

A photograph of railroad tracks stretching into the distance under a cloudy sky. Two signal lights are visible on the tracks. The text is overlaid on the image.

# County Road (CR) 32A Railroad Crossing Relocation Study Report - Presentation and Community Input Meeting

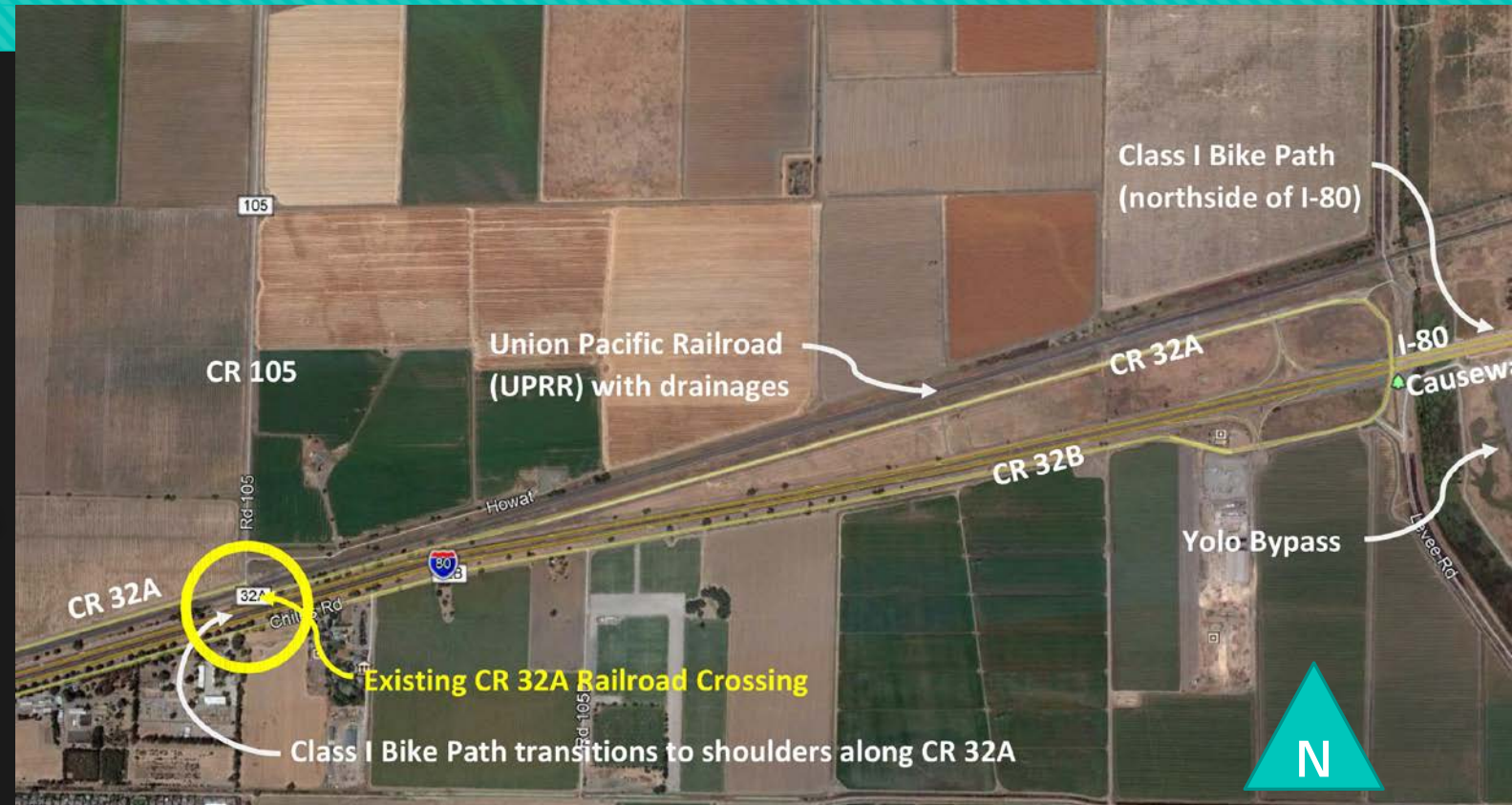
City of Davis and County of Yolo in Cooperation with  
Union Pacific Railroad (UPRR) and California Public  
Utilities Commission (CPUC)



# Presenting the Project to Solicit Public Input

Project sponsors are requesting your feedback on:

- The project purpose and need
- The alternatives under consideration and other possibilities
- Or any information about the project area and issues that are important to you



# Agenda

- Project Purpose and Need
- Project Background
- Design Constraints and Opportunities
- Alternatives under further study
  - Alternative 1: Overhead Crossing, Design Speed 50 MPH
  - Alternative 2: At-grade Crossing, Design speed 40 MPH
  - Alternative 3: At-grade Crossing, Design speed 45 MPH
- **Alternatives removed from further consideration**
  - Alternative 4: Underpass Crossing, Design Speed 55 MPH
  - Alternative 5: Overhead Crossing, Design Speed 55 MPH
  - Alternative 6: Overhead Crossing, Design Speed 55 MPH
  - Alternative 7: Underpass Crossing, Design Speed 55 MPH



