



# **City of Palo Alto** **Grade Separation Project** Churchill Avenue, Meadow Drive, and Charleston Road

*Meadow Drive and Charleston Road  
Grade Separation Community Meeting  
September 30, 2025*



CITY OF  
**PALO ALTO**

# Caltrain Safety Enhancements

**Caltrain completed two major safety upgrades in Palo Alto as part of its Enhanced Crossing Strategy pilot.**

## High-Security Fencing

- West side of tracks from University Avenue Station to Churchill Avenue
- Closed major corridor gap next to public property

## Churchill Intersection Safety

- Surface markings, delineators, wider crosswalks with gates
- Solar-powered markers for nighttime
- Anti-trespass panels
- Rail Sentry/AI Lidar
- Waze/Google/Apple Maps collaboration to reduce driver confusion

## Pilot & Next Steps

- Modeled after Broadway (Burlingame) and Churchill pilots
- Positive pilot results; corridor-wide expansion planned
- VTA expediting \$950k Measure B funding for remaining Palo Alto crossings (Palo Alto, Meadow, Charleston)



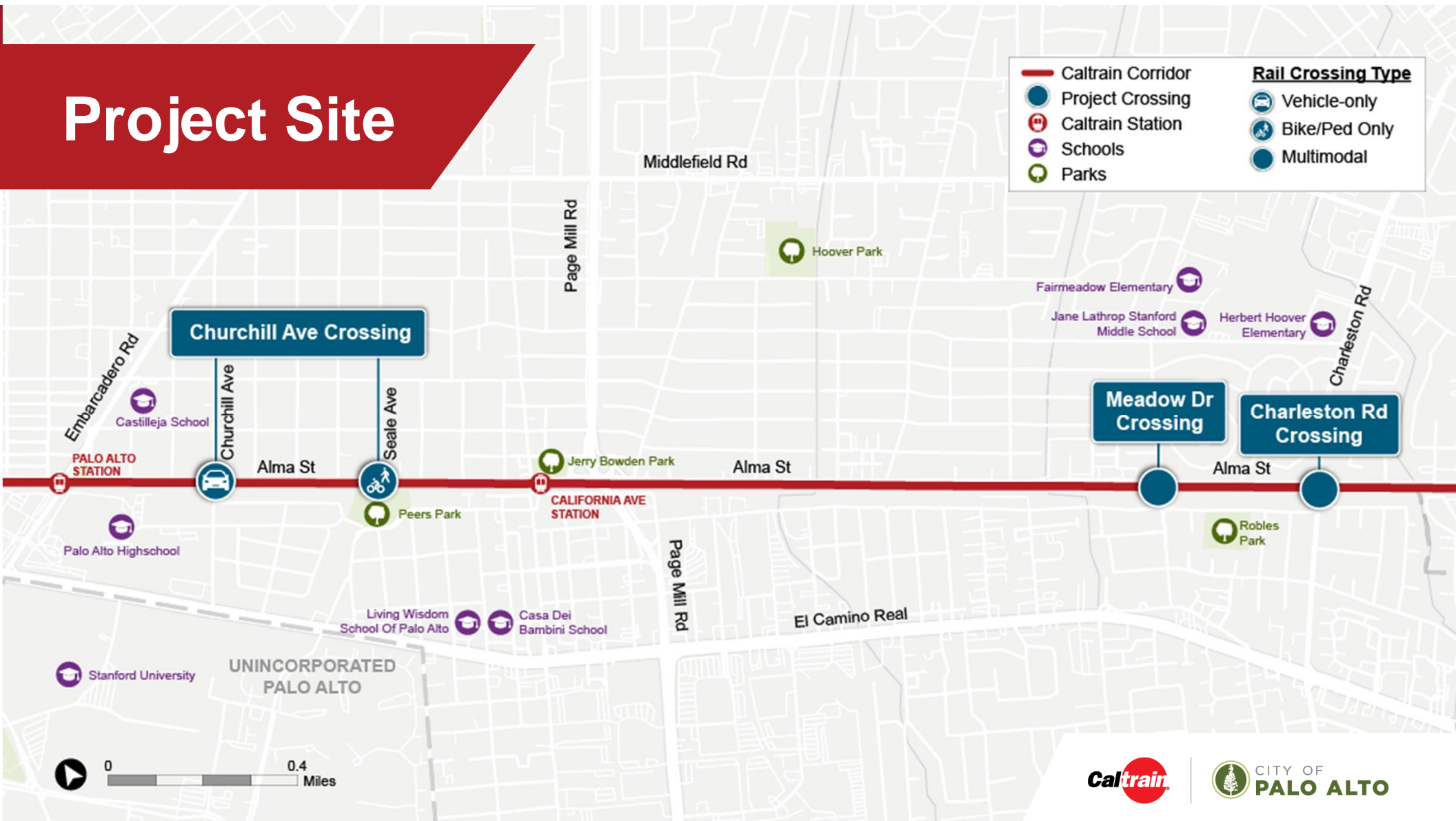


## Meeting Purpose

- ✓ Review draft refined concepts
- ✓ Receive community input to inform concept refinement and alternatives to advance



# Project Site







# Current Project Phase



## Funding

**Total:** \$20 Million (*VTA Measure B = \$14 M + FRA Rail Crossing Elimination = \$6 M*)

**Deadline:** Complete 35% Design and Environmental Documentation by the end of 2027

### Preliminary Engineering and Environmental

2025			2026				2027			
Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Conceptual Refinement			15% Design		35% Design and Environmental					

We are here

Receive direction from City Council on which alternatives to advance to 15% Design.



# June 2024 Council Direction

## Churchill Avenue Alternatives

*Motion approved to recommend Seale Avenue as the Bicycle and Pedestrian crossing location for the Partial Underpass Alternative at Churchill Avenue to advance into the Preliminary Engineering and Environmental Documentation phase, with the Bicycle and Pedestrian Crossing (Street Closure) alternative as a backup.*

## Meadow Drive and Charleston Road Alternatives

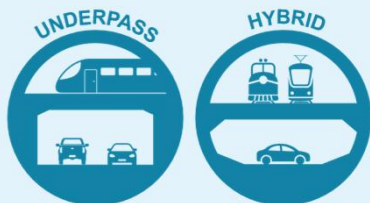
*Motion approved to advance Hybrid (including mixed wall/column approach) and Underpass alternatives into the Preliminary Engineering and Environmental Documentation phase.*

Council requested updates through the alternatives' refinements (during 15% design) with opportunities to change course and refocus on one option, if desired.

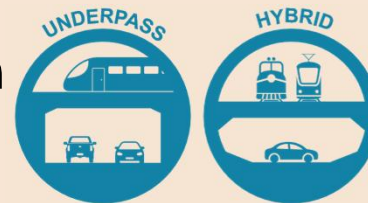


## Conceptual Alternatives

Meadow  
Drive



Charleston  
Road



Churchill  
Avenue



**Locally Preferred Alternative**  
(Includes Seale Bike/Ped Crossing)



**Bike/ped Crossing  
Backup**





# Project Goals and Desired Outcomes



Improve **safety**



Establish **project footprint** for environmental clearance & minimize **environmental impacts**



Improve **mobility** and minimize **congestion**



Minimize **potential private property impacts**



# Recent Technical Activities



## Existing Conditions

- Topographic Survey
- Geotechnical Exploration
- Existing Utility Research



## Technical Analysis

- Multimodal and Circulation Analysis
- Drainage and Stormwater Analysis



## Design Development

- Basis of Design Development
- Construability Workshops
- Risk Identification and Management

