Wyoming Boulevard Sidepath Study and Conceptual Design Casper, WY

Prepared for: Casper Area Metropolitan Planning Organization

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DN13-0397

FEHR PEERS

Table of Contents

Chapter 1.	Introduction	1
Chapter 2.	Data Collection	3
2.1	GIS Data	5
2.1	GIS Data	
2.2	Field Review	
2.3	Trail Plans Review	∠
Chapter 3.	Alternative Conceptional Designs	5
3.1	Option 1	6
	3.1.1 Challenges and Constraints	6
	3.1.2 Right-of-Way Considerations	3
3.2	Option 2	10
	3.2.1 Challenges and Constraints	10
	3.2.2 Right-of-Way Considerations	12
3.3	Option 3	14
3.4	Cost Estimates	15
Chapter 4.	Summary of Conceptual Designs	16



Appendices

Appendix A: Field Notes and Photo Log

Appendix B: Review of the Proposed On- and Off-Street Pedestrian and Bicycle Facilities

Appendix C: Conceptual Design Plan Set

List of Figures

Figure 1-1 Vicinity Map and Site Plan	2
Figure 3-1: Option 1 Sidepath Conceptual Cross-Section	6
Figure 3-2: Option 2 Sidepath Conceptual Cross-Section	10
Figure 3-3: Option 3 Sidepath Conceptual Cross-Section	14
List of Tables	
Table 3-1: Right-of-Way Considerations for Option 1	<u>C</u>
Table 3-2: Right-of-Way Considerations for Option 2	13
Table 3-3: Estimated Cost for Alternative Designs	15
Table 4-1: Consumer Report Matrix	16



CHAPTER 1. INTRODUCTION

Jurisdictions across the nation, including Casper, are realizing the importance that pedestrian and bicycling infrastructure has on the quality of life and personal health of its residents. These facilities provide residents of all ages with a better choice of transportation whether commuting to work, traveling to and from school, or simply for recreational purposes. Planning for these facilities is only the first step in this process; designing facilities that provide the safety and comfort level for all age groups is the true challenge. It is realized that in order to make these facilities truly successful, the public's perception of safety and convenience play a big role.

Fehr & Peers has applied a safety and convenience approach to the feasibility assessment and conceptual design of the proposed sidepath options along Wyoming Boulevard in Casper, WY. The sidepath will travel from CY Avenue (West Casper) to Yellowstone Highway (East Casper) for a total of eight miles. **Figure 1-1** shows the site vicinity map. This document is intended to provide a summary of the analysis and the conceptual designs for the three design options. The study included the following tasks:

- Document Review and Data Collection Review and understand the existing plans and policies related to the proposed sidepath and conduct a field visit.
- 2. **Right-of-Way and Easement Assessment** Collect GIS data from the Casper Area MPO on the location of ROW and documented easements.
- 3. **Conceptual Planning** Evaluate the feasibility of constructing a multi-use path along Wyoming Boulevard.
- 4. **Cost Estimating** Develop high-level cost estimate for each option.



20 { **26** Eastdale Park E 2nd St W 1st St 20 (220) Washington Park Three Crowns Golf Course E 12th St E 13th St (258) W 13th St Central Wyoming Fairgrounds (251) E 21st St Casper Golf Club Casper Country Club 252 Yellowstone National Park Wyoming

Figure 1-1 Vicinity Map and Site Plan



CHAPTER 2. DATA COLLECTION

Prior to initiating the conceptual design of the sidepath options, various data were collected to establish an understanding of the existing conditions along the corridor and future projects that might influence the location of the path and types of connections to it. Data was collected from various sources:

- Casper Area MPO GIS aerial photography, contours, and parcel boundaries
- Natrona County Assessor's Office property value information
- Field Visit existing conditions, photo inventory, document potential challenges
- Trail Plan Review potential future trails/parks and connections

The available parcel, right-of-way, and easement information was limited in some areas. In locations where property information was limited, the visible fence lines observed in the field and through aerial images were relied on to estimate the approximate right-of-way location.

All of the provided data was utilized to determine the most appropriate designs for each of the three alternative options.

2.1 GIS Data

The Casper Area MPO provided aerial photography, 2-foot contours, and parcel boundaries from their GIS database. It should be noted that the aerial photography is slightly outdated and did not include some of the newly constructed intersections, accesses, and businesses along the Wyoming Boulveard corridor and thus other mapping resources were utilized to supplement the provided aerials.

The contours and parcel boundaries were layered on top of the aerial photography to further understand the character and constraints of the sidepath alternative designs. Parcel lines are for information purposes only and serve to identify the potential right-of-way boundaries. Unfortunately the parcel information does not perfectly align with the fence/property lines shown on the aerials. Together the parcel lines, the fence lines shown on aerial mapping, and field verification were used to identify the approximate location of the right-of-way line. Thus the property impacts and associated costs discussed later in this report are approximate and will require further verification to truly understand the limits of impact.



2.2 Field Review

In order to document the existing conditions, challenges, and opportunities along the corridor, Fehr & Peers visited the site on April 10th, 2013. The entire corridor was driven twice and Fehr & Peers staff walked many portions of the roadway to take notes and photographs. This field visit provided great insight on the type of pedestrian/bicycle facility and potential conflict points that exist along Wyoming Boulevard. The field notes and photos are available in **Appendix A**.

2.3 Trail Plans Review

A review of the following bicycle and pedestrian facility plans was conducted to identify existing or proposed bicycle or pedestrian facilities located within the vicinity of our project limits that may require further evaluation of appropriate on- and off-street trail connections to the proposed Wyoming Boulevard sidepath.

- Casper Metropolitan Area Multi-Use Trail System Plan
- Garden Creek/Sedar Draw Conceptual Trails Design Study
- Morad Park Bypass plans

The review of these documents indicated that the majority of these on- and off-street facilities have not been implemented yet with the exception of the following:

- Soft-surface trail surrounding Yesness Park
- Unimproved portion of Casper Rail Trail Near Yellowstone Hwy
- Improved Long Path near Long Park
- Improved CY Avenue Path on the western end of the study area

The current status of the proposed on- and off-street pedestrian and bicycle facilities that have connections with Wyoming Boulevard are summarized in **Appendix B**. As the Casper Area Trails, Path, and Bikeway Plan (CATPBP) is developed, consideration should be given to incorporating these planned on- and off-street trail connections into future design plans for the Wyoming Boulevard sidepath.



CHAPTER 3. ALTERNATIVE CONCEPTIONAL DESIGNS

The proposed sidepath will be a hard surface trail that extends the entire length of Wyoming Boulevard between CY Avenue and Yellowstone Highway. Conceptual designs were developed in AutoCAD on an aerial map base provided by the Casper Area MPO. The conceptual designs were based on information gathered during our document review task, the on-site field evaluation, guidance provided within the AASHTO Guide for the Development of Bicycle Facilities, private property and utility impacts, and likely capital cost considerations.

Initially, the three sidepath options included the following:

- Option 1. A 10-foot wide, detached, two-way multi-use path on one side of Wyoming Boulevard
- Option 2. An 8-10-foot, detached, one-way multi-use path on both sides of Wyoming Boulevard
- Option 3. A combination of detached and attached multi-use paths on both sides of Wyoming Boulevard

However, these options were modified to provide more feasible conceptual designs that took into account the existing topographic, utility, and right-of-way constraints. Based on discussions with the MPO staff, the original three sidepath options were modified to arrive at the following three proposed options:

- Option 1. A 10-foot two-way combo (detached/attached) sidepath along the north side of Wyoming Boulevard.
- Option 2. A 10-foot two-way combo (detached/attached) sidepath along the south side of Wyoming Boulevard.
- Option 3. A 10-foot one-way combo (detached/attached) sidepath along both sides of Wyoming Boulevard (this is essentially Option 1 and Option 2 combined).

The conceptual design alternatives (provided in **Appendix C**) identified the following issues:

- Potential cut/fill locations and need for retaining walls and railings
- Locations requiring new drainage or adjustments to existing drainage facilities
- Areas that may require removal of existing pedestrian sidewalk facilities
- Sensitive environmental areas that may require further study
- Right-of-way encroachments
- Utility and major sign structure impacts



It should be noted that there are plans to widen Wyoming Boulevard to four lanes between Casper Mountain Road and 15th Street. This project is not currently listed on the WYDOT State Transportation Improvement Program (STIP), which projects to 2019. Within this segment, the sidepath was designed to accommodate the future widening. It was assumed that widening would include an additional 12-foot travel lane in each direction along with a 12-foot auxiliary lanes and 7-foot buffer from the proposed sidepath. Therefore, the sidepath was offset 20 to 27 feet from the existing edge of pavement to ensure the widening project would not require reconstruction of the sidepath. If the widening does not occur, then the sidepath will have a wide buffer that will enhance the comfort and safety of users.

3.1 **Option 1**

Option 1 proposes a 10-foot two-way combination (detached/attached) sidepath along the north side of Wyoming Boulevard. An illustration of the proposed cross section is provided below (Figure 3-1).

Existing North Side Wyoming Blvd South Side Varies. Varies. Minimum of Minimum of Varies 2 ft 2 ft 5 ft 5 ft 5 ft Gradino Sidepath Sidepath Grading Buffer Edge of Pavement/ Area Area Shoulder/Curb Edge of Existing Slope or Right-of-Way

Figure 3-1: Option 1 Sidepath Conceptual Cross-Section

3.1.1 Challenges and Constraints

Based on our review of existing field conditions and the proposed sidepath layout for Option 1, we have identified the following challenges and constraints:

• Accommodations for Steep Slopes and Embankments

- o Between CY Avenue and Denis Drive due to the uphill between Wyoming Boulevard and the Shell Gas Station property (Sheet 4)
- Just north of Eagle Drive, near the residential properties, due to slope (Sheet 6)
- Just south of Eagle Drive due to steep slope (Sheet 7)
- Just south of the church access due to steep slope (Sheet 14)



- o Between McKinley Street and Scenic Route due to steep slope (Sheet 17)
- Various segments between Scenic Route and Kingsbury Drive due to steep slope (Sheets 22, 24)
- o Between Kingsbury Drive and Centennial Village Drive due to steep slope (Sheet 26)

• Trail Width Constraints (less than 10 feet)

- o North of 15th Street due to existing fence line and concrete ditch, 6-foot trail (Sheets 28 and 29)
- o Between the Safeway access and 2nd Street due to right-of-way, large utilities, and existing retaining wall (Sheet 32)

• Buffer Width Constraints (less than 7 feet)

- South of Sunrise Drive along residential properties due to existing fence, 5 foot buffer (Sheet 10)
- Attached: Between Denis Drive and Outer Road due to the topography and right-of-way
 (Sheet 4)
- Attached: South of Sunrise Drive to Coffman Avenue due to large utility poles, a large drainage structure, and topography (Sheet 10)
- Attached: Between Coffman Avenue and Poplar Street due to available width between
 Wyoming Boulevard and the apartment complex property (Sheet 11)
- o Attached: Either side of the Yesness Park Access due to the topography (Sheet 12)
- o Attached: Between 15th Street and 12th Street due to existing fence line and concrete ditch (Sheets 28 and 29)
- o Attached: Gannett Street to Safeway access due to existing buildings (Sheet 32)
- Attached: Between I-25 ramp terminal intersections due to existing bridge columns (Sheets 33, 34)

• Utility Relocation

- o Small utility boxes and markers along fences near Arroyo Drive (Sheet 9)
- o Small utility boxes and meters along fences north of 12th Street (Sheets 29, 30)
- o Light poles north and south of Carriage Lane (Sheets 30, 31)
- o Large utility box south and north of Carriage Lane (Sheets 30, 31)
- o Traffic Controller Cabinet and utility meters on the northwest corner of the intersection at Carriage Lane (Sheet 31)



- o Small utility meters north of Gannett Street (Sheet 32)
- o Relocate Fire Hydrant on northwest corner of intersection with 2nd Street (Sheet 32)
- o Large utility box south of Legion Lane (Sheet 33)

• Potential Environmentally Sensitive Area (requires further study)

- o South of Sunrise Drive, south of residential fences (Sheet 10)
- Just south of the church access (Sheet 14)
- Midway between Casper Mountain Road and McKinley Street (Sheet 15)
- o South of McKinley Street, near the detention pond (Sheet 17)

• Drainage Structure Adjustments

- Extension of the drainage structure, south of McKinley Street, near the detention pond
 (Sheet 17)
- o Extension of the drainage structure, north of Scenic Route (Sheet 20)
- Extension of the drainage structure, midway between Scenic Route and Kingsburg Drive (Sheet 24)
- **Sidewalk Removal** (it is assumed that all existing sidewalks along the north side of Wyoming Boulevard will be removed and replaced with the proposed sidepath)
 - o Between Denis Drive and Outer Drive (Sheet 4)
 - o Between Arroyo Drive and Yesness Park Access (Sheets 9, 10, 11)
 - o Between 15th Street and Yellowstone Highway (Sheets 28 to 34)

Other

- o Relocation of large sign at the bank entrance (Sheet 32)
- South of Legion Lane, backed in parking results in vehicle's back ends encroaching 2 to 4 feet onto proposed sidepath (Sheet 33)

3.1.2 Right-of-Way Considerations

The majority of right-of-way impacts were focused on both the east and west ends of the corridor in the more developed commercial areas. Since this land is more developed, it is more valuable and would thus have a higher acquisition cost. The table below summarizes the general location of the property impact,



property owner information, corresponding sidepath design plan sheet number, impacted acreage, and associated value.

The value of potential property acquisitions was estimated by linking the GIS parcel ID numbers and the County Assessors property value database. The property values were converted into price per acre. The assumed acreage was measured as the area needed for the sidepath cross section, plus two feet from back of the sidepath.

As previously noted, based on the discrepancies between the fence line in the aerials and parcel line information, these right-of-way impacts will need to be evaluated further during the final design to provide a more accurate assessment of impacts.

Table 3-1: Right-of-Way Considerations for Option 1

Ref. No.	Location	Brief Description	Property Owner	Sheet No.	Area (acre)	Price
1-1	Between CY Ave and Denis Dr	Shell Gas Station Property	Dooley Oil Inc	4	0.16	\$ 85,822.13
1-2	Between CY Ave and Denis Dr	Car Wash Property	Dooley Oil Inc	4	0.09	\$ 65,457.96
1-3	South of Plaza Dr/Outer Dr	Diner Property	Ricor Properties LLC	4, 5	0.04	\$ 17,129.45
1-4	West of Arroyo Dr	Vacant Property adj. to residential fence	Mesa Development Inc.	8	0.05	\$ 339.19
1-5	Northeast corner of Poplar St	Adj. to Elementary School Property	City of Casper	11	0.05	\$ -
1-6	Between Casper Mtn Rd and McKinley St	Vacant Property	Leroy Thomas et UX	14	0.41	\$ 10,135.83
1-7	Between Casper Mtn Rd and McKinley St	Vacant Property	Lyle D Wirth et Al Trustees	14, 15	0.62	\$ 1,377.81
1-8	Between Casper Mtn Rd and McKinley St	Vacant Property	David Frech et Al	15, 16	0.75	\$ 2,729.07
1-9	Between Casper Mtn Rd and McKinley St	Vacant Property	Ronald E. Wright Living Trust	16	0.66	\$ 1,613.54
1-10	South of Kingsbury Dr	Vacant Property	Country Club	22, 23	1.51	\$ 1,146.41
1-11	South of Carriage Ln	Elementary School Property	Natrona County School District	30, 31	0.18	\$ -
1-12	North of Gannett St	Bank Property	Community First National Bank	32	0.09	\$ 142,628.77
1-13	North of Gannett St	Village Inn Property	Falgers Inc.	32	0.09	\$ 26,662.30
				Total	4.61	\$ 355,042.46



3.2 **Option 2**

Option 2 provides a 10-foot two-way combination (detached/attached) sidepath along the south side of Wyoming Boulevard. An illustration of the proposed cross section is provided below (**Figure 3-2**).

Existing North Side Wyoming Blvd South Side Varies. Varies, Minimum of Minimum of 2 ft 5 ft 2 ft 5 ft 5 ft Grading Buffer Grading Sidepath Sidepath Edge of Pavement/ Area Area Shoulder/Curb Edge of Existing Slope or Right-of-Way

Figure 3-2: Option 2 Sidepath Conceptual Cross-Section

3.2.1 Challenges and Constraints

Based on our review of existing field conditions and the proposed sidepath layout for Option 2, we have identified the following challenges and constraints:

Accommodations for Steep Slopes and Embankments

- o Just north of Eagle Drive, near the residential properties due to steep slope (Sheet 6)
- o Between McKinley Street and Scenic Route due to steep slope (Sheet 17)
- o Midway between Scenic Route and Kingsbury Drive due to steep slope (Sheet 24)
- o Between Kingsbury Drive and Centennial Village Drive due to steep slope (Sheet 26)
- o Between Mall Driveway and 2nd Street due to steep slope (Sheet 32)

• Trail Width Constraints

o Between CY Avenue and Denis Drive due to width between Wyoming Boulevard curband-gutter and the small retaining wall along the Starbucks property (Sheet 4).

Buffer Width Constraints

Between Arroyo Drive and Valley Road due to existing concrete ditch, 2 foot buffer (Sheet
 9)



- Between Coffman Avenue and Poplar Street due to existing retaining wall for the church parking lot, 2 foot buffer (Sheet 11)
- Attached: Between I-25 ramp terminal intersections due to existing bridge columns (Sheets 33, 34)

• Potential Environmentally Sensitive Area (requires further study)

- North of Chinook Trail/Coffman Avenue (Sheet 10)
- o Just south of the church access (Sheet 14)
- o Midway between Casper Mountain Road and McKinley Street (Sheet 15)
- o South of McKinley Street, across from the detention pond (Sheet 17)

• Utility Relocation

- o Light poles between Mall Driveway and 2nd Street (Sheet 32)
- Small utility boxes and utility meters on northeast corner of intersection with 2nd Street (Sheet 32)

• Drainage Structure Adjustments

- Extension of the drainage structure, south of McKinley Street, across from the detention pond (Sheet 17)
- o Extension of the drainage structure, north of Scenic Route (Sheet 20)
- Extension of the drainage structure, west of Kingsbury Drive (Sheet 24)
- **Sidewalk Removal** (it is assumed that all existing sidewalks along the south side of Wyoming Boulevard will be removed and replaced with the proposed sidepath)
 - o South of Plaza Drive (Sheets 4, 5)
 - Southeast of Eagle Drive (Sheet 7)
 - o Between Centennial Hills Boulevard and Yellowstone Highway (Sheets 28 to 34)

Other

- Near Denis Drive, backed in parking results in vehicle's back ends encroaching 2 to 4 feet onto proposed sidepath(Sheet 4)
- Southeast corner of intersection at Casper Mountain Road, caution constructing trail around traffic control box (Sheet 13)
- o Relocation of large sign at the mall entrance (Sheet 31)



- South of Legion Lane, backed in parking results in vehicle's back ends encroaching 2 to 4 feet (Sheet 33)
- Traffic Controller Cabinet and pedestrian signal pole on the northwest corner of the I-25
 Westbound ramp terminal intersection (Sheet 34)

3.2.2 Right-of-Way Considerations

The majority of right-of-way impacts were focused on both the east and west ends of the corridor in the more developed commercial areas. Since this land is more developed, it is more valuable and thus have a higher acquisition cost. A major reason for the higher right-of-way costs with Option 2 was due to the impacts to the Eastridge Mall property, which identified the property line at the existing back edge of sidewalk. The table below summarizes the general location of the property impact, property owner information (where available), corresponding sidepath design plan sheet number, impacted acreage, and associated value.

The value of potential property acquisitions was estimated by linking the GIS parcel ID numbers and the County Assessors property value database. The property values were converted into price per acre. The assumed acreage was measured as the area needed for the sidepath cross section, plus two feet from back of the sidepath.

As previously noted, based on the discrepancies between the fence line in the aerials and parcel line information, these right-of-way impacts will need to be evaluated further during the final design to provide a more accurate assessment of impacts.



Table 3-2: Right-of-Way Considerations for Option 2

	Location	Brief Description	Property Owner	Sheet	Area (acre)	Price
2-1	Between CY Ave and Starbucks Access	Starbucks Property	Platte River Crossing	4	0.11	\$ 109,848.68
2-2	Between CY Ave and Starbucks Access	Business Property	S E P Family LTD	4	0.27	\$ 60,669.13
2-3	South of Plaza Dr/Outer Dr	McDonalds Property	McDonald's Real Estate	4	0.09	\$ 43,185.44
2-4*	South of Plaza Dr/Outer Dr	Credit Union Property	Reliant Federal Credit Union	4	0.01	\$ 373.50
2-5	Between Plaza Dr and Talon Dr	Business/Vacant Property	Long Term LLC	5	0.19	\$ 7,096.53
2-6	Northwest corner at Eagle Dr	Vacant Property	R C Shogi LLC	7	0.09	\$ 17,563.24
2-7	Southwest corner at Eagle Dr	Bank Property	Western Vista Federal Credit Union	7	0.01	\$ 19,392.94
2-8*	Southeast corner at Coffman Ave	Church Property	Shephard of the Hills Presbyterian Church	10	0.04	\$ 6,337.37
2-9	North of Blackmore Rd	Open Space Property near Pedestrian Bridge	City of Casper	30	0.37	\$ -
2-10	Between Blackmore Rd and Mall Entrance	Mall Property	PDC- Eastridge Mall LLC	30, 31	0.26	\$ 141,760.83
2-11	Between Mall Entrances	Mall Property	PDC- Eastridge Mall LLC	31, 32	0.51	\$ 278,069.33
2-12	Between Mall Entrance and 2nd St	Mall Property	PDC- Eastridge Mall LLC	32	0.44	\$ 239,902.95
				Total	2.39	\$ 924,199.94

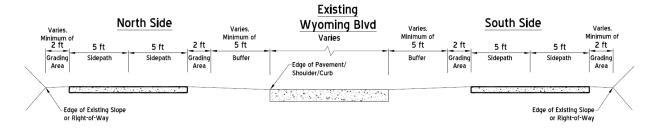
^{*} Estimated based on adjacent parcel value due to insufficient data.



3.3 Option 3

Option 3 provides a 10-foot one-way combination (detached/attached) sidepath along both sides of Wyoming Boulevard. An illustration of the proposed cross section is provided below (**Figure 3-3**).

Figure 3-3: Option 3 Sidepath Conceptual Cross-Section



Since Option 3 combines both the north and south sidepaths into one option, the challenges and constraints discussion for those options should be referenced to understand the impacts presented within this option.

Similar to the challenges and constraints discussion above, the right-of-way considerations discussion for Options 1 and 2 can be referenced to understand the impacts presented within Option 3.

There is potential to alter Option 3 to include only one sidepath that alternates between the north and south sides of Wyoming Boulevard. The benefits of this approach would be:

- Provides a full-width trail the entire length of the corridor
- Reduces impacts to environmentally sensitive areas
- Lessens need for right-of-way acquisitions
- Decreases number of potential utility relocations

There are a few major concerns with having an alternative path that need to be considered:

- Introduces multiple crossing for users on an arterial roadway with high speed vehicles
- Increases travel time for sidepath users



If this alternative were to warrant future consideration, we have identified the preferred location of the alignment for each segment below:

- CY Avenue to Eagle Drive North side
- Eagle Drive to Arroyo Drive Either side (Would require a signalized crossing at or near Arroyo Drive)
- Arroyo Drive to Casper Mountain Road North side
- Casper Mountain Road to 15th Street Either side
- 15th Street to 2nd Street South side
- 2nd Street to Yellowstone Highway Either side

3.4 Cost Estimates

Cost estimates were developed for each option utilizing cost data provided within the 2012 WYDOT Weighted Average Bid Prices. For items not found within the WYDOT reference, 2012 cost data from the Colorado Department of Transportation was utilized. A summary of the total cost for each option broken out by capital, contingency, and right-of-way acquisition costs is provided below. A detailed breakdown of the unit cost for each item is provided on the summary of quantities sheet within the conceptual design plan set.

Table 3-3: Estimated Cost for Alternative Designs

	Option 1	Option 2	Option 3
Capital Cost Subtotal	\$ 5,133,500	\$ 5,306,500	\$ 10,440,000
Contingency (30%)	\$ 1,540,050	\$ 1,591,950	\$ 3,132,000
Right-of-Way Cost	\$ 355,042	\$ 924,200	\$ 1,279,242
Total Cost	\$ 7,028,592	\$ 7,822,650	\$ 14,851,242



CHAPTER 4. SUMMARY OF CONCEPTUAL DESIGNS

In order to provide reviewers with an understanding of how each of the sidepath options compares to one another, a consumer report style matrix was developed. It evaluated the following categories:

- **Topographical and Space Constraints** Considers the number of locations where the sidepath would need to use minimal widths or be attached to the roadway to avoid a space constraint.
- **Weather and Prevailing Winds** The prevailing winds found along the corridor make a sidepath located on the north side more desirable
- Connection to future on- and off-street trail network Generally the majority of existing and future trail connections will be provided on the north side of the Wyoming Boulevard
- **Constructability** Considers the amount of drainage, utility, environmental impacts that would need to be mitigated
- Capital Funding Requirements Generally lower capital cost is preferable
- **Right-of-Way Impacts** Considers the number of potential right-of-way impacts and the associated cost.

