

AGENDA REPORT

Meeting of the San Marcos Traffic Commission

MEETING DATE: May 4, 2022
AGENDA ITEM NO: 7A
SUBMITTED BY: Peter Kuey, P.E., Principal Civil Engineer
APPROVED BY: Isaac Etchamendy, P.E., City Engineer
SUBJECT: Reconsideration of Rancho Dorado Neighborhood – Residential Speeding Concerns

BACKGROUND:

In 2020 Engineering Staff received traffic safety concerns from San Marcos residents within the Rancho Dorado neighborhood. Residents reported perceived vehicular speeding along several roadways within the Rancho Dorado community. The roadway segments indicated in the complaint were White Sands Drive between San Marcos Boulevard and Sun Valley Road, Coast Avenue between White Sands Drive and Summit Point Way, and Island Drive between Coast Avenue and Rancho Santa Fe Road.

Prior to the 2020 complaints received by the City prior efforts had been undertaken in the community to address complaints of speeding. In 2014 the City installed traffic delineators on White Sands Drive to reduce roadway width to eleven feet (11'). The City immediately received numerous complaints stating that the narrow lane was difficult to navigate and the delineators were not aesthetically pleasing. In 2015 the City removed the delineators and reinstalled them to allow for a thirteen foot (13') wide lane to improve the ability of vehicles to navigate the narrowed lanes. A post installation evaluation of the delineator installation proved to be very successful reducing the 85th percentile speed by six (6) miles per hour (MPH). Subsequent complaints from the Home Owner's Association (HOA) board and residents were received regarding the unappealing aesthetic nature of the delineators. The City then removed the delineators and installed striping as a compromise allowing reduced lane width.

In 2020 and 2021 the City began investigating the concerns of speeding along the roadways of concern. City staff engaged with the HOA and resident stakeholders and initiated a study to evaluate if the roadways in question were experiencing speeds sufficiently over the posted speed limit to warrant traffic calming measures. The safety evaluation collected volume data, collision data, field measurements, and observations. The result of the safety evaluation determined that traffic calming countermeasures were warranted in the community. The City coordinated with the HOA and resident stakeholders regarding the recommended countermeasures. The proposed countermeasures were

structured in a tiered manner with low-cost/high impact countermeasures recommended first. The countermeasures were broken into Tier 1, Tier 2 and Tier 3:

- Tier 1 – Countermeasures to be discussed with the City Traffic Commission and Rancho Dorado neighborhood as first order of implementation. The recommended countermeasures include the restriping of roadways to create visual narrowing of the roadway.
- Tier 2 – Countermeasures that could be considered after evaluating Tier 1 countermeasure effectiveness could include: parking lane with full centerline, horizontal deflection with striped center traffic island with lateral shift or horizontal deflection with raised center traffic island with lateral shift and along Island Drive, Class II buffered bicycle lane with partial centerline.
- Tier 3 – Countermeasures that were reviewed but not recommended include: chicanes or chokers, raised medians, traffic circles or intersection treatments, vertical deflections such as speed humps/tables/cushions, dynamic speed activated warning signs, road diets, and intersection corner extensions.

The proposed Tier 1 countermeasures were provided to the HOA and resident stakeholders. On October 6, 2021 City staff recommended installation of Tier 1 improvements at the regular meeting of Traffic Commission. The recommendations included:

1. Installation of edge line striping in the form of Class II Bicycle lands 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 intersections along the project study area to help motorists stay in lanes as they navigate through the community.
3. Installation of edge line striping to define parking lanes on White Sands Drive, Coast Avenue, and Island Drive in order to discourage speeding by narrowing the 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 25 MPH zone.
6. Recommend studying the effectiveness after one year of implementation and reporting the results.

At the October 6, 2021 Traffic Commission meeting Engineering staff was directed by Traffic Commission to collect new traffic data and include data prior to the Covid pandemic. Staff directed its contractor to conduct 7-day speed survey on Coast Avenue, Island Drive, and White Sands Drive from January 10, 2022 to January 16, 2022.