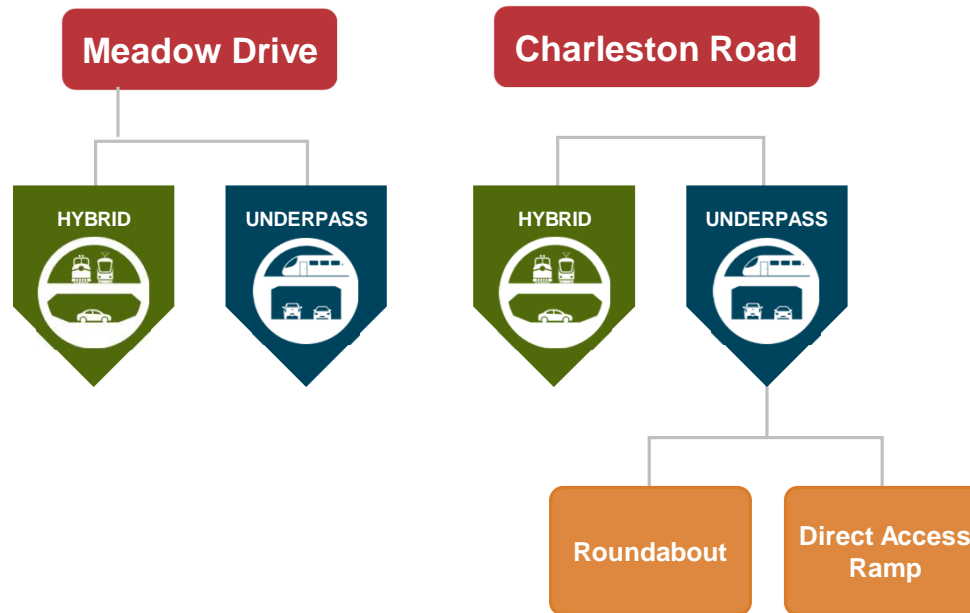


# Summary of Concepts

CROSSING

ALTERNATIVE

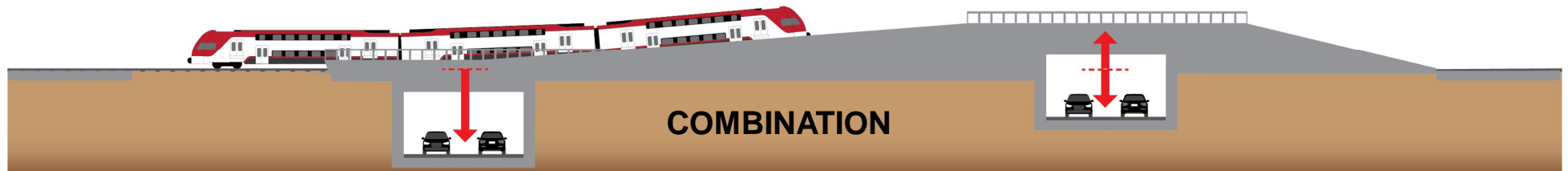
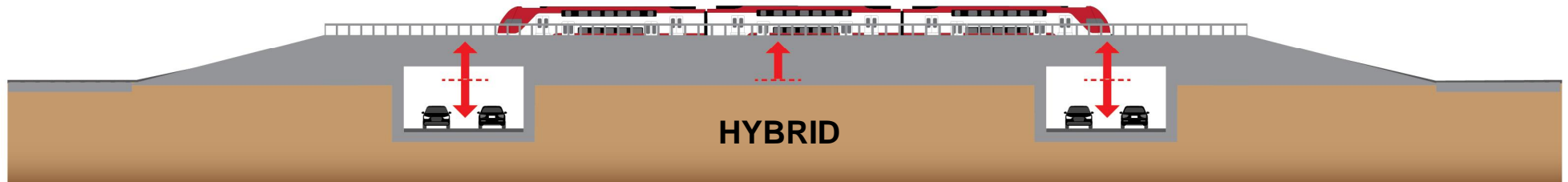
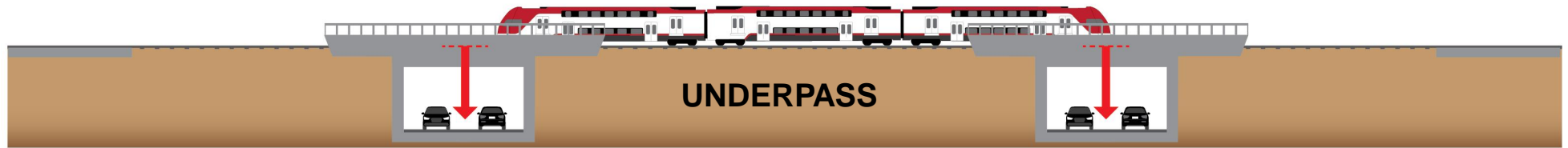
OPTION





# DRAFT Crossing Concept Profiles

Not to Scale



El Verano Avenue

Meadow Drive

Charleston Road

Greenmeadow Way

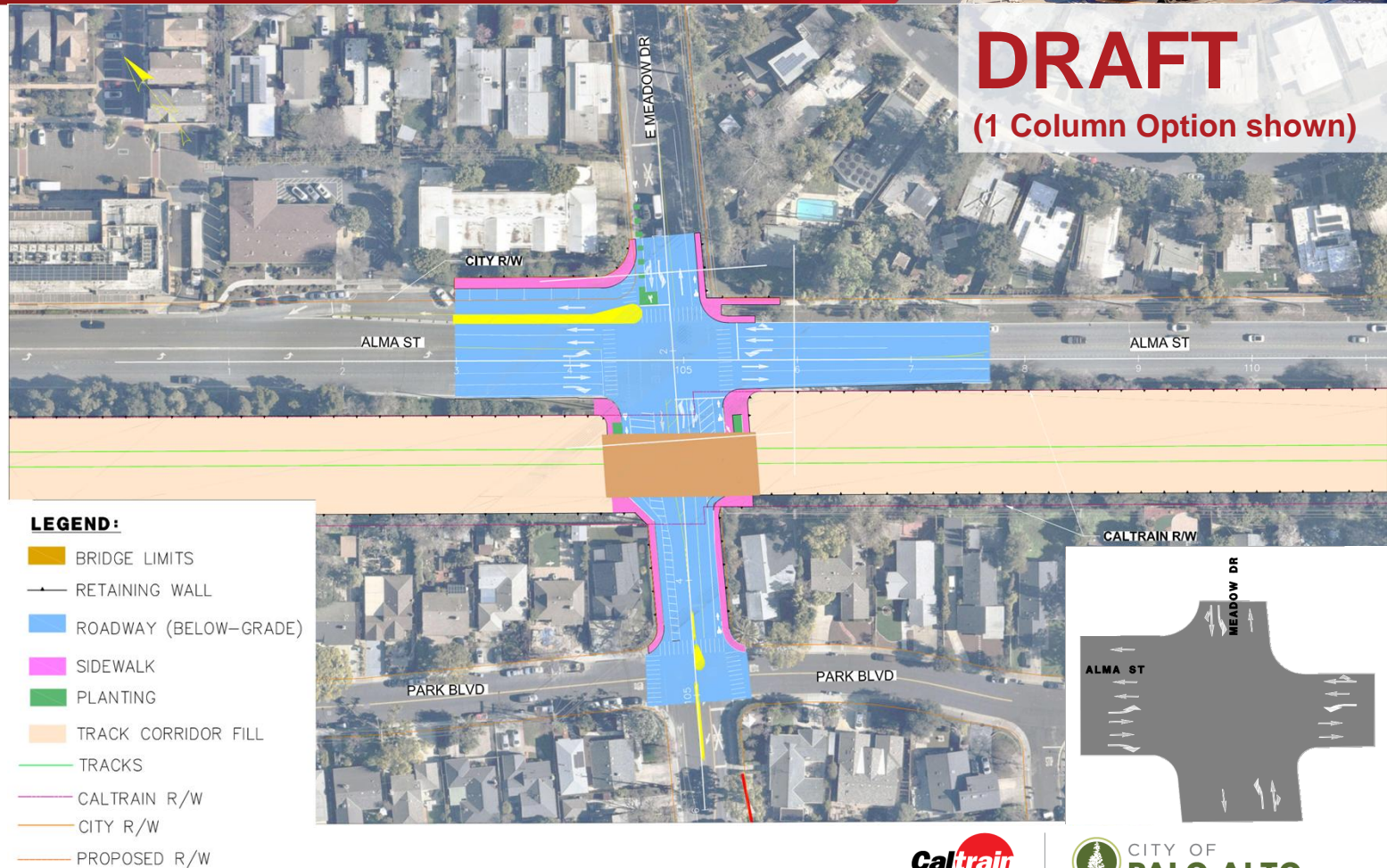
# Meadow Drive Hybrid



**DRAFT**  
(1 Column Option shown)

## Concept Refinement

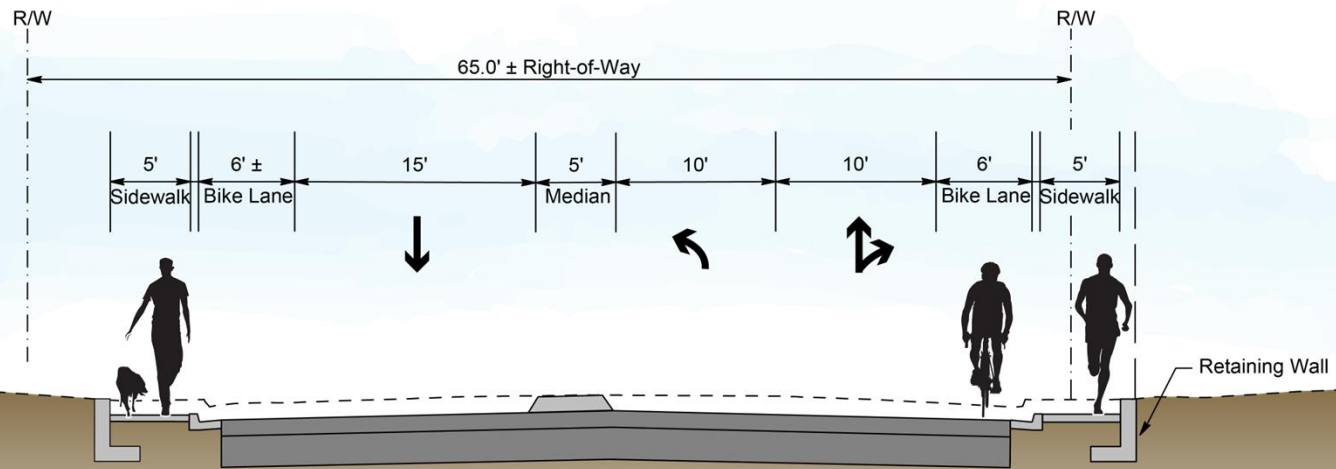
- Lower Meadow Drive 4' to 6' at crossing
- Raise railroad tracks 17' to 19'
- Dedicated left-turn lanes to align lanes across Alma Street
- Added bicycle queuing area on westbound Meadow Drive
- No potential property acquisitions



