

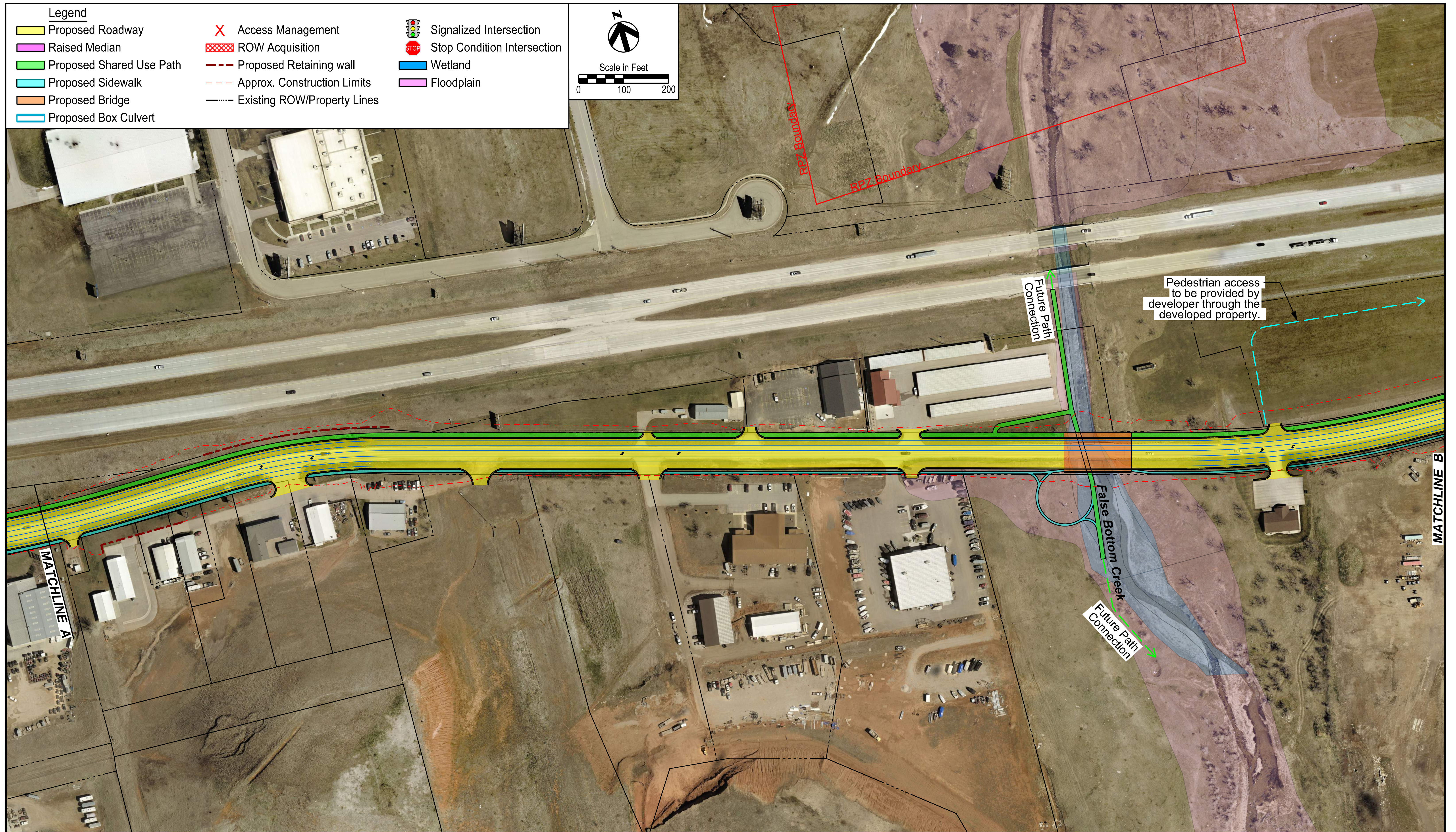
## Roadway Options - 27th Street to East of Heritage Drive

Colorado Blvd Corridor Study (27th Street to Colorado Loop)

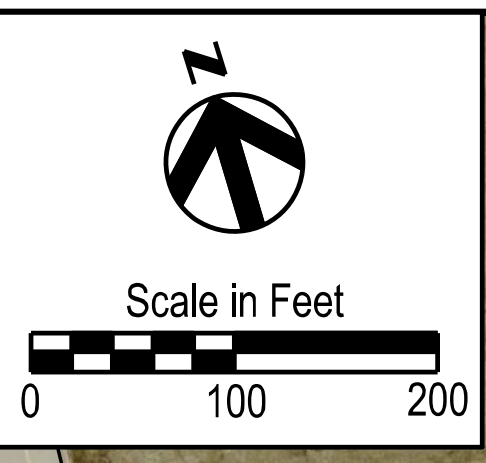
Concept #  
T1, H1,  
H2, Road  
Segment 1

Revision:

Spearfish, SD



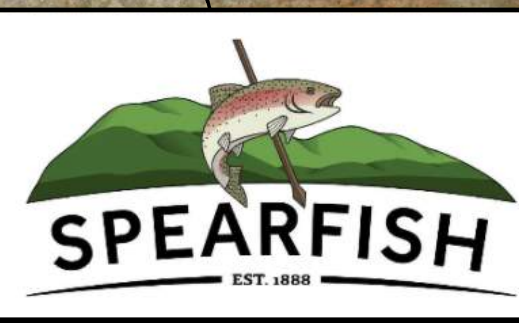
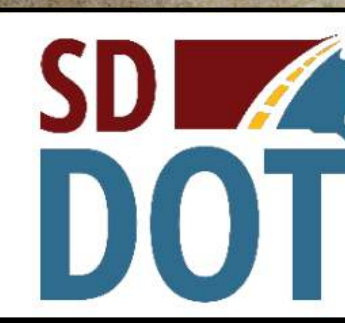
- Legend**
- Proposed Roadway
  - Raised Median
  - Proposed Shared Use Path
  - Proposed Sidewalk
  - Proposed Bridge
  - Proposed Box Culvert
  - X Access Management
  - ROW Acquisition
  - Proposed Retaining wall
  - Approx. Construction Limits
  - Existing ROW/Property Lines
  - Signalized Intersection
  - Stop Condition Intersection
  - Wetland
  - Floodplain



Pedestrian access to be provided by developer through the developed property.

MATCHLINE A

MATCHLINE B



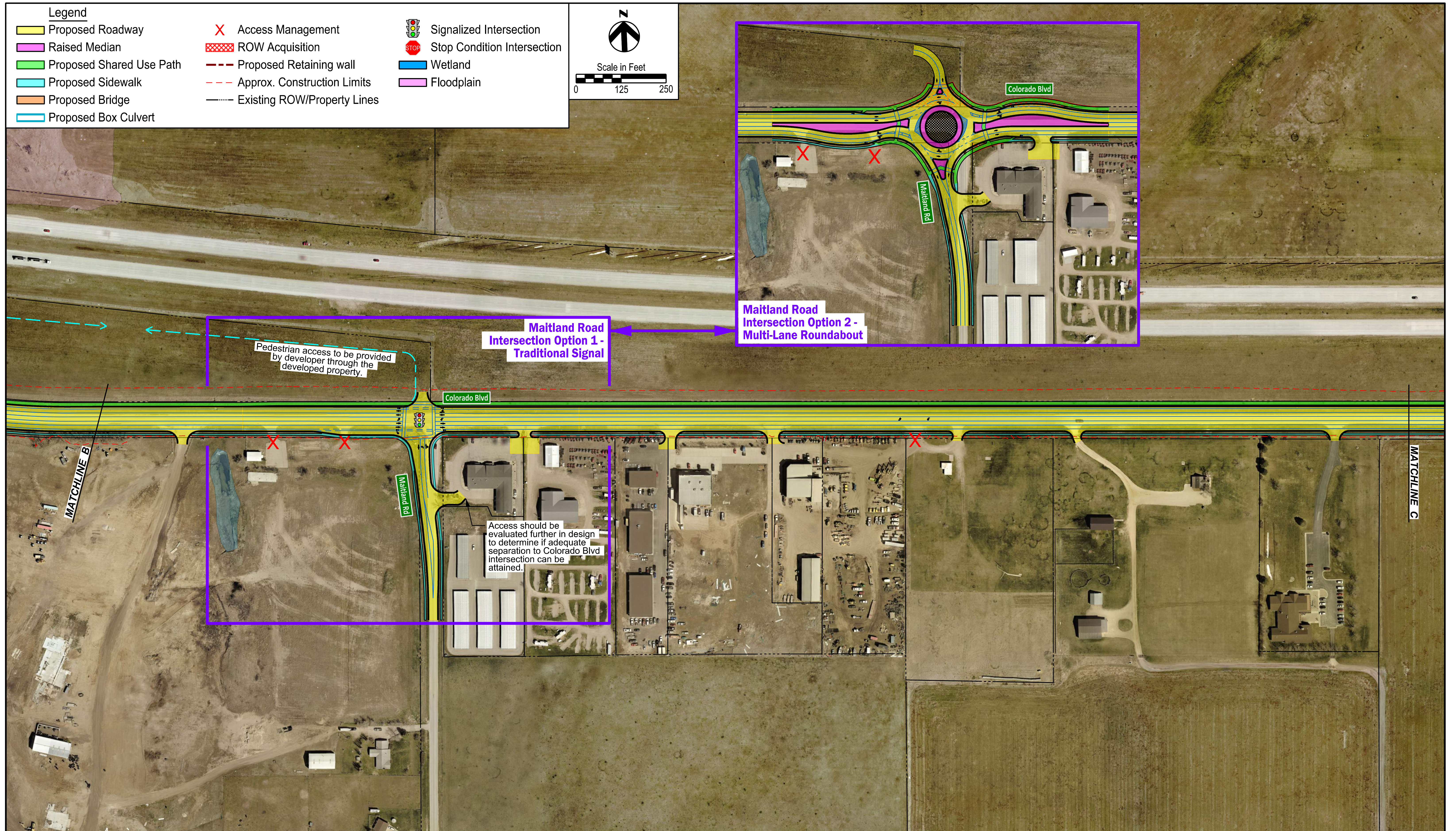
## Roadway Options - East of Heritage Drive to False Bottom Creek

Colorado Blvd Corridor Study (27th Street to Colorado Loop)

