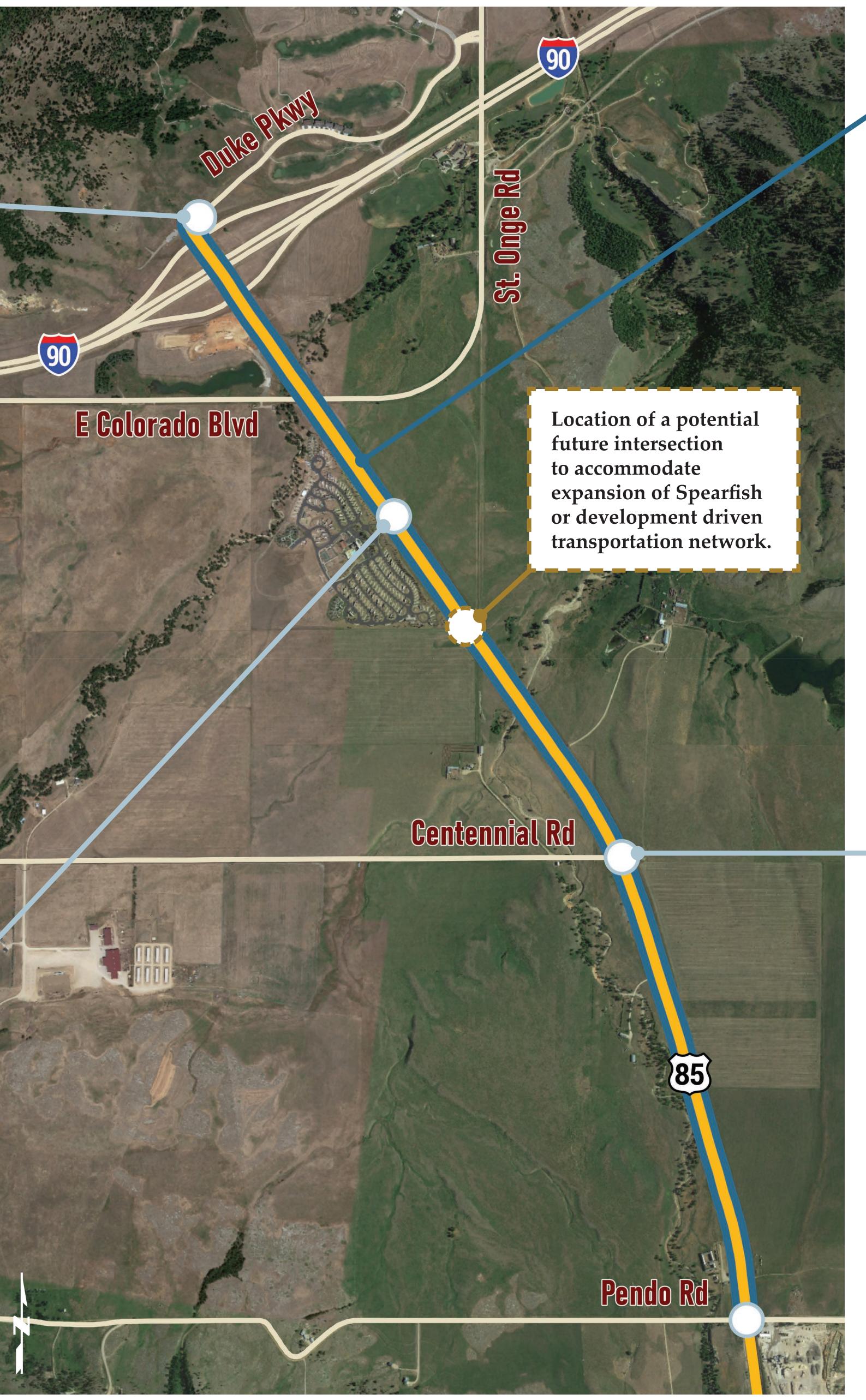
Duke Parkway

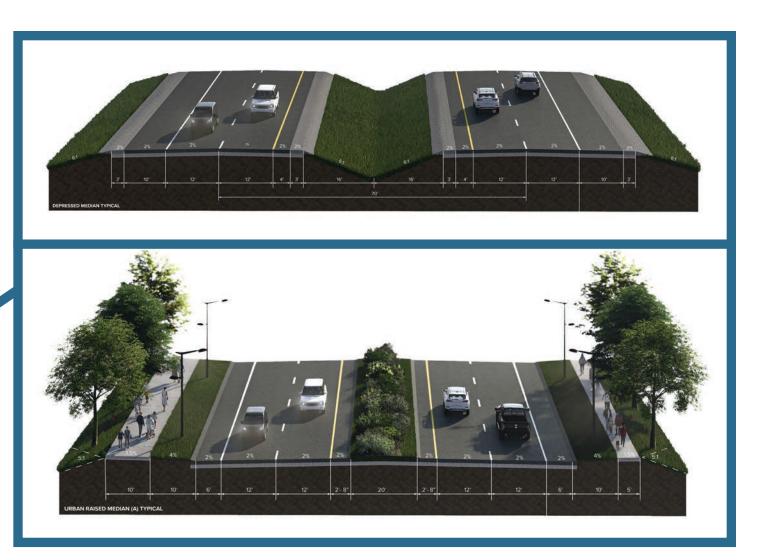
- **Tintersection** (signal to be added if/when traffic volumes satisfy warrant criteria)
- Roundabout



Elkhorn Ridge RV Resort

- Southbound right-turn lane
- RCI





