MEMORANDUM

To: Greg Kasmer, RECON

CC: Mark Carpenter, KTU+A

From: Arnold Torma, KOA Corporation

Re: Mission Trails Master Plan Environment Technical Study – Traffic and Parking

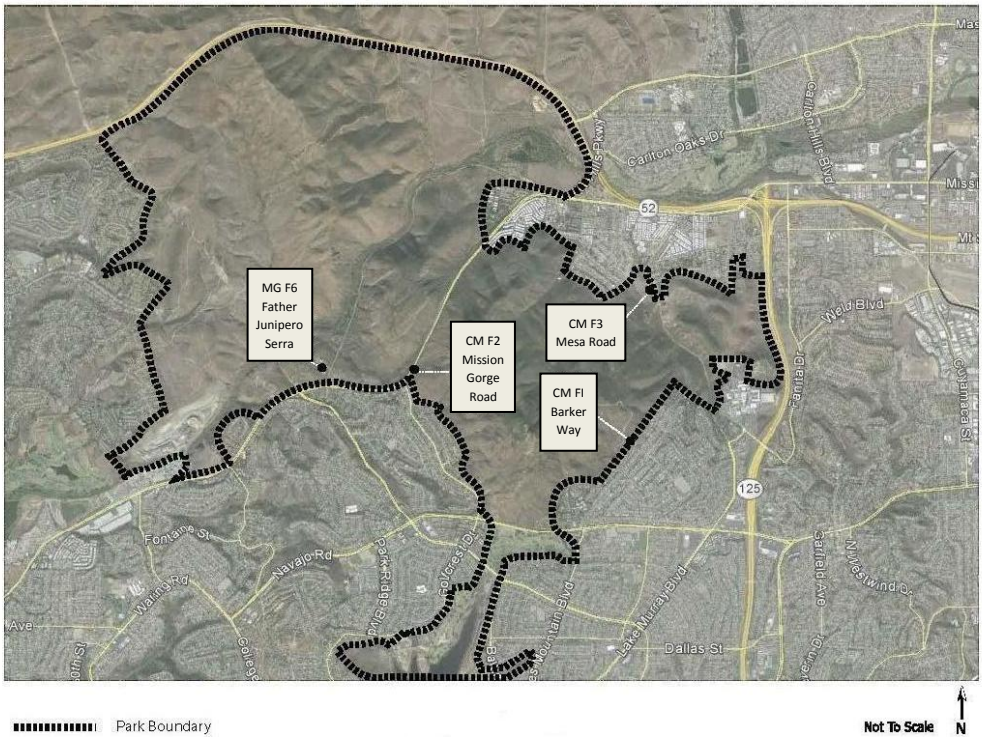
KOA No.: JB92084

Date: August 29, 2014

Project Description

The Mission Trails Regional Park Master Plan, last updated in 1985, is currently being updated by KTU+A for the City of San Diego Planning Department, Park Planning Section. The Mission Trails Regional Park Master Plan update contains a number of recommendations for improvements throughout the Park. Of these improvement recommendations, there are four that involve the creation of additional visitor parking and therefore have potential for traffic related impacts. The purpose of this memo is to document the potential for impacts related to those four improvements. Each of the four improvements will be discussed separately below.

