### **MEMO**

**To:** Natalie Porter, El Dorado Long Range Planning

**From:** Jonathan Flecker, KDA

**Date:** September 27, 2017

**Re:** Update to Piedmont Oak Estates Traffic Impact Analysis

We have updated two scenarios of the Piedmont Oak Estates traffic study completed December 19, 2014. The previous short term future scenario has been revised to reflect the County's current TIS standard of 10 years from Existing, i.e. 2027. The Cumulative 2035 scenario has also been updated to reflect the County's current travel demand model. In addition, the project's residential component has been reduced, from 104 single family residential (SFR) units to 75 SFR units.

New traffic counts were completed along Missouri Flat Road during the first week of May 2017. These counts were compared to the traffic volumes used in the previously completed traffic study and included peak hour traffic volume counts presented in the Diamond Springs El Dorado Area Mobility and Livable Community Plan technical report, as well as supplemental traffic counts conducted in July 2014. The July counts were adjusted based on turning movement counts that were conducted at adjacent intersections while school was in session.

The intersection traffic was reviewed to determine the percentage increase or decrease in traffic volumes between 2014 and 2017. Eight intersections experienced increases in traffic volumes of 8.0% or less while three intersections, Missouri Flat Road at Industrial Drive, Missouri Flat Road at Enterprise Drive and Missouri Flat Road at Pleasant Valley Road experienced traffic volume increases of up to 11.4%. Generally accepted practice is to conduct peak hour traffic counts for one day during the mid-week (Tuesday, Wednesday or Thursday) during a typical week. Traffic counts will vary daily and the FHWA's *Traffic Monitoring Guide* identifies that volumes within a 10% variance are acceptable. The majority of intersections meet the FHWA criteria.

Based on this information and an evaluation of the variance in traffic volumes between 2014 and 2017, the traffic volumes used in preparation of the December 2014 report were used as the basis for existing conditions. A new existing analysis was therefore not undertaken, as all intersections previously operated within acceptable County Level of Service (LOS) thresholds.

### **ATTACHMENT 15**

**KD** Anderson & Associates, Inc.

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#### NEAR TERM (2027) AND LONG TERM (2035) CUMULATIVE IMPACTS

The County's Travel Demand Model (TDM) forecasts for 2035 are the basis for projecting Near Term and Cumulative intersection turning movements.

The analysis of the long range 2035 cumulative condition is intended to consider the impact of this project within the context of buildout of the General Plan circulation element occurring in 2035.

#### **Roadway Conditions**

Roadways in 2035 are generally projected to remain with their current lane configurations with the following changes to the roadway network:

- The Diamond Springs Parkway, north of China Garden Road, will connect Missouri Flat Road to Diamond Road (SR 49) and is projected to be completed by 2027. This roadway will include two through lanes in each direction with turn lanes at key intersections. Missouri Flat Road will become the west and south legs of the Missouri Flat Road / Diamond Springs Parkway intersection.
- Missouri Flat Road south of Diamond Springs Parkway will be widened to include two through lanes in each direction by 2035.
- Installation of a traffic signal at the Missouri Flat Road / Industrial Drive intersection as identified in the *El Dorado County Public Safety Facility Project Draft EIR*.
- Side street approaches to the Missouri Flat Road / China Garden Road intersection will be limited to right turns only as a result of the mitigations identified in the *El Dorado County Public Safety Facility Project Draft EIR*. While the DEIR noted two alternative mitigations for this intersection, County staff determined that installation of a traffic signal at China Garden Road is not the preferred alternative based on the installation of the traffic signal at Industrial Drive as noted above.
- The Missouri Flat Road / Diamond Springs Parkway intersection will include two left turn lanes and a through-right lane along the northbound approach, a left turn lane, two through lanes and a right turn lane along the eastbound approach, a single lane along the southbound approach and a left turn lane, a through lane and a through-right lane on the westbound approach. The intersection will be signalized.
- The Diamond Drive / Diamond Springs Parkway intersection will consist of two northbound left turn lanes and a through lane along the northbound approach while the southbound approach will include a through lane and a right turn lane. The



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eastbound approach will include a right turn lane and a left turn lane. This intersection will be signalized.

