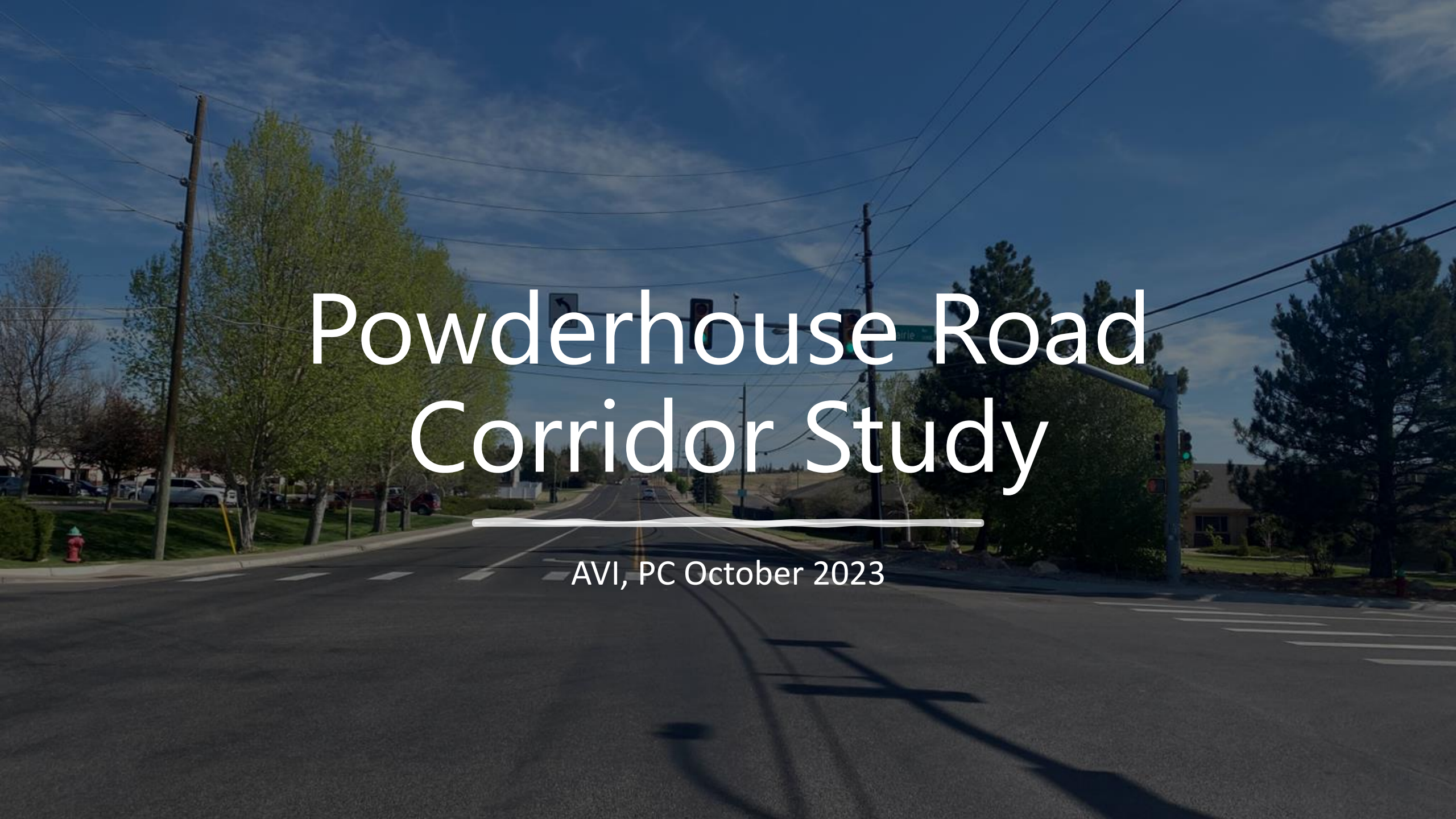
