

TRAFFIC COMMISSION MEETING

April 6th, 2022

SAN MARCOS
DISCOVER LIFE'S POSSIBILITIES

AGENDA ITEM #7B

Rancho Dorado – Residential Speeding Concerns



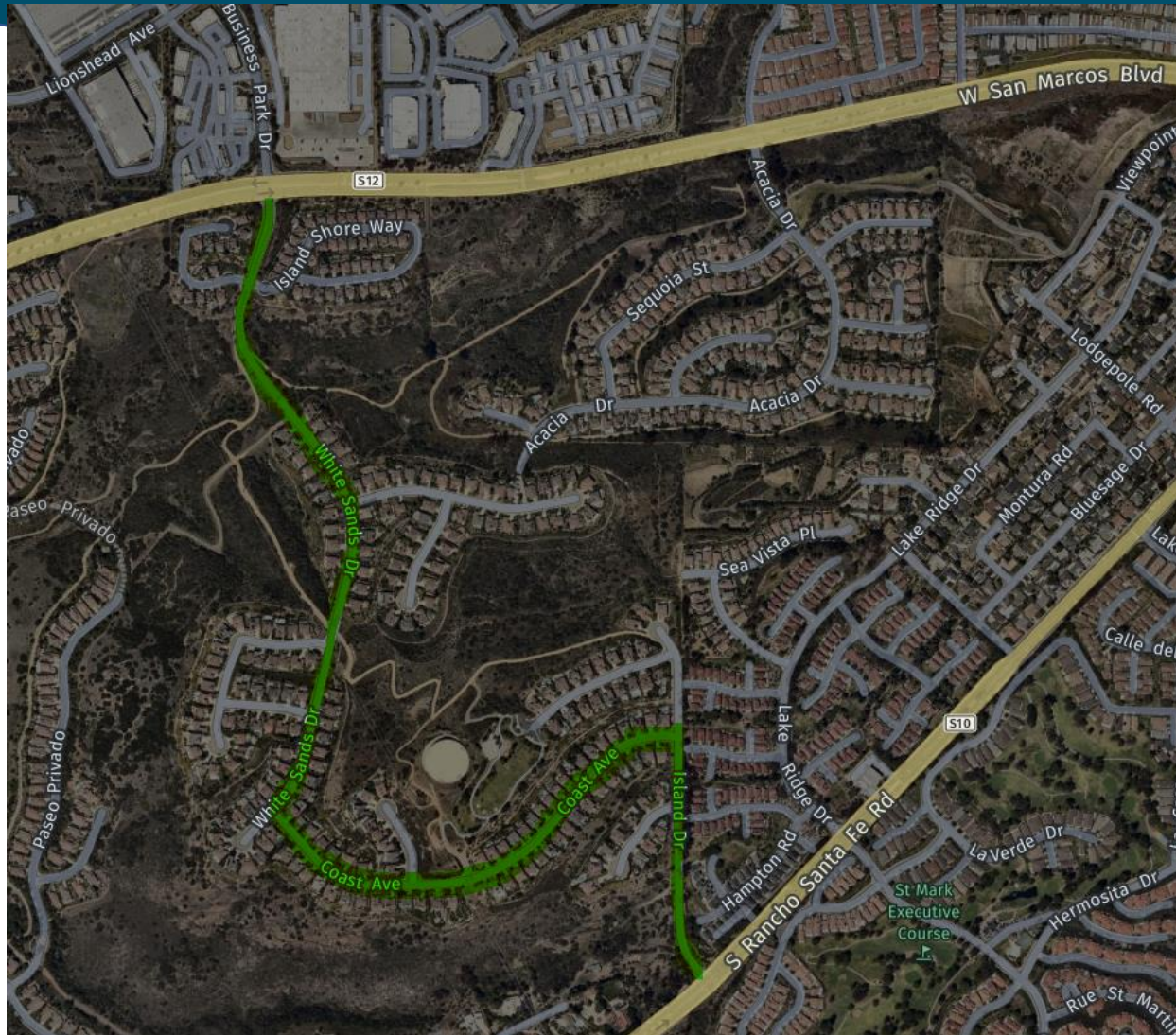
TRAFFIC SAFETY CONCERNS

- City staff received traffic safety concerns or reports of excessive speeding from residents within Rancho Dorado Neighborhood from 2020 to 2021.
- The reported perceived speeding is along White Sands Drive, Coast Avenue and Island Drive.
- City staff collected speed and volume data, collision data, field measurements and observations within 2020 and 2021.
- City staff have worked with the Sheriff's department to gather speed data using "black cat" radar specifically on Coast Avenue mounted on an existing light pole.
- It was determined that City Staff would investigate these concerns and provide a Traffic Calming Report to assist in the findings.