Figure 1 – Aerial Map of Project Location



Methodology

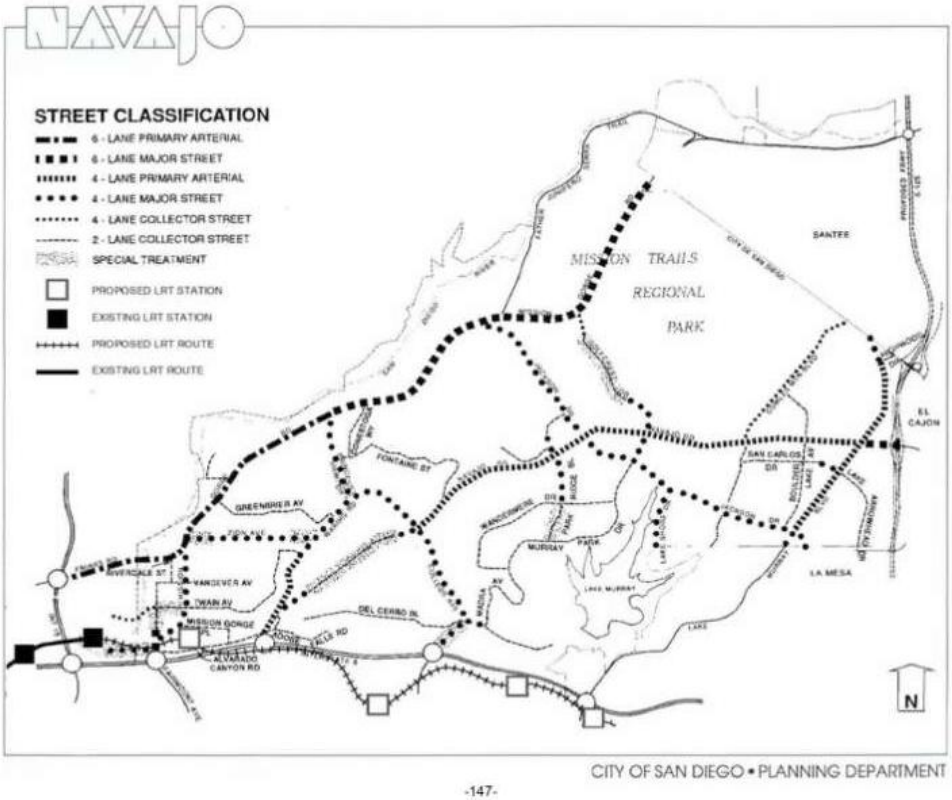
As this project does not assume a growth in park size, there will be no net-growth in trip generation. Trips made by users of the proposed lots will be reassigned from other, primarily on-street parking locations in the vicinity of the project area, and the proposed on-site/off-street lots will reduce the demand for on-street parking. The discussion and analysis of project impacts is based on this anticipated project trip reassignment. Traffic counts in the vicinity of the proposed parking areas have been gathered in early 2014 and are attached to this document.

Table 1 – Existing and Future Parking Spaces

Area	Existing On-Street	Proposed Off-Street
CM F1 - Barker Way	15	36
CM F2 - Mission Gorge Road	Nominal	16
CM F3 - Mesa Road	25	76
MG F6 - Father Junipero Serra Trail	50	80

Three of the proposed improvements discussed herein lie within the City of San Diego, and the fourth is located in the City of Santee. Some of the proposed improvements lie within areas covered by the Navajo Community Plan. As is discussed in greater detail later in this study, this project does not conflict with any current or future planning efforts related to that Plan.