Concept #  
Road  
Segment 1

Revision:

Spearfish, SD



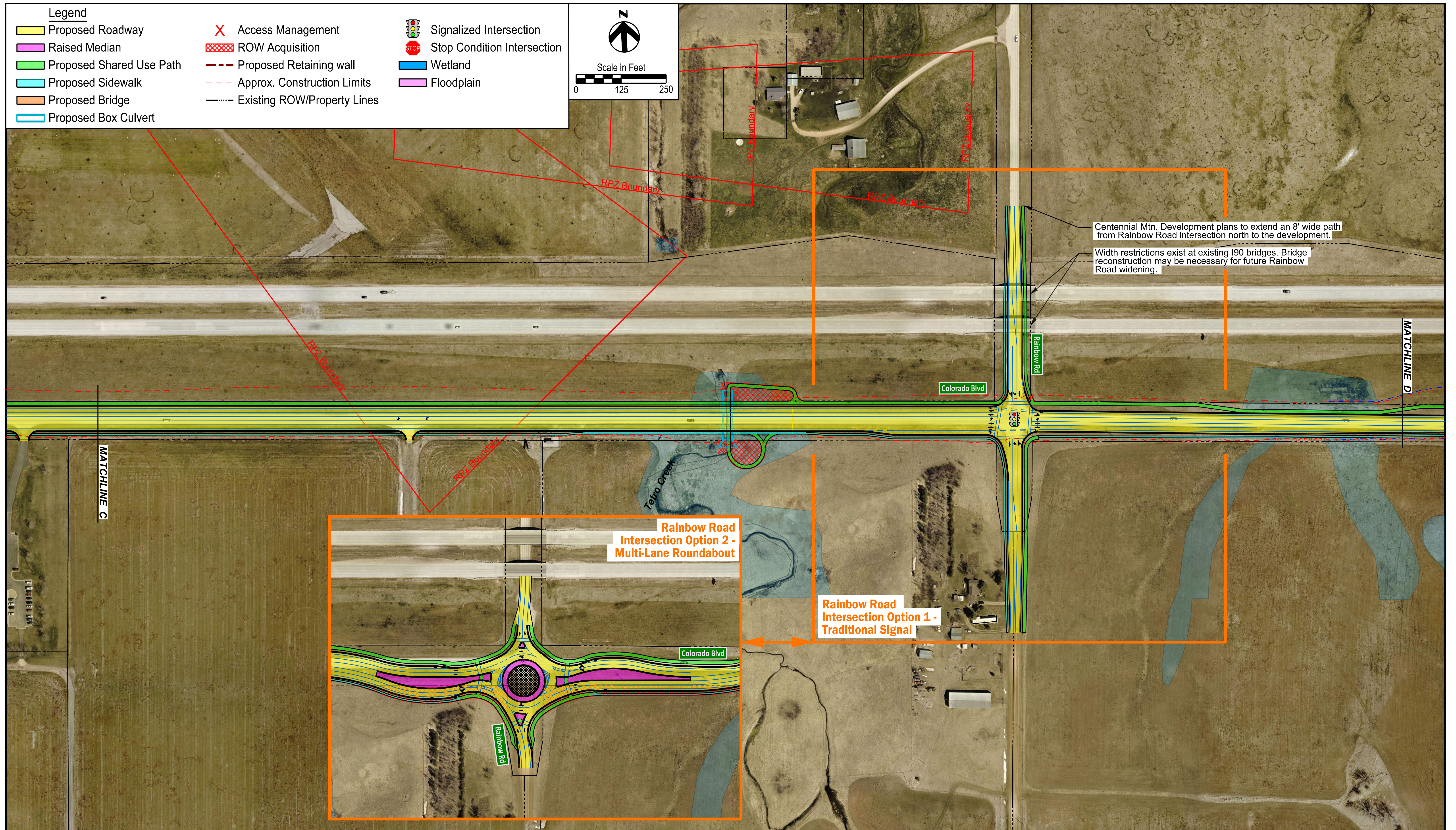
## Roadway Options - False Bottom Creek to West of Rainbow Road

