

Point San Pedro Road Roadway Restriping Pilot

Point San Pedro Road Community Meeting

March 30, 2022

Background

1971

- PSPR widened to 4 lanes in anticipation of substantial development in the current China Camp area. The need for the additional lanes was based on the anticipated development-induced increase in vehicle trips.
- Bay Conservation and Development Commission (BCDC) permit included bike lanes on PSPR as a requirement for the road project

1976

- China Camp State Park established, ending most development opportunities on the PSP peninsula

2020

- County begins renovating Bayside Park to address accessibility (ADA) concerns and rehabilitation needs
- BCDC revisits 1971 permit and requires County to provide bike lane along park frontage

2021

- Community concerned with loss of parking along park; additional safety issues identified
- County solution presented at June and December, 2021 community meetings which addresses multiple concerns

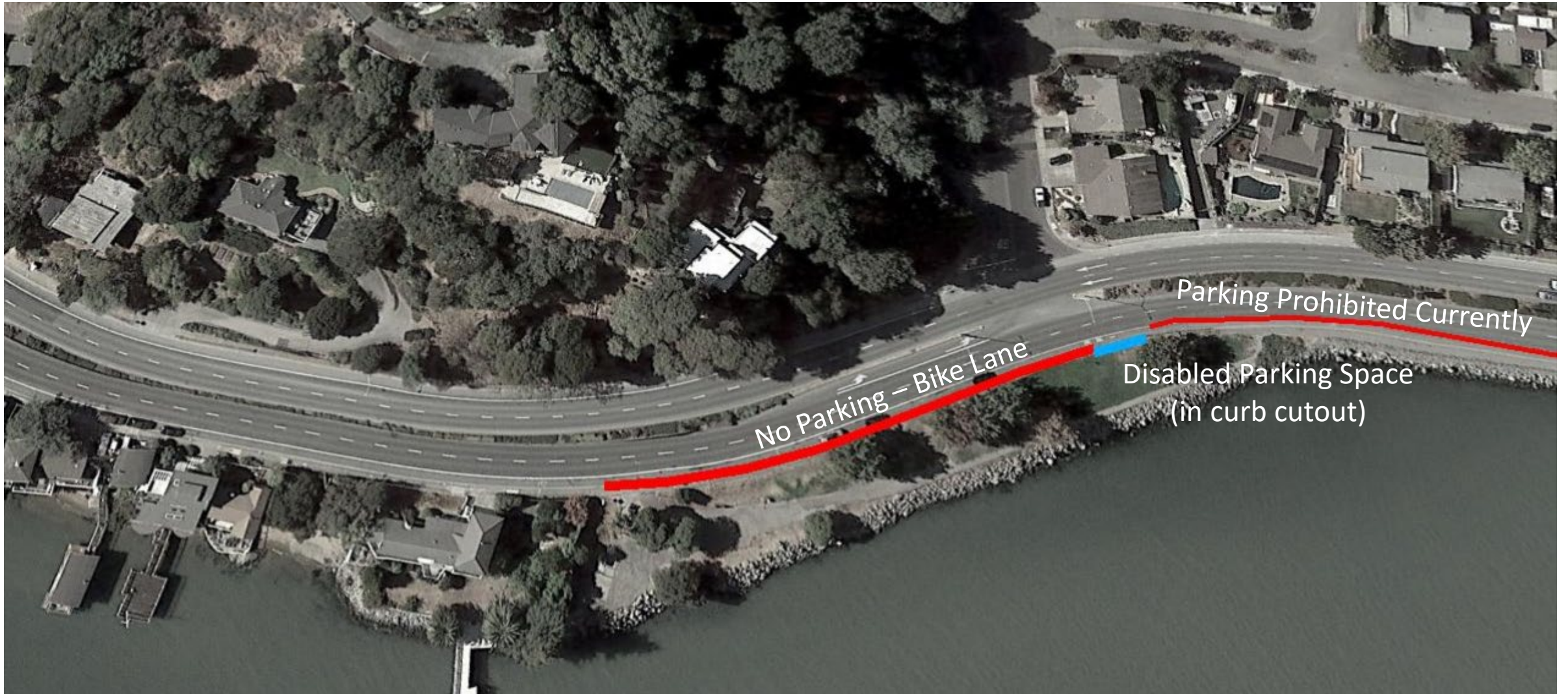
What's Happened to Date

- Park construction has concluded (turf to be installed later per MMWD drought restriction)
- County staff consulted with Bay Conservation and Development Commission (BCDC) to consider alternative approaches to address the permitting issue.
- County's BCDC permit for the park is now out of compliance and enforcement action has been initiated.