HYBRID



## Meadow Drive Hybrid Meadow Drive Cross-Section



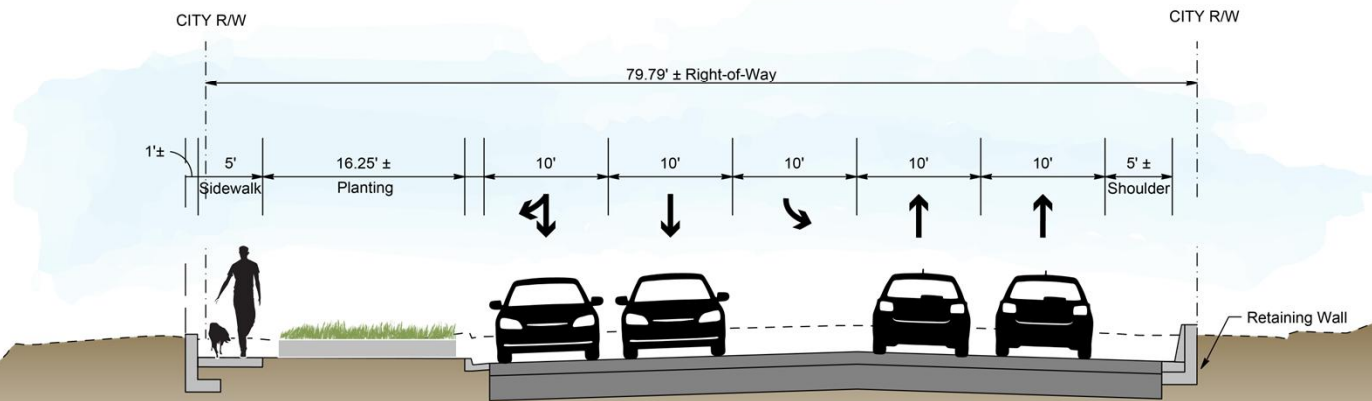
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HYBRID



## Meadow Drive Hybrid Alma Street Cross-Section

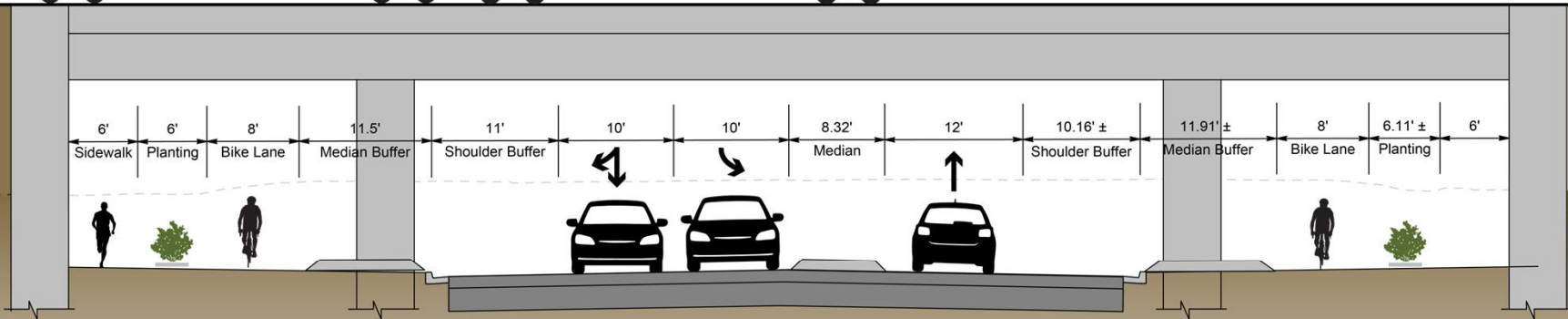


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HYBRID



## Meadow Drive Hybrid Meadow Drive at Railroad Bridge Cross-Section



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(2 Column Option shown)

HYBRID



## Meadow Drive Hybrid (1 Column Option)



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HYBRID



## Meadow Drive Hybrid (2 Column Option)



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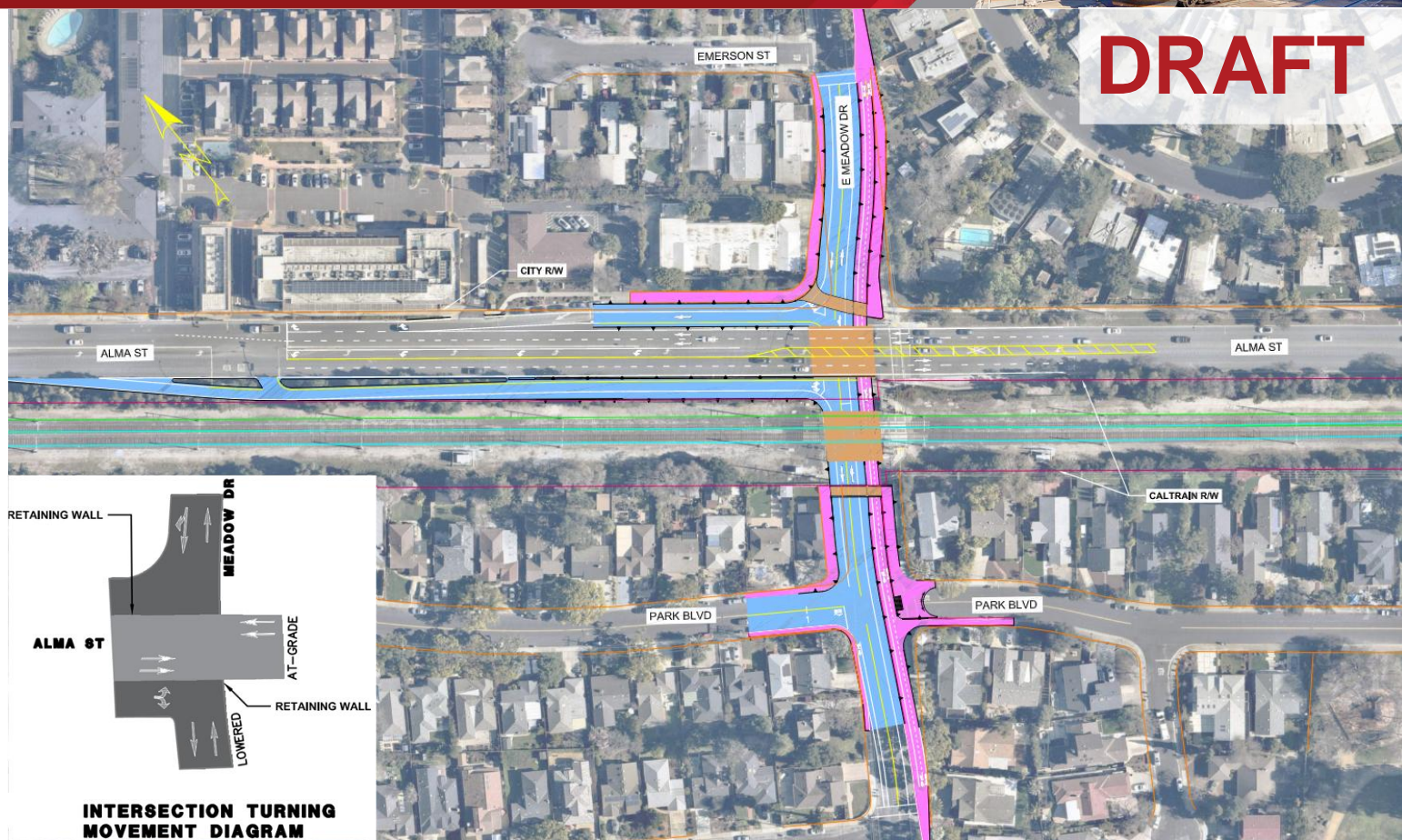


# Meadow Drive Underpass



## Concept Refinement

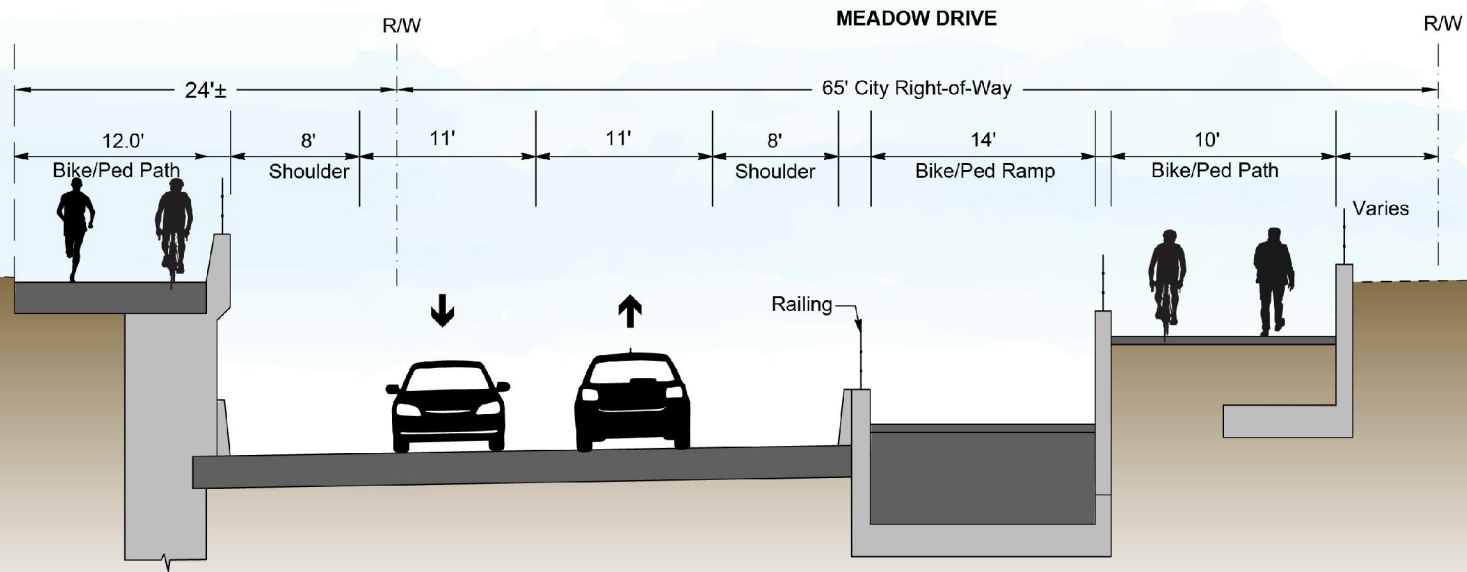
- Reduced width of multi-use path and corresponding shoulders
- Checked which size vehicles can navigate turns in proposed design
- Potential full and partial property acquisitions