Staff brought this item back to the Traffic Commission on April 6, 2022. The Commissioners listened to staff's presentation, held discussions and voted to approve staff's recommendations.

Subsequent to the April 6th Traffic Commission Meeting, it was brought to staff's attention that appropriate public noticing requirements were not met. Staff regrets this oversight and is requesting the Traffic Commission to reconsider this item. Reconsideration will provide opportunity for the public to provide comment on the proposed item and allow the Commission to consider those comments in its decision. For tonight's meeting, staff has enlisted the help of the Rancho Dorado Homeowner's Association management company, The Avalon Management Group, in providing additional notification support to the Rancho Dorado community. The City appreciates the assistance of the Avalon Management Group.

DISCUSSION:

On October 6, 2021 Engineering staff was directed by Traffic Commission to:

1. Collect additional traffic data within six (6) weeks of the commission meeting; and,
2. Include data prior to the COVID pandemic.

On January 10 through January 16, 2022 the City's data collection consultant collected additional traffic data as requested by the Traffic Commission. A comparison of the traffic data collection is summarized below:

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

Based on the speed survey, the results are provided below:

- *Coast Avenue, between White Sands Drive and Summit Point Way:* This roadway section is a two-lane residential street, approximately $\frac{1}{2}$ mile in length. The street provides access to single family homes. Typical street width on Coast Avenue measures 40 feet curb-to-curb. The slope of Coast Avenue ranges from about 0.5 to over 10 percent, with the steepest point located approximately 300 feet east of Summit Point Way.

The posted speed limit is 25 MPH, which meets the *prima facie* speed limit and residential density criteria per the California Vehicle Code (CVC). The 85th percentile speed was observed to be 28.1 mph in the eastbound direction and 29.1 mph in the westbound direction. On an average, there were 25 vehicles in the eastbound direction and 50 vehicles in the westbound direction traveling at speeds higher than 35 mph.

- *Island Drive, between Coast Avenue and Crystal Cove Way:* This section is a two-lane residential street, approximately $\frac{1}{4}$ mile in length. There is an existing contiguous sidewalk along the western side of the roadway and a decomposed granite pathway on the eastern side. Typical street width on Island Drive measures 40 feet curb-to-curb. There are no existing bicycle facilities along Island Drive. There is an existing on-street parking along both sides of the roadway. The vertical grade ranges from 1 to 20 percent, with the steepest point located approximately 150 feet south of Crystal Cove Way.

The posted speed limit is 25 MPH, which meets the *prima facie* speed limit and residential density criteria per the California Vehicle Code (CVC). The 85th percentile speed was observed to be 37.0 mph in the northbound direction and 38.4 mph in the southbound direction. On an average, there were 329 vehicles in the northbound direction and 360 vehicles in the southbound direction traveling at speeds higher than 35 mph. All of the residents have their own off-street parking. Absence of on-street parking results in less friction and encourages speeding along this road.

- *White Sands Drive, between Emerald Sea Way and Sun Valley Road:* This roadway section is a two-lane residential street running north to south, approximately 0.65 miles in length. The street provides access to single family homes. Typical street width on White Sands Drive is 40 feet apart from the segment between San Marcos Boulevard and Emerald Sea Way, where it narrows from 55 feet at San Marcos Boulevard to 40 feet at Emerald Sea Way. There are two bulb outs with raised medians located at the southern terminus of the 6-foot raised median and

at the trail crossing north of Sea Island Place. The road profile grade or slope of White Sands Drive ranges from 8 to 11 percent.

The posted speed limit is 25 MPH, which meets the *prima facie* speed limit and residential density criteria per the California Vehicle Code (CVC). The 85th percentile speed was observed to be 34.6 mph in the northbound direction and 35.3 mph in the southbound direction. On an average, there were 339 vehicles in the northbound direction and 342 vehicles in the southbound direction traveling at speeds higher than 35 mph.