Figure 2 – Navajo Community Plan Street Classification Element



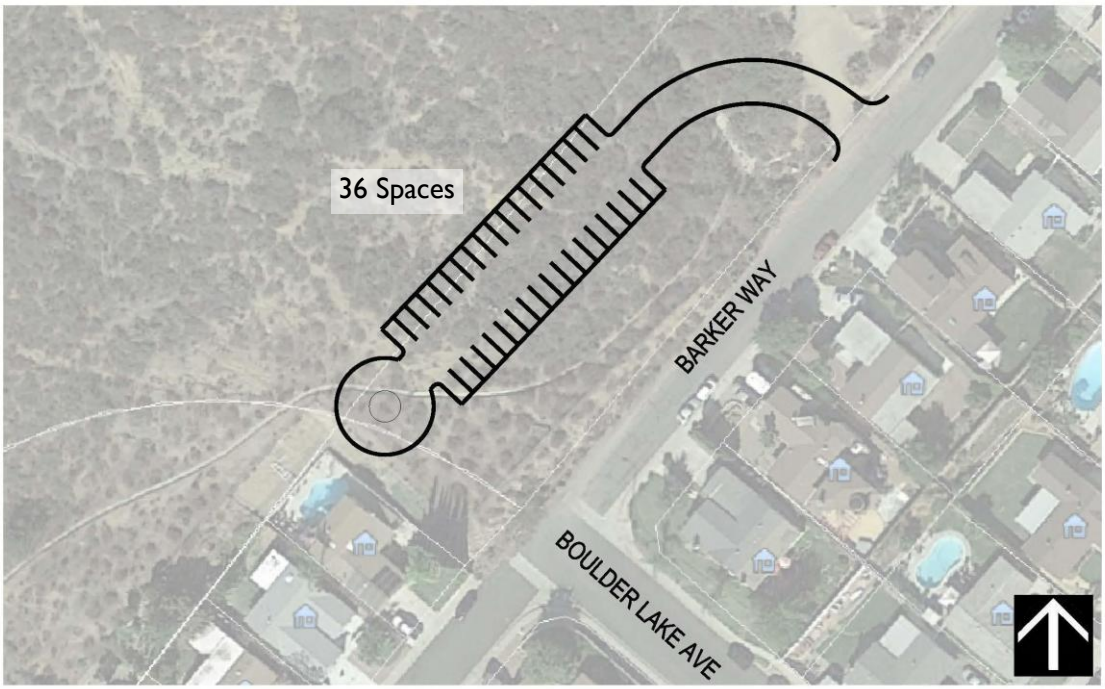
Proposed Improvements and Impacts

CM F1 – Barker Way, Parking

Proposal

Plan, design and implement off-street gravel or decomposed granite surfaced parking area for 36 cars at the Barker Way entrance to reduce some of the parking demand on the local residential streets and provide a more formal trailhead and potential for a maintainable comfort station.

Figure 3 – CM F1 - Barker Way Parking



Discussion

Barker Way in this area is a City of San Diego street that is paved, has two lanes, and is a single-loaded residential street with full improvements on the eastern side along the adjacent homes. On the western side abutting Mission Trails Park there is no sidewalk improvement in the block between Boulder Lake Avenue and Coleshill Drive where access is taken to the park and where the parking lot is proposed. The curb on the western side is formed in asphalt rather than in concrete. In this block the street varies in width from approximately 30 feet to approximately 24 feet. In the blocks to the north and south of this section there are full improvements on both sides of Barker Way consistent with the presence of homes on both side of the street.

Visitors parking to hike in the Park will typically park on the west side adjacent to the park, but some drivers park adjacent to the homes on the eastern side. The number of existing users varies between approximately seven and fifteen parked vehicles on the street using the park at different times of the day. This project will reduce the demand for on-street parking with the addition of the off-street lot. Traffic volumes on Barker Way in early 2014 have been measured as 310 ADT (average daily traffic) or vehicles per day on a weekday, and 730 per day on a weekend. These volumes are consistent with the

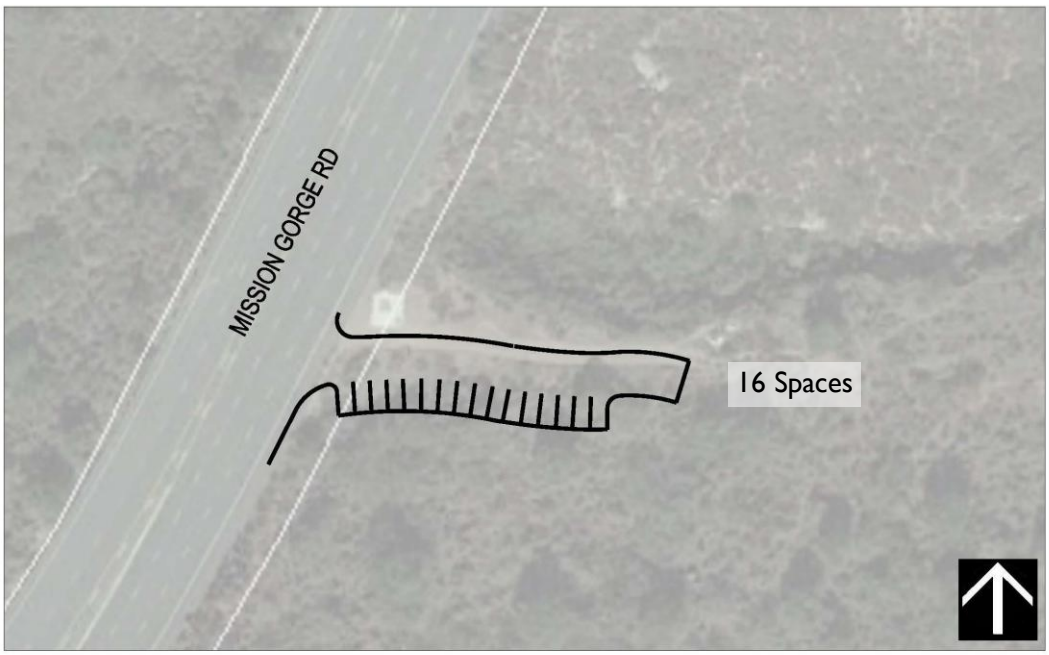
classification the City calls "single loaded residential street" which is meant to carry no more than 1,500 vehicles per day. As this project does not include a growth in park size, there is no anticipated net-growth in trip generation, and as project trip reassignment will be minimal, it can be determined that the project will have no traffic related impacts.