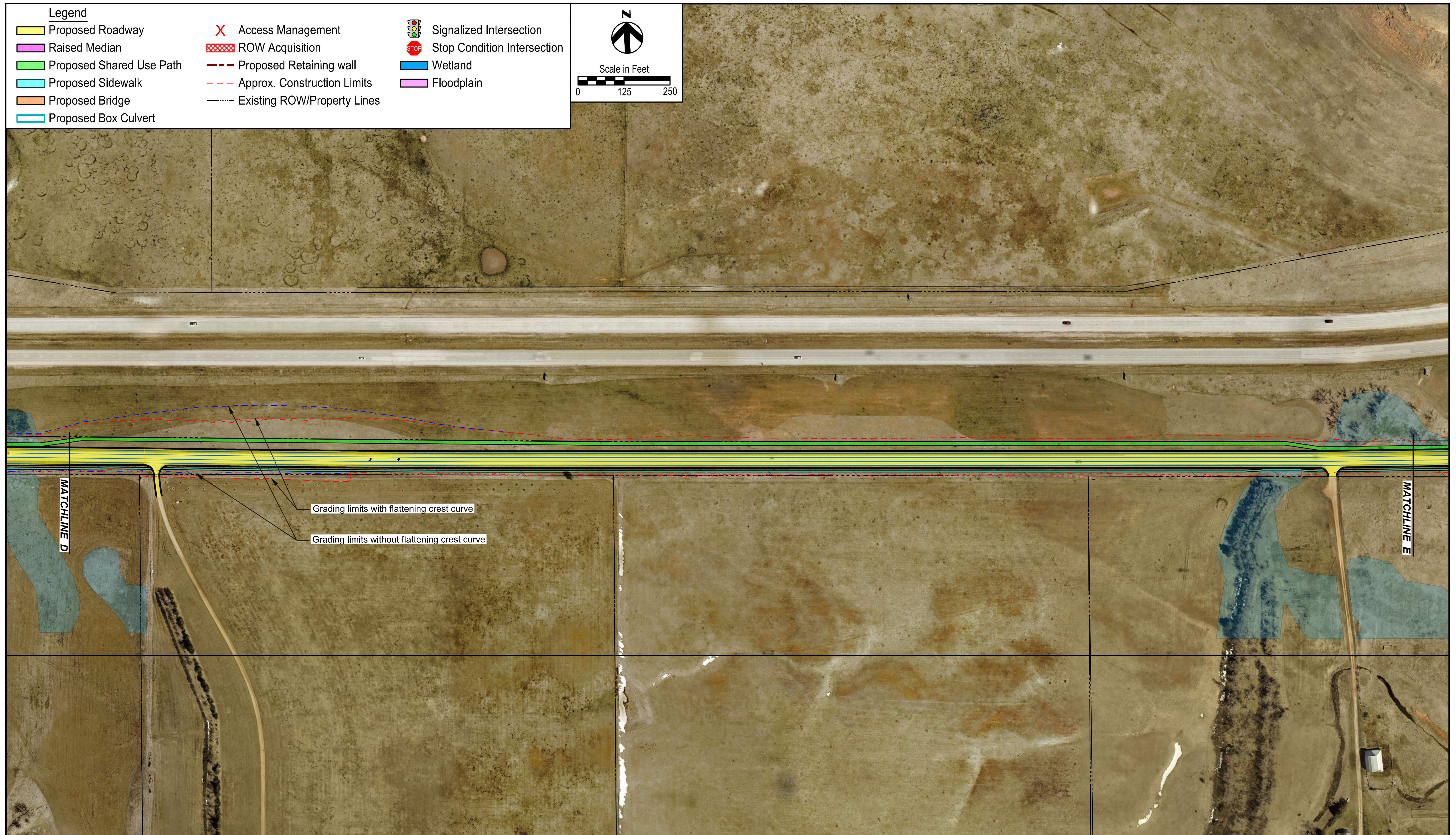
Colorado Blvd Corridor Study (27th Street to Colorado Loop)