# Study's Purpose is to...

**Investigate alternatives to relocate the CR 32A railroad crossing to improve safety and address the current conflicts experienced between trains, vehicles, and bicycles**

# Project is Needed

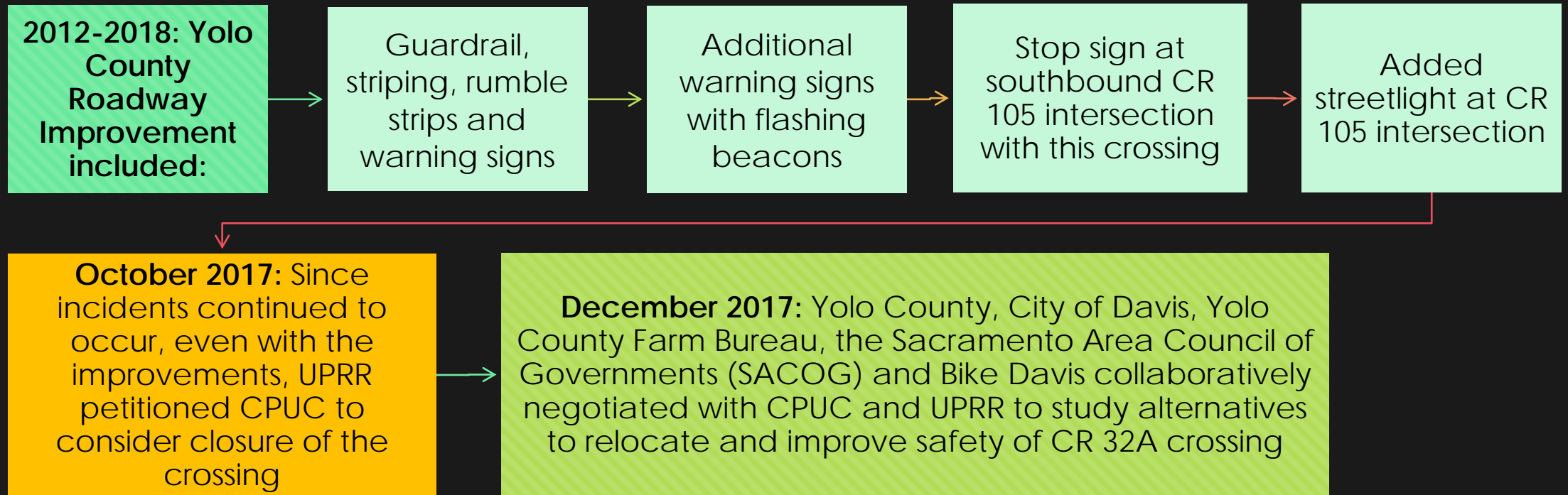
- Westbound and southbound incidents have resulted in some vehicles sliding off the roadway into the active railroad corridor resulting in collisions between cars and trains
- Current location prohibits standard roadway geometric design
- Traffic safety measures have not reduced the occurrence of incidents at this crossing
- Traffic volumes on CR 32A are expected to increase due to I-80 east-west overflow traffic and general planned growth in the project vicinity
- Maintaining a CR 32A railroad crossing provides a critical route for over-sized farm equipment to access land north and south of Interstate 80, for bicycle access between Davis and Sacramento, and for waste hauling to the Yolo County landfill originating from West Sacramento



# Project is Needed

- 27 accidents recorded by UPRR between 2014 and 2017, another 23 incidents recorded by others during same period
- Incidents have included excessive delays to rail and motorized traffic, major damage to motor vehicles and bicyclists, repeated destruction of safety guardrails and signage, and even resulted in fatalities – as recent as September 2019