UNDERPASS



## Meadow Drive Underpass Meadow Drive



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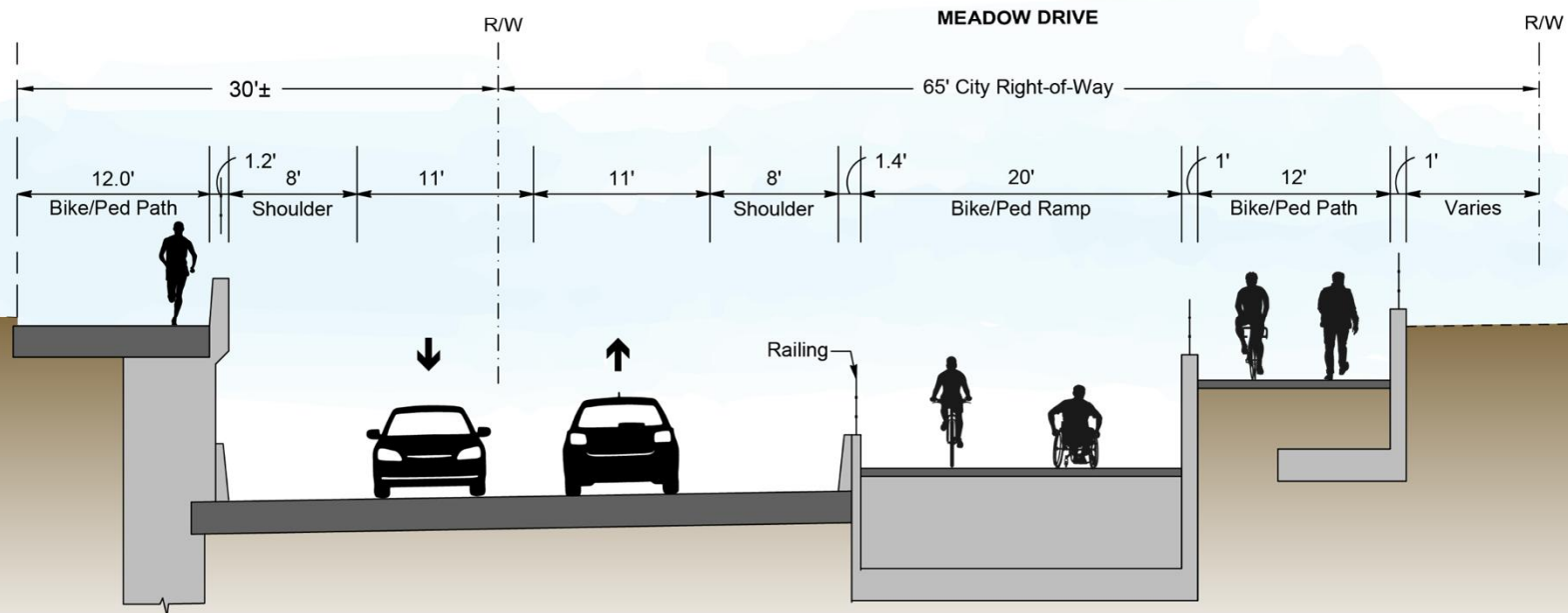
MEADOW DRIVE  
UNDERPASS  
MEADOW DRIVE CROSS-SECTION

UNDERPASS



# Meadow Drive Underpass Meadow Drive

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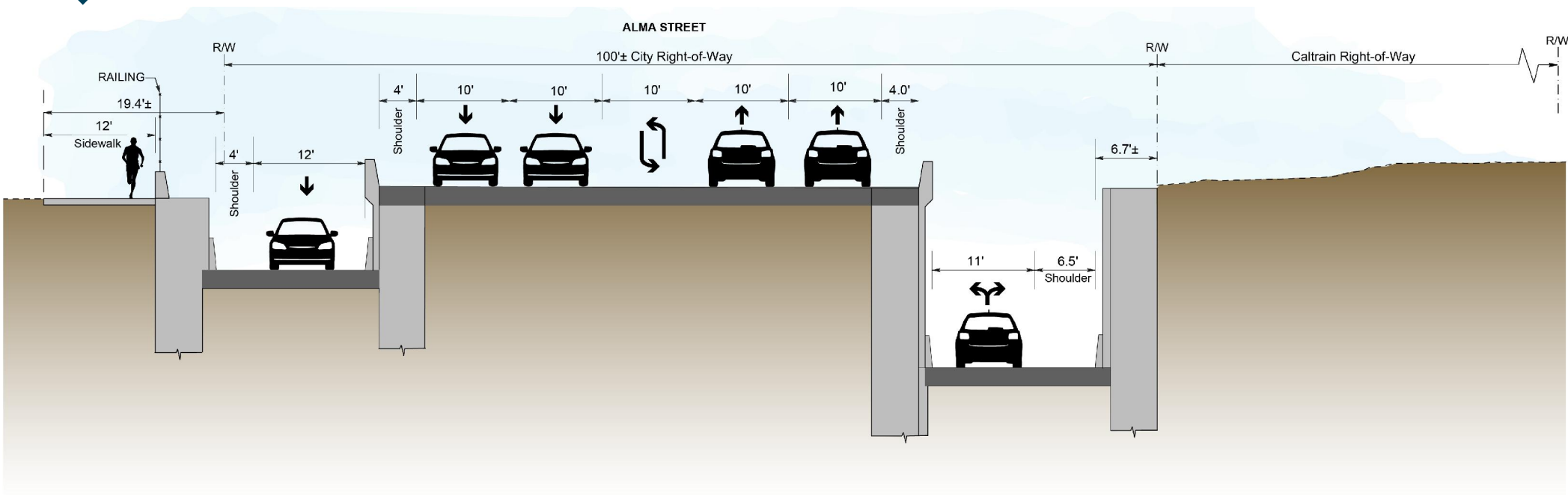
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MEADOW DRIVE  
UNDERPASS  
AECOM  
MEADOW DRIVE CROSS-SECTION

UNDERPASS



# Meadow Drive Underpass Alma Street



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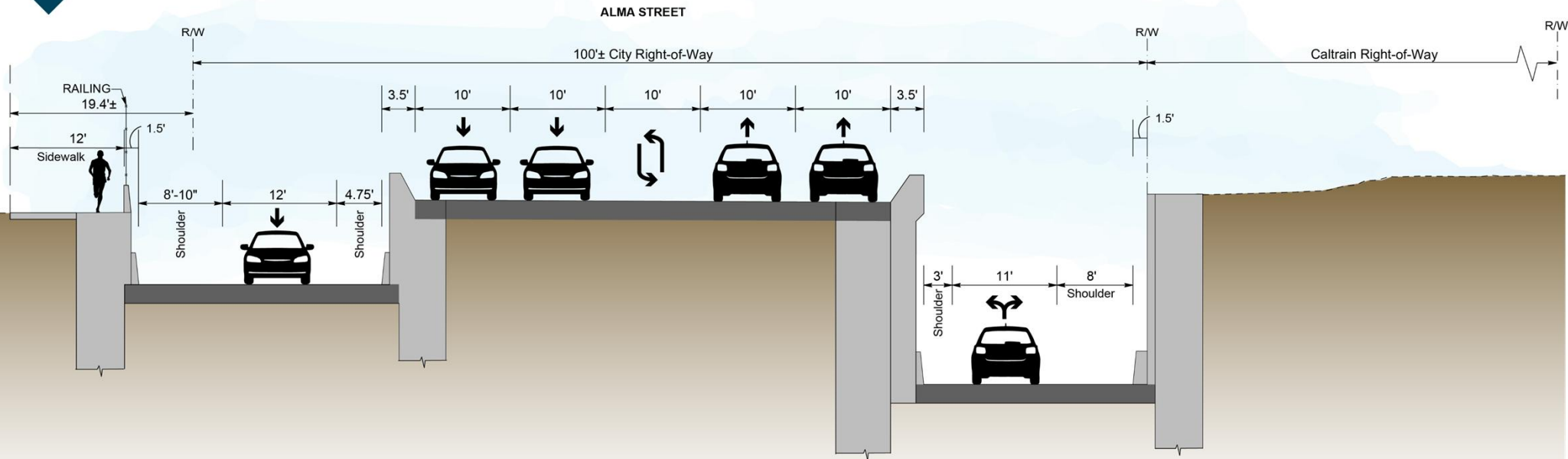
**MEADOW DRIVE  
UNDERPASS  
ALMA STREET CROSS-SECTION**



