

AGENDA

Meeting of the San Marcos Traffic Commission

Meeting Date: April 3, 2019 | **Meeting Time:** 6:00 PM

Location: City Council Chambers, 1 Civic Center Drive, San Marcos CA 92069

Americans with Disabilities Act: If you need special assistance to participate in this meeting, please contact the City Clerk Department at (760) 744-1050, ext. 3105. Notification 48 hours in advance will enable the City to make reasonable arrangements to ensure accessibility to this meeting. Assisted listening devices are available for the hearing impaired. Please see the City Clerk if you wish to use this device.

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Agenda-related writings or documents provided to a majority of the Commission after distribution of the agenda packet will be available for public inspection at the time of distribution at the Information Desk counter located on the first floor of City Hall, 1 Civic Center Drive, San Marcos, CA, during normal business hours.

1. CALL TO ORDER - 6:00 P.M.

2. PLEDGE OF ALLEGIANCE

3. ROLL CALL

Anyone wishing to speak to the Commission on any item must first complete a Request to Speak form and turn it in to the secretary

4. ORAL COMMUNICATIONS

Persons wishing to speak on a matter not on the agenda may be heard at this time; however, no action will be taken until placed on a future agenda.

5. APPROVAL OF MINUTES

February 6, 2019

6. OLD BUSINESS

- a. None

7. NEW BUSINESS

- a. Wild Canyon Drive – Speeding Concerns and Pedestrian Safety

- b. Camino Magnifico – Speeding Concerns

8. REPORTS AND INFORMATION ITEMS

- a. Engineering Staff Updates
- b. San Diego County Sheriff's Department Traffic Collision Summary And Accident Investigation Log
- c. Traffic Commission Commentary
- d. Staff Commentary

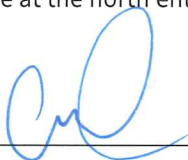
ADJOURNMENT

AFFIDAVIT OF POSTING

STATE OF CALIFORNIA)
COUNTY OF SAN DIEGO) ss.
CITY OF SAN MARCOS)

I, Aurelia Cabrera, Secretary, San Marcos Traffic Commission, hereby certify that I caused the posting on March 27, 2019 of this agenda in the glass display case at the north entrance of City Hall.

DATED: March 27, 2019



Aurelia Cabrera
Traffic Commission Secretary

MINUTES

Meeting of the San Marcos Traffic Commission

WEDNESDAY, FEBRUARY 6, 2019 | 6:00 PM

City Council Chambers, 1 Civic Center Drive, San Marcos, CA 92069

1. **CALL TO ORDER:** Chairman Hansen called the Traffic Commission Meeting to order at 6:02 p.m.

2. **SELECTION OF NEW CHAIRMAN AND VICE CHAIRMAN:**

CHAIRMAN ELECTION:

- Commissioner Collins makes a motion to elect Commissioner Arturo Rico as Chairman. No other nominations were made, carried by a 6-1 vote. Commissioner Christian abstained. New 2019 Chairman: Arturo Rico

VICE CHAIRMAN ELECTION:

- Commissioner Christian makes a motion to elect Commissioner Ed Collins as Vice Chairman. Commissioner Hansen seconds the motion. No other nominations were made, carried by a unanimous 7-0 vote. New 2019 Vice Chairman: Ed Collins

3. **PLEDGE OF ALLEGIANCE:** Led by Commissioner Hansen

4. **ROLL CALL**

PRESENT: MASTERSON, BRIDGE, MAKROGIANNIS, RICO, HANSEN, COLLINS, CHRISTIAN

ABSENT: BUCKLEY

ALSO PRESENT: Alternate Commissioner, Gregory Hoaglin; Senior Traffic Engineer, Mike Rafael; Principal Traffic Engineer, Nicholas Abboud; Sheriff Deputy, Nicholas Maryn; and Traffic Commission Secretary, Denise Avila and Aurelia Cabrera

5. **INTRODUCTION OF NEW COMMISSIONERS:** Charles Buckley (Re-appointed), Deborah Bridge (New regular member), Morgan Christian and Gregory Hoaglin (New Alternates)

6. **ORAL COMMUNICATIONS**

- a. None

7. APPROVAL OF MINUTES – December 5, 2018

Commissioner Bridge makes a motion to accept the minutes as recorded. Commissioner Masterson seconds the motion. Motion carries.

AYES: COMMISSIONERS: BRIDGE, MASTERSON

NOES: COMMISSIONERS:

ABSTAINS: COMMISSIONERS:

8. OLD BUSINESS

- a. None

9. NEW BUSINESS

- a. None

10. REPORTS AND INFORMATION ITEMS

- a. Engineering Staff Updates
- b. San Diego County Sheriff's Department Traffic Collision Summary And Accident Investigation Log
- c. Traffic Commission Commentary
- d. Staff Commentary

11. ADJOURNMENT: New Chairman Rico adjourned the meeting at 7:00 p.m.



Arturo Rico, Chairman
Traffic Commission

ATTEST:

Aurelia Cabrera, Secretary
Traffic Commission

AGENDA REPORT

Meeting of the San Marcos Traffic Commission

MEETING DATE: April 3, 2019
AGENDA ITEM NO: 7A
SUBMITTED BY: Michael Rafael, P.E. – Senior Civil Engineer 
APPROVED BY: Nic Abboud, P.E. – Principal Civil Engineer 
SUBJECT: Wild Canyon Drive – Speeding and Pedestrian Safety Concerns

BACKGROUND:

Engineering staff received traffic safety concerns from San Elijo Hill residents living adjacent to Wild Canyon Drive. Residents reported excessive speeds along Wild Canyon Drive between Idyllwild and Tucana Drive. Residents are concerned about the lack of pedestrian access to the existing neighborhood sitting area on the west side of Wild Canyon Drive. They are also concerned about the safety of pedestrians crossing to the sitting area due to the speed of vehicles, blind roadway curves, and existing trees obstructing the roadway. Residents are suggesting a 3-way stop at the intersection of Idyllwild and Wild Canyon to provide traffic calming in the neighborhood.

DISCUSSION:

The study area is located on Wild Canyon Drive between Tucana Drive and Rock court in the San Elijo Hills community (see attached Vicinity Map). This roadway section is classified as a two-lane, undivided collector street based on the City's Urban Street Design criteria. The street provides access to single family homes in the San Elijo Hills community north of San Elijo Road. The street varies in width from 34 to 40 feet with sidewalks on both sides. There are no restrictions for on-street parking. There are no striped bike lanes. The slope of the street varies from 3 to 10 percent and has a curvilinear alignment (3 existing short horizontal curves). The street speed limit is posted at 30 MPH, supported by a valid Engineering and Traffic Survey (attached). There is an existing neighborhood sitting area that is situated on the westside of Wild Canyon Drive between Festival Road and Idyllwild Way.

Engineering staff conducted an engineering study to determine if traffic calming measures may be warranted on Wild Canyon Drive. Engineering staff collected both traffic speed and volume data on a typical weekday along (3) locations on Wild Canyon Drive. Based on the data collected, the highest traffic volumes along the roadway segment occurred during the morning peak (7-8am) and afternoon peak (3-4pm) which is consistent with residential traffic patterns (see attached tables). The 85th percentile speeds and ADTs (average daily traffic) were collected on Wild Canyon Drive and are summarized below:

- Location 1, 400 feet north of Festival Road: 85th percentile speed - 31 MPH, ADT - 1758 vehicles per day (VPD) (2/27/19)

- Location 2, 160 feet north of Idyllwild Way: 85th percentile speed - 34 MPH, ADT - 1958 VPD (2/27/19)
- Location 3, 175 feet east of Idyllwild Way; 85 percentile speed - 35 MPH, ADT - 2383 VPD (03/14/19)

The 85th percentiles speeds did not exceed more than 7 MPH over the posted speed limit of 30 MPH which would generally indicates the need for some type of traffic calming on a City street. Traffic volumes are consistent with the collector roadway classification of approximately 2400 vehicles per day. Cut-through traffic is non-existent. There were no collisions reported in the last 5 years along this roadway segment. Motorists were observed driving in the middle of the street.

Engineering staff also conducted a ball bank analysis per the CAMUTCD guidelines to determine if speed advisory limits along Wild Canyon Drive were needed due to "driver discomfort" caused by the existing roadway curvature at the posted speed. Based on the ball bank measurements, a 25 MPH speed advisory should be posted with a curve warning sign to advise drivers of the recommended speed for the roadway curves.

Engineering staff reviewed the community's request for an ALL-WAY STOP control at the intersection of Idyllwild Drive and Wild Canyon Drive to improve pedestrian safety and reduce vehicle speeds. The intersection is located on Wild Canyon Drive in the middle of the curved roadway between Festival Road and Luminara Way. Currently, the intersection is STOP-controlled on Idyllwild Way but not on Wild Canyon Drive. Per the CAMUTCD, ALL-WAY STOP-controls at intersections are intended to assign right-of-way at locations where traffic volumes are approximately equal from all approaches and not used for speed control. Other criteria used for warranting an all-way stop control include the following: (5) five or more reported crashes in a year, high pedestrian volumes, and existing line of sight restrictions at the intersection. Installation of unwarranted stop signs is discouraged for it has been shown to result in higher speeds between controlled intersections, rolling stops through intersections, and increased noise pollution. Based on staff's evaluation of the intersection, an ALL-WAY STOP control is currently not warranted based on the CAMUTCD criteria. Traffic volumes are not equal from all approaches. Intersection stopping sight distance was measured to approximately 350 feet to the west and 330 to the east, which is adequate for the posted speed limit of 30 MPH. There were no collisions reported at the intersection for the last 5 years. Low pedestrian volume was observed crossing at the intersection during peak hours.