- The Diamond Springs Parkway / Throwita Way intersection will consist of two eastbound through lanes, a left turn lane and a right turn lane while the westbound approach will consist of a left turn lane, a through lane and a shared through-right lane. The northbound approach will consist of a left turn lane and a shared through-right lane while the southbound approach is a shared left-through-right lane. This intersection will be signalized.

#### 2035 Traffic Forecasts

Year 2035 traffic forecasts were based on the most recent countywide traffic model modified to include the four-lane section of Missouri Flat Road south of Diamond Springs Parkway. Projected 2035 roadway volumes along Missouri Flat Road were reviewed and approved by County staff as part of the Creekside Center Traffic Impact Analysis.

Two methods described below were used to develop forecasts of future Year 2035 peak hour intersection turning movement traffic volumes on other roadways for this traffic impact study:

**Method #1** was used at existing intersections that would not have legs added to the intersection in the future, and would not experience substantial unbalanced increases in traffic volumes (substantial increases in traffic volumes on some legs of the intersection, but not on other legs of the intersection). At these intersections, existing turning movement count data are available, and can be increased by application of model-generated growth factors. The intersection of Missouri Flat and Forni Road is an example of an intersection in this category.

**Method #2** was used at new intersections, intersections that would have added legs in the future, or would experience substantial unbalanced increases in traffic volumes. At these intersections, existing turning movement count data are not available, or cannot be validly increased by application of model-generated growth factors. The intersection of Diamond Springs Parkway and Missouri Flat Road is example of an intersection in this category.

**Method #1.** In Method #1, peak hour traffic volumes from the travel model was used to generate growth factors. These growth factors were applied to existing peak hour intersection turning movement traffic volumes. The development of future year intersection turning movement traffic volumes requires that the turning movements at each intersection "balance". To achieve the balance, inbound traffic volumes must equal the outbound traffic volumes, and the volumes must be distributed among the various left-turn, through, and right-turn movements at each intersection. The "balancing" of future year intersection turning movement traffic

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volumes was conducted using methods described in the Transportation Research Board's (TRB's) National Cooperative Highway Research Program (NCHRP) Report 255, *Highway Traffic Data for Urbanized Area Project Planning and Design*. The NCHRP 255 method applies the desired peak hour directional volumes to the intersection turning movement volumes, using an iterative process to balance and adjust the resulting forecasts to match the desired peak hour directional volumes.

**Method #2.** In Method #2, where the road configuration is expected to change between the current year and 2035 the model forecasts were used to determine approach and departure volumes at the new intersections. As noted in the County's TIS Guidelines the forecasted model volumes were reviewed for reasonableness and adjusted as necessary. Balancing of the future turning movement traffic volumes were again conducted using the methods from NCHRP 255.

#### **Near Term Traffic Conditions**

Near Term traffic forecasts were based on the conditions projected ten years from Existing conditions (2027) using straight line interpolation between existing volumes and 2035 projections. The roadway network was evaluated in this scenario based on the County's 10-year CIP. This included construction of the Diamond Springs Parkway, but excludes widening of Missouri Flat Road south of China Garden Road.

Intersection turning movements for Near Term 2027 conditions are presented in Figure 1.