Table 4-1: Consumer Report Matrix

	Option 1	Option 2	Option 3
Topographical and Space Constraints	0	•	•
Weather and Prevailing Winds	•	0	•
Connection to Future On- and Off- Street Trail Network	•	0	•
Constructability	•	•	•
Capital Funding Requirements	•	•	0
Right-of-Way Impacts	•	0	0
Low (Less Desirable)		● High (Mo	ost Desirable)



APPENDIX A: FIELD NOTES AND PHOTO LOG





Place trail along roadway

Tie trail into Sidewalk

100 0 100 200 1" = 100' GRAPHIC SCALE

REVISIONS

DESCRIPTION

DATE BY

Underground Service Alert

1-800
922-1987

TWO WORKING DAYS BEFORE YOU DIG

FEHR PEERS

□ Wainut Creek, CA
□ Roseville, CA
□ San Jose, CA
□ San Francisco, CA

San Diego, CA
Salt Lake City, UT
Reno, NV
Denver, CO
Seattle, WA

 Designed By:
 RP

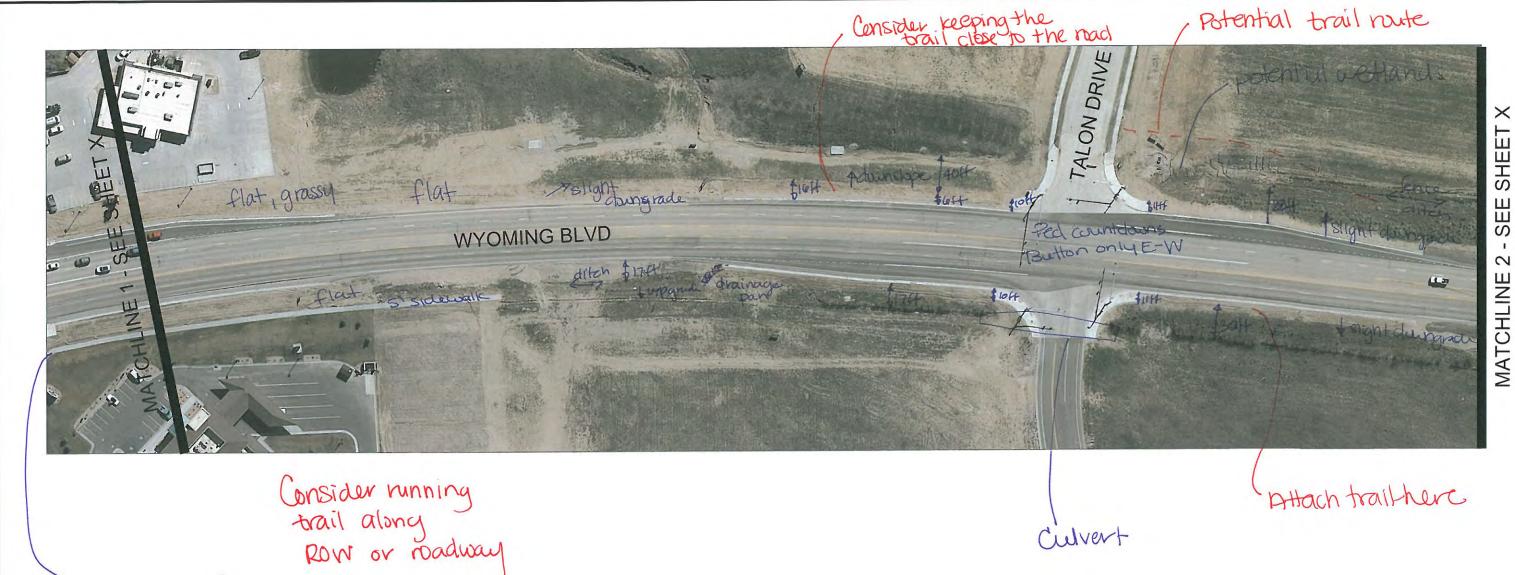
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 Checked By:
 RP

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 XX

 Date:
 4/2013

Conceptual Design
Wyoming Blvd Pedestrian Study
Casper, WY



Need to verify if the sidewalk is withinthe ROW Attach trailhere

Culvert

200 1" = 100' GRAPHIC SCALE

REVISIONS

Underground Service Alert all: TOLL FREE 1-800 922-1987

FEHR PEERS 621 17th Street Suite 2301

4/2013

Conceptual Design Wyoming Blvd Pedestrian Study Casper, WY

SHEET X -or-X



Consider keeping trail close to fence. May need some fill due to the diten.

Consider running trail along side of hill (need retaining wall).

> 100 0 100 200 1" = 100' GRAPHIC SCALE

REVISIONS
NO. DESCRIPTION
DATE BY

Underground Service Alert

Call: TOLL FREE

1-800
922-1987

TWO WORKING DAYS BEFORE YOU DIG

FEHR PEERS

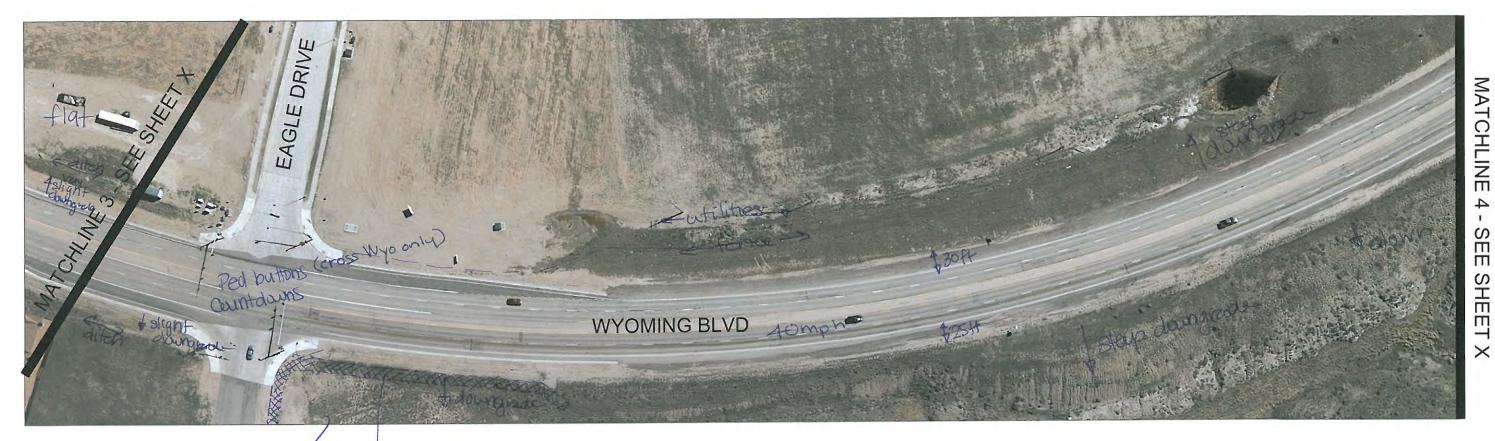
621 17th Street Suite 2301 ■ Walnut Creek, CA ■ Sar ■ Roseville, CA ■ Sal ■ San Jose, CA ■ Rer ■ San Francisco, CA ■ Der

San Diego, CA
Salt Lake City, UT
Reno, NV
Denver, CO
Seattle, WA
CA

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Wyoming Blvd Pedestrian Study
Casper, WY

X — OF — X

rs Associates, its employees, its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sha



new sidewalk
-new development
(very new)

100 0 100 20 1" = 100' GRAPHIC SCALE

REVISIONS

NO. DESCRIPTION

DATE BY

Underground Service Alert

Call: TOLL FREE

1-800
922-1987

FEHR PEERS

□ Walnut Creek, CA
□ Roseville, CA
□ San Jose, CA
□ San Francisco, CA
□ Orange County. CA
□ Seettle, WA

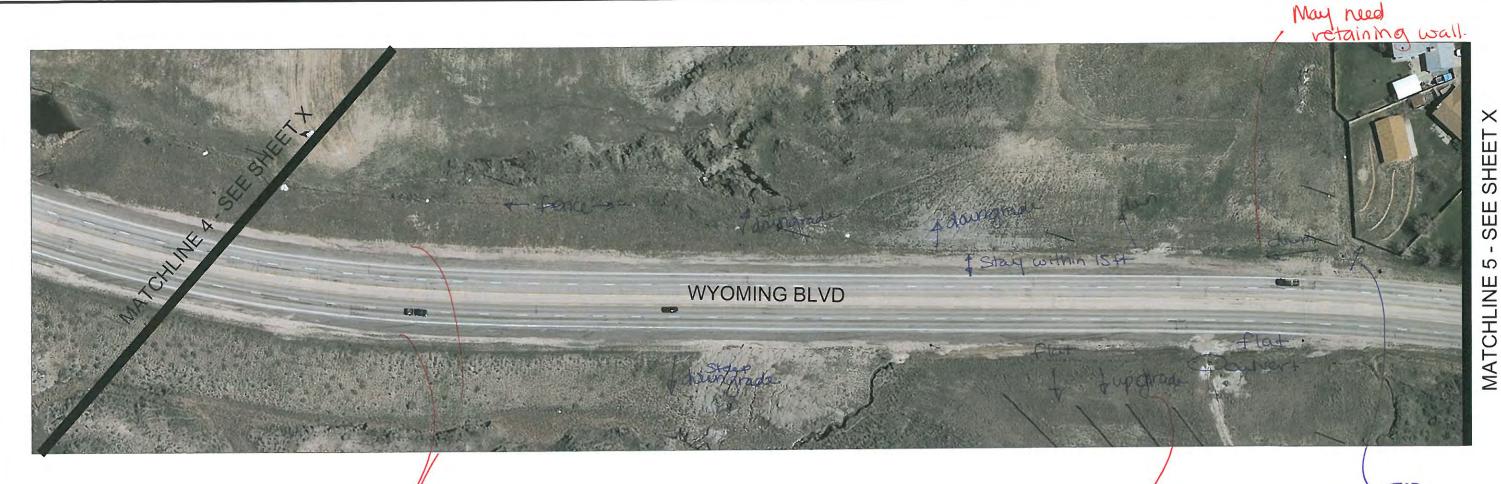
Conceptual Design
Wyoming Blvd Pedestrian Study
Casper, WY

SHEET

X

OF --
X

TWO WORKING DAYS BEFORE YOU DIG



Both sides, consider keeping trail within 15ft of the roadway or filling and placing trail at the fence latter

upgrade.

Consider placing trail along road or on hillside

> 100 0 100 200 1" = 100' GRAPHIC SCALE

REVISIONS

NO. DESCRIPTION

DATE BY

Underground Service Alert

Call: TOLL FREE

1-800
922-1987

FEHR PEERS

621 17th Street Suite 2301 er, CO 80293

San Diego, CA
Salt Lake City, UT
Reno, NV
Denver, CO
Sa Seattle, WA

Designed By: _____RP

Drawn By: _____CS

Checked By: _____RP

Drawing No.: ____XX

Date: _____4/2013

Conceptual Design
Wyoming Blvd Pedestrian Study
Casper, WY

X — OF — X

ehr & Peers Associates, its employees, its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



light poles are close to roadway

New driveway and building (see Google)

Concrete diten Consider piping. and placing path on top or pavallel. Gas utility box. There looks to be enough space to squeeze in the

> 1" = 100' GRAPHIC SCALE

REVISIONS

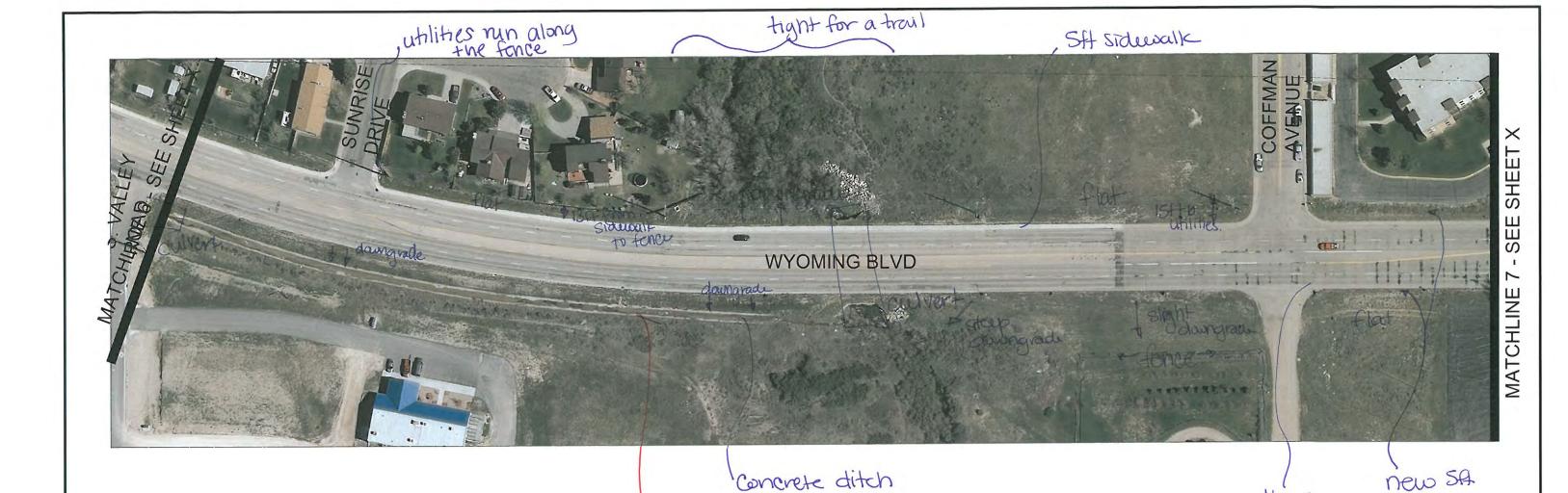
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SHEET X —or— X



Consider either running

trail on S. side of the ditch or pipe the ditch, and put path over.
This may require a retaining wall.

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1" = 100

there

all 4

are ourb

ramps on

corners at

intersection

GRAPHIC SCALE SHEET X —oF — X

sidewalk

(attached)

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Consider placing trail in ditch or along road

Consider an attached trail

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SHEET X —or— X

MATCHLINE 8 - SEE SHEET X

MATCHLINE 9 - SEE SHEET X

Consider Keeping trail attached from driveways to up hills.

> 100 0 100 200 1" = 100' GRAPHIC SCALE

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CA

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 RP

 Drawn By:
 CS

 Checked By:
 RP

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X — OF —



Consider placing trail along roadway or out in hill

Consider placing fence

Consider placing trail in ditch (v10ff off road)

Consider placing trail along utility easement tracks State Maintenana begins Cto the East

Consider running trail along fence and then bring closer to road at the intersection.

100 0 100 200 1" = 100' GRAPHIC SCALE

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Drawn By: CS

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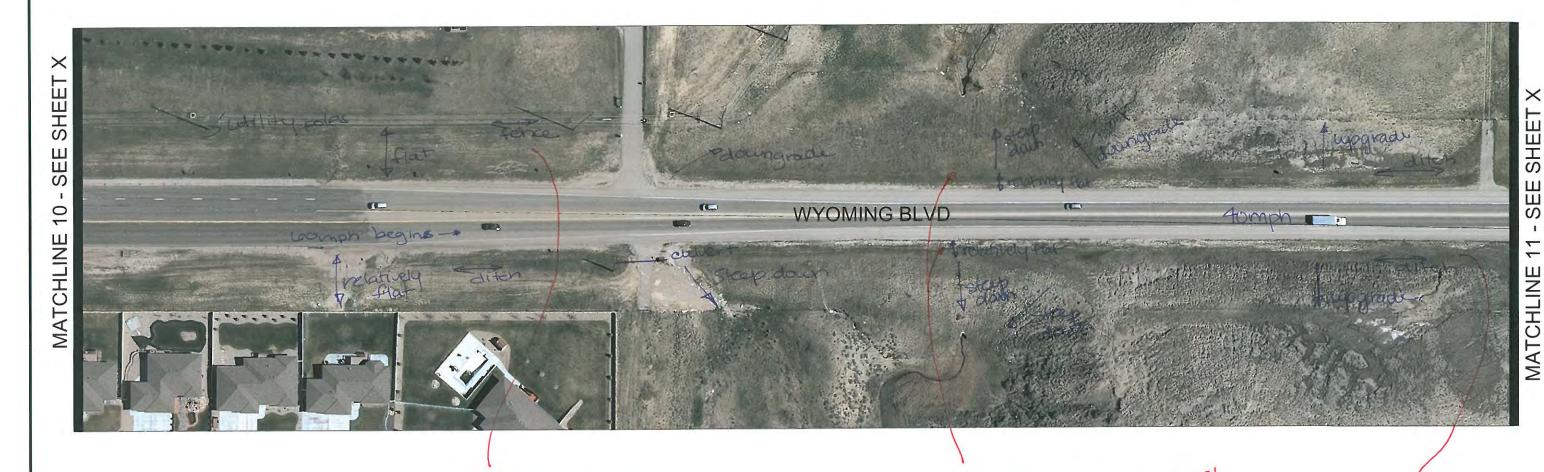
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Consider placing trail along the fence. Be cautious of the variety of utilities (gas, fiber, phone). Consider keeping trail attached to roadway (both sides)

Place trail In the middle of the ditch

100 0 100 200 1" = 100' GRAPHIC SCALE

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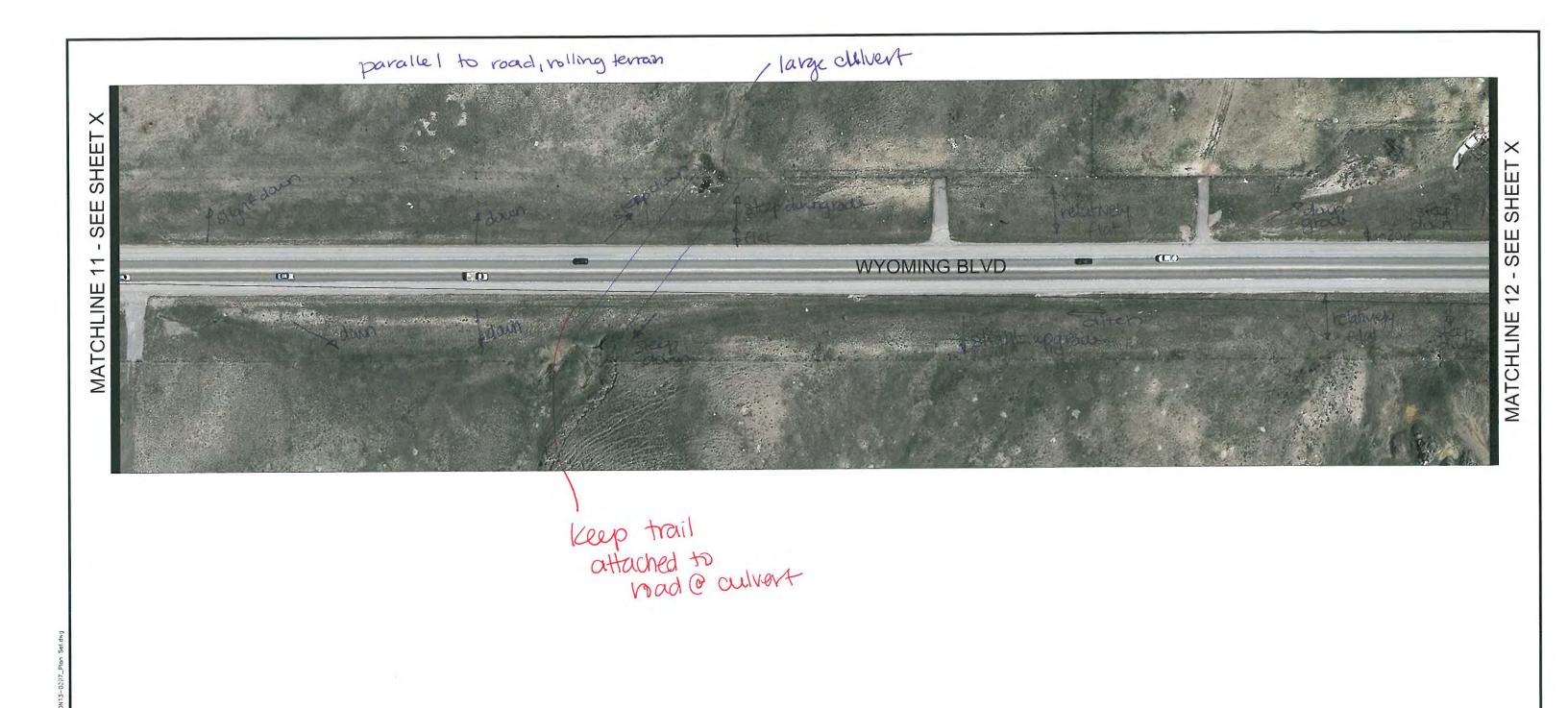
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X — OF — X



Consider running trail along the fence.
Potentially combine ditch and trail

Consider bringing trail towards road at driveways

1" = 100'GRAPHIC SCALE

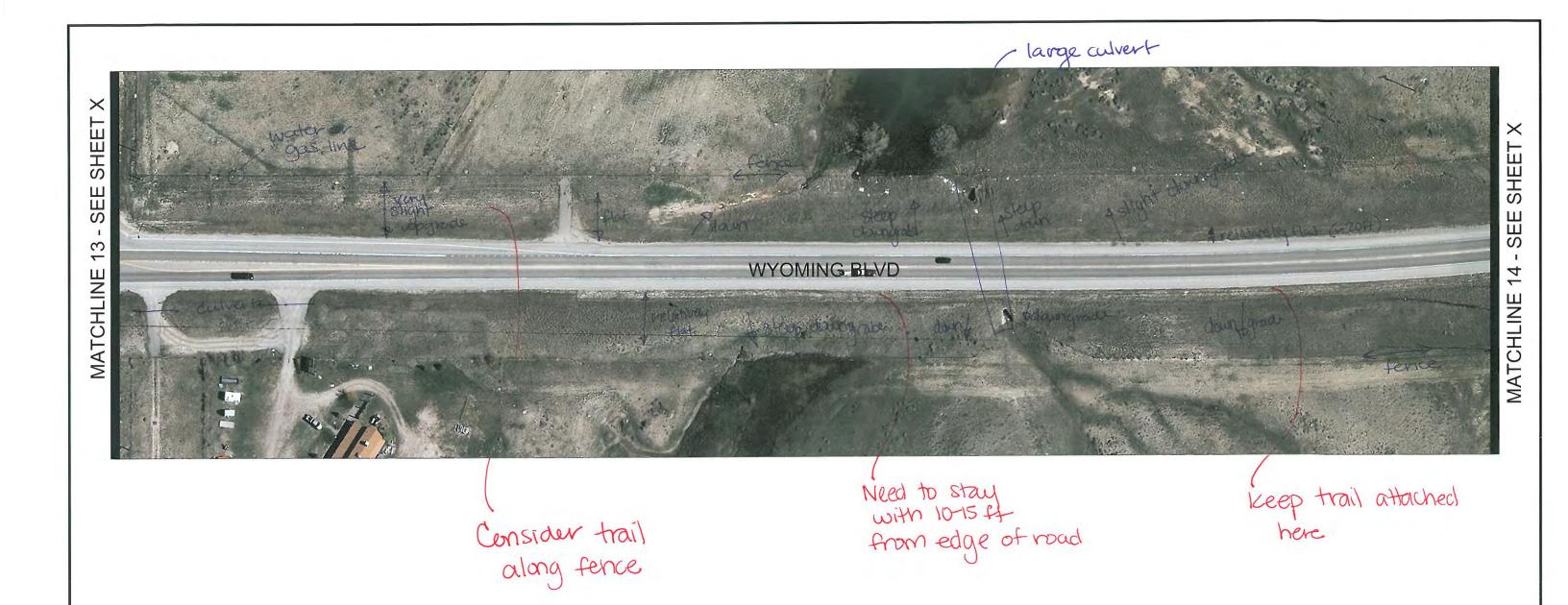
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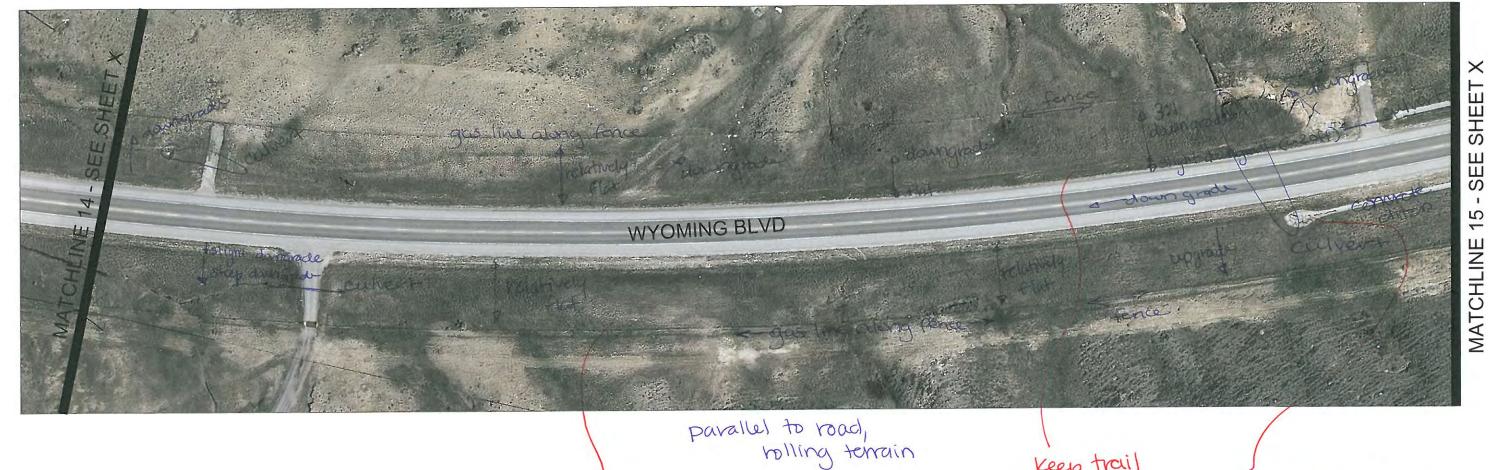
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1" = 100'