Engineering staff reviewed the community's request for a new pedestrian ramp serving the neighborhood sitting area. After reviewing the existing access points to the site, a new curb ramp should be installed on the northwest side of the intersection of Festival Road and Wild Canyon Drive. The proposed curb ramp should be installed on the northwest side of the T-intersection adjacent to the existing street light where visibility and line of sight are not impacted. Pedestrian warning signs should also be installed to inform motorists of the possibility of pedestrian crossing at this uncontrolled location. Currently, the only ADA (American Disabilities Act) access to the sitting area for residents east of Wild Canyon Drive is at the intersection of Luminara Way and Wild Canyon Drive which is approximately 550 feet south of the sitting area. The proposed curb ramp provides ADA access on the northern end of the sitting area.

Based on the findings of this study, Engineering staff proposes the use of centerline striping and curve warning and speed advisory signs to improve traffic safety on Wild Canyon Drive. Centerline striping helps delineate the travel lane for the driver, restricts passing of other vehicles, improves line of sight around a roadway curve, and provides a preview of changing roadway alignment. The CAMUTCD guidelines allow the use of centerline striping to improve delineation on horizontal curves. Based on the traffic data collected, traffic calming devices are not warranted at this time. Staff also proposes installation of a new pedestrian curb ramp and pedestrian warning signs to announce the presence of the new pedestrian curb ramp and the potential for pedestrians in the vicinity of the neighborhood's sitting area on the west side of Wild Canyon Drive.

In the course of the field investigations, the intersection of Festival Road and Wild Canyon Drive was found to have no intersection control. Engineering staff recommends that one-way STOP sign, limit line, and "STOP" pavement legend should be installed to enhance the right-of-way operations and sight distance on Festival Road at Wild Canyon Drive. In addition, 50-feet of solid double-yellow lines are recommended at the intersection of Idyllwild Way and Wild Canyon Drive, and Luminara Way and Wild Canyon Drive to improve channelization of vehicles turning into the intersection.

CONCLUSION AND RECOMMENDATIONS:

Engineering staff recommends the following improvements (see attached exhibits):

- 1) Installation of centerline striping, curve warning and 25 MPH speed advisory signs on Wild Canyon Drive between Tucana Drive and Luminara Way to improve traffic safety.
- 2) Installation of a new pedestrian curb ramp at the northwest side of the intersection of Wild Canyon Drive and Festival Road to provide ADA access to the existing neighborhood sitting area. Installation of new pedestrian warning signs to inform motorists of uncontrolled mid-block crossing.
- 3) Installation of a new one-way STOP sign, limit line, pavement legend, and 50-feet of solid double yellow lines at the intersection of Festival Road and Wild Canyon Drive. Installation of 50-feet of solid double yellow lines on Idyllwild Way at Wild Canyon Drive, and Luminara Way and Wild Canyon Drive to improve channelization of vehicles turning into the intersection.
- 4) Trim existing trees adjacent to intersections where line of sight may be impacted.
- 5) Deployment of the City's speed radar trailers to help build and reinforce speed compliance on Wild Canyon Drive.

Traffic Data/Roadway Information:

Traffic Volumes:

Wild Canyon Drive, Tucana Drive and Luminara Way - 2383 VPD (vehicles per day, March 2019).

Speed Limit:

Wild Canyon Drive, Tucana Drive and San Elijo Road, 30 MPH posted (2014).

Accident History (last 5 years):

None reported.

Unusual Conditions: None.

Attachment(s)