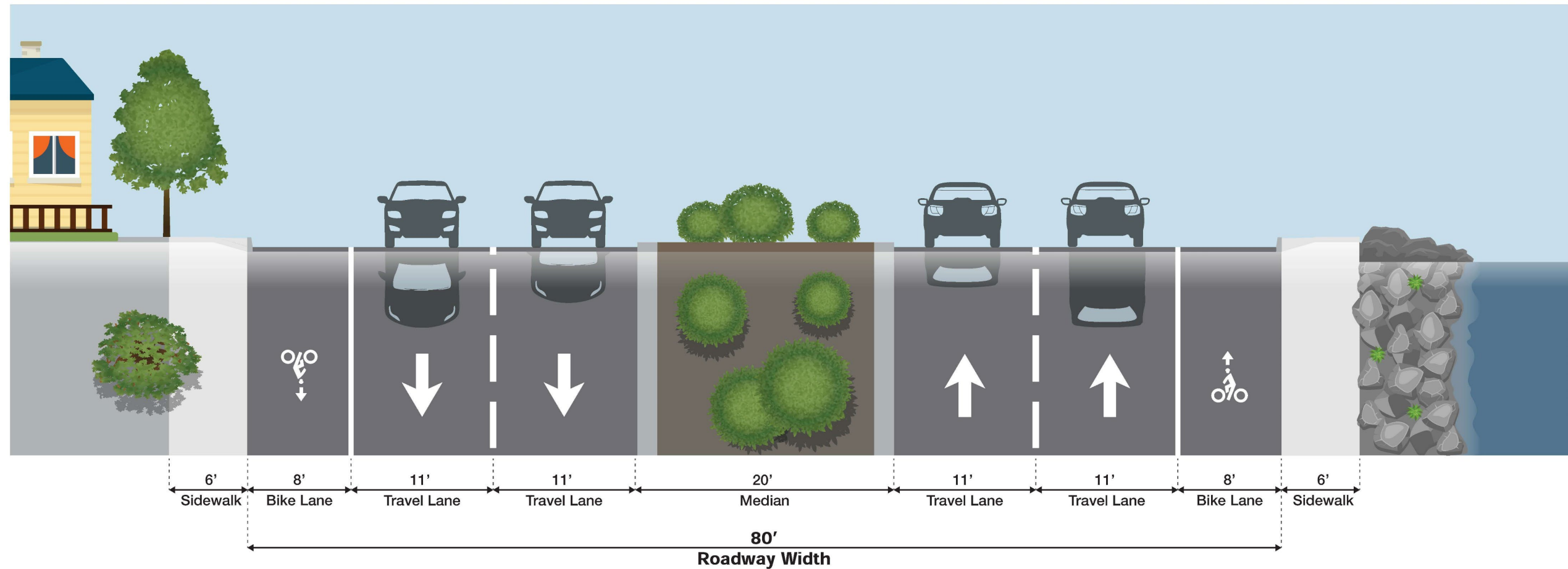
What's Happened to Date

- Lane reduction layout developed in response to BCDC permit requirements and community concerns
 - Current layout plan reflects consideration of concerns and suggestions raised during the June and December, 2021 community meetings and email communications
 - Provision of dedicated bicycle lanes on Point San Pedro Road identified in County's and City's Bicycle/Pedestrian Master Plans
- BCDC staff presented with road conversion alternative to address bike lane requirement and retain park frontage parking.

