

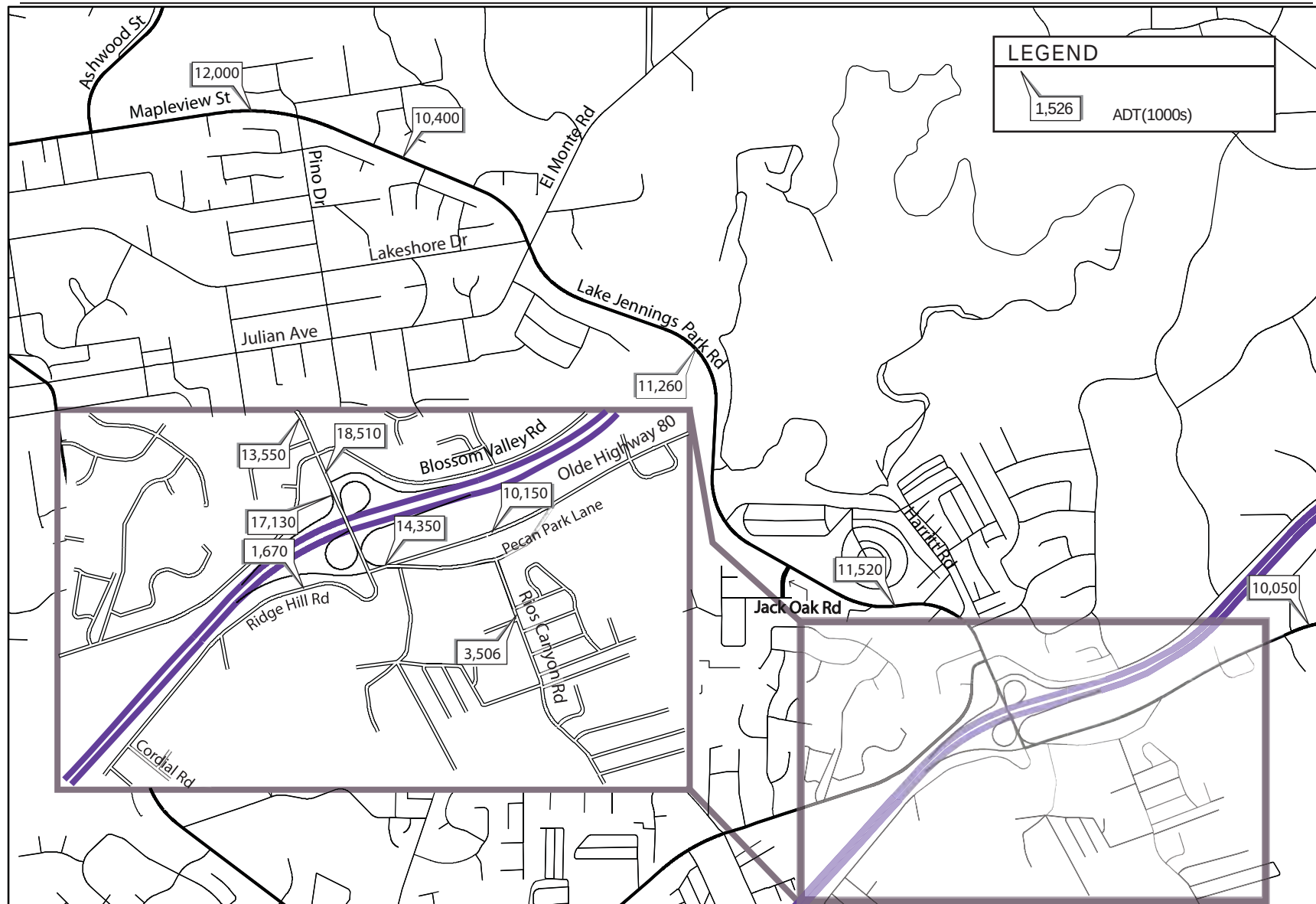
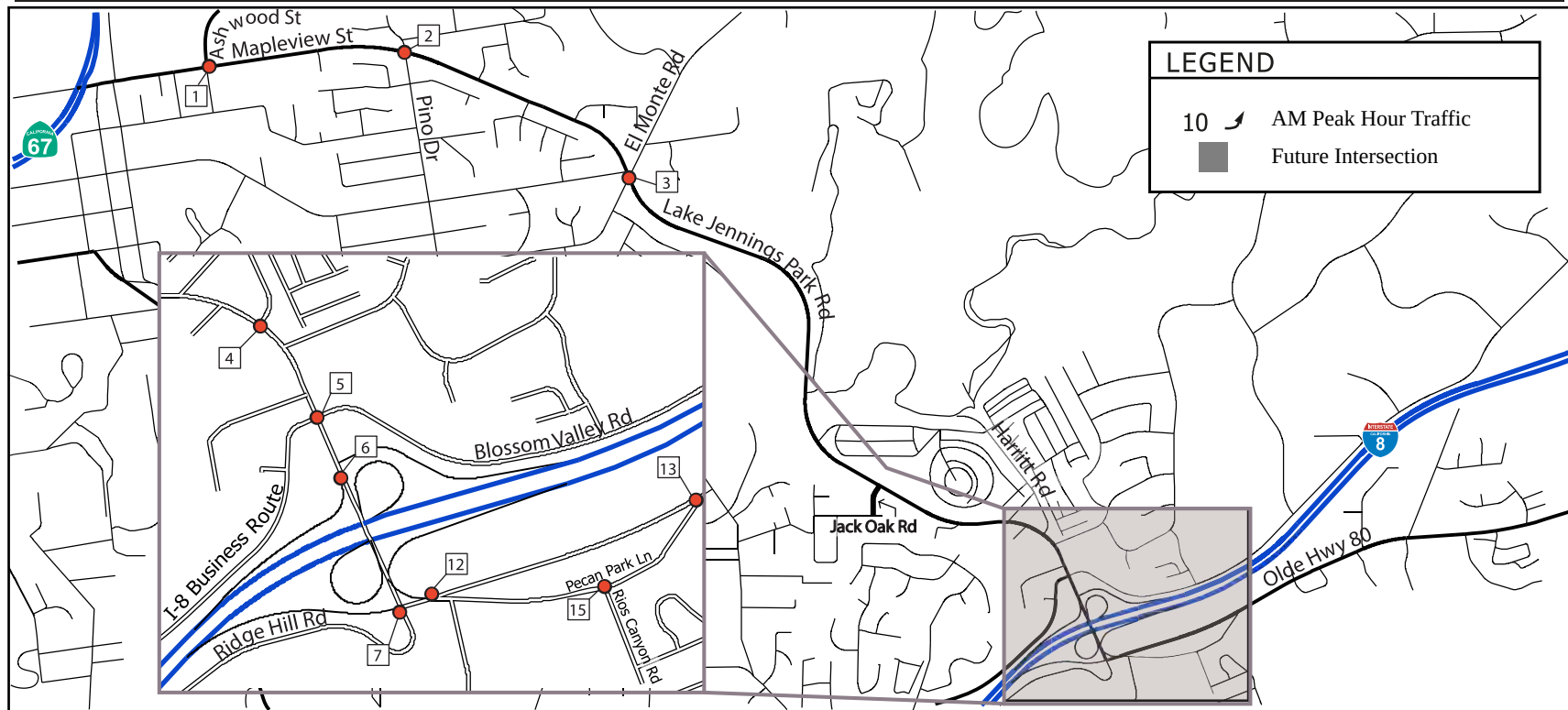