Vicinity Map

Proposed Traffic Signing and Striping Improvements Exhibits

Sight Distance Exhibits

Ball Bank Data Exhibits

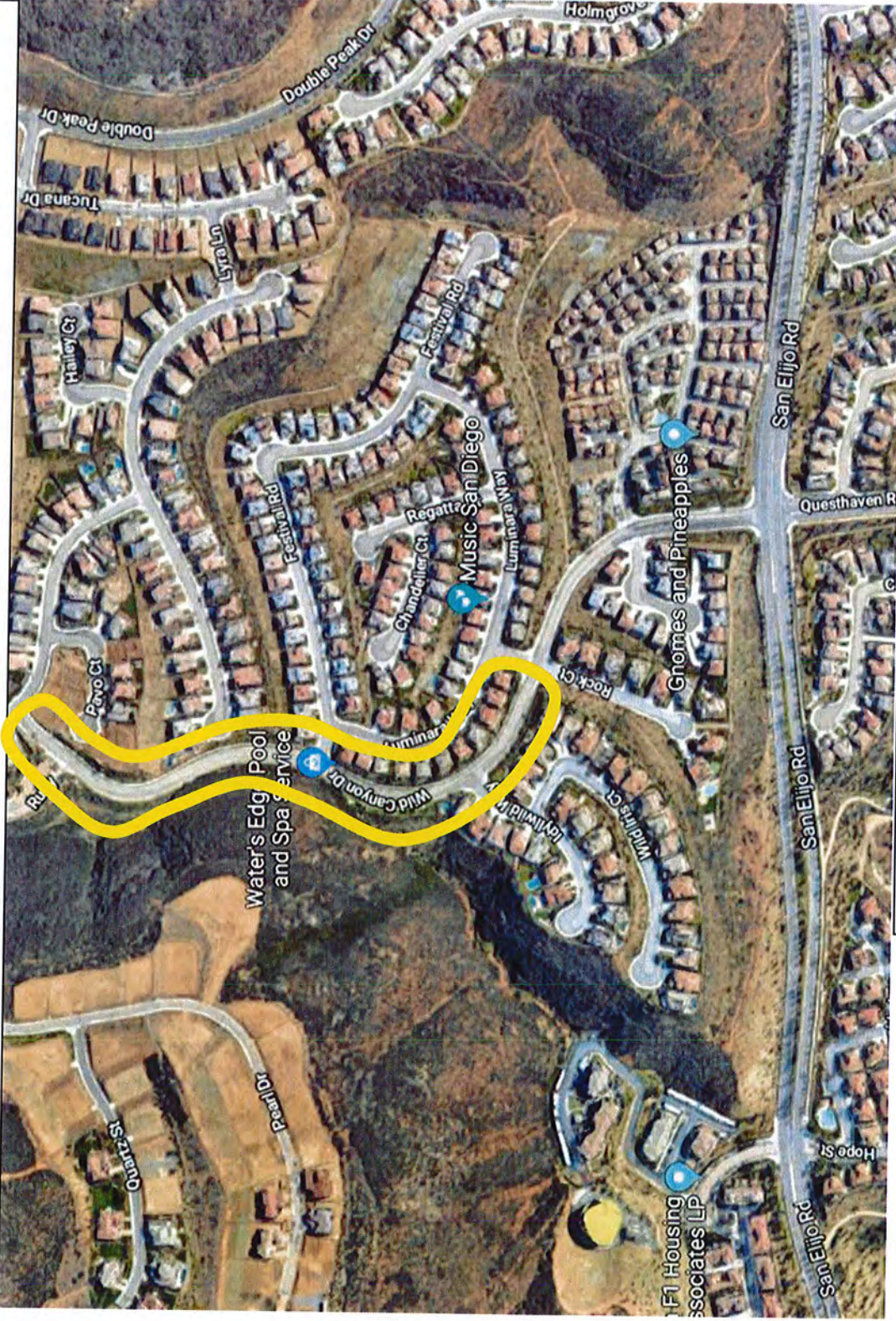
Traffic Volume and Speed Data Sheets

Engineering and Traffic Survey

Photos

VICINITY MAP

WILD CANYON DR BETWEEN TUCANA DRIVE AND ROCK COURT



TC AGENDA #7A

APRIL 3, 2019

*NOT TO SCALE

MATCH LINE - SEE PAGE 1

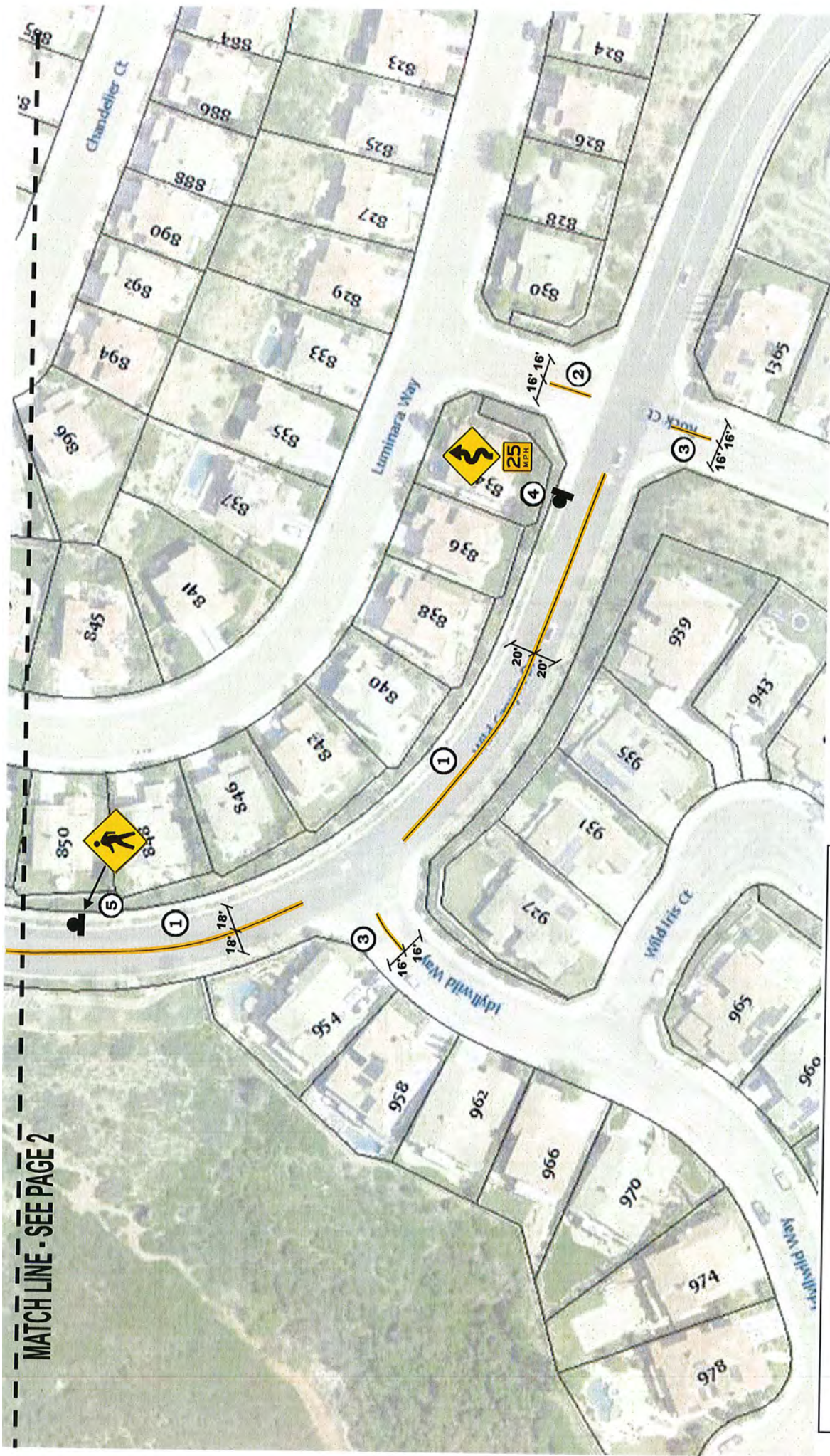


PROPOSED TRAFFIC STRIPING IMPROVEMENTS
WILD CANYON DR
TC AGENDA #7A
APRIL 3, 2019

MATCH LINE - SEE PAGE 3

CONSTRUCTION NOTES:

- ① INSTALL DOUBLE YELLOW CENTER LINE (DETAIL 22).
- ② INSTALL STOP BAR, STOP LEGEND AND 50 FT OF DOUBLE YELLOW CENTER LINE (DETAIL 21).
- ③ INSTALL TYPE "C" CURB RAMP PER SDRSD G-29.
- ④ INSTALL NEW W11-2 (PEDESTRIAN WALKING) SIGNS ON NEW BREAKAWAY POST.



*NOT TO SCALE

PROPOSED TRAFFIC STRIPING IMPROVEMENTS

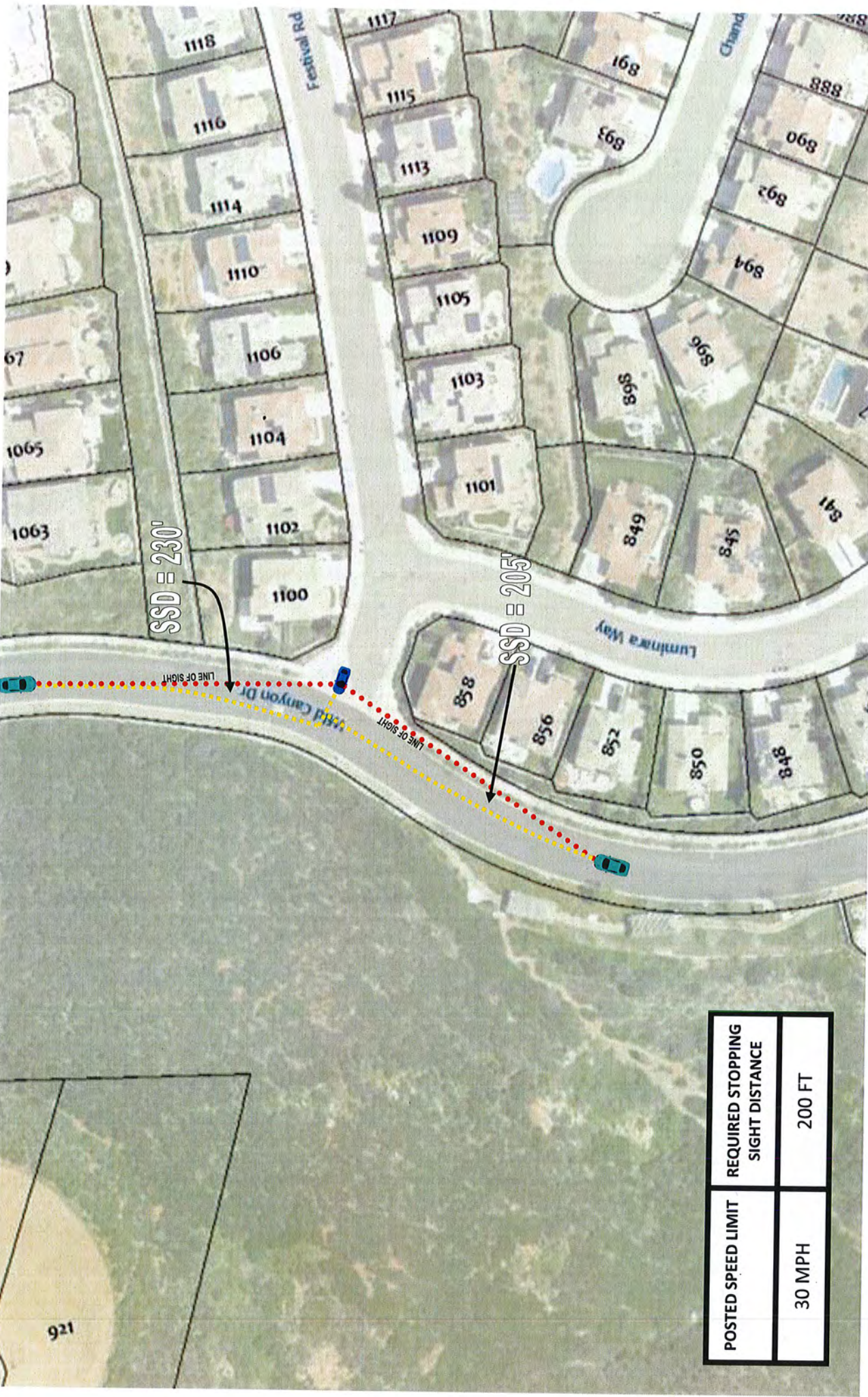
WILD CANYON DR

TC AGENDA #7A

APRIL 3, 2019

CONSTRUCTION NOTES:

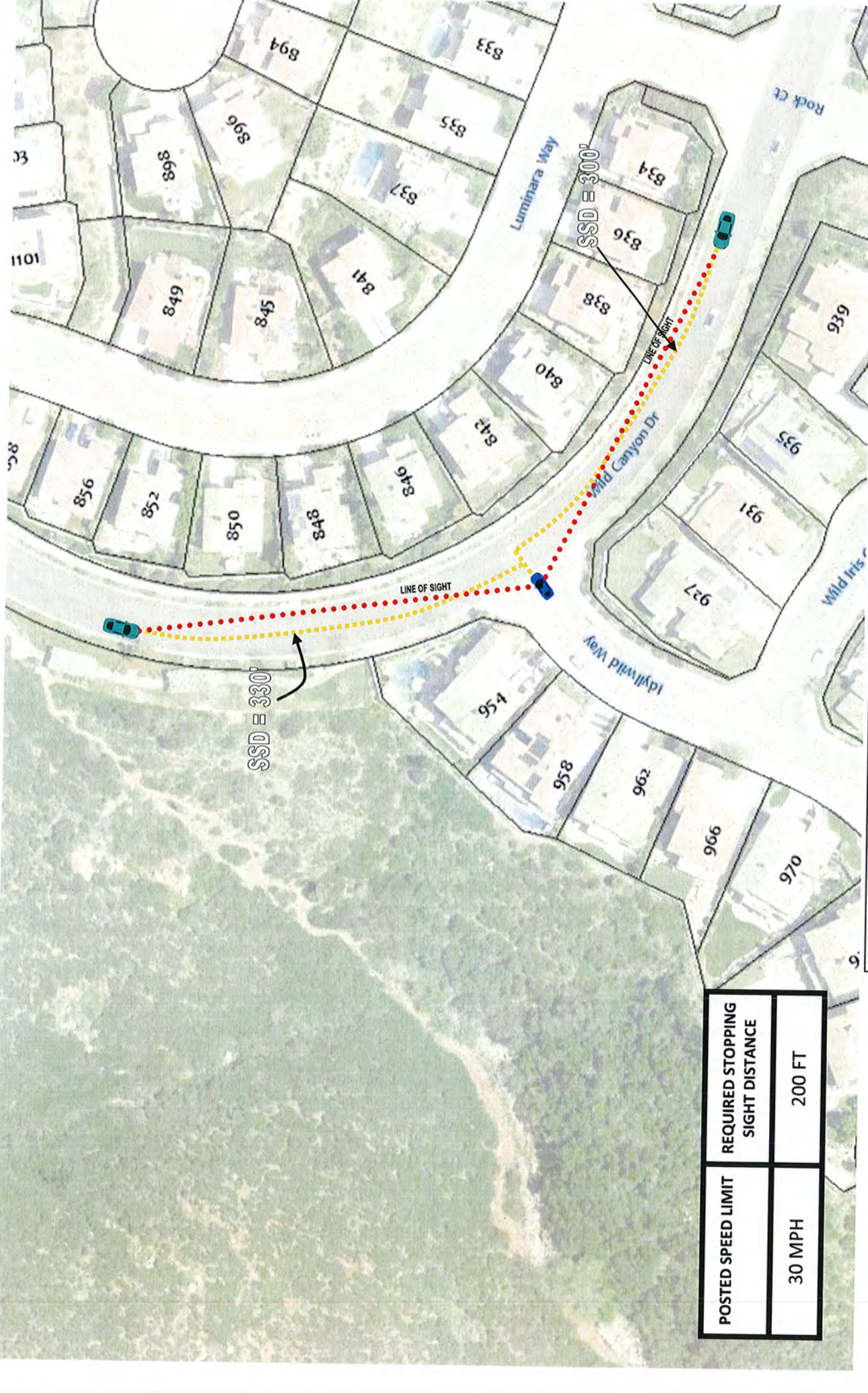
- ① INSTALL DOUBLE YELLOW CENTER LINE (DETAIL 22)
- ② INSTALL STOP LEGEND AND 50 FT OF DOUBLE YELLOW CENTER LINE (DETAIL 21)
- ③ INSTALL 50 FT OF DOUBLE YELLOW CENTER LINE (DETAIL 21)
- ④ INSTALL NEW CURVE WARNING SIGN (W1-5) (LEFT) AND 25 MPH SPEED ADVISORY SIGN (W13-1P) ON NEW BREAKAWAY POST.
- ⑤ INSTALL NEW W11-2 (PEDESTRIAN WALKING) SIGN ON EXISTING STREET LIGHT.