Bayside Park Parking Restriction Under BCDC Permit



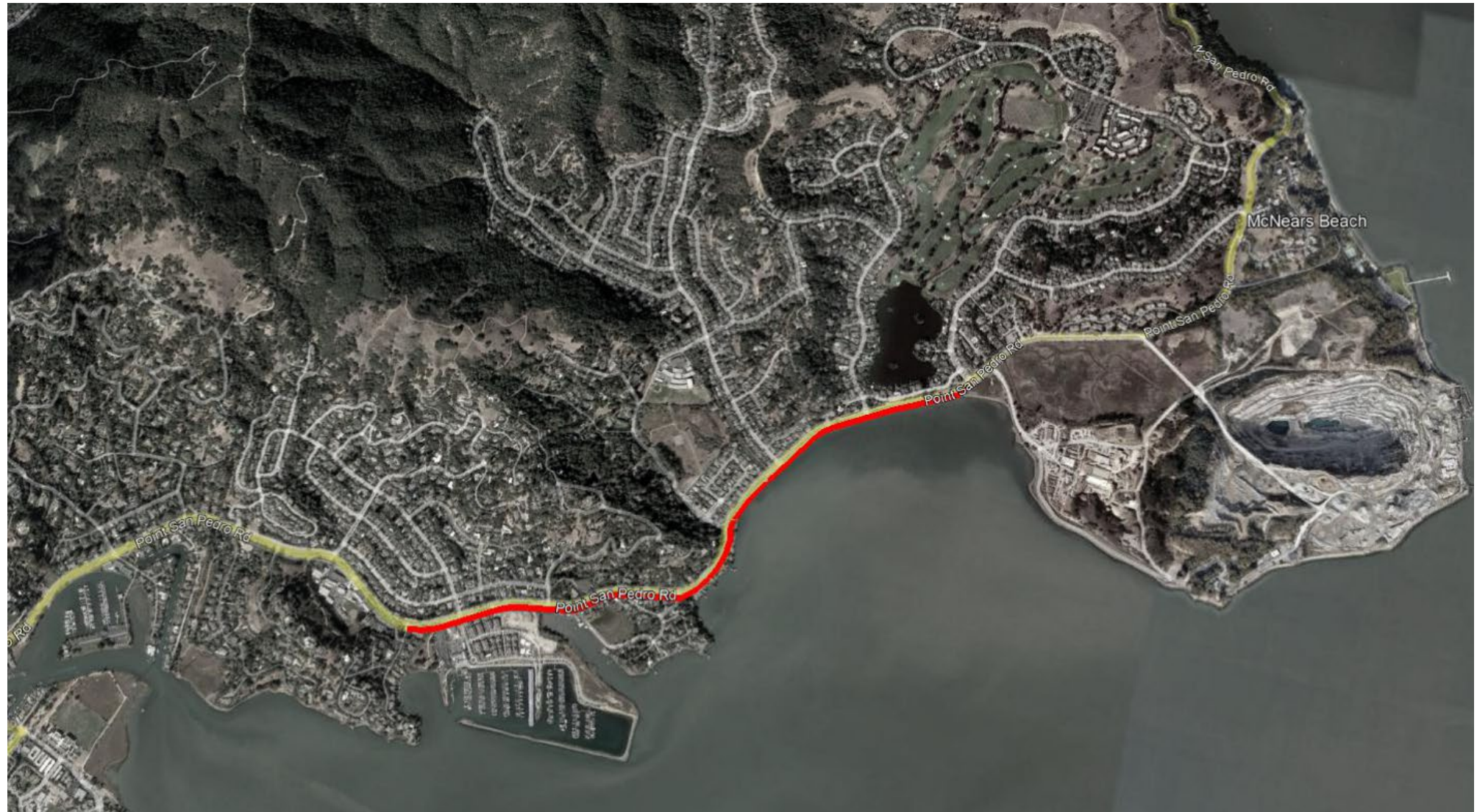
BCDC Permit Configuration – Bayside Park



Bayside Park Parking Restriction Under BCDC Permit

- Current two-lane traffic configuration would remain
- Parking no longer permitted along park frontage to provide bike lane
 - Similar to roadway section east of Bayside Park
- Does not address current alignment and safety concerns in section between Bayview Drive and Main Drive
 - Visibility constraints remain
 - Bicyclists riding in vehicle lane
 - Speeding concerns remain

Eastbound Road Conversion - Pilot Project Limits



Eastbound Road Conversion - Pilot Project Scope

- Results in continuous eastbound bike lane from Bayview Drive to Biscayne Drive
- The merge begins 330 feet after Loch Lomond Drive and is complete by Bayview Drive.
 - Remains as one lane to Riviera Drive where the road currently narrows to one lane
- Eastbound on-Street parking retained between San Pedro Cove and Main Drive (east end of Bayside Park)

Eastbound Road Conversion - Pilot Project Scope

- No changes to posted speed limits
- Layout done with paint within the current roadway; no hardscape/concrete work
- Does not affect emergency vehicle access
- Does not change conditions for the westbound roadway

Traffic Volumes and Speeds on Point San Pedro Road

Point San Pedro Road at:	Average Daily Traffic (ADT) Eastbound	AM Peak Hour Eastbound	PM Peak Hour Eastbound	Average Speed	85th Percentile Speed	Date		
Marina Blvd (east of)	8873	619	761			March 2014		
Manderly Road (west of)	7863	593	652			August 2009		
Loch Lomond Drive (east of)		393	512			August 2018		
Oak Drive (stairs)	5058	438	8:00-9:00	538	3:00-4:00	37.2	41.5	February 2022
Knight Drive (east of)	2271	204	11:00-12:00	259	4:00-5:00	40.1	45.0	March 2022

- At the peak, 538 vehicles per hour is one vehicle every 7 seconds
- Eastbound bicycle traffic averages 118 daily