GRAPHIC SCALE SHEET X __OF__ X

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keep trail near road

Consider piping ditch or combine w/trail

Consider running trail along fence

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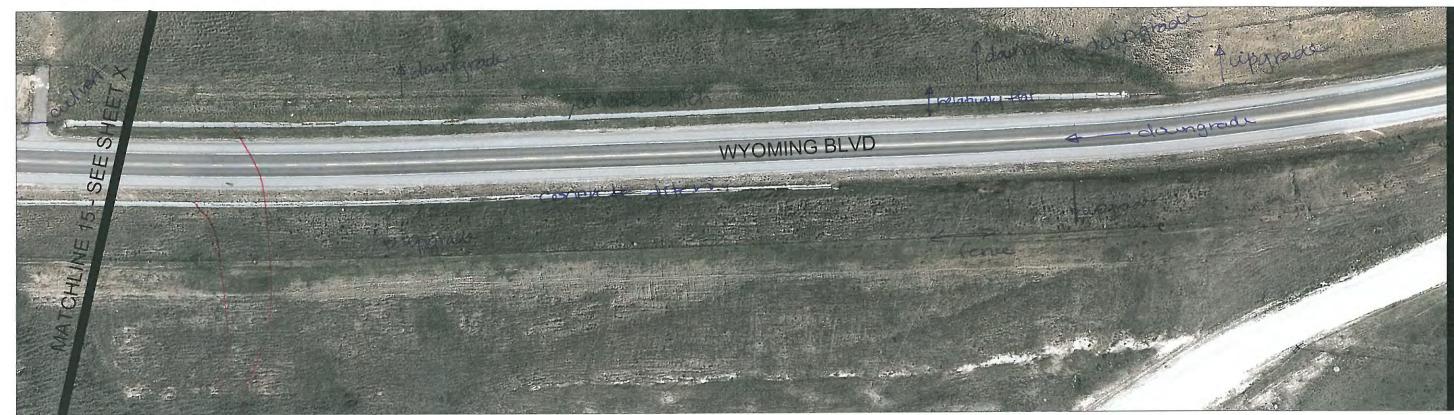
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Consider removing concrete ditch and reconstructing w/ trail

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SHEET X —OF— X

Playage Culvert

AdamyWYOMING BLVD

Control of the Control of the

Consider planing the trail in the middle of ROW Bring trail closer to

100 0 100 200 1" = 100' GRAPHIC SCALE

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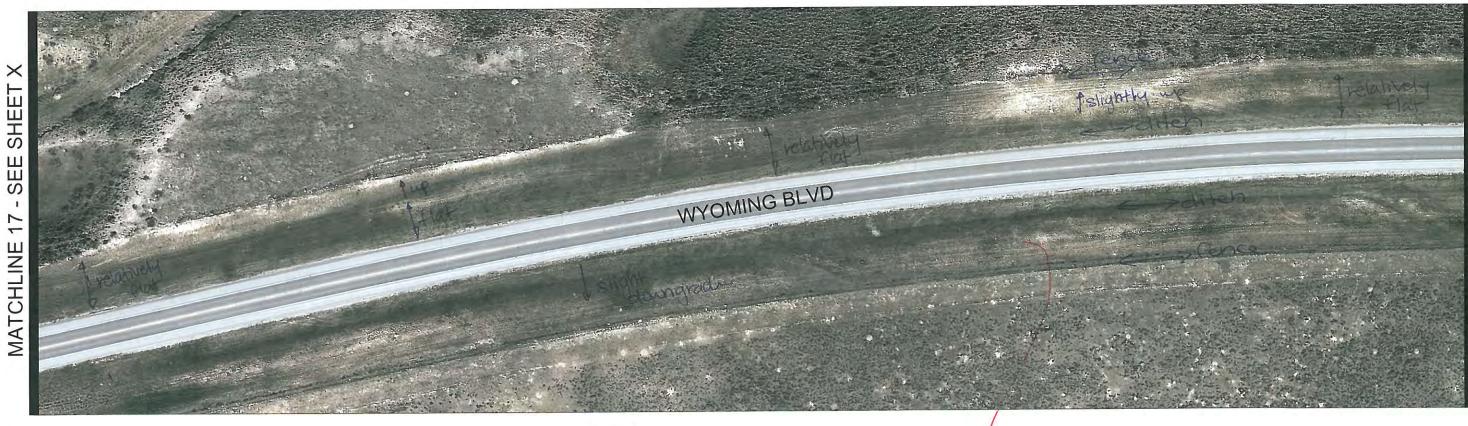
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X — OF — X

MATCHLINE 17 - SEE SHEET X



parallel to road, rolling terrain

Consider placing trail in the middle of Row or along fence.



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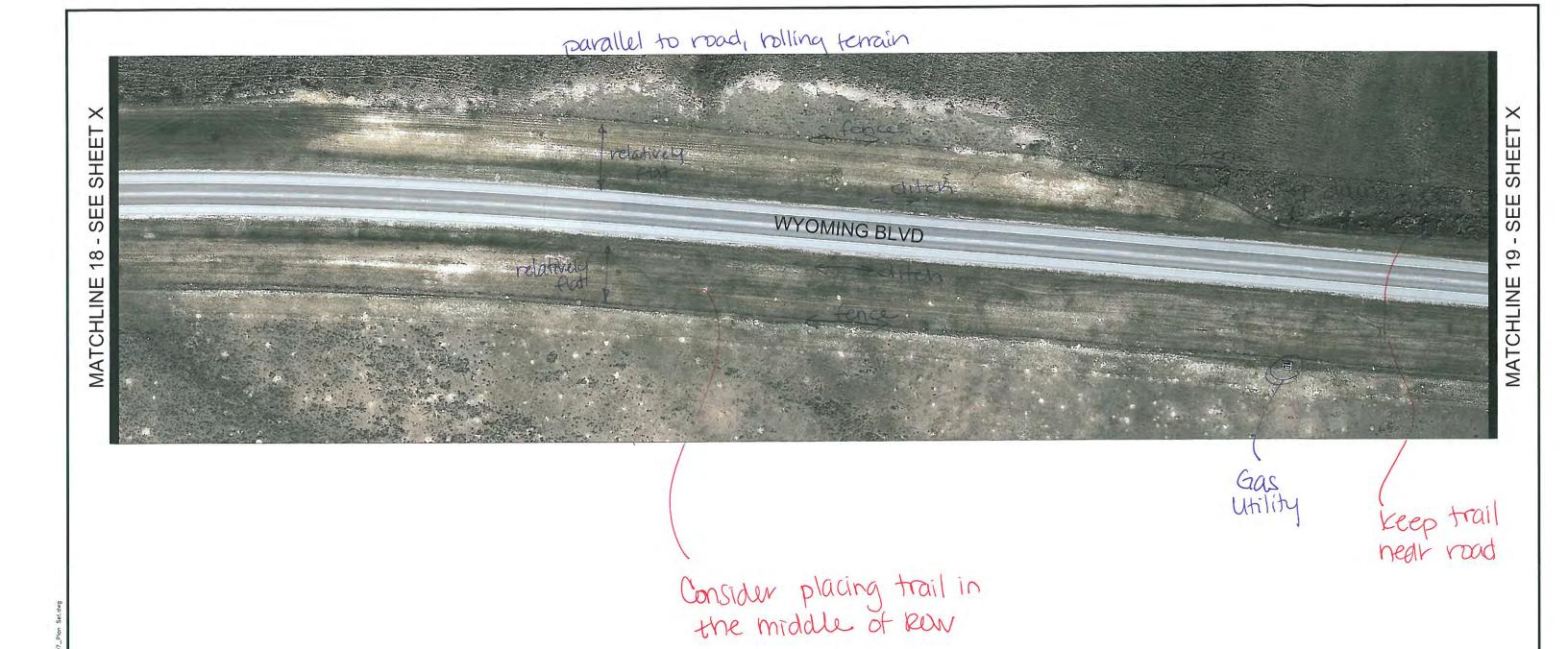
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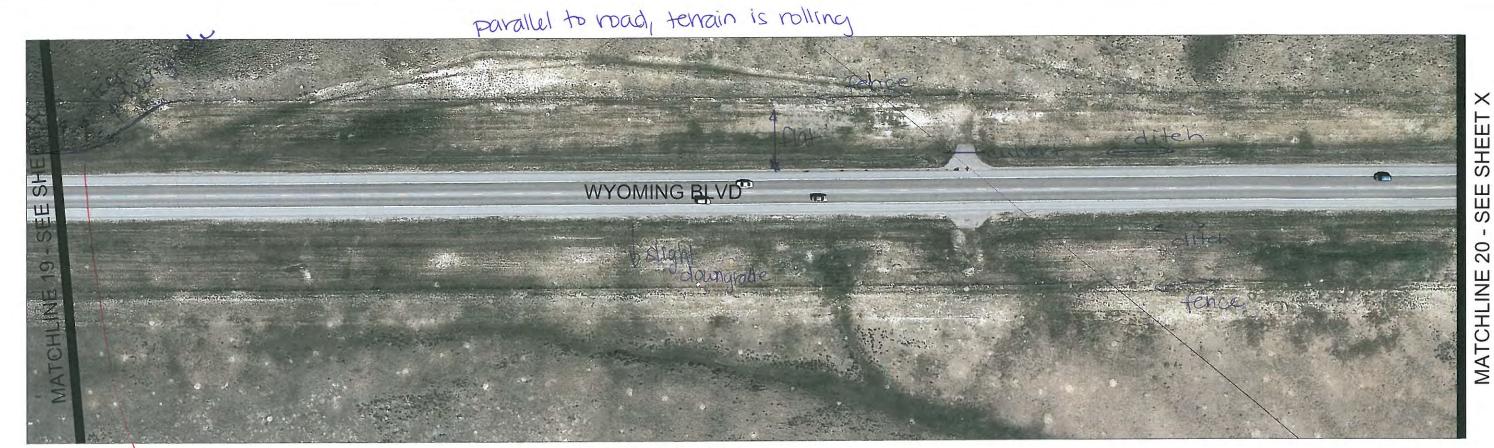
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X —or— X



Bring trail back toroad

parallel to road, terrain is rolling

Consider placing trail along fence or diten.

1" = 100' GRAPHIC SCALE

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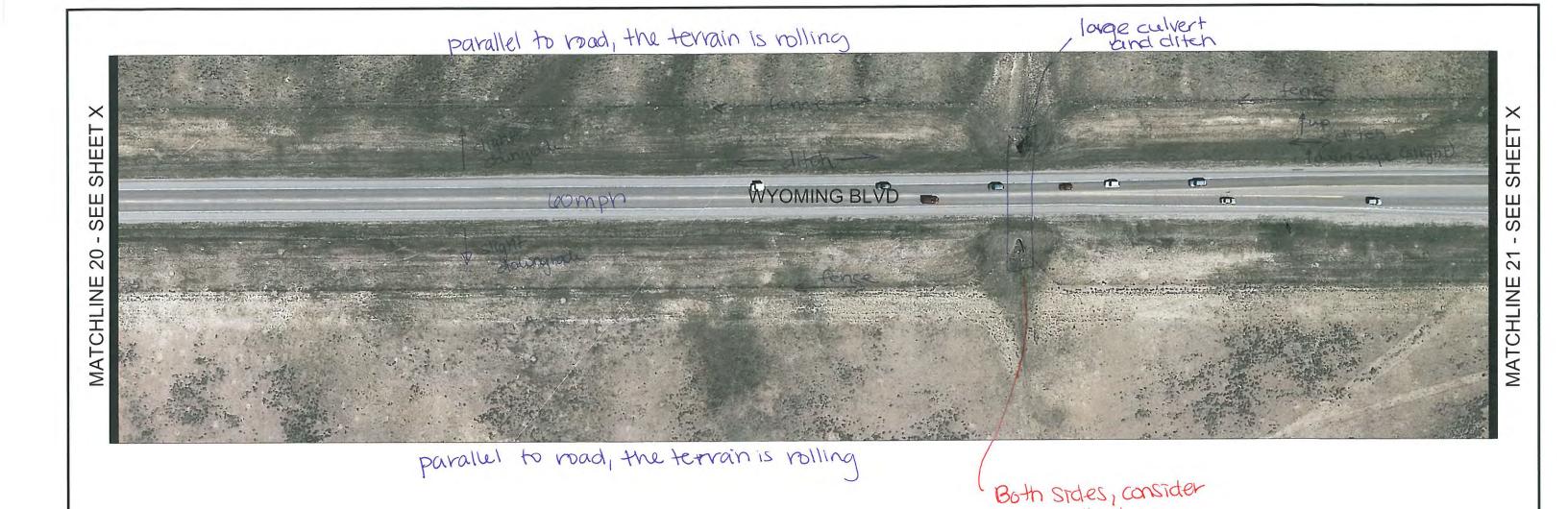
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- May need minimal grading to level trail

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placing trail along road cattached) or

bridge over diten

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SHEET X ---OF---X



Consider placing trail along ditch of fonce Consider
bringing trail
back to intersection
corner

100 0 100 200 1" = 100' GRAPHIC SCALE

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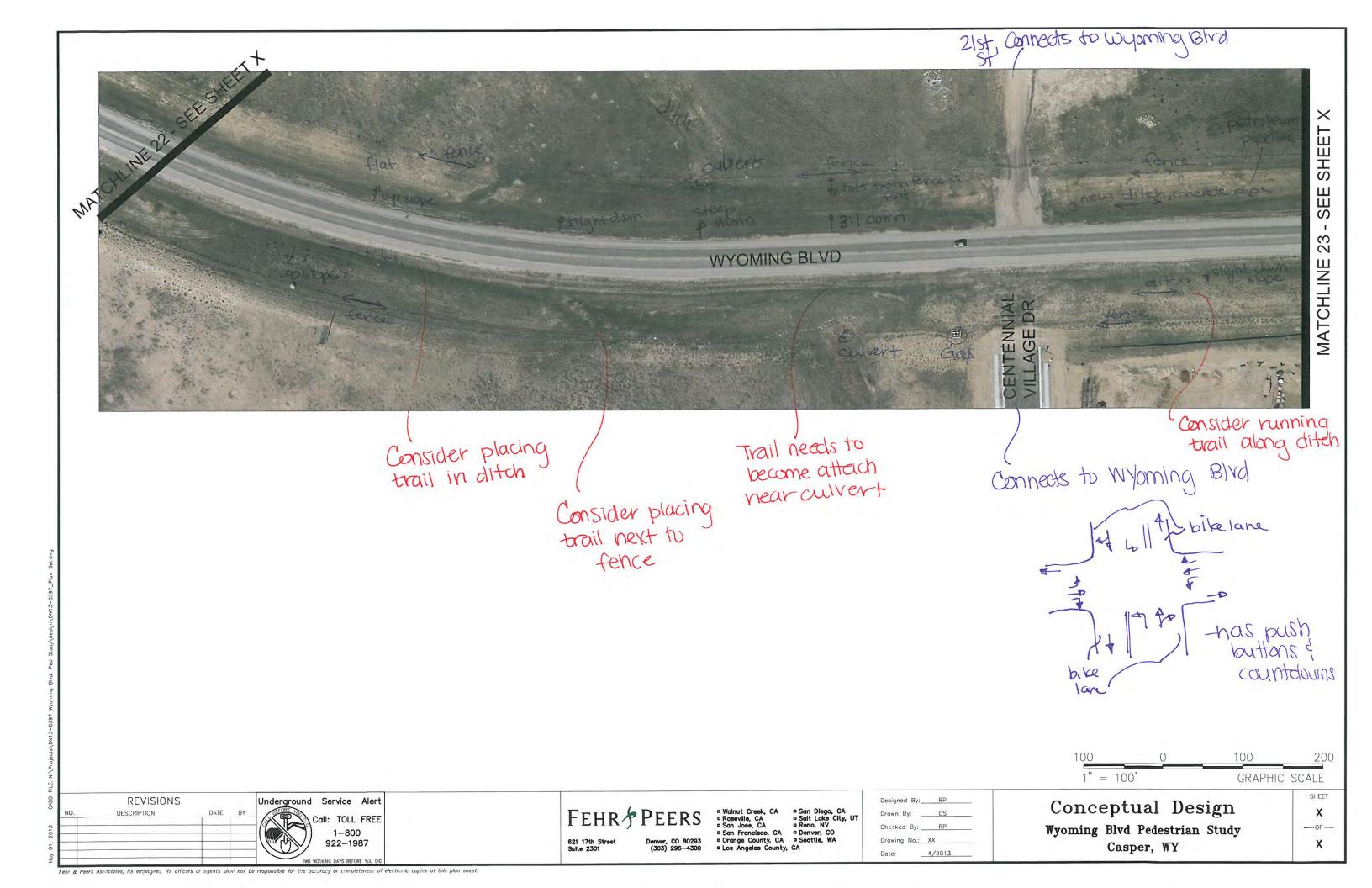
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X — of —



May need to cut in slope or pipe ditch. Consider keeping trail @ middle of hill)

Sometimes and the cut in read or pipe ditch. Consider keeping trail @ middle of hill)

WYOMING BLVD

WYOMING BLVD

Alathal state of hill and the consider keeping trail @ middle of hill)

WYOHING BLVD

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Alathal state of hill and the consider keeping trail @ middle of hill)

WYOHING BLVD

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Consider placing trail along ditch - Wide shoulders on roadway - Opportunities to detach the trail on both states

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23

MATCHLINE

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1" = 100'

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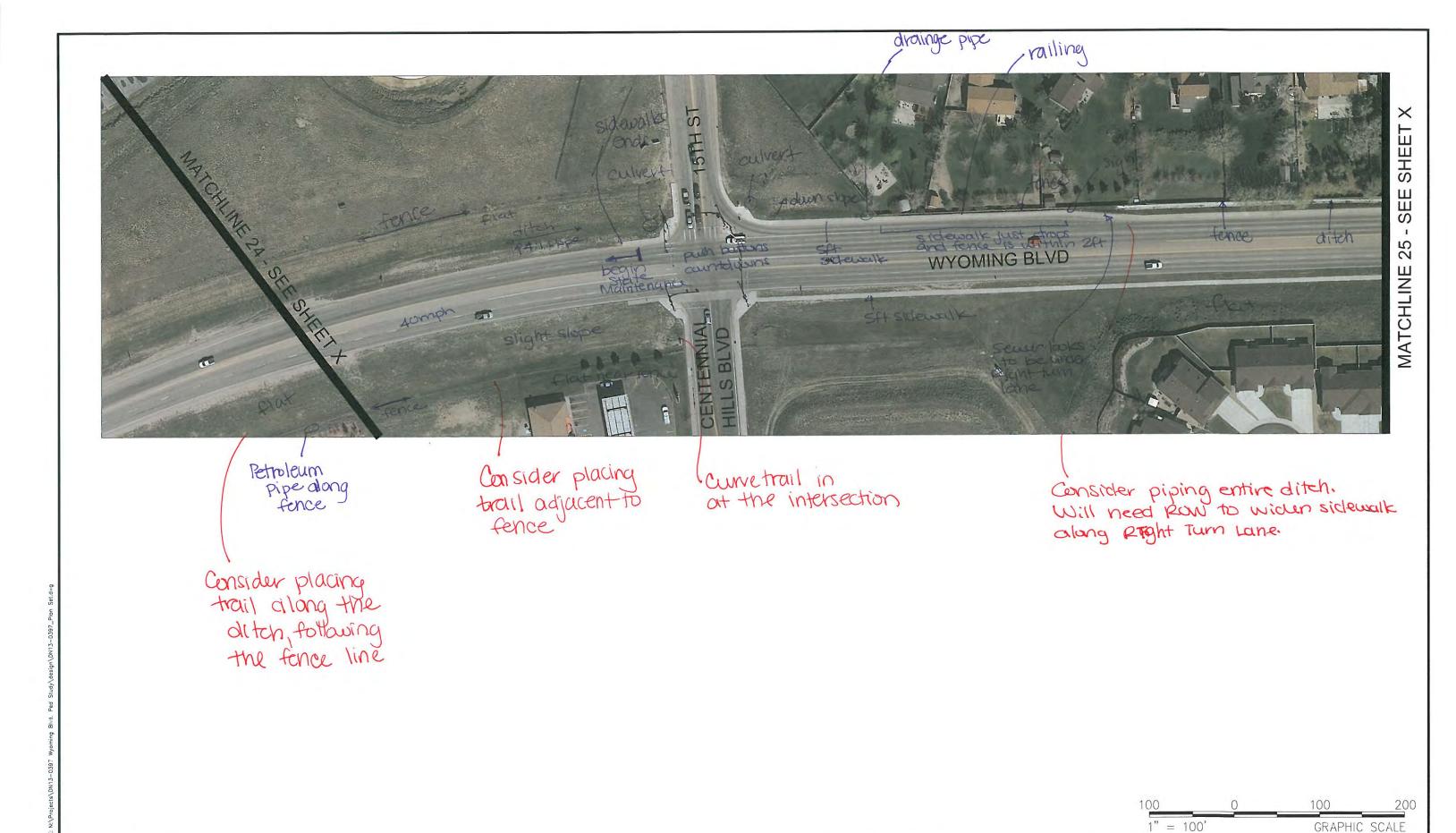
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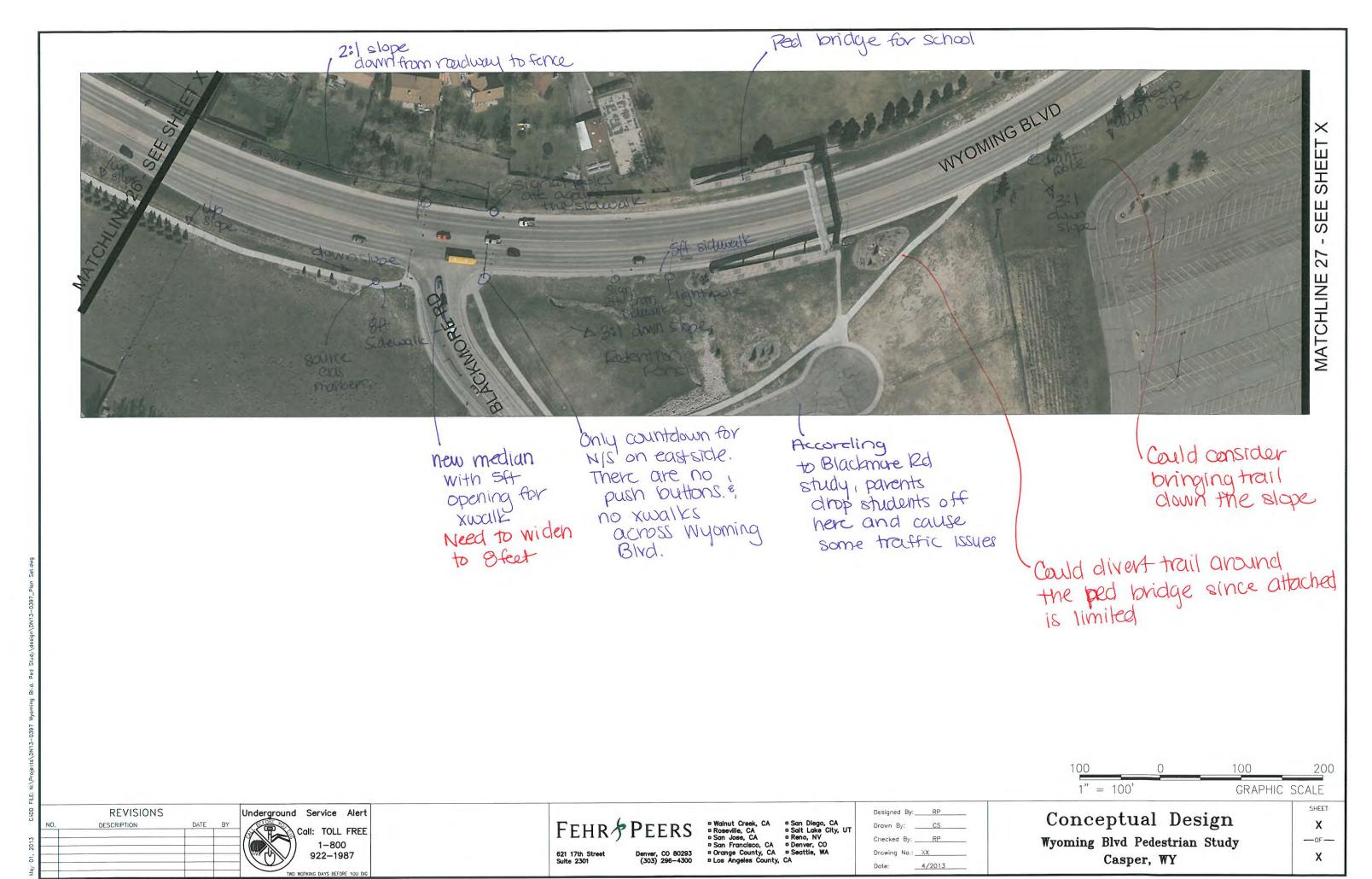
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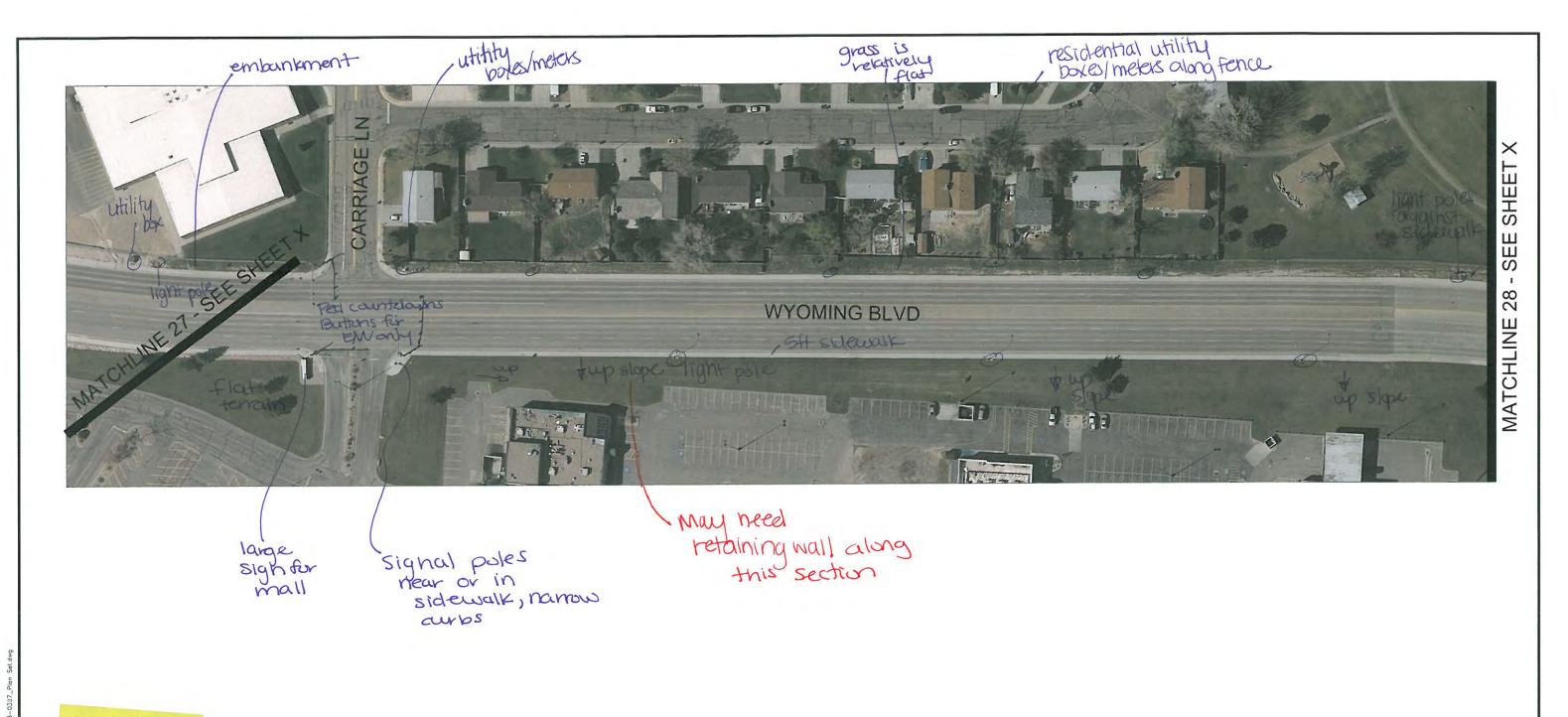
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> 100 0 100 200 1" = 100' GRAPHIC SCALE