*NOT TO SCALE

SIGHT DISTANCE EXHIBIT
FESTIVAL RD @ WILD CANYON DR
TC AGENDA #7A, APRIL 3, 2019

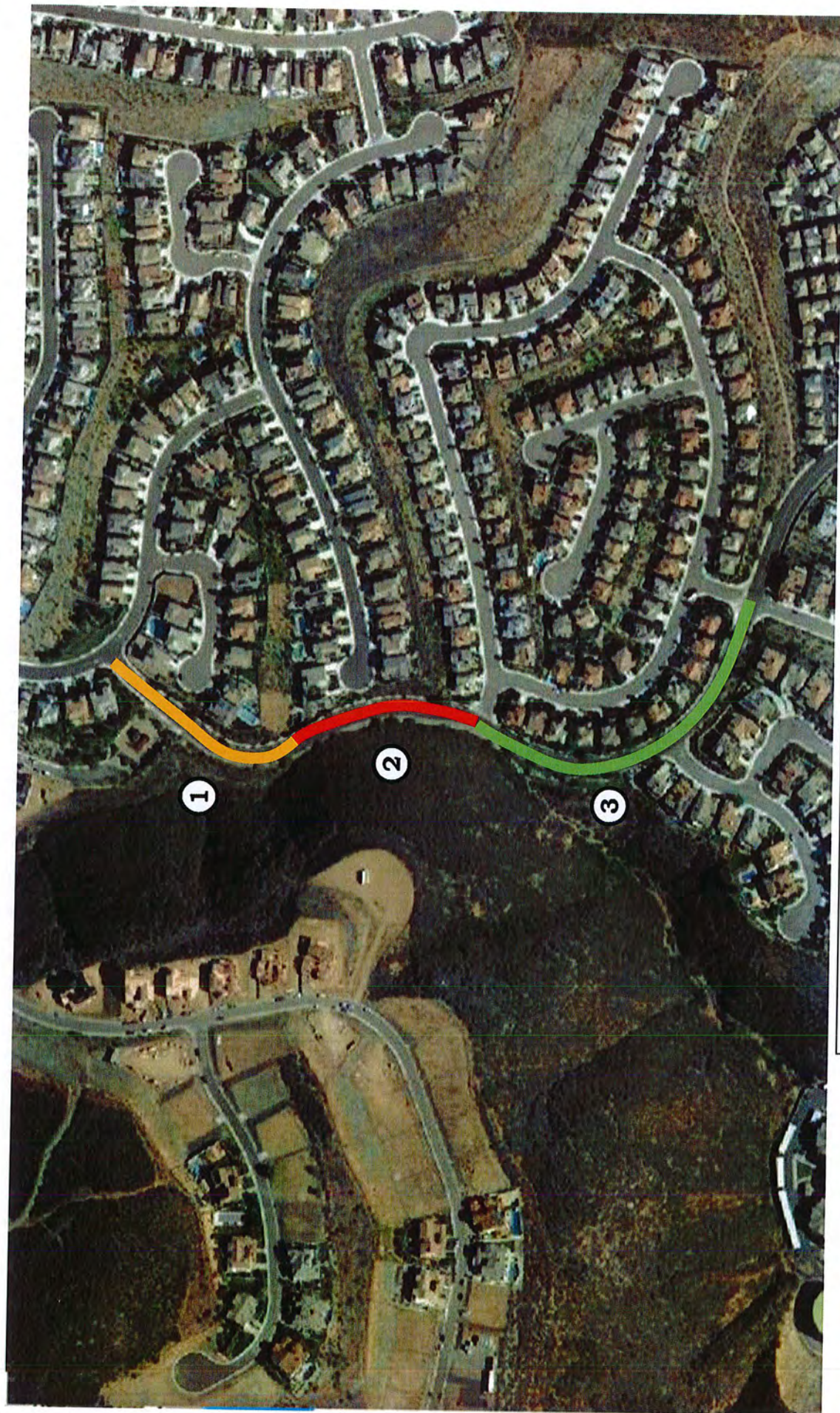
POSTED SPEED LIMIT	REQUIRED STOPPING SIGHT DISTANCE
30 MPH	200 FT



*NOT TO SCALE

SIGHT DISTANCE EXHIBIT
IDYLLWILD WAY @ WILD CANYON DR
TC AGENDA #7A, APRIL 3, 2019

POSTED SPEED LIMIT	REQUIRED STOPPING SIGHT DISTANCE
30 MPH	200 FT



BALL BANK ANALYSIS EXHIBIT - CURVE LOCATIONS

TC AGENDA #7A







APRIL 3, 2019



*NOT TO SCALE

BALL BANK WORKSHEET

Road Name: Wild Canyon Drive
Municipality: City of San Marcos
Date/Time: 02/19: 10:00 am
Driver: MR
Observer: MR
Vehicle: Ford Fusion
Weather: Clear
Surface condition: Dry
Speed Limit: 30 MPH

# of Curves	Advisory Speed (mph)		
	Less than or equal 20 mph	25 or 30 mph	Greater than or equal 35 mph
1	W1-1  L	Turn or Curve signs may be used.*	W1-2  R
2	W1-3  L		W1-4  R
3 or more	W1-5  L		 R



* The decision should be based on the geometry and general appearance of the particular curve(s)

Speed Range	Maximum Ball Bank Reading
≤ 24 mph	16 degrees
25-34 mph	14 degrees
35-49 mph	12 degrees
≥ 50 mph	10 degrees

Curve No.	Existing Advisory Speed (mph)	Driving Direction	Recorded Ball Bank Reading (Degrees)											New Advisory Speed (mph)
			Speed, (mph)											
			15	20	25	30	35	40	45	50	55	60		
1	N/A	NB			6	10							25	
		SB			8	12							↓ 25	
1	N/A	NB			5	9								
		SB			8	13								
1	N/A	NB			6	10								
		SB			7	12								
2	N/A	NB			7	13								
		SB			9	14								
2	N/A	NB			8	13								
		SB			10	15								
2	N/A	NB			8	12								
		SB			11	15								
3	N/A	NB			6	8								
		SB			7	12						25		
3	N/A	NB			5	7								
		SB			7	11								
3	N/A	NB			5	8								
		SB			6	10								

SPEED

Wild Canyon Dr 400' N/O Festival Rd
Location #1

Day: Wednesday
Date: 2/27/2019

City: San Marcos
Project #: CA19_4095_002

Summary

Time	<15	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70+	Total
00:00 AM	0	0	0	1	3	0	0	0	0	0	0	0	0	4
01:00	0	0	0	0	2	0	0	0	0	0	0	0	0	2
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	1	0	0	0	0	0	0	0	0	0	1
04:00	0	0	3	2	1	0	0	0	0	0	0	0	0	6
05:00	0	0	3	4	2	0	0	0	0	0	0	0	0	9
06:00	0	5	37	45	12	2	0	0	0	0	0	0	0	101
07:00	2	10	36	85	17	0	0	0	0	0	0	0	0	150
08:00	1	11	33	62	26	0	0	0	0	0	0	0	0	133
09:00	0	0	34	59	15	1	0	0	0	0	0	0	0	109
10:00	1	2	29	56	20	3	0	0	0	0	0	0	0	111
11:00	0	9	18	50	28	1	0	0	0	0	0	0	0	106
12:00 PM	1	3	32	58	22	2	0	0	0	0	0	0	0	118
13:00	0	2	30	55	20	0	0	0	0	0	0	0	0	107
14:00	0	3	41	85	20	1	0	0	0	0	0	0	0	150
15:00	0	11	32	79	27	1	0	0	0	0	0	0	0	150
16:00	0	10	42	66	20	0	0	0	0	0	0	0	0	138
17:00	1	5	25	66	21	0	0	0	0	0	0	0	0	118
18:00	1	5	28	56	19	1	0	0	0	0	0	0	0	110
19:00	0	1	12	37	13	0	0	0	0	0	0	0	0	63
20:00	0	1	12	23	9	1	0	0	0	0	0	0	0	46
21:00	0	1	2	7	5	0	0	0	0	0	0	0	0	15
22:00	0	0	2	5	1	0	0	0	0	0	0	0	0	8
23:00	0	1	0	0	1	1	0	0	0	0	0	0	0	3
Totals	7	80	451	902	304	14	1%							1758
% of Totals	0%	5%	26%	51%	17%	1%								100%