CM F2 – Mission Gorge Rd, Parking

Proposal

Plan, design and implement an off-street gravel or decomposed granite surfaced parking area for 16 cars just north of and uphill from Golfcrest Drive off Mission Gorge Road adjacent to the SDCWA pipeline access portal. This will provide northerly access to the Pyles Peak trail and a potential rock climbing area. Access from Mission Gorge Road would be a right turn in and right turn out only.

Figure 4 – CM F2 - Mission Gorge Road Parking



Discussion

Mission Gorge Road in San Diego near the project site functions as arterial roadway with relatively few local access points between Jackson Drive and the Santee City limits to the east. No parking exists along Mission Gorge Road in this area, but the few users seeking to enter the park in this area can use the nearby portion of Golfcrest Drive to park. These users will be able to use the proposed on-site lot to park in the future, instead of choosing to park on-street on Golfcrest Drive. Speeds are governed by the 55 mph maximum limit allowed by law. Typically the roadway has 6 lanes, or 3 in each direction, with some exceptions in downhill portions where there are at times 2 lanes in one direction. In front of the proposed parking lot access point there are 3 uphill, or eastbound, lanes climbing towards the summit. Just downhill or westerly about 700 plus feet from the proposed parking access point there is a traffic signal at Golfcrest Drive. The grade of Mission Gorge Road is approximately seven percent uphill at the

proposed access point. Although a bike lane is not designated on the roadway in this area, some enthusiastic bicyclists not overwhelmed by the grades and the length will use this route despite a more level route that exists along Father Junipero Serra Trail nearer the San Diego River.

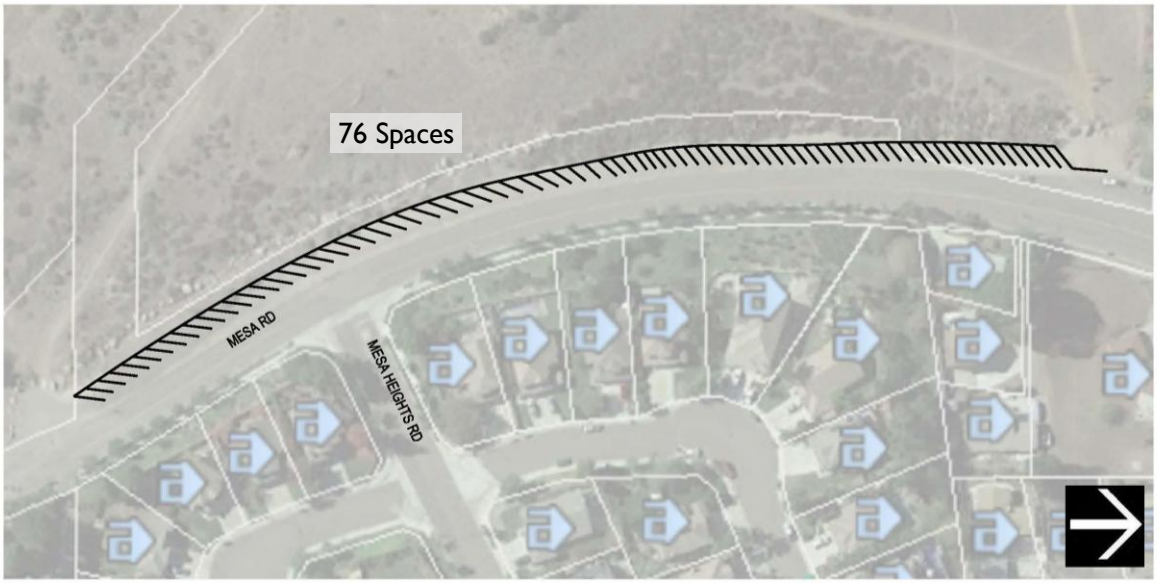
The directional traffic volume on this portion of Mission Gorge Road in early 2014 was measured as 11,340 ADT going eastbound. On weekends, traffic volume drops to 8,440 eastbound daily. This volume is consistent with the City's classification for a 4-lane major. As this project does not include a growth in park size, there is no anticipated net-growth in trip generation, and as project trip reassignment will be minimal, it can be determined that the project will have no traffic related impacts.

CM F3 – Mesa Road, Parking

Proposal

Plan, design and implement improvements in collaboration with the City of Santee to the disturbed shoulder along Mesa Road near and south of Big Rock Park These improvements would provide additional parking spaces and a linear bike skills area and access to the Mesa Road Trailhead. This would result in 76 diagonal parking spaces.