COUNTY OF MARIN

DEPARTMENT OF PUBLIC WORKS

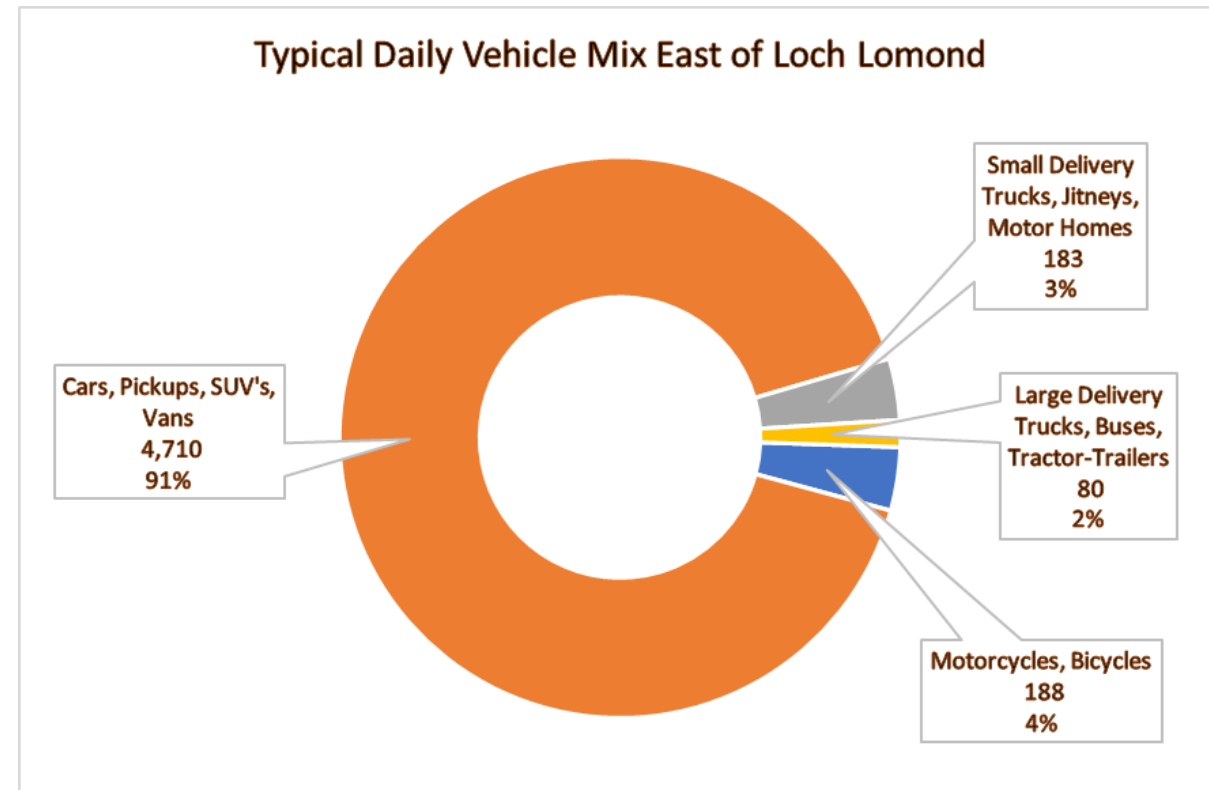
Location 1: POINT SAN PEDRO ROAD mp 1.98
 Location 2:
 Site Code: A101mp1.98
 File Name: PT SAN PEDRO 2-3-4-5-6
 Latitude: 37.976215
 Longitude: -122.478582

Start Date: 2/3/2022
 End Date: 2/18/2022
 Date Printed: 2/18/2022
 Serial Number: BC-19
 GPS Accuracy: 0 ft
 Location Verified: No

Time	2/7/22 Mon	2/8/22 Tue	2/9/22 Wed	2/10/22 Thu	2/11/22 Fri	Weekday Average	2/12/22 Sat	2/13/22 Sun
12:00 AM	7	10	7	6	6	7	24	30
01:00	2	3	4	2	6	3	17	16
02:00	2	4	5	7	3	4	8	7
03:00	6	3	2	2	1	3	4	1
04:00	7	9	12	7	9	9	1	2
05:00	58	66	61	68	65	64	19	10
06:00	68	74	62	56	76	67	43	50
07:00	189	207	215	204	243	212	87	91
08:00	402	422	416	490	461	438	196	151
09:00	314	315	288	322	332	314	297	218
10:00	289	353	159	353	354	302	340	366
11:00	364	352	129	420	388	331	420	430
12:00 PM	376	400	402	453	12	329	456	454
01:00	358	371	502	424	448	421	450	525
02:00	335	372	417	412	405	388	488	479
03:00	510	501	499	565	615	538	492	435
04:00	460	472	490	497	519	488	510	260
05:00	454	464	553	481	456	482	404	188
06:00	328	393	400	445	401	393	306	161
07:00	183	191	236	223	251	217	237	199
08:00	101	109	133	162	170	135	155	134
09:00	60	77	134	103	130	101	133	62
10:00	22	34	57	62	75	50	91	38
11:00	12	17	10	31	42	22	49	9
Total	4907	5219	5193	5795	5468	5318	5227	4316
Percent	92.3%	98.1%	97.6%	109.0%	102.8%		98.3%	81.2%
AM Peak	08:00	08:00	08:00	08:00	08:00	08:00	11:00	11:00
Volume	402	422	416	490	461	438	420	430
PM Peak	03:00	03:00	05:00	03:00	03:00	03:00	04:00	01:00
Volume	510	501	553	565	615	538	510	525