UNDERPASS



# Meadow Drive Underpass Alma Street



**DRAFT**

MEADOW DRIVE  
UNDERPASS  
AECOM  
ALMA STREET CROSS-SECTION



UNDERPASS



# Meadow Drive Underpass



**DRAFT**





# Charleston Road Hybrid



## Concept Refinement

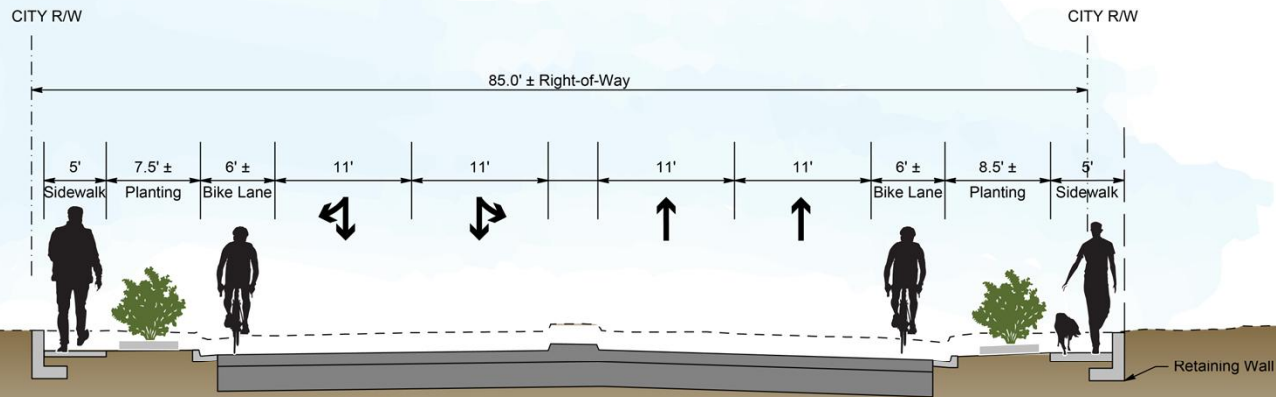
- Lower Charleston Road 4' to 6' at crossing
- Raise railroad tracks 17' to 19'
- No potential property acquisitions



HYBRID



## Charleston Road Hybrid Charleston Road Cross-Section



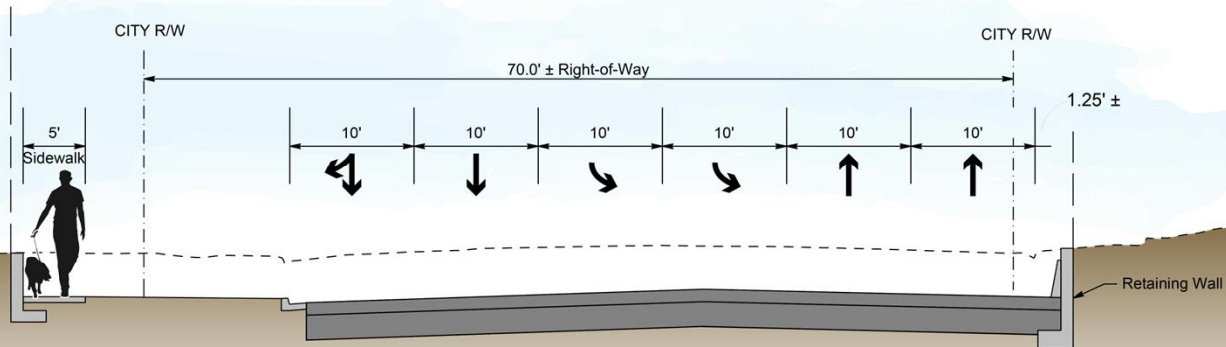
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HYBRID



## Charleston Road Hybrid Alma Street Cross-Section

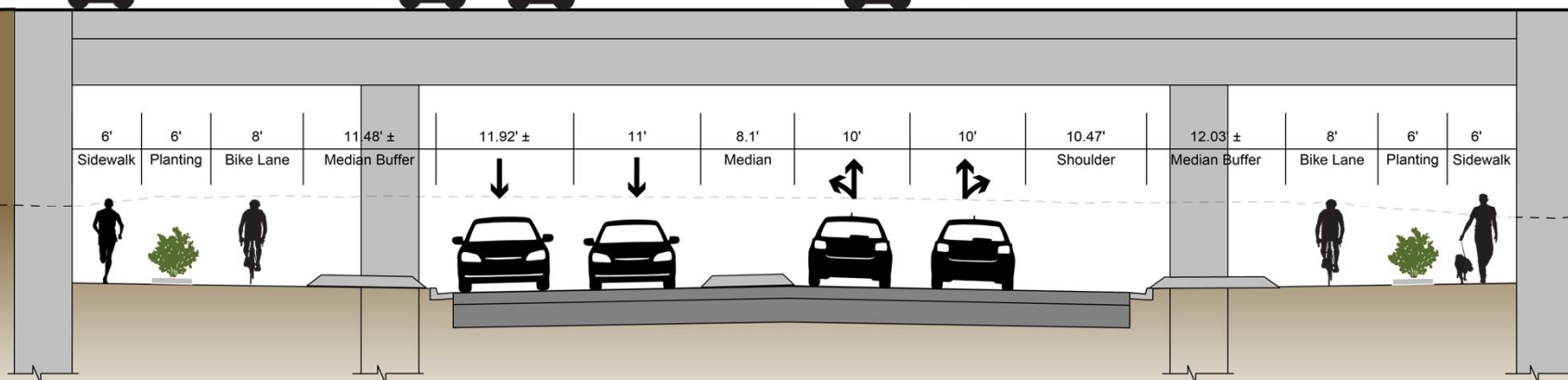


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HYBRID



## Charleston Road Hybrid Rail Bridge



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## Charleston Road Hybrid



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(2 Column Option Shown)

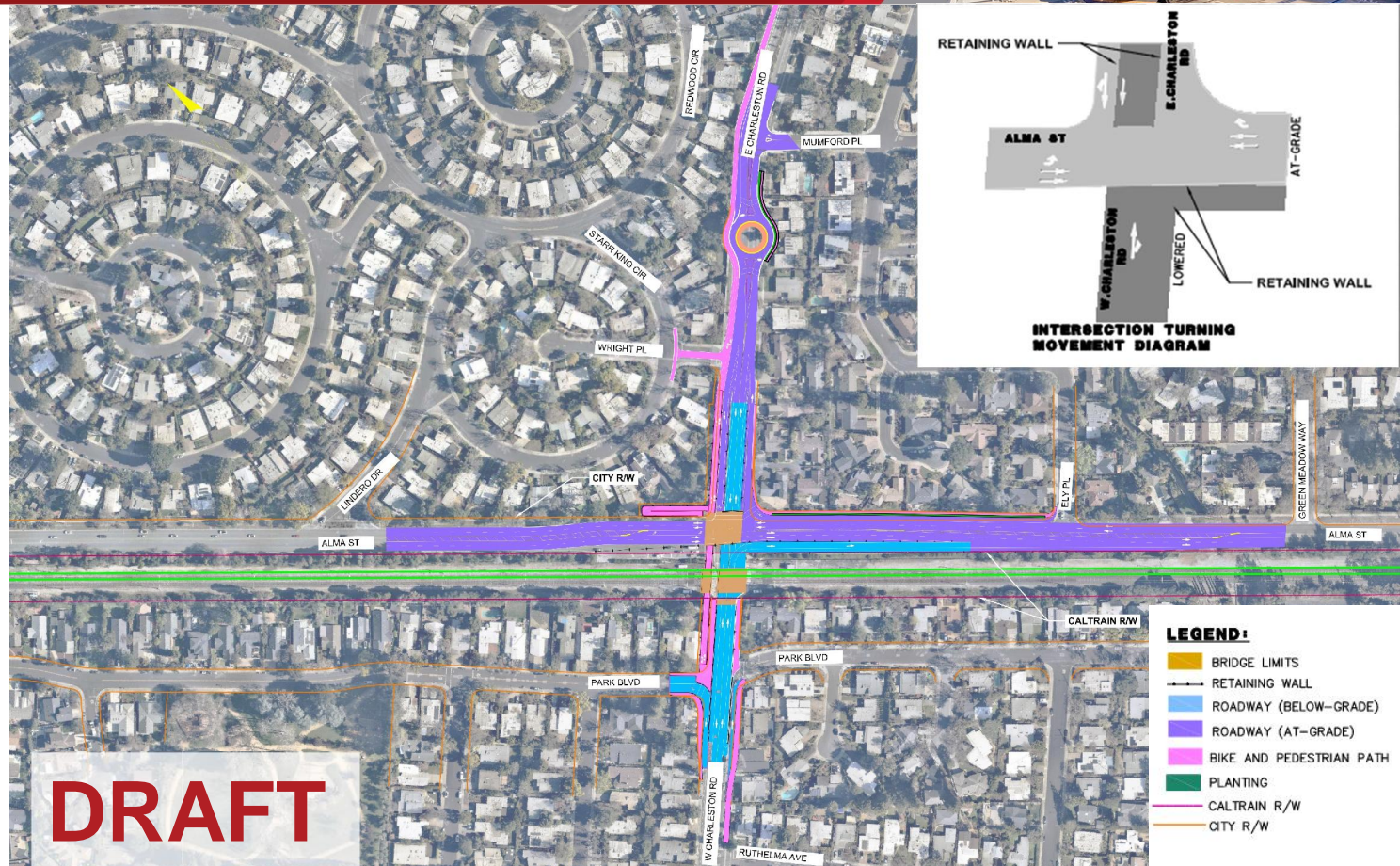


# Charleston Road Underpass: Roundabout



## Concept Refinement

- Reduced roundabout from two to one lane
- Reduced width of multi-use path and corresponding shoulders
- Potential partial and full property acquisition