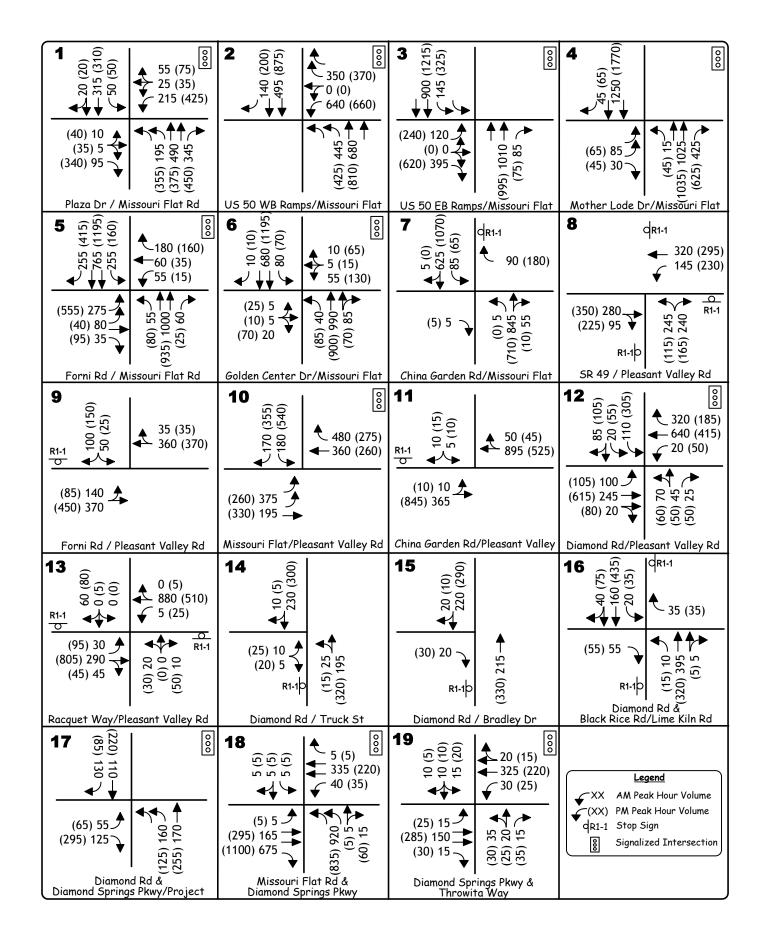
**Intersection Levels of Service**. Year 2027 volumes were used to calculate operating Levels of Service at selected intersections. Table 1 displays the a.m. and p.m. peak hour Levels of Service at each study intersection in the 2027 condition. All intersections will operate within the County's LOS thresholds, at LOS E or better.

**Traffic Signal Warrants.** The Pleasant Valley Road / SR 49 - South intersection meets the peak hour signal warrant in both the a.m. and p.m. peak hours while operating at a worst-case LOS D.

**Intersection Queues.** Table 2 presents information regarding 2027 peak period queuing in lanes at signalized study intersections. In each case, the available storage has been presented along with current peak hour traffic volumes and the 95<sup>th</sup> percentile queue length. On multiple lane approaches the longest queue amongst a group of common lanes has been noted.

Most intersections have lane storage capacity that can accommodate peak period queues. Those 95<sup>th</sup> percentile queues with length exceeding the available storage have been highlighted. The 95<sup>th</sup> percentile queue exceeds available storage in twelve locations.





# 2027 NO PROJECT TRAFFIC VOLUMES AND LANE CONFIGURATIONS

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#### TABLE 1 PEAK HOUR INTERSECTION LEVELS OF SERVICE 2027 PLUS PROJECT CONDITIONS

			AM Pea	ak Hour			PM Pe	ak Hour		
			2027	2027 PI	us Project		2027	2027 I	Plus Project	Traffic
			Average		Average		Average		Average	Signal
Location	Control	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	Warranted?
1. Missouri Flat Rd / Plaza Dr	Signal	В	14.7	В	14.6	C	27.4	С	27.7	N/A
2. Missouri Flat Rd / WB US 50 ramps	Signal	В	18.3	В	18.7	В	18.8	С	21.8	N/A
3. Missouri Flat Rd / EB US 50 ramps	Signal	В	12.7	В	13.0	С	24.3	С	25.8	N/A
4. Missouri Flat Rd / Mother Lode Dr	Signal	A	9.8	A	9.7	В	18.1	C	21.2	N/A
5. Missouri Flat Rd / Forni Rd	Signal	C	26.7	С	29.5	D	35.7	D	36.7	N/A
6. Missouri Flat Rd / Golden Center Dr	Signal	В	17.5	В	17.4	С	31.0	D	35.2	N/A
7. Missouri Flat Rd / China Garden Rd	EB/WB									Yes†
NB Left	Stop	A	5.9	A	6.0	♦	$\Diamond$	♦	♦	
SB Left		В	14.2	В	12.6	A	8.1	A	8.4	
EB Right		A	6.7	В	10.1	A	9.9	В	10.2	
WB Right		A	9.0	A	6.5	C	17.8	C	18.8	
8. Pleasant Valley Rd (SR 49) / SR 49 - South	AWS Stop	C	19.1	C	22.4	D	26.8	D	25.3	Yes
9. Pleasant Valley Rd (SR 49) / Forni Rd	SB Stop									Yes†
SB		E	35.7	F	51.6	В	13.6	В	12.6	
EB Left		A	6.3	A	6.2	A	6.4	A	6.4	
10. Missouri Flat Rd / Pleasant Valley Rd (SR 49)	Signal	C	23.9	С	28.1	С	24.6	С	22.7	N/A
11. Pleasant Valley Rd (SR 49) / China Garden Rd	SB Stop									No
SB		В	14.4	В	14.5	В	11.8	В	12.6	
EB Left		В	14.1	В	12.2	В	10.8	Α	9.9	