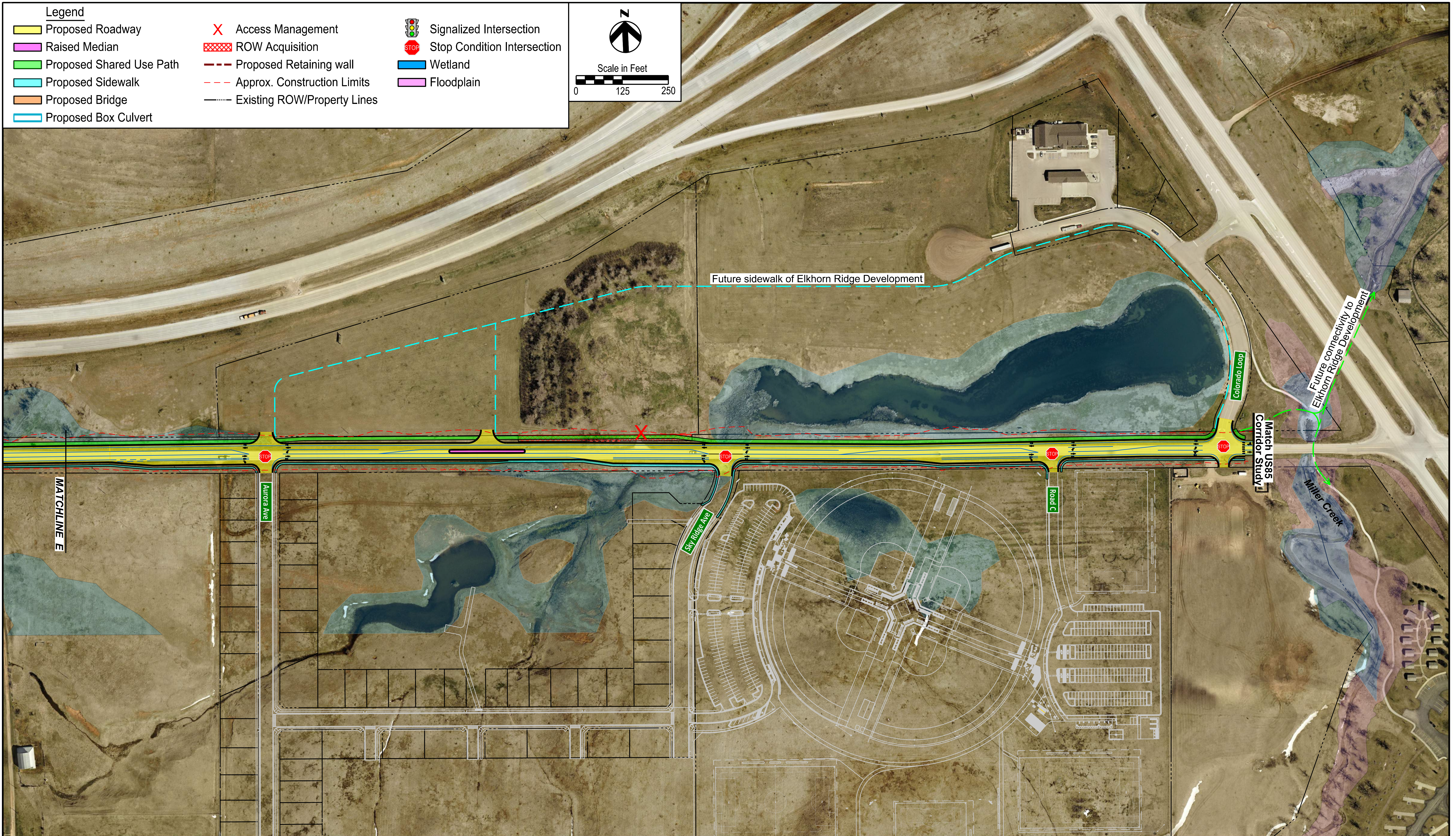
Spearfish, SD

Concept #  
M1, M2,  
Road  
Segment 2

Revision:







# INTERSECTION COMPARATIVE MATRIX



## COLORADO BOULEVARD CORRIDOR STUDY

Intersection	Option No. & Description	2050 Traffic Operations	Comparative Predictive Safety	Comparative Construction Costs (2)	ROW Needs	Wetland Impacts	Private Business Access Restrictions	Other Considerations
		Level of Service (AM/PM)	Percent Change in Crashes (1)	\$2023	Acres	Acres	No. of Drives	
<b>27th St Intersection</b>	Traditional Signal with Capacity Improvements	C / C	-5%	● \$1.4 M	● 0.00	● 0.01	-	A Leading Pedestrian Interval (LPI) can be added to enhance pedestrian safety. Signal operations would operate with slightly more delay but still operate at an acceptable LOS C threshold.
<b>Heritage Dr Intersection</b>	Option 1 - Traditional Signal	B / A	-34%	● \$2.5 M	● 0.02	● 0.00	RIRO at 2 drive	Provides opportunity for passenger cars to turn around. Familiar intersection type. Pedestrian crosswalk across both Colorado Blvd and Heritage Dr.
	Option 2 - Continuous Green Tee	B / B	-39%	● \$2.5 M	● 0.02	● 0.00	RIRO at 5 drives	Operates with more delay than signalized intersection. Presents a potential weaving issue due to the close proximity between the Heritage Drive and 27th Street intersections. Pedestrian crosswalk only across Heritage Dr. More restrictions on surrounding private driveways.
<b>Maitland St Intersection</b>	Option 1 - Traditional Signal	B / A	-6%	● \$2.2 M	● 0.00	● 0.06	-	Familiar intersection type.
	Option 2 - Roundabout	A / A	-18% to +3%	● \$2.7 M	● 0.00	● 0.07	RIRO at 1 drive	Provides opportunity for large trucks to turn around. Traffic calming. Reduced fatal and injury crashes compared to traditional signal. Crossing distances lower for pedestrians with splitter islands that allow pedestrians to focus on one direction at a time. Larger intersection footprint.
<b>Rainbow Rd Intersection</b>	Option 1 - Traditional Signal	B / B	-38%	● \$3.8 M	● 0.00	● 0.00	-	NB/SB turn lanes needed on Rainbow Road at end of planning horizon. Requires 190 bridge replacements if turn lanes were added. Familiar intersection type.
	Option 2 - Roundabout	B / B	-38% to -23%	● \$3.5 M	● 0.81	● 0.00	-	Provides opportunity for large trucks to turn around. Traffic calming. Reduced fatal and injury crashes compared to traditional signal. Crossing distances lower for pedestrians with splitter islands that allow pedestrians to focus on one direction at a time. Larger intersection footprint.

(1) Crash reduction based on a comparison with the no-build alternative over the evaluation period of 2027-2050. Roundabout intersections have a range of results since the proposed configuration is a hybrid of a single/multi-lane roundabout.

(2) Includes north shared use path costs for comparative purposes.