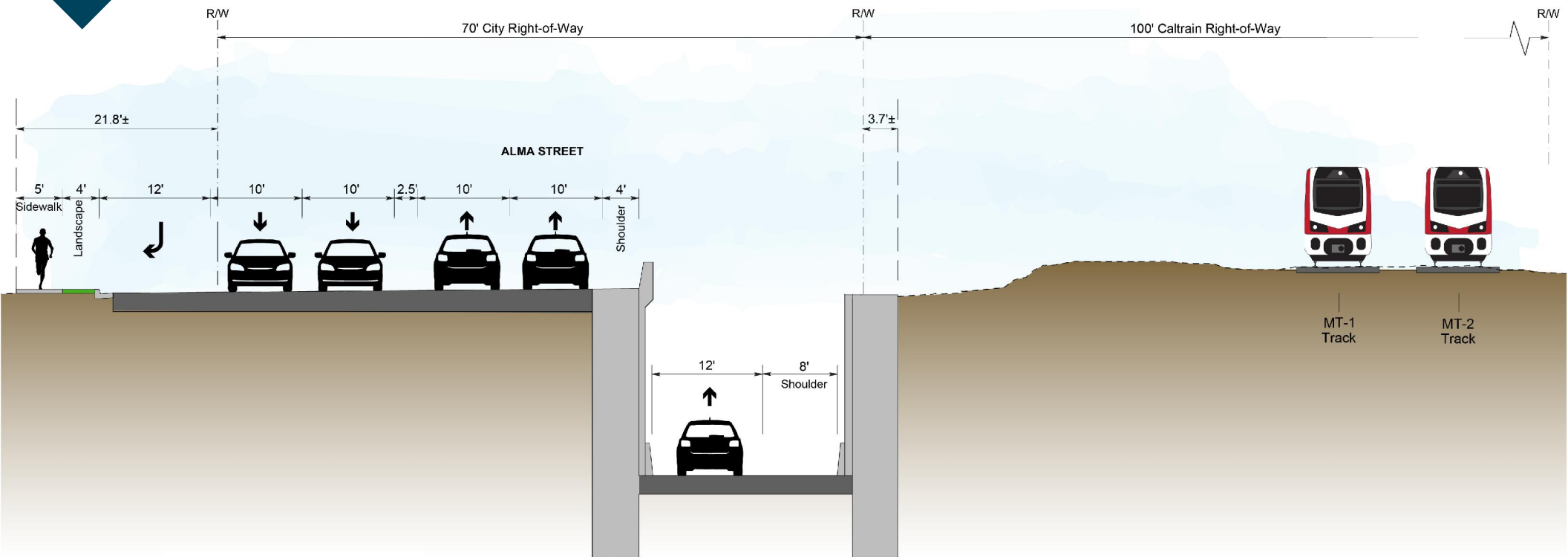




UNDERPASS



# Charleston Road Underpass: Roundabout – Alma Street



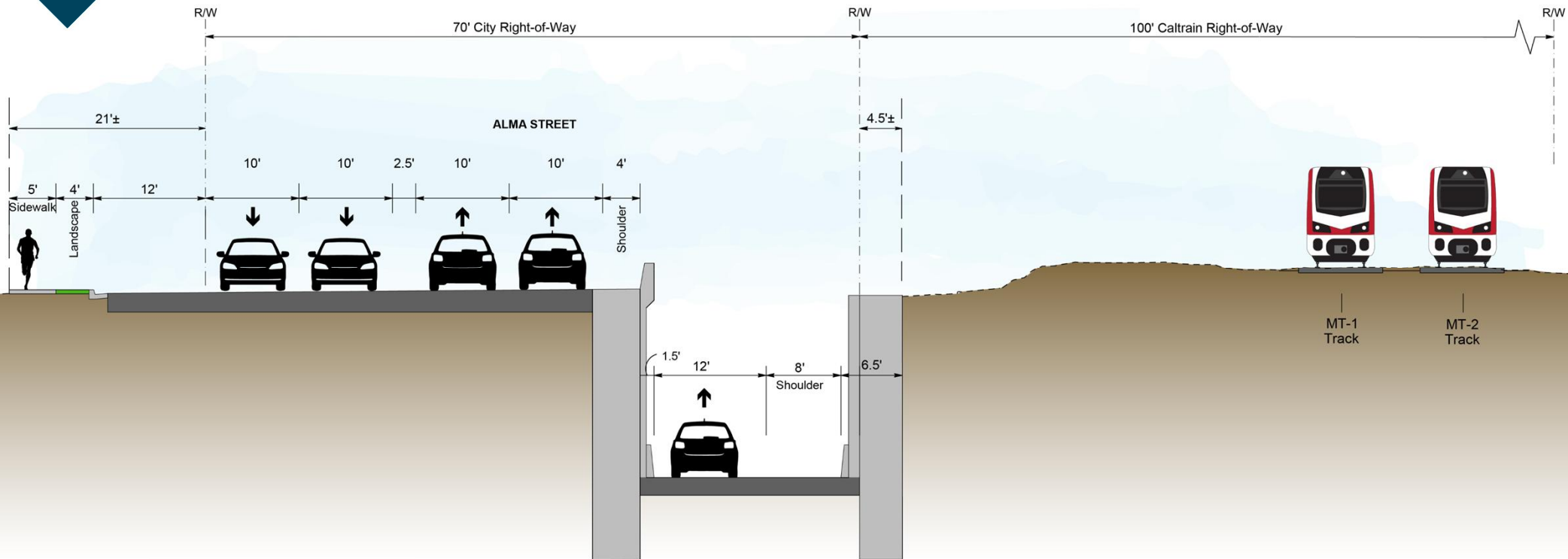
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CHARLESTON ROAD  
UNDERPASS  
ROUNDAABOUT  
ALMA STREET CROSS-SECTION

UNDERPASS



# Charleston Road Underpass: Roundabout – Alma Street

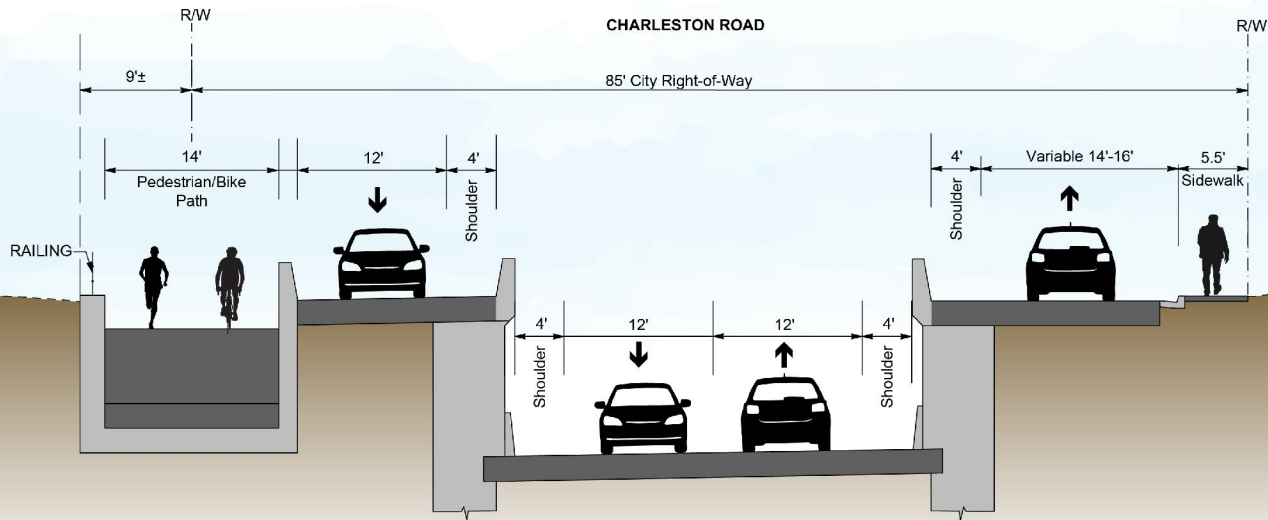


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**CHARLESTON ROAD  
UNDERPASS  
ROUNDABOUT  
AECOM  
ALMA STREET CROSS-SECTION**