The City also investigated its records for speed surveys performed in the study area prior to the onset of the COVID-19 pandemic and does not have any speed surveys prior to the COVID-19 pandemic.

RECOMMENDATIONS:

Based on the findings of this study, no significant variations in speeds were observed between the data collected in 2021 and in 2022. Based on the data the study area would still be recommended for traffic calming countermeasures. Engineering staff recommends that the Traffic Commission implement the original staff recommendations indicated in the October 6, 2021 meeting and incorporate the additional recommendation from the February 6, 2022 analysis (items 6 & 7). Recommendations are summarized below:

1. Installation of edge line striping in the form of Class II Bicycle lands 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 intersections along the project study area to help motorists stay in lanes as they navigate through the community.
3. Installation of edge line striping to define parking lanes on White Sands Drive, Coast Avenue, and Island Drive in order to discourage speeding by narrowing the 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 25 MPH zone.
6. Install radar feedback signage and operate them at interim periods to improve their long-term effectiveness.

7. Continue to work with the Sheriff department to increase enforcement.
8. Recommend studying the effectiveness after one year of implementation and reporting the results.

The recommended order of implementation is: (1) Coast Avenue, (2) Island Drive, and (3) White Sands Drive.

Traffic Data/Roadway Information:

Speed Limit:

Prima Facie (25 MPH), posted.

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)

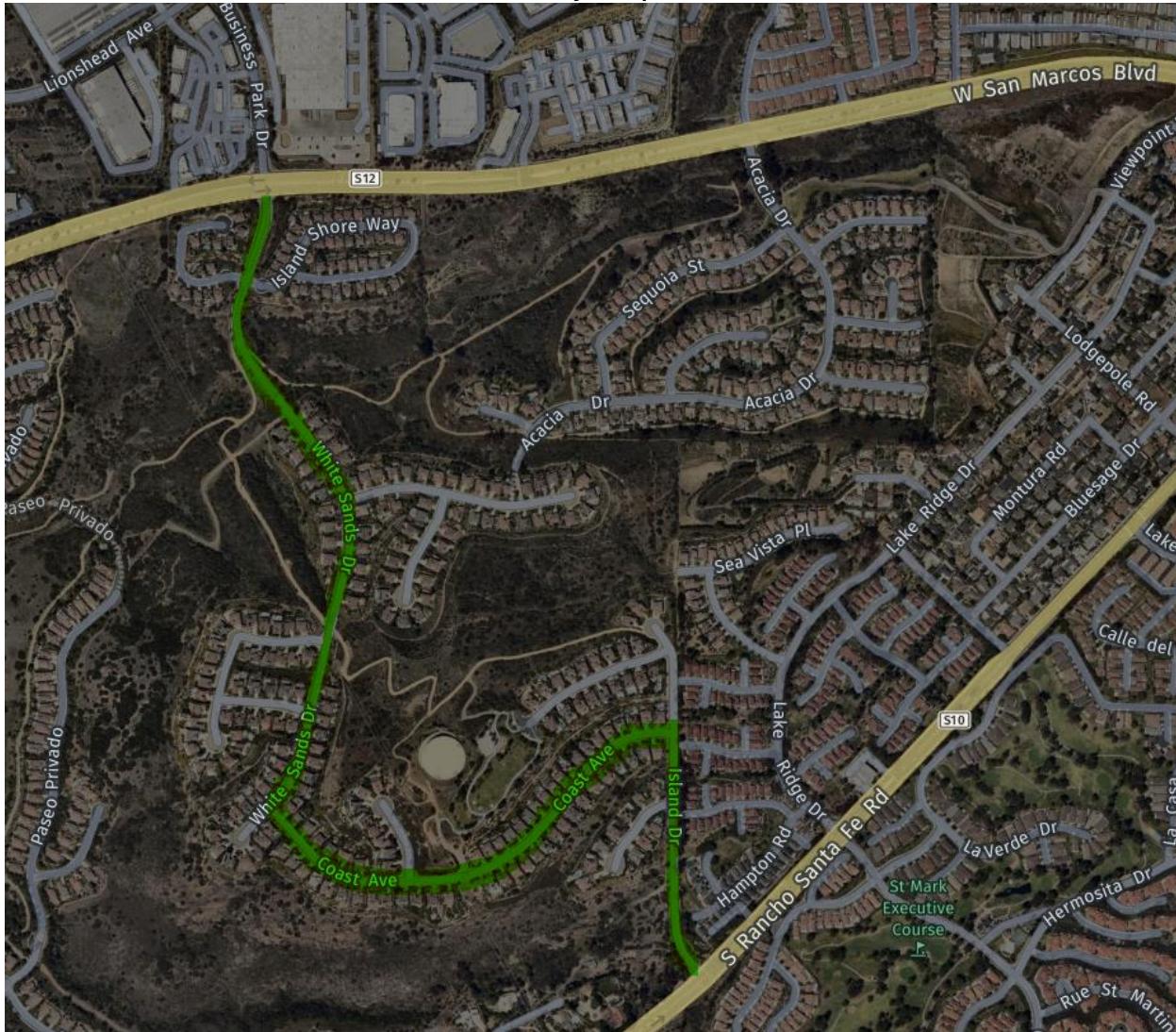
Attachment(s)