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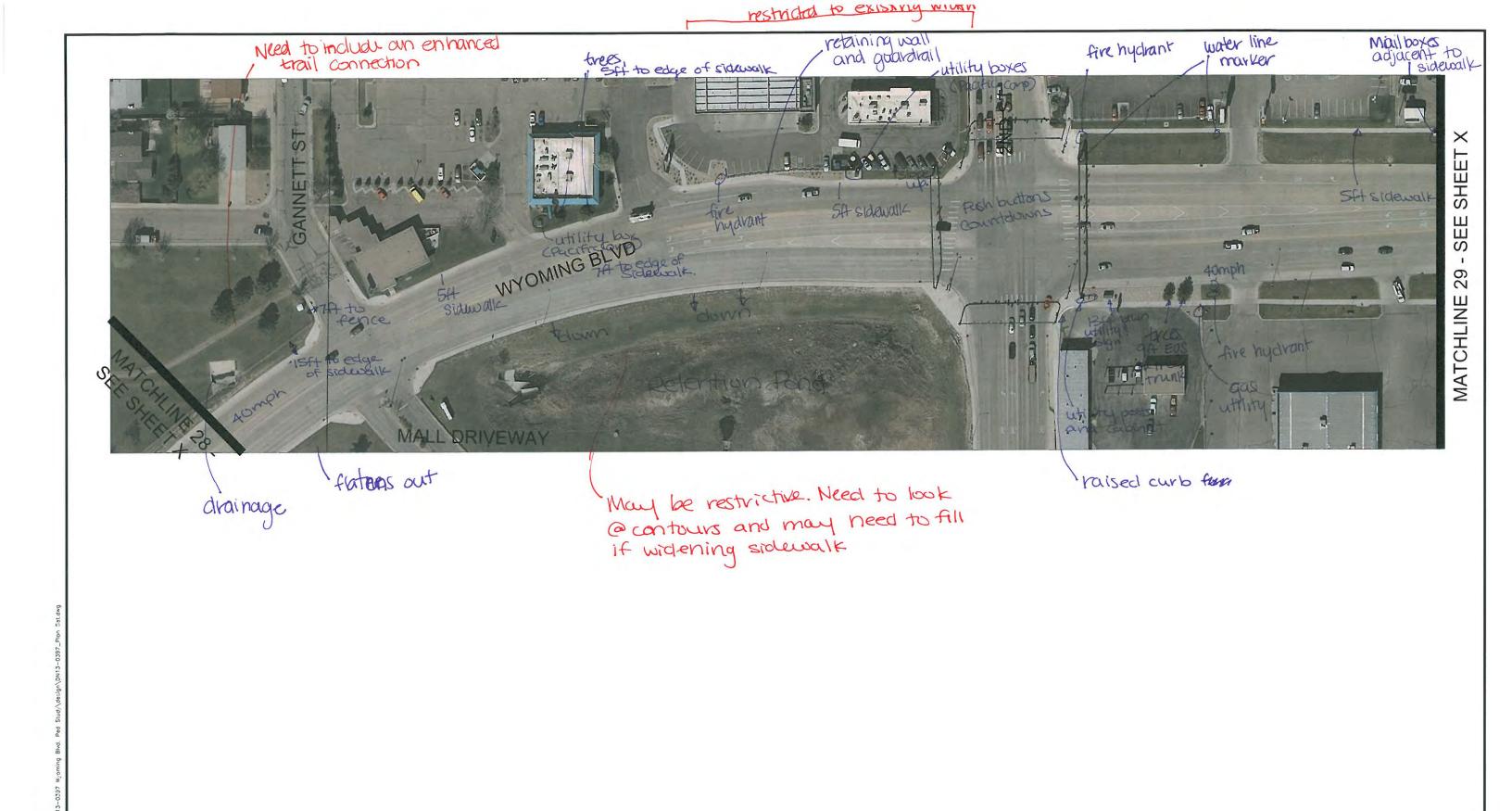
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1" = 100'

GRAPHIC SCALE

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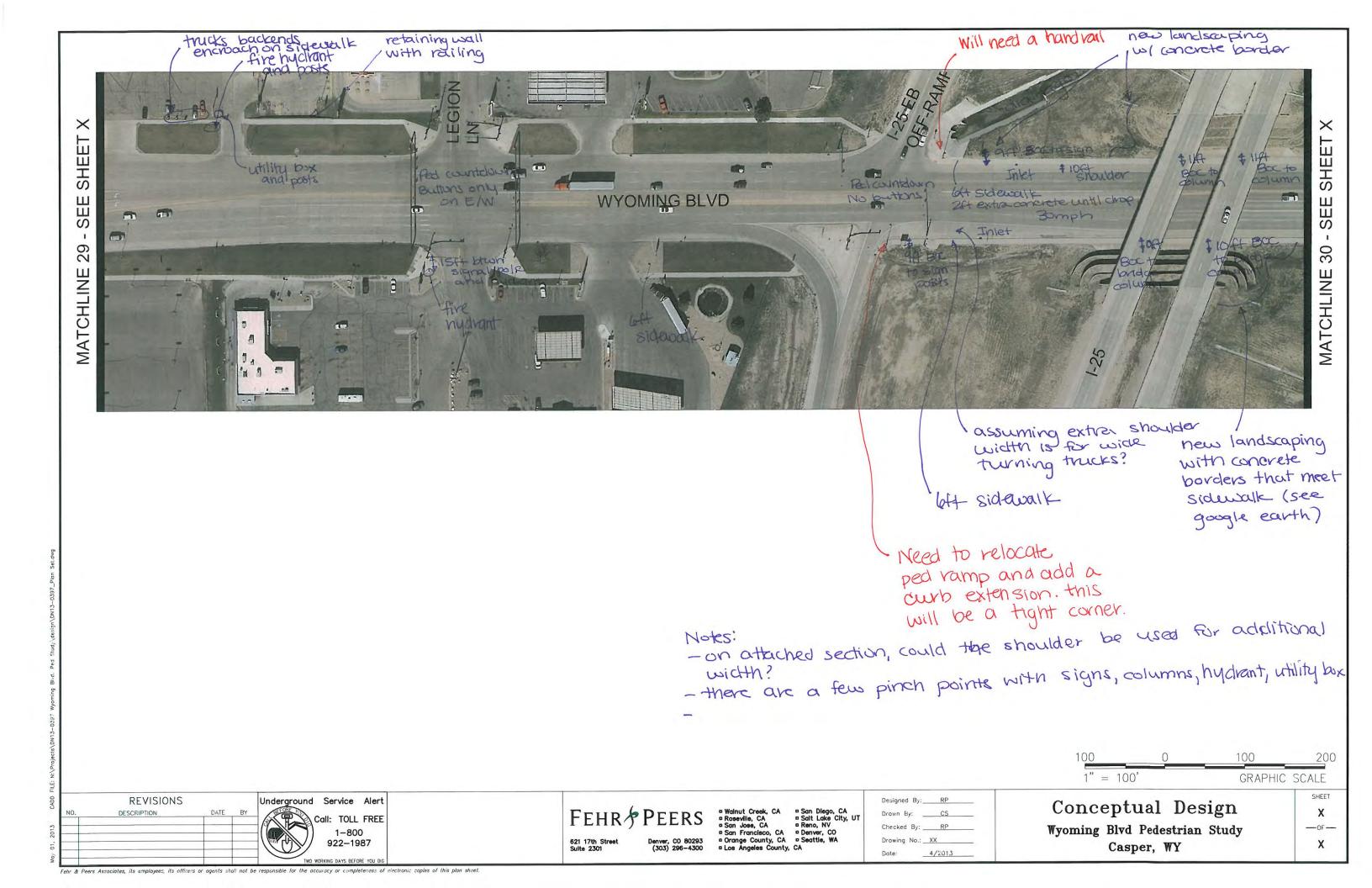
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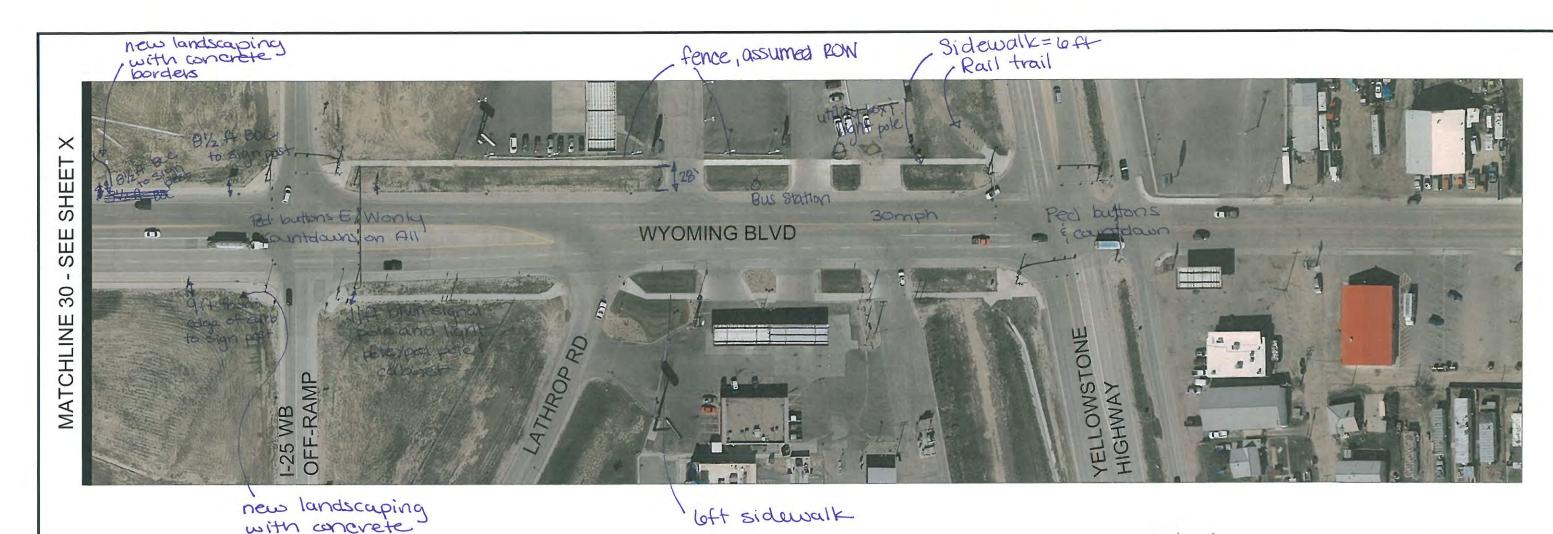
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Notes:

- Pretty straight forward

- Some pinch points with signs, poles

- @ attached portion, there is a very wide shoulder that could be considered for

additional width



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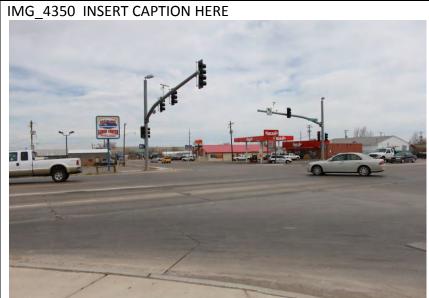
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borders (see

google earth)











































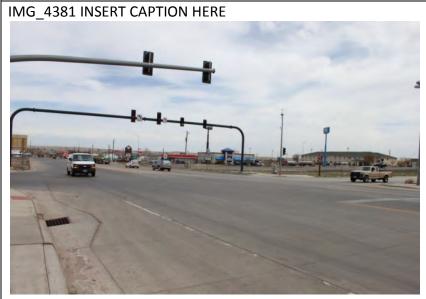










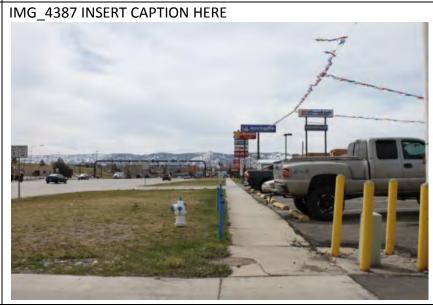


















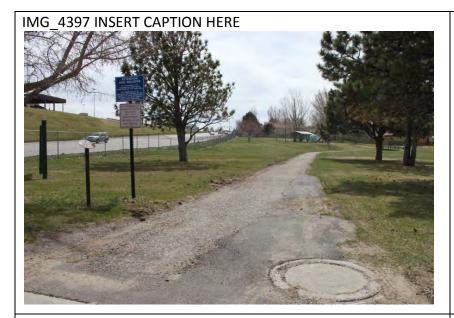


























































































































































































































































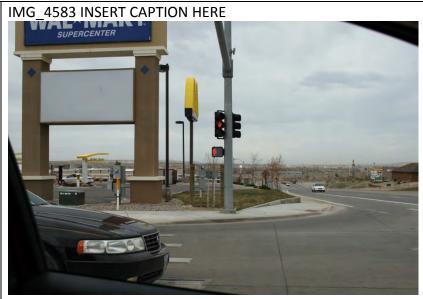


















































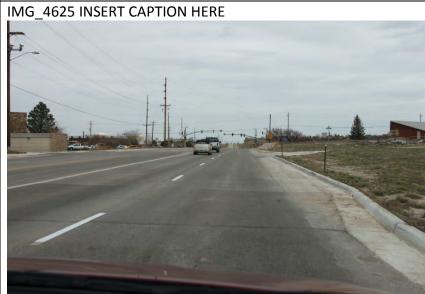


















































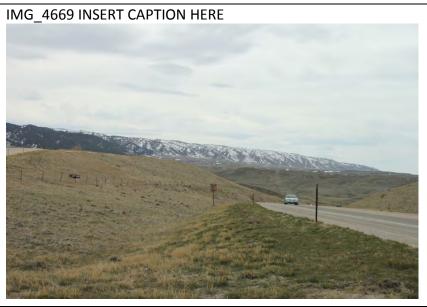




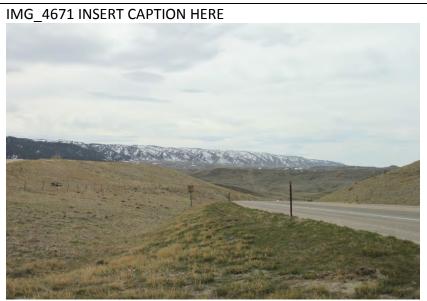






































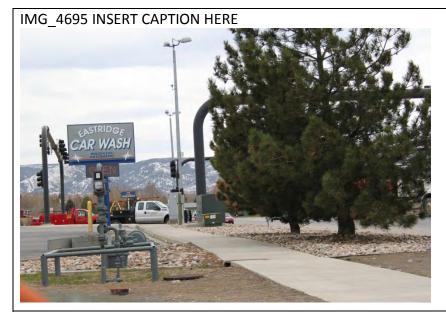


































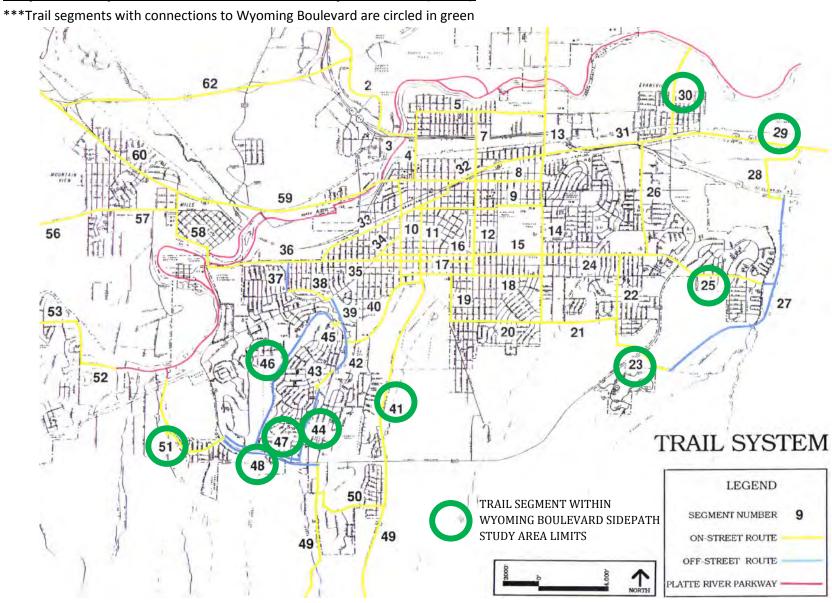


Wyoming Blvd. Pedestrian Study Photos from April 2013 Field Visit

APPENDIX B: REVIEW OF THE PROPOSED ON- AND OFF-STREET PEDESTRIAN AND BICYCLE FACILITIES



Casper Metropolitan Area Multi-Use Trail System Plan (1993)



Casper Metropolitan Area Multi-Use Trail System Plan (1993)

Following is a list of segments from the 1993 Casper Multi-Use Trail System that are connected to Wyoming Boulevard (as shown in the map above):

Segment 51: Wolf Creek/Fox/Eagle (Wyoming Blvd to Cy Ave)

- An on-street bike lane was planned for Wolf Creek Rd, Fox, and Eagle Dr to provide a connection between Wyoming Blvd and Cy Ave
 - Intersection: Wyoming Blvd/Eagle Dr and Cy Ave/Wolf Creek Rd
 - Status: Incomplete; no facility work has been done

Segment 48: Wyoming Blvd South (Eagle to South Poplar)

- An off-street bike path is planned to be constructed within the right-of-way along the south side of Wyoming Blvd. The design should maintain as much separation from the roadway as possible, while maintaining drainage and minimizing necessary grading.
 Project to be coordinated with WYDOT. This bikeway would provide a link to Eagle Trail and S. Poplar Road trail.
 - Intersection: Wyoming Blvd./Eagle Trail and South Poplar
 - Status: Incomplete

• Segment 47: Wyoming Blvd North (Eagle to Garden Creek)

- O Wyoming Blvd will feature a bike path within the right-of-way along north side of the roadway. The design should maintain as much separation from the roadway as possible, while maintaining drainage and minimizing necessary grading. Project to be coordinated with WYDOT. This bikeway would provide a link to Garden Creek Trail and Grandview Trail.
 - Intersection: Wyoming Blvd./Garden Creek Trail and Grandview Trail
 - Status: Incomplete

• Segment 46: Valley Hill/Grandview (Grandview Place to Wyoming Blvd)

- An off-street bike path was planned from Grandview Place to Wyoming Boulevard, providing a trail connection from the Garden Creek Greenway to Wyoming Boulevard.
 - Intersection: Valley Hill/Grandview trail/Wyoming Blvd
 - Status: Incomplete; no facility work has been done

• Segment 44: Garden Creek South (Green Meadows to Wyoming Blvd)

- An off-street bike path is planned for the area south of Green Meadows. This trail would provide a link to the Wyoming Blvd bike facilities and the Adams Park/Adams Greenway Trail.
 - Intersection: Wyoming Blvd/ S. Coffman Ave.
 - Status: While no formal bike facility has been constructed, S Coffman Ave provides a roadway access for bikes to access the Green Meadows neighborhood, the community parks, and greenway trails.

• Segment 41: Casper Mountain Road (15th Street to Wyoming Blvd)

- o Casper Mountain Road features a striped bike lane on the shoulders of both sides.
 - Intersection: Wyoming Blvd/Casper Mountain Road
 - Status: Complete

Segment 31: Yellowstone Hwy (Curtis St to Beverly St)

- Yellowstone Hwy is planned to feature a striped bike lane on both sides of the street.
 Presumably based on the high speed nature of the roadway, designated bike shoulders would likely be provided.
 - Intersection: Yellowstone Hwy/Wyoming Blvd
 - Status: Incomplete; no bike lanes are designated bike shoulders are present.

Segment 30: Curtis (Yellowstone Hwy to N. Platte River)

- O Curtis Street is planned to feature a striped bike lane on both sides of the street, either along the curb or between the parking lane and vehicle thru lane.
 - Intersection: Curtis Street/Wyoming Blvd
 - Status: Curtis Street is labeled as a City Trail, featuring sidewalks on either side of the roadway. However, no bike lanes are present.

Segment 29: Yellowstone Hwy (Wyoming Blvd to East)

- Yellowstone Hwy is planned to feature a designated bike shoulder on both sides of the street.
 - Intersection: Yellowstone Hwy/Wyoming Blvd
 - Status: Incomplete; no designated bike shoulders are present.

• Segment 25: 12th Street (Walsh to Elkhorn Creek)

- o 12th Street is scheduled to feature a striped bike lane on both sides on the road, between the parking lane and vehicle thru lane. Near the Wyoming Boulevard intersection, where no parking is allowed, the bike lanes would be placed along the curb.
 - Intersection: 12th Street/Wyoming Blvd
 - Status: Incomplete; no bike lanes

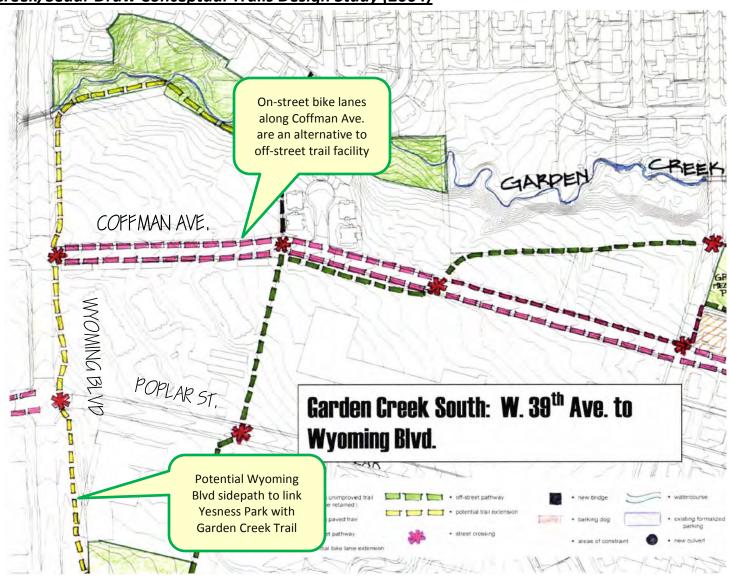
• Segment 23: Kingsbury Drive/Country Club Road (21st Street to Elkhorn Creek)

- 'Shared Roadway' signs are planned along Country Club Road. In the future, if the roadway from 24th Street to the east end of Country Club Road is improved, it is recommended that the 'Shared Roadway' treatment be converted into a striped bike lane for the full segment.
 - Intersection: Country Club Road/Wyoming Blvd
 - Status: Incomplete; no signs posted for 'Shared Roadway'

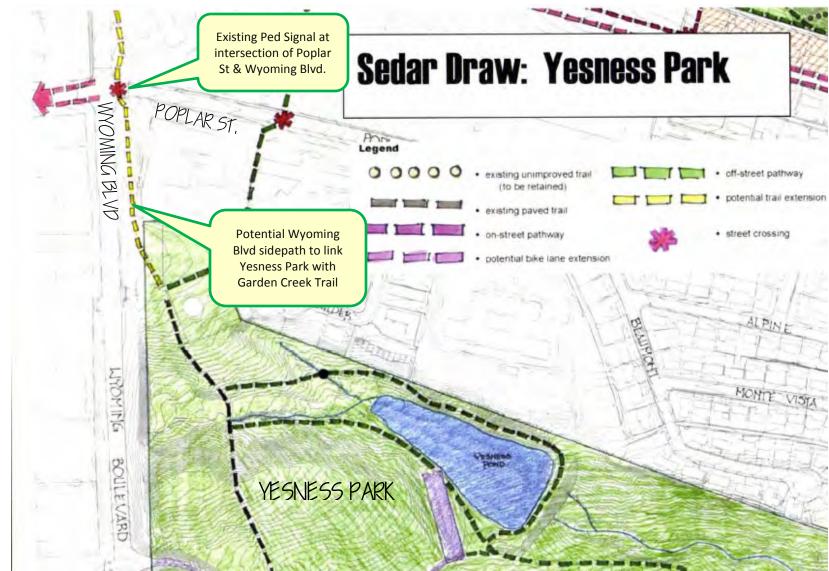
Garden Creek/Sedar Draw Conceptual Trails Design Study (2004)

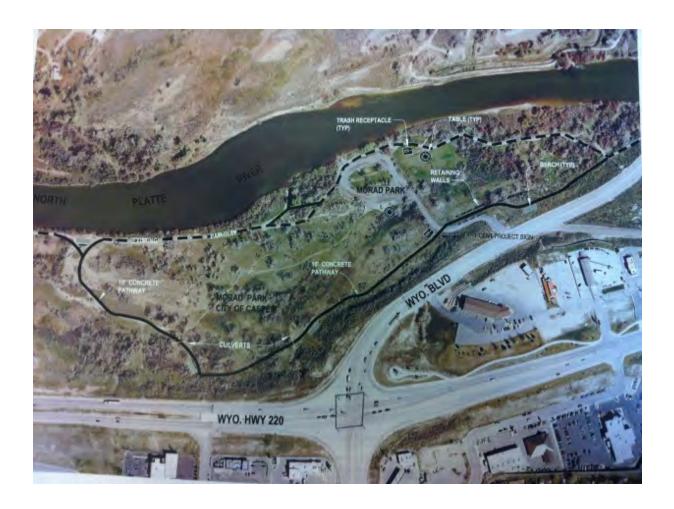
- In the alternatives analysis for Garden Creek South Trail, plans for an on-street bike lane on Coffman Avenue were noted. The continuous bike-lanes would be striped on Coffman Avenue from Wyoming Boulevard to Adams Park, potentially continuing to 25th Street. This would serve as an alternative to rerouting an off-road trail within the difficult southern sections of the Garden Creek Greenway.
- To provide connection between the Garden Creek Trail and Yesness Park, a sidepath facility was
 proposed along the north side of Wyoming Boulevard. This sidepath facility would be separated
 from highway traffic by using the northern edge of Wyoming Boulevard's right-of-way.
 Additionally, this facility would provide a link to the future should bike lane facilities on Poplar
 Street, south of Wyoming Boulevard. An existing pedestrian signal at S. Poplar Street could be
 used to make the at-grade crossing at Wyoming Boulevard.