# Charleston Road Underpass: Roundabout – Charleston Road

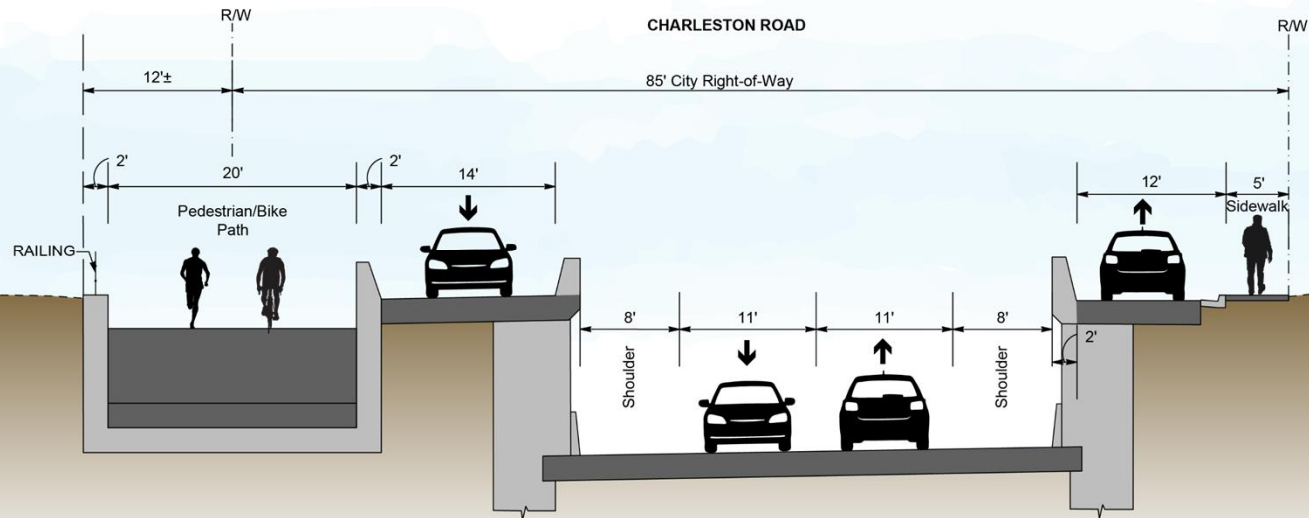


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CHARLESTON ROAD  
UNDERPASS  
ROUNDABOUT  
CHARLESTON ROAD CROSS-SECTION



# Charleston Road Underpass: Roundabout – Charleston Road



**DRAFT**

**CHARLESTON ROAD  
UNDERPASS  
ROUNDABOUT  
AECOM  
CHARLESTON ROAD CROSS-SECTION**



UNDERPASS



## Charleston Road Underpass: Roundabout



*Note: Concept shown is for two-lane roundabout. Current concept is one-lane roundabout. Concepts are working drafts for initial review and feedback.*

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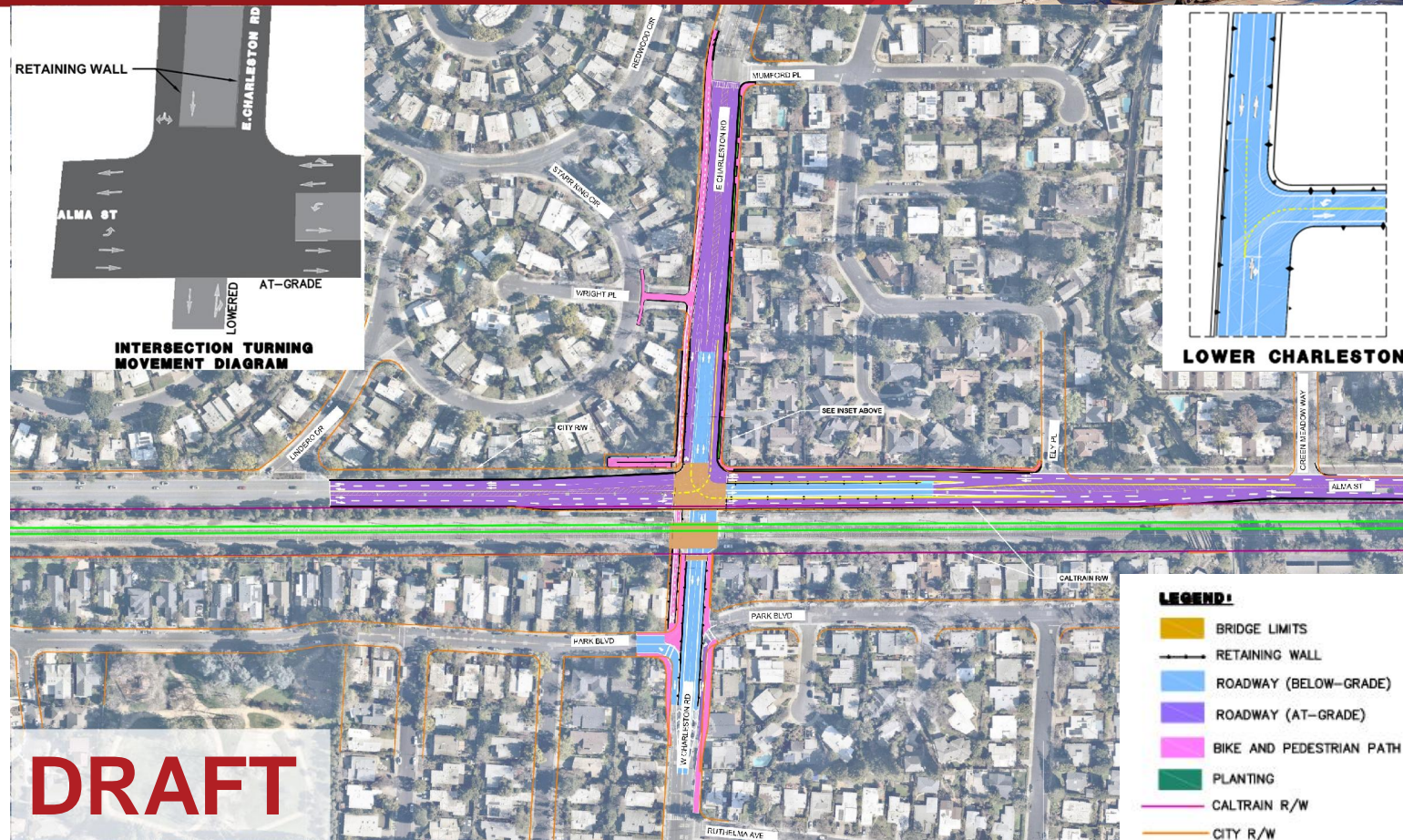


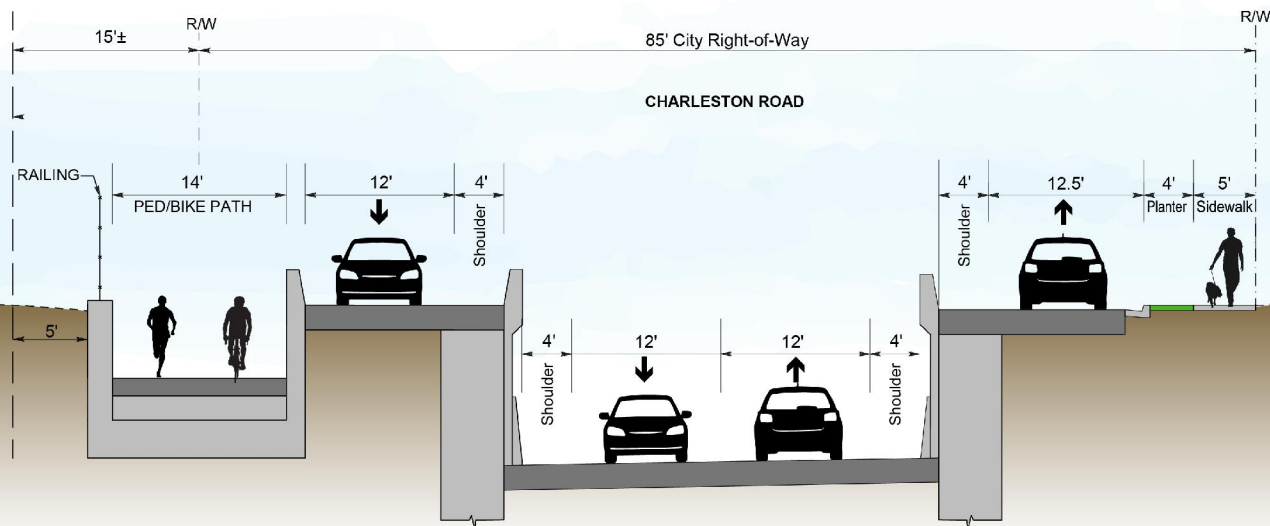
# Charleston Road Underpass: Direct Access Ramp



## Concept Refinement

- Eliminated the roundabout
- Reduced width of multi-use path and corresponding shoulders
- Potential partial and full property acquisition