Vicinity Map

Proposed Traffic Signing and Striping Improvements Exhibit

Traffic Volume and Speed Data Sheet

Vicinity Map



Proposed Traffic Signing and Striping Improvements Exhibits

SAN MARCOS

DISCOVER LIFE'S POSSIBILITIES

City of San Marcos
1 Civic Center Drive
San Marcos, CA 92069



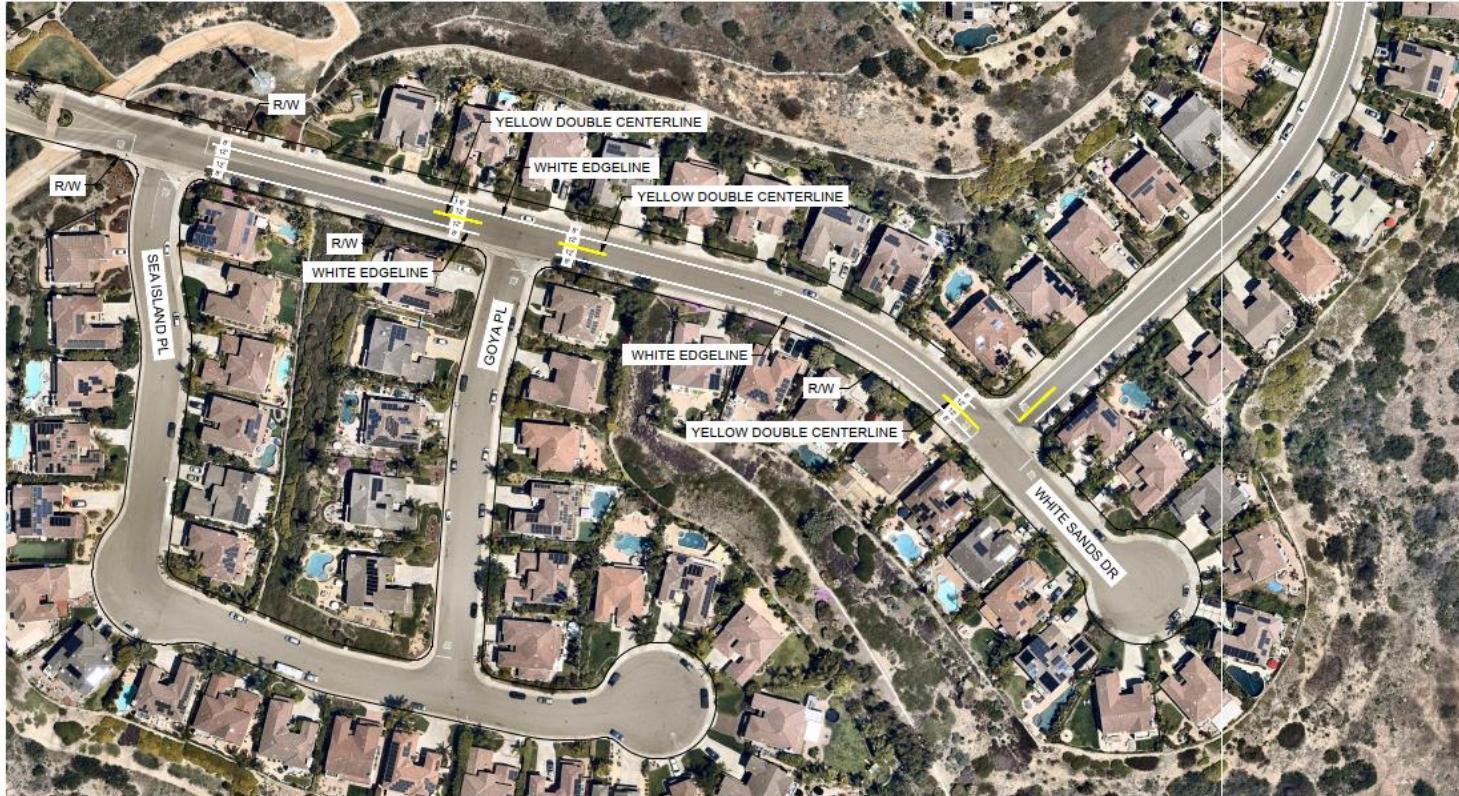
RANCHO DORADO TRAFFIC CALMING
WHITE SANDS DRIVE - TIER 1 - CLASS II BICYCLE LANE