Figure 3-3
Existing Daily Roadway Segment Volumes

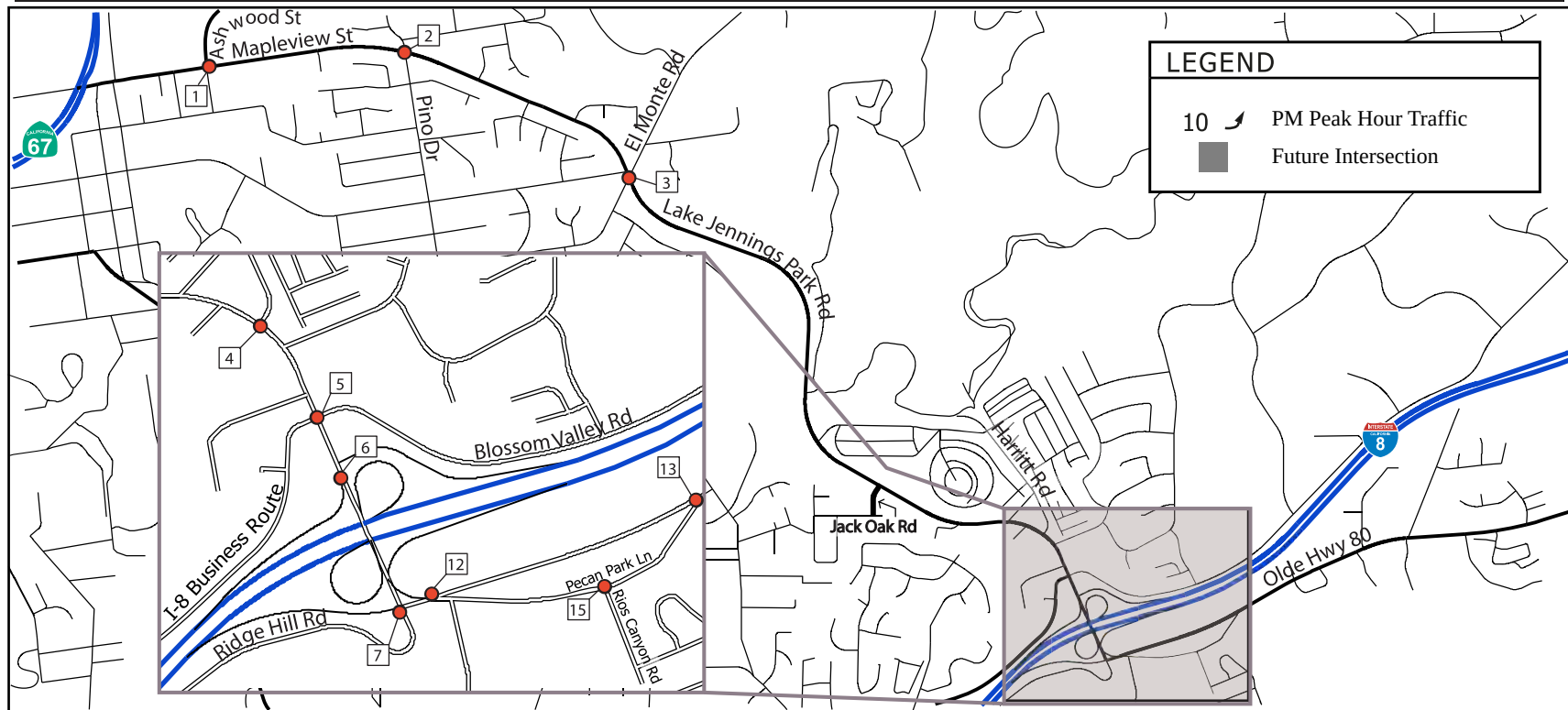




Mapleview St & Ashwood St 436 ↗ 250 153 ↘ 487 129 ↗ 41 260 ↗ 43 211 ↘ 143 58 ↗ 33 1	Mapleview St & Pino Dr 25 ↗ 491 13 ↘ 16 3 ↗ 16 8 ↗ 109 304 ↘ 7 52 ↗ 33 2	Lake Jennings Park Rd & El Monte Rd 16 ↗ 23 8 ↘ 37 17 ↗ 34 57 ↗ 137 26 ↘ 393 96 ↗ 22 3	Lake Jennings Park Rd & Harritt Rd 329 ↗ 30 17 ↘ 96 503 ↗ 38 4	Lake Jennings Park Rd & Blossom Valley Rd 54 ↗ 59 403 ↘ 54 45 ↗ 226 48 ↗ 105 65 ↘ 413 206 ↗ 81 5	Lake Jennings Park Rd & I-8 WB On Ramp 532 ↗ 265 294 ↘ 15 0 ↗ 15 329 ↗ 461 6	Lake Jennings Park Rd & I-8 EB Off Ramp 178 ↗ 508 16 ↘ 26 153 ↗ 26 189 ↗ 54 265 ↘ 26 9 ↗ 26 7	Olde Hwy 80 & Driveway 1 8
Olde Hwy 80 & Driveway 2 9	Olde Hwy 80 & Driveway 3 10	Olde Hwy 80 & Rios Canyon Rd 11	Olde Hwy 80 & Pecan Park Ln West 459 ↗ 4 4 ↘ 110 325 ↗ 110 52 ↘ 110 12	Olde Hwy 80 & Pecan Park Ln East 426 ↗ 11 11 ↘ 11 329 ↗ 19 13 ↘ 13 13	Ridge Hill Rd & Driveway 4 14	Rios Canyon Rd & Pecan Park Ln 1 ↗ 40 40 ↘ 40 4 ↗ 149 144 ↘ 149 149 ↗ 42 15	

Figure 3-4
Existing AM Peak Hour Intersection Volumes





Maplevue St & Ashwood St 356 170 237 141 277 44 375 480 59 17 119 74 1	Maplevue St & Pino Dr 19 15 8 13 311 15 28 523 116 53 33 19 2	Lake Jennings Park Rd & El Monte Rd 33 41 23 27 37 51 41 31 158 84 267 21 3	Lake Jennings Park Rd & Harritt Rd 606 43 20 76 376 100 4	Lake Jennings Park Rd & Blossom Valley Rd 71 536 52 15 24 158 61 32 163 136 470 176 5	Lake Jennings Park Rd & I-8 WB On Ramp 321 510 0 193 16 589 359 6	Lake Jennings Park Rd & I-8 EB Off Ramp 313 27 189 502 25 413 453 37 31 19 7	Olde Hwy 80 & Driveway 1 8
Olde Hwy 80 & Driveway 2 9	Olde Hwy 80 & Driveway 3 10	Olde Hwy 80 & Rios Canyon Rd 11	Olde Hwy 80 & Pecan Park Ln West 407 14 495 134 88 1 4 12	Olde Hwy 80 & Pecan Park Ln East 411 17 500 1 11 21 13	Ridge Hill Rd & Driveway 4 14	Rios Canyon Rd & Pecan Park Ln 1 23 7 136 97 31 15	