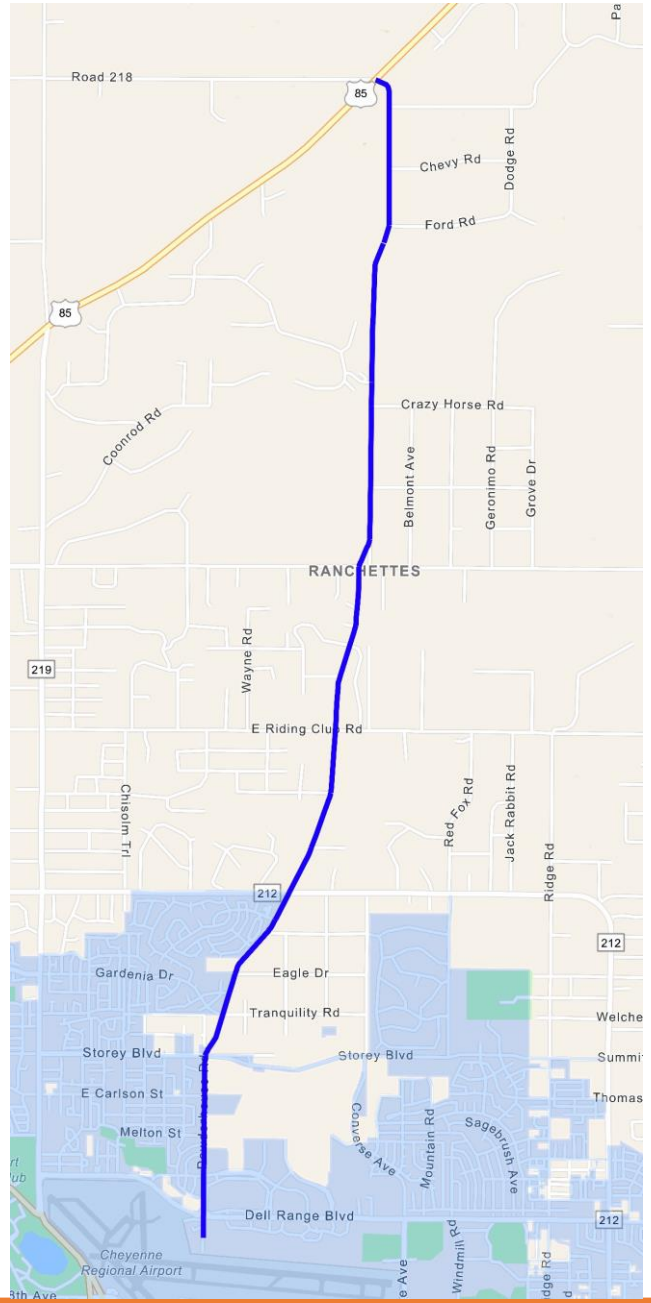