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
	Volume	%		Volume	%		Volume	%		Volume	%	
AM Volumes	4	37	193	7	0	0	0	0	0	0	0	0
% AM	0%	2%	11%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Peak Hour	07:00	08:00	06:00	11:00	10:00							
Volume	2	11	37	85	28							
PM Volumes	3	43	258	7	178	7	0	0	0	0	0	0
% PM	0%	2%	15%	0%	10%	0%	0%	0%	0%	0%	0%	0%
PM Peak Hour	12:00	15:00	16:00	14:00	15:00	12:00						
Volume	1	11	42	85	27	2						
Totals	7	80	451	902	304	14	1%					
% of Totals	0%	5%	26%	51%	17%	1%						

Street Name	Direction	Percentiles		
		15th	50th	85th
Wild Canyon Dr	Summary	22	27	31
			Average	85th
			27	31
				95th
				34
				ADT
				1758

SPEED

Wild Canyon Dr 160' N/O Idyllwild Way
Location #2

City: San Marcos
Project #: CA19_4095_001

Day: Wednesday
Date: 2/27/2019

Summary

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
00:00 AM	0	0	0	0	2	2	0	0	0	0	0	0	0	4
01:00	0	0	0	0	1	1	0	0	0	0	0	0	0	2
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	2	2	0	0	0	0	0	0	0	2
04:00	0	0	3	0	2	2	0	0	0	0	0	0	0	7
05:00	0	0	0	7	7	7	0	0	0	0	0	0	0	15
06:00	1	3	20	48	33	33	7	0	0	0	0	0	0	112
07:00	1	4	27	94	40	40	6	0	0	0	0	0	0	172
08:00	0	1	25	63	48	48	13	1	0	0	0	0	0	151
09:00	0	2	20	57	34	34	8	0	0	0	0	0	0	121
10:00	0	6	25	46	40	40	10	2	0	0	0	0	0	129
11:00	0	3	14	35	42	42	9	1	0	0	0	0	0	104
12:00 PM	2	5	37	52	33	33	6	1	0	0	0	0	0	136
13:00	0	0	22	53	38	38	4	0	0	0	0	0	0	117
14:00	1	3	21	67	57	57	6	0	0	0	0	0	0	155
15:00	2	7	35	79	34	34	4	0	0	0	0	0	0	161
16:00	1	0	20	65	55	55	6	0	0	0	0	0	0	147
17:00	4	2	13	68	46	46	6	0	0	0	0	0	0	139
18:00	0	5	14	54	42	42	8	0	0	0	0	0	0	123
19:00	0	0	4	36	22	22	4	3	0	0	0	0	0	69
20:00	0	1	4	28	19	19	4	1	0	0	0	0	0	57
21:00	0	0	1	9	7	7	0	0	0	0	0	0	0	17
22:00	0	0	1	2	5	5	1	0	0	0	0	0	0	9
23:00	0	0	2	4	2	2	1	0	0	0	0	0	0	9
Totals	12	42	308	867	611	109	9	0%						1958
% of Totals	1%	2%	16%	44%	31%	6%	0%							100%

Directional Peak Periods	All Speeds		AM 7-9		NOON 12-2		PM 4-6		Off Peak Volumes	
	Volume	%	Volume	%	Volume	%	Volume	%	Volume	%
AM Volumes	19	1%	350	18%	251	13%	59	3%	0	0%
% AM	0%	10:00	07:00	08:00	08:00	10:00	08:00	10:00	0	0%
AM Peak Hour	06:00	10:00	07:00	08:00	08:00	10:00	08:00	10:00	0	0%
Volume	1	6	27	94	48	13	2	5	0	0%
PM Volumes	10	23	174	517	360	50	13	5	0	0%
% PM	1%	15:00	12:00	15:00	14:00	18:00	19:00	19:00	0	0%
PM Peak Hour	17:00	15:00	12:00	15:00	14:00	18:00	19:00	19:00	0	0%
Volume	4	7	37	79	57	8	3	3	0	0%
Totals	161		323		253		286		1096	
%	56%		16%		13%		15%		56%	

Street Name	Direction		Percentiles			
	Summary	Direction	15th	50th	Average	95th
Wild Canyon Dr	Summary		24	29	29	36
						ADT
						1958

SPEED

Wild Canyon Dr 175' E/O Idyllwild Way
Location #3

City: San Marcos
Project #: CA19_4110_001

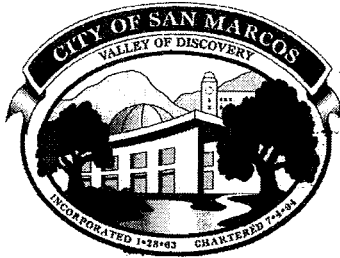
Day: Thursday
Date: 3/14/2019

Summary

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
00:00 AM	0	0	0	1	3	0	0	0	0	0	0	0	0	4
01:00	0	0	0	0	4	0	0	0	0	0	0	0	0	6
02:00	0	0	0	0	1	0	0	0	0	0	0	0	0	1
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	4	3	1	0	0	0	0	0	0	0	9
05:00	0	0	0	2	4	6	0	0	0	0	0	0	0	17
06:00	1	2	8	52	70	15	4	0	0	0	0	0	0	152
07:00	2	12	37	68	86	19	1	0	0	0	0	0	0	225
08:00	0	0	0	22	46	20	2	0	0	0	0	0	0	174
09:00	6	6	18	44	52	10	1	0	0	0	0	0	0	137
10:00	4	2	20	34	40	13	1	0	0	0	0	0	0	114
11:00	1	6	17	50	55	11	0	0	0	0	0	0	0	140
12:00 PM	0	4	18	57	47	5	2	0	0	0	0	0	0	133
13:00	0	2	9	47	59	13	2	0	0	0	0	0	0	132
14:00	1	3	14	48	82	23	4	0	0	0	0	0	0	175
15:00	1	3	20	82	79	25	3	0	0	0	0	0	0	213
16:00	0	2	13	57	83	23	4	0	0	0	0	0	0	182
17:00	1	0	10	39	94	28	4	0	0	0	0	0	0	176
18:00	0	4	11	43	72	14	3	0	0	0	0	0	0	147
19:00	0	1	11	42	32	10	2	0	0	0	0	0	0	98
20:00	0	2	19	33	19	6	3	0	0	0	0	0	0	82
21:00	0	1	3	13	14	3	0	0	0	0	0	0	0	34
22:00	0	1	2	7	2	4	2	0	0	0	0	0	0	18
23:00	0	0	2	3	4	5	0	0	0	0	0	0	0	14
Totals	17	53	257	775	989	254	38							2383
% of Totals	1%	2%	11%	33%	42%	11%	2%							100%

Directional Peak Periods	All Speeds		AM 7-9		NOON 12-2		PM 4-6		Off Peak Volumes	
	Volume	%	Volume	%	Volume	%	Volume	%	Volume	%
AM Volumes	14	30	125	304	402	95	0	0	0	0
% AM	1%	1%	5%	13%	17%	4%	0%	0%	0%	0%
AM Peak Hour	09:00	07:00	07:00	07:00	07:00	08:00	06:00	06:00	07:00	07:00
Volume	6	12	37	68	86	20	4			
PM Volumes	3	23	132	471	587	159	29	0	0	0
% PM	0%	1%	6%	20%	25%	7%	1%	0%	0%	0%
PM Peak Hour	14:00	12:00	15:00	15:00	17:00	17:00	14:00			
Volume	1	4	20	82	94	28	4			
Totals	17	53	257	775	989	254	38			
% of Totals	1%	2%	11%	33%	42%	11%	2%			

Street Name	Direction		Percentiles			
	15th	50th	Average	85th	95th	ADT
Wild Canyon Dr	25	30	30	35	38	2383



CITY OF SAN MARCOS
ENGINEERING AND TRAFFIC SURVEY

STREET: WILD CANYON DRIVE
LIMITS: TUCANA DRIVE AND SAN ELIJO ROAD

DATE OF SURVEY: 07/08/14
REVIEWED BY: M.RAFael

A. PREVAILING DATA:

DIRECTIONS: : NORTH/SOUTH
WEATHER CONDITION: : SUNNY, CLEAR
LOCATION OF SURVEY: : MID-BLOCK (850 FEET NORTH OF ROCK CT.)
85TH PERCENTILE: : 30 MPH
10 MPH PACE: : 22-31 MPH
PERCENT IN PACE: : 87%
POSTED SPEED LIMIT (ON DATE OF SURVEY): : NONE
SPEED LIMIT CHANGE: : N/A
RECOMMENDED SPEED LIMIT: : 30 MPH