# Project Background



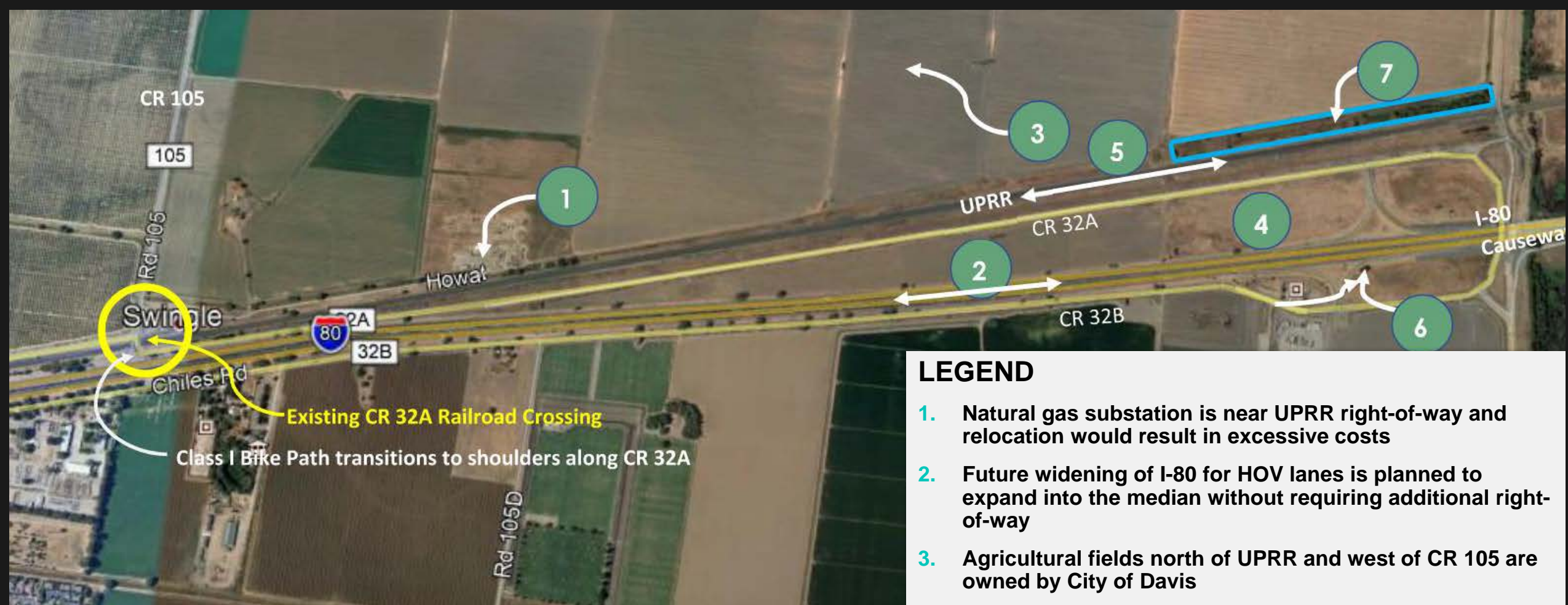


# Project Area Constraints

## LEGEND

1. Existing crossing includes change in roadway elevation within two sharp 90-degree turns
2. Roadway modifications are constrained by I-80 right-of-way to the south
3. Large drainage ditches on both sides of UPRR trackway
4. Crossing is signed as 10 miles per hour for the westbound direction curve, but many motorists exceed this speed
5. Class I bike path transitions into a class II bike path on CR 32A frontage road at this crossing. Cyclists travel east along the paved road shoulder of CR 32 A to access the I-80 causeway Class I bike route
6. The railroad grade gradually rises in elevation eastward of this crossing. The railroad corridor includes the following utilities: a major gas pipeline, overhead power lines, utility poles and fiber optic lines





## LEGEND

1. Natural gas substation is near UPRR right-of-way and relocation would result in excessive costs
2. Future widening of I-80 for HOV lanes is planned to expand into the median without requiring additional right-of-way
3. Agricultural fields north of UPRR and west of CR 105 are owned by City of Davis
4. Eastern portions of CR 32A are not as constrained by the I-80 right-of-way
5. UPRR railway grade rises to approximately 7.5 feet above CR 32A elevation near the I-80 on/off ramps
6. At-grade crossings must allow adequate queuing distance for cars waiting at the I-80 EB on-ramp metering light on Chiles Road (CR 32B)
7. Environmentally sensitive habitat and occasional stormwater drainage overflow area

# Project Area Opportunities and Considerations



## A Full Range of Alternatives

### The following slides will compare

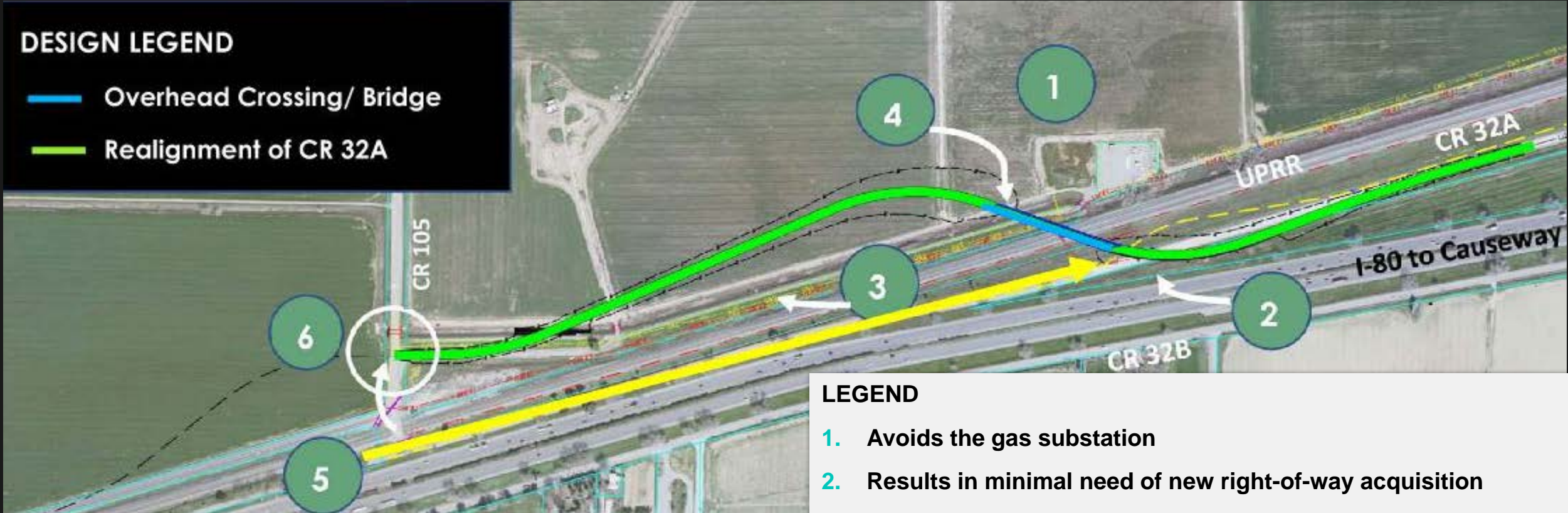
- 3 Alternative Overpass Crossing concepts (bridge over the tracks)
- 2 Alternative At-grade Crossing concepts (improved intersection with automatic gates)
- 2 Alternative Underpass Crossing concepts (tunnel under the tracks)

