November 20, 2024

6-A Exhibit 8
Transportation Commission Meeting
November 20, 2024

Fernside Boulevard Traffic Calming & Bikeways Project

Presentation to Transportation Commission

Parametrix | Parisi TRANSPORTATION CONSULTING

1.3 Mile Corridor Project

Project subsets:
- Design concept for full corridor
- Near-term upgrade with resurfacing west of High St

Project Phases

Transportation Commission

1. **Public outreach for existing conditions & initial input:** November 2023 -January 2024

January 2024

2. **Public outreach for draft concept alternatives:** May-June 2024

July 2024

3. **Public hearings for final design concept:** Winter 2024 Transportation Commission and City Council public hearings (including seeking City Council approval)

November 2024

4. **Resurfacing and restriping on Fernside Blvd west of High St:** 2026

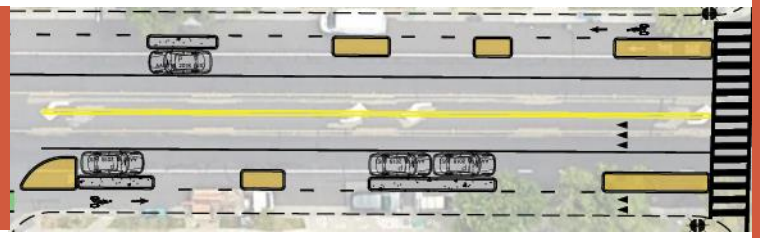
5. **Construct full corridor project:** 2030 goal – timing depends on finding funding

Concept Selection

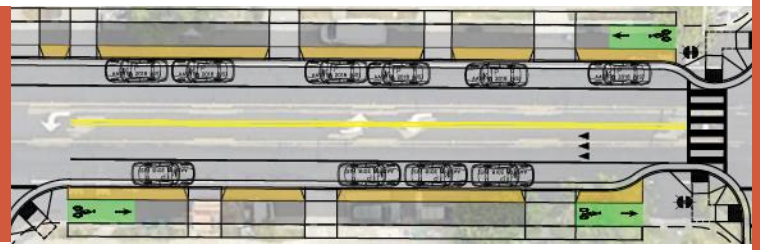
Concept Alternatives

Long-Term Concepts

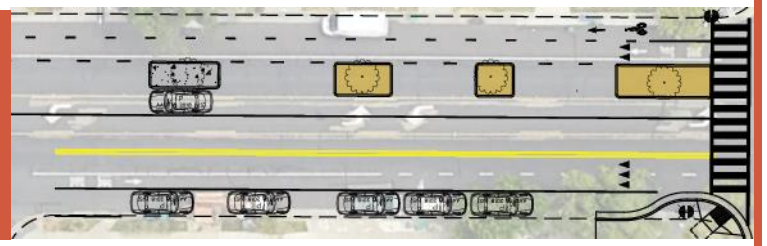
LT1a: One-Way Curb-Protected Bikeways



LT1b: One-Way Raised Bikeways



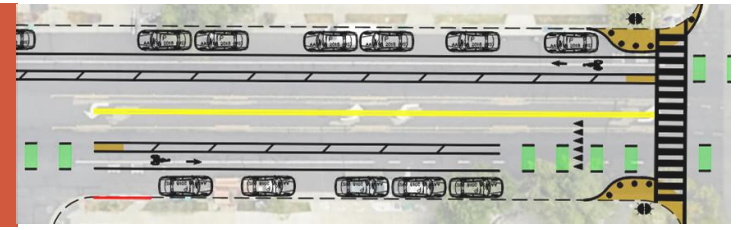
LT2a: Two-Way Curb-Protected Bikeway



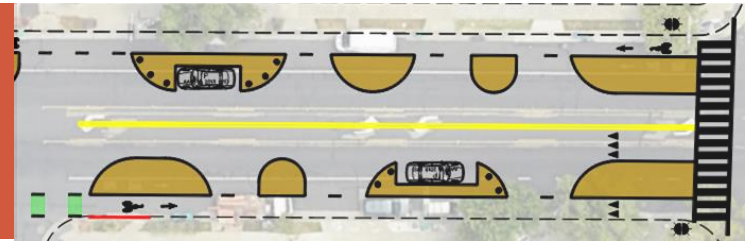
LT2b: Two-Way Raised Bikeway

Near-Term Concepts

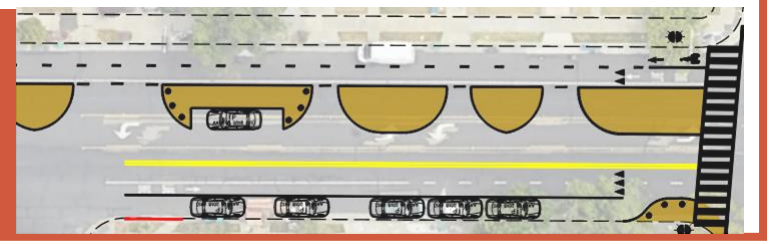
NT1: Buffered Bike Lanes



NT2: One-Way Separated Bikeways

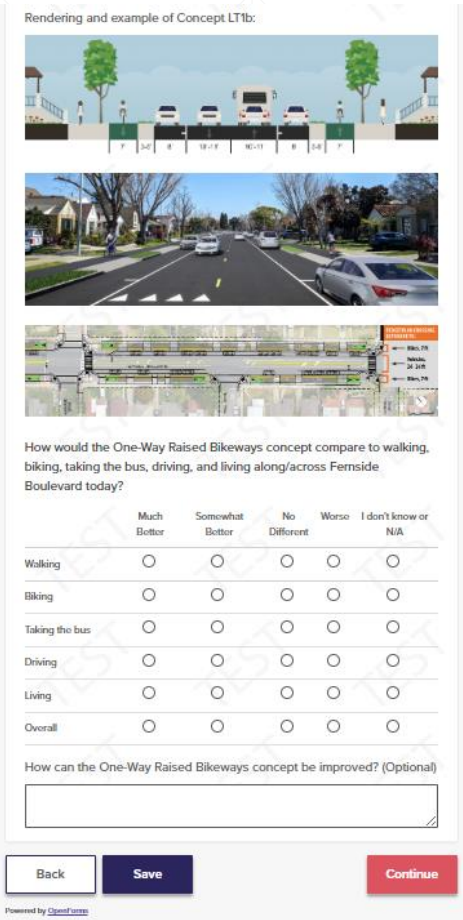


NT3: Two-Way Separated Bikeway



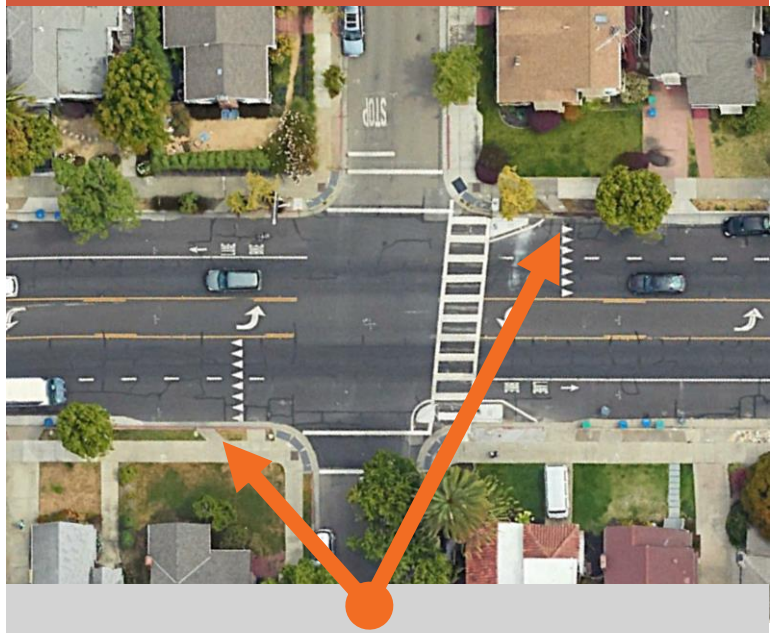
Spring 2024 Community Engagement Participation