Figure 5 – CM F3 - Mesa Road Parking



Discussion

This City of Santee street is a two lane local road leading southward towards its present terminus against Mission Trails Park slightly less than a mile from Mission Gorge Road. Santee classifies the street as a residential collector, and the 2014 traffic volumes just south of Prospect Avenue are 630 ADT during the week and almost the same on weekends. The northern portion of Mesa Road has bike lanes terminating at Prospect Avenue. According to the 2009 City of Santee Bicycle Master Plan, a signed bike route is planned for the southern end of Mesa Road, from Prospect Avenue to the terminus of the road. Currently, Mesa Road is striped with a double yellow center line to prohibit passing. Depending on the type of facility that will be provided for bicycles in this area, consideration should be taken during the design of this project.

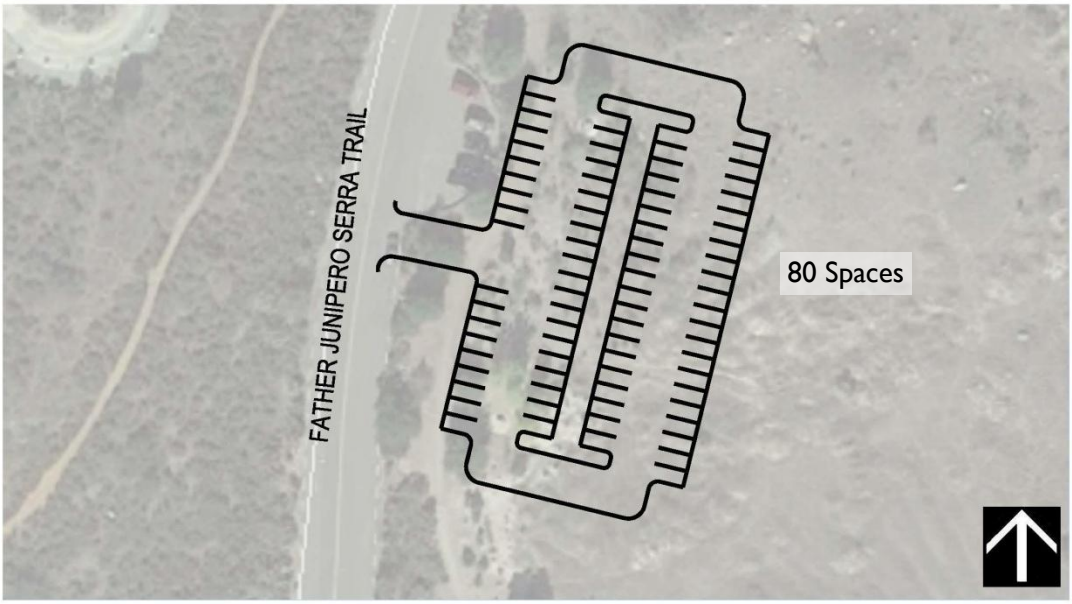
The City of San Diego Navajo Community Plan had envisioned Lake Murray Boulevard continuing to the north from San Diego and down the hill into Santee to make a connection with Mesa Road, but this is inconsistent with Santee's circulation planning, and there is no active plan to effect this change. Perhaps a future update of the Navajo Community Circulation Plan will rectify this inconsistency. As this project does not include a growth in park size, there is no anticipated net-growth in trip generation, and as project trip reassignment will be minimal, it can be determined that the project will have no traffic related impacts.

MG F6 – Father Junipero Serra Trail, Parking

Proposal

Construct a 80 space parking lot on the easterly side of Father Junipero Serra Trail between Mission Gorge Road and the Visitor and Interpretive Center driveway entrance. The existing on-street parking is assumed to be retained.

Figure 6 – MG F6 - Father Junipero Serra Trail Parking



Discussion

Father Junipero Serra Trail extends from Mission Gorge Road on the west near Jackson Drive in the City of San Diego to eventually rejoin Mission Gorge Road in Santee to the east. Only the first approximately 600 feet on the western end of the roadway is traversable in two directions and all day since a gate restricts traffic beyond the visitors center to eastbound traffic during daytime hours as a one-way roadway. In the 600 foot, two-way portion the roadway is two lanes, approximately 36 feet wide, and parking is allowed along much of it. A rounded, semicircular spot exists in the roadway on the east side where additional street parking is available perpendicular to the roadway. In total there are approximately 50 on-street parking spaces in this stretch between Mission Gorge Rd and the Visitors

Center access driveway. During peak times on weekends most of these spaces are occupied; with the construction of this project, visitors would have the option of using the new 80 space lot.