Vehicle Types and Mix East of Loch Lomond

- Over 91% of vehicles are Cars, Pickups, SUV's and Vans
- 5% of Vehicles are Trucks and Other Large Vehicles
- Classification by Length
 - 0-10' Bicycles and Motorcycles
 - 10-20' Cars, Pickups, SUV's, Vans
 - 20-30' Small Delivery Trucks, Jitneys, Motor Homes
 - 30'+ Large Delivery Trucks, Buses, Tractor-Trailers



Loch Lomond-Riviera Collision History (2016 to Present)

- 36 total collisions, 22 injured persons, zero fatalities
 - Loch Lomond/Lochinvar – 11 collisions
 - Bayview Drive – 3
 - Beach Drive – 3
 - Marine Drive – 4
 - Main Drive – 4
 - Knight Drive – 7
 - Peacock Drive – 3
 - Riviera Drive - 1

No Impact to Traffic Flow with Single Eastbound Lane

- Capacity Standard is 1,100 vehicles per lane, per hour
- Peak hour volume is half of a single lane's capacity
- Minimal “friction” in the one-lane section
 - Few intersections
 - Separated by median from westbound traffic
 - No commercial driveways
- Curve geometry remains unchanged

Safety Enhancements with Pilot Project

- Discourages speeding
 - Improves safety for pedestrians and cyclists, particularly near the park
- Provides continuous bicycle facilities where cyclists must currently ride in 40 mph traffic lane
 - Striped buffer provides additional separation between vehicle lanes and bike lanes

Safety Enhancements with Pilot Project

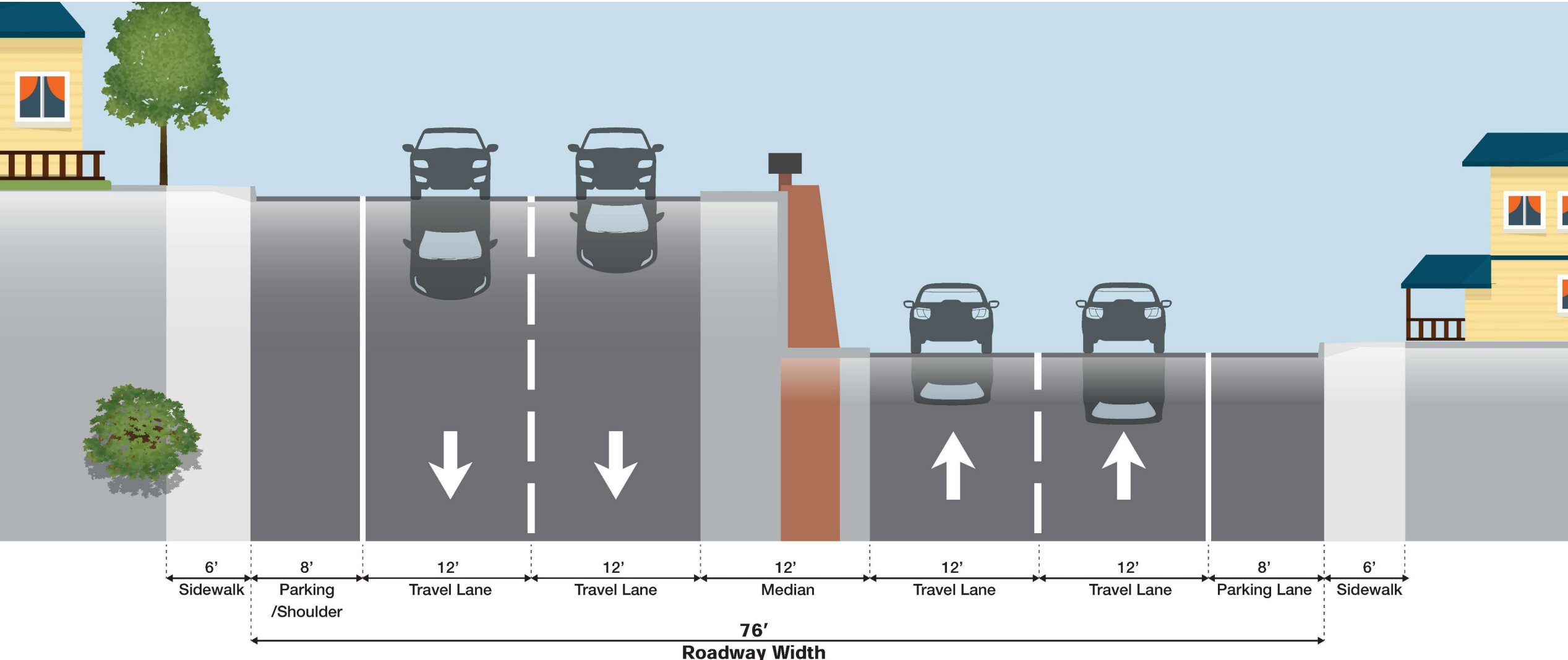
- Improves visibility and sight lines
 - For residents backing out of driveways into Point San Pedro
 - For drivers exiting Beach Road and Marine Drive on to Point San Pedro
 - For drivers on Point San Pedro by shifting the lane away from the median wall

