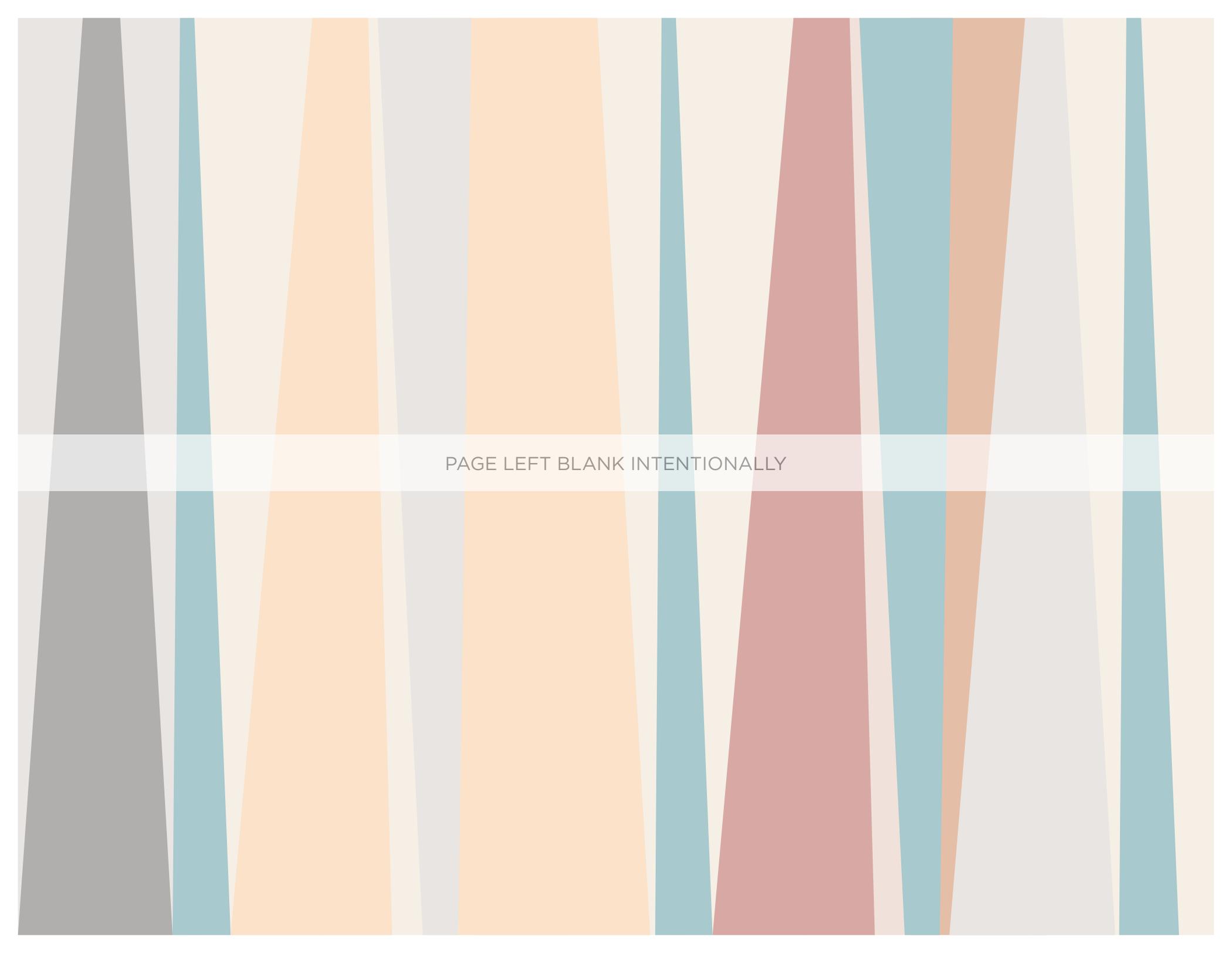


**Albuquerque RAIL TRAIL**

**PART IV - TECHNICAL + ROW ANALYSIS**

NOVEMBER 2021 - *Public Comment Draft*



PAGE LEFT BLANK INTENTIONALLY

# PART IV - TABLE OF CONTENTS

<b>TECHNICAL + ROW ANALYSIS.....</b>	<b>74</b>
Segment 1.....	74
Segment 2 .....	76
Segment 3 .....	78
Segment 4 .....	80
Segment 4 Enlargement.....	82
Segment 5 .....	84
Segment 5 Interim Design Option.....	86
Segment 6 .....	88
Segment 7 .....	88
Segment 8 .....	90

# TECHNICAL + ROW ANALYSIS

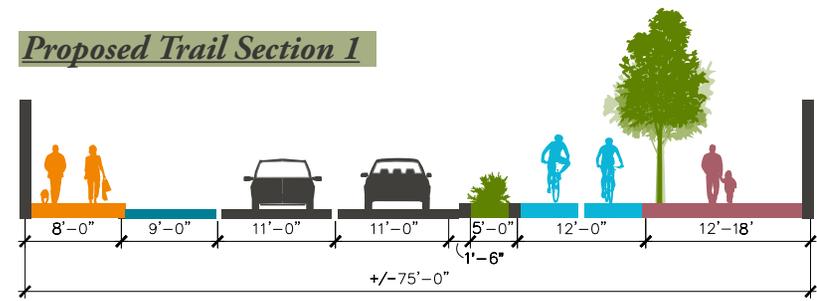
*The right of way (ROW) along the Rail Trail corridor varies in width, necessitating a flexible design that is fundamentally different on the north and south sides of Central Avenue. Specifically in the northern portion, the trail alignment is constrained where buildings back onto the railroad and no buffer exists. In the southern portion of the site, the ROW is wider and properties along the western edge of the trail are owned by the City.*

Where the trail is immediately adjacent to the rail the proposed trail requires 25 ft. to accommodate the trail shoulders, landscape buffers, and space to allow two-way trail traffic. In addition to this requirement, a 25 ft. setback from the railroad center line is required. Where the trail is located along a roadway a minimum of 24 ft. is required to accommodate a 12 ft. cycle track and a 12 ft. pedestrian corridor with landscaping. Where more ROW is available, a raised median should be provided between vehicular travel lanes and the trail.