Powderhouse Road Corridor Study

AVI, PC October 2023

Powderhouse Road Corridor

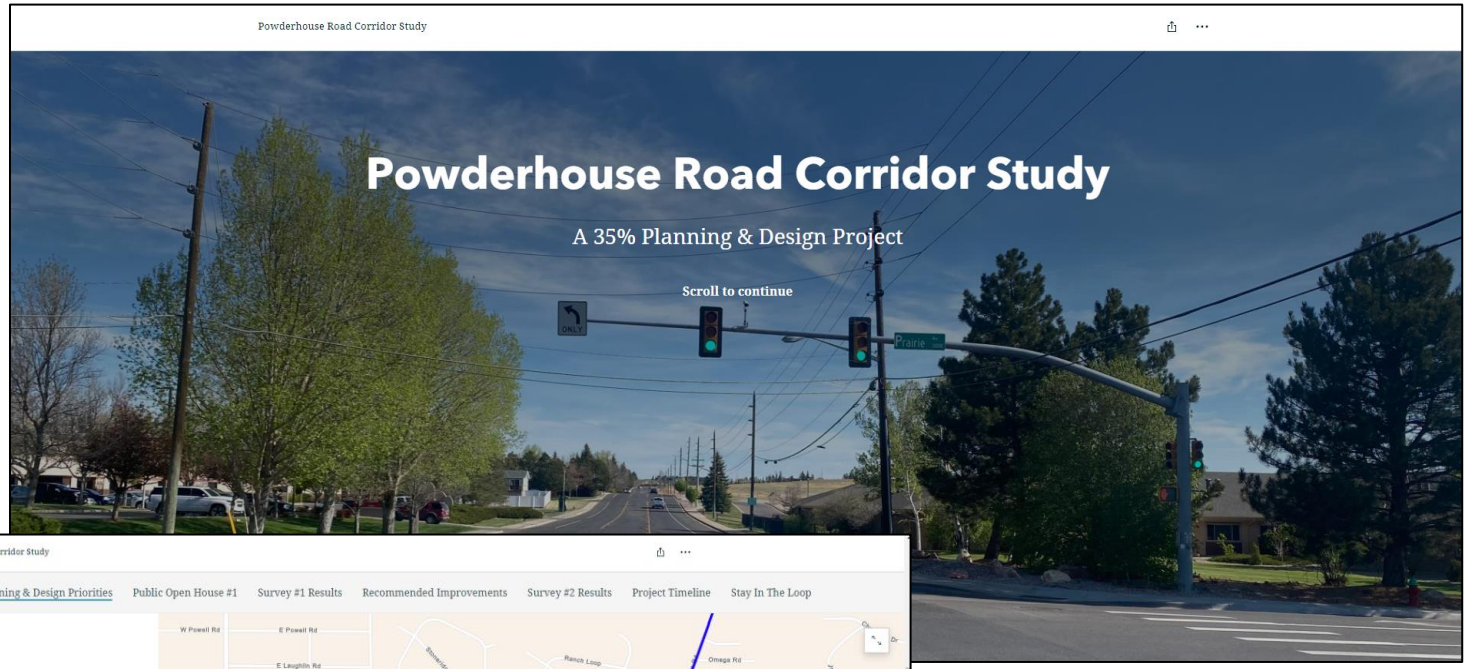
- 7.2 miles long
  - Dell Range to US Highway 85
- 2 jurisdictions – City & County
- Varied zoning and land use