- On October 6, 2021, the Traffic Commission heard the matter and directed staff to conduct additional studies and obtain pre-Covid pandemic traffic data.
- Additional speed surveys were conducted from January 10-16, 2022. No Pre-Covid pandemic traffic data is available.
- These additional findings are presented to you today for the Traffic Commission's consideration.



VICINITY MAP – STUDY AREA

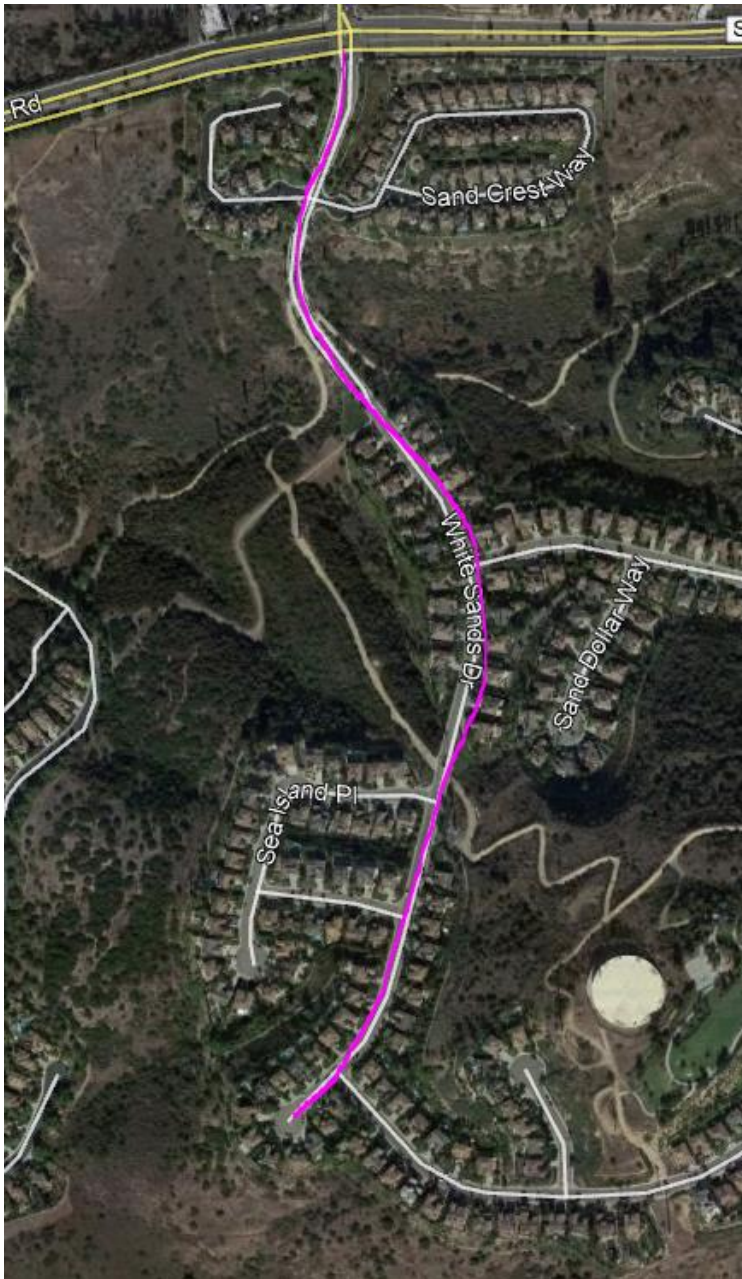
White Sands Drive / Coast Avenue / Island Drive



- Posted Speed Limit is 25 mph, prima facie speed limit for residential density per CVC
- White Sand Drive runs North-South
- Coast Avenue runs West-East
- Island Drive runs North-South
- Rancho Dorado Community
- Provides access single family homes in the area