Figure 3-5
Existing PM Peak Hour Intersection Volumes



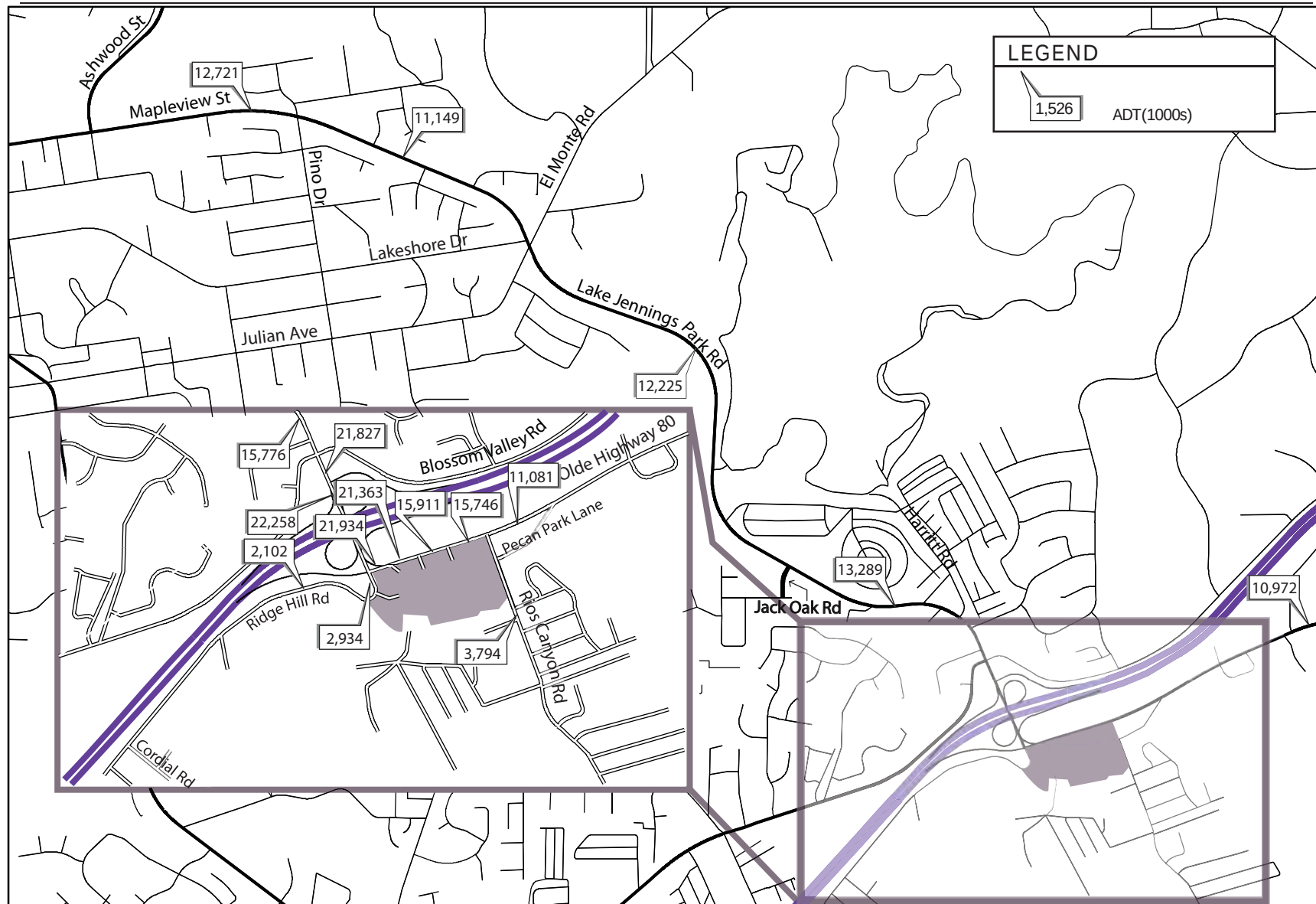
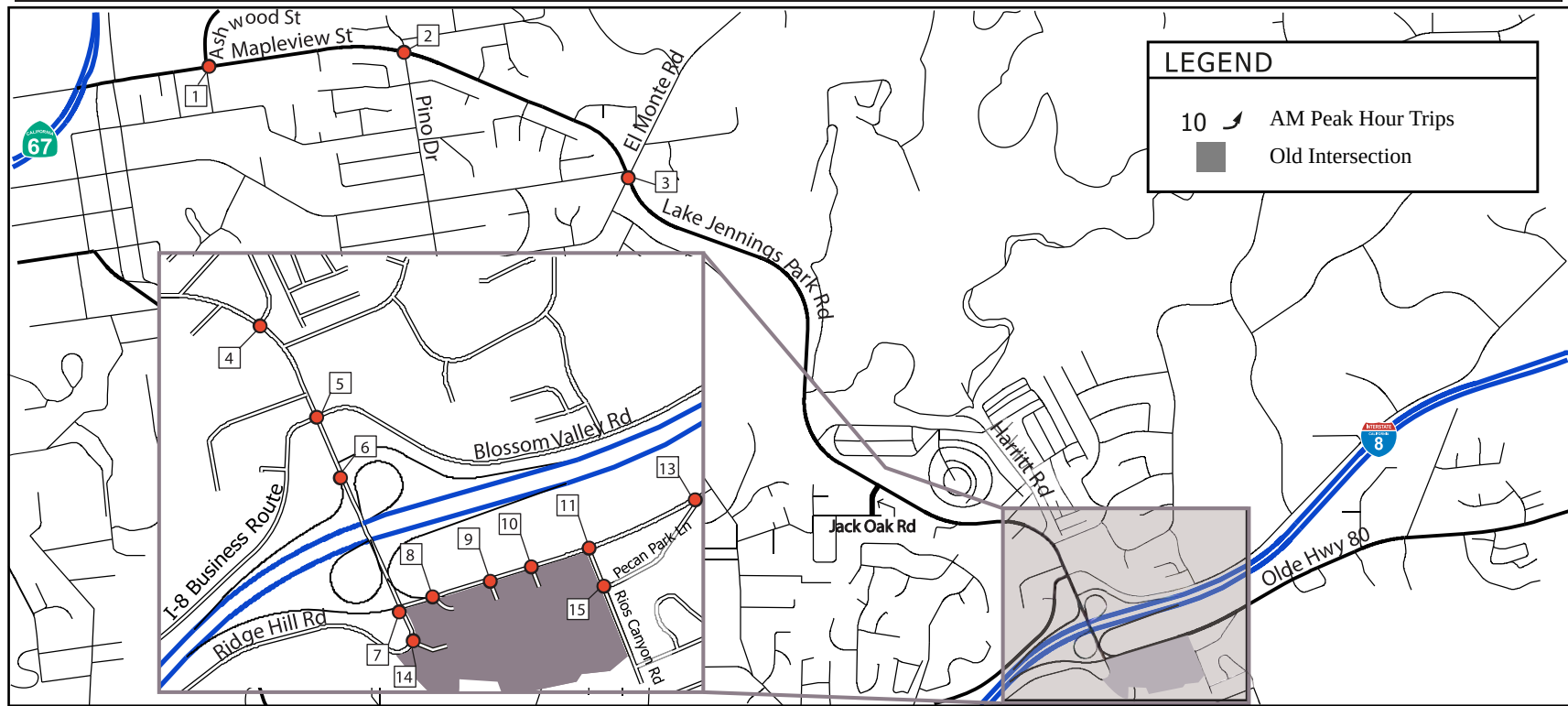