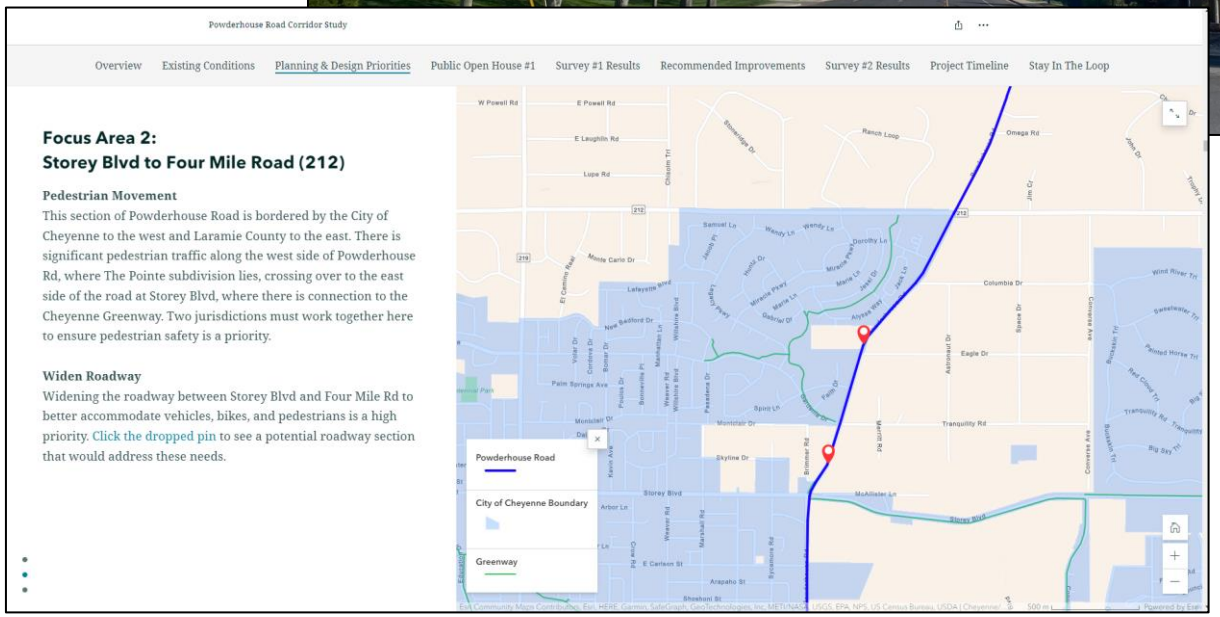


Existing Conditions

Public Engagement

- StoryMap
- Email List
- Survey Monkey
- One-on-one meetings
- 2 Open Houses





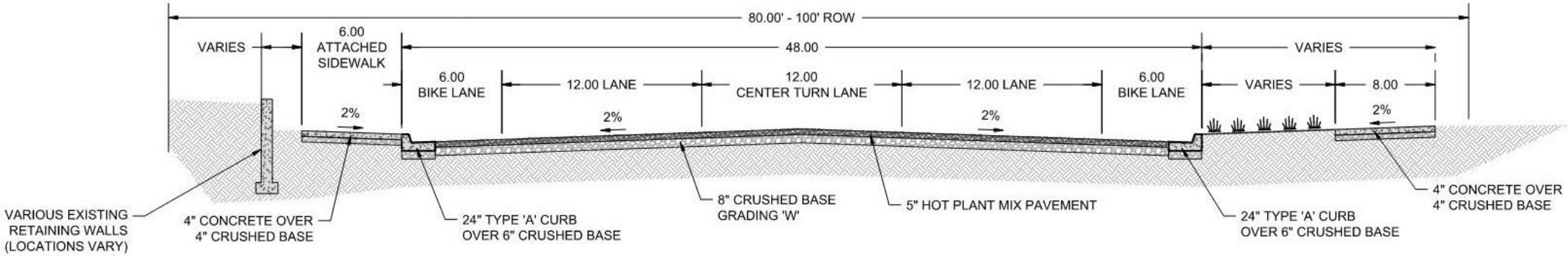
Open Houses and Surveys

- Concerns about impact of Coyote Ridge on traffic and safety
- Concerns about speed limits
- Strong support for bicycle and pedestrian amenities
- Strong arguments both for and against finishing the connection to US Highway 85

Recommended Improvements

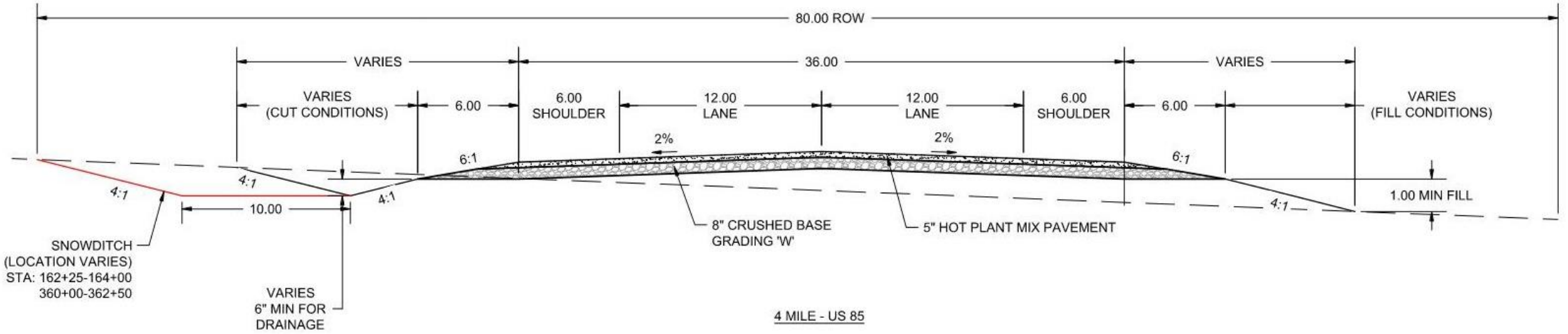
- Classify entire corridor as Minor Arterial
- Optimize signal timing at Dell Range and Storey
- Improve and add lighting and signage throughout corridor
- Upgrade ADA facilities
- Construct new sidewalk in missing sections
- Continuous bike lanes through City section
- Widen shoulder to 6’ through County section
- Paved surfacing where currently nonexistent
- Post speed at 35 mph through City section
- Post speed at 45 mph through County section