B. ACCIDENT HISTORY:

NO. OF MONTHS COVERED: : 36
TOTAL ACCIDENTS: : 0
COLLISION RATE: : 0 ACCIDENT/MILLION VEHICLE MILES (MVM)
CALIFORNIA STATEWIDE COLLISION RATE: 1.03 ACCIDENTS/MVM
(2010, DISTRICT 11, URBAN, 2 AND 3 LANES)

C. TRAFFIC FACTORS:

AVERAGE DAILY TRAFFIC: : 500 VEHICLES PER DAY (ESTIMATED)
LENGTH OF SEGMENT: : 0.5 MILES
LANE CONFIGURATION: : 1 LANE EACH DIRECTION, DIVIDED

D. EXISTING ROAD CONDITIONS:

X-WALKS - CNTRL/UNCNRL:	: NO/NO	HORIZONTAL ALIGNMENT: MODERATE
PEDESTRIANS/BICYCLES:	: MODERATE/LOW	VERTICAL ALIGNMENT: MODERATE
SIDEWALKS/BIKE LANES:	: YES/NO	INTERSECTIONS: MODERATE
ON-STREET PARKING:	: YES	DRIVEWAYS: NONE

E. ADJACENT LAND USE:

SINGLE FAMILY HOMES, OPEN SPACE

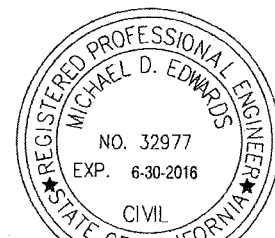
F. TRAFFIC ENGINEER'S RECOMMENDATION (EXPLANATION):

THIS SPEED ZONE SATISFIES THE CONDITIONS OF SECTION 627 OF THE CALIFORNIA VEHICLE CODE AND HAS BEEN PREPARED AND EVALUATED IN ACCORDANCE WITH THE CALIFORNIA MANUAL OF TRAFFIC CONTROL DEVICES, SECTION 2B.13 (2012). A SPEED LIMIT POSTING OF 30 MPH IS FOUND TO BE APPROPRIATE AND JUSTIFIED BASED ON THE NEAREST 5 MPH INCREMENT OF THE 85TH PERCENTILE SPEED BEING 30 MPH.

APPROVED AND CERTIFIED BY: _____

CITY ENGINEER
CITY OF SAN MARCOS

10/1/14
DATE



CITY OF SAN MARCOS - SPEED SURVEY

SPEED RANGES	NUMBER OF VEHICLES	PERCENT OF TOTAL	PERCENT ACCUMULATION
15	0	0.0%	0.0%
16	0	0.0%	0.0%
17	0	0.0%	0.0%
18	0	0.0%	0.0%
19	0	0.0%	0.0%
20	1	1.5%	1.5%
21	0	0.0%	1.5%
22	3	4.4%	5.9%
23	4	5.9%	11.8%
24	5	7.4%	19.1%
25	4	5.9%	25.0%
26	2	2.9%	27.9%
27	7	10.3%	38.2%
28	8	11.8%	50.0%
29	7	10.3%	60.3%
30	14	20.6%	80.9%
31	5	7.4%	88.2%
32	1	1.5%	89.7%
33	2	2.9%	92.6%
34	1	1.5%	94.1%
35	1	1.5%	95.6%
36	1	1.5%	97.1%
37	0	0.0%	97.1%
38	1	1.5%	98.5%
39	1	1.5%	100.0%
40	0	0.0%	100.0%
41	0	0.0%	100.0%
42	0	0.0%	100.0%
43	0	0.0%	100.0%
44	0	0.0%	100.0%
45	0	0.0%	100.0%
46	0	0.0%	100.0%
47	0	0.0%	100.0%
48	0	0.0%	100.0%
49	0	0.0%	100.0%
50	0	0.0%	100.0%
51	0	0.0%	100.0%
52	0	0.0%	100.0%
53	0	0.0%	100.0%
54	0	0.0%	100.0%
55	0	0.0%	100.0%
56	0	0.0%	100.0%
57	0	0.0%	100.0%
58	0	0.0%	100.0%
59	0	0.0%	100.0%
60	0	0.0%	100.0%
61	0	0.0%	100.0%
62	0	0.0%	100.0%
63	0	0.0%	100.0%
64	0	0.0%	100.0%
65	0	0.0%	100.0%
66	0	0.0%	100.0%
67	0	0.0%	100.0%
68	0	0.0%	100.0%
69	0	0.0%	100.0%
70	0	0.0%	100.0%
TOTAL VEHICLES: 68			

RECORDER: SI PHAN

LOCATION:

WILD CANYON DRIVE - TUCANA DRIVE AND SAN ELIJO RD.

APPROACH: SB/NB

SURFACE: DRY

WEATHER: CLEAR

DATE: 7/8/14

TIME: 3:00 - 4:00 PM

SURVEY STATISTICS

POSTED SPEED: 35 MPH

AVERAGE SPEED: 28 MPH

MEDIAN SPEED: 28 MPH
(50th PERCENTILE)

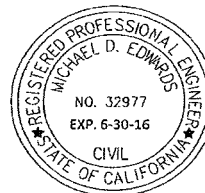
MODAL SPEED: 30 MPH

85TH PERCENTILE SPEED: 30 MPH

10 MPH PACE: 22 - 31 MPH

PERCENT IN PACE: 87%

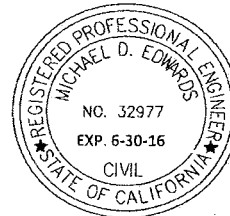
COMMENTS:



CITY OF SAN MARCOS - SPEED SURVEY

LOCATION: WILD CANYON DRIVE - TUCANA DRIVE AND SAN ELIJO RD APPROACH: SB/NB SURFACE: DRY
 DATE: 7/8/14 TIME: 3:00 - 4:00 PM WEATHER: CLEAR POSTED SPEED: NONE RECORDER: SI PHAN

MPH	SOUTHBOUND	NORTHBOUND	
15			0
16			0
17			0
18			0
19			0
20			
21			1
22	x x x		0
23	x x x		3
24	x x x x		4
25	x x		5
26	x		4
27	x x x		2
28	x x x x x x		7
29	x x x x		8
30	x x x x x x x		7
31	x		14
32			5
33			1
34			2
35			1
36			1
37			1
38			0
39			1
40			1
41			0
42			0
43			0
44			0
45			0
46			0
47			0
48			0
49			0
50			0
51			0
52			0
53			0
54			0
55			0
56			0
57			0
58			0
59			0
60			0
61			0
62			0
63			0
64			0
65			0
66			0
67			0
68			0
69			0
70			0
			TOTAL: 68



10/3/14
Date

AGENDA REPORT

Meeting of the San Marcos Traffic Commission

MEETING DATE: April 3, 2019
AGENDA ITEM NO: 7B
SUBMITTED BY: Michael Rafael, P.E. – Senior Civil Engineer *MLR*
APPROVED BY: Nic Abboud, P.E. – Principal Civil Engineer *NA*
SUBJECT: Camino Magnifico – Speeding Concerns

BACKGROUND:

Engineering staff received traffic safety concerns on Camino Magnifico between Borden Road and Via Barquero. Residents reported motorists speeding on Camino Magnifico during the morning peak periods. Residents would like the City to implement traffic calming devices such as speed bumps to reduce vehicular speeds.

DISCUSSION:

The study area is located on Camino Magnifico between Avenida Arana and Via Barquero in the Santa Fe Hills community (see attached Vicinity Map). This roadway section is classified as a two-lane, undivided residential street based on the City's Urban Street Design criteria. The residential street is 48 feet curb to curb with sidewalks on both sides. The slope of the street varies from 2 to 6 percent and has a mild curvilinear alignment. There are no posted speed limits on Camino Magnifico, however, the street satisfies the residential district criteria for a prima facie speed of 25 MPH per the California Vehicle Code (CVC) section 515 and 22352 (b)(1). The roadway segment provides access to single family homes in the Santa Fe Hills community north of Paloma Elementary school.

Engineering staff collected traffic speed and volume data to evaluate the need for traffic calming measures on Camino Magnifico. Based on the data collected, the highest hourly traffic volumes on one typical weekday occurred during the following times: southbound towards Borden Road (43 vph, 8-9 am), northbound towards Via Barquero (29 vph, 3-4 pm) (see attached tables). The 85th percentile speeds were measured at 35 MPH in both directions which exceeds the prima facie speed limit of 25 MPH for a residential street. Vehicle speeds over 32 MPH typically necessitate some type of traffic calming improvements. However, the traffic volumes were considerably light with a total of 482 vehicles per day on Camino Magnifico. The speed data collected indicates that the excessive speeds (32 MPH and over) are generated by residents during the (8-9 am) and (3-4 pm) peak hours. Cut-through traffic is nonexistent. There were no collisions reported along the roadway segment for the last 5 years. There were also no observed pedestrian crossings along Camino Magnifico during the peak hour periods. Motorists were observed driving in the middle of the street where their speeds appear to be excessive.

Based on the findings of this study, Engineering staff proposes the use of centerline striping (limited at the intersections) and 25 MPH speed limit signs and pavement speed legends as a viable, low-cost traffic calming option for speed reduction on Camino Magnifico. Centerline striping helps delineate the travel lane for the driver, restricts passing of other vehicles, improves line of sight around a roadway curve, and provides a preview of changing roadway alignment. The CAMUTCD per Section 3B.01 allows the use of centerline striping to improve delineation on horizontal curves. New speed limit signs and pavement speed legends will help reinforce the posted speed limit on a residential street and can be used as traffic calming.