Garden Creek/Sedar Draw Conceptual Trails Design Study (2004)



Garden Creek/Sedar Draw Conceptual Trails Design Study (2004)





Fort Caspar Underpass

"Trail Users will Soon Have More Room to Roam"

Casper Citizen, June 26, 2013

http://www.caspercitizen.com/2013/06/26/more-room-to-roam/

- Platte River Parkway Trust will begin construction in fall of 2013 for an underpass at Fort Caspar between Wyoming Boulevard and Collins Drive.
- Blind spots from the corner fence around the Central Wyoming Fair Grounds, high speed limits, and heavy truck traffic have made this crossing dangerous.
- Platte River Parkway Trust is also working to secure land rights and easements for further expansion, including a westward extension out to Robertson Road and a northeastern extension from Bryan Stock Trail to Long Lakes.

APPENDIX C: CONCEPTUAL DESIGN PLAN SET

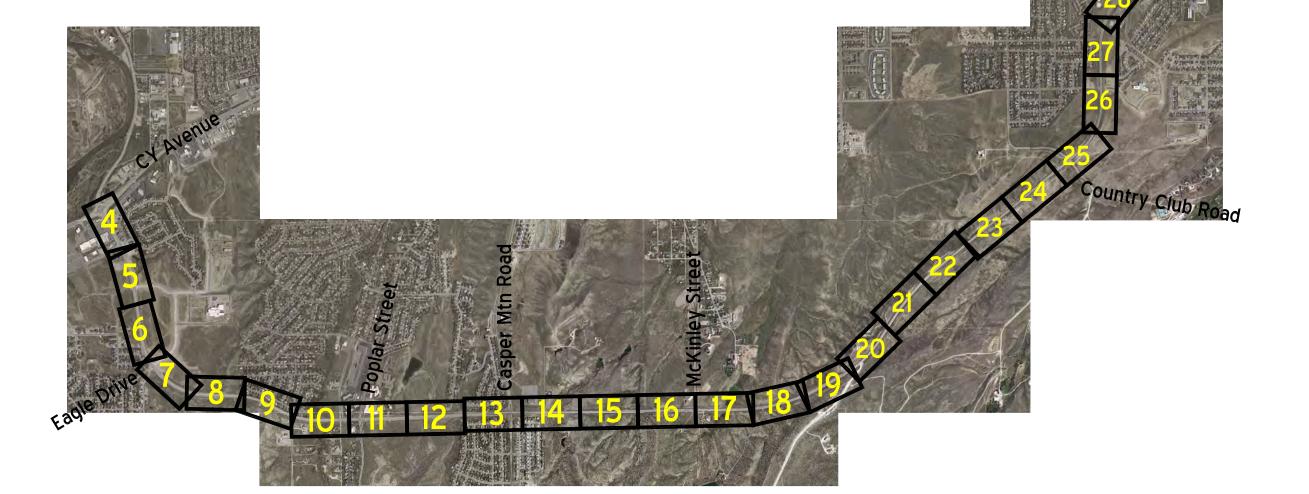


DRAFT Wyoming Blvd Pedestrian Sidepath Study

Casper Metropolitan Planning Organization, Wyoming

INDEX OF SHEETS

DESCRIPTION	SHEET NO.
COVER SHEET & KEY MAP	1
COST ESTIMATE	2
CROSS SECTION AND DETAILS	3
CONCEPTUAL DESIGN PLANS	4-34



NO.

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con Jose, CA
can Francisco, CA
connage County, CA
connage

 Designed By:
 RP

 Drawn By:
 CS

 Checked By:
 RP

 Drawing No:
 XX

 Date:
 8/2013

Cover and Key Map
Wyoming Blvd Pedestrian Sidepath Study
Casper, WY

Yellowstone Highway

Blackmore Road

12th Street

SHEET

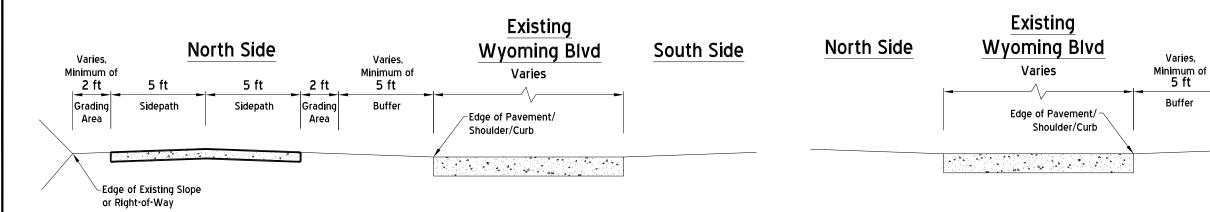
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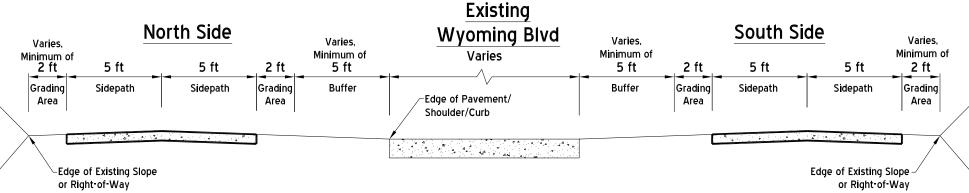
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OPTION 1: Typical Cross Section for 10 ft Detached Sidepath on North Side

OPTION 2: Typical Cross Section for 10 ft Detached Sidepath on South Side



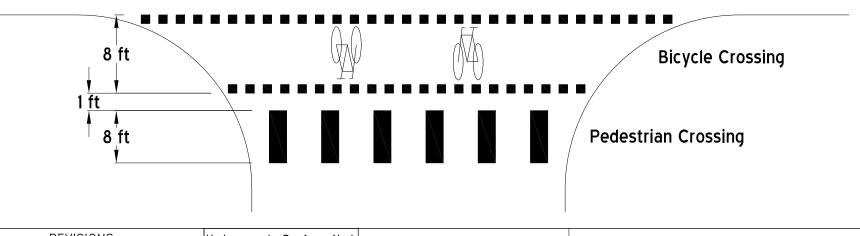
OPTION 3: Typical Cross Section for 10 ft Detached Sidepath on Both Sides



Notes:

- I. According to the AASHTO Guide for the Development of Bicycle Facilities, the provided dimensions are the minimum widths for the sidepath cross sectional elements. Due to existing right-of-way and/or utility constraints along Wyoming Blvd, the desired sidepath and buffer dimensions may not be feasible and have been identified within the conceptual design plans There are other locations where the topography and right-of-way allow for a wider buffer to provide an increased separation between the sidepath and roadway shoulder.
- 2. The grading areas should be 2 feet at minimum with a maximum of IV:6H slope. All lateral obstructions should be have at least 2 feet clearance.

Typical Pavement Markings for Intersection Crossing



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Cross Section and Details
Wyoming Blvd Pedestrian Sidepath Study
Casper, WY

South Side

5 ft

Sidepath

2 ft

Grading

Area

Varies,

Minimum of

2 ft

Grading

Area

5 ft

Sidepath

Edge of Existing Slope

or Right-of-Way

SHEET

2

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34

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			Quantities			Cost Estimate					
			Option 1 Total	Option 2 Total	Option 3 Total	c	Option 1 Total	c	Option 2 Total	E	Option 3 Total
Item#	Item Description	Units			- 10						
	L Clearing and Grubbing	Acre	11	11	22	0.00	58,777.51	\$	58,777.51	\$	117,555.02
201.03206	6 Clearing Tree 6 in	Each	0	6	6	1200		\$	607.44	\$	607.44
	Removal of Pedestrian Rail	Feet	380	0	380	1111	3,921.60	\$	-	\$	3,921.60
CALCULATION OF THE PARTY.	Removal of Pipe Fe Section	Each	3	5	8	12	395.34	\$	658.90	\$	1,054.24
	Removal of Sidewalk	Sq Yard	8776	7451	16227	Filtronia	53,270.32	\$	45,227.57	\$	98,497.89
	Removal of Curb and Gutter	Feet	840	840	1680	Prings.	3,309.60	\$	3,309.60	\$	6,619.20
	Removal of Concrete	Sq Yard	207	138	345	\$	1,103.31	\$	735.54	\$	1,838.85
	Reset Mailbox (Multiple)	Each	1	0	1	\$	873.66	\$		\$	873.66
203.02200	Rock Excavation	Cu Yard	1204	2423	3627		5,574.52	\$	11,218.49	\$	16,793.01
	Embankment material	Cu Yard	19549	13745	33294	\$	234,588.00	\$	164,940.00	\$	399,528.00
-	Evergreen Tree (new install)	Each	0	6	6	\$		\$	1,800.00	\$	1,800.00
215.03300) Silt Fence	Feet	84941	86120	171061	1900	356,752.20	\$	361,704.00	\$	718,456.20
216.03105	5 Seeding	Sq Yard	53240	53240	106480	\$	49,513.20	\$	49,513.20	\$	99,026.40
301.01030	Crushed Run Subbase	Cu Yard	2097	2125	4222	\$	42,149.70	\$	42,712.50	\$	84,862.20
301.01085	5 Crushed Base	Cu Yard	5219	5307	10526	\$	134,545.82	\$	136,814.46	\$	271,360.28
401.03323	3 Asphalt Binder (PG 64-22)	Ton	124	119	243	\$	75,342.40	\$	72,304.40	\$	147,646.80
	Reconditioning (Compacting Subgrade)	Sq Yard	46967	47756	94723	\$	65,753.80	\$	66,858.40	\$	132,612.20
414.01050	Concrete Pavement (10 in)	Sq Yard	207	138	345	\$	12,856.77	\$	8,571.18	\$	21,427.95
503.01400	Pedestrian Railing	Feet	5975	6585	12560	\$	1,227,922.25	\$	1,353,283.35	\$	2,581,205.60
511.04000	Filter Aggregate	Cu Yard	9.6	12	21.6	\$	770.88	\$	963.60	\$	1,734.48
603.20048	RCP 48 in	Feet	32	40	72	\$	5,268.16	\$	6,585.20	\$	11,853.36
	Masonry Landscape Wall (Dry Stack)	Sq Feet	10327.5	13800	24127.5	\$	361,462.50	\$	483,000.00	\$	844,462.50
603.22048	RCP FE Section 48 in	Each	4	5	9	\$	6,410.28	\$	8,012.85	\$	14,423.13
	6 inch Drain Pipe	Feet	3215	3600	6815	\$	45,813.75	\$	51,300.00	\$	97,113.75
608.10300) Bike Path (concrete)	Sq Yard	46783	47756	94539	\$	1,871,320.00	\$	1,910,240.00	\$	3,781,560.00
609.10200	Curb and Gutter Type A	Feet	840	840	1680	\$	17,304.00	\$	17,304.00	\$	34,608.00
	Truncated Domes	Sq Feet	840	840	1680	\$	43,680.00	\$	43,680.00	\$	87,360.00
	Concrete Curb Ramps	Sq Yard	1890	1890	3780	\$	189,000.00	\$	189,000.00	\$	378,000.00
701.24700	Reset Lighting Pole	Each	8	3	11	\$	11,348.00	\$	4,255.50	\$	15,603.50
702.30300) Sign Post, Sq Tubular Stl	Each	82	79	161	\$	23,321.62	\$	22,468.39	\$	45,790.01
702.30500	Sign Panels, Aluminum	Sq Feet	406	389	795	\$	13,032.60	\$	12,486.90	\$	25,519.50
	Reset Ground Sign	Each	6	7	13	\$	1,644.00	\$	1,918.00	\$	3,562.00
799.70124	Thermoplastic Pavement Markings 24 in	n Feet	2583	2187	4770	\$	110,035.80	\$	93,166.20	\$	203,202.00
799.71810	Epoxy Pavement Line 4 in	Feet	42469.85	43059.21	85529.06	\$	10,192.76	\$	10,334.21	\$	20,526.97
799.71200	Preformed Pavement Line 12 in	Feet	1525	1247.5	2772.5	\$	27,389.00	\$	22,405.10	\$	49,794.10
799.74900	Pavement Marking Removal	Sq Feet	5500	5250	10750	\$	20,625.00	\$	19,687.50	\$	40,312.50
	Preformed Bike Symbol	Each	44	42	86		12,232.00	\$	11,676.00	\$	23,908.00
	Reset Fire hydrant	Each	1	0	1	\$	10,000.00	\$		\$	10,000.00
	Reset large ground sign (interstate)	Each	3	2	5	\$	6,000.00	\$	4,000.00	\$	10,000.00
	Relocate mall sign and bank sign	Each	1	1	2	\$	15,000.00	\$	15,000.00	\$	30,000.00
	Reset traffic control box	Each	1	0	1	\$	5,000.00			\$	5,000.00
	And the second s		,		Subtotal		5,133,500.00		5,306,500.00	\$	10,440,000.00
				30%	contingency		1,540,050.00	Ś	1,591,950.00	\$	3,132,000.00
					Total		6,673,550.00	Ś	6,898,450.00	\$	13,572,000.00

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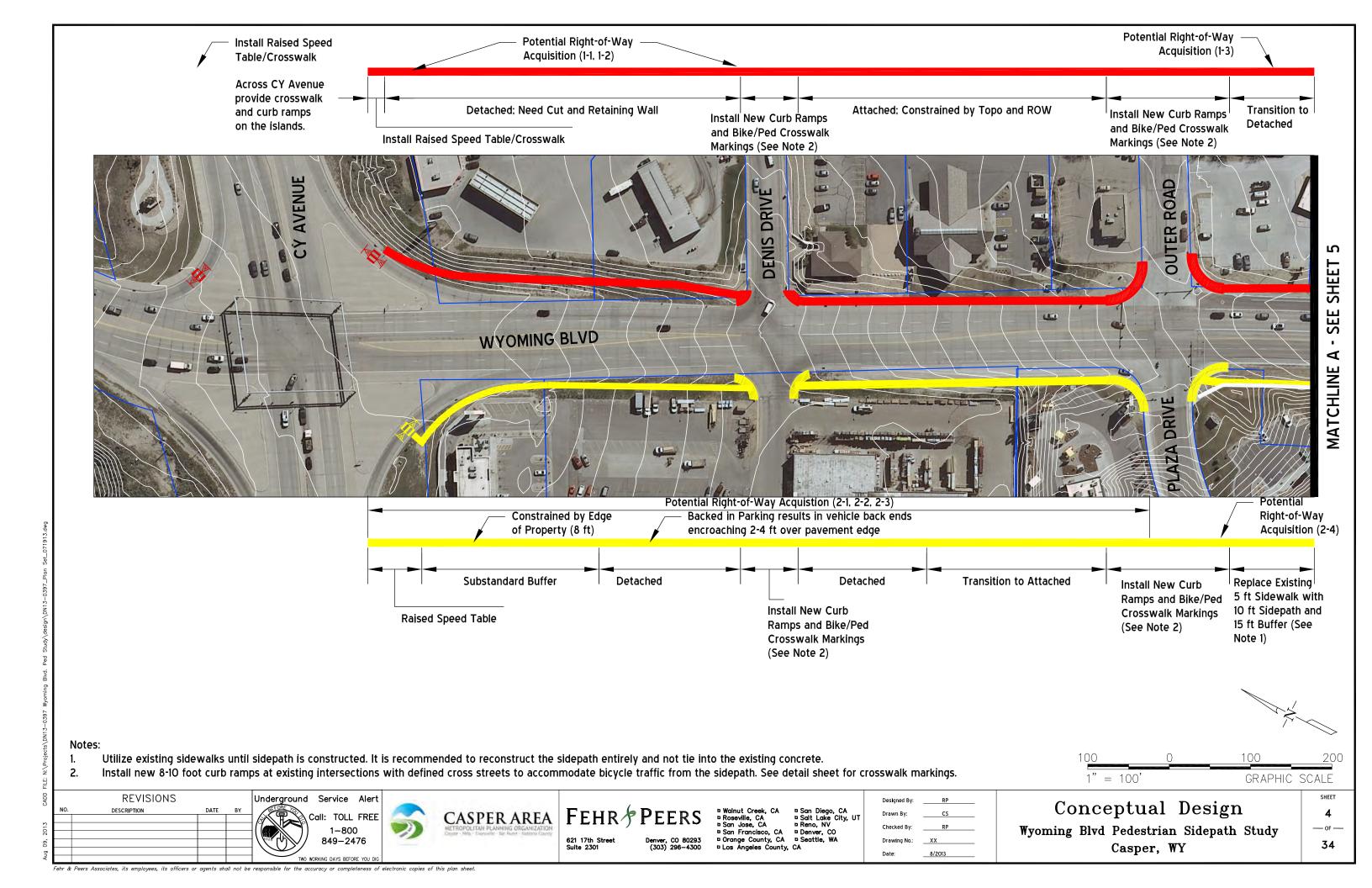
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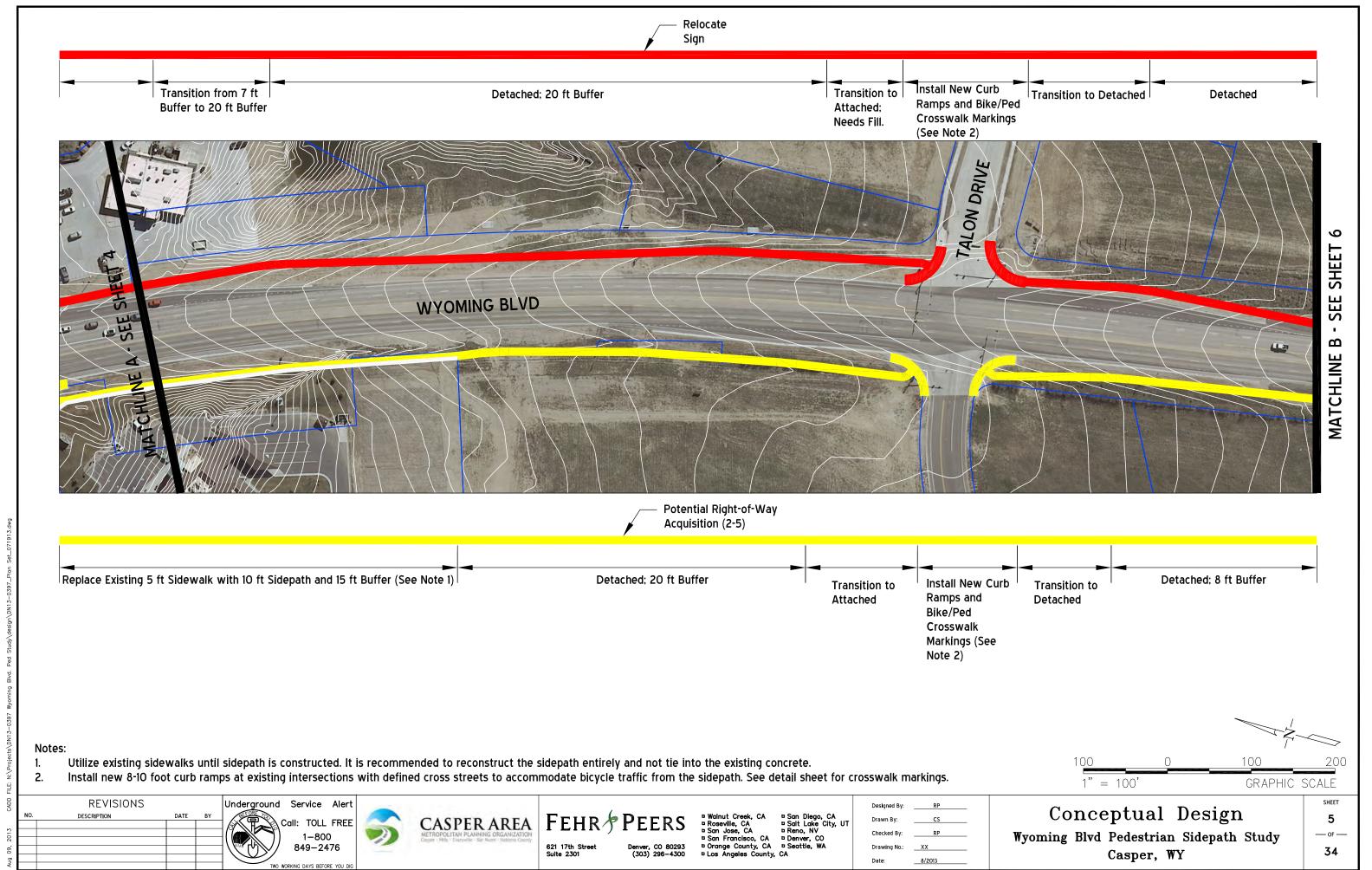
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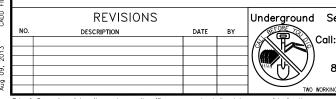
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Cost Estimate Wyoming Blvd Pedestrian Sidepath Study Casper, WY

3 — OF — 34







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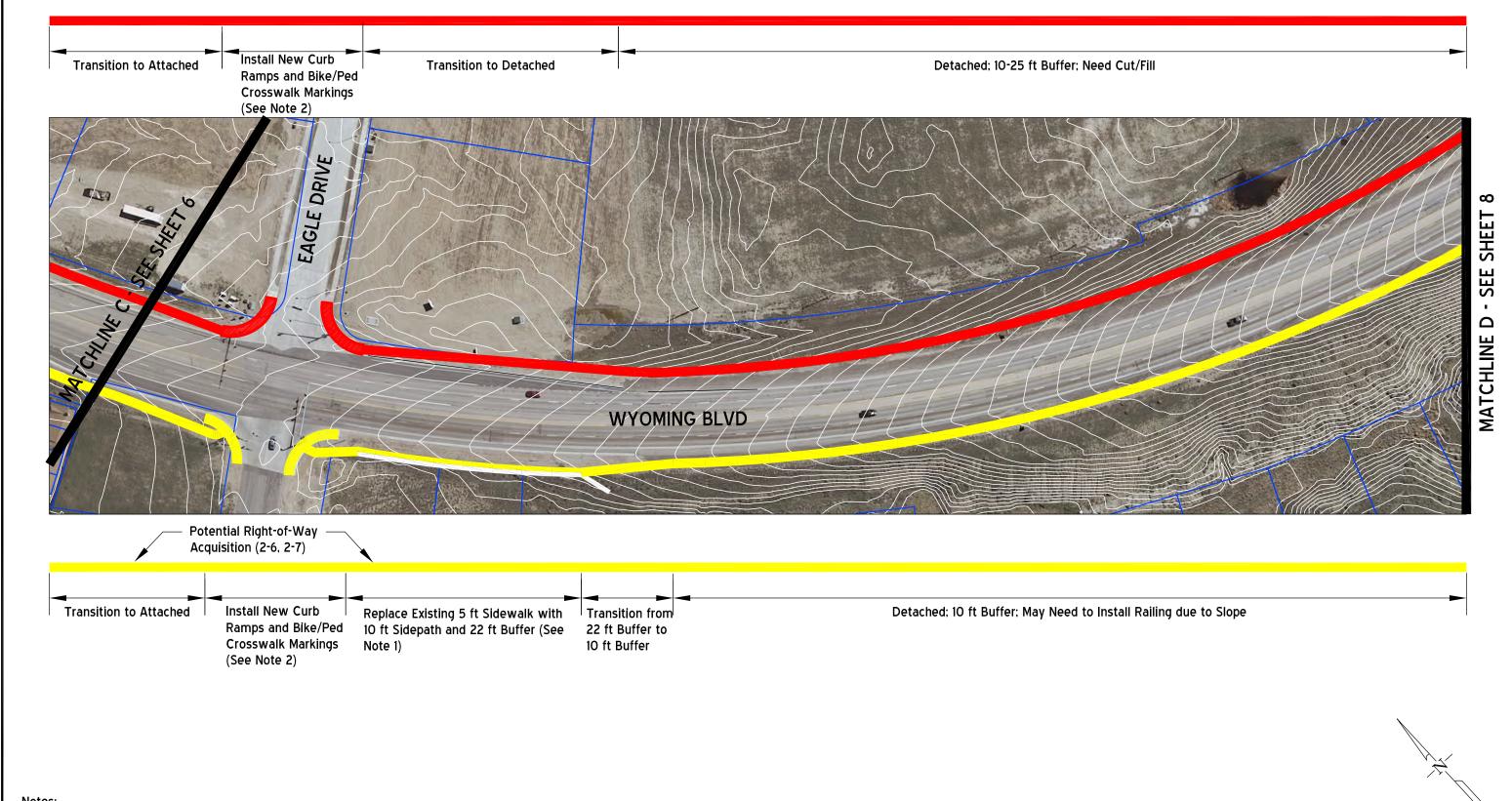
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Conceptual Design
Wyoming Blvd Pedestrian Sidepath Study
Casper, WY

1" = 100'

SHEET
6
— OF —
34



Notes:

- Utilize existing sidewalks until sidepath is constructed. It is recommended to reconstruct the sidepath entirely and not tie into the existing concrete.
- Install new 8-10 foot curb ramps at existing intersections with defined cross streets to accommodate bicycle traffic from the sidepath. See detail sheet for crosswalk markings.