Typical Cross Section – City

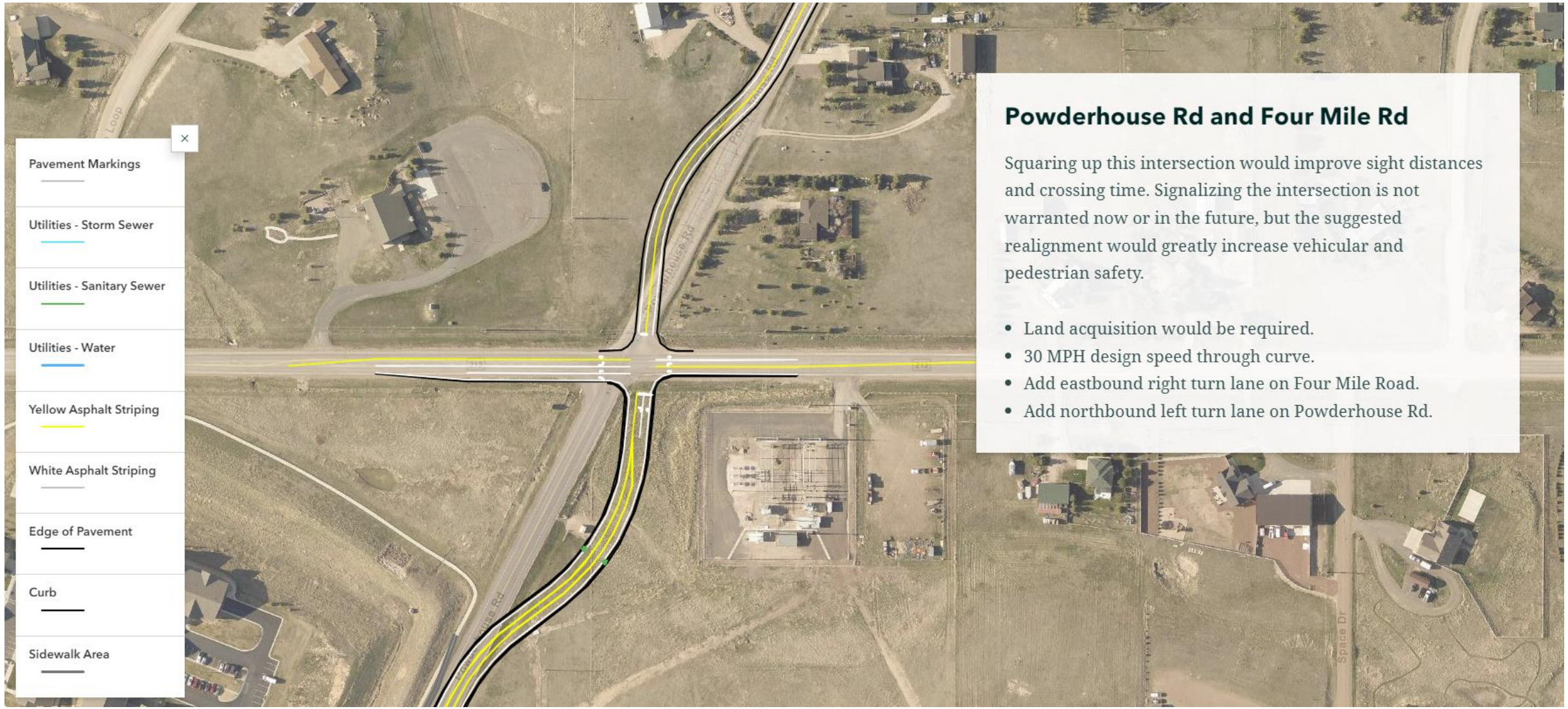


MELTON ST - CARLSON ST

Typical Cross Section - County



Intersection Realignment – 4 Mile