- **13** virtual community workshop attendees
- **40** in-person community workshop attendees
- **304** online survey participants



Long-Term Concepts: Transit Accessibility

Existing Conditions



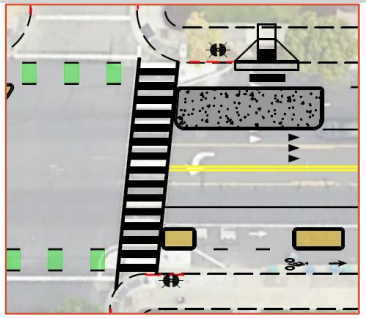
Bus stops against existing curb; <u>non-accessible</u> boarding location

Buses must merge into travel lane

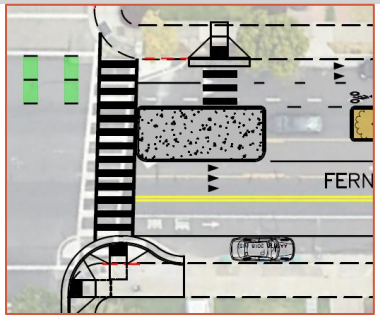
All Long-Term Concepts Include:

- Fully accessible bus boarding islands
- In-lane bus stops

Curb-Protected Concepts: accessible ramp across bikeway to sidewalk

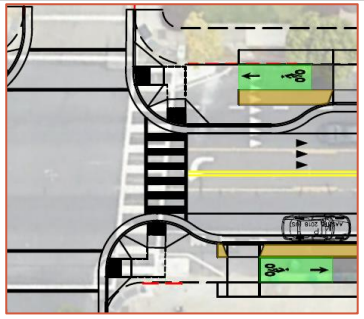


LT1a: One-Way Curb-Protected Bikeways

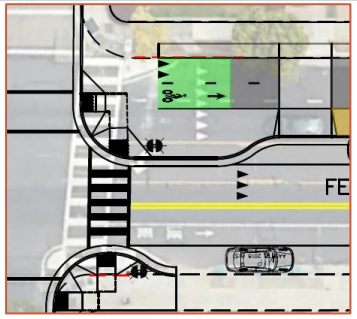


LT2a: Two-Way Curb-Protected Bikeway

Raised Concepts: level crossing across bikeway to sidewalk (easier access)



LT1b: One-Way Raised Bikeways



LT2b: Two-Way Raised Bikeway

Long-Term Concept Input

How important is it to include these design aspects on Fernside Boulevard in the long term?

	Narrower travel lanes to reduce speeds	Shorter pedestrian crossing distances	Additional marked crosswalks	Flashing beacons at crossings without stop signs	One-way bikeways so bicyclists travel the same direction as drivers	Two-way bikeway that provides a wider combined space for bicyclists	Bikeways that are raised to sidewalk level	Abundant on-street parking	Ease of entering / exiting driveways from the street
Extremely Important	45%	42%	48%	52%	33%	18%	17%	23%	35%
Important	25%	30%	36%	32%	23%	22%	19%	22%	29%
Neutral	9%	16%	12%	11%	24%	21%	23%	16%	18%
Less Important	7%	5%	2%	3%	7%	11%	12%	18%	11%
Not Important	14%	8%	2%	3%	13%	28%	29%	21%	7%

- **Pedestrian improvements** and **reducing vehicle speeds** were identified as long-term priorities
- Ease of driveway access was identified as **more important** than abundant on-street parking
- **One-way bikeways** identified as slightly more important than two-way

Long-Term Alternatives Comparison

Alternative:	Existing	LT1a	LT1b	LT2a	LT2b
		One-way		Two-way	
		Curb-protected	Raised	Curb-protected	Raised
Pedestrian Safety	Poor	Fair	Good	Good	Excellent
Bicyclist Safety & Level of Stress	Poor	Fair	Good	Good	Excellent
Traffic Calming	Poor	Good	Good	Good	Good
Transit Operations and ADA-Compliant Stops	Fair	Good	Good	Good	Good
Vehicle Operation	Good	Fair	Fair	Good	Good
Neighborhood Amenity	Poor	Fair	Fair	Excellent	Excellent
Potential for ADA Parking	Fair	Fair	Excellent	Fair	Good
Other Services (Garbage, Delivery, Maintenance)	Good	Fair	Good	Fair	Good
Estimated On-Street Parking Removal*	-	40-60%	25-45%	20-40%	15-30%
Estimated Construction Cost and Constructability	-	$16 MM	$23 MM	$15 MM	$21 MM

**Current peak parking occupancy 41-48%*

Selected Long-Term Concept: Two-Way Bikeway

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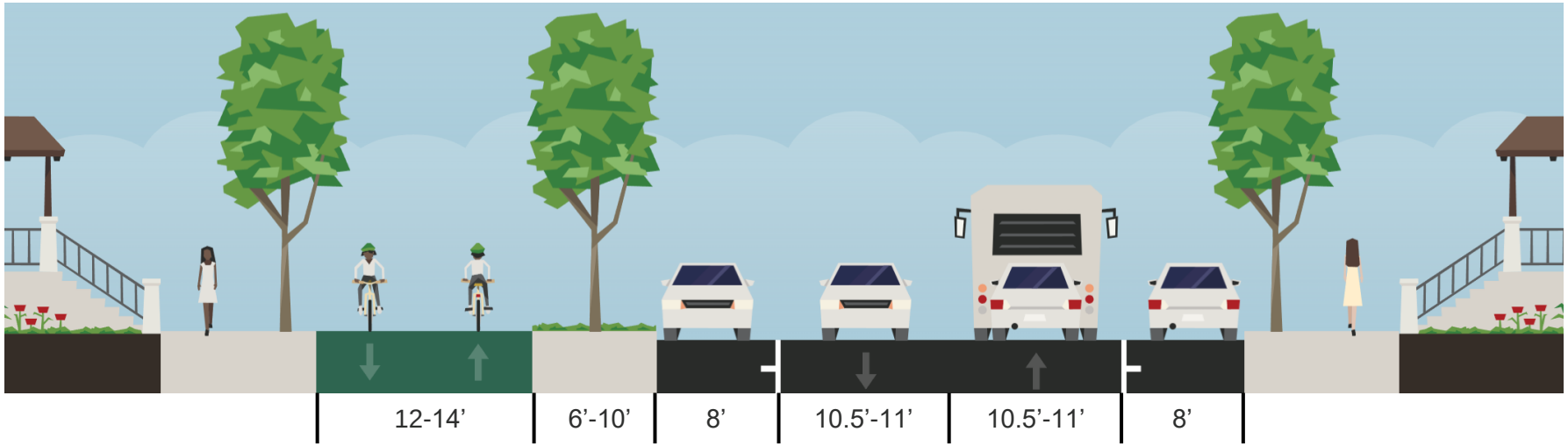
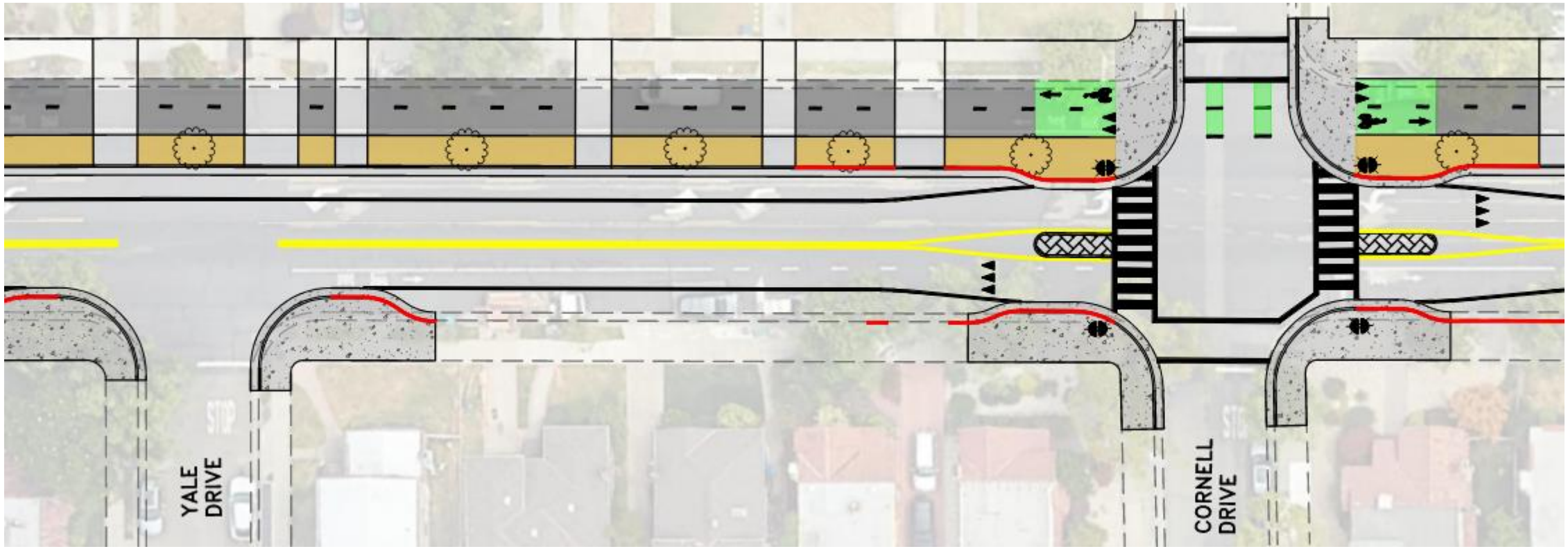