<sup>‡</sup> meets volume portion of warrant in PM peak hour

Red indicated threshold exceeded



<sup>†</sup> meets volume portion of warrant in AM and PM peak hours

<sup>♦</sup> no delay reported

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# TABLE 1 (cont'd) PEAK HOUR INTERSECTION LEVELS OF SERVICE 2027 PLUS PROJECT CONDITIONS

			AM Pea	ık Hour			PM Pea	ak Hour		
		2	2027	2027 Pl	us Project	2	2027	2027 PI	us Project	Traffic
			Average		Average		Average		Average	Signal
Location	Control	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	Warranted?
12. Diamond Rd (SR 49) / Pleasant Valley Rd (SR 49)	Signal	В	19.8	C	20.0	C	20.2	C	20.9	N/A
13. Pleasant Valley Rd / Racquet Way	NB/SB									Yes‡
NB	Stop	C	15.3	В	13.4	С	20.2	C	22.2	
SB		В	10.5	A	9.8	A	7.5	A	8.5	
EB Left		A	7.8	A	6.5	A	5.2	A	5.1	
WB Left		A	8.2	A	6.5	В	11.0	В	11.3	
14. Diamond Road (SR 49) / Truck St	EB Stop									No
NB Left		A	2.9	A	2.9	A	3.1	A	3.0	
EB		A	4.9	A	5.1	A	5.7	A	5.7	
15. Diamond Road (SR 49) / Bradley Dr	EB Stop									No
EB		A	2.6	A	2.8	A	2.8	A	3.1	
16. Diamond Rd (SR 49) / Lime Kiln Rd – Black Rice Ln	EB/WB									Yes‡
NB Left	Stop	A	4.0	A	3.6	A	6.0	A	6.6	
SB Left		A	4.2	A	3.8	A	3.9	A	4.2	
EB Right		A	3.2	A	3.2	A	4.8	A	5.1	
WB Right		A	4.5	A	4.1	A	3.4	A	3.5	
17. Diamond Road (SR 49) / Diamond Springs Parkway	Signal	A	6.0	A	8.0	A	9.3	В	11.4	N/A
18. Diamond Springs Parkway / Missouri Flat Road	Signal	В	13.1	В	12.7	В	17.5	В	17.4	N/A
19. Diamond Springs Parkway / Throwita Way	Signal	В	14.2	В	14.7	В	14.3	В	14.8	N/A