LOCATION MAP

WHITE SANDS DRIVE



- One Lane each direction residential collector street
- Runs north to south
- 25 MPH speed limit (prima facie)
- Intersects with Island Shore Way / Emerald Sea Way / Sun Valley Road / Sea Island Place / Coast Avenue
- 40 feet wide
- Vertical grade ranges from 0.5 to over 10 percent
- White Sands Drive between Emerald Sea Way to Sun Valley Road
Posted Speed: 25 MPH
85th Percentile: 35 MPH

LOCATION MAP

COAST AVENUE

White Sands Drive to Summit Point Way

- One Lane each direction residential collector street
- Runs west to east
- 25 MPH speed limit (prima facie)
- Intersects with Summit Point Way
- 40 feet wide
- Vertical grade ranges from 0.5 to over 10 percent
- Posted Speed: 25 MPH
- 85th Percentile: 29 MPH





LOCATION MAP

ISLAND DRIVE

Coast Avenue to Crystal Cove Way

- One Lane each direction residential collector street
- Runs west to east
- 25 MPH speed limit (prima facie)
- Intersects with Summit Point Way
- 40 feet wide
- Vertical grade ranges from 0.5 to over 10 percent
- Posted Speed: 25 MPH
- 85th Percentile: 38 MPH

ENGINEERING STUDY/ANALYSIS

Traffic Volumes:

White Sands Drive – 677 VPD (vehicles per day)

Coast Avenue – 390 VPD (vehicles per day)

Island Drive – 523 VPD (vehicles per day)

Speed Limit:

Prima Facie (25 MPH), posted.

Speed Surveys:

		85 th Percentile Speed (mph)		
	Posted	Jan. 10-16, 2022	July 7, 2020	July 7, 2020
	Speed (mph)			March 23-29, 2021
Island Drive	25	38	37	
White Sands Ave.	25	35	34	
Coast Avenue	25	29		30

Accident History (last 5 years):

White Sands Drive & Sun Valley Road – Rear End with Parked Motor Vehicle
(December 2017)

San Marcos Boulevard & White Sands Drive – Broadside Collision (August 2018)

White Sands Drive & Emerald Sea Way – Non-Collision Motorcycle Crash (July
2020)

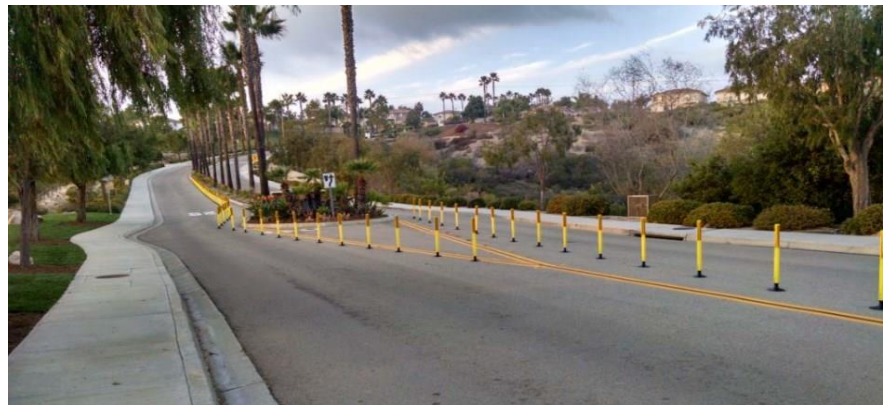


ENGINEERING STUDY/ANALYSIS

Past Considerations:

City staff have installed previous traffic calming measures in a small roadway segment on White Sands Drive in 2014 (traffic delineators to reduce roadway width).

- This was effective (reduced 85th percentile speeds by 6 mph) but ultimately removed per the request of the residents in favor of painted roadway striping.
- Based on the residents' concerns and previous history and considerations for this neighborhood, Staff initiated a traffic safety evaluation of the corridor, to determine if traffic calming alternatives may be warranted based on a Tiered countermeasure consideration.



ENGINEERING STUDY/ANALYSIS

Support for warranted traffic calming measures:

City's Unsafe Speed Violation Threshold Policy

California Basic Speed Rule for Speed Law Violation:

"No person shall drive a vehicle at a speed greater than is reasonable or prudent having due regard for weather, visibility, the traffic on, and surface and width of the highway. In no event shall a person drive at a speed such as to endanger the safety of persons or property." *California Vehicle Code §22350*

The City of San Marcos utilizes an unsafe speed violation threshold policy in determining where traffic calming is warranted.