Figure 3-6
Existing With Project Daily Roadway Segment Volumes

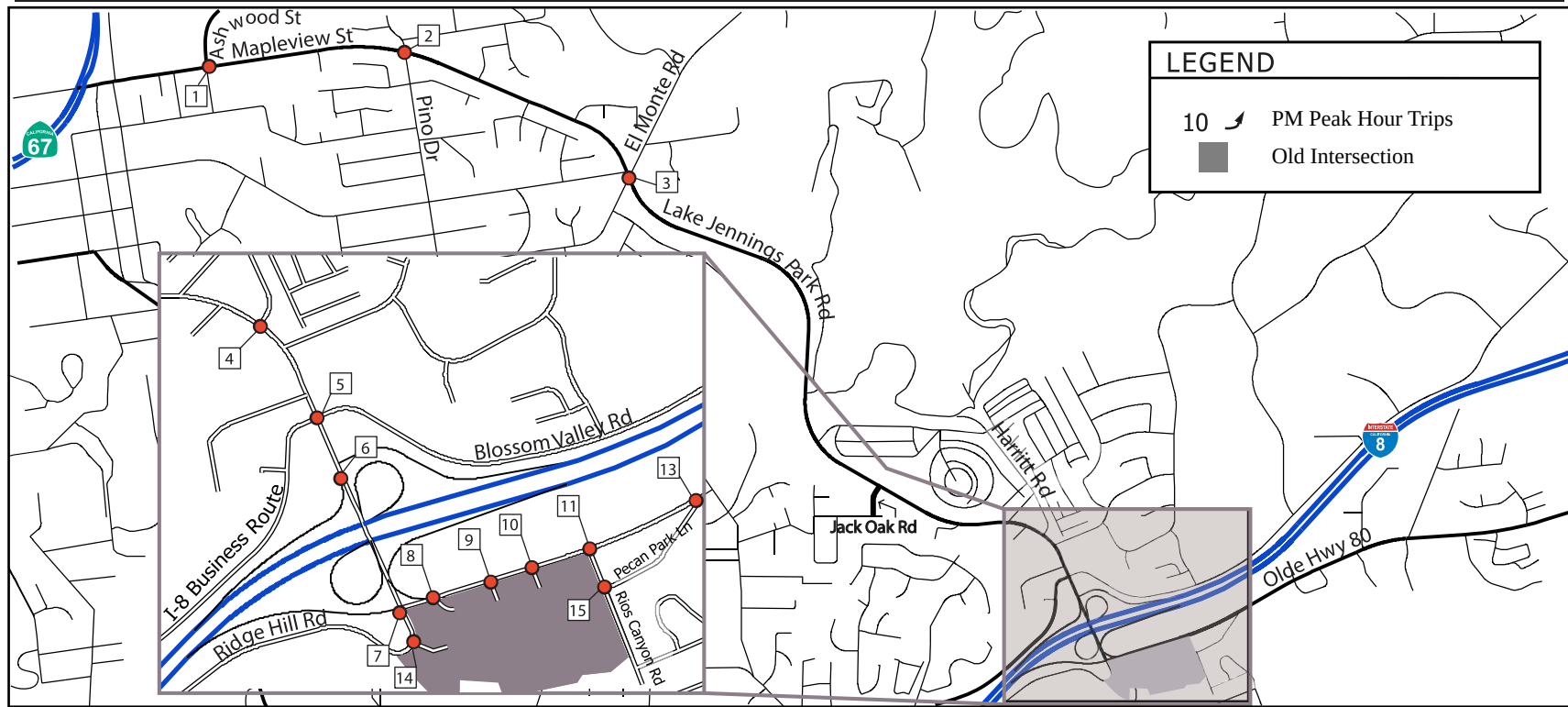




Mapleview St & Ashwood St 1 436 153 253 496 42 260 223 58 43 143 34	Mapleview St & Pino Dr 2 25 13 3 504 16 8 322 52 109 7 33	Lake Jennings Park Rd & El Monte Rd 3 16 27 17 23 37 34 57 26 101 141 406 22	Lake Jennings Park Rd & Harritt Rd 4 376 17 30 101 538 42	Lake Jennings Park Rd & Blossom Valley Rd 5 54 462 45 59 54 234 48 65 227 121 457 87	Lake Jennings Park Rd & I-8 WB On Ramp 6 532 382 265 23 395 524	Lake Jennings Park Rd & I-8 EB Off Ramp 7 178 31 264 657 26 189 362 22 84 28	Olde Hwy 80 & Driveway 1 8 686 559 31
Olde Hwy 80 & Driveway 2 9 537 42 393 166 149 22	Olde Hwy 80 & Driveway 3 10 579 403 12 9	Olde Hwy 80 & Rios Canyon Rd 11 458 11 349 64 121 32	Olde Hwy 80 & Pecan Park Ln West 12 457 370 5 5	Olde Hwy 80 & Pecan Park Ln East 13 457 370 5 5	Ridge Hill Rd & Driveway 4 14 42 28 30 11 82 15	Rios Canyon Rd & Pecan Park Ln 15 75 10 153 5	

Figure 3-7
Existing With Project AM Peak Hour Intersection Volumes





Maplevue St & Ashwood St 356 170 245 149 301 46 375 504 59 17 119 76 1	Maplevue St & Pino Dr 19 15 8 13 346 15 28 558 116 53 33 19 2	Lake Jennings Park Rd & El Monte Rd 33 38 23 27 37 51 41 31 168 94 304 21 3	Lake Jennings Park Rd & Harritt Rd 693 43 20 86 463 110 4	Lake Jennings Park Rd & Blossom Valley Rd 71 646 52 15 24 172 61 32 203 176 580 190 5	Lake Jennings Park Rd & I-8 WB On Ramp 321 674 193 31 753 516 6	Lake Jennings Park Rd & I-8 EB Off Ramp 313 55 334 866 25 413 632 61 103 19 7	Olde Hwy 80 & Driveway 1 868 970 57 8