<sup>‡</sup> meets volume portion of warrant in PM peak hour

Red indicated threshold exceeded



<sup>†</sup> meets volume portion of warrant in AM and PM peak hours

<sup>♦</sup> no delay reported

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### TABLE 2 2027 PEAK HOUR QUEUES AT SIGNALIZED INTERSECTIONS

			AM Pea	ık Hour	PM Peak Hour		
		Capacity		Queue		Queue	
	Location	(feet)	VPH	(feet)	VPH	(feet)	
1.	Missouri Flat Road / Plaza Drive						
	NB left turn	330	195 (2)	82	355 (2)	179	
	NB through	450	490 (2)	100	375 (2)	179	
	NB right turn	450	345	132	450	191	
	SB left turn	110	50	69	50	70	
	EB left+through+right	120	110 (2)	65	415 (2)	207	
	WB left +through+right turn	275	295 (2)	122	535 (2)	241	
2.	Missouri Flat Road / WB US 50 ramps						
	NB left turn	160	445 (2)	169	425 (2)	161	
	NB through	360	680 (2)	323	810 (2)	187	
	SB through	520	495 (2)	152	875 (2)	268	
	WB left turn	410	640 (2)	215	660 (2)	261	
	WB right turn	410	350 (2)	130	370 (2)	163	
3.	Missouri Flat Road / EB US 50 ramps	·					
	NB through	160	1,010 (2)	199	995 (2)	183	
	NB right turn	140	85	74	75	57	
	SB left	160	145 (2)	94	325 (2)	187	
	SB through	380	900 (2)	101	1,215 (2)	322	
	EB left+through+right turn	540	515 (3)	170	860 (3)	279	
4.	Missouri Flat Road / Mother Lode Drive					•	
	NB left turn	150	15	51	45	183	
	NB through	2,300	1,025 (2)	278	1,035 (2)	705	
	SB through	140	1,250 (2)	184	1,770 (2)	193	
	SB right turn	130	45	55	65	65	
5.	Missouri Flat Road / Forni Road						
	NB left turn	250	55	158	80	174	
	NB through	1,000	1,000 (2)	355	935 (2)	361	
	NB right turn	160	60	147	25	80	
	SB left turn	300	255	334	160	301	
	SB through	2,300	765 (2)	373	1,195 (2)	454	
	SB right turn	150	255	181	415	234	
6.	Missouri Flat Road / Golden Center Drive						
	NB left turn	120	40	98	85	174	
	SB left turn	160	80	135	70	155	
10.	Missouri Flat Road / SR 49 (Pleasant Valley	y Rd)					
	SB left turn	600	180	123	540	224	
	SB right turn	600	170	81	355	104	
	EB left turn	160	375 (2)	261	260 (2)	278	
	WB right turn	190	480	157	275	136	

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TABLE 2 (cont'd)
2027 PEAK HOUR QUEUES AT SIGNALIZED INTERSECTIONS

			AM Pea	k Hour_	PM Peak Hour		
		Capacity		Queue		Queue	
	Location	(feet)	VPH	(feet)	VPH	(feet)	
12.	Diamond Road (SR 49) / Pleasant Valley	Rd (SR 49)					
	SB left turn	340	110	106	305	223	
	SB through+right	340	105	86	160	99	
	NB right turn	100	25	54	50	70	
	NB left+through	600	115	114	110	136	
	EB left turn	200	100	115	105	161	
	WB right turn	170	320	252	185	182	
	WB left turn	100	20	84	50	101	
17.	Diamond Road (SR 49) / Diamond Spring	gs Parkway					
	NB left	350	160 (2)	53	125 (2)	56	
	SB right	465	130	57	85	50	
	EB left	995	55	50	65	56	
	EB right	995	125	55	295	101	
18.	Missouri Flat Rd / Diamond Springs Pkw	у					
	NB left	275	920 (2)	225	835 (2)	213	
	EB through	1,600	165 (2)	76	295 (2)	210	
	WB left	500	40	58	35	51	
	WB Through	1,600	335 (2)	97	220 (2)	73	
19.	Diamond Springs Pkwy / Throwita Way						
	NB right	200	15	28	35	44	
	EB left	200	15	44	25	58	
	EB right	200	15	18	30	26	
	WB left	200	30	65	25	55	

#### **2027 Plus Project**

**Trip Generation.** The trip generation for this project was revised to account for a reduction in SFR units, from 104 units to 75 units. The revised trip generation is illustrated in Table 3. The revised project will generate 1,192 new daily trips, with 115 new trips in the a.m. peak hour and 182 new trips during the p.m. peak hour.

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### TABLE 3 TRIP GENERATION

					Tri	ps Per Ui	nit		
	Unit			AM Peak Hour			PN	I Peak H	our
Land Use	Quantity	Size	Daily	In	Out	Total	In	Out	Total
Single Family Residential (LU 210)	Unit	75	10.47	25%	75%	0.79	63%	37%	1.05
General Office (LU 710)	KSF	20.0	19.32	88%	12%	2.64	17%	83%	5.04
Single Family Residential (LU 210)			806	16	47	62	51	30	81
General Office (LU 710)			386	46	6	53	17	84	101
Net New Trips		1,192	62	53	115	68	114	182	

KSF – thousand square feet

Notes – no pass-by trip reduction used; numbers may not add up due to rounding

**Trip Distribution & Assignment.** No changes were made to the trip distribution and assignment originally identified in the December 2014 traffic impact analysis.

**Intersection Levels of Service**. Year 2027 plus Project volumes were used to recalculate operating Levels of Service at the study intersections. Figure 2 displays the Project traffic volumes while Figure 3 displays the "2027 Plus Project" traffic volumes at each study intersection in both a.m. and p.m. peak hours. Table 1 displays the a.m. and p.m. peak hour Levels of Service under 2027 plus Project conditions. One intersection will operate at LOS F with the proposed project. This is the Pleasant Valley Road (SR 49) / Forni Road intersection which will decline to LOS F. This is not considered significant as the project will add less than 10 trips per hour and less than 100 daily trips to the intersection.