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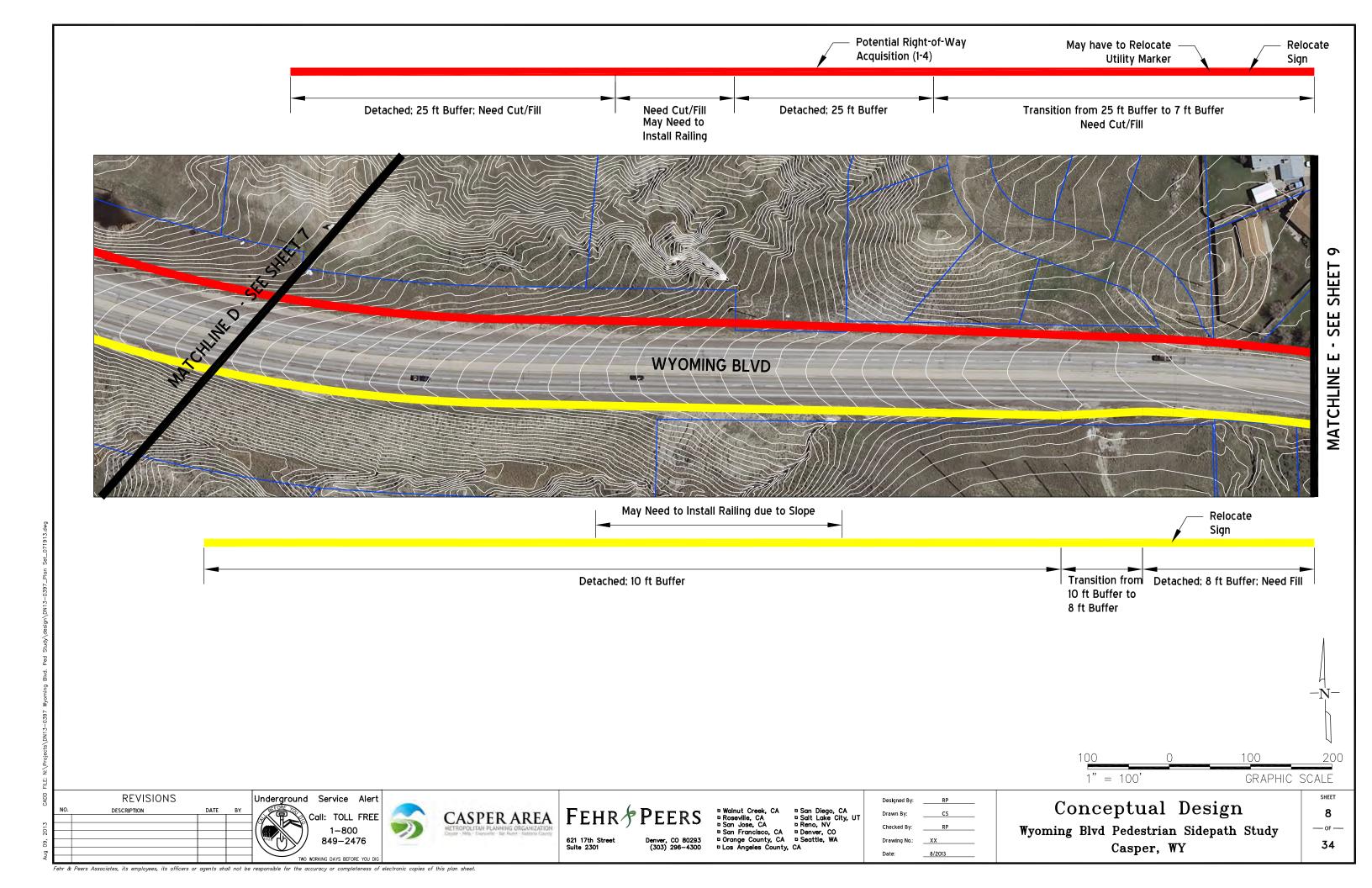
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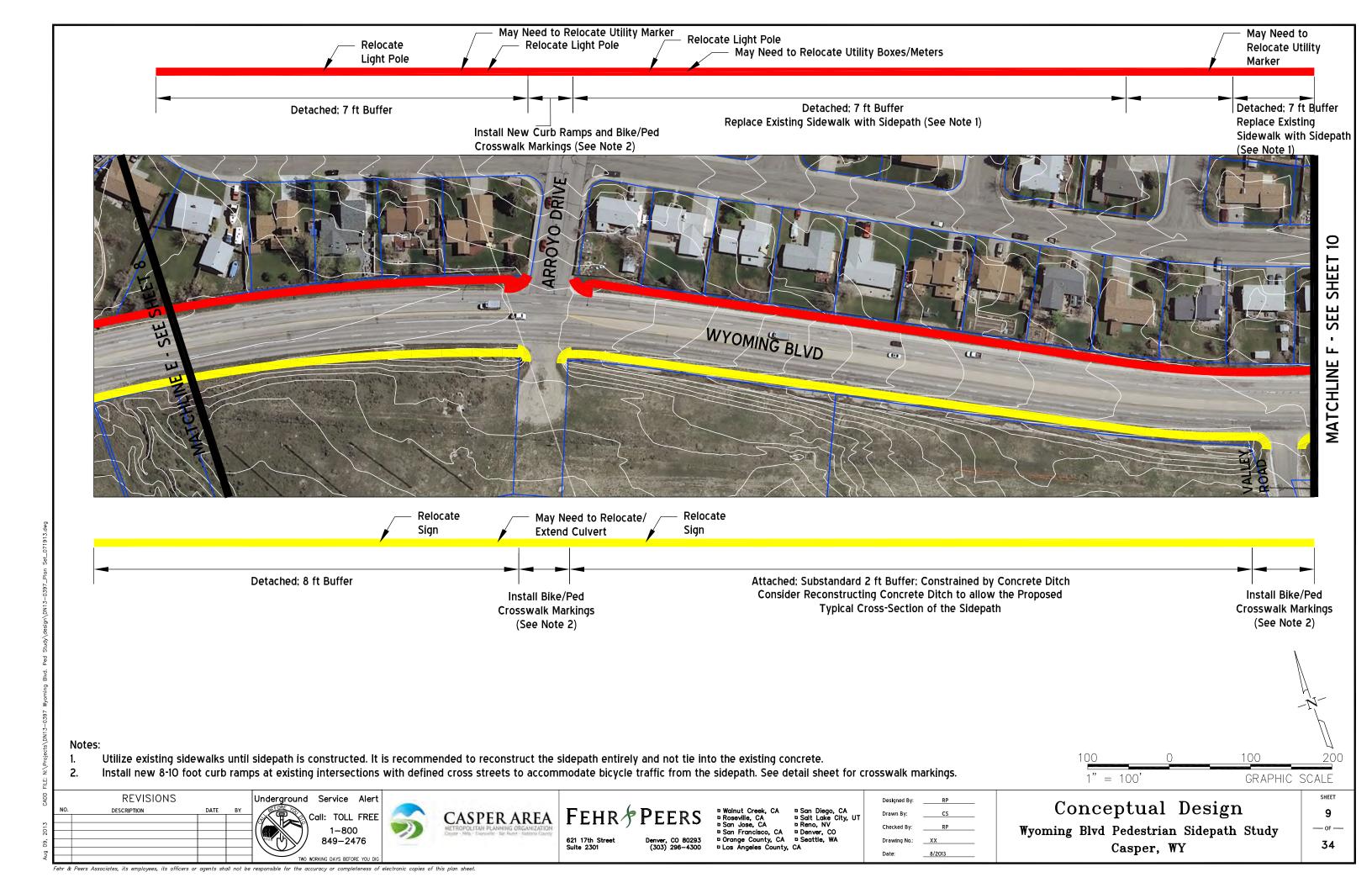
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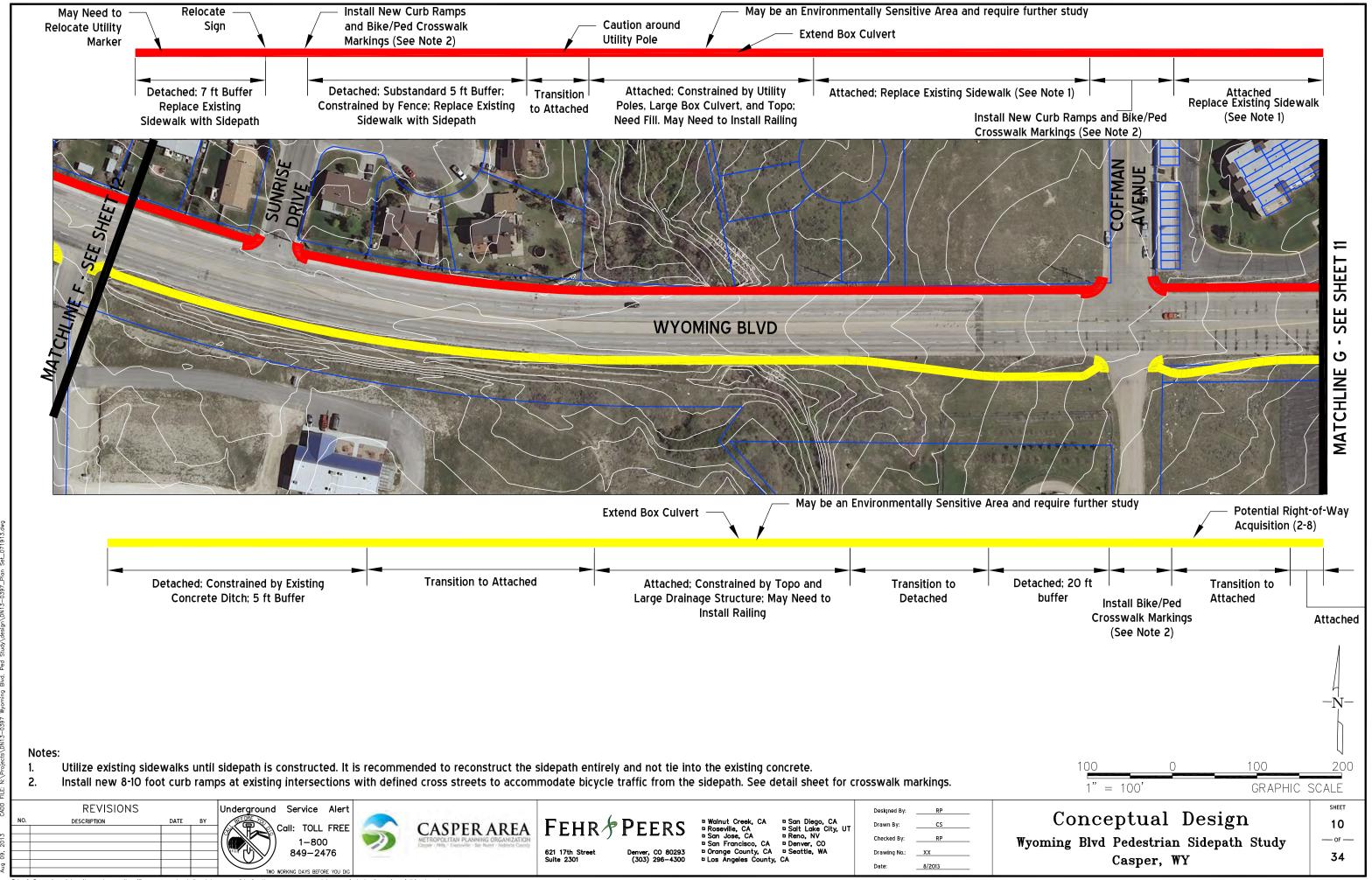
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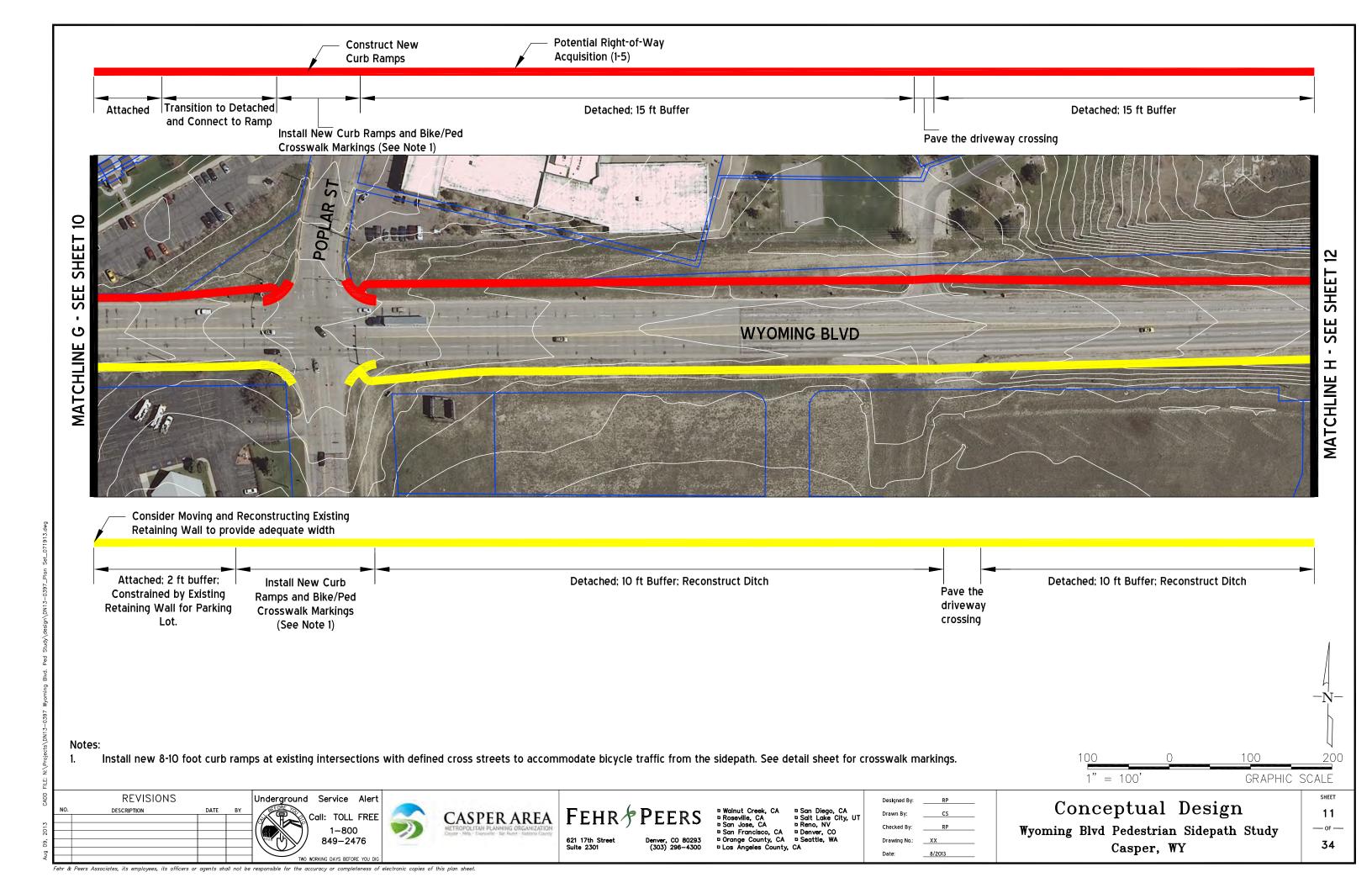
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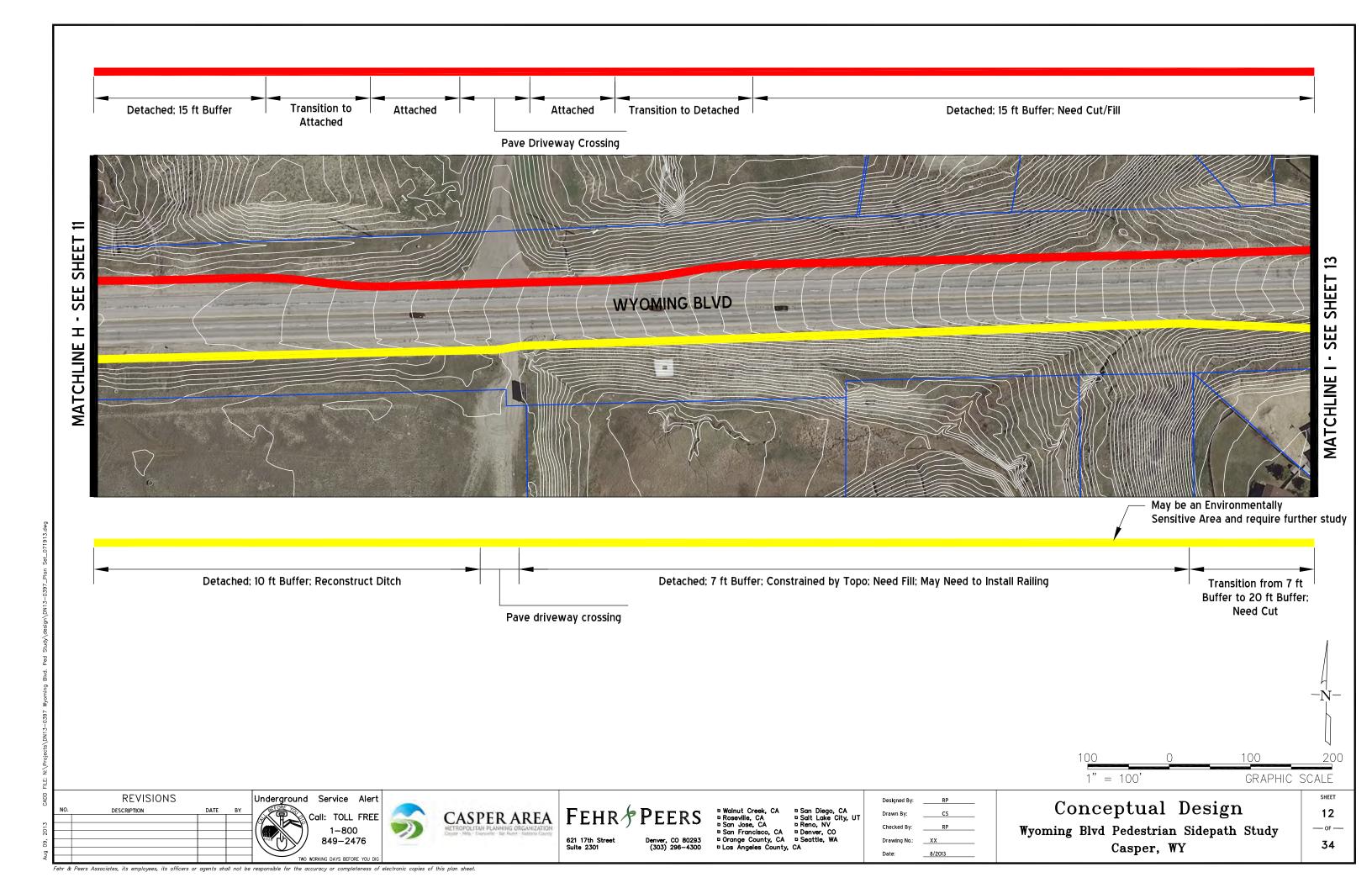
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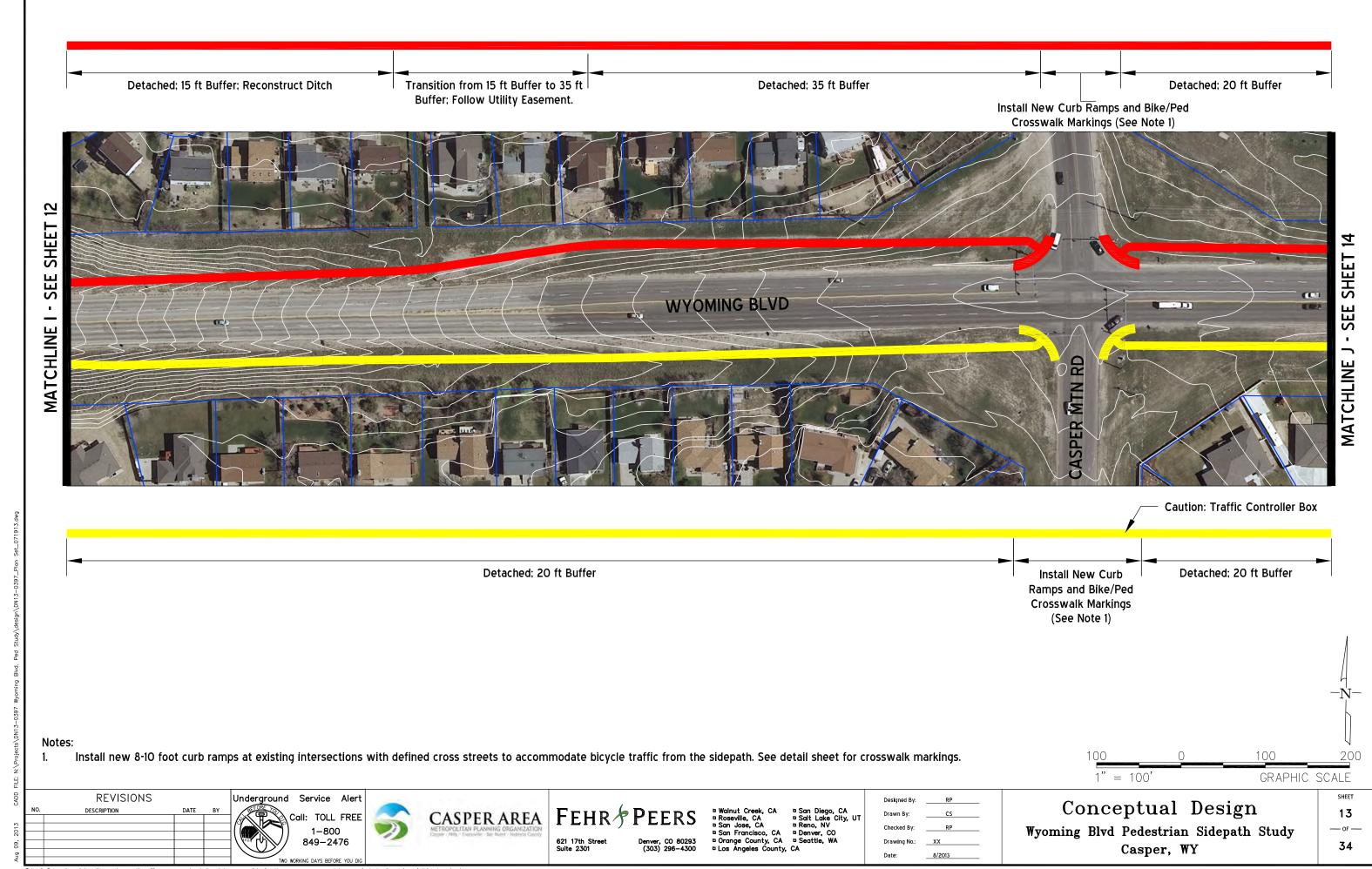