For locations with a posted speed limit of 25 MPH, the 85th percentile speed, speeding violations must be at least 32 MPH.

Coast Avenue is the only street segment that does not meet this threshold at 29 MPH. For consistency, Coast Avenue has been included in Tier 1, as a reduction from the 85th percentile of 29 MPH would benefit the overall connectivity of the neighborhood.

ENGINEERING STUDY/ANALYSIS

The results of the safety evaluation provided a traffic calming countermeasure table summary with exhibits broken down into Tier 1, Tier 2, and Tier 3 list.

- Tier 1 represents countermeasures to be discussed in an open format.
- Tier 2 represents secondary countermeasures pending the outcome and implementation from Tier 1 countermeasures.
- Tier 3 represents countermeasures which were reviewed but not recommended at this time.

Note: Speed bumps/cushions did not meet standards on road profile/grades over 7% due to safety concerns, as all three study roadway segments exceed this requirement, hence it was not considered as a Top Tier countermeasure.

ENGINEERING STUDY/ANALYSIS

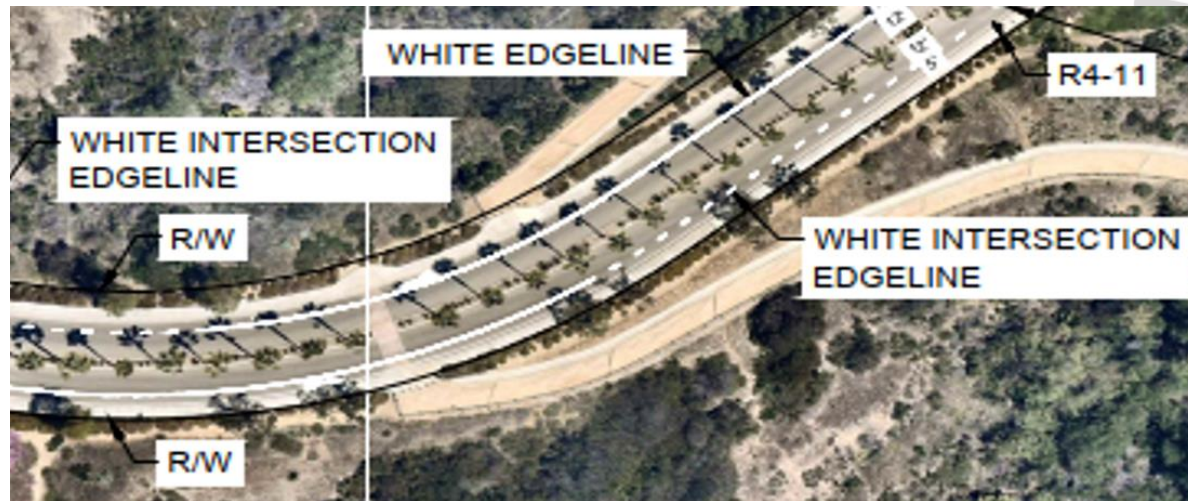
Tier 1 Traffic Calming Countermeasures:

Countermeasure: Class II Bike Lane

Location:

- White Sands Drive Between San Marcos Boulevard and 650' North of Sun Valley Road, 85th Percentile 34 mph (2020)

Anticipated Speed Reduction: 2 to 3 mph



ENGINEERING STUDY/ANALYSIS

Tier 1 Traffic Calming Countermeasures:

Countermeasure: Class II Bike Lane

Advantages:

- Discourages speeding by narrowing vehicle travel lanes to 12', perceived friction
- Provides new facilities exclusive to bicycle travel

Disadvantages:

- Cost



ENGINEERING STUDY/ANALYSIS

Tier 1 Traffic Calming Countermeasures:

Countermeasure: Parking Lane with Partial Centerline

Locations:

- Remaining portions of White Sands Drive, 85th Percentile 35 mph
- Coast Avenue full corridor, 85th Percentile 29 mph
- Island Drive, 85th Percentile 38 mph



ENGINEERING STUDY/ANALYSIS

Tier 1 Traffic Calming Countermeasures:

Countermeasure: Parking Lane with Partial Centerline

Advantages:

- Discourages speeding by narrowing vehicle travel lanes to 12', perceived friction
- Maintains 8' on-street parking lane

Disadvantages:

- Cost
- Partial Centerline provides less friction than a full centerline



ENGINEERING STUDY/ANALYSIS

Tier 2 Traffic Calming Countermeasures – Not Recommended at this time:

Countermeasure: Parking Lane with Full Centerline

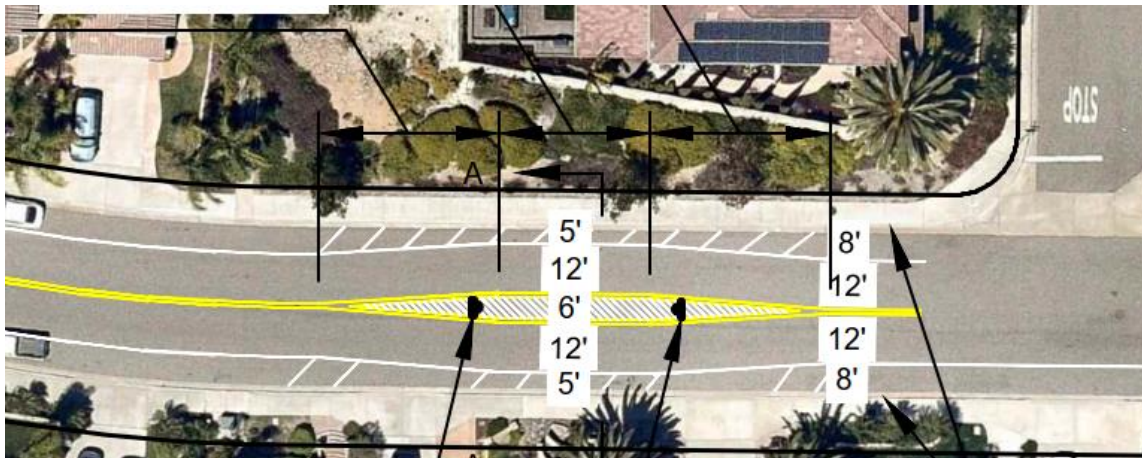
Anticipated Speed Reduction: 1 to 5 mph

Countermeasure: Horizontal Deflection with Striped Center Traffic Island with Lateral Shift

Anticipated Speed Reduction: 1 to 6 mph

Countermeasure: Horizontal Deflection with Raised Center Traffic Island with Lateral Shift

Anticipated Speed Reduction: 1 to 6 mph



ENGINEERING STUDY/ANALYSIS

Tier 2 Traffic Calming Countermeasures – Not Recommended at this time:

Island Drive only - Countermeasure: Class II Buffered Bicycle Lane with Partial Centerline

Anticipated Speed Reduction: 1 to 5 mph



ENGINEERING STUDY/ANALYSIS

Tier 3 Traffic Calming Countermeasures – Not Recommended:

Countermeasures:

- Chicanes or Chokers
- Raised Medians
- Traffic Circles or intersection treatments
- Vertical Deflection
 - Speed Humps/Tables/Cushions
- Dynamic Speed Activated Warning Signs
- Road Diets
- Corner Extensions at Intersections