**Traffic Signal Warrants.** 2027 plus Project traffic volumes at unsignalized intersections were compared to peak hour warrant requirements to determine whether traffic signals may be needed. One intersection, Pleasant Valley Road (SR 49) at SR 49 - South will meet the peak hour warrant, in both a.m. and p.m. peak hours.

**Intersection Queues.** Table 4 identifies peak period queues for the Year 2027 plus Project condition. Project trips and the SimTraffic software may change the length of some queues. Those 95<sup>th</sup> percentile queues with lengths exceeding the available storage have been highlighted. Under 2027 plus Project conditions thirteen locations will exceed the available storage.

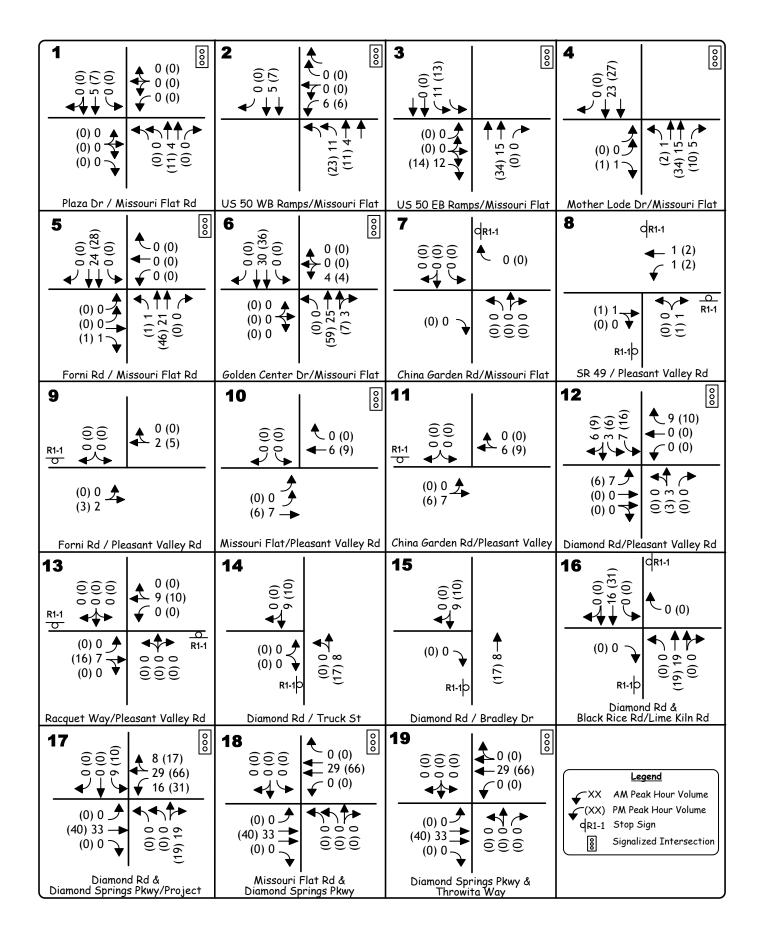
The left turn lanes along the Westbound US 50 off-ramps at Missouri Flat Road are projected to have queues of up to 441 feet in the p.m. peak hour. The westbound ramp currently provides for dual left turn lanes of about 410 feet each. The off-ramp extends an additional 1,000 feet with single lanes for right and left turning vehicles prior to reaching US 50. This provides adequate storage for this projected queue.