Improvements:

- Removal of center turn lane west of High Street, narrower vehicle lanes to reduce speeds
- Reduced crosswalk distance across the path of motor vehicles by over 50%
- Additional curb extensions, marked crosswalks, and flashing beacons
- Median islands at approach to 4-way intersections
- 2-way bikeway at sidewalk or roadway level, separated from travel lanes on north side of street
- New wider buffer strip can accommodate substantial landscaping, e.g. for planting trees

Selected Long-Term Concept: Two-Way Bikeway

Estimated construction cost: $20.4 Million



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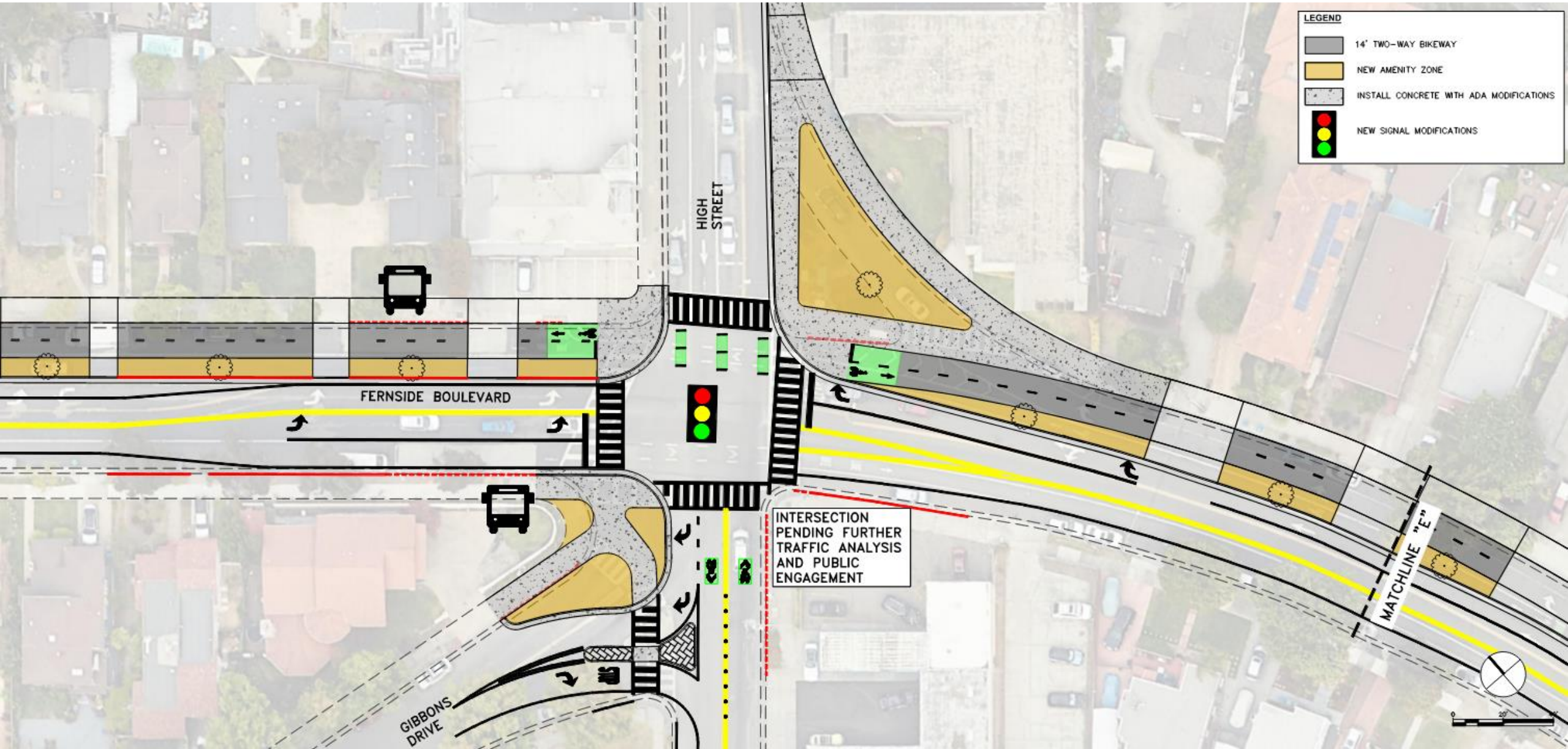