Safety Enhancements with Pilot Project

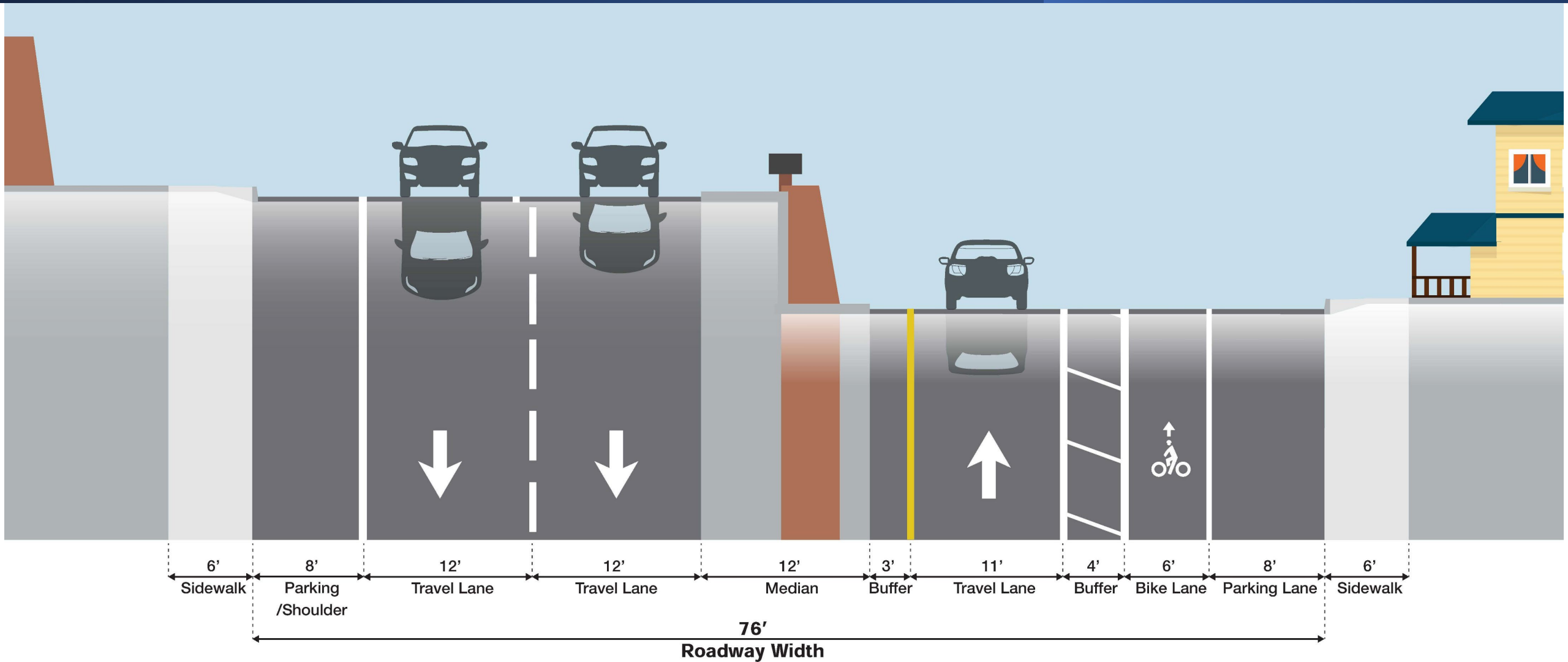
- Eases exiting and entering driver's side of parked vehicles
 - Removes current need to step into vehicle lane