# RECREATION PATH COMPARATIVE MATRIX



## COLORADO BOULEVARD CORRIDOR STUDY

Path Segment	Segment Length (Miles)	Shared Use Path Side	Cost (\$/Mile)	ROW Needs (Acres)	Number of Drives/Ints Crossed (1)	Wetland Impacts (Acres)	Floodplain Impacts (Acres)	Commentary
Segment 1 (27th Street to east of False Bottom)	0.9	North	● \$ 2.5 M	● 0.02	● 6	0.13	0.31	Significantly less driveways and conflict points for bicyclists and pedestrians. ~\$500K more expensive than south option.
		South	● \$ 1.9 M	● 0.02	● 16	0.07	0.35	Located on the side of the road with businesses and intersecting roads (therefore pedestrians only have to cross road at 27th Street). No need for sidewalk on the north side. This option better fits within the existing ROW Width.
		Off Alignment	● \$ 2.0 M	(2)	● 10	(2)	(2)	Out of way travel required. Potentially lower level of ped/bike stress. Delayed construction since secondary E-W roadway is developer driven.
Segment 2 (east of False Bottom to Rainbow Rd)	1.3	North	● \$ 1.0 M	● 0.83	● 3	0.88	0.08	Significantly less driveways and conflict points for bicyclists and peds. ~\$300K more expensive than south option.
		South	● \$ 0.7 M	● 0.86	● 14	0.90	0.09	Located on the side of the road with businesses and intersecting roads. No need for sidewalk on the north side.
		Off Alignment	● \$ 1.0 M	(2)	● 5	(2)	(2)	Out of way travel required. Potentially lower level of ped/bike stress. Delayed construction since secondary E-W roadway is developer driven.
Segment 3a (Rainbow Road to Aurora Ave)	0.9	North	● \$ 1.0 M	● 0.00	● 1	0.78	-	~\$300K more expensive than south option.
		South	● \$ 0.7 M	● 0.00	● 5	0.70	-	Located on the side of the road with businesses and intersecting roads. No need for sidewalk on the north side.
		Off Alignment	● \$ 1.0 M	(2)	● 3	(2)	(2)	Out of way travel required. Potentially lower level of ped/bike stress. Delayed construction since secondary E-W roadway is developer driven.
Segment 3b (Aurora Ave to Colorado Loop)	0.6	North	● \$ 0.7 M	● 0.19	● 3	0.75	0.08	
		South	● \$ 0.8 M	● 0.19	● 4	0.68	0.07	Located on the side of the road with businesses and intersecting roads. No need for sidewalk on the north side.
		Off Alignment North	● \$ 1.1 M	(2)	● 4	(2)	(2)	Out of way travel required. Potentially lower level of ped/bike stress.
		Off Alignment South	● \$ 2.0 M	(2)	● 5	(2)	(2)	Significant out of way travel required. Potentially lower level of ped/bike stress.

(1) includes future driveways and minor/major intersections

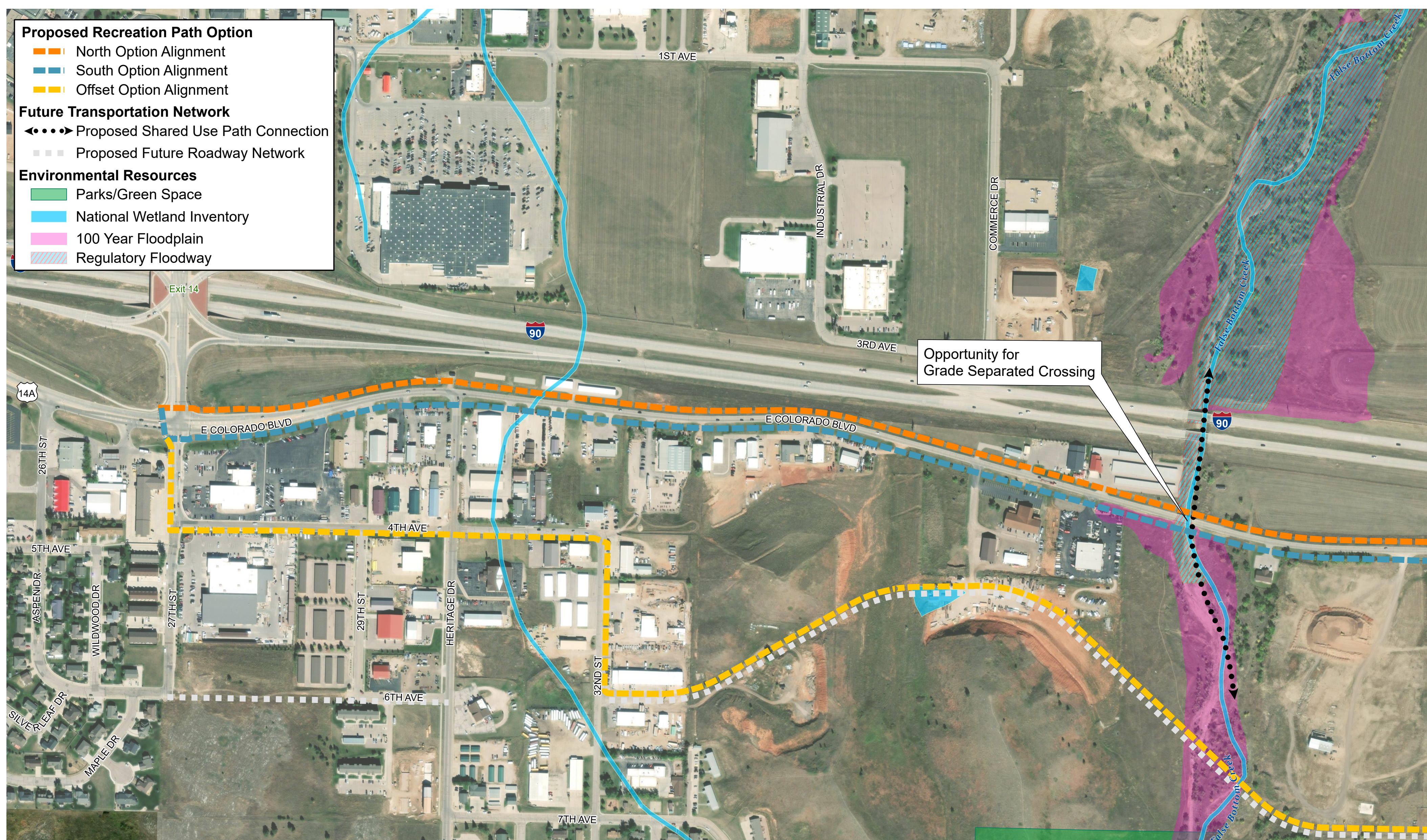
(2) ROW and environmental impact data unavailable for the off-alignment options.