### Key Project Design Considerations:

- Roadway geometry (changes in grade, turning radii, design speed)
- Stacking distance relative to the east bound I-80 on-ramp
- Vertical clearance for railroad overcrossing must be 23 feet
- Underpass crossing requires pumping plant to remove drainage; in addition, siphons would be needed for agricultural/storm drainages to pass under the depressed roadway
- Minimize impacts to existing biking facilities and possible safety enhancements
- Avoid impacts to gas substation
- Minimize impacts on farmlands and environmental resources
- Avoid high-cost utility relocations
- Minimize right-of-way needs
- Funding unknown – construction costs may dictate project alternative or exploration of phased construction

## DESIGN LEGEND

- Overhead Crossing/ Bridge
- Realignment of CR 32A



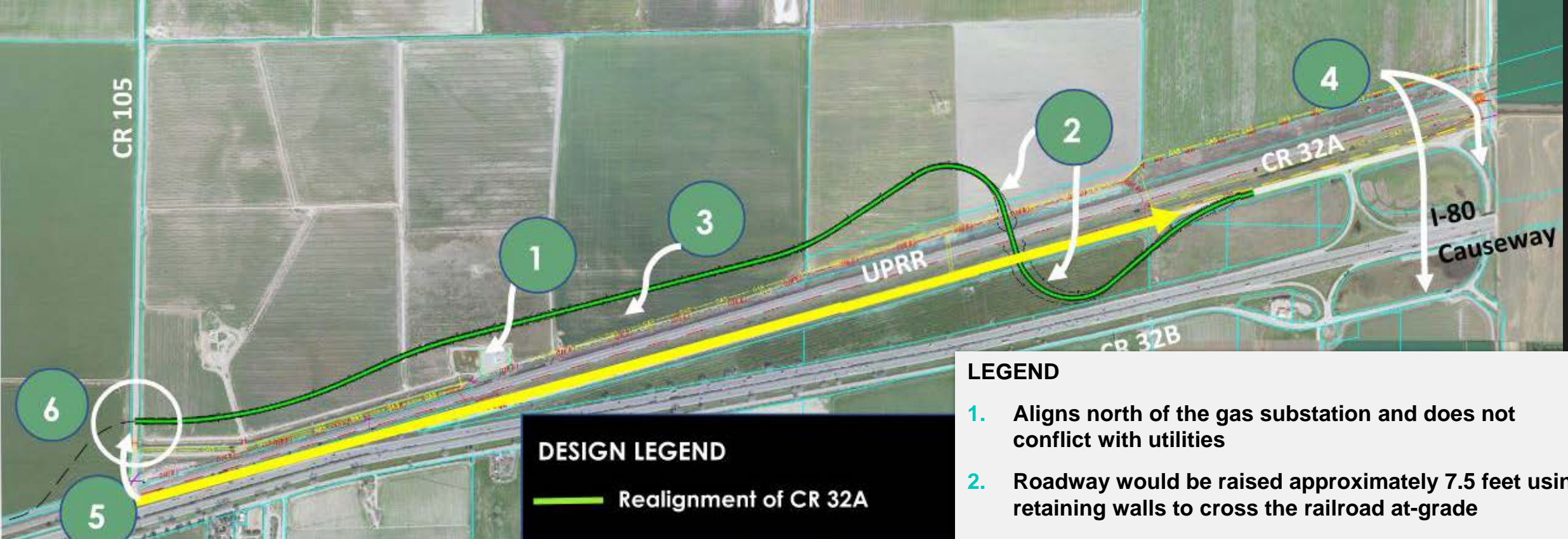
## LEGEND

1. Avoids the gas substation
2. Results in minimal need of new right-of-way acquisition
3. Avoids impacting most utilities, except may require relocating overhead power lines
4. Skewed crossing is relatively short bridge structure but still may conflict with gas pipeline and railroad right-of-way
5. Class I bike path would be extended approximately 0.5 miles up to the new crossing location using the existing CR 32A that will be abandoned. The path would pass under the new CR 32A alignment, and the remainder of the bike path from the overhead crossing to the causeway will remain a class II until further development
6. Shifts CR 32A intersection with CR 105 slightly north