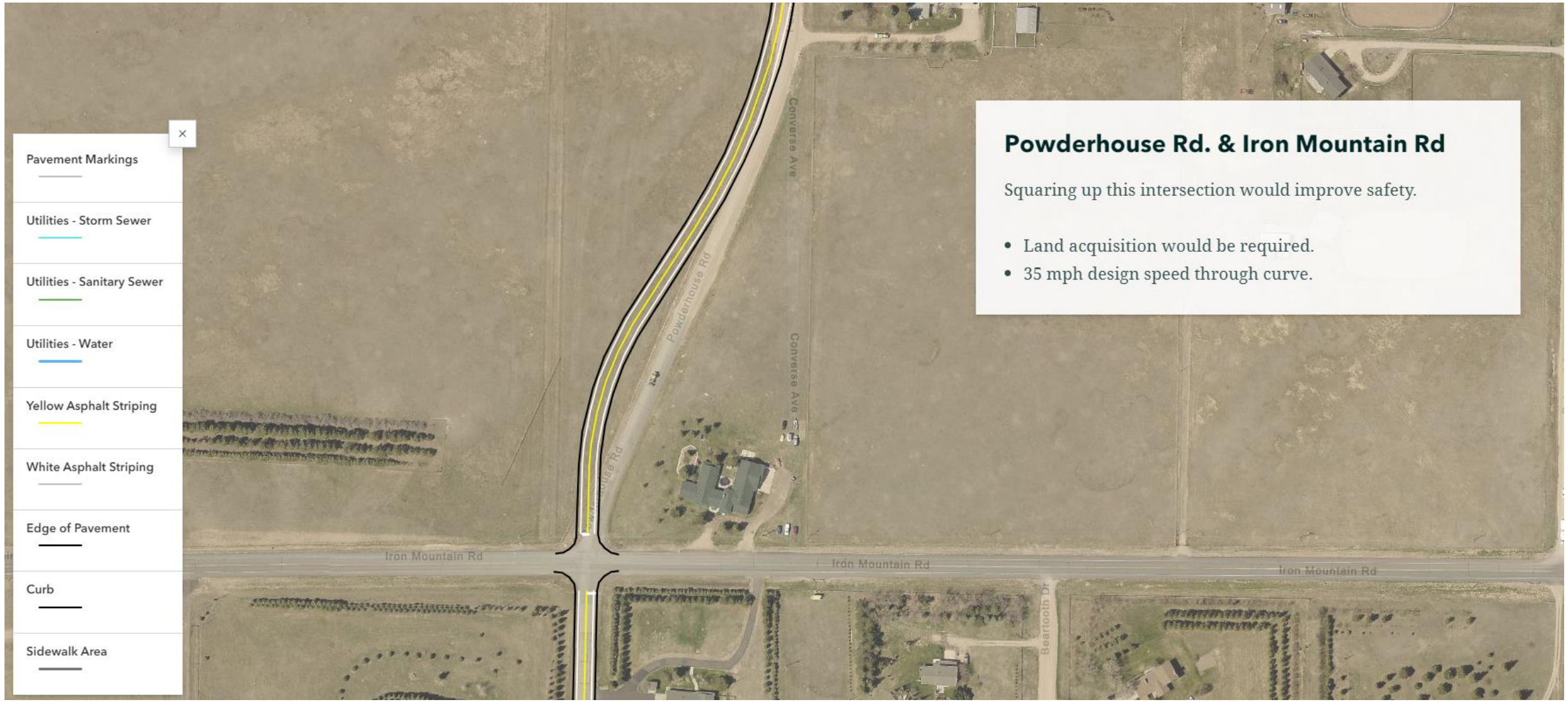


Powderhouse Rd and Four Mile Rd

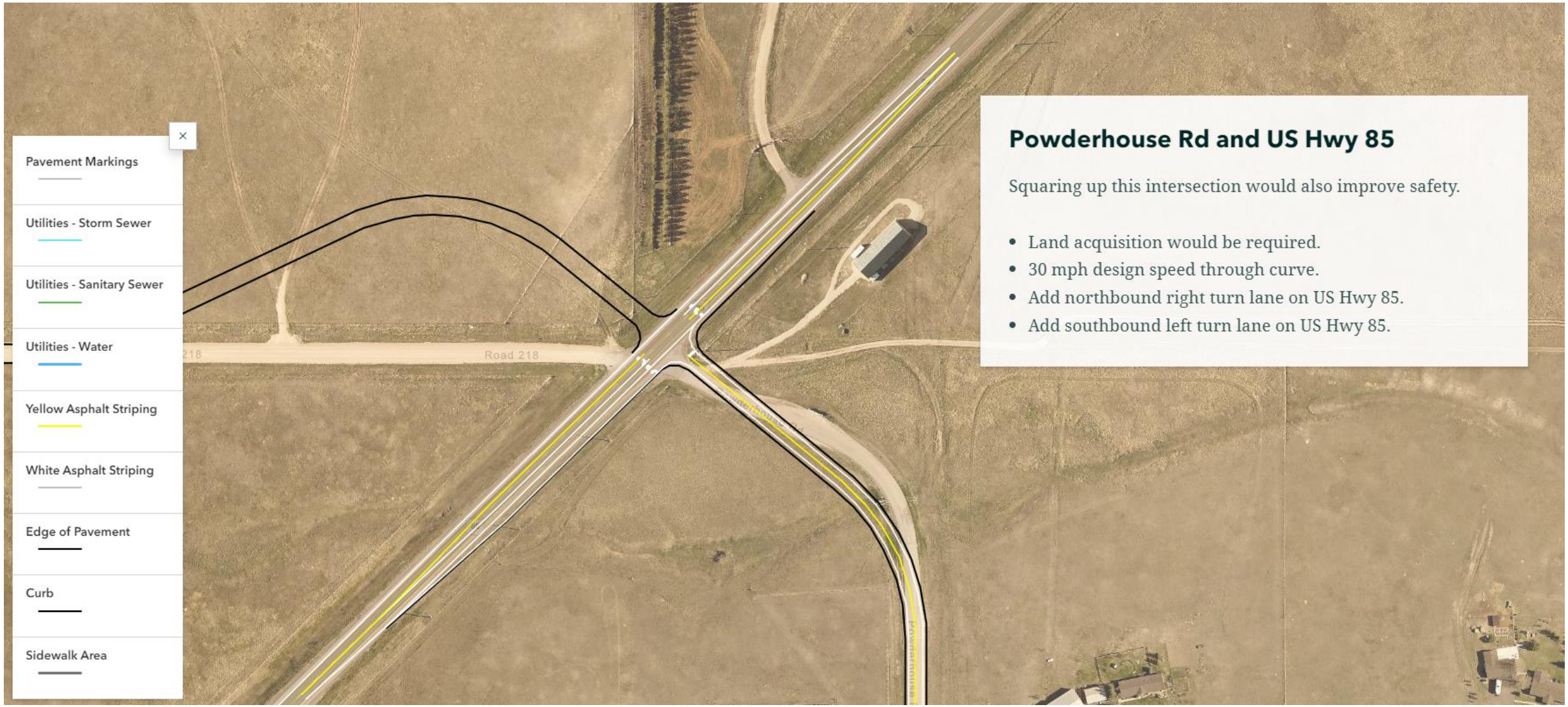
Squaring up this intersection would improve sight distances and crossing time. Signalizing the intersection is not warranted now or in the future, but the suggested realignment would greatly increase vehicular and pedestrian safety.