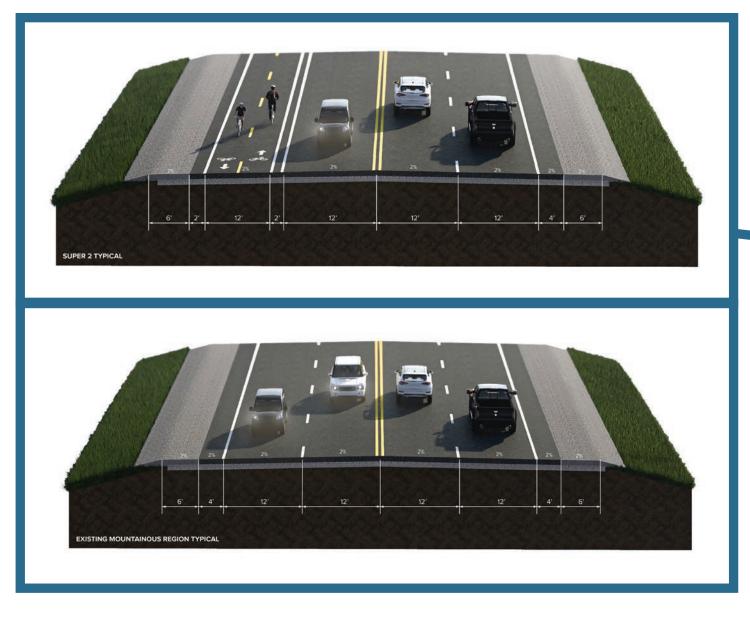
Duke Parkway to Crook City Road/Pendo Road

- Extend existing typical section to Crook City Rd/Pendo Rd
- Urbanized, 4-lane divided with turn lanes
- No-build



Centennial Road

- Southbound right-turn lane, Northbound left-turn lane, and skew correction
- RCI