# Alternative 1: Overhead Crossing, Design Speed 50 MPH

Crossing shifted approx. 0.5 mile east  
Skewed crossing



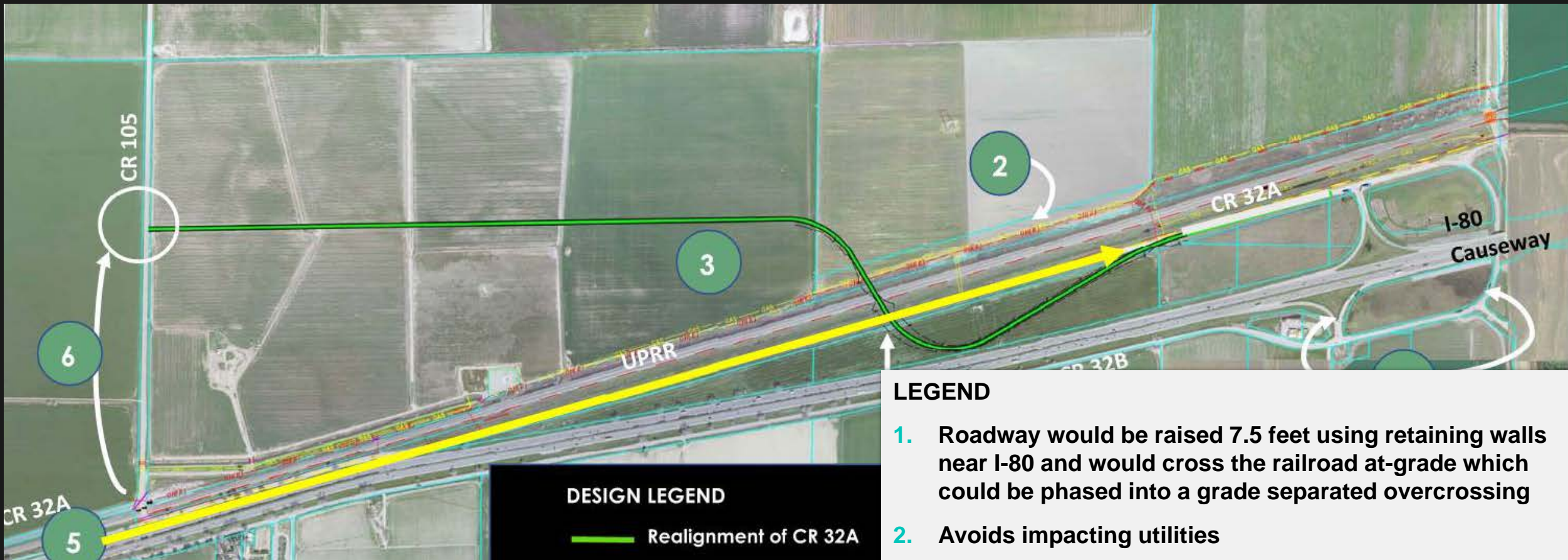


**LEGEND**

- 1. Aligns north of the gas substation and does not conflict with utilities
- 2. Roadway would be raised approximately 7.5 feet using retaining walls to cross the railroad at-grade
- 3. Requires extensive right-of-way acquisition and would leave remnant farmlands between new CR 32A and UPRR that would be difficult to continue farming
- 4. Queuing distance is approximately 5,500 feet to the east bound I-80 on-ramp
- 5. Class I bike path would be extended approximately 1.5 miles longer using the existing CR 32A roadway and the path would pass under the new CR 32A alignment through a large culvert pipe
- 6. Shifts CR 32A intersection with CR 105 slightly north

# Alternative 2: At-grade Crossing, Design Speed 40 MPH

Crossing shifted approx. 1.5 miles east  
Perpendicular crossing at railroad



**LEGEND**

1. Roadway would be raised 7.5 feet using retaining walls near I-80 and would cross the railroad at-grade which could be phased into a grade separated overcrossing
2. Avoids impacting utilities
3. Requires new right-of-way, but alignment allows for farming would be feasible on either side of CR 32A
4. Queuing distance is approximately 7,000 feet to the east bound I-80 on-ramp
5. Class I bike path would be extended approximately 1.5 miles longer using the existing CR 32A roadway and the path would pass under the new CR 32A alignment
6. New intersection at CR 105 would be about 0.4 miles north

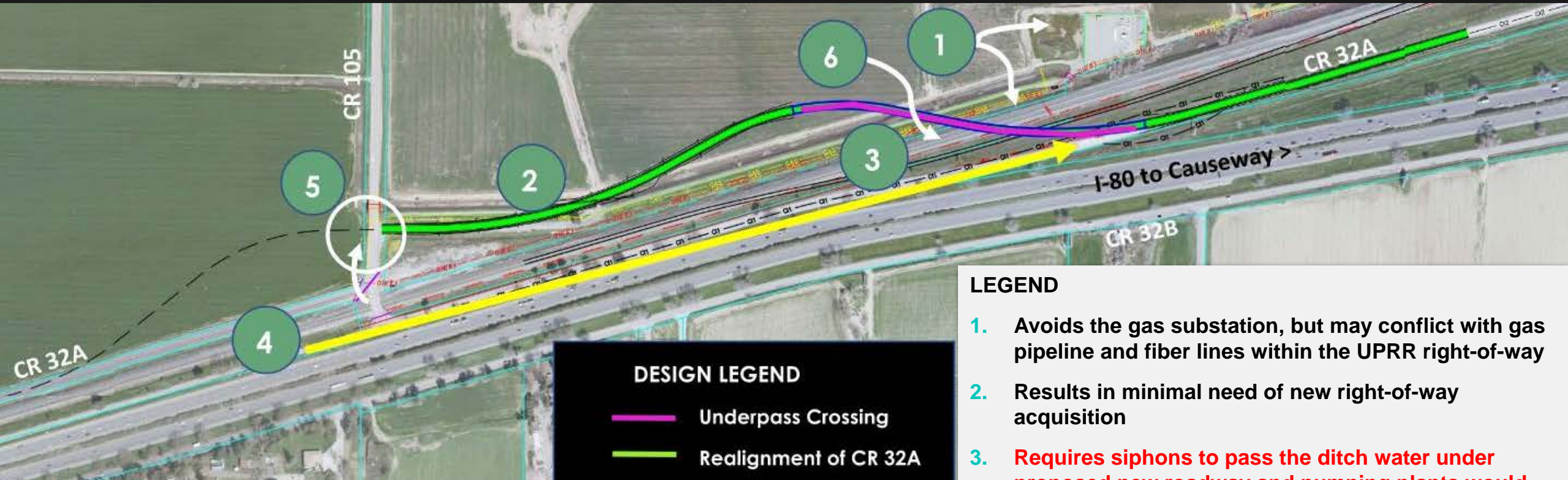
# Alternative 3: At-grade Crossing, Design Speed 45 MPH