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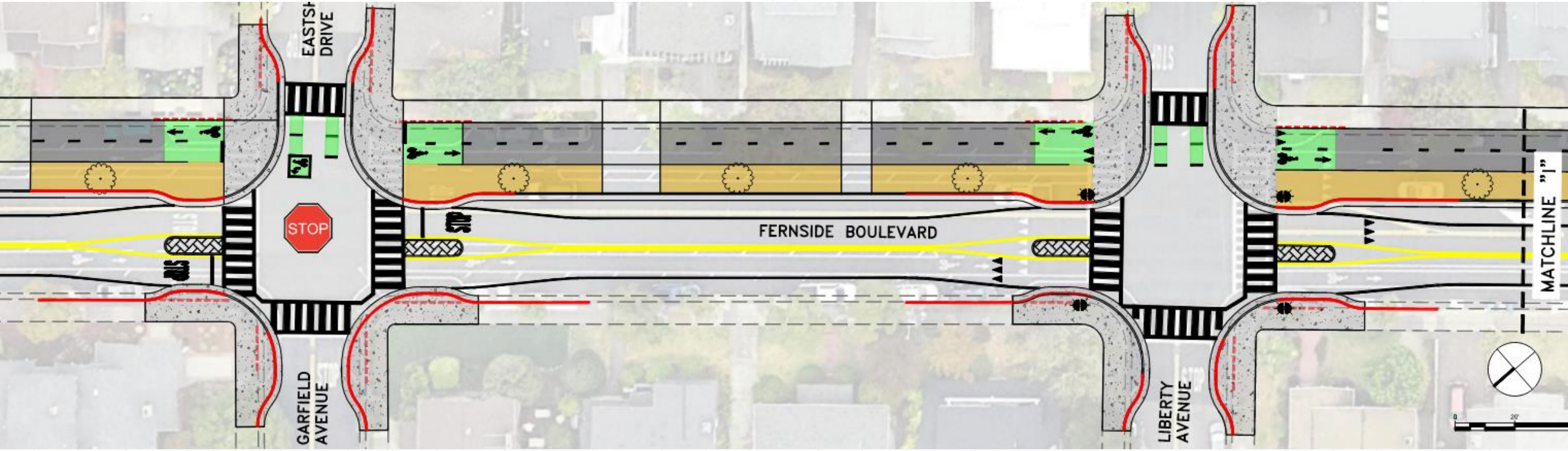
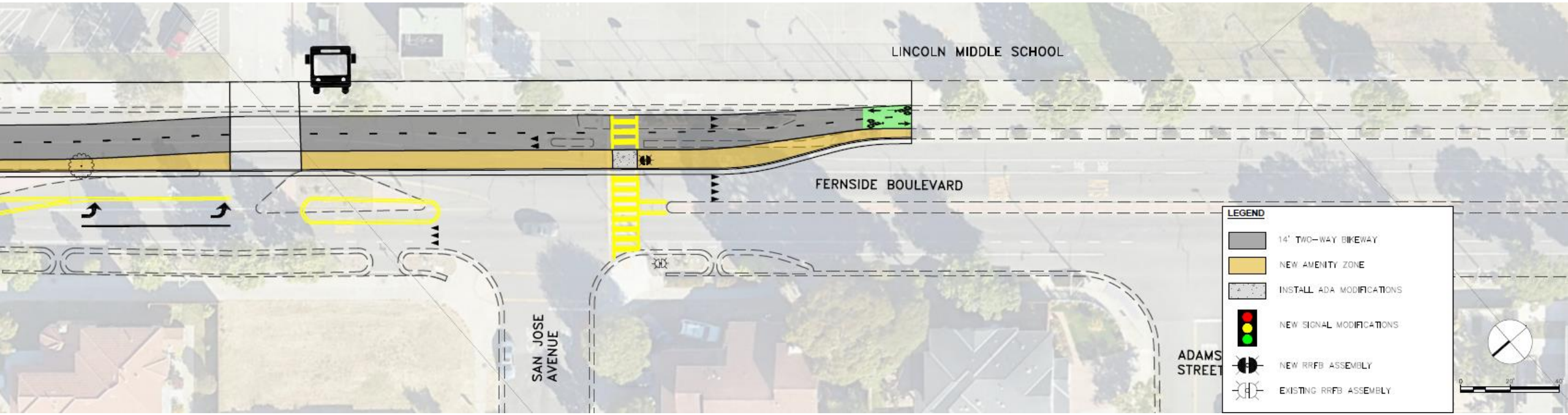


Selected Long-Term Concept: Two-Way Bikeway



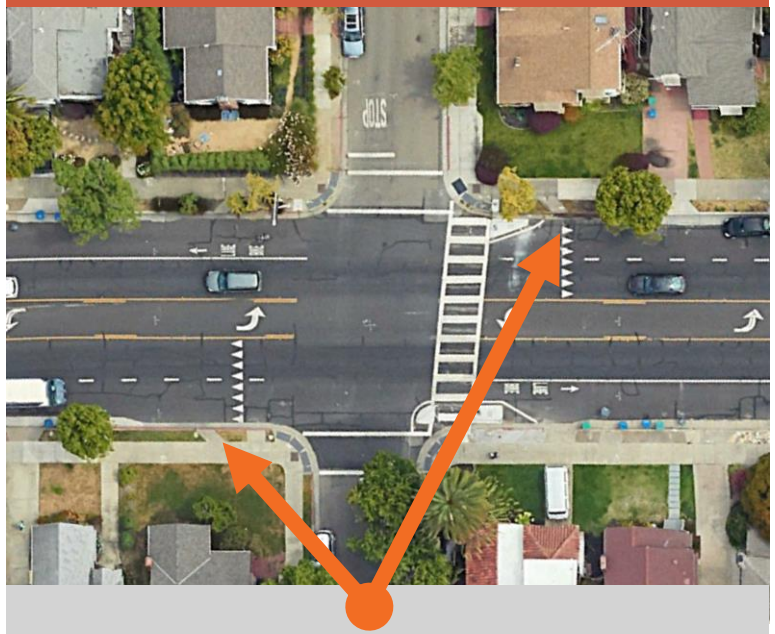
Selected Long-Term Concept: Two-Way Bikeway

Considerations for detailed design:

- Lane width: 10.5 ft vs. 11 ft
- Fernside/High/Gibbons: traffic analysis, public engagement
- Locations of curb-protected vs. raised bikeway
- Median island details at 4-way intersections
- Buffer strip design: landscaping, accessible loading, integration of trash staging/pickup, delivery vehicles
- Drainage
- Lighting

Near-Term Concepts: Transit Accessibility

Existing Conditions

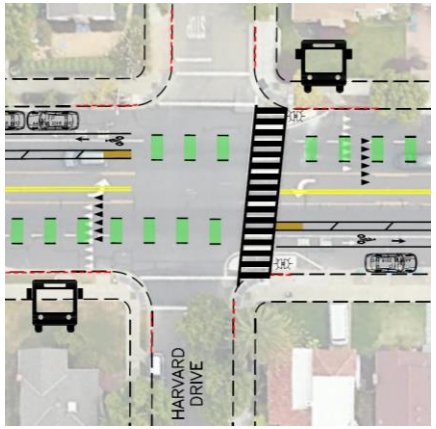


Bus stops against existing curb; non-accessible boarding location

Buses must merge into travel lane

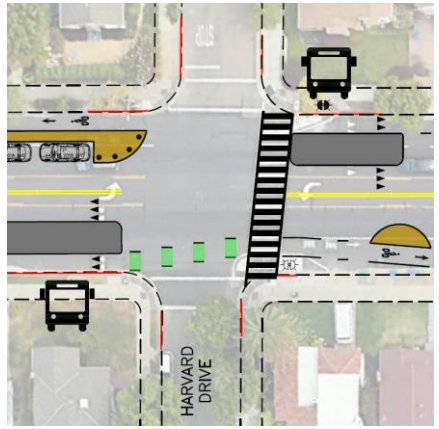
Near-Term Concepts:

NT1: Buffered Bike Lanes



Bus stop accessibility and transit operations not improved

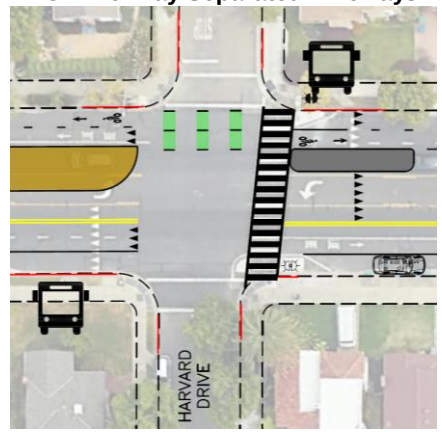
NT2: One-Way Separated Bikeways



Accessible bus boarding islands

In-lane bus stops to improve transit operations

NT3: Two-Way Separated Bikeways



Bus stop accessibility and transit operations improved on north side only

Near-Term Concept Input (cont.)

How would each near-term concept compare to walking, biking, taking the bus, driving, and living along/across Fernside Boulevard today?

NT1: Buffered Bike Lanes

	Walking	Biking	Taking the bus	Driving	Living	Overall
Much Better / Better	31%	62%	9%	14%	38%	50%
No Different	55%	21%	51%	42%	34%	24%
Worse	10%	14%	12%	21%	15%	17%

NT2: One-Way Separated Bikeways

	Walking	Biking	Taking the bus	Driving	Living	Overall
Much Better / Better	46%	67%	15%	20%	36%	44%
No Different	35%	8%	38%	21%	11%	7%
Worse	18%	20%	21%	44%	40%	38%

NT3: Two-Way Separated Bikeway

	Walking	Biking	Taking the bus	Driving	Living	Overall
Much Better / Better	40%	60%	15%	19%	36%	41%
No Different	31%	7%	35%	21%	8%	7%
Worse	22%	26%	23%	44%	43%	41%

- Highest priorities based on input: Addressing **illegal vehicle passing maneuvers, reducing speeding, and pedestrian improvements**
- Separated Bikeways rated as **better for pedestrians and bicyclists** compared to Buffered Bike Lanes**,** *but*
- Separated Bikeways scored lower **for drivers, residents, and overall** compared to Buffered Bike Lanes.