7/8/2021
Sheet 1 of 6



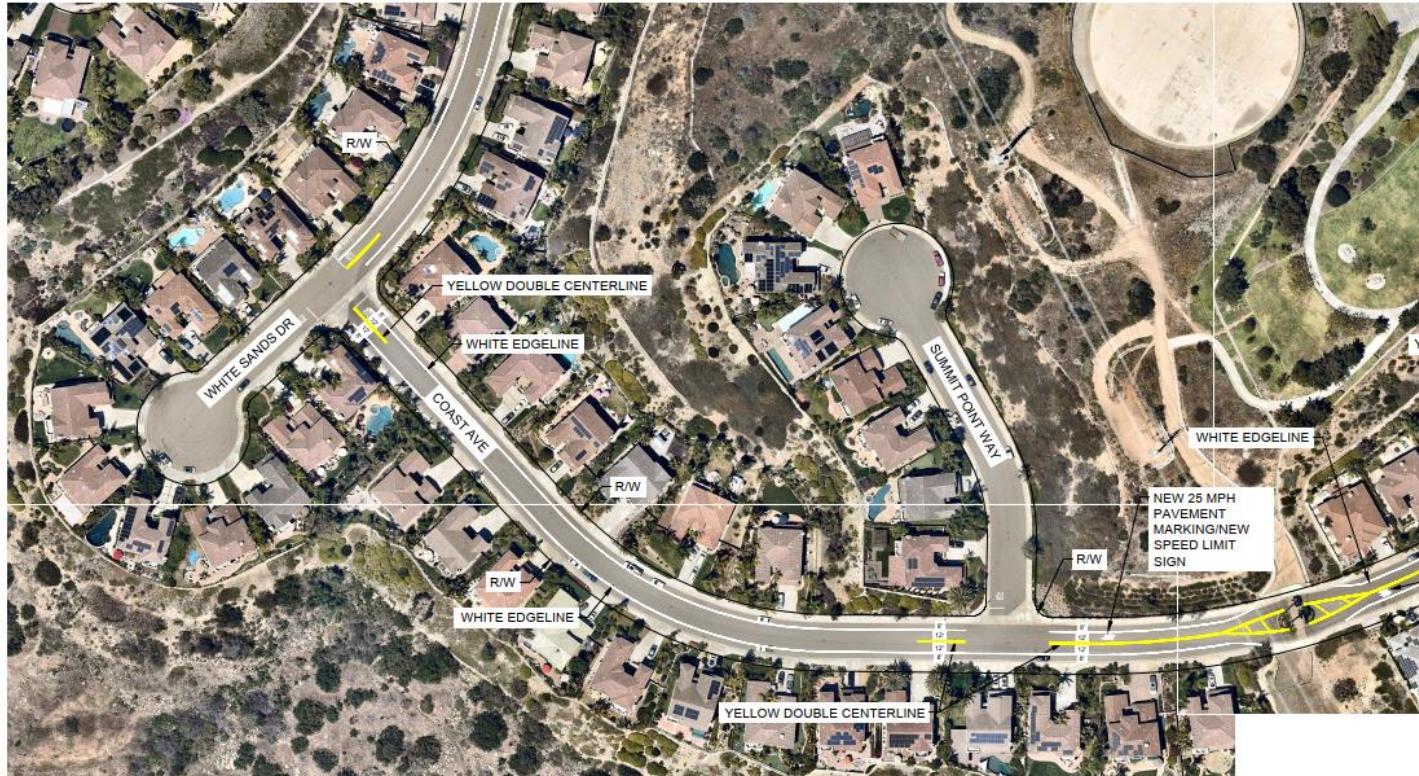
RANCHO DORADO TRAFFIC CALMING
WHITE SANDS DRIVE - TIER 1 - PARKING LANE WITH PARTIAL CENTERLINE