Access is gained to and from Mission Gorge Road via a right turn in or out from westbound Mission Gorge Road or from a median break allowing left turns in only from Mission Gorge Road. Exiting turns are not allowed left or easterly onto Mission Gorge Road as there is no traffic signal, and the speeds would make that turn infeasible without a signal. Recent 2014 traffic counts show that the weekday traffic is 2,190 ADT (both directions) and it rises to 3,500 on a weekend day between Mission Gorge Road and the Visitors Center. As this project does not include a growth in park size, there is no anticipated net-growth in trip generation, and as project trip reassignment will be minimal, it can be determined that the project will have no traffic related impacts.

Attachment A: Traffic Counts

Attachment A1 – Barker Way Between Boulder Lake Ave. & Coleshill Dr. Traffic Count

THURSDAY - MARCH 20TH, 2014 CITY: COWLES MTN PROJECT: PTD14-0321-01

BARKER BTN BOULDER LAKE & COLESHILL

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	0		0					12:00	4		1				
00:15	0		1					12:15	0		3				
00:30	0		1					12:30	3		4				
00:45	0	0	1	3			3	12:45	2	9	4	12			21
01:00	0		0					13:00	2		1				
01:15	0		0					13:15	3		3				
01:30	0		1					13:30	1		2				
01:45	1	1	1	2			3	13:45	0	6	2	8			14
02:00	0		0					14:00	4		2				
02:15	0		0					14:15	1		3				
02:30	0		0					14:30	3		1				
02:45	0	0	0	0				14:45	3	11	3	9			20
03:00	0		1					15:00	2		0				
03:15	0		0					15:15	6		0				
03:30	0		0					15:30	6		0				
03:45	0	0	1	2			2	15:45	4	18	4	4			22
04:00	0		0					16:00	4		3				
04:15	0		0					16:15	4		3				
04:30	0		1					16:30	9		1				
04:45	0	0	2	3			3	16:45	8	25	1	8			33
05:00	1		0					17:00	8		5				
05:15	1		0					17:15	5		2				
05:30	0		0					17:30	12		3				
05:45	4	6	0	0			6	17:45	13	38	5	15			53
06:00	2		0					18:00	10		4				
06:15	2		1					18:15	15		10				
06:30	1		1					18:30	4		3				
06:45	1	6	4	6			12	18:45	2	31	5	22			53
07:00	1		5					19:00	2		7				
07:15	2		4					19:15	4		10				
07:30	3		2					19:30	0		3				
07:45	4	10	1	12			22	19:45	2	8	4	24			32
08:00	7		4					20:00	1		0				
08:15	4		2					20:15	2		5				
08:30	8		3					20:30	2		0				
08:45	2	21	4	13			34	20:45	4	9	1	6			15
09:00	6		2					21:00	2		1				
09:15	3		7					21:15	1		1				
09:30	4		4					21:30	0		1				
09:45	5	18	1	14			32	21:45	0	3	0	3			6
10:00	5		5					22:00	1		0				
10:15	4		3					22:15	3		1				
10:30	3		3					22:30	0		0				
10:45	2	14	4	15			29	22:45	0	4	0	1			5
11:00	4		2					23:00	0		1				
11:15	3		2					23:15	0		0				
11:30	2		2					23:30	1		0				
11:45	3	12	2	8			20	23:45	0	1	1	2			3
Total Vol.		88		78			166			163		114			277

Daily Totals	NB	SB	EB	WB	Combined
	251	192			443

	AM			PM		
Split %	53.0%	47.0%	**37.5%**	**58.8%**	**41.2%**	**62.5%**
Peak Hour	07:45	08:45	**08:30**	17:30	18:15	**17:30**
Volume	23	17	35	50	25	72
P.H.F.	0.72	0.61	**0.80**	0.87	0.63	**0.72**