# RECREATIONAL PATH ALIGNMENT OPTIONS




## COLORADO BOULEVARD CORRIDOR STUDY




### SEGMENT 1 27TH STREET TO FALSE BOTTOM CREEK



## What do you think?

**NORTH ALIGNMENT** Preferred  |  |  Not Preferred

**SOUTH ALIGNMENT** Preferred  |  |  Not Preferred

**OFFSET ALIGNMENT** Preferred  |  |  Not Preferred

# RECREATIONAL PATH ALIGNMENT OPTIONS



## COLORADO BOULEVARD CORRIDOR STUDY

### SEGMENT 2 FALSE BOTTOM CREEK TO RAINBOW ROAD



## What do you think?

**NORTH ALIGNMENT** Preferred | | Not Preferred

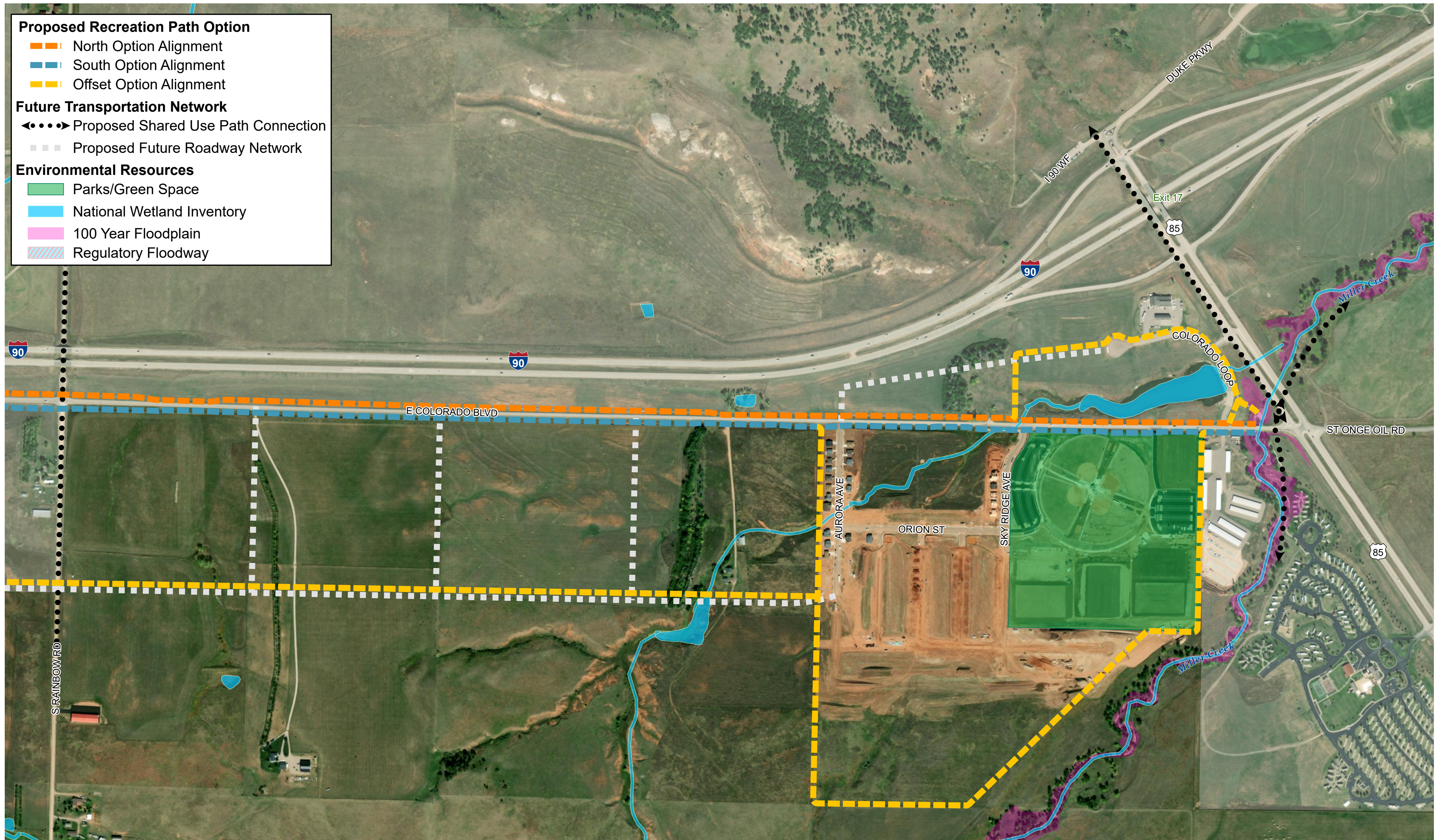
**SOUTH ALIGNMENT** Preferred | | Not Preferred