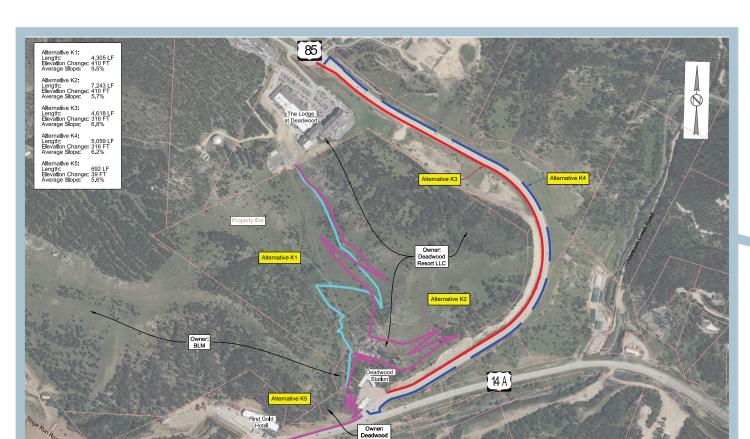


Crook City Road/Pendo Road to US14A

- Super 2
- No-build

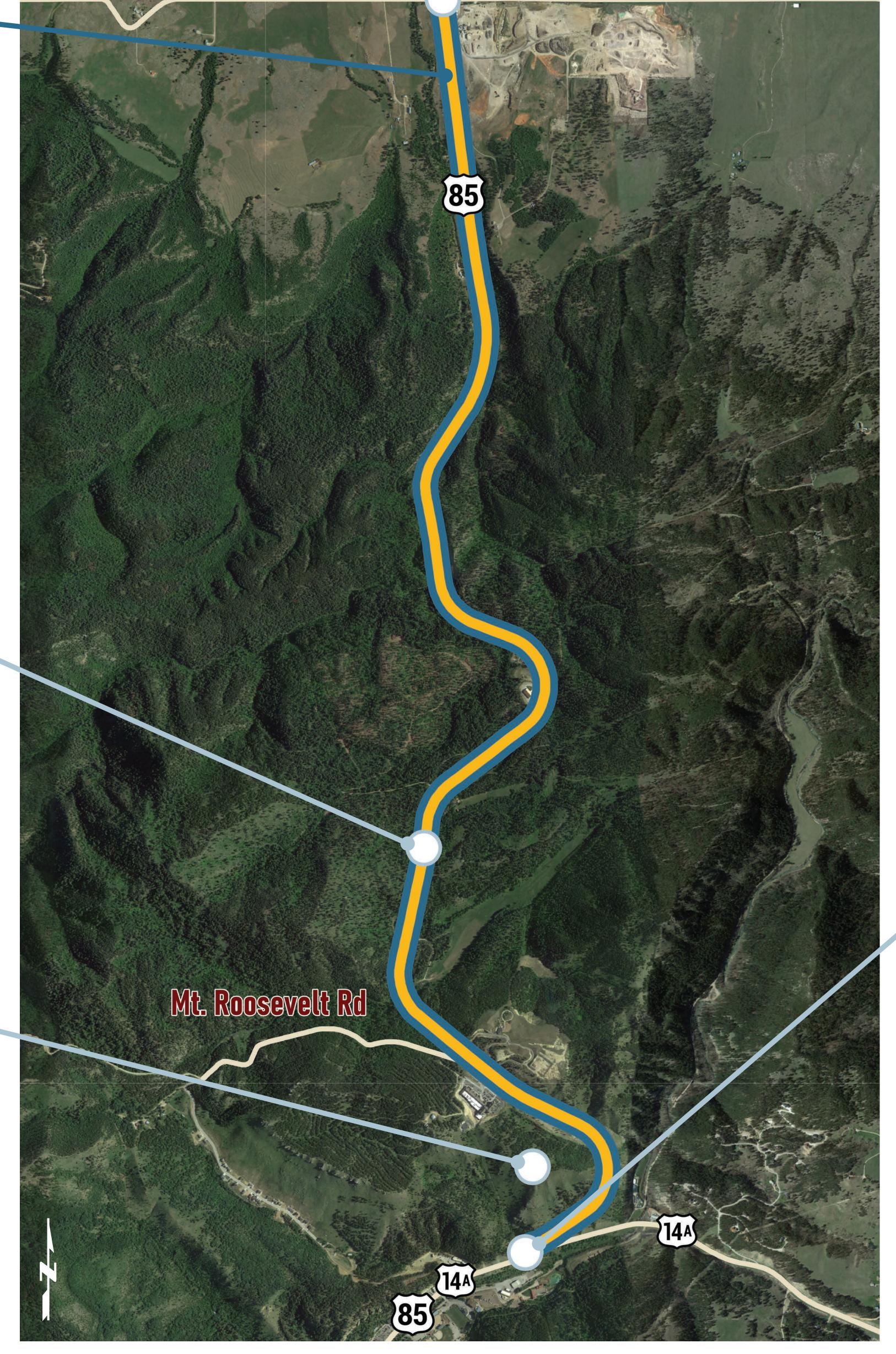
The Ridge development driveway intersections (3 locations)

Northbound right-turn lanes



Pedestrian Connection to The Lodge at Deadwood

5 alternatives





US14A Intersection

- Continuous green T intersection
- No-build