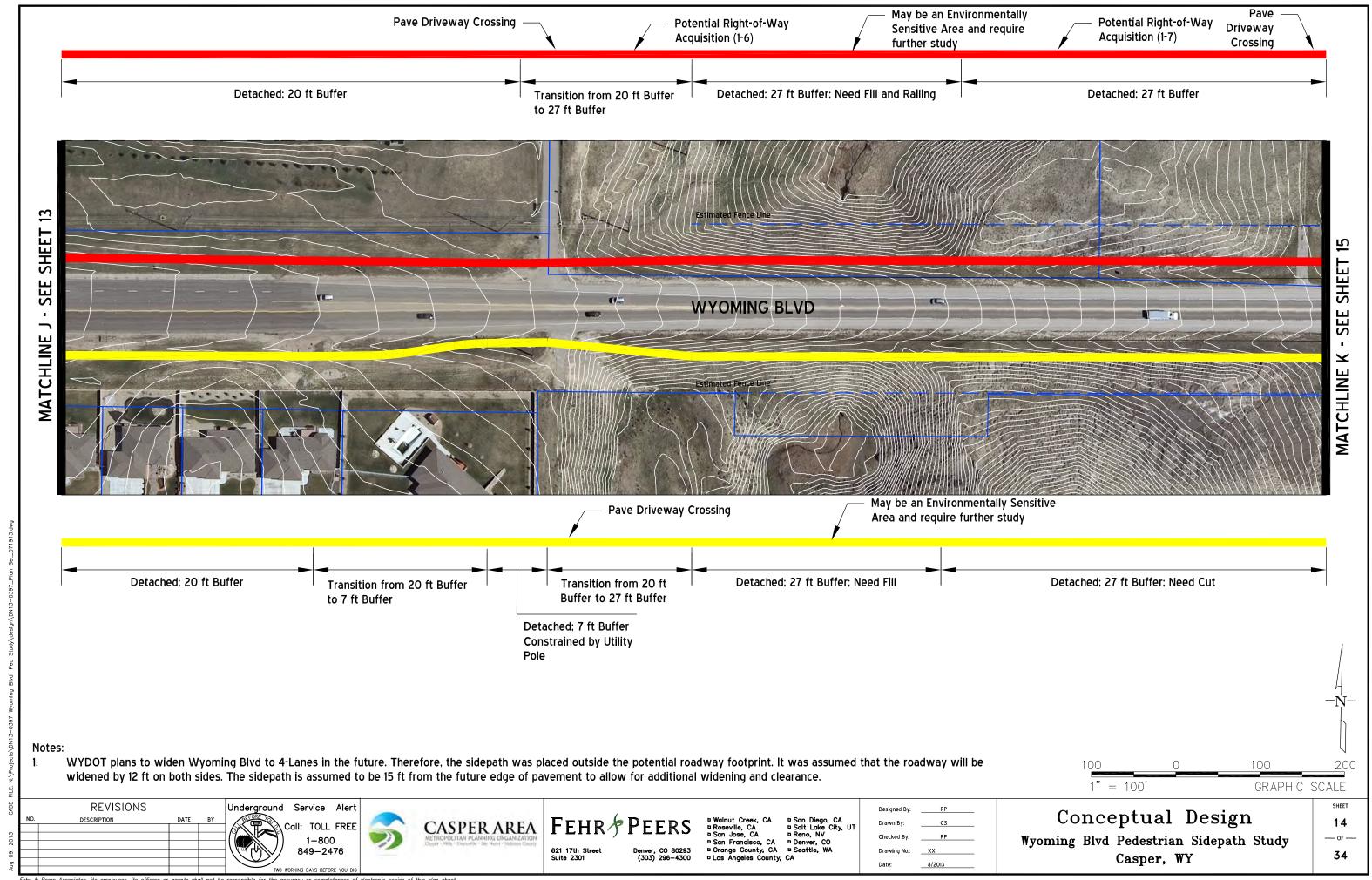


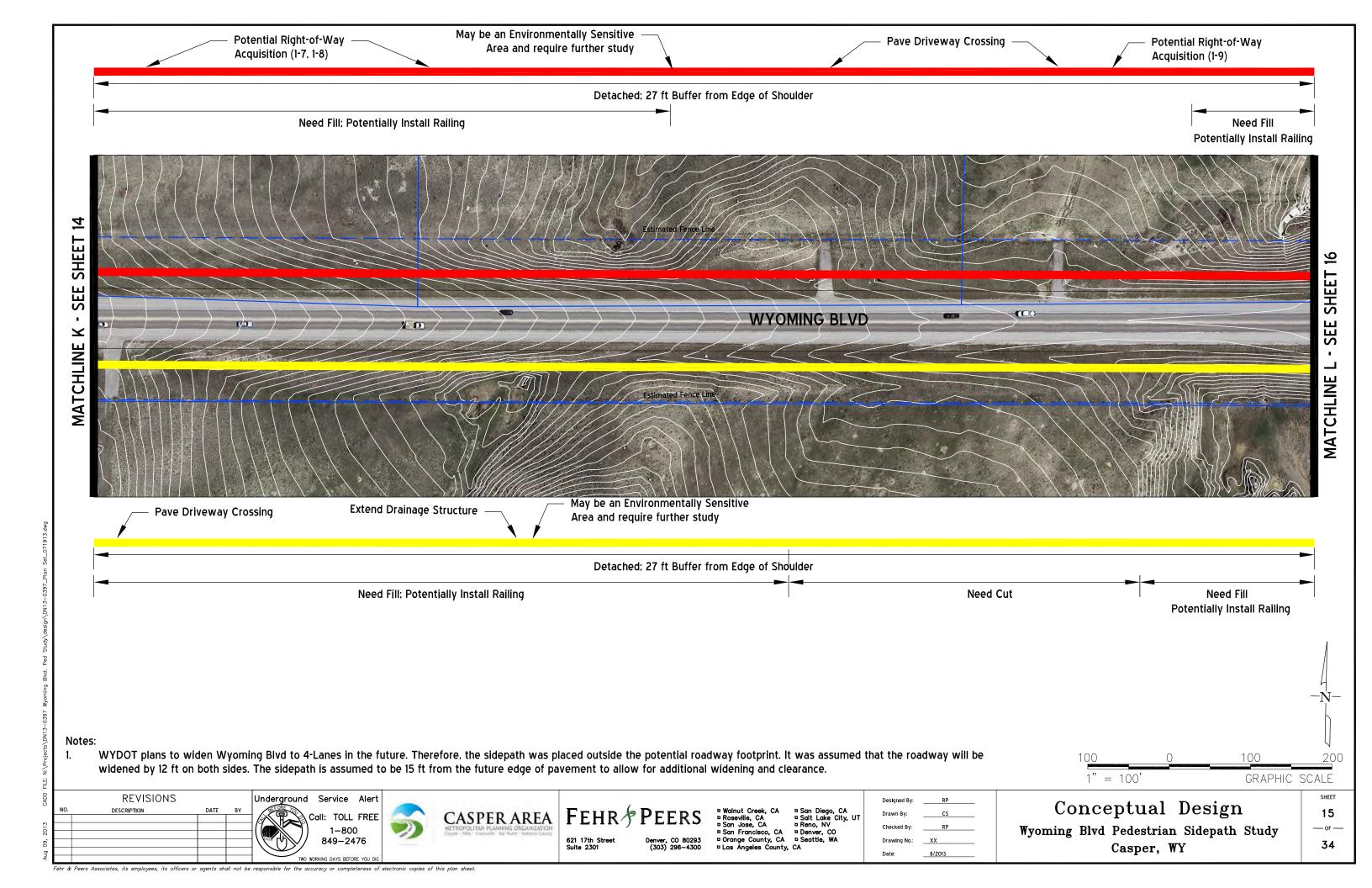


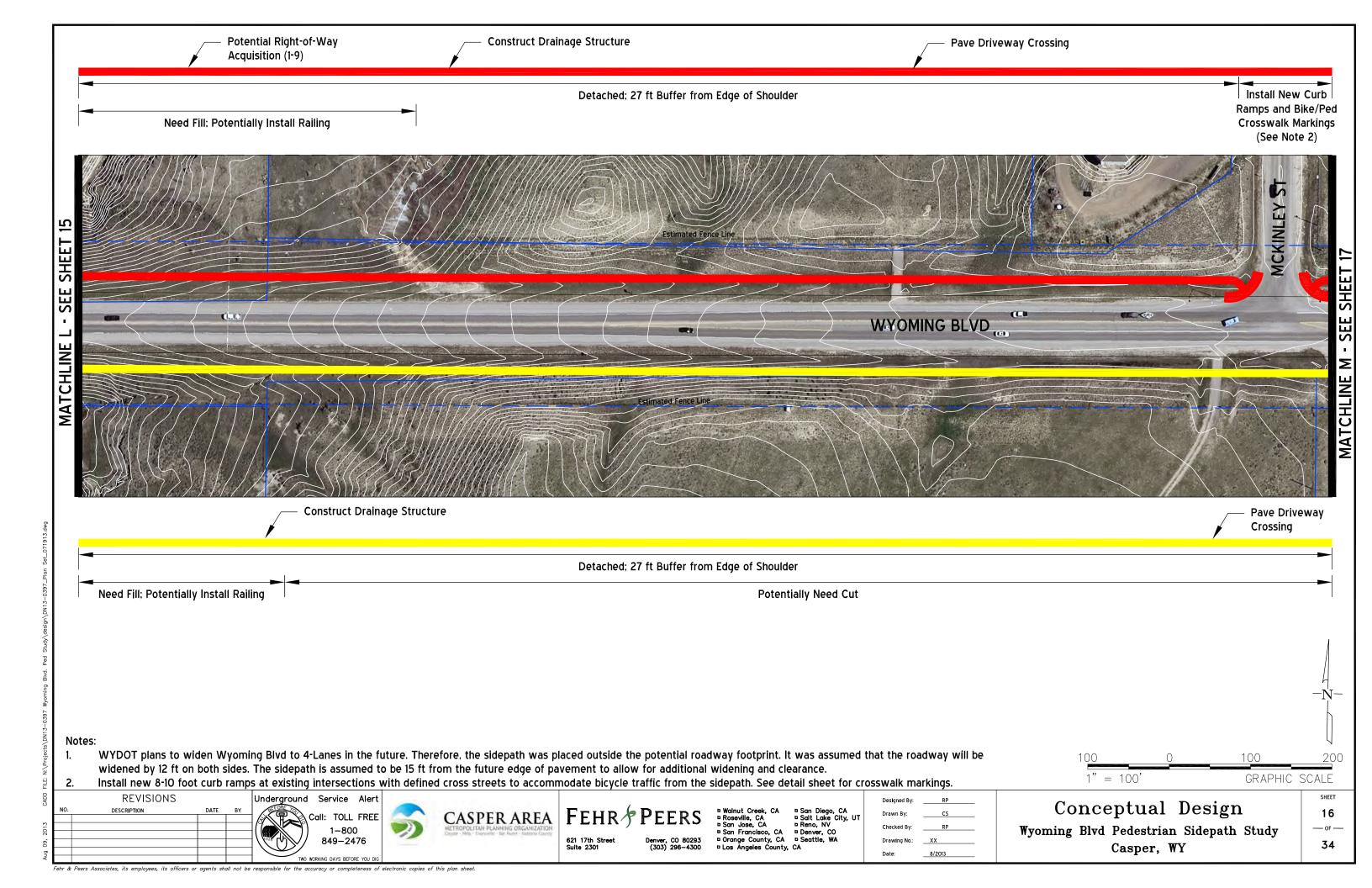


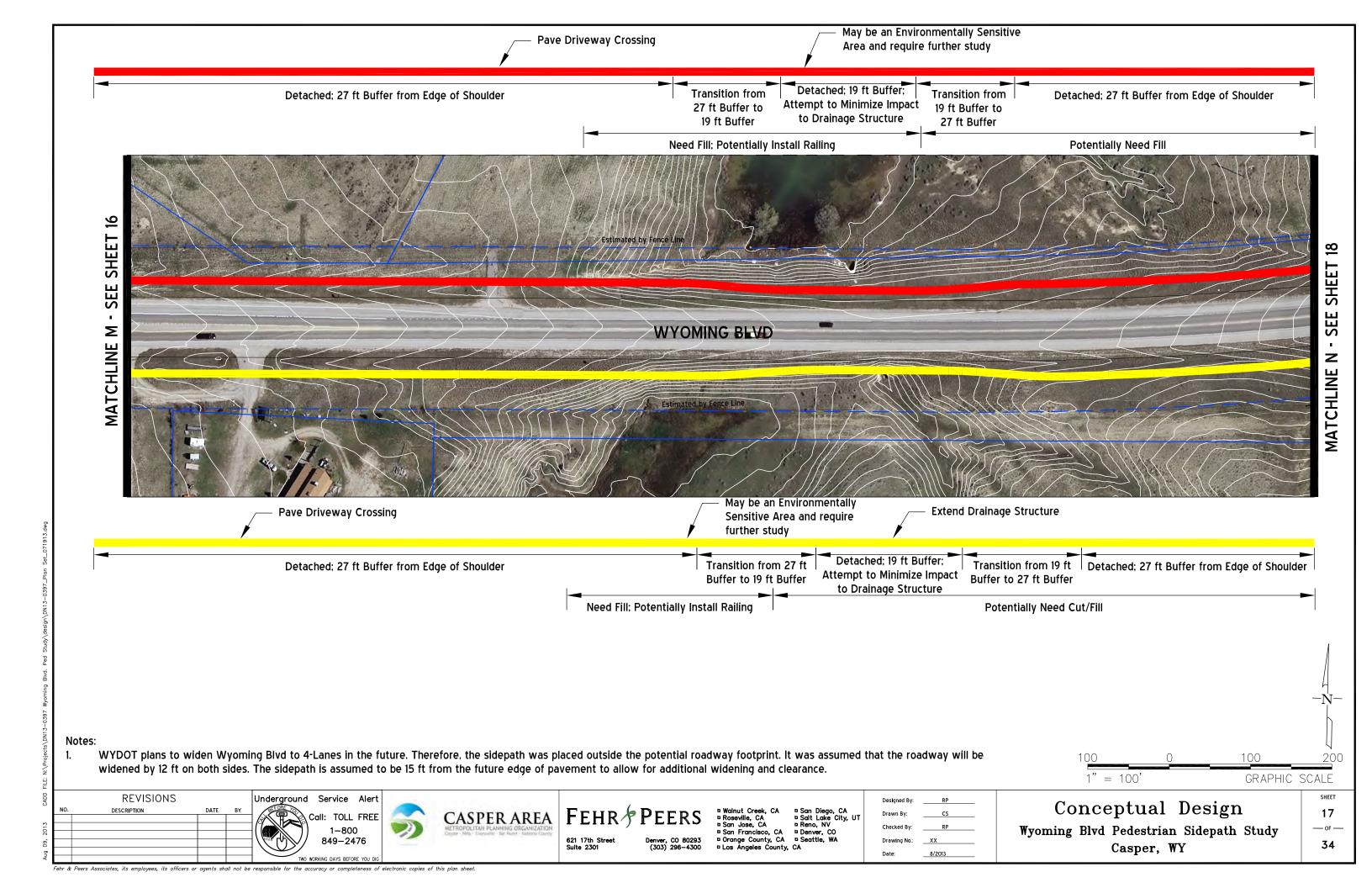


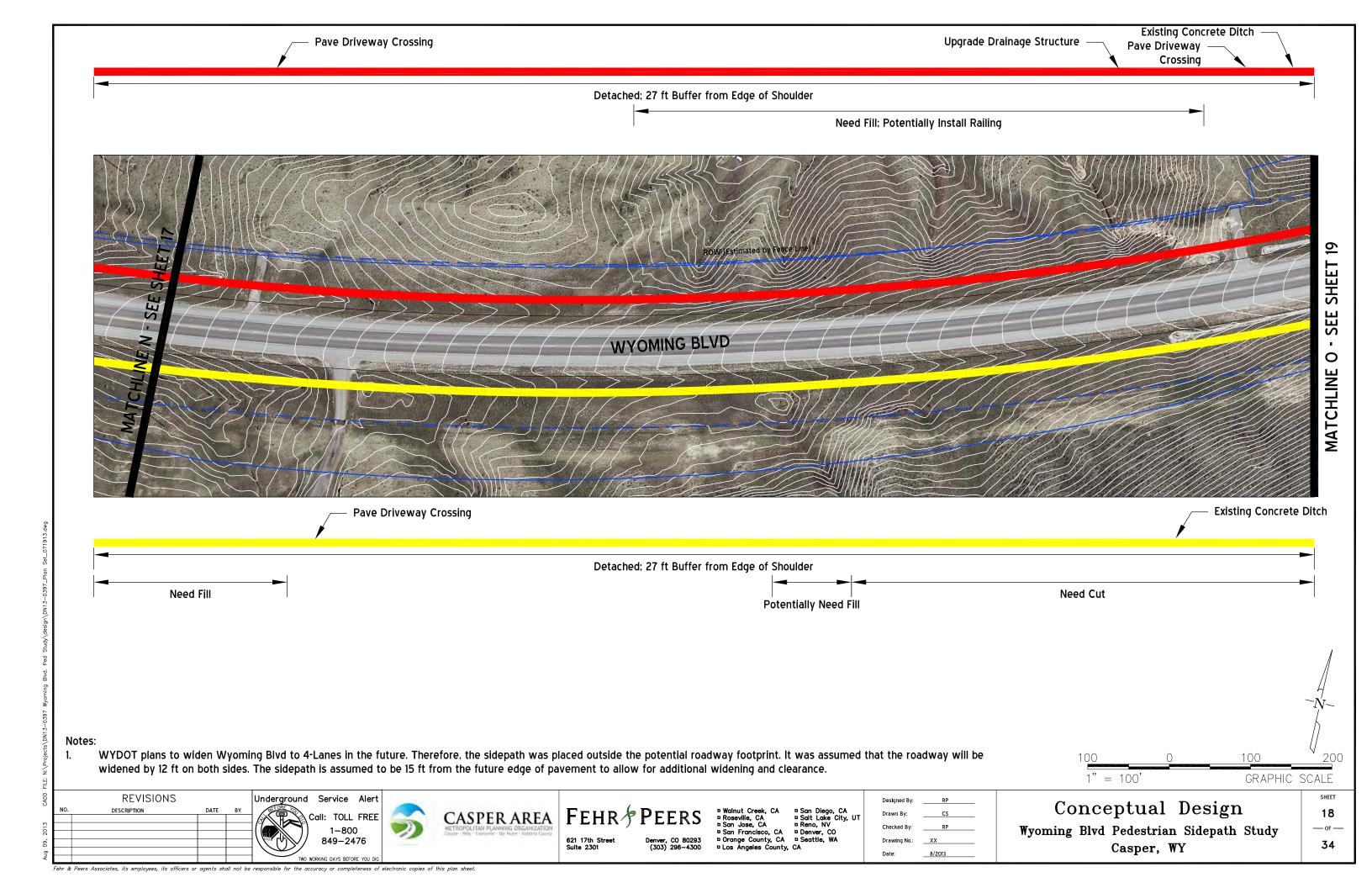


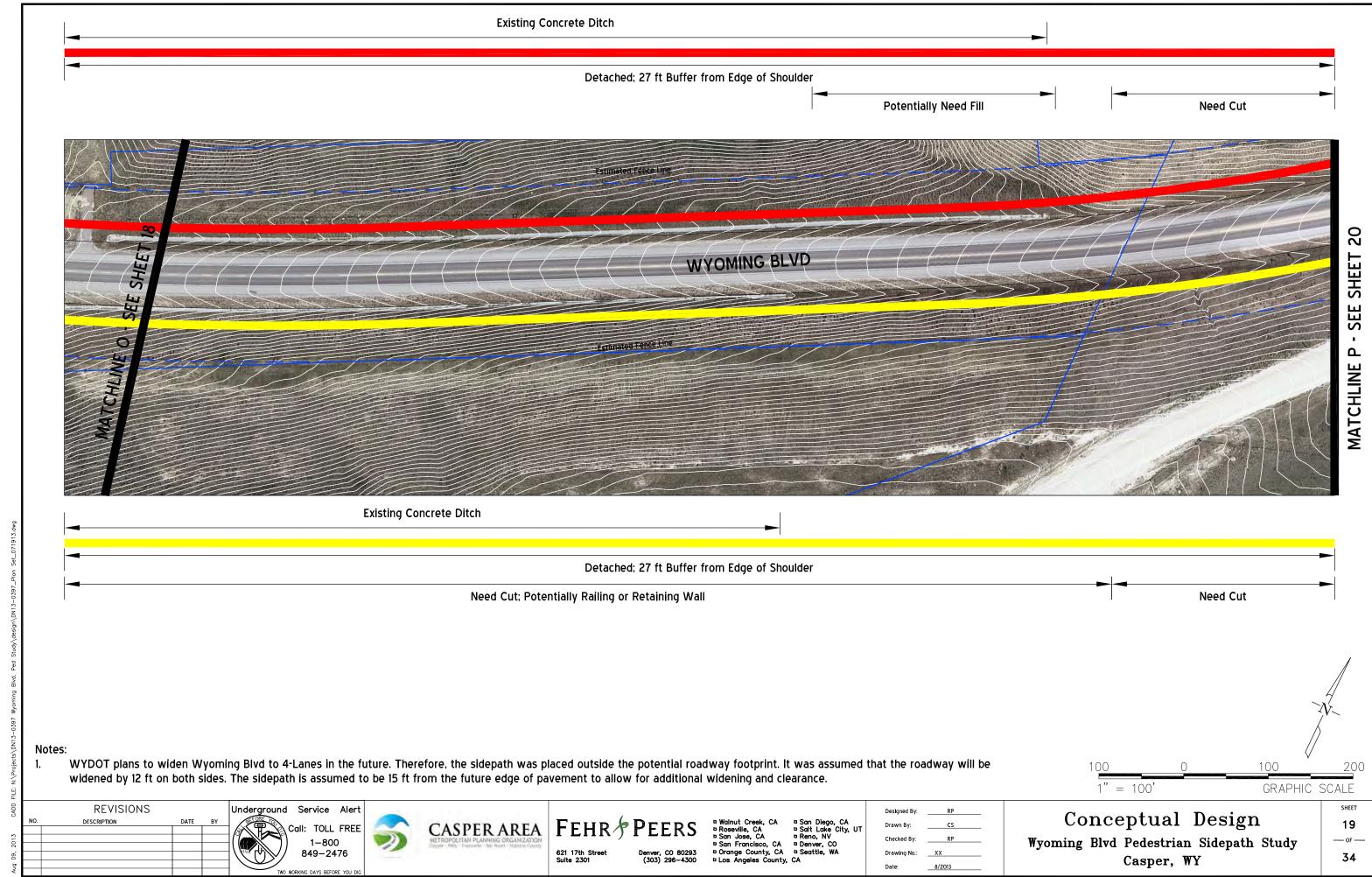


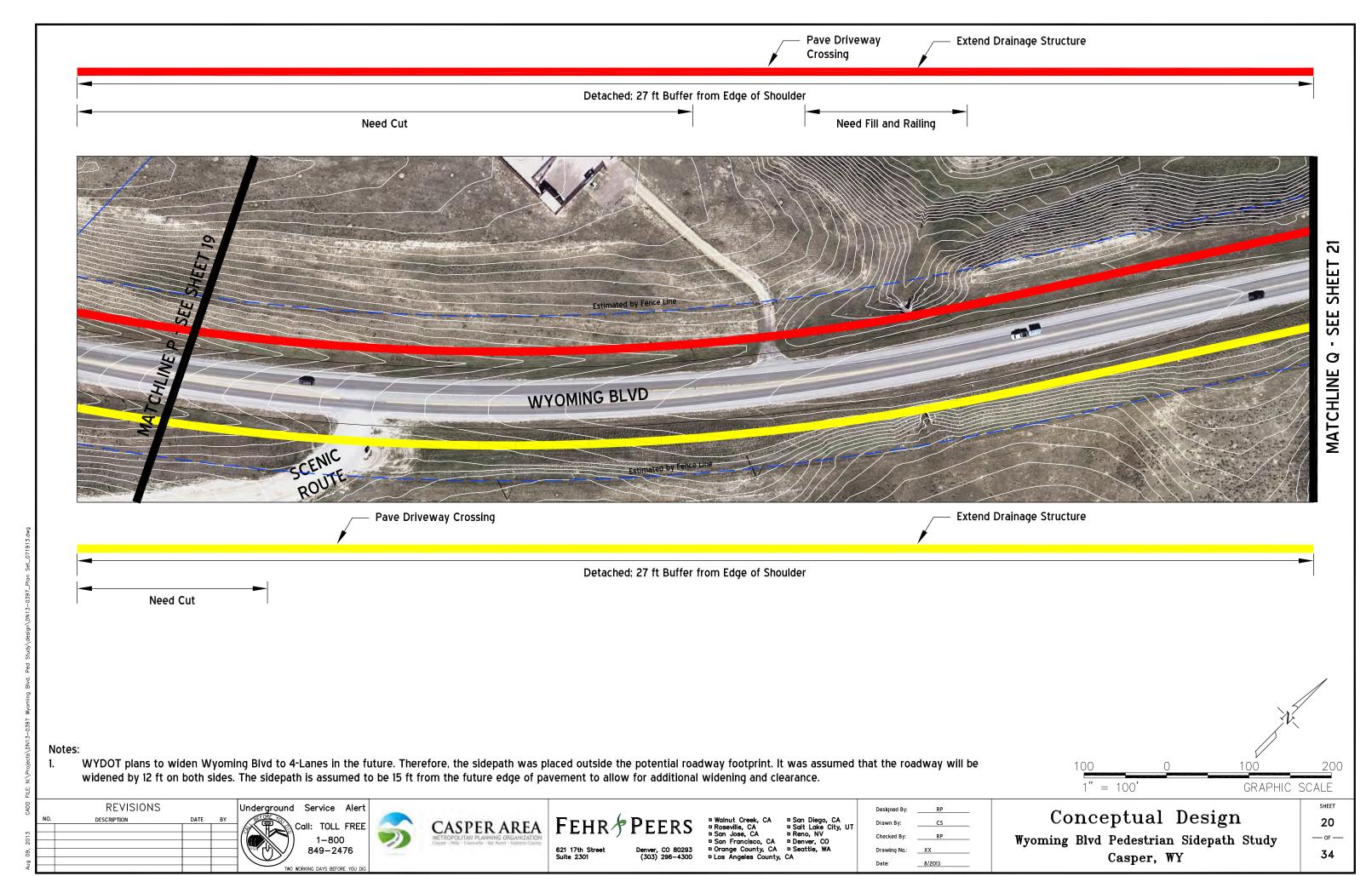




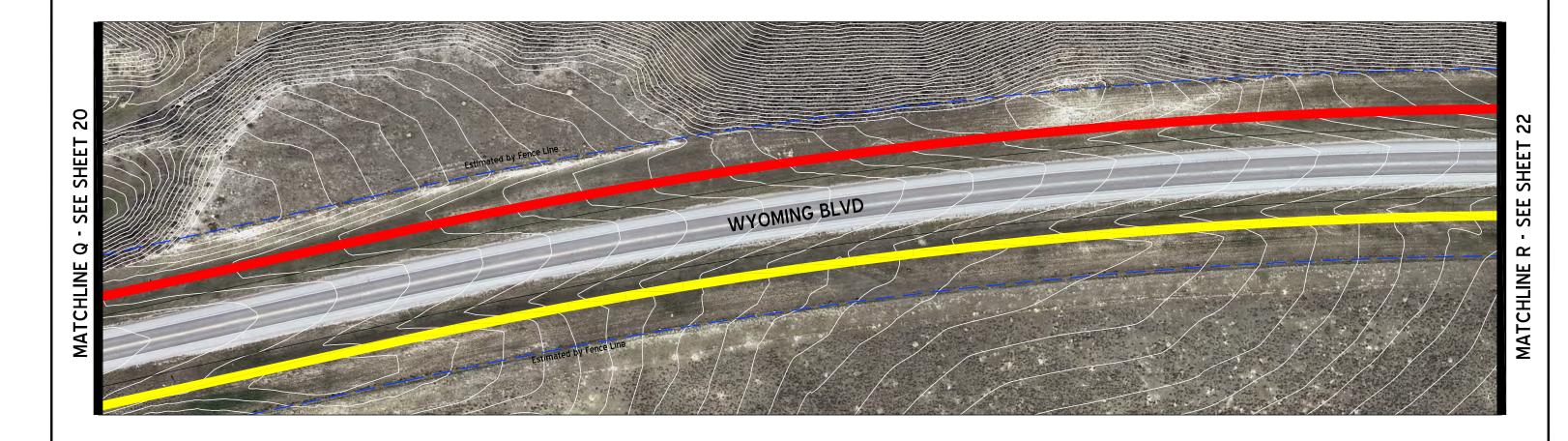








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Detached: 27 ft Buffer from Edge of Shoulder

Notes:

WYDOT plans to widen Wyoming Blvd to 4-Lanes in the future. Therefore, the sidepath was placed outside the potential roadway footprint. It was assumed that the roadway will be widened by 12 ft on both sides. The sidepath is assumed to be 15 ft from the future edge of pavement to allow for additional widening and clearance.