Speed cushions and/or bumps are not recommended on City streets for traffic calming benefits. However, the City is currently exploring the use and benefits of speed cushions on residential streets and developing appropriate implementation criteria.

City staff also recommends deployment of the City's speed radar trailers in combination with the proposed traffic striping and signing improvements to help build speed compliance in the neighborhood. Staff will monitor the effects of the new traffic striping and speed limit signage for at least a year to ensure its continued benefit to the neighborhood. More aggressive traffic calming devices may be considered in the event that the proposed improvements are not successful in reaching the speed reduction goals desired by the community. A reassessment of the conditions would be necessary before more aggressive options are considered.

In the course of the field investigations, the intersections of Camino Magnifico and Avenida Fragata and Camino Magnifico and Avenida Amistad were found to currently not have one-way STOP signs installed on the minor street. It is recommended that one-way STOP signs, limit lines, pavement legends, and 50-feet of solid double yellow lines be installed to enhance the right-of-way operations and sight distances at the intersections. Camino Magnifico is designated as the major street where Avenida Amistad and Avenida Fragata are the minor streets.

CONCLUSION AND RECOMMENDATIONS:

Engineering staff recommends the following improvements:

- 1) Installation of limited centerline striping at the intersections of Camino Magnifico and Avenida Amistad and Camino Magnifico and Avenida Fragata.
- 2) Installation of new 25 MPH speed limit signs on breakaway posts on Camino Magnifico between Via Barquero and Borden Road to help reduce vehicular speeds and provide traffic calming.
- 3) Installation of new one-way STOP signs, limit line, pavement legends, and 50-feet of solid double yellow lines at the intersections of Avenida Fragata and Camino Magnifico, and Avenida Amistad and Camino Magnifico to improve right-of-way operations and sight distance.
- 4) Deployment of the City's speed radar trailers to help build and reinforce speed compliance on Camino Magnifico.

Traffic Data/Roadway Information:

Traffic Volumes:

Camino Magnifico, Avenida Arana and Via Barquero – 482 VPD (2019).
Borden Road, Las Posas Road and Comet Circle – 10,789 VPD (2017).

Speed Limit:

Camino Magnifico, Avenida Arana and Via Barquero, non-posted.

Accident History (last 5 years):

None

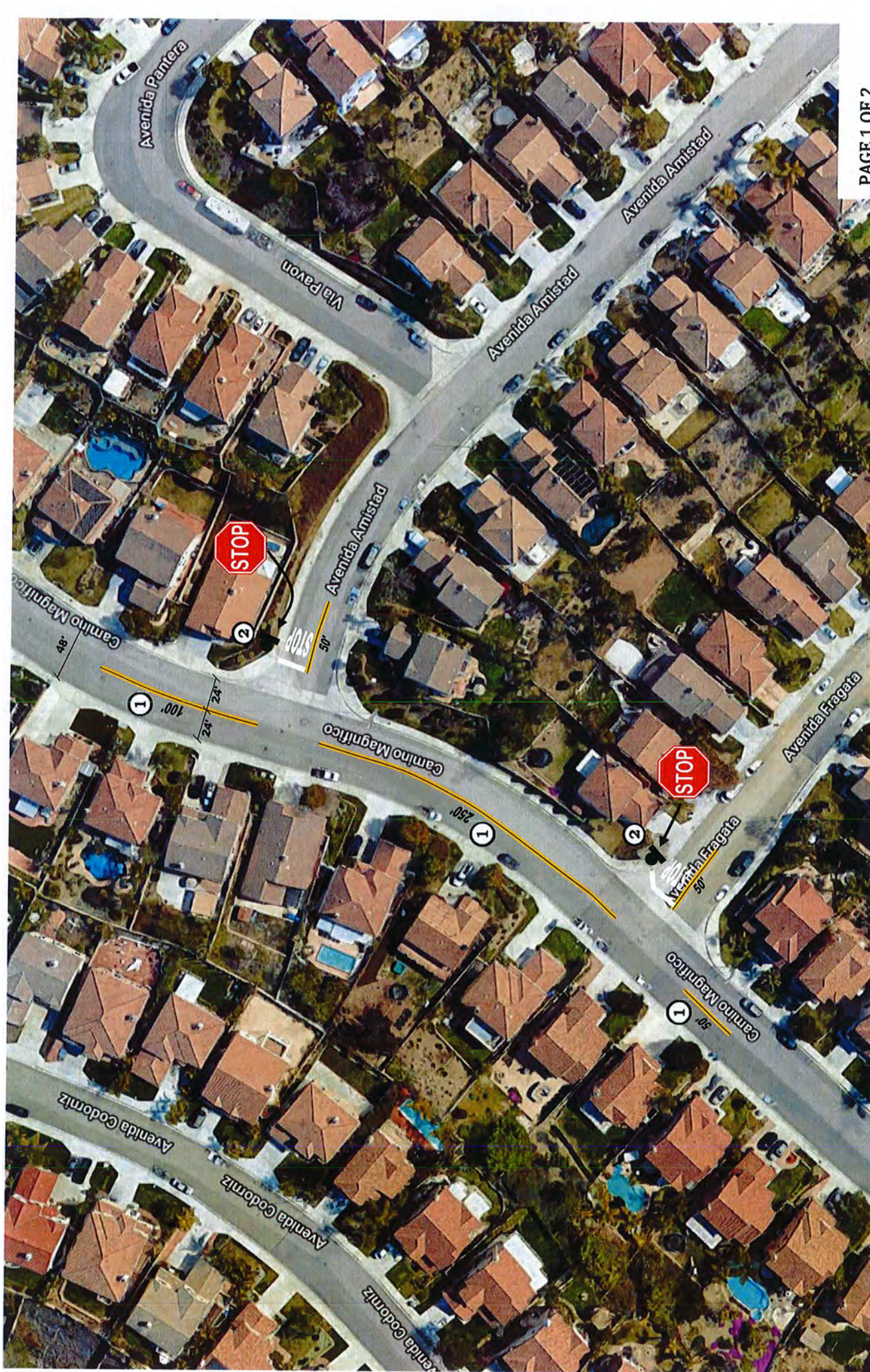
Unusual Conditions: None.

Attachment(s)

Vicinity Map
Proposed Signing and Striping Improvements Exhibits
Traffic Volume and Speed Data Sheet
Photos

[illegible]