PACIFIC TECHNICAL DATA, LLC

Attachment A2 – Mission Gorge Road East of Golfcrest Drive Traffic Count

THURSDAY - MARCH 20TH, 2014 CITY: COWLES MTN PROJECT: PTD14-0321-01

MSSION GORGE E-O GOLF CREST

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	4		5					12:00	86		66				
00:15	4		8					12:15	57		74				
00:30	7		3					12:30	80		63				
00:45	5	20	0	16			36	12:45	67	290	82	285			575
01:00	4		5					13:00	82		89				
01:15	2		1					13:15	74		73				
01:30	3		2					13:30	75		74				
01:45	1	10	0	8			18	13:45	75	306	69	305			611
02:00	4		0					14:00	75		89				
02:15	2		3					14:15	123		88				
02:30	2		1					14:30	100		84				
02:45	1	9	1	5			14	14:45	100	398	105	366			764
03:00	4		2					15:00	76		76				
03:15	0		5					15:15	114		65				
03:30	3		3					15:30	123		96				
03:45	3	10	5	15			25	15:45	143	456	66	303			759
04:00	5		10					16:00	167		84				
04:15	11		18					16:15	171		81				
04:30	12		15					16:30	200		100				
04:45	11	39	23	66			105	16:45	188	726	89	354			1080
05:00	19		27					17:00	191		110				
05:15	9		37					17:15	222		83				
05:30	23		46					17:30	151		89				
05:45	26	77	51	161			238	17:45	121	685	72	354			1039
06:00	33		78					18:00	101		88				
06:15	45		107					18:15	73		90				
06:30	58		168					18:30	87		86				
06:45	77	213	218	571			784	18:45	70	331	85	349			680
07:00	70		234					19:00	55		48				
07:15	79		267					19:15	60		69				
07:30	91		217					19:30	45		49				
07:45	76	316	187	905			1221	19:45	38	198	39	205			403
08:00	81		146					20:00	43		33				
08:15	72		104					20:15	36		35				
08:30	69		116					20:30	37		45				
08:45	49	271	63	429			700	20:45	36	152	34	147			299
09:00	71		67					21:00	32		28				
09:15	68		73					21:15	19		22				
09:30	72		81					21:30	27		20				
09:45	59	270	47	268			538	21:45	8	86	16	86			172
10:00	58		55					22:00	18		18				
10:15	71		81					22:15	25		22				
10:30	63		60					22:30	29		16				
10:45	56	248	66	262			510	22:45	21	93	7	63			156
11:00	74		69					23:00	10		10				
11:15	73		75					23:15	10		4				
11:30	66		60					23:30	5		5				
11:45	68	281	72	276			557	23:45	6	31	4	23			54
Total Vol.		1764		2982			4746			3752		2840			6592

Daily Totals				
NB	SB	EB	WB	Combined
5516	5822			11338

	AM			PM		
Split %	37.2%	62.8%	**41.9%**	**56.9%**	**43.1%**	**58.1%**
Peak Hour	07:15	06:45	**06:45**	16:30	16:30	**16:30**
Volume	327	936	**1253**	801	382	**1183**
P.H.F.	0.90	0.88	**0.91**	0.96	0.87	**0.97**

PACIFIC TECHNICAL DATA, LLC

Attachment A3– Mesa Road South of Prospect Avenue Traffic Count

THURSDAY - MARCH 20TH, 2014 CITY: COWLES MTN PROJECT: PTD14-0321-01

MESA S-O PROSPECT

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	0		2					12:00	3		3				
00:15	0		2					12:15	6		3				
00:30	0		1					12:30	6		5				
00:45	1	1	0	5			6	12:45	5	20	5	16			36
01:00	0		1					13:00	5		10				
01:15	0		1					13:15	7		2				
01:30	0		0					13:30	5		10				
01:45	0	0	0	2			2	13:45	4	21	4	26			47
02:00	0		0					14:00	7		5				
02:15	0		2					14:15	6		9				
02:30	0		0					14:30	5		9				
02:45	1	1	0	2			3	14:45	5	23	7	30			53
03:00	0		0					15:00	7		6				
03:15	0		0					15:15	7		10				
03:30	0		0					15:30	2		8				
03:45	0	0	0	0				15:45	3	19	3	27			46
04:00	2		0					16:00	2		4				
04:15	0		0					16:15	8		6				
04:30	0		1					16:30	3		10				
04:45	1	3	0	1			4	16:45	4	17	6	26			43
05:00	1		0					17:00	2		7				
05:15	1		0					17:15	12		9				
05:30	5		1					17:30	4		8				
05:45	1	8	0	1			9	17:45	3	21	10	34			55
06:00	3		1					18:00	1		4				
06:15	2		0					18:15	5		4				
06:30	5		0					18:30	8		11				
06:45	8	18	2	3			21	18:45	12	26	4	23			49
07:00	5		1					19:00	5		7				
07:15	10		1					19:15	6		4				
07:30	6		5					19:30	6		7				
07:45	10	31	6	13			44	19:45	4	21	8	26			47
08:00	4		3					20:00	1		3				
08:15	6		5					20:15	3		2				
08:30	4		4					20:30	4		7				
08:45	7	21	3	15			36	20:45	1	9	3	15			24
09:00	4		4					21:00	0		4				
09:15	3		1					21:15	5		3				
09:30	8		5					21:30	2		5				
09:45	7	22	8	18			40	21:45	3	10	2	14			24
10:00	1		3					22:00	1		1				
10:15	8		2					22:15	1		3				
10:30	5		4					22:30	2		2				
10:45	6	20	4	13			33	22:45	0	4	2	8			12
11:00	5		3					23:00	1		2				
11:15	6		1					23:15	0		1				
11:30	3		3					23:30	0		2				
11:45	5	19	4	11			30	23:45	0	1	1	6			7
Total Vol.		144		84			228			192		251			443