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Sheet 2 of 6



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

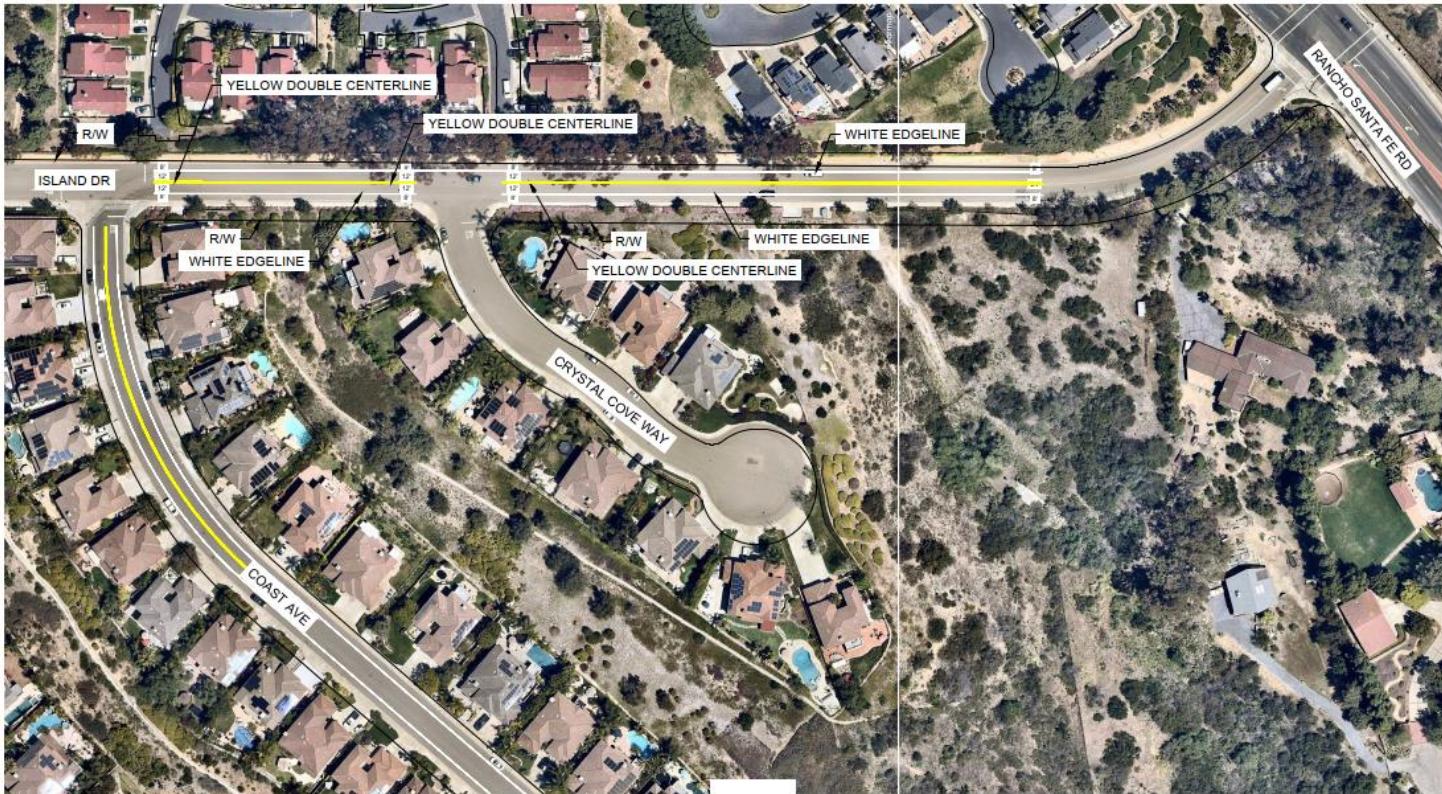
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RANCHO DORADO TRAFFIC CALMING
COAST AVENUE - TIER 1 - PARKING LANE WITH PARTIAL CENTERLINE