PROPOSED IMPROVEMENTS



PROPOSED IMPROVEMENTS



RANCHO DORADO TRAFFIC CALMING
WHITE SANDS DRIVE - TIER 1 - PARKING LANE WITH PARTIAL CENTERLINE

7/8/2021
Sheet 2 of 6

PROPOSED IMPROVEMENTS



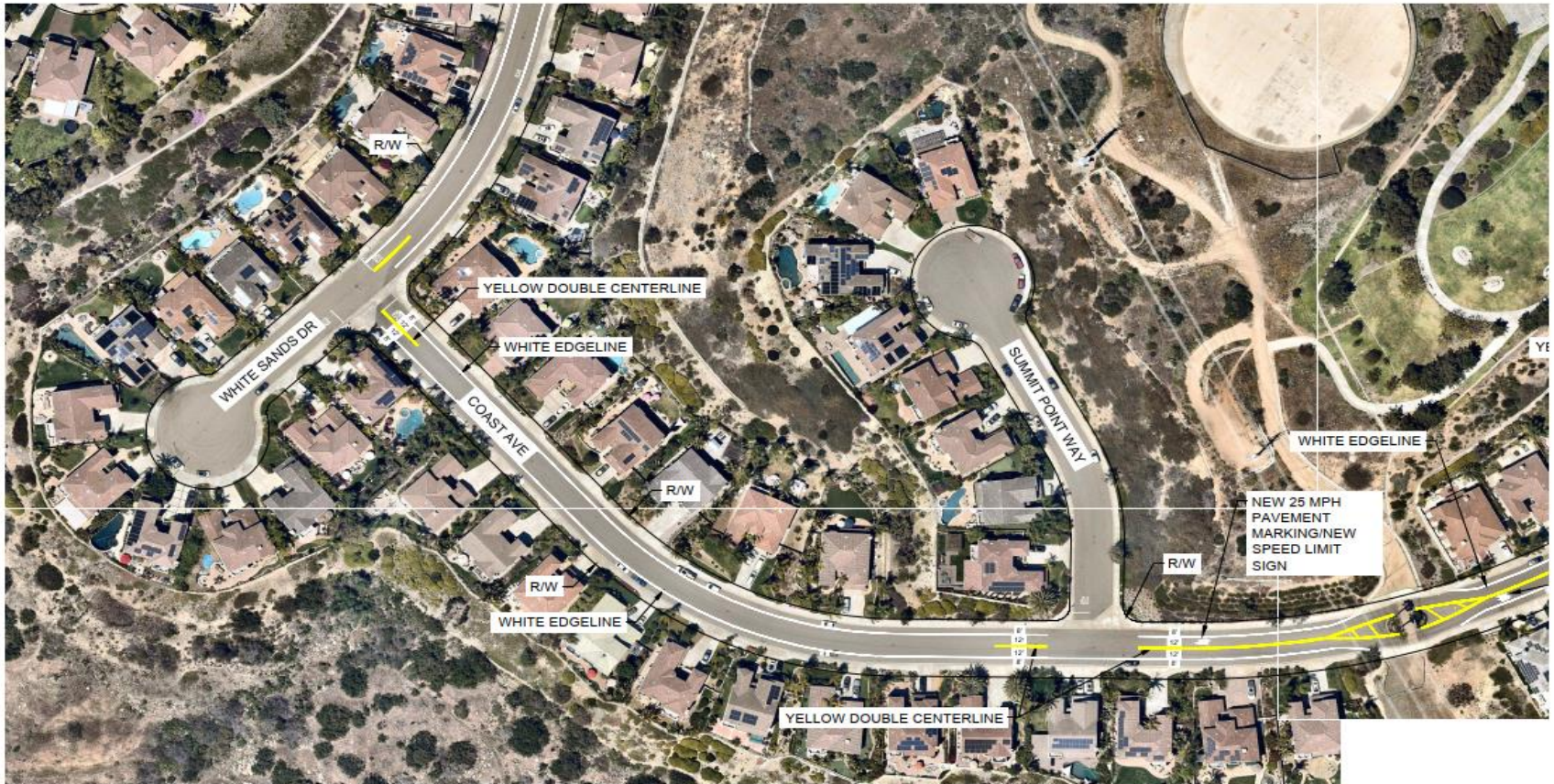
RANCHO DORADO TRAFFIC CALMING

WHITE SANDS DRIVE - TIER 1 - PARKING LANE WITH PARTIAL CENTERLINE



7/8/2021
Sheet 3 of 6

PROPOSED IMPROVEMENTS



PROPOSED IMPROVEMENTS



PROPOSED IMPROVEMENTS



STAFF RECOMMENDATIONS

1. Installation of edge line striping in the form of Class II Bicycle Lanes on White Sands Drive between San Marcos Boulevard and 650' North of Sun Valley Road to discourage speeding by narrowing vehicle travel lanes.
2. Installation of partial double yellow centerlines at the intersections along the project study to help motorists stay in lane as they navigate.
3. Installation of edgeline striping to define parking lanes on White Sands Drive, Coast Avenue, and Island Drive to discourage speeding by narrowing vehicle travel lanes.
4. Installation of new speed limit signs (25 MPH) on Coast Avenue between Summit Point Way and Island Drive to inform motorists of the residential 25 MPH zone.
5. Installation of new speed pavement markings (25 MPH) on Coast Avenue between Summit Point Way and Island Drive to inform motorists of the residential 25 MPH zone.
6. Installation of Radar Feedback signage and operate them at interim periods to improve long-term effectiveness & continue to work with the Sherriff to increase enforcement.
7. Recommend studying the effectiveness after one year of implementation and reporting the results.