Crossing shifted approx. 1.5 miles east  
Nearly perpendicular crossing at railroad

**DESIGN LEGEND**

— Realignment of CR 32A





**DESIGN LEGEND**

- Underpass Crossing
- Realignment of CR 32A

**LEGEND**

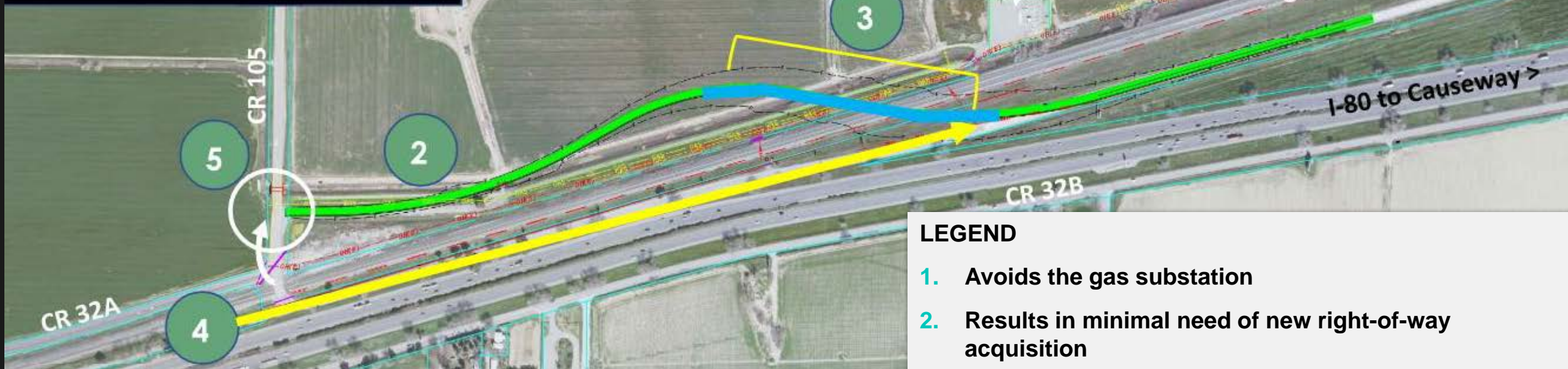
1. Avoids the gas substation, but may conflict with gas pipeline and fiber lines within the UPRR right-of-way
2. Results in minimal need of new right-of-way acquisition
3. **Requires siphons to pass the ditch water under proposed new roadway and pumping plants would result in long-term operation and maintenance costs**
4. Class I bike path would be extended approximately 0.5 mile longer using the existing CR 32A roadway and would convert to Class II path where it rejoins the vehicular roadway on CR 32A
5. Shifts CR 32A intersection with CR 105 slightly north
6. **Requires costly temporary relocation of railroad lines to construct tunnel**

# Alternative 4: Underpass Crossing, Design Speed 55 MPH

Crossing shifted approx. 0.5 mile east  
Skewed crossing

## DESIGN LEGEND

-  Overhead Crossing/ Bridge
-  Realignment of CR 32A



## LEGEND

1. Avoids the gas substation
2. Results in minimal need of new right-of-way acquisition
3. **Skewed crossing results in very long and costly bridge structure which requires bridge columns that may conflict with gas pipeline or fiber lines within UPRR right-of-way**
4. Class I bike path would be extended approximately 0.5 mile longer using the existing CR 32A roadway and would convert to Class II path where it rejoins the vehicular roadway on CR 32A
5. Shifts CR 32A intersection with CR 105 slightly north