## SEGMENT 1

This ROW accommodates the following: a pedestrian trail (12 ft. with landscape buffers where appropriate), a two-way cycle track (12 ft.), a protective median between bikes and cars (5 ft.), two vehicle lanes (11 ft. each), parallel parking (9 ft.), and a sidewalk on the west side of the street (8 ft.). Further study is need to smoothly transition the Rail Trail to the planned streetscape improvements fronting the Rail Yards property. The final configuration is



Section on 1<sup>st</sup> Street looking north

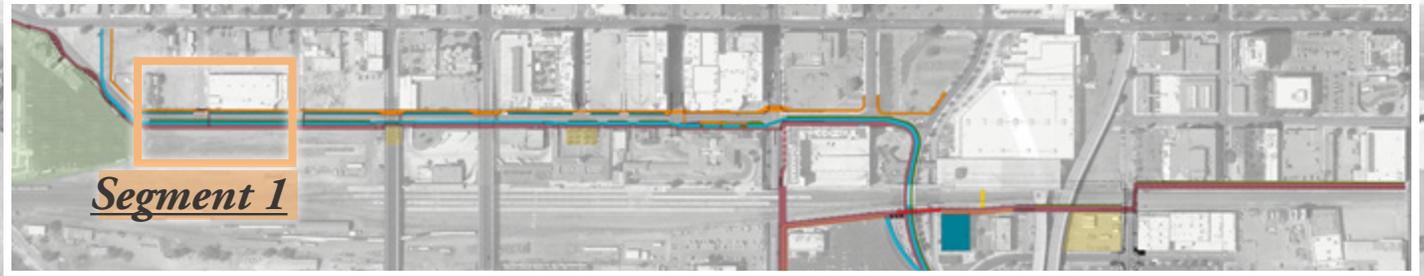
### LEGEND

- Sidewalk
- Protective Median between Bikes and Cars
- Parallel Parking
- Two-Way Cycle Track
- Travel Lane
- Pedestrian Trail

Trail connection to 2nd Street corridor and bicycle facilities

2<sup>ND</sup> STREET

Context Map



Segment 1

Future Rail Yards Streetscape

Cycle track width narrows in interim condition

Segment 1

Existing Drain Inlet

Trail Section 1

Parallel Parking

Sidewalk

STOVER AVENUE

IRON AVENUE

1<sup>ST</sup> STREET

75 ft.

Analyze/coordinate transition from Rail Trail cycle track with Rail Yards Streetscape and future design of 1st/2nd Street intersection

Existing power poles and overhead lines along 1st Street will be located between cycle track and pedestrian trail

Trail/Two-Way Cycle Track

Fence

Pedestrian Trail

Protective Median between Bikes and Cars

Potential conflict w/ electrical infrastructure

Existing Drain Inlet

highly dependant on the resolution of the City’s effort to obtain private property at the 1st/2nd Street intersection. There are potential conflicts with electrical infrastructure in this area, and some drain inlets will likely require relocation.

## SEGMENT 2

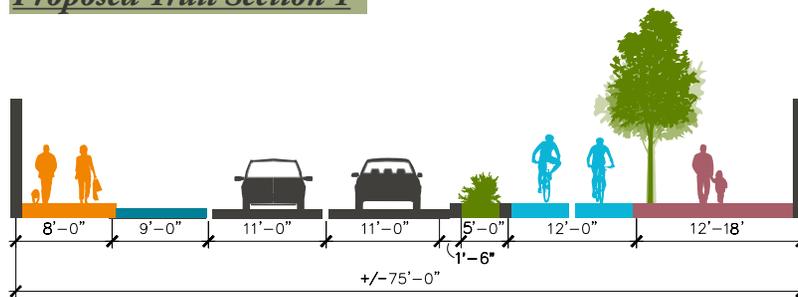
Measuring from the fence that runs along the railroad tracks (east of the future trail) to the back of the sidewalk on the west side, the width of the ROW varies between 67 and 75 ft. Under the Cola and Lead Avenue bridges, the ROW narrows to 60-65 ft.

The 75 ft. ROW accommodates the following: a pedestrian trail (12 ft.+), a two-way cycle track (12 ft. with landscape

buffers where appropriate), two vehicle lanes (11 ft. each), parallel parking (9 ft.), and a sidewalk on the west side of the street (8 ft.).

The 65+ ft. ROW accommodates the following: a pedestrian trail (9-12 ft.), a two-way cycle track (12 ft.), two vehicle lanes (11 ft. each), parallel parking (9 ft.), and a sidewalk on the west side of the street (8 ft.). There are potential conflicts with electrical infrastructure in this area and some drain inlets will likely require relocation.

### Proposed Trail Section 1

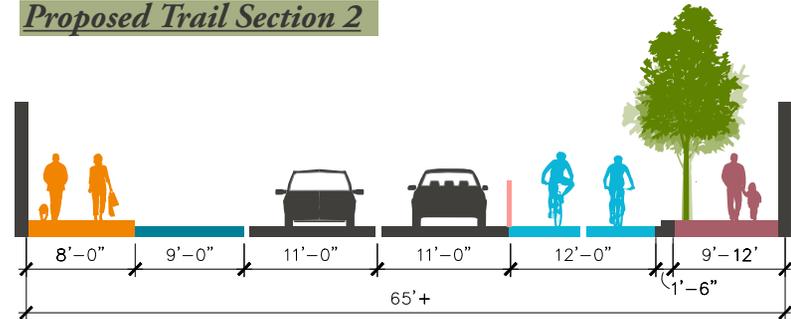


Section on 1<sup>ST</sup> Street looking north

#### LEGEND

- Sidewalk
- Parallel Parking
- Travel Lane
- Protective Median between Bikes and Cars
- Two-Way Cycle Track
- Pedestrian Trail