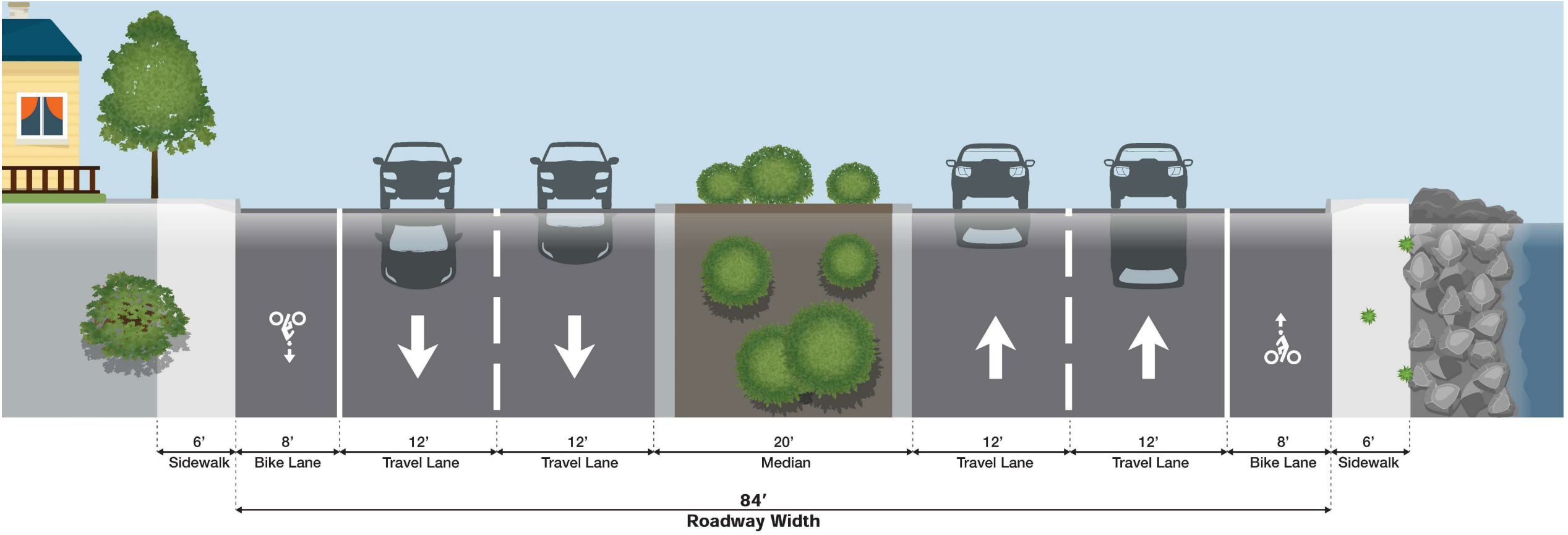
Current Configuration – Bayview Drive to Main Drive



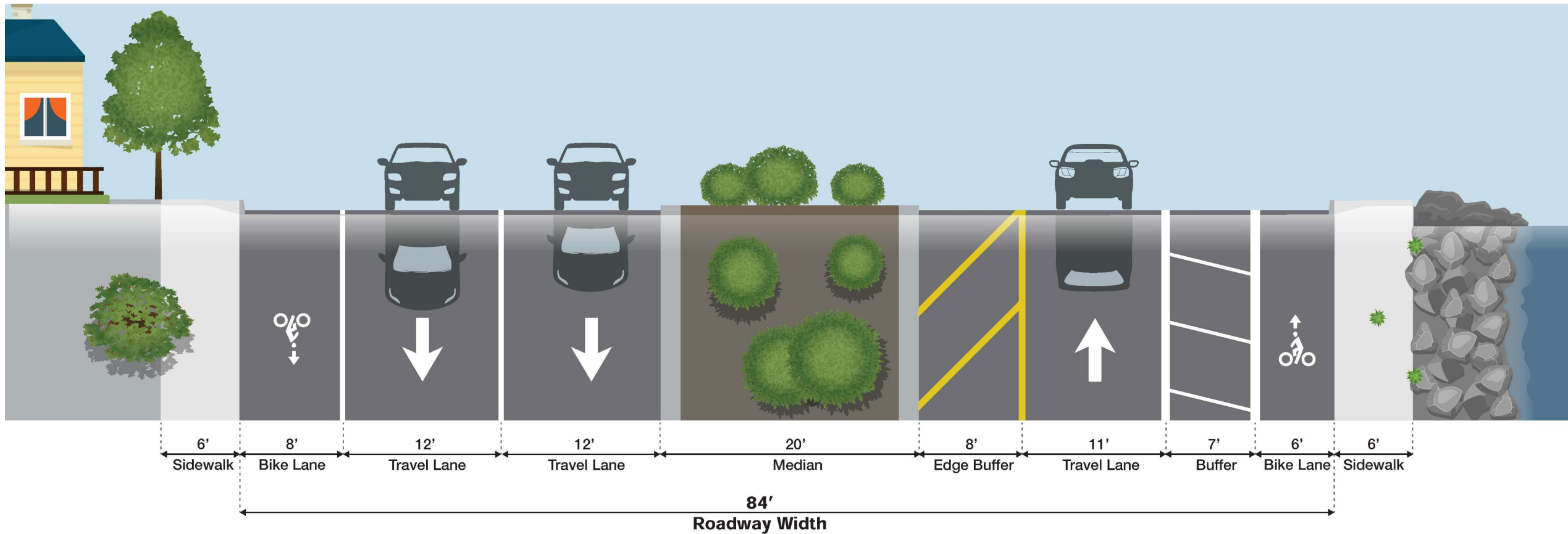
Pilot Configuration – Bayview Drive to Main Drive