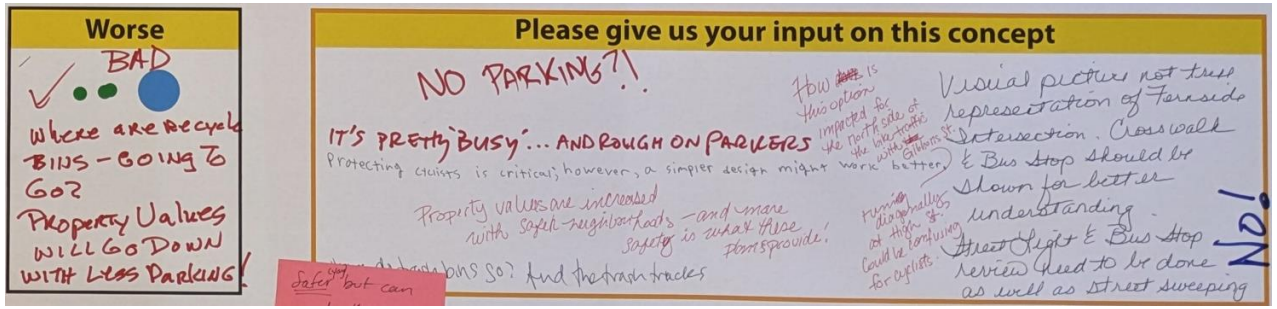
Near-Term Alternatives Comparison

Alternative:	Existing	NT1	NT2	NT3
		Buffered Bike Lanes	One-Way Separated Bike Lanes	Two-Way Separated Bikeway
Pedestrian Safety	Poor	Fair	Good	Good
Bicyclist Safety & Level of Stress	Poor	Fair	Good	Good
Traffic Calming	Poor	Fair	Good	Good
Transit Operations and ADA-Compliant Stops	Fair	Fair	Good	Good
Vehicle Operation	Good	Good	Fair	Fair
Neighborhood Amenity	Poor	Fair	Fair	Fair
Potential for ADA Parking	Fair	Fair	Fair	Fair
Other Services (Garbage, Delivery, Maintenance, etc.)	Good	Good	Fair	Fair
Estimated On-Street Parking Removal*	-	20-30%	65-85%	45-65%
Estimated Construction Cost and Constructability	-	$1,000,000	$2,100,000	$2,000,000

**Current peak parking occupancy 41-48%*

Near-Term Separated Bikeway Input

- Written comments widely mixed and **highly emphatic**
- Survey responses for One-Way Separated Bikeways: **81 negative comments and 15 positive written comments**
- Written **comment opposition to separated bikeways**: parking impacts (~20% of comments), visual clutter (~6%), driveway access (~4%), and others
- Transportation Commission input urged prioritizing traffic calming and bike/ped safety



"This is insanity for drivers and people who live on Fernside"

"Hate this concept…just STOP it!"

"What the heck is the City thinking"

"This is asking for people to complain"

"A foolish and needlessly complicated plan"

"This has to be someone's idea of a practical joke"

"The design is absolute trash"

"Don't have cars park "floating" in the middle of the street"

Selected Near-Term Concept:
Buffered Bike Lanes with Quick-Build Median Islands

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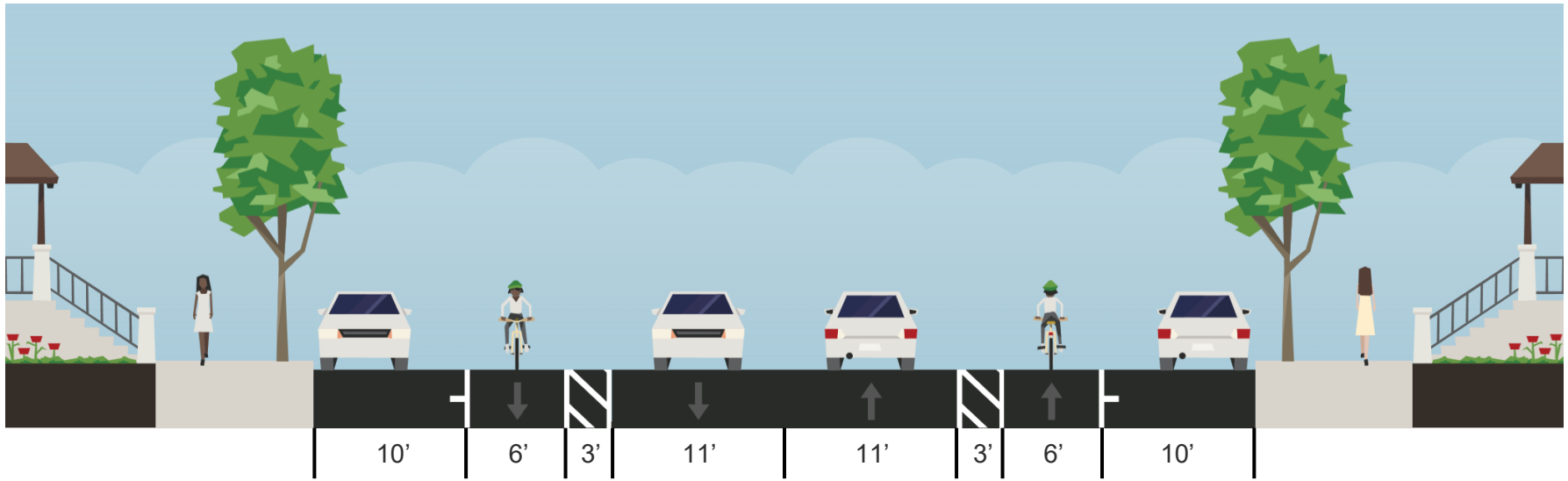
Buffered Bike Lanes with Quick-Build Median Islands



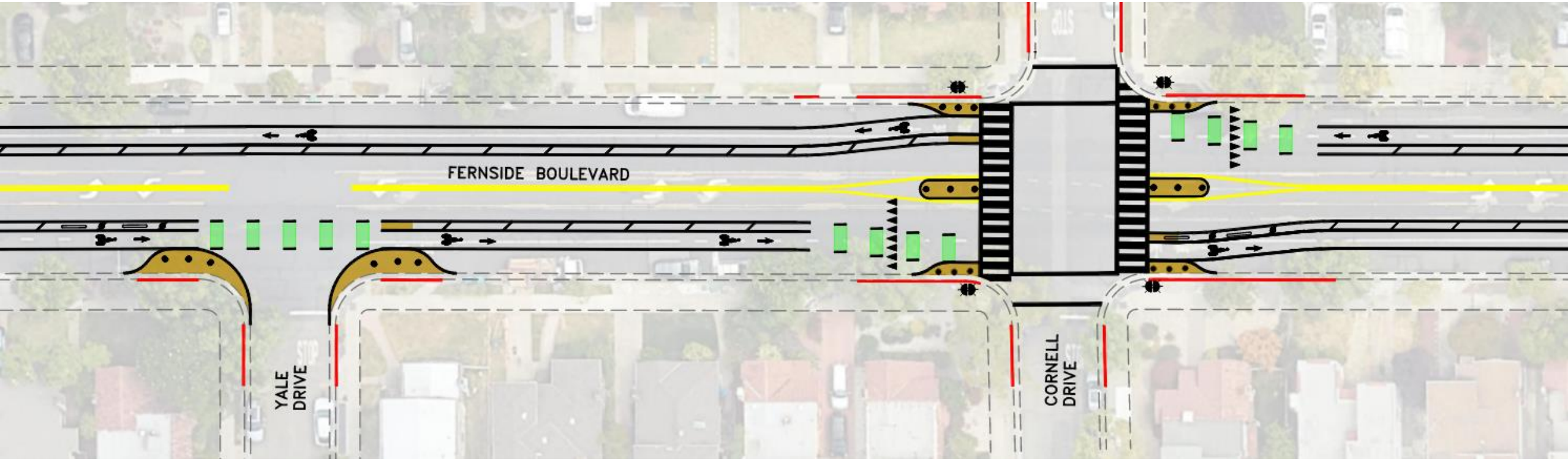
Improvements:

- Center turn lane removed, narrower vehicle travel lanes to reduce speeds
- Additional marked crosswalks *(and, if budget allows, additional flashing beacons*)
- Striped buffer between the bike lane and vehicle travel lane
- Median islands at approaches to 4-way intersections
- Additional delineation / buffer hardening where feasible

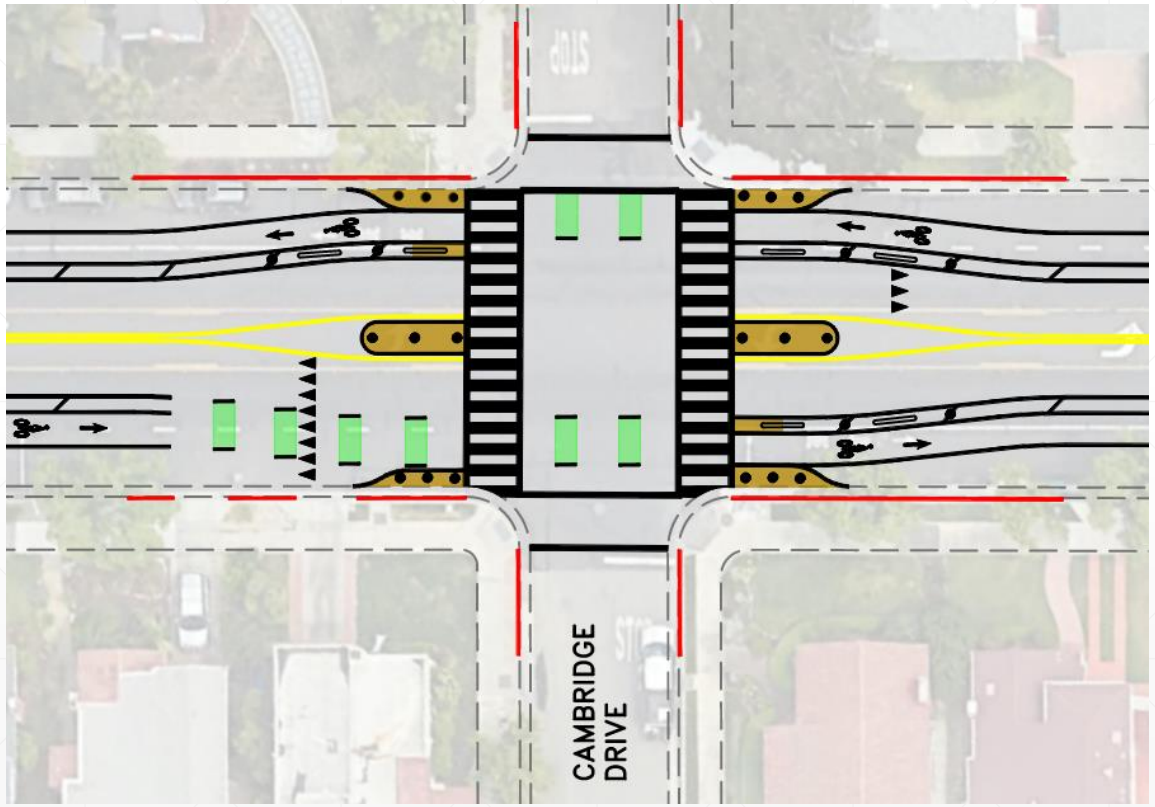
Selected Near-Term Concept: Buffered Bike Lanes