- Land acquisition would be required.
- 30 MPH design speed through curve.
- Add eastbound right turn lane on Four Mile Road.
- Add northbound left turn lane on Powderhouse Rd.

Intersection Realignment – Iron Mountain



Intersection Realignment – US Highway 85



Drainage & Utilities

City

- Upsize existing Single Type A at Melton to a Triple Type A to accommodate 100-year event
- Watermain stub at Melton and also Tranquility

County

- Culverts should be sized at crossings to accommodate 10-year event

	Existing Pipe		2-YR Pipe (RCP)		10-YR Pipe (RCP)	
Culvert	Culvert Dia.	No. Barrels	Culvert Dia.	No. Barrels	Culvert Dia.	No. Barrels
	(FT)		(FT)		(FT)	
1	3.00	2	3.00	2	3.00	5
2	3.00	2	4.50	6	6.00	8
3	N/A	N/A	4.50	4	6.00	7
4a	N/A	N/A	1.25	1	1.25	1
4b	N/A	N/A	1.50	1	2.00	1
4c	N/A	N/A	1.50	1	2.00	1
4d	1.50	1	2.00	1	2.00	2
4e	3.00	2	3.00	2	3.00	5
4f	2.00	1	2.50	1	2.50	2
5a	2.00	1	3.50	4	6.00	3
5b	N/A	N/A	2.00	1	2.50	1
6a	3.00	3	3.50	2	5.00	3
6b	3.00	1	3.00	1	3.00	1
6c	2.00	1	2.00	1	2.00	1
6d	2.00	1	2.00	1	2.00	1

	Existing Pipe		100-YR Pipe (RCP)		100-YR Alt Box (RCB) Basins 1, 2, 3		
Culvert	Culvert Dia.	No. Barrels	Culvert Dia.	No. Barrels	Rise	Span	No. Barrels
	(FT)		(FT)		(FT)	(FT)	
1	3.00	2	8.00	3	6.00	12.00	1
2	3.00	2	8.00	7	8.00	16.00	3
3	N/A	N/A	8.00	7	8.00	15.00	3
4a	N/A	N/A	2.50	1	N/A	N/A	N/A
4b	N/A	N/A	2.50	2	N/A	N/A	N/A
4c	N/A	N/A	2.50	2	N/A	N/A	N/A
4d	1.50	1	3.00	2	N/A	N/A	N/A
4e	3.00	2	5.50	3	N/A	N/A	N/A
4f	2.00	1	3.00	3	N/A	N/A	N/A
5a	2.00	1	6.00	6	N/A	N/A	N/A
5b	N/A	N/A	2.50	2	N/A	N/A	N/A
6a	3.00	3	6.00	5	N/A	N/A	N/A
6b	3.00	1	**	**	N/A	N/A	N/A
6c	2.00	1	**	**	N/A	N/A	N/A
6d	2.00	1	**	**	N/A	N/A	N/A

**Subdivision system designed for 100-yr.

Cost Estimates

Powderhouse Road
Bid Tabulation

Powderhouse Road Corridor Study Project				
Estimate Totals	**Current Amount ($)**	**5-Year Amount ($)**	**10-Year Amount ($)**	**15-Year Amount ($)**
Phase 1 - Dell Range Blvd to Storey Blvd Improvements	$5,040,386.09	$6,432,951.83	$8,210,257.82	$10,478,600.68
Phase 2 - Storey Blvd to Four Mile Road Improvements	$5,497,997.51	$7,016,992.85	$8,955,658.60	$11,429,941.95
Phase 3a - Four Mile Road to Iron Mountain Road Improvements	$6,615,047.88	$8,442,663.64	$10,775,215.95	$13,752,209.45
Phase 3b - Iron Mountain Road to US HWY 85 Improvements	$9,555,897.34	$12,196,015.59	$15,565,549.83	$19,866,024.26
Project Subtotal (Construction Costs)	$26,709,328.82	$34,088,623.92	$43,506,682.20	$55,526,776.33