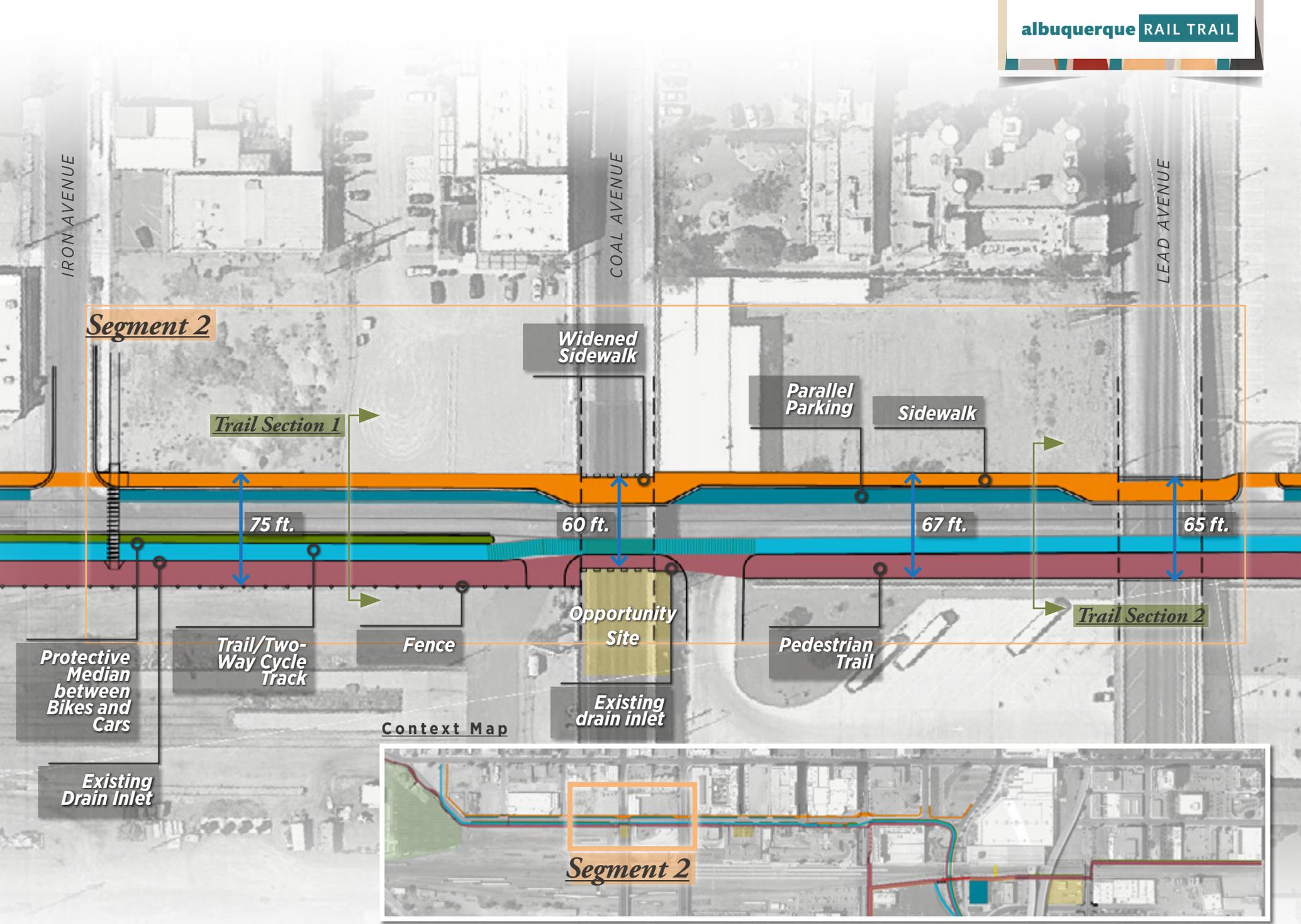
### Proposed Trail Section 2



Section on 1<sup>ST</sup> Street looking north

#### LEGEND

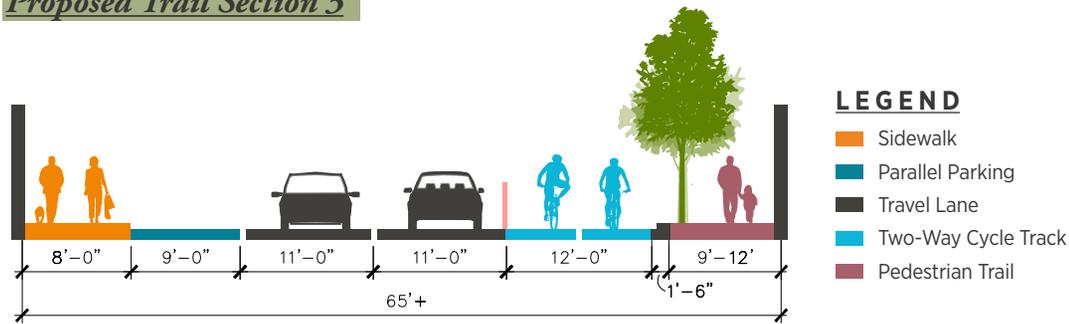
- Sidewalk
- Two-Way Cycle Track
- Parallel Parking
- Pedestrian Trail
- Travel Lane



### SEGMENT 3

The Segment 3 design is consistent with Segment 2, continuing north until the trail meets Gold Street. There is one pinch point in front of the Freight House where the ROW narrows to 61 ft. In this section the pedestrian trail is narrowed to 8 ft.

#### Proposed Trail Section 3

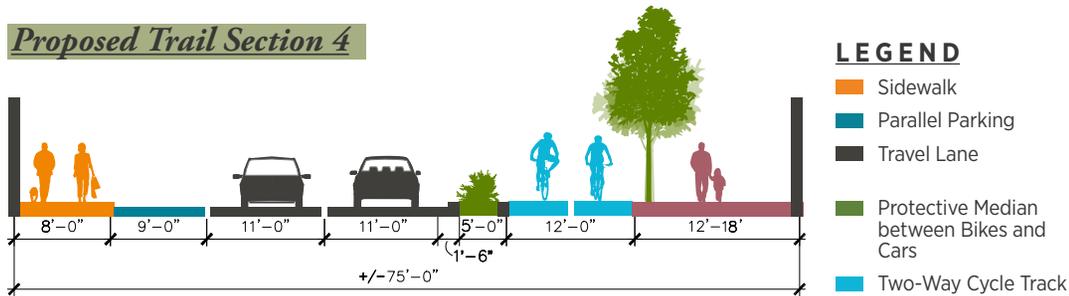


Section on 1<sup>st</sup> Street looking north

#### LEGEND

- Sidewalk
- Parallel Parking
- Travel Lane
- Two-Way Cycle Track
- Pedestrian Trail

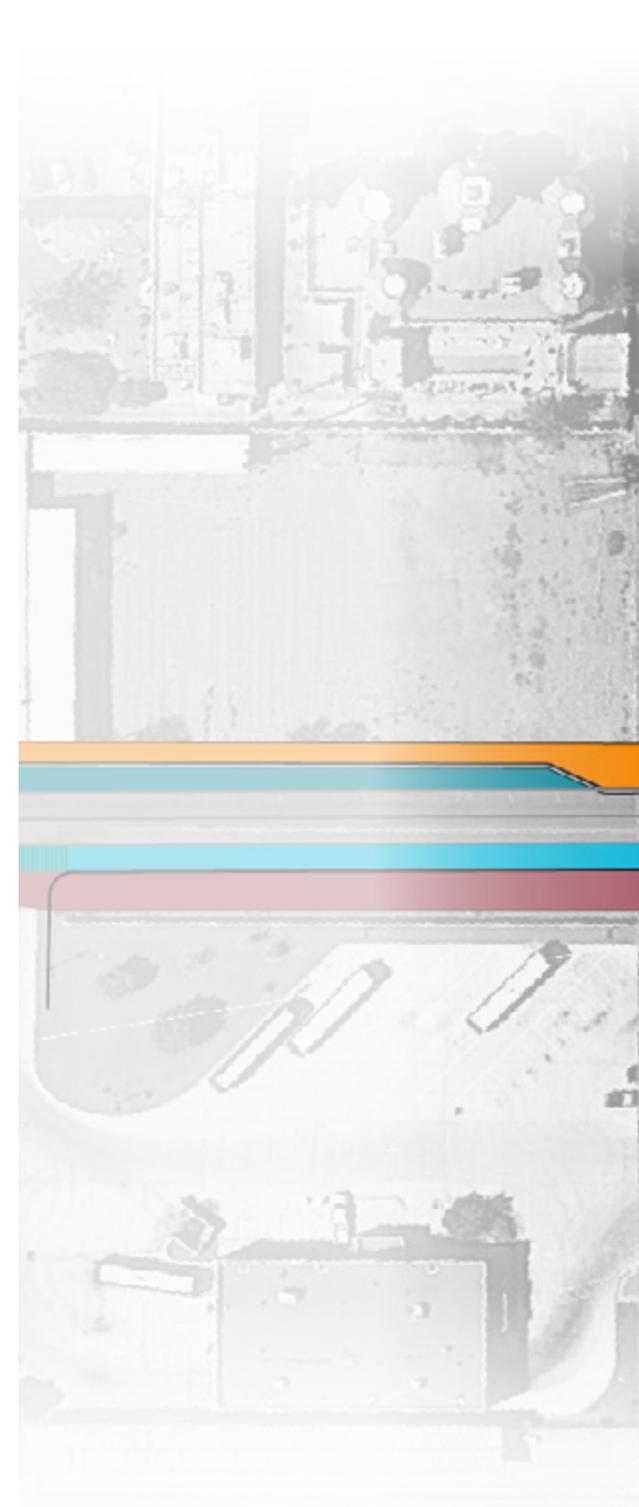
#### Proposed Trail Section 4



Section on 1<sup>st</sup> Street looking north

#### LEGEND

- Sidewalk
- Parallel Parking
- Travel Lane
- Protective Median between Bikes and Cars
- Two-Way Cycle Track
- Pedestrian Trail



LEAD AVENUE

SILVER AVENUE

GOLD AVENUE

**Segment 3**

**Trail Section 3**

67 ft. ROW

61 ft.