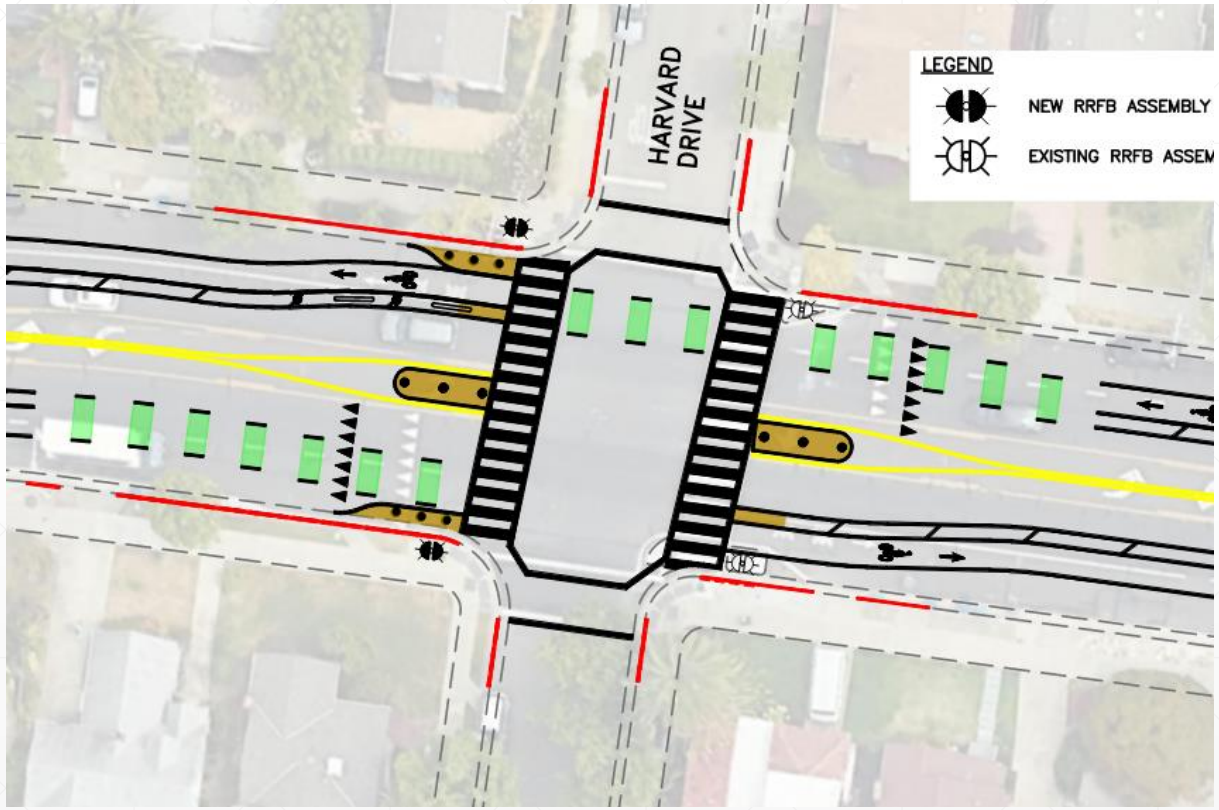
Buffered Bike Lanes with Median Islands

Estimated construction cost, including pavement: $1.45 million

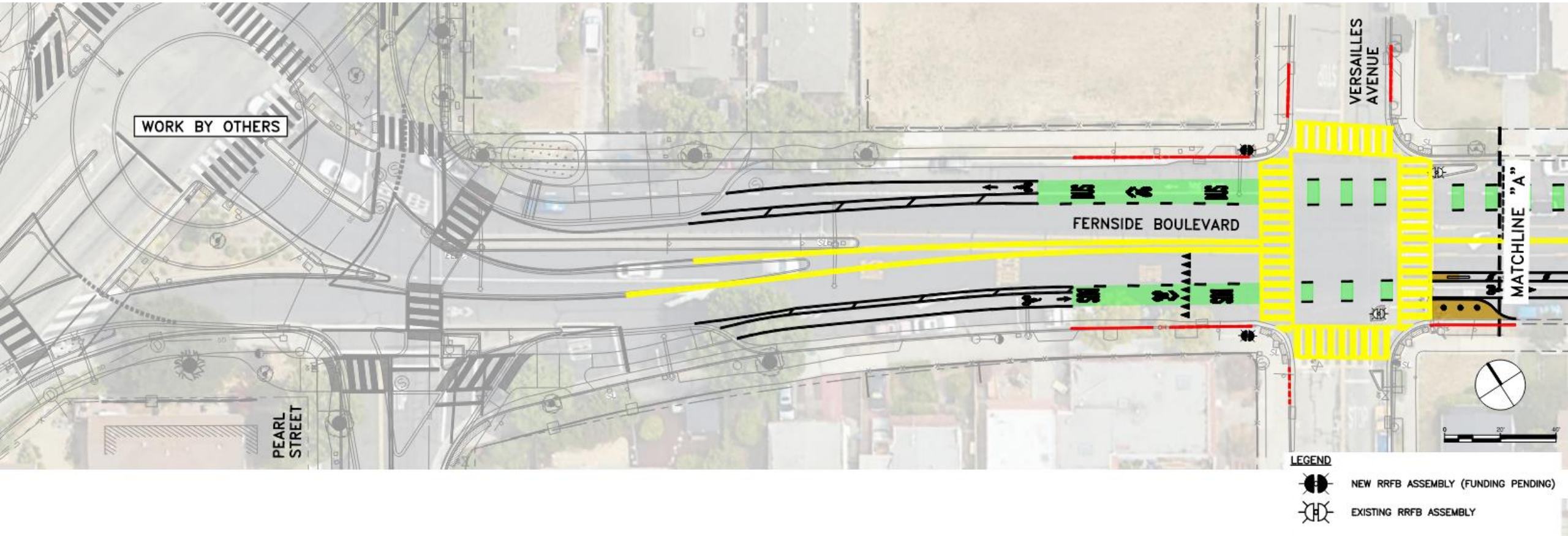


Quick-Build Pedestrian Median Islands
Vertical Hardening at Some Intersections





Selected Near-Term Concept: Buffered Bike Lanes



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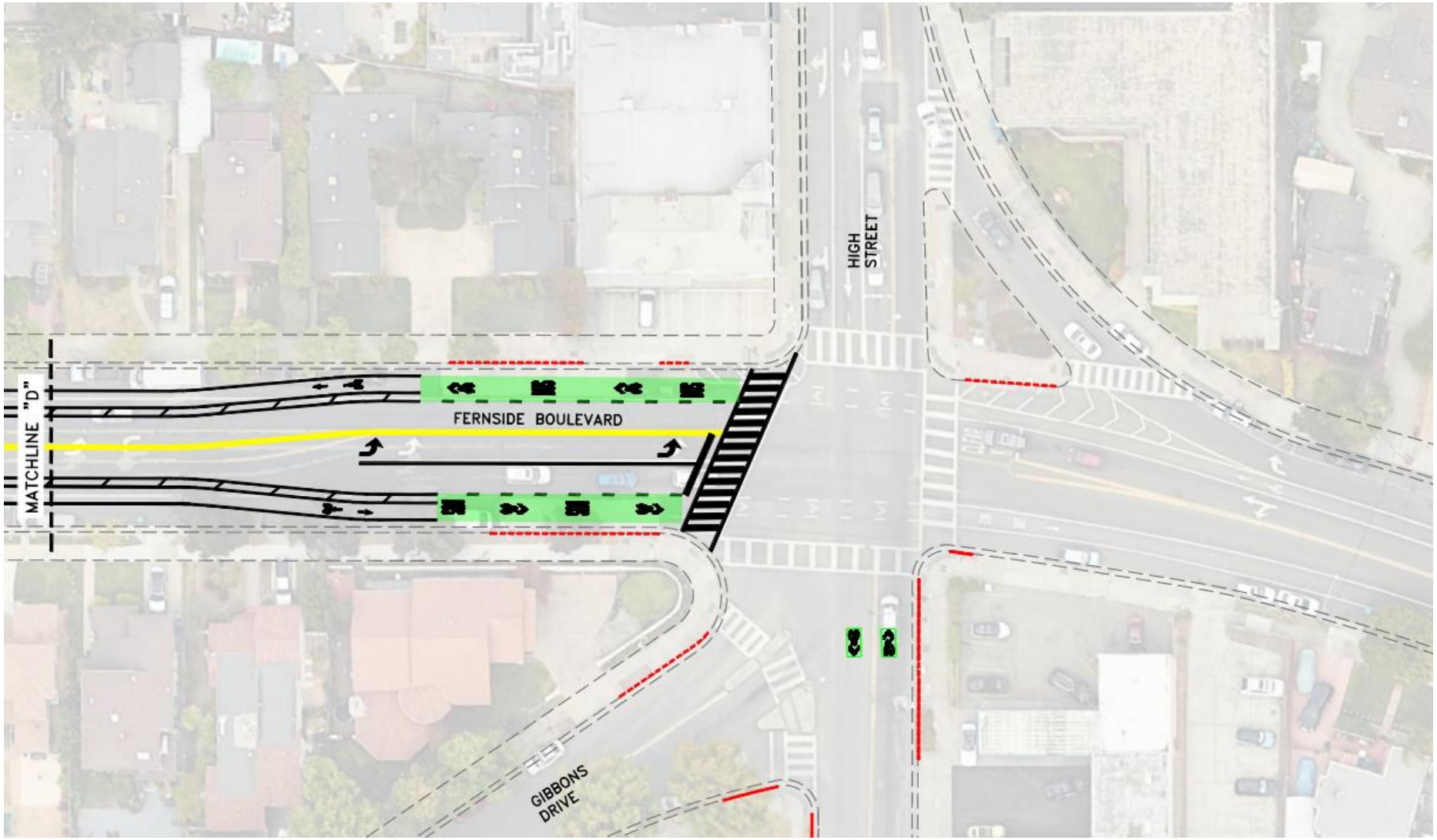


Selected Near-Term Concept: Buffered Bike Lanes

Considerations for detailed design:

- Design specifications for vertical elements
- Additional flashing beacon installations
- Gibbons/Fernside/High design details

Next Steps

Project Phases

1. **Public outreach for existing conditions & initial input:** November 2023 - January 2024
2. **Public outreach for draft concept alternatives:** May-June 2024
3. **Public hearings for final design concept:** November 2024-Early 2025 Transportation Commission and City Council public hearings (including seeking City Council approval)
4. **Resurfacing and restriping on Fernside Blvd west of High St:** 2026
5. **Construct full corridor project:** 2030 goal – timing depends on finding funding

Thoughts?