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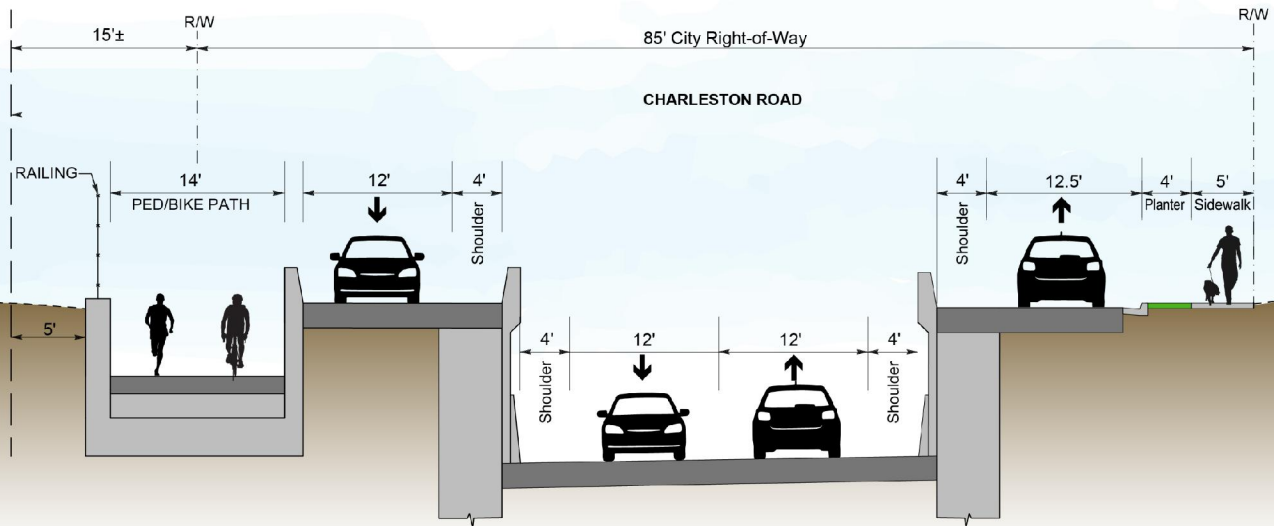
CHARLESTON ROAD  
UNDERPASS  
DIRECT ACCESS RAMP  
CHARLESTON ROAD CROSS-SECTION



UNDERPASS



# Charleston Road Underpass: Direct Access Ramp – Charleston Road



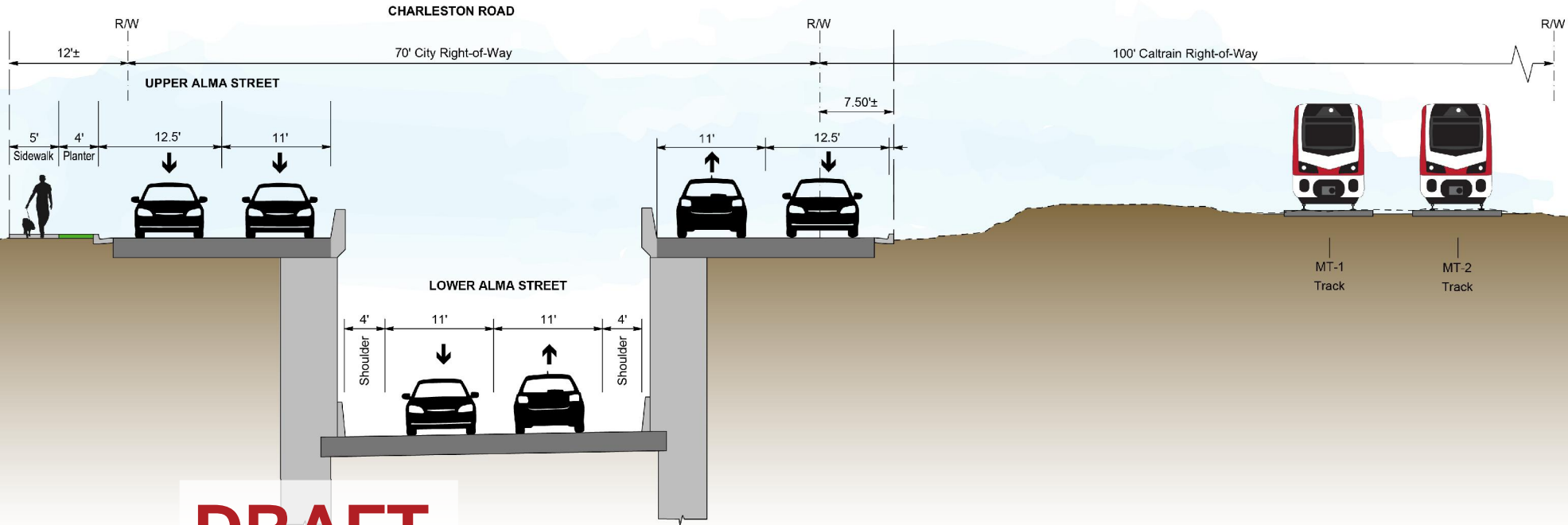
**DRAFT**

CHARLESTON ROAD  
UNDERPASS  
DIRECT ACCESS RAMP  
CHARLESTON ROAD CROSS-SECTION

UNDERPASS



# Charleston Road Underpass: Direct Access Ramp – Alma Street



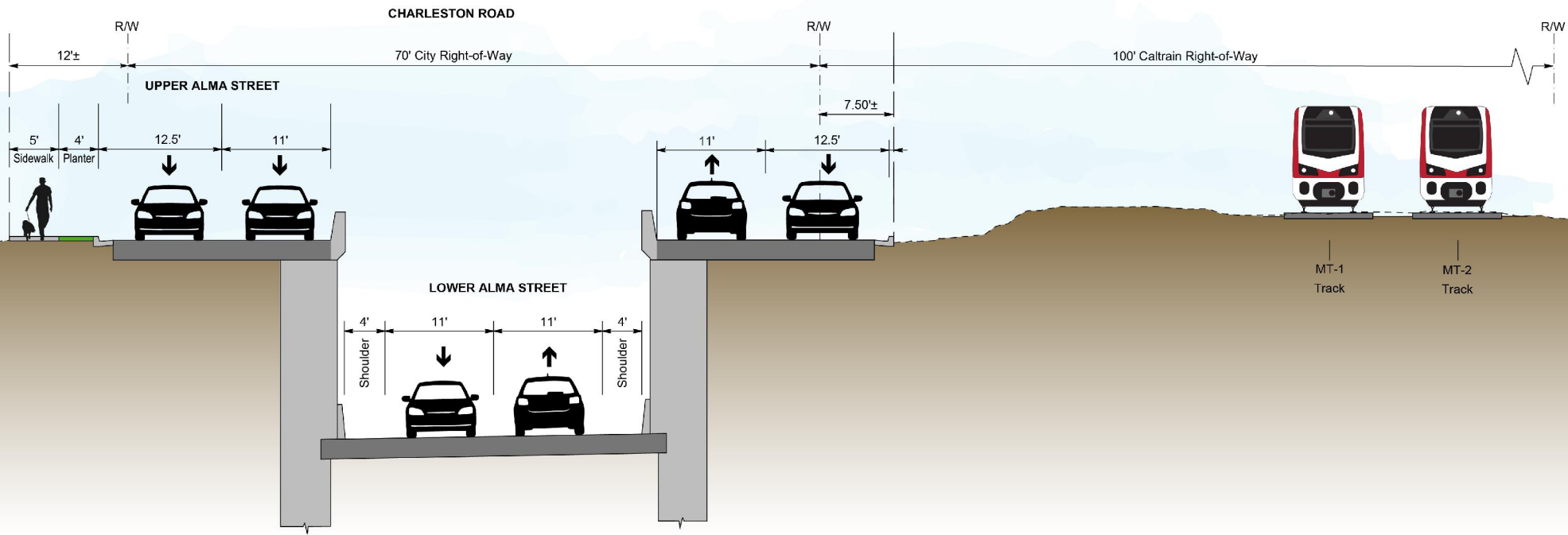
**DRAFT**

CHARLESTON ROAD  
UNDERPASS

UNDERPASS



# Charleston Road Underpass: Direct Access Ramp – Alma Street



**DRAFT**

CHARLESTON ROAD  
UNDERPASS  
DIRECT ACCESS RAMP  
ALMA STREET CROSS-SECTION



UNDERPASS



# Charleston Road Underpass: Direct-Access Ramp

**DRAFT**







# Initial Considerations

## Meadow Drive

### Hybrid

- No potential property acquisition\*

### Underpass

- Potential Parcel Acquisitions
  - 1 to 4 full
  - 6 to 9 partial

## Charleston Road

### Hybrid

- No potential property acquisition\*

### Underpass – Roundabout

- Potential Parcel Acquisitions
  - 3 full
  - 23 to 25 partial

### Underpass – Direct Access Ramp

- Potential Parcel Acquisitions
  - 1 full
  - 21 to 23 partial



# Project Lookahead

## October

Synthesize Rail  
Committee and  
Community Meeting  
comments and input

## November

**11/18  
Rail Committee**  
*Refined concept review  
and recommendations to  
advance to 15%*

## December

**12/8  
City Council**  
*Decision to advance 1 or  
2 concepts to 15% for  
each crossing*





# Community Input



## Stations and Content

Meadow Drive  
Charleston Road

1. Roll Plot of Each Concept
2. Crossing Trade Off Sheets
3. Station Activity and Instructions
4. Comment Form



## Station Activity

Use color-coded sticky notes to identify opportunities, interests, support, and/or questions



## Comment Form

Provide feedback via

- Comment form
- Website (use QR code) or link



# Additional Input Opportunities



*Project Website*

## Materials Provided on Website:

- Refined concepts for review
- Recorded presentation
- Comment form
- ***Comment Period: October 3 – October 17***