70 ft. ROW

Protective Median between Bikes and Cars

Trail/Two-Way Cycle Track

Pedestrian Trail

Existing Drain Inlet

Sidewalk

Parallel Parking

Existing Drain Inlet

Opportunity Site

**Trail Section 4**

Potential conflict with ADA access to building

Potential conflict with traffic signal equipment

Alvarado Transportation Center

Existing Drain Inlet

Context Map



**Segment 3**

## SEGMENT 4

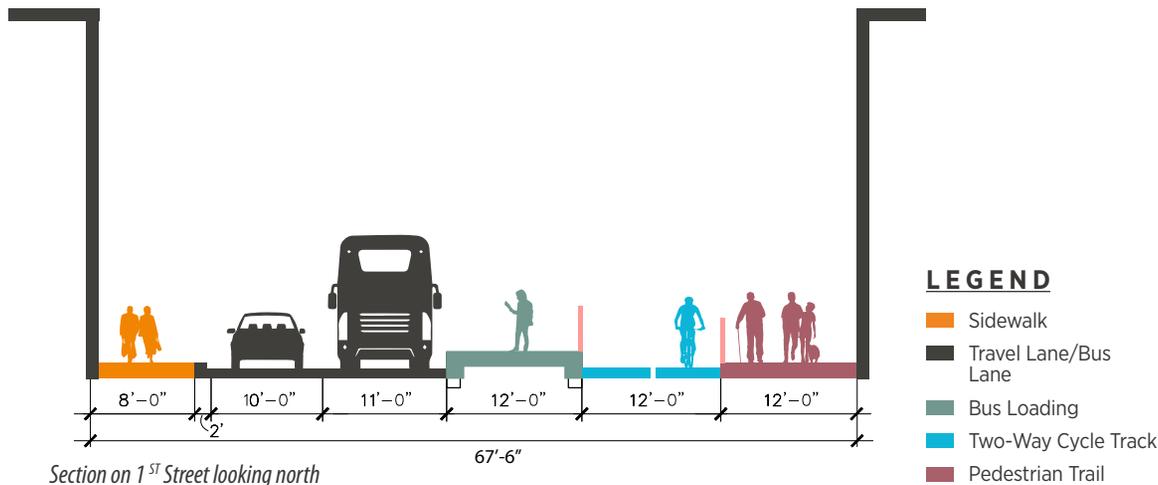
Segment 4 has the most complex challenges along the 1st Street trail corridor. A narrow 67 ft. ROW is further limited by the presence of the ART and Route 66 transit platforms. The design team met with ABQ Ride staff on numerous occasions to understand the frequency of transit stops, the function of the platforms, and the needs of transit users. While the recommended design reflects the input of ABQ Ride, a robust coordination effort with municipal staff must be part of further trail development in Segment 4. The proposed trail section includes a separated raised bus loading area, trail, and sidewalk. By splitting these facilities, conflicts can be minimized.

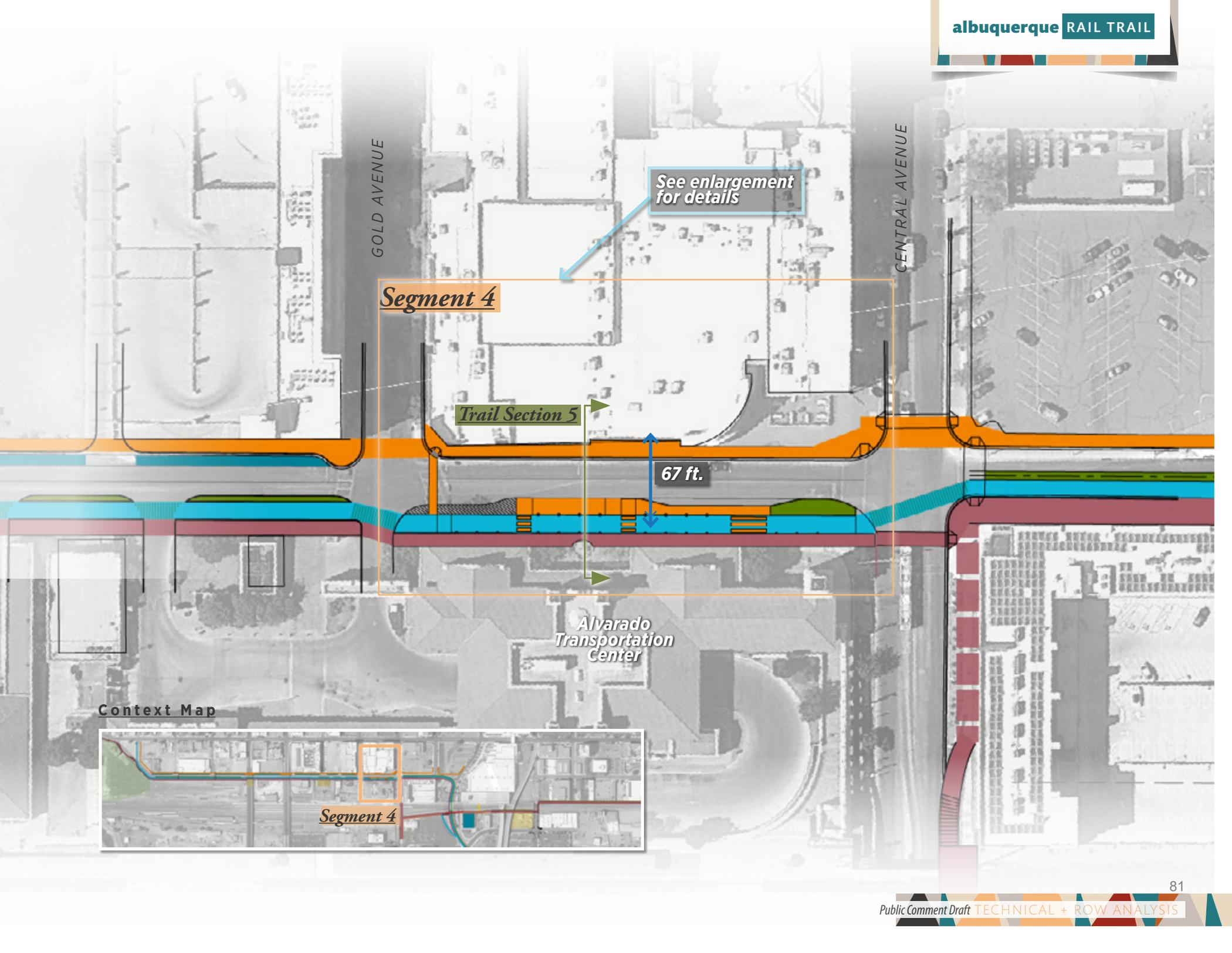
Another precautionary measure to consider is to raise the cycle track at pedestrian crossings to make cyclists aware that they are entering a pedestrian conflict zone.