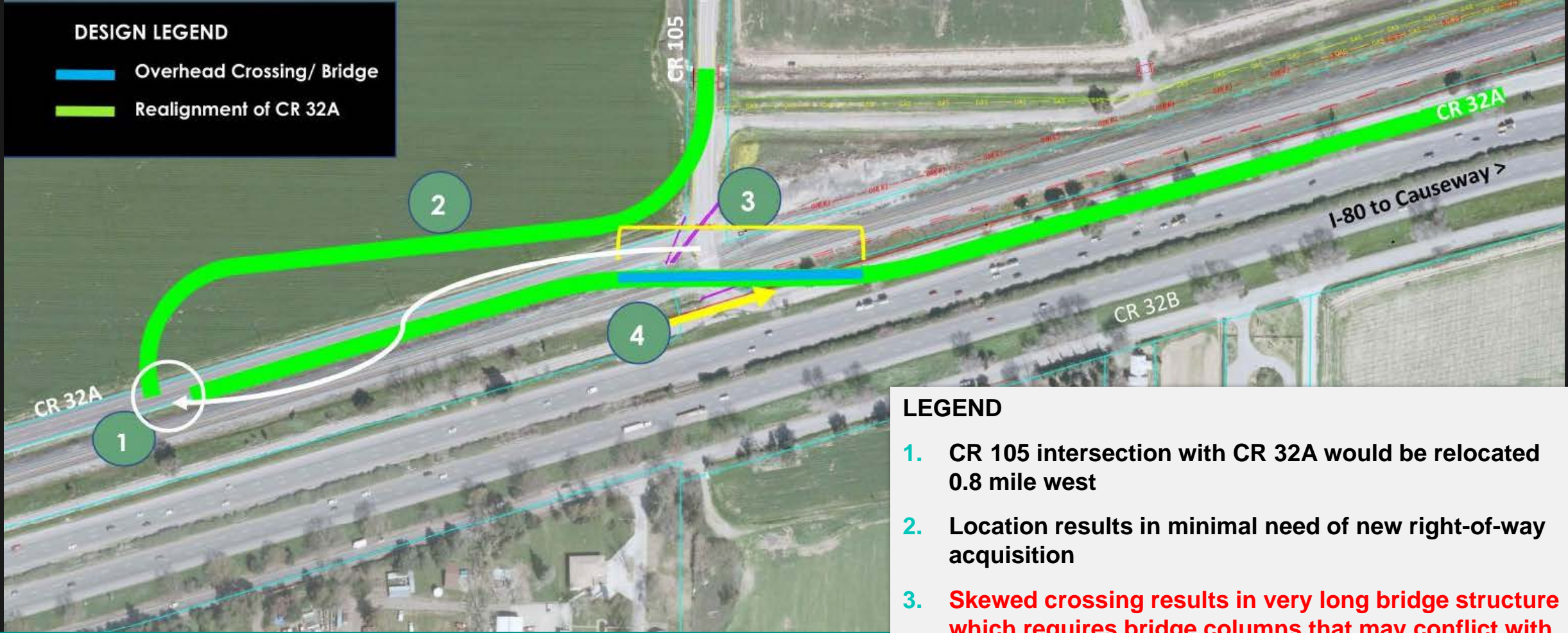
# Alternative 5: Overhead Crossing, Design Speed 55 MPH