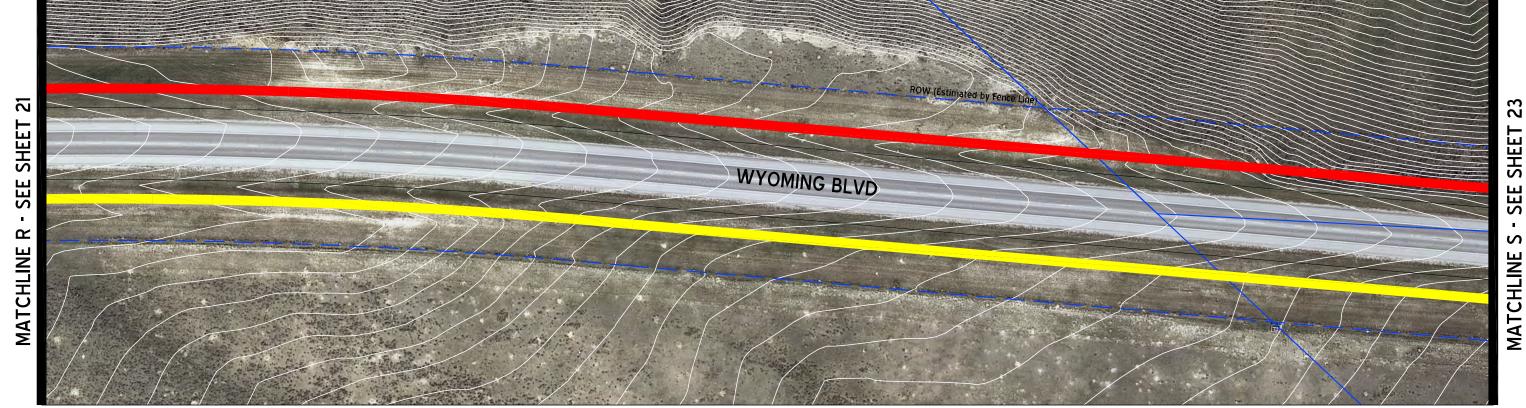
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Drawn By:	cs	
Checked By:	RP	
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Date:	8/2013	

1" = 100' GRAPHIC SCALE Conceptual Design 21 Wyoming Blvd Pedestrian Sidepath Study — of — 34 Casper, WY



Detached; 27 ft Buffer from Edge of Shoulder

Notes:

WYDOT plans to widen Wyoming Blvd to 4-Lanes in the future. Therefore, the sidepath was placed outside the potential roadway footprint. It was assumed that the roadway will be widened by 12 ft on both sides. The sidepath is assumed to be 15 ft from the future edge of pavement to allow for additional widening and clearance.

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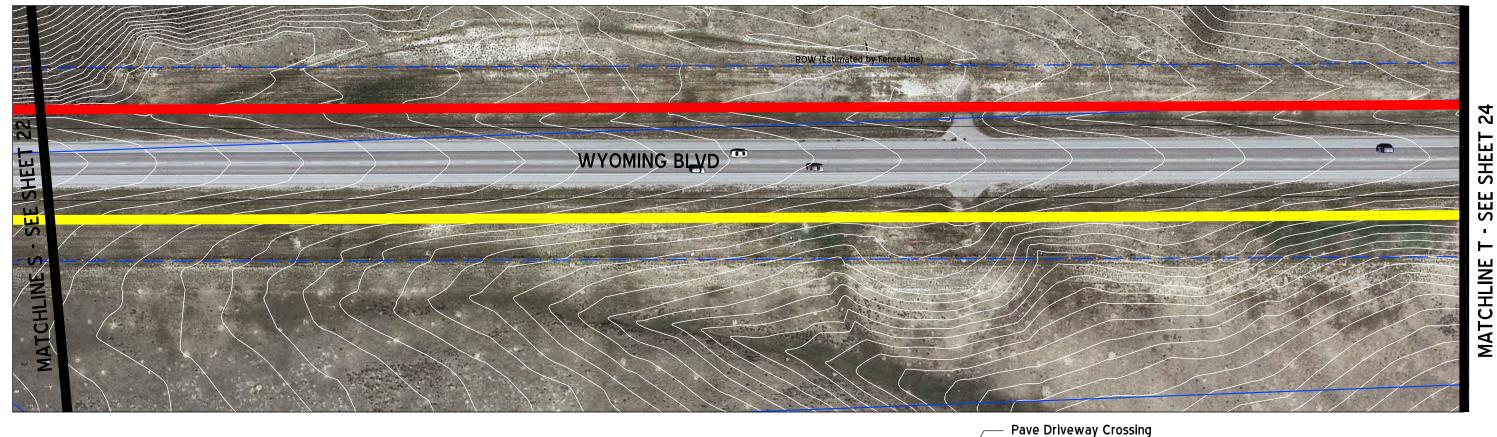
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1" = 100'

22 — of — 34

GRAPHIC SCALE

Detached; 27 ft Buffer from Edge of Shoulder



Detached; 27 ft Buffer from Edge of Shoulder

Notes:

WYDOT plans to widen Wyoming Blvd to 4-Lanes in the future. Therefore, the sidepath was placed outside the potential roadway footprint. It was assumed that the roadway will be widened by 12 ft on both sides. The sidepath is assumed to be 15 ft from the future edge of pavement to allow for additional widening and clearance.

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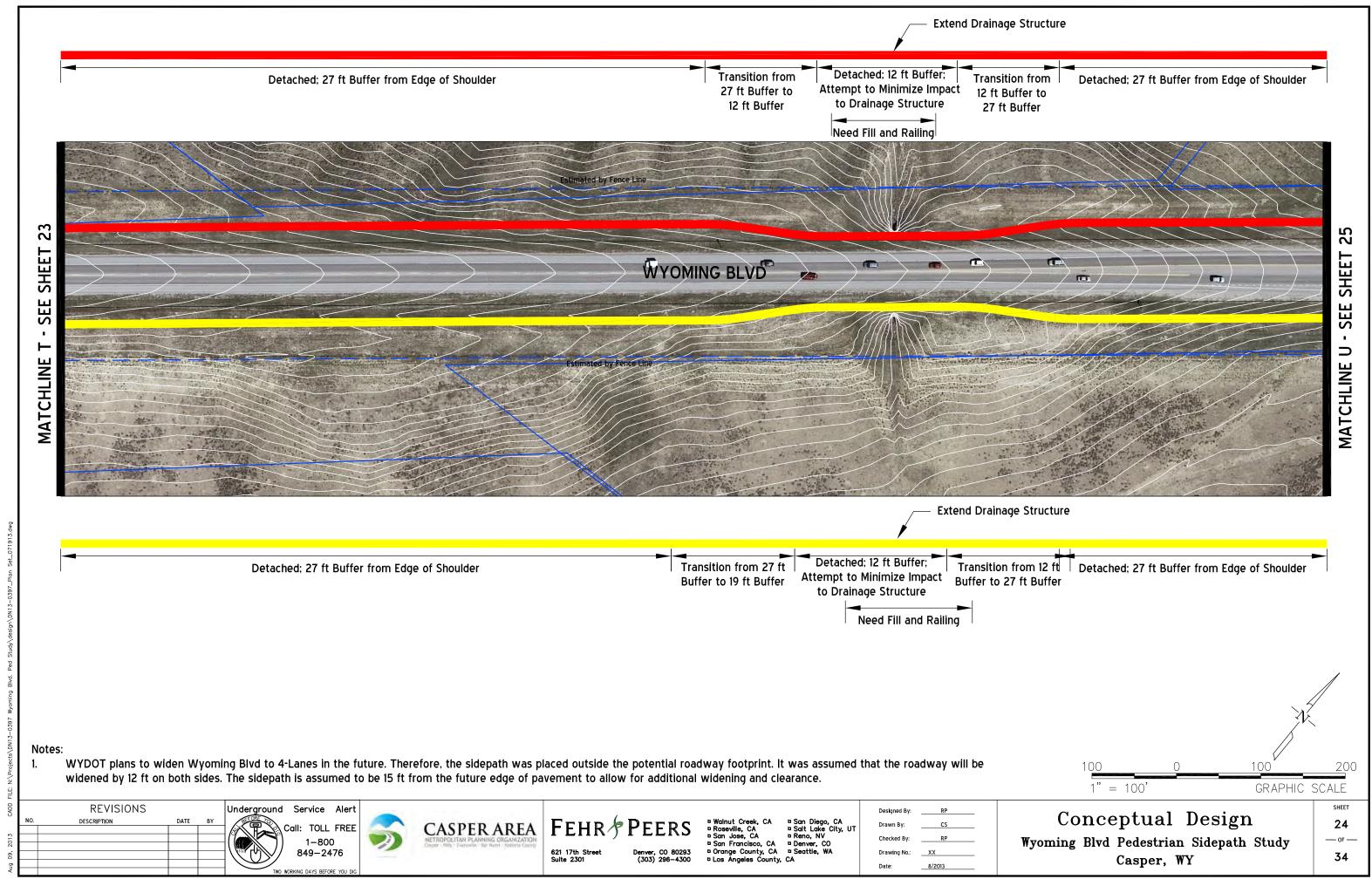
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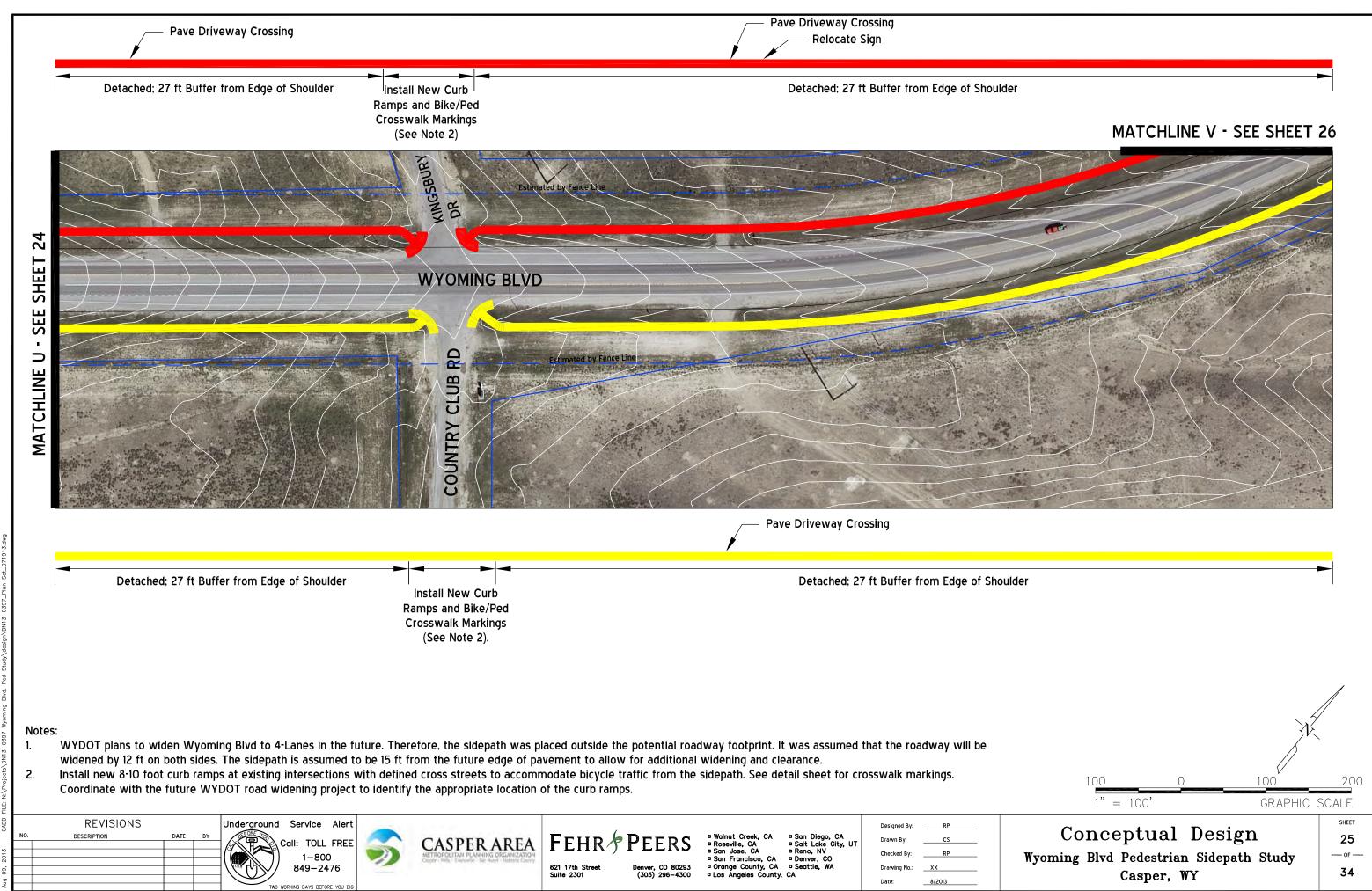
1" = 100'

23 — of — 34

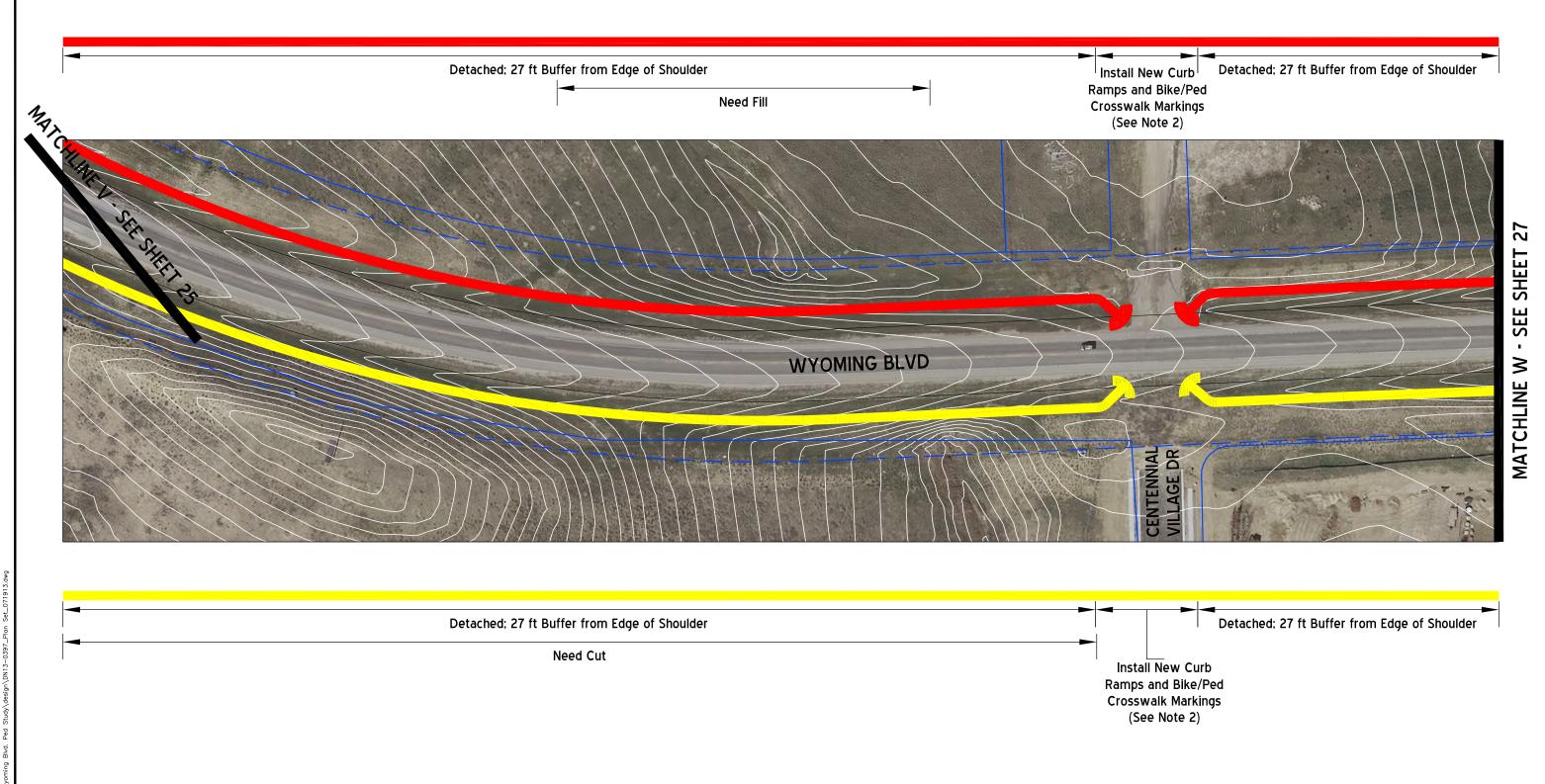
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- WYDOT plans to widen Wyoming Blvd to 4-Lanes in the future. Therefore, the sidepath was placed outside the potential roadway footprint. It was assumed that the roadway will be widened by 12 ft on both sides. The sidepath is assumed to be 15 ft from the future edge of pavement to allow for additional widening and clearance.
- Install new 8-10 foot curb ramps at existing intersections with defined cross streets to accommodate bicycle traffic from the sidepath. See detail sheet for crosswalk markings. Coordinate with the future WYDOT road widening project to identify the appropriate location of the curb ramps.

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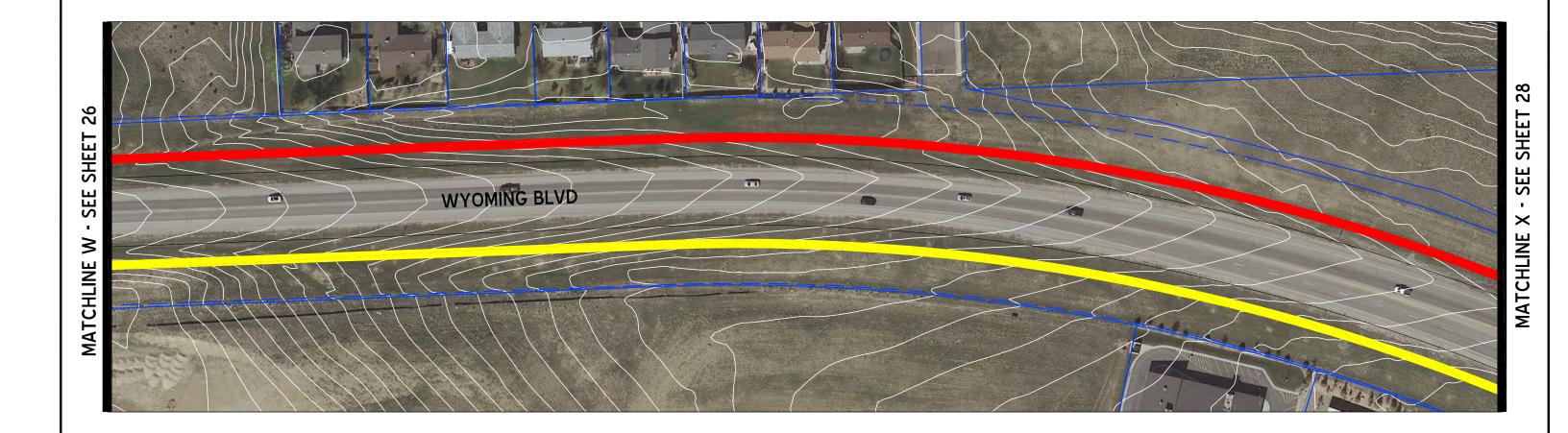
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1" = 100'

26 — оғ — 34

GRAPHIC SCALE



Detached: 27 ft Buffer from Edge of Shoulder

Notes:

WYDOT plans to widen Wyoming Blvd to 4-Lanes in the future. Therefore, the sidepath was placed outside the potential roadway footprint. It was assumed that the roadway will be widened by 12 ft on both sides. The sidepath is assumed to be 15 ft from the future edge of pavement to allow for additional widening and clearance.

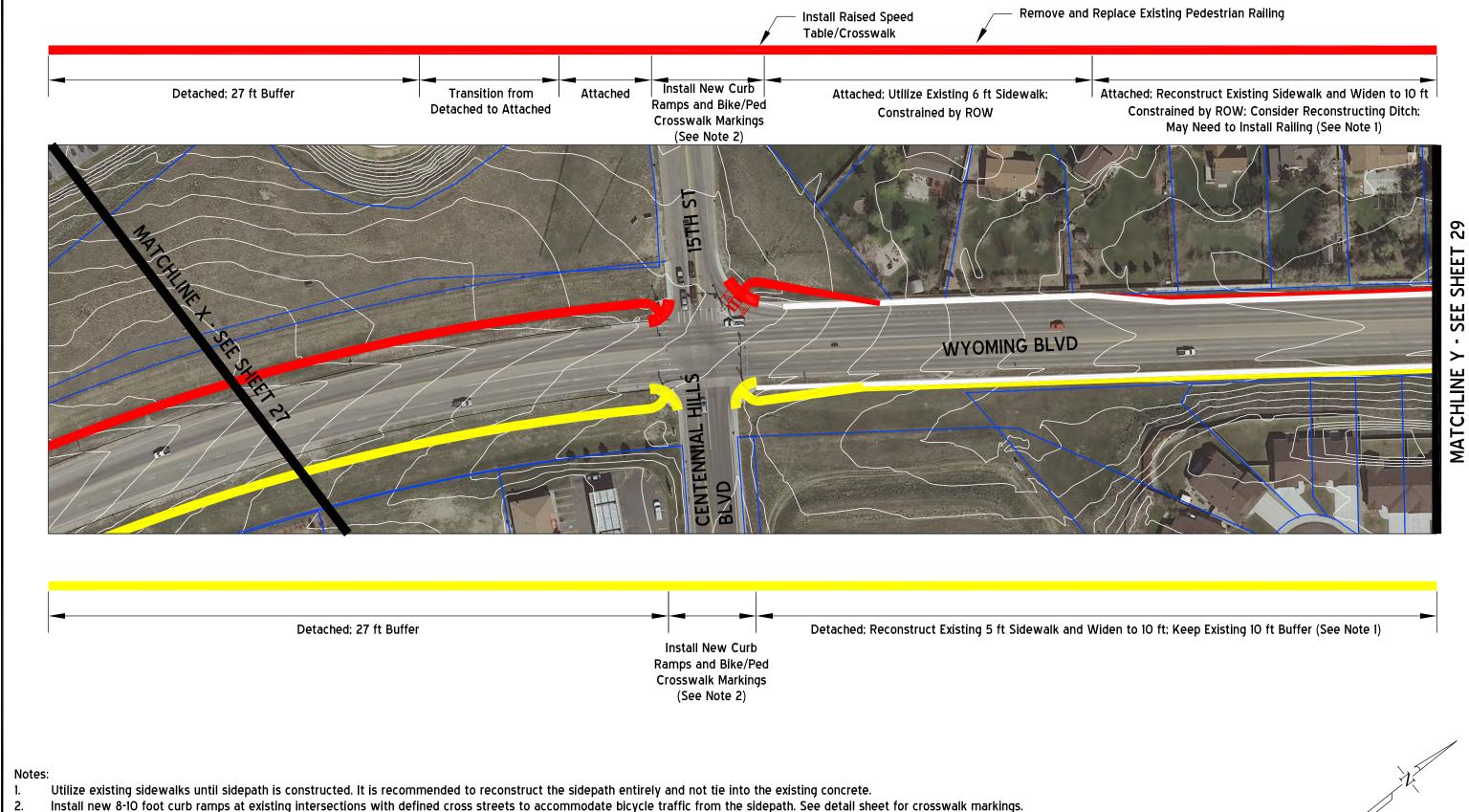
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1" = 100'

GRAPHIC SCALE 27 — of — 34



- WYDOT plans to widen Wyoming Blvd to 4-Lanes in the future beginning just southwest of Centennial Hills Blvd. Therefore, the sidepath was placed outside the potential roadway footprint. It was assumed that the roadway will be widened by 12 ft on both sides. The sidepath is assumed to be 15 ft from the future edge of pavement to allow for additional widening and clearance.

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