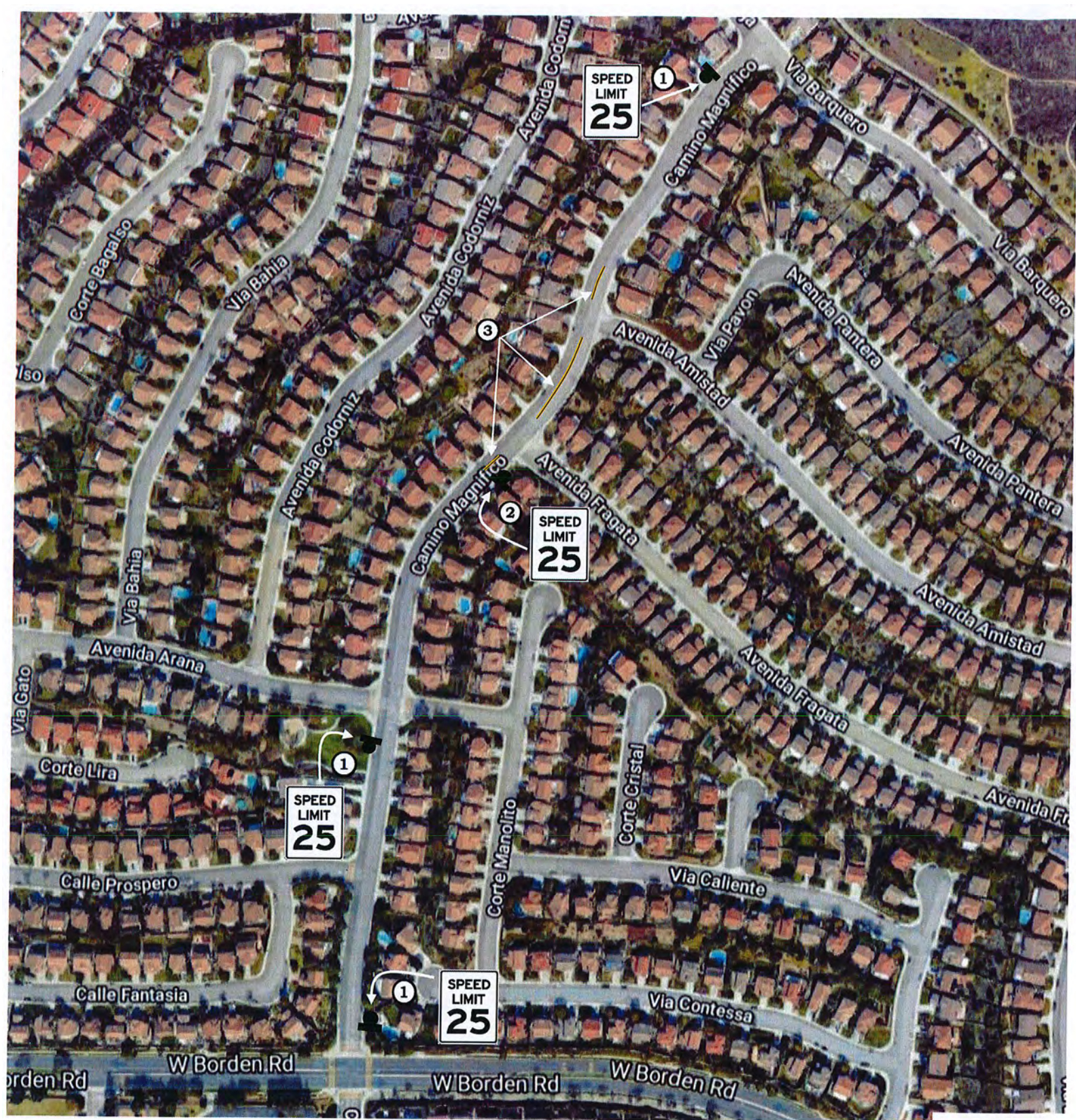
TC AGENDA #7B
APRIL 3, 2019



*NOT TO SCALE

PROPOSED SIGNING AND STRIPING IMPROVEMENTS
CAMINO MAGNIFICO – SPEEDING ISSUE
AGENDA #7B
APRIL 3, 2019

- CONSTRUCTION NOTES:**
- ① INSTALL DOUBLE YELLOW CENTERLINE (DETAIL 21)
 - ② INSTALL R1-1 "STOP" SIGN (30" X 30") ON NEW ROUND POST, STOP LEGEND, STOP BAR, AND 50 FT OF DOUBLE YELLOW CENTER LINE. RELOCATE STREET NAME SIGNS ON NEW POST.



CONSTRUCTION NOTES:

- ① INSTALL R2-1 (25 MPH) SIGN ON NEW BREAKAWAY POST AND 25 MPH SPEED LEGEND.
- ② INSTALL R2-1 (25 MPH) SIGN ON EXISTING STREET LIGHT AND 25 MPH SPEED LEGEND.
- ③ INSTALL DOUBLE YELLOW CENTER LINE (DETAIL 21)

PROPOSED SIGNING AND STRIPING IMPROVEMENTS

CAMINO MAGNIFICO – SPEEDING ISSUE

AGENDA #7B

APRIL 3, 2019

PAGE 2 OF 2



*NOT TO SCALE

SPEED**Camino Magnifico S/O 776 Camino Magnifico**

Day: Tuesday

Date: 12/11/2018

City: San Marcos

Project #: CA18_4466_006

Summary

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
00:00 AM	0	0	1	0	2	0	0	0	0	0	0	0	0	3
01:00	0	0	0	2	0	0	0	0	0	0	0	0	0	2
02:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1
03:00	0	0	1	1	0	0	0	0	0	0	0	0	0	2
04:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
05:00	0	1	0	2	1	1	0	0	0	0	0	0	0	5
06:00	0	1	1	2	5	0	0	0	0	0	0	0	0	9
07:00	1	1	6	7	8	0	0	0	0	0	0	0	0	23
08:00	1	2	15	25	20	6	0	0	0	0	0	0	0	69
09:00	2	1	5	7	6	2	3	0	0	0	0	0	0	26
10:00	0	2	3	7	4	3	0	0	0	0	0	0	0	19
11:00	0	1	10	7	10	2	0	0	0	0	0	0	0	30
12:00 PM	2	2	3	7	7	3	1	0	0	0	0	0	0	25
13:00	2	3	7	8	3	1	1	0	0	0	0	0	0	25
14:00	0	1	0	16	10	3	3	0	0	0	0	0	0	33
15:00	0	5	13	16	7	7	1	1	0	0	0	0	0	50
16:00	3	4	8	17	9	5	2	0	0	0	0	0	0	48
17:00	0	4	6	7	8	3	3	0	0	0	0	0	0	31
18:00	0	2	8	8	2	2	1	0	0	0	0	0	0	23
19:00	1	2	1	3	2	4	0	1	0	0	0	0	0	14
20:00	1	4	2	9	5	3	0	1	0	0	0	0	0	25
21:00	0	3	4	1	3	2	0	0	0	0	0	0	0	13
22:00	0	0	0	1	1	1	0	0	0	0	0	0	0	3
23:00	0	0	1	1	0	0	0	0	0	0	0	0	0	2
Totals	13	40	96	154	113	48	15	3						482
% of Totals	3%	8%	20%	32%	23%	10%	3%	1%						100%

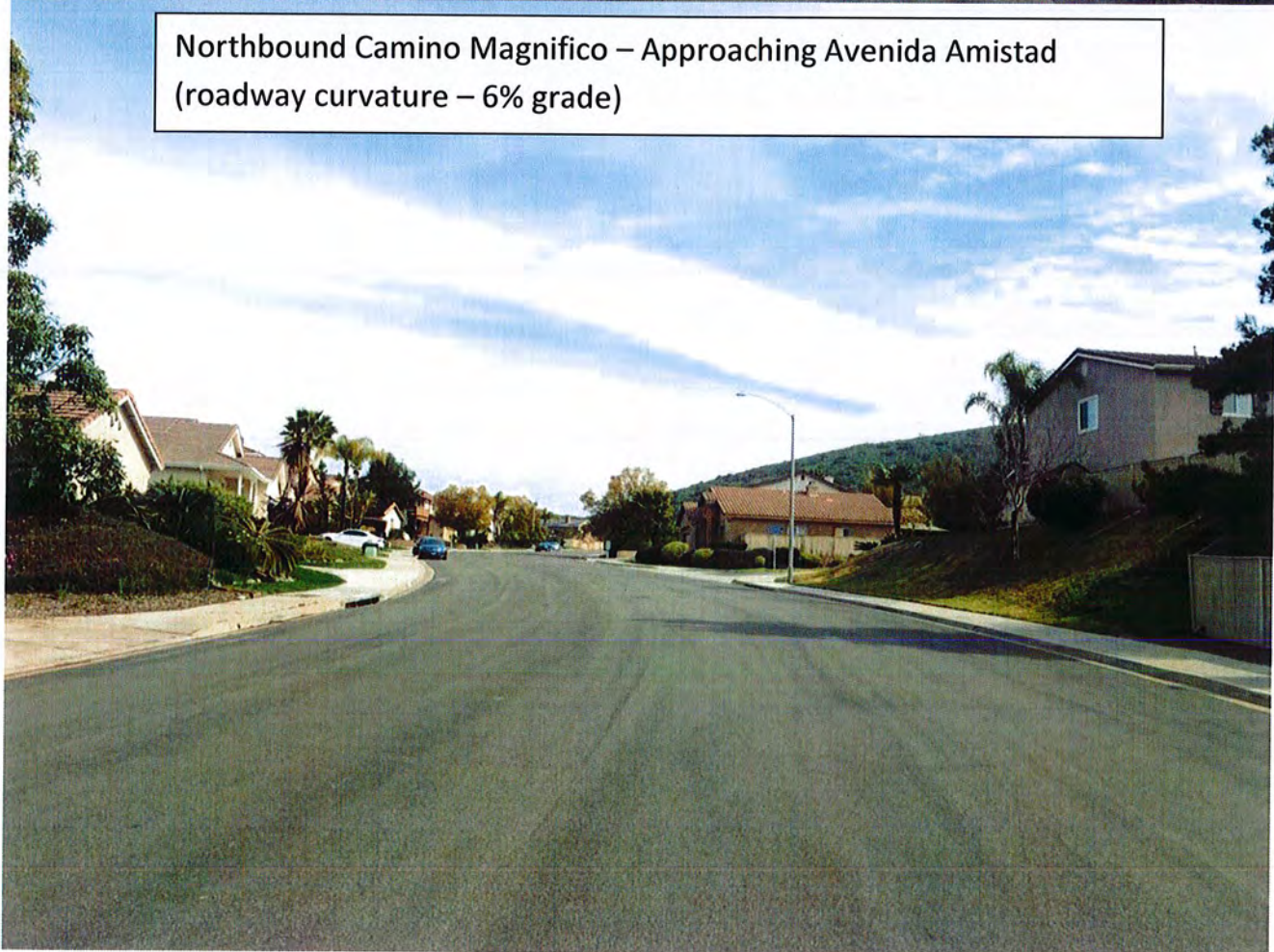
Directional Peak Periods	All Speeds			AM 7-9		NOON 12-2		PM 4-6		Off Peak Volumes	
	Volume	%		Volume	%	Volume	%	Volume	%	Volume	%
AM Volumes	43	12%	60	56	12%	14	3%	0	0%	0	0%
% AM	9%	2%	12%	12%	1%	3%	1%	0	0%	0	0%
AM Peak Hour	08:00	08:00	08:00	08:00	08:00	08:00	09:00	0	0%	0	0%
Volume	2	15	25	20	6	3	3	0	0%	0	0%
PM Volumes	53	94%	94	57	12%	34	12%	0	0%	0	0%
% PM	11%	6%	20%	12%	7%	7%	2%	0	0%	0	0%
PM Peak Hour	15:00	15:00	16:00	14:00	14:00	15:00	14:00	0	0%	0	0%
Volume	13	17	17	10	7	3	1	0	0%	0	0%
Totals	92	19%	17	10	7	3	1	0	0%	261	54%

Street Name	Direction	Percentiles		
		15th	50th	95th
Camino Magnifico	Summary	21	28	39
			ADT	482

Northbound Camino Magnifico – Approaching Avenida Fragata



Northbound Camino Magnifico – Approaching Avenida Amistad
(roadway curvature – 6% grade)



Northbound Camino Magnifico – Approaching Via Barquero



Southbound Camino Magnifico – Approaching Avenida Amistad
(roadway curvature – 6%)