Crossing shifted approx. 0.5 mile east  
Skewed crossing



## DESIGN LEGEND

- Overhead Crossing/ Bridge
- Realignment of CR 32A

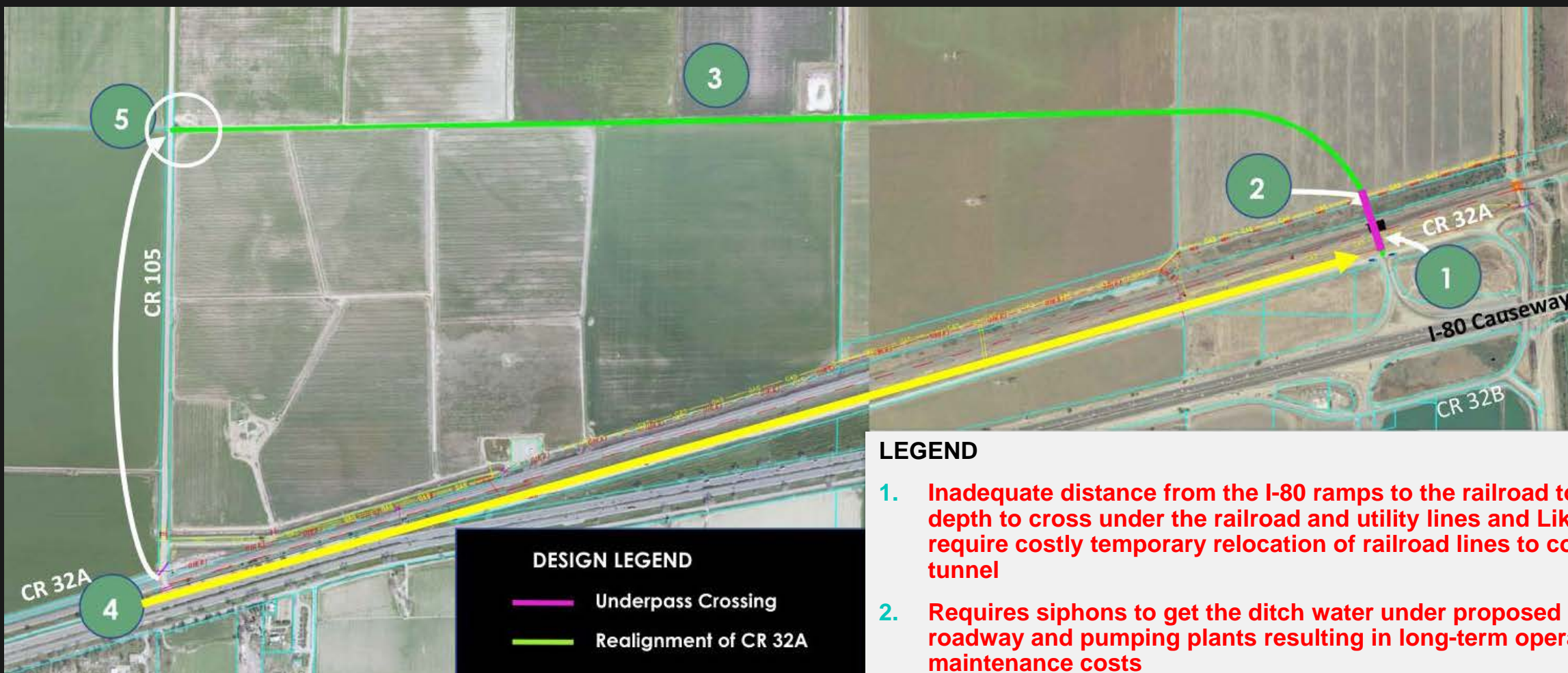


## LEGEND

- CR 105 intersection with CR 32A would be relocated 0.8 mile west
- Location results in minimal need of new right-of-way acquisition
- Skewed crossing results in very long bridge structure which requires bridge columns that may conflict with gas pipeline or fiber lines within UPRR right-of-way
- Class I bike path would be not be lengthened
- Costly retaining walls would be required in order to support the bridge in this location between I-80 and CR 32A

# Alternative 6: Overhead Crossing, Design Speed 55 MPH

No shift in crossing location  
Skewed crossing



#### LEGEND

1. Inadequate distance from the I-80 ramps to the railroad to meet depth to cross under the railroad and utility lines and Likely to require costly temporary relocation of railroad lines to construct tunnel
2. Requires siphons to get the ditch water under proposed new roadway and pumping plants resulting in long-term operation and maintenance costs
3. Alignment mimics Alternative #3 – Extensive new right-of-way, but alignment allows for farming to continue on either side of CR 32A
4. Class I bike path would use existing CR 32A for entire length (almost 2.0 miles), pass over new depressed roadway to the I-80 bike path
5. New Intersection at CR 105 would be about 0.6 miles north of the current crossing
6. Likely to require costly temporary relocation of railroad lines to construct tunnel

## Alternative 7: Underpass Crossing, Design Speed 55 MPH

Crossing shifted approx. 1.8 miles east  
Perpendicular crossing



# Alternatives Comparison Table

Alternative	Design Speed	Separates Roadway From Railroad	Potential Utility conflicts	Approximate right-of-way needed	Additional feet of Class I Bike path	Long-term maintenance issues	Estimated Cost (\$Millions)
<b>Alternatives 1 – 3 are Carried Forward for Further Study</b>							
<b>1: Overhead Crossing</b>	50	Yes	Overhead power poles, gas pipeline	5.6 acres	0.5 mile	Low to none	\$18.5
<b>2: At-grade Crossing</b>	40	No	None	13.8 acres*	1.5 miles	Low to none	\$6.35
<b>3: At-grade Crossing</b>	45	No	None	12.1 acres	1.5 miles	Low to none	\$5.85
<b>Alternatives 4 – 7 are Removed from Further Consideration</b>							
<b>4: Underpass Crossing</b>	55	Yes	Gas pipeline	4.0 acres	0.5 mile	Drainage pump and siphons	
<b>5: Overhead Crossing</b>	55	Yes	Overhead power poles, gas pipeline	5.0 acres	0.5 mile	Low to none	
<b>6: Overhead Crossing</b>	55	Yes	Relocate overhead power poles, gas pipeline	5.6 acres*	0 mile	Low to none	
<b>7: Underpass Crossing</b>	55	Yes	Gas pipeline	13.8 acres	2.0 miles	Drainage pump and siphons	

\* Indicates alignment results in potentially unfarmable remnant lands

# SEND US YOUR INPUT

Please email your comments to:

Todd.Riddiough@yolocounty.org

with subject line: *Comments on the CR 32A Railroad Crossing Relocation Study*

Or mail written comments to:

Department of Community Services, Public Works Division

Attention: *CR 32A Railroad Crossing Relocation Study*,

292 West Beamer Street, Woodland, CA 95695

**Written Comments are due by 5:00 PM on September 4, 2020**



# Online Public Meeting Opportunity

You will also be able to provide verbal feedback and ask questions of the project team during an online open house.

Due to the pandemic, we will not be having an in-person public meeting. Instead, we will hold an online open house on:

August 31, 2020, from 5:30 – 7:00 PM.

You can join this online meeting at any time during the 1.5 hour window to participate.

A link to this online Zoom Meeting is located on the project webpage (*where you clicked the link for this presentation*). Contact Todd Riddiough if you need assistance at [todd.riddiough@yolocounty.org](mailto:todd.riddiough@yolocounty.org).

# Online Public Meeting Opportunity

**Examples of valuable input would be to answers these questions:**

- For what purpose do you use CR 32A roadway?
- What concerns do you have for this roadway and railway crossing?
- Do you have any comments about the project purpose or need for a relocated crossing?
- Which alternative do you prefer and why?
- Are any of the proposed alternatives unfavorable to you and why?

**But you are free to provide us with any feedback on this project**