**OFFSET ALIGNMENT** Preferred | | Not Preferred

# RECREATIONAL PATH ALIGNMENT OPTIONS

## COLORADO BOULEVARD CORRIDOR STUDY

### SEGMENT 3 RAINBOW ROAD TO MILLER CREEK



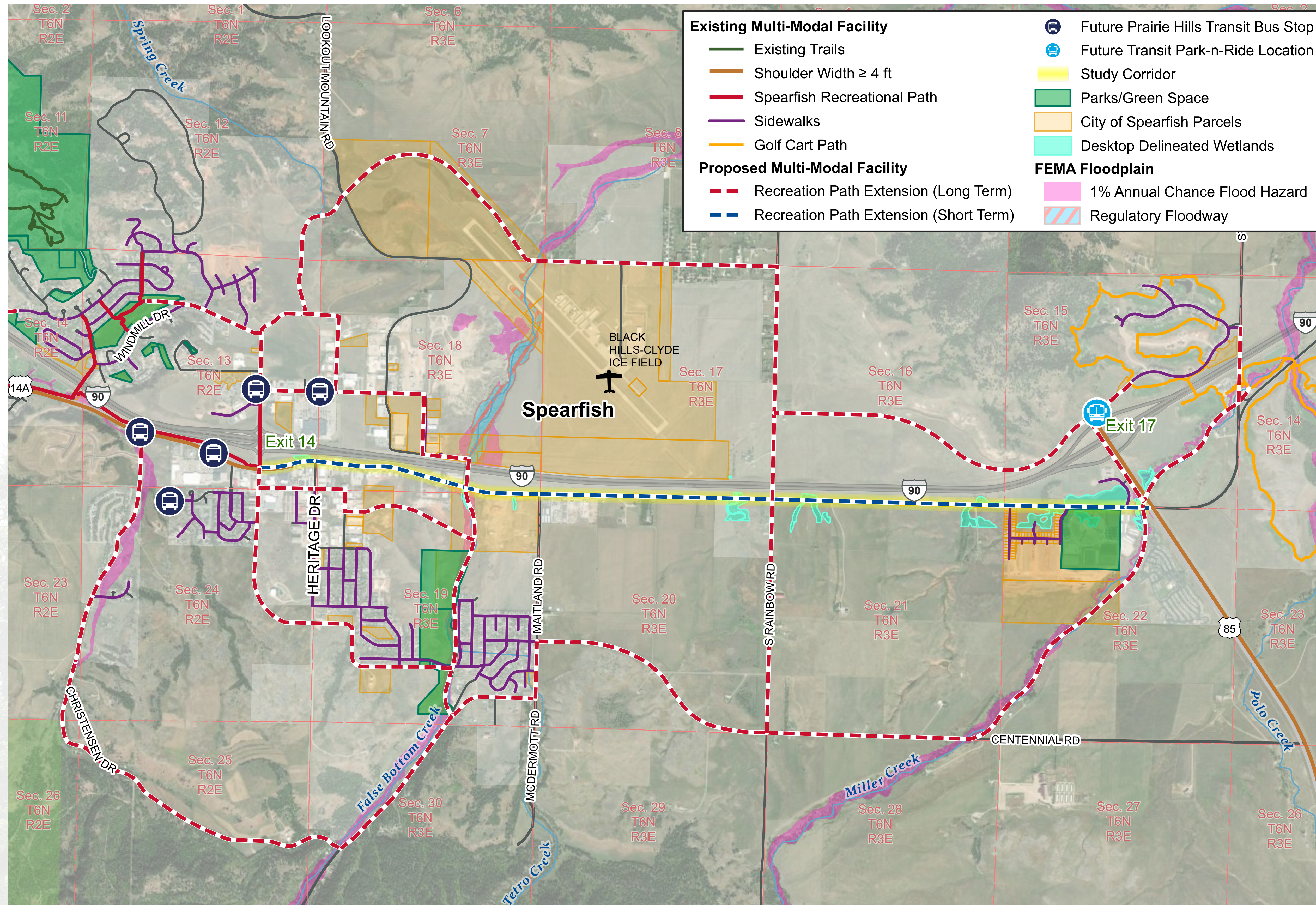
## What do you think?

<b>NORTH ALIGNMENT</b>	Preferred						Not Preferred
<b>SOUTH ALIGNMENT</b>	Preferred						Not Preferred
<b>OFFSET ALIGNMENT (N)</b>	Preferred						Not Preferred
<b>OFFSET ALIGNMENT (S)</b>	Preferred						Not Preferred

# EXISTING AND PROPOSED MULTI-MODAL FACILITY NETWORK



## COLORADO BOULEVARD CORRIDOR STUDY



# EXISTING AND PROPOSED ROADWAY NETWORK

## COLORADO BOULEVARD CORRIDOR STUDY