Olde Hwy 80 & Driveway 2 504 77 665 305 364 34 9	Olde Hwy 80 & Driveway 3 581 697 22 23 10	Olde Hwy 80 & Rios Canyon Rd 470 17 554 166 111 32 11	Olde Hwy 80 & Pecan Park Ln West 12	Olde Hwy 80 & Pecan Park Ln East 468 567 5 6 13	Ridge Hill Rd & Driveway 4 89 62 72 28 50 28 14	Rios Canyon Rd & Pecan Park Ln 183 10 143 6 15	

Figure 3-8
Existing With Project PM Peak Hour Intersection Volumes



3.4 EXISTING WITH PROJECT CONDITIONS ROADWAY SEGMENT ANALYSIS

Table 3-1 summarizes the roadway segment analysis results for existing conditions without and with the project. The roadway segment analysis methodology is described in Section 2.2.1 of this report. Without any improvements by the project, there would be deficient and impacted segments at the following eight locations:

- Olde Highway 80 from Lake Jennings Park Road to Project Driveway 1
- Olde Highway 80 from Project Driveway 1 to Project Driveway 2
- Olde Highway 80 from Project Driveway 2 to Project Driveway 3
- Olde Highway 80 from Project Driveway 3 to Rios Canyon Road
- Olde Highway 80 from Rios Canyon Road to Pecan Park Lane
- Lake Jennings Park Road from Harritt Road to Blossom Valley Road
- Lake Jennings Park Road from Blossom Valley Road to I-8 Westbound Off-Ramp
- Lake Jennings Park Road from I-8 Westbound Off-Ramp to Olde Highway 80

As shown in Table 3-1, the above impacted segments would all be mitigated to avoid direct impacts assuming the project would make the fronting improvements along Olde Highway 80 and the off-site improvements proposed for Lake Jennings Park Road between Olde Highway 80 and Harritt Road. The recommended roadway improvements are shown in Appendix D.