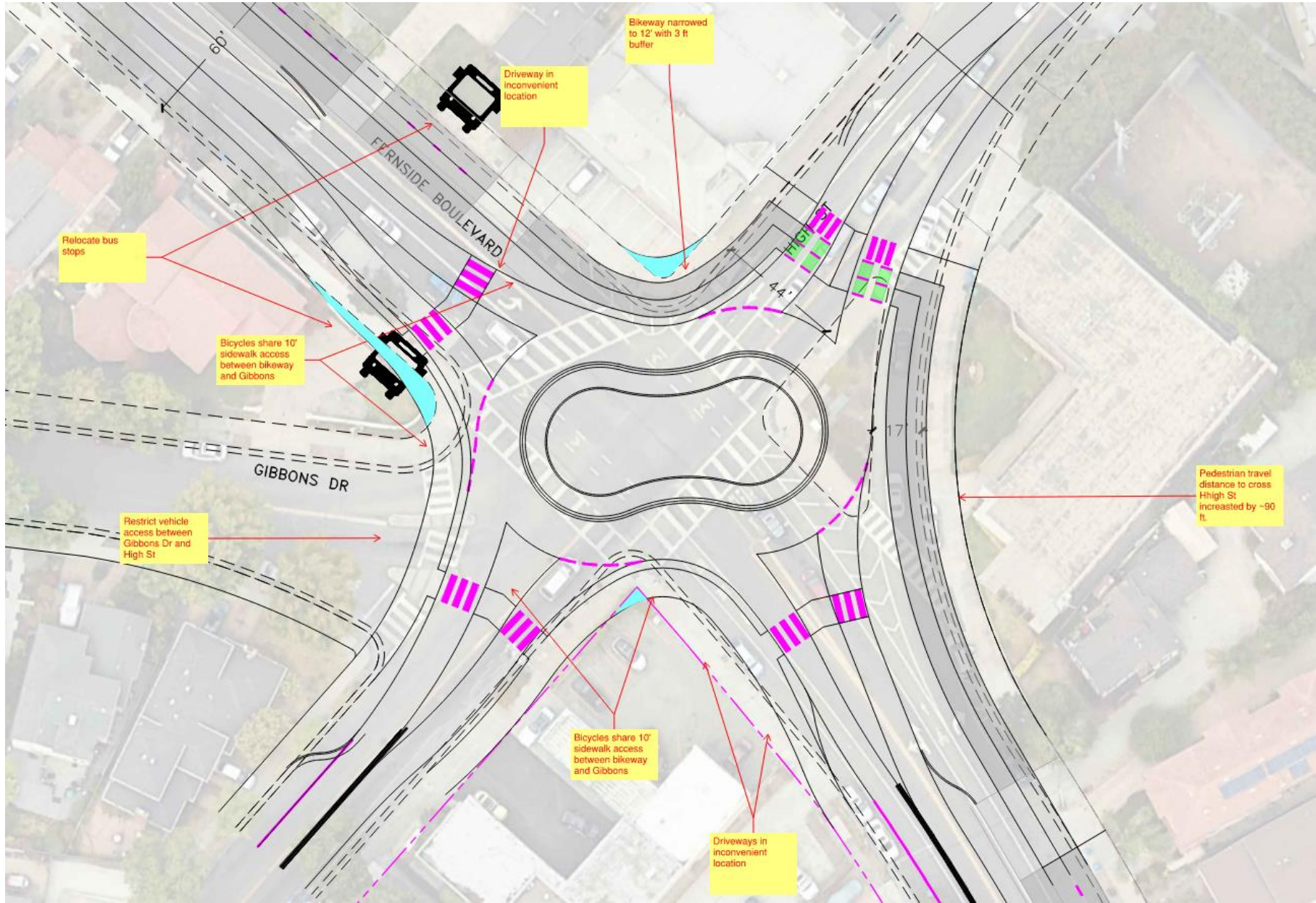
Feedback?

Backup Slides

Roundabout Feasibility Evaluation: Fernside/High

<u>Not recommended at this location</u>:

- Lengthened paths of pedestrian and bicycle travel
- Non-traditional travel lane configuration
- Driveways in inconvenient location
- Requires relocation of bus stops
- Right-of-way impacts
- Construction Cost
- (est. addl ~$3 million)



Roundabout Feasibility Evaluation: Fernside/Encinal

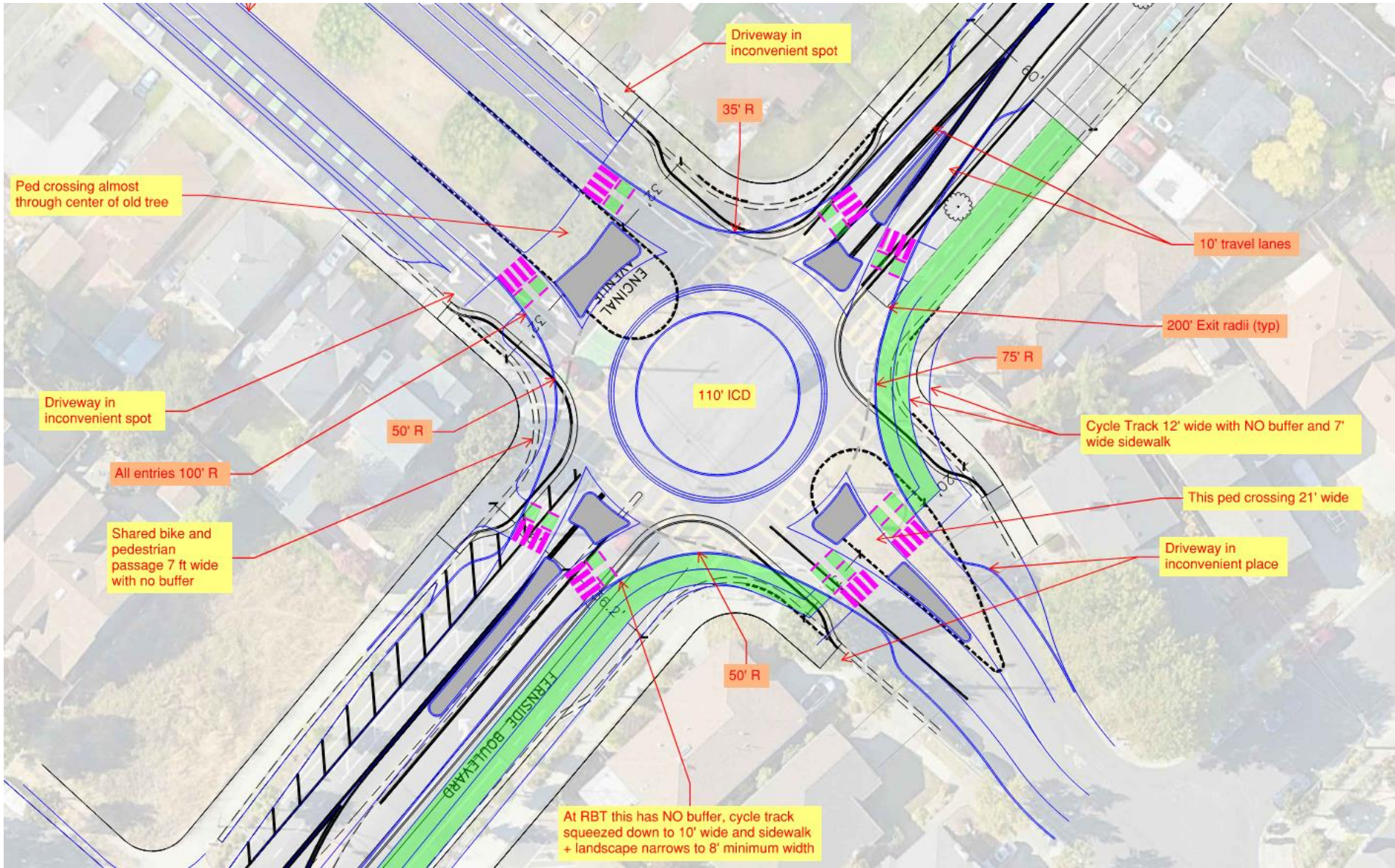
<u>Not recommended at this time</u>

Pros:

- Traffic calming influence near school
- Shortened crossing distances

Cons:

- Lengthened paths of pedestrian and bicycle travel
- Driveways in inconvenient location
- Median island details
- Construction cost (est. addl ~$2 million)



One-Way vs. Two-Way

One-Way Bikeways	Two-Way Bikeways
Easier for vehicles to cross driveways or side streets	Wider overall path of travel for bicycles enables passing
Simpler for pedestrians to cross the bikeway	On-street parking and driveway access only impacted on one side of street
Avoids oncoming bicyclist conflicts	More space for vehicles exiting driveways to wait before entering roadway
	Connects with existing two-way bikeway at Lincoln Middle School
	Wider buffer strip can accommodate more substantial landscaping

Raised vs. Curb-Protected

	Curb-Protected Bikeway	Raised Bikeway
Pedestrian Safety	More clearly separates bicycles from pedestrians (applicable at intersections)	Better pedestrian crossing improvement / integration with bulb-outs
Bicyclist Safety		Provides better bicyclist protection vs discontinuous median islands, provides better bicyclist visibility to motorists
Maintenance		Simpler to maintain bikeway/keep free of debris
Other Services		Better wheelchair loading accessibility, Simpler trash service integration
Construction	Simpler construction; retain existing flowlines	
On-Street Parking Removal*	More impacted	Less impacted
Construction Cost	Slightly lower	Slightly higher

**Current peak parking occupancy 41-48%*