Daily Totals				
NB	SB	EB	WB	Combined
336	335			671

	AM			PM		
Split %	63.2%	36.8%	**34.0%**	**43.3%**	**56.7%**	**66.0%**
Peak Hour	07:00	07:30	**07:15**	18:30	17:00	**18:30**
Volume	31	19	**45**	31	34	**57**
P.H.F.	0.78	0.79	**0.70**	0.63	0.85	**0.75**

PACIFIC TECHNICAL DATA, LLC

Attachment A4 – Father Juipero Serra Trail North of Mission Gorge Road Traffic Count

THURSDAY - MARCH 20TH, 2014 CITY: COWLES MTN PROJECT: PTD14-0321-01

FATHER JUNIPERO TRAIL N-O MISSION GORGE

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	3		2					12:00	19		24				
00:15	0		2					12:15	20		24				
00:30	1		0					12:30	26		25				
00:45	3	7	0	4			11	12:45	16	81	27	100			181
01:00	1		2					13:00	11		25				
01:15	0		1					13:15	20		22				
01:30	0		0					13:30	22		19				
01:45	1	2	0	3			5	13:45	39	92	27	93			185
02:00	2		0					14:00	13		23				
02:15	1		0					14:15	25		24				
02:30	2		0					14:30	41		35				
02:45	0	5	1	1			6	14:45	31	110	23	105			215
03:00	0		2					15:00	29		20				
03:15	0		1					15:15	27		25				
03:30	0		3					15:30	40		33				
03:45	0	0	1	7			7	15:45	47	143	30	108			251
04:00	1		5					16:00	42		19				
04:15	2		4					16:15	39		27				
04:30	1		6					16:30	41		38				
04:45	1	5	8	23			28	16:45	45	167	32	116			283
05:00	3		10					17:00	45		33				
05:15	2		17					17:15	53		26				
05:30	1		16					17:30	43		30				
05:45	0	6	8	51			57	17:45	34	175	33	122			297
06:00	4		18					18:00	44		21				
06:15	5		25					18:15	28		38				
06:30	1		27					18:30	39		38				
06:45	2	12	33	103			115	18:45	39	150	27	124			274
07:00	8		40					19:00	32		34				
07:15	19		48					19:15	24		18				
07:30	18		48					19:30	24		17				
07:45	13	58	35	171			229	19:45	17	97	17	86			183
08:00	15		31					20:00	18		13				
08:15	19		41					20:15	19		18				
08:30	40		31					20:30	28		4				
08:45	14	88	28	131			219	20:45	19	84	6	41			125
09:00	18		24					21:00	8		5				
09:15	18		23					21:15	13		4				
09:30	24		31					21:30	7		7				
09:45	10	70	22	100			170	21:45	11	39	9	25			64
10:00	15		26					22:00	14		2				
10:15	18		27					22:15	13		6				
10:30	13		22					22:30	10		4				
10:45	19	65	25	100			165	22:45	6	43	0	12			55
11:00	17		25					23:00	8		3				
11:15	18		19					23:15	8		3				
11:30	10		25					23:30	4		3				
11:45	18	63	27	96			159	23:45	6	26	1	10			36
Total Vol.		381		790			1171			1207		942			2149

Daily Totals				
NB	SB	EB	WB	Combined
1588	1732			3320

	AM			PM		
Split %	32.5%	67.5%	**35.3%**	**56.2%**	**43.8%**	**64.7%**
Peak Hour	08:15	07:00	**07:00**	16:45	18:15	**16:30**
Volume	91	171	229	186	137	**313**
P.H.F.	0.57	0.89	**0.85**	0.92	0.90	**0.99**

PACIFIC TECHNICAL DATA, LLC