3.5 EXISTING WITH PROJECT CONDITIONS INTERSECTION ANALYSIS

Table 3-2 summarizes the intersection operations analysis results for existing conditions without and with the project. The intersection operations analysis methodology is described in Section 2.2.3 of this report. Existing conditions intersection operations analysis worksheets are included in Appendix E. Existing With Project conditions intersection operations analysis worksheets are included in Appendix F. Without any improvements by the project, most of the study area intersections would operate at acceptable service levels except for the following two intersections where they would be directly impacted and would have less than adequate service levels, particularly during the PM peak hour:

- Lake Jennings Park Road and I-8 Westbound Off-Ramp
- Lake Jennings Park Road and I-8 Eastbound Off-Ramp

Again, the recommended roadway improvements shown in Appendix D would mitigate the intersection operations to avoid direct impacts at the I-8 Westbound and Eastbound Ramp intersections on Lake Jennings Park Road.

3.6 EXISTING WITH PROJECT CONDITIONS FREEWAY MAINLINE ANALYSIS

Table 3-3 summarizes the freeway mainline analysis results for existing conditions without and with the project. The intersection operations analysis methodology is described in Section 2.2.4 of this report. As shown in Table 3-3, the study area freeway mainline links would operate at adequate service levels and there is no direct impact by the project.

Table 3-1 - Existing With Project Conditions Roadway Segment Analysis Summary

Roadway Segment	Existing Lanes / Configuration	LOS E Cap.	Existing		Existing With Project		Δ Traffic	Significant?	With Mitigation		
			ADT	LOS	ADT	LOS			New Lanes/ Config.	New LOS E Cap.	LOS
Olde Highway 80											
Lake Jennings Park Rd. to Dwy 1	2CCITL	19,000	14,350	E	21,934	F	7,584	Yes	4BITL	28,000	C
Project Dwy 1 to Dwy 2	2CCnM	16,200	14,350	E	21,363	F	7,013	Yes	4BITL	28,000	C
Project Dwy 2 to Dwy 3	2CCnM	16,200	14,350	E	15,911	E	1,561	Yes	4BITL	28,000	A
Project Dwy 3 to Old Rios Canyon Rd.	2CCnM	16,200	14,350	E	15,746	E	1,396	Yes	4BITL	28,000	A
Rios Canyon Rd. to Pecan Park Ln.	2CCnM	16,200	10,150	D	11,081	E	931	Yes	2CCITL	19,000	D
Pecan Park Ln. to Chimney Rock Ln.	2CCITL	19,000	10,050	D	10,972	D	922	No			
Mapleview Street											
Ashwood St. to Pino Dr.	4MRITL	34,200	12,000	A	12,721	A	721	No			
Lake Jennings Park Road											
Pino Dr. to El Monte Rd.	4MRITL	34,200	10,400	A	11,149	A	749	No			
El Monte Rd. to Jack Oak Rd.	2CCITL	19,000	11,260	D	12,225	D	965	No			
Jack Oak Rd. to Harritt Rd.	2CCITL	19,000	11,520	D	13,289	D	1,769	No			
Harrit Rd. to Blossom Valley Rd.	2CCITL	19,000	13,550	E	15,776	E	2,226	Yes	4BITL	28,000	A
Blossom Valley Rd. to I-8 WB Off-Ramp	2CCITL	19,000	18,510	E	21,827	F	3,317	Yes	4BITL	28,000	C
I-8 WB Off-Ramp to Olde Highway 80	2CCnM	16,200	17,130	F	22,258	F	5,128	Yes	4BITL	28,000	D
Olde Highway 80 to Driveway 4	2CCnM	16,200	1,670	A	2,934	B	1,264	No			
Ridge Hill Road											
Lake Jennings Park Rd. to Cordial Rd.	2RC	4,500	1,670	Better	2,102	Better than C	432	No			
Rios Canyon Road											
South of Olde Highway 80	2LCRS	9,700	3,506	A	3,794	A	288	No			

Abbreviations: 2CCnM is a 2 lane Community Collector with no Median.
 2CCITL is a 2 lane Community Collector with an Intermittent Turn Lane.
 4MRITL is a 4 lane Major Road with an Intermittent Turn Lane.
 4BITL is a Boulevard with an Intermittent Turn Lane
 2RC is a 2 lane Residential Collector
 2LCRS is a 2 lane Light Collector with a Reduced Shoulder