The cycle track north of Central Avenue and the approach to the intersection of 1<sup>ST</sup> Street and Central Avenue should be carefully designed to enhance safety for cyclists and to minimize conflicts with pedestrians. There are potential sight issues with traffic going east-west and north-south.

At the intersection, a bike box should be provided to position cyclists ahead of the automobile traffic. Colored pavement should be used for the approach and a bike box should be added to delineate the bike facility at the intersection.

### Proposed Trail Section 5





GOLD AVENUE

CENTRAL AVENUE

See enlargement for details

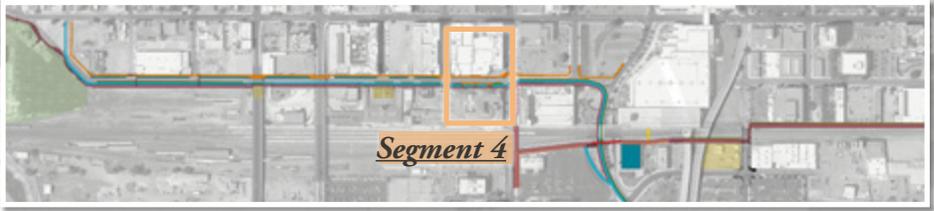
**Segment 4**

**Trail Section 5**

67 ft.

Alvarado Transportation Center

Context Map



**Segment 4**

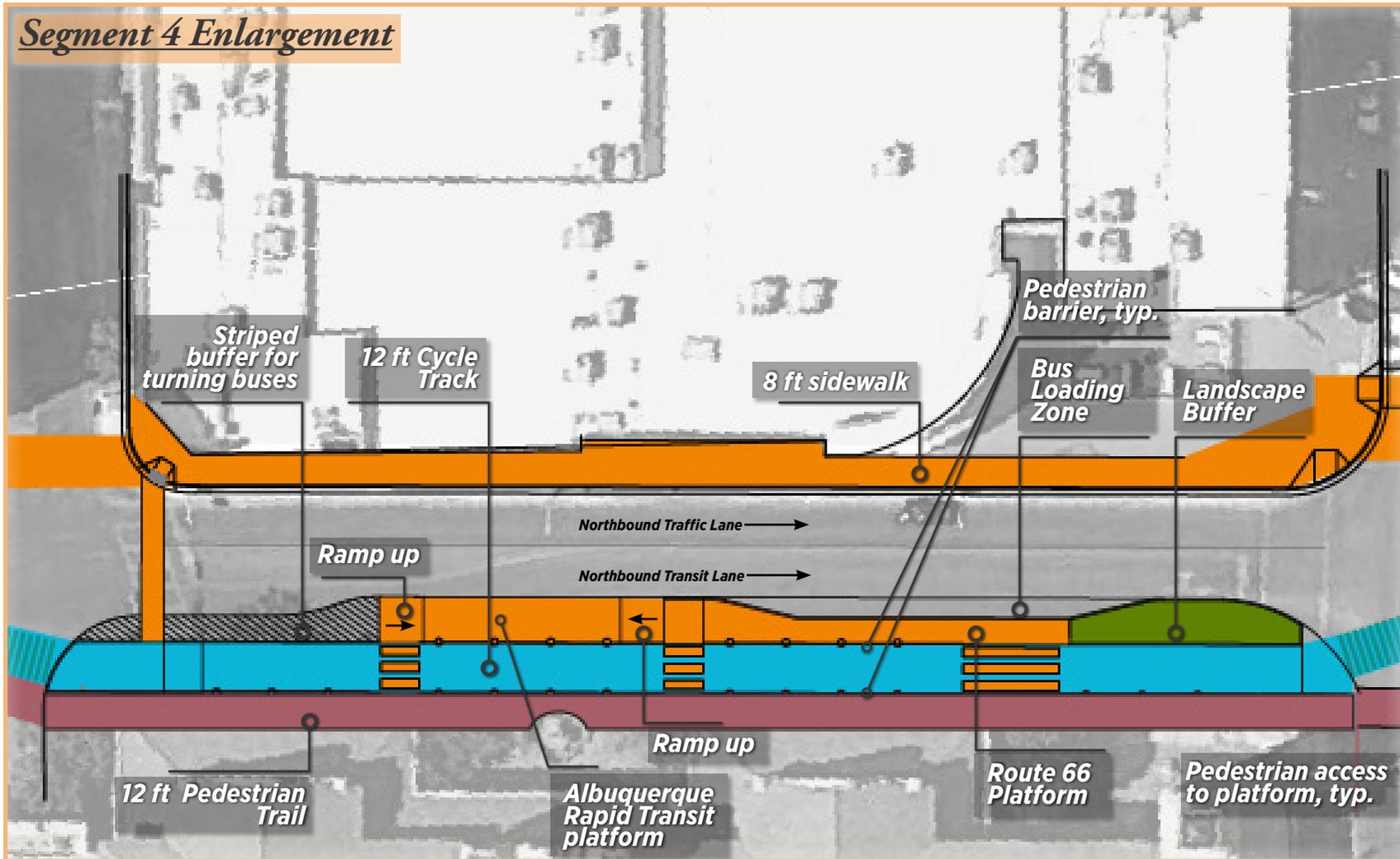
## SEGMENT 4 ENLARGEMENT

The proposed design for Segment 4 accommodates the cycle track by eliminating the southbound travel lane for one block between Central and Gold. Eliminating this lane allows for the pedestrian trail and cycle track to maintain a consistent +/- 12 ft. width. Removal of southbound traffic also reduces conflicts in this transit-heavy location where buses are turning north on 1st Street from Gold every few minutes. Elimination of the southbound travel lane has been vetted by ABQ Ride, COA Traffic, and other municipal staff but has not been reviewed by the public or private property owners. Outreach efforts should be made in the next design iteration.