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

7/8/2021
Sheet 6 of 6

Traffic Volume and Speed Data Sheets



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CITIZEN REQUEST EVALUATION

Project Location and Context		
Project Location/Address	Coast Avenue, Island Drive, White Sands Drive	
Project Type	Traffic	
Study Location	Coast Avenue: White Sands Drive – Summit Point Way Island Drive: Coast Avenue – Crystal Cove Way White Sands Drive: Emerald Sea Way – Sun Valley Road	
Project Description		
Residents raised concerns regarding speeding along these residential streets.		
Analysis		
Speed surveys were conducted for the three roadway segments above. Summary of the results is provided below.		
<ul style="list-style-type: none">• <i>Coast Avenue</i>: The 85th percentile speed is 28.1 mph in the eastbound direction and 29.1 mph in the westbound direction. On average, there were 25 vehicles in the eastbound direction and 50 vehicles in the westbound direction traveling at speeds higher than 35 mph. Single family residential surrounds this roadway. All of the residents have their own off-street parking. Lack of on-street parking results in less friction and encourages speeding along this road.• <i>Island Drive</i>: The 85th percentile speed is 37.0 mph in the northbound direction and 38.4 mph in the southbound direction. On average, there were 329 vehicles in the northbound direction and 360 vehicles in the southbound direction traveling at speeds higher than 35 mph. Single-family residential surrounds this roadway. All of the residents have their own off-street parking. Lack of on-street parking results in less friction and encourages speeding along this road.• <i>White Sands Drive</i>: The 85th percentile speed is 34.6 mph in the northbound direction and 35.3 mph in the southbound direction. On an average, there were 339 vehicles in the northbound direction and 342 vehicles in the southbound direction traveling at speeds higher than 35 mph.		
Submittal		
Conclusion	<p>Short term: Consider mobile speed feedback sign and increase enforcement to reduce speeding along all of the roadways listed above.</p> <p>Near-term: Consider permanent speed feedback sign to reduce speeding along with an increase in enforcement.</p> <p>Long-term: Consider road diets and other traffic calming treatments such as speed humps, traffic circle, speed cushions.</p> <p>Implementation Order: Coast Avenue, Island Drive, White Sands Drive.</p>	 A circular official seal for a registered professional engineer. The text "REGISTERED PROFESSIONAL ENGINEER" is at the top, "PHUONG H. NGUYEN PE" is in the center, and "TR 260" is at the bottom. The date "03/31/2022" is also present. A handwritten signature of "Phuong H. Nguyen" is written over the seal.
Registered Traffic/Civil Engineer Name	Phuong Nguyen, PE	
Company	CR Associates	
Date	02/06/2022	