**Table 3-2 - Existing With Project Conditions
Intersection Operations Analysis Summary**

Intersection	Existing		Existing With Project		Δ Delay	PH Trips on Critical Movement	Signif?	With Mitigation	
	Delay	LOS	Delay	LOS				Delay	LOS
AM Peak Hour									
1. Mapleview Street and Ashwood Street	27.7	C	27.5	C	-0.2	-	No		NA
2. Mapleview Street and Pino Drive	18.6	B	18.5	B	-0.1	-	No		NA
3. Lake Jennings Park Road and El Monte Road	14.5***	B	15.3***	C	0.8	-	No		NA
4. Lake Jennings Park Road and Harrit Road	11.6	B	11.7	B	0.1	-	No		NA
5. Lake Jennings Park Road and Blossom Valley Road	30.6	C	35.3	D	4.7	-	No		NA
6. Lake Jennings Park Road and I-8 WB Off Ramp*	13.6	B	15.3	C	1.7	-	No	12.2	B
7. Lake Jennings Park Road and I-8 EB Off Ramp**	9.5***	A	12.7***	B	3.2	-	No	15.3	B
8. Olde Highway 80 and Project Driveway 1	NA	NA	0.0	A	NA	-	No		NA
9. Olde Highway 80 and Project Driveway 2	NA	NA	10.7	B	NA	-	No		NA
10. Olde Highway 80 and Project Driveway 3	NA	NA	9.2	A	NA	-	No		NA
11. Olde Highway 80 and Rios Canyon Road	NA	NA	15.5	C	NA	-	No		NA
12. Olde Highway 80 and Pecan Park Lane West	23.3	C	NA	NA	NA	-	No		NA
13. Olde Highway 80 and Pecan Park Lane East	14.1	B	10.5	B	-3.6	-	No		NA
14. Ridge Hill Drive and Project Driveway 4	NA	NA	7.5	A	NA	-	No		NA
15. Rios Canyon Road and Pecan Park Lane	10.7	B	9.9	A	-0.8	-	No		NA
PM Peak Hour									
1. Mapleview Street and Ashwood Street	32.6	C	35.2	D	2.6	-	No		NA
2. Mapleview Street and Pino Drive	19.6	B	19.6	B	0.0	-	No		NA
3. Lake Jennings Park Road and El Monte Road	13.9***	B	15.6***	C	1.7	-	No		NA
4. Lake Jennings Park Road and Harrit Road	8.6	A	9.6	A	1.0	-	No		NA
5. Lake Jennings Park Road and Blossom Valley Road	32.8	C	54.9	D	22.1	-	No		NA
6. Lake Jennings Park Road and I-8 WB Off Ramp*	19.0	C	72.8	F	53.8	20	Yes	18.8	C
7. Lake Jennings Park Road and I-8 EB Off Ramp**	15.3***	C	59.4***	F	44.1	205	Yes	24.4	C
8. Olde Highway 80 and Project Driveway 1	NA	NA	0.0	A	NA	-	No		NA
9. Olde Highway 80 and Project Driveway 2	NA	NA	19.6	B	NA	-	No		NA
10. Olde Highway 80 and Project Driveway 3	NA	NA	9.2	A	NA	-	No		NA
11. Olde Highway 80 and Rios Canyon Road	NA	NA	19.6	C	NA	-	No		NA
12. Olde Highway 80 and Pecan Park Lane West	29.0	D	NA	NA	NA	-	No		NA
13. Olde Highway 80 and Pecan Park Lane East	14.8	B	12.3	B	-2.5	-	No		NA
14. Ridge Hill Drive and Project Driveway 4	NA	NA	7.7	A	NA	-	No		NA
15. Rios Canyon Road and Pecan Park Lane	9.8	A	10.6	B	1.1	-	No		NA

* Mitigation: Expand Lake Jennings Park Road from a 2 lane Community Collector to a 4 lane Major Road

** Mitigation: Signalize the intersection

*** Average delay calculation for the AWS intersection

Table 3-3 - Existing With Project Conditions Freeway Mainline Analysis Summary

									Existing			Existing With Project				
Freeway Mainline Segment	Direction of Travel	Lanes (1-way)	Capacity (1)	ADT One-Way	Peak Hour Volume at LJPR	Peak Hour One-Way Volume	Peak Hour Factor	Truck Factor (3)	Peak Volume (PCE) (4)	V/C	LOS (5)	Peak Volume (PCE)	V/C	LOS (5)	Increase in VC	Signifi- cant?
Weekday AM Peak Hour																
I-8 West of Lake Jennings Park Road	West	2	4,600	68,000	2,220	3,224	95.0%	97.18%	3,492	0.763	C	3,509	0.763	C	0.004	No
I-8 East of Lake Jennings Park Road	West	2	4,600	53,000	2,220	2,513	95.0%	97.18%	2,722	0.59	B	2,724	0.59	B	0.000	No
Weekday PM Peak Hour																
I-8 West of Lake Jennings Park Road	East	2	4,600	68,000	2,481	3,311	95.0%	97.18%	3,586	0.78	C	3,627	0.788	C	0.009	No
I-8 East of Lake Jennings Park Road	East	2	4,600	53,000	2,481	2,581	95.0%	97.18%	2,796	0.61	B	2,801	0.61	B	0.001	No

1. Obtained from balancing Caltrans peak hour mainline volume by the Caltrans

2. This is the peak hour peak direction volume before adjusting for heavy vehicles. In the weekay PM peak hour and Saturday Midday hour, the peak direction is NB on Interstate 15.

3. Assume 4% trucks and 2%recreational vehicles for a total of 6% heavy vehicles.

HVF = $1 / (1 + \text{Percent Truck}(\text{Truck Factor}-1) + \text{Percent Recreation Vehicle}(\text{RV Factor}-1))$

Truck Factor (<2% grade, 5% trucks) = 1.5

RV Factor (<2% grade, 2% RV) = 1.2

HVF= 97.18%

4. PCE=PHV/(PHF*HVF)

5. Level of service based on SANTEC Guidelines Attachment C D/C ratio.

3.7 EXISTING WITH PROJECT CONDITIONS RAMP METER ANALYSIS

Table 3-4 summarizes the ramp meter analysis results for existing conditions without and with the project. The ramp meter analysis methodology is described in Section 2.2.5 of this report. As shown in Table 3-4, there is no direct impact by the project on the ramp meter queuing.

Table 3-4 - Existing With Project Conditions Ramp Meter Analysis Summary

<i>Location</i>	<i>Peak</i>	<i>Meter</i>	<i>Existing</i>				<i>Existing With Project</i>					
			<i>Demand</i>	<i>Excess Demand</i>	<i>Avg. Delay</i>	<i>Avg. Queue</i>	<i>Demand</i>	<i>Excess Demand</i>	<i>Avg.</i>	<i>Avg. Queue</i>	<i>Increase in Delay (Minutes)</i>	<i>Significant?</i>
I-8 WB from NB Lake Jennings Park Road	AM	636	449	0	0	0	532	0	0	0	0	No
I-8 WB from SB Lake Jennings Park Road	AM	636	532	0	0	0	532	0	0	0	0	No

CHAPTER 4

CUMULATIVE CONDITIONS

Cumulative baseline conditions represent opening day of the proposed project. Project traffic is added to the Cumulative baseline volumes to create the “With Project” scenario.

4.1 CUMULATIVE BASELINE TRAFFIC VOLUMES

Traffic growth on roadways is a function of the expected land development, economic activity, and changes in demographics. Several methods can be used to estimate this growth.