### **Context Map**



### Segment 4 Enlargement

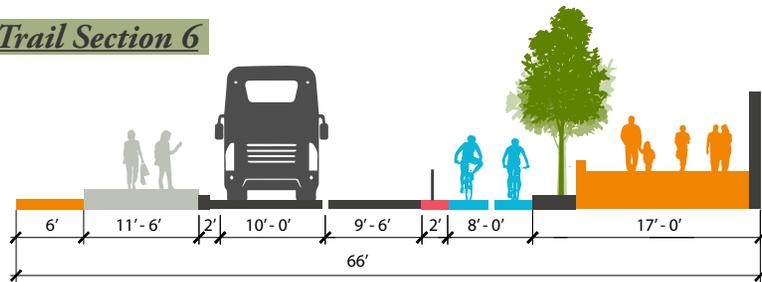


## SEGMENT 5

The proposed design for this section of the trail would split the trail into two facilities, with one heading east along Central Avenue (a) and the other section continuing north along 1<sup>ST</sup> Street (b). In this configuration of the Central Ave. bridge, the trail along Central would predominantly serve pedestrians and the trail along 1<sup>ST</sup> Street would serve bicyclists. This split is proposed because the current configuration of Central Ave and the railroad bridge would require bicyclists to dismount due to the congested and limited ROW. Refer to the segment 5 enlargement regarding additional details for Central Avenue recommendations.

**Note:** Available ROW along the Innovate property is +/-17', 7' less than the ideal 25' corridor. The adjacent Innovate ABQ development has indicated that the additional 7' of ROW can be obtained and that they intend to create a cohesive frontage to embrace the trail.

### Trail Section 6

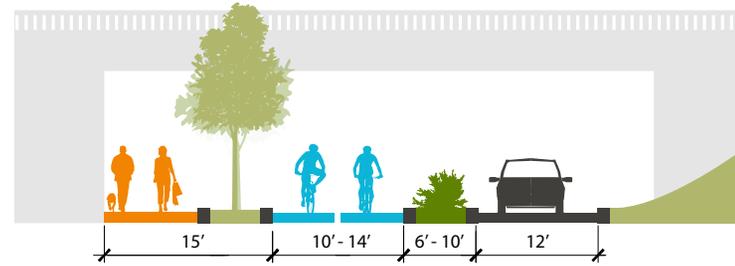


Section on 1<sup>ST</sup> Street looking north

#### LEGEND

- Sidewalk/Bus Platform
- Buffer/Barrier/Delineator
- Existing Sidewalk
- Travel Lane/Bus Lane
- Two-Way Cycle Track

### Trail Section 7

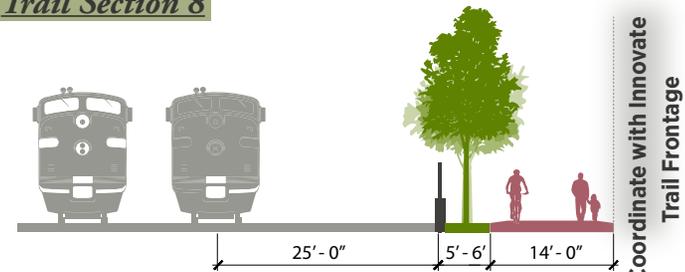


Section on Tijeras Avenue looking west

#### LEGEND

- Existing Sidewalk
- Protective Median
- Existing Landscape Buffer
- Travel Lane
- Two-Way Cycle Track

### Trail Section 8



Section along the east side of the railroad tracks looking north

#### LEGEND

- Railroad ROW
- Landscape Buffer
- Trail

### Context Map



Segment 5

Trail Section 6

Existing Drain Inlet within proposed cycle track

CENTRAL AVENUE

Segment 5 Interim

Pedestrian pinch point due to existing infrastructure

This area poses additional challenges and is discussed in the Appendix in further detail. See segment 5 enlargement for interim and preferred alignments

Existing Drain Inlet

Limits of bridge (trail below)

New single-span bridge over Tijeras Avenue for trail

Drain Inlet

Trail (a) and (b) rejoin

Trail Section 8

Steps to Tijeras Ave

Approximately 7' of additional ROW required for 25' Rail Corridor

Trail Section 7

Connect to existing bicycle infrastructure

Approximately 14' of additional ROW required for Rail Trail access ramp

## SEGMENT 5 INTERIM DESIGN OPTION

The proposed design for this section utilizes the existing sidewalk on the north side of Central Avenue to pass under the railroad. This alternative, however, is considered an interim solution as users often experience unsafe conditions when passing under the railroad bridge. For this reason long-term crossing strategies should be explored that might require significant redesign of the Central Avenue railroad crossing.