Current Configuration - Main Drive to Riviera Drive

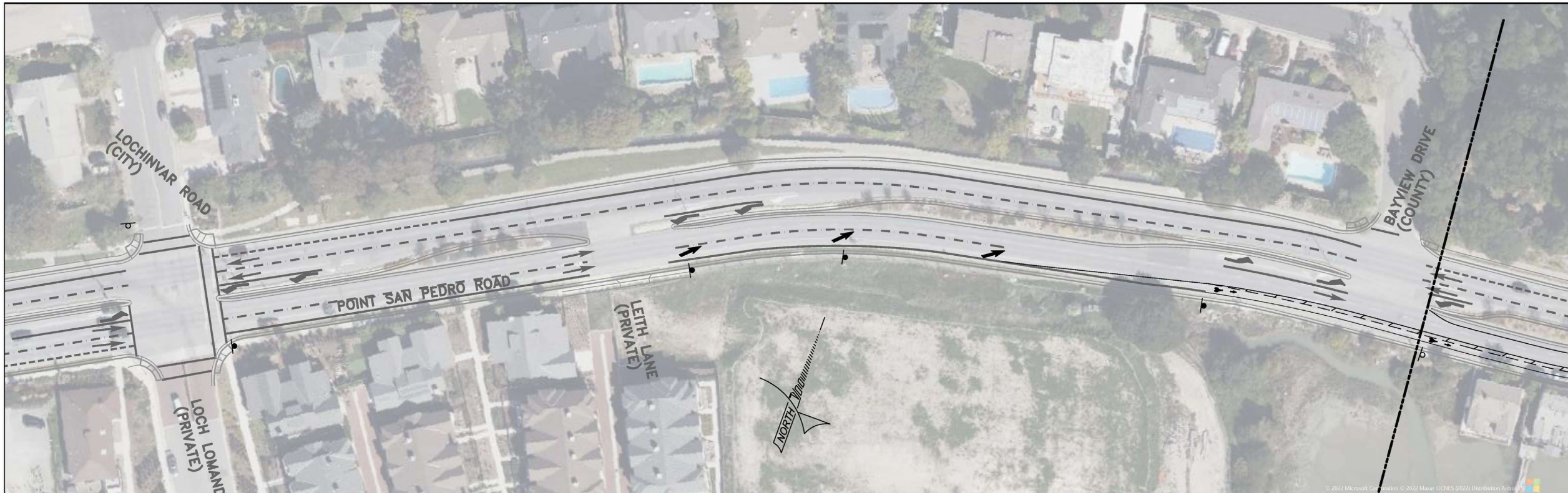


Pilot Configuration - Main Drive to Riviera Drive



Lane Reduction Detail

ALTERNATIVE B - BIKE LANE AT BAYVIEW DRIVE



Emergency Egress/Access Concerns

- Primary Emergency Evacuation Routes
 - Westbound (south side of peninsula) to Montecito/Central San Rafael
 - North/Westbound via China Camp to Santa Venetia
- Point San Pedro Road westbound remains two lanes
- China Camp/North San Pedro constraints remain
- Eastbound pavement width remains the same; no effect on passage of emergency vehicles

Eastbound Bicycling Suggestions Without Lane Reduction

- Prohibit on-street parking eastbound
 - Many residences fronting PSPR do not have on-site parking available, partially due to 1971 road widening
 - Does not retain parking for Bayside Park users
- Direct Cyclists to Use the Sidewalk
 - Sidewalk not wide enough to qualify as mulituse path
 - Creates conflict with pedestrians
 - State law prohibits sidewalk riding except by children

Left Turn Pocket Access and Visibility

- Existing curb lines and length of pockets remain
- Shifting through lane away from median adds deceleration and storage (waiting) space for left turning vehicles
 - Improves sight lines approaching Main Drive intersection



Eastbound Road Conversion Evaluating Outcomes

- Data collection in February/March, July, August/September
 - Vehicle and bicyclist counts
 - Vehicle speeds
 - Collisions
 - Gap Time (space between vehicles)
- Three collection periods reflect conditions pre-Pilot, summer, and when school is in session
- Data collection occurring eastbound near the Oak Drive stairs and at Knight Drive

Eastbound Road Conversion Evaluating Outcomes

- What is measured
 - Throughput – changes in user types and counts, by time of day
 - Vehicle Speeds – changes in vehicle speeds, overall and in relation to the posted speed limit
 - Congestion – changes in vehicle speeds and throughput
 - Safety – changes in the rate and type of collisions; changes in vehicle speeds

Pilot Schedule 2022-23

- Pre-installation data collection – February/March
- Installation of Pilot striping layout – mid-April
- First post-installation data collection – July
- Second post-installation data collection – late August/early September
- Community meeting to discuss results and next steps – October

Questions and Comments

- Questions and Comments?
 - Now, using the Zoom chat function
 - After tonight's meeting by email:
psppilot@marincounty.org
 - Visit the project web page:
<https://bit.ly/PointSanPedroRoadPilotProject>