For this analysis it is conservatively assumed that every parcel builds out to the General Plan designation as modeled by SANDAG for the year 2035 and that all General Plan Amendments within the study area are approved and implemented. Two cumulative projects have been identified that we included data for in our analysis. They are the Lakeside Tractor Supply project directly across the street from the shopping center which has approximately 900 daily trips, and the other project is an 18 unit residential project on Lake Jennings Park Road just to the north of I-8 which generates 180 daily trips. For more specific information concerning these cumulative projects see Appendix G.

The Cumulative Without Project daily traffic volumes are shown in Figure 4-1. The Cumulative Without Project AM and PM peak hour intersection volumes are shown in Figures 4-2 and 4-3, respectively.

4.2 CUMULATIVE WITH PROJECT CONDITIONS TRAFFIC VOLUMES

The Cumulative With Project daily traffic volumes are shown in Figure 4-4. The Cumulative With Project AM and PM peak hour intersection volumes are shown in Figures 4-5 and 4-6, respectively.

4.3 CUMULATIVE WITH PROJECT CONDITIONS ROADWAY SEGMENT ANALYSIS

Table 4-1 summarizes the roadway segment analysis results for Cumulative conditions without and with the project. The roadway segment analysis methodology is described in Section 2.2.1 of this report. Without any improvements by the project, there would be deficient and impacted segments at the following nine locations:

- Olde Highway 80 from Lake Jennings Park Road to Project Driveway 1
- Olde Highway 80 from Project Driveway 1 to Project Driveway 2
- Olde Highway 80 from Project Driveway 2 to Project Driveway 3
- Olde Highway 80 from Project Driveway 3 to Rios Canyon Road
- Olde Highway 80 from Rios Canyon Road to Pecan Park Lane
- Lake Jennings Park Road from Jack Oak Road to Harritt Road
- Lake Jennings Park Road from Harritt Road to Blossom Valley Road
- Lake Jennings Park Road from Blossom Valley Road to I-8 Westbound Off-Ramp
- Lake Jennings Park Road from I-8 Westbound Off-Ramp to Olde Highway 80

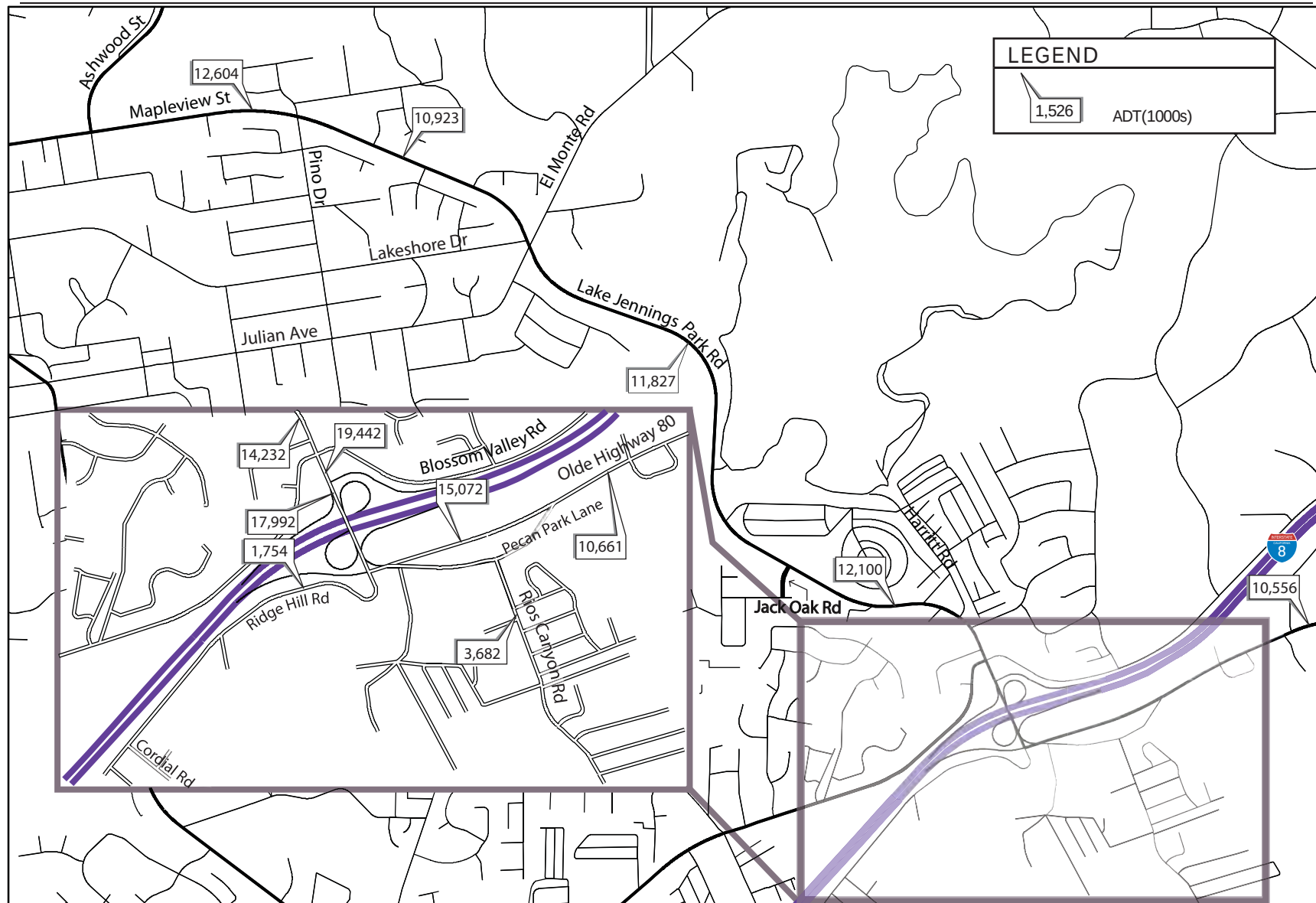


Figure 4-1
Cumulative Without Project Daily Roadway Segment Volumes