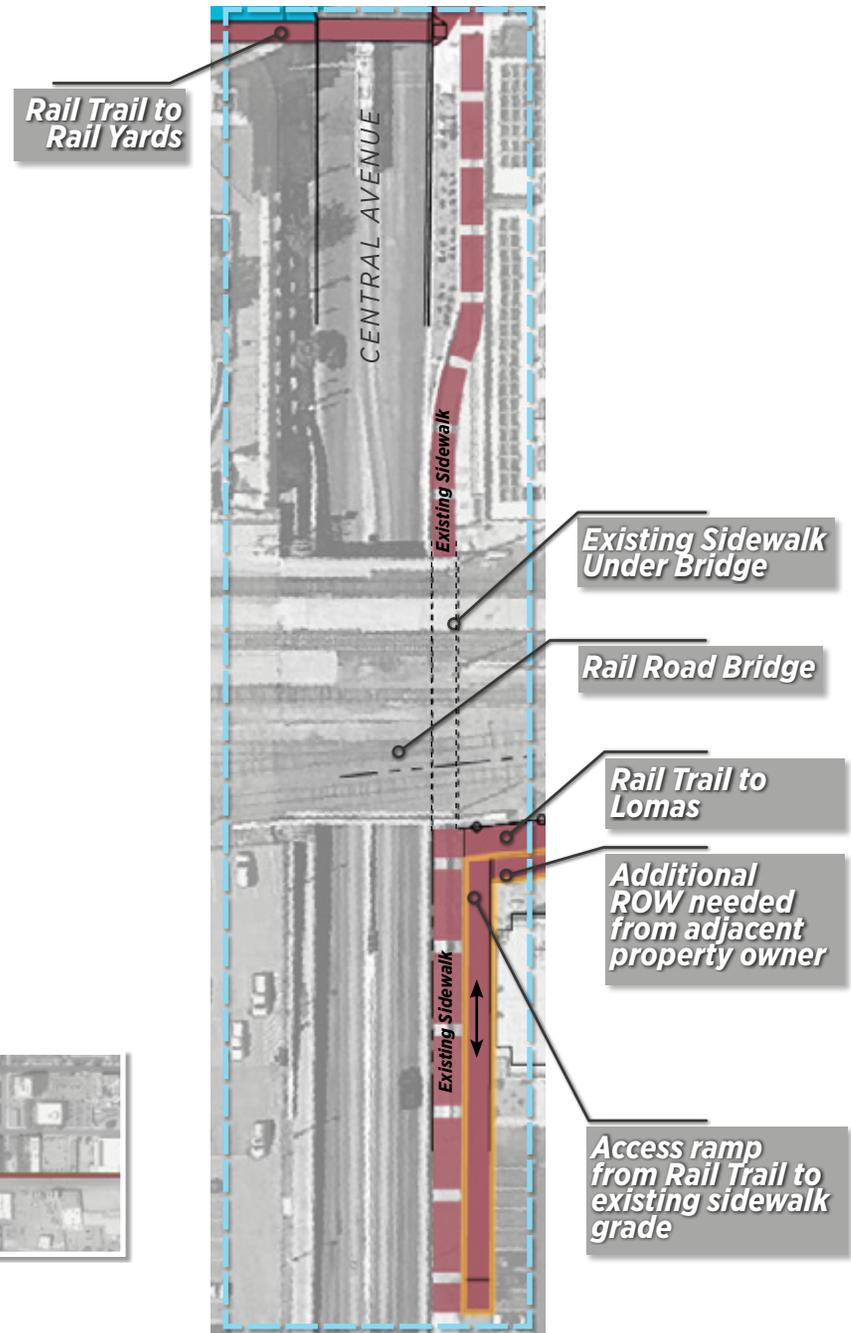
### Interim

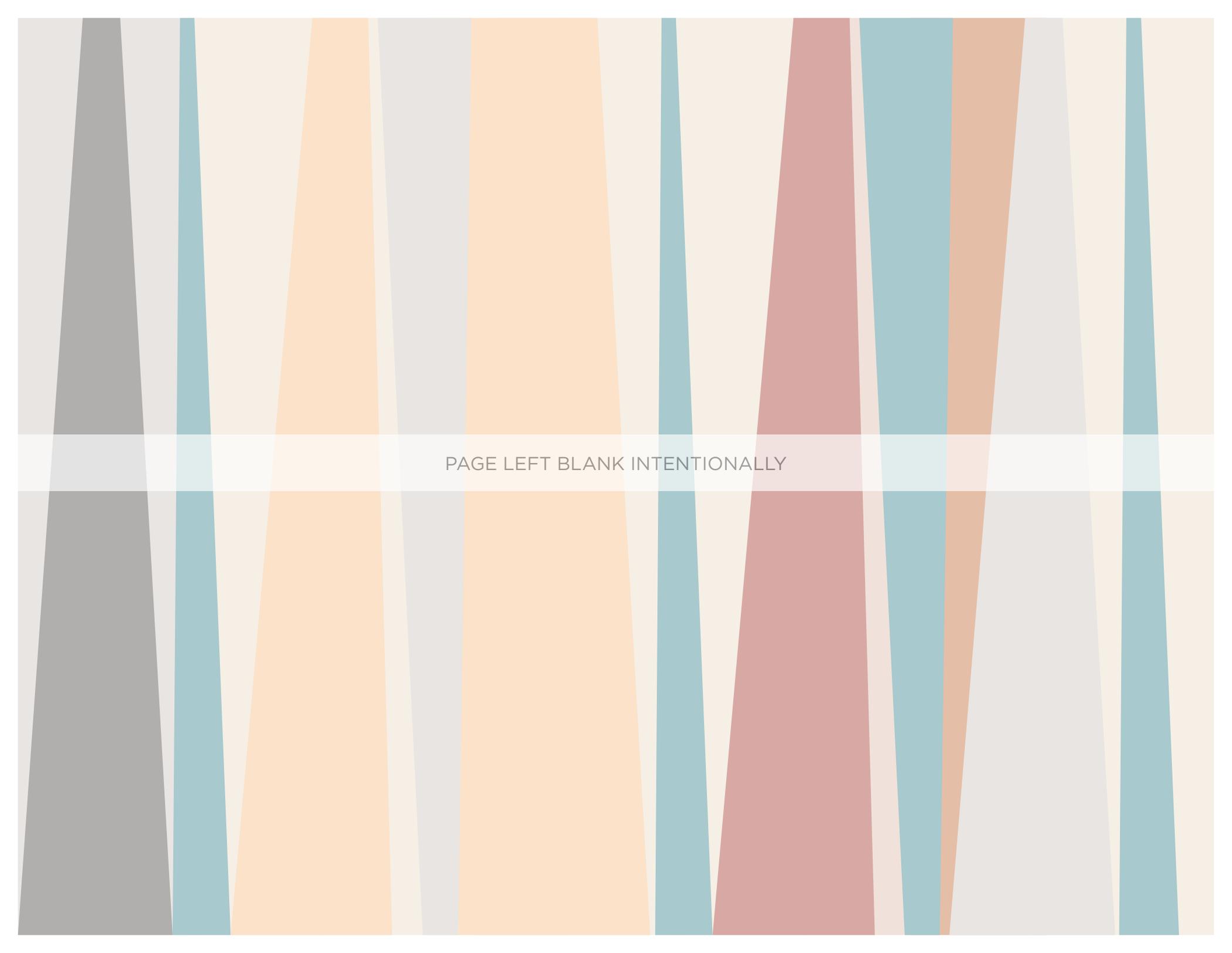
The 'interim' solution utilizes the existing sidewalk on the north side of Central and crossing the railroad via the existing underpass. It connects to the Rail Trail on the east side of the tracks via a ramp. To construct the ramp, approximately 14 ft. of ROW will need to be obtained from the adjacent property owner.

### Context Map



## Segment 5 Interim





PAGE LEFT BLANK INTENTIONALLY

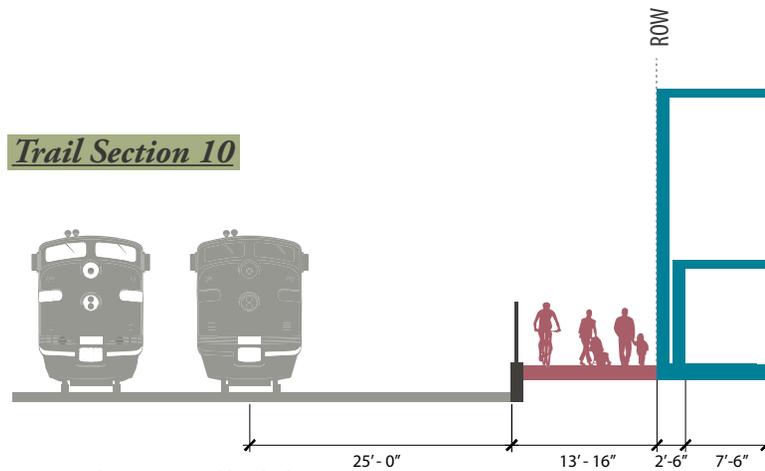
## SEGMENT 6

In this segment, the trail continues to follow the railroad tracks. The trail would be 14 ft. wide with a barrier on the railroad side and buildings on the east side. Opportunities exist to connect the trail to adjacent developments on the west side of segment 6.

## SEGMENT 7

In this segment the trail continues to follow the railroad tracks. The trail would be 14 ft. wide with a 5.5 ft. landscape buffer on either side of the trail where feasible. The parcel located on the north side of the Marquette Avenue Overpass is owned by the State of New Mexico, identified in yellow. This parcel offers an opportunity to create a trail amenity like a plaza or park. Further north, an at-grade railroad crossing is planned as an extension of Marquette Avenue for both vehicles and pedestrians. The trail would cross the rail tracks on the north side of Marquette Avenue. The trail continues on the west side of the tracks from the Marquette Crossing to Lomas Blvd.