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CITIZEN REQUEST EVALUATION

Speed Survey Summary

Location

Coast Ave: White Sands Drive - Summit Point Way

Date (From - To)

1/10/2022 1/16/2022

Posted Speed Limit (mpg)

25.0

	Average Daily Traffic			Speed (mph)							
				Average		85th Percentile		95th Percentile		Veh @ 35+ mph	
	EB/NB	WB/SB	Total	EB/NB	WB/SB	EB/NB	WB/SB	EB/NB	WB/SB	EB/NB	WB/SB
Day 1	387	412	799	23	24	28	29	29	32	16	45
Day 2	424	416	840	24	26	29	30	32	33	40	68
Day 3	440	425	865	24	25	28	29	31	33	35	57
Day 4	434	390	824	24	25	28	29	32	33	34	55
Day 5	437	451	888	23	25	28	29	30	33	25	57
Day 6	318	318	636	23	24	28	29	29	32	13	25
Day 7	303	298	601	23	25	28	29	29	33	12	40
Average	392	387	779	23.4	24.9	28.1	29.1	30.3	32.7	25	50
Average without Outlier	376	374	750	23.2	24.6	28.0	29.0	29.8	32.6	20	44



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CITIZEN REQUEST EVALUATION

Speed Survey Summary

Location

Island Drive: Coast Avenue - Crystal Cove Way

Date (From - To)

1/10/2022 1/16/2022

Posted Speed Limit (mpg)

25.0

	Average Daily Traffic			Speed (mph)							
				Average		85th Percentile		95th Percentile		Veh @ 35+ mph	
	EB/NB	WB/SB	Total	EB/NB	WB/SB	EB/NB	WB/SB	EB/NB	WB/SB	EB/NB	WB/SB
Day 1	547	527	1,074	30	32	36	38	39	42	285	348
Day 2	561	561	1,122	32	33	37	39	39	43	357	416
Day 3	582	589	1,171	32	33	37	38	40	42	388	421
Day 4	546	586	1,132	32	33	37	38	41	42	346	388
Day 5	598	580	1,178	32	33	37	39	40	43	399	409
Day 6	403	390	793	32	33	37	39	40	43	254	253
Day 7	410	435	845	33	33	38	38	42	42	276	286
Average	521	524	1,045	31.9	32.9	37.0	38.4	40.1	42.4	329	360
Average without Outlier	501	504	1,005	31.8	32.8	37.0	38.4	40.4	42.4	312	337



CITY OF SAN MARCOS

CITIZEN REQUEST EVALUATION

Speed Survey Summary

Location

White Sands Drive: Emerald Sea Way - Sun Valley Road

Date (From - To)

1/10/2022 1/16/2022

Posted Speed Limit (mpg)

25.0

	Average Daily Traffic			Speed (mph)							
				Average		85th Percentile		95th Percentile		Veh @ 35+ mph	
	EB/NB	WB/SB	Total	EB/NB	WB/SB	EB/NB	WB/SB	EB/NB	WB/SB	EB/NB	WB/SB
Day 1	672	648	1,320	29	30	33	35	37	39	261	329
Day 2	739	750	1,489	29	30	33	35	37	39	292	386
Day 3	744	744	1,488	29	29	34	35	38	39	341	352
Day 4	746	784	1,530	30	30	36	34	39	38	418	379
Day 5	760	726	1,486	31	30	36	36	39	39	463	359
Day 6	571	562	1,133	31	31	35	36	39	39	321	322
Day 7	507	515	1,022	30	30	35	36	39	39	277	267
Average	677	676	1,353	29.9	30.0	34.6	35.3	38.3	38.9	339	342
Average without Outlier	651	647	1,298	30.2	30.2	35.0	35.4	38.6	38.8	348	331