### Trail Section 10

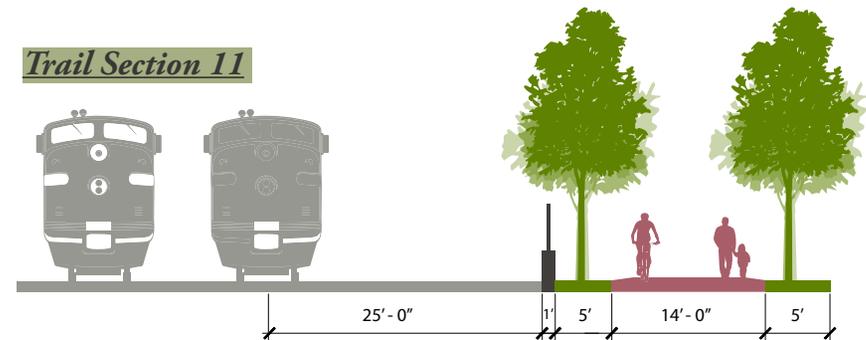


Section at the Springer Building looking north

#### LEGEND

- Railroad ROW
- Trail
- Springer Building

### Trail Section 11



Section on the east side of the railroad tracks looking north

#### LEGEND

- Railroad ROW
- Trail
- Landscape Buffer

**Segment 6**

**Segment 7**

Proposed bridge to the Convention Center Parking Garage

Raise trail to Verge Building

Proposed Marquette Avenue at grade crossing

Potential Conflict with Rail Equipment

Trail Section 10

Trail Section 11

Varying additional ROW required for 25' Rail Corridor. Recommend working with property owners.

Opportunity Site

MARQUETTE AVENUE

MARQUETTE AVENUE

Context Map



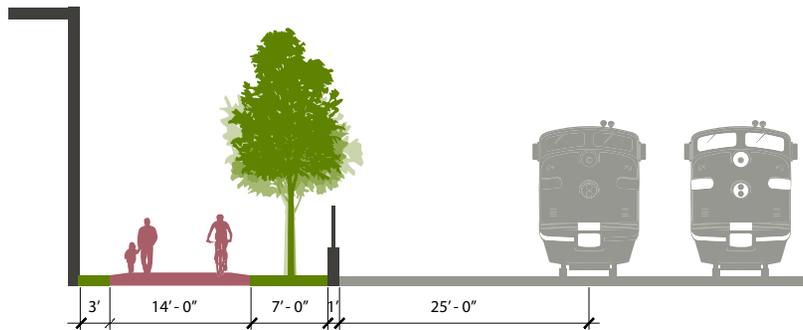
**Segment 7**

**Segment 6**

## SEGMENT 8

In this segment, the trail continues to follow the railroad tracks on the west side. There is a total ROW of approximately 25 ft. This could accommodate a 14 ft. trail and an 11 ft. landscape buffer. If trees are desired, they will require a wider landscape area. Trees should not be located in close proximity to existing buildings and building foundations. Therefore a possible scenario would be to have a smaller landscape area next to the existing buildings on the west side and a wider landscape area that accommodates trees on the east side.

### Trail Section 12

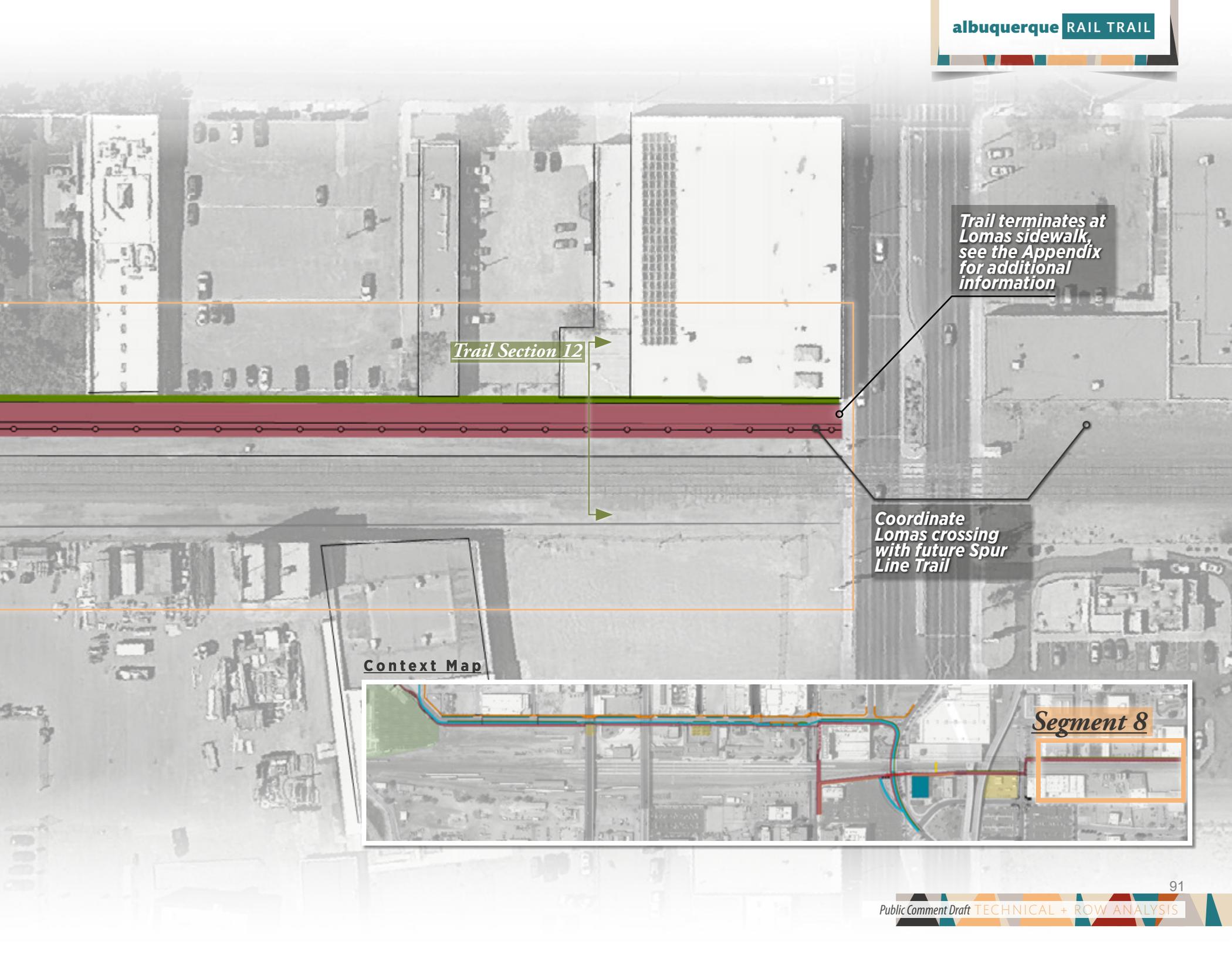


Section on the west side of the railroad tracks looking north

#### LEGEND

- Railroad ROW
- Trail
- Landscape Buffer





*Trail Section 12*

*Trail terminates at Lomas sidewalk, see the Appendix for additional information*

*Coordinate Lomas crossing with future Spur Line Trail*

**Context Map**

**Segment 8**