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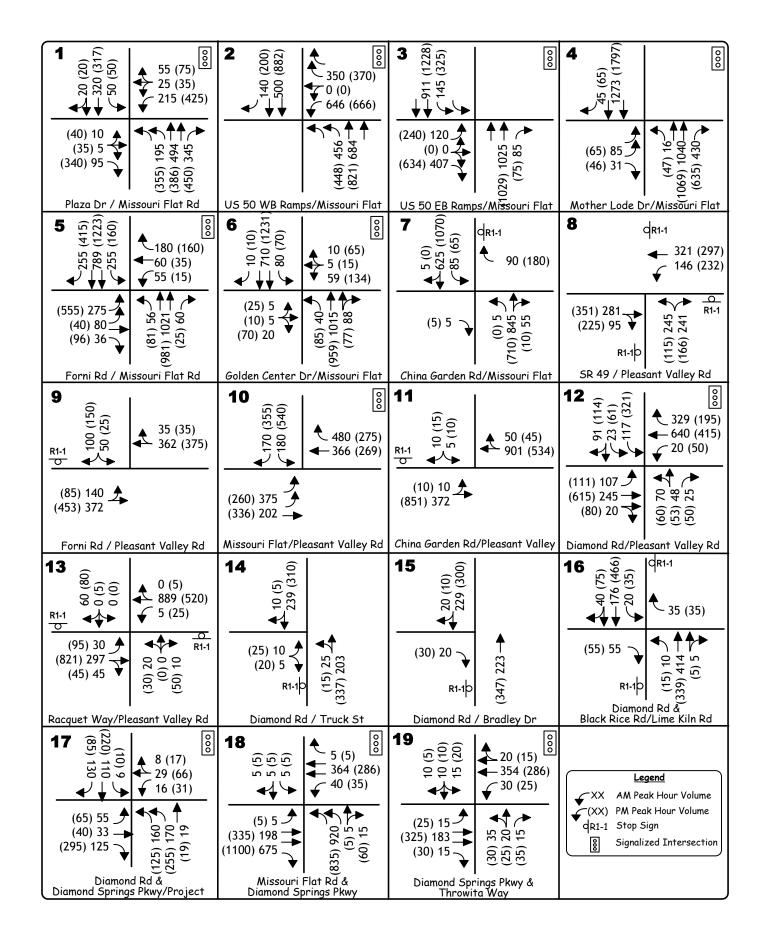
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The southbound left turn lane at the Missouri Flat Road / Golden Center Drive intersection is projected to require storage of about 174 feet. The existing left turn lane is about 160 feet. The left turn bay taper provides about 30 feet of additional storage before a left turning vehicle will block the southbound through lane. This provides the additional storage needed to accommodate the projected turn length and no mitigations are necessary.



# PROJECT VOLUMES TRAFFIC VOLUMES AND LANE CONFIGURATIONS



# 2027 PLUS PROJECT TRAFFIC VOLUMES AND LANE CONFIGURATIONS

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TABLE 4 2027 PLUS PROJECT PEAK HOUR QUEUES AT SIGNALIZED INTERSECTIONS

		AM Peak Hour							
			VPH		2027 Plus		VPH		2027 Plus
Location	Capacity (feet)	2027	Project Only	Total	Project Queue (feet)	2027	Project Only	Total	Project Queue (feet)
. Missouri Flat Road / Plaza Drive									
NB left turn	330	195 (2)	0	195	98	355 (2)	0	355	177
NB through	450	490 (2)	4	494	146	375 (2)	11	386	184
NB right turn	450	345	0	345	146	450	0	450	196
SB left turn	110	50	0	50	62	50	0	50	75
EB left+through+right	120	110 (2)	0	110	70	415 (2)	0	415	216
WB left +through+right turn	275	295 (2)	0	295	118	535 (2)	0	535	241
2. Missouri Flat Road / WB US 50 ramps									
NB left turn	160	445 (2)	11	456	166	425 (2)	23	448	166
NB through	360	680 (2)	4	684	345	810 (2)	11	821	224
SB through	520	495 (2)	5	500	159	875 (2)	7	882	272
WB left turn	410	640 (2)	6	646	229	660 (2)	6	666	441
WB right turn	410	350 (2)	0	350	130	370 (2)	0	370	227
3. Missouri Flat Road / EB US 50 ramps									
NB through	160	1,010 (2)	15	1,025	199	995 (2)	34	1,029	184
NB right turn	140	85	0	85	69	75	0	75	53
SB left	160	145 (2)	0	145	89	325 (2)	0	325	194
SB through	380	900 (2)	11	911	120	1,215 (2)	13	1,228	349
EB left+through+right turn	540	515 (3)	12	527	158	860 (3)	14	874	307
4. Missouri Flat Road / Mother Lode Drive									
NB left turn	150	15	1	16	54	45	2	47	202
NB through	2,300	1,025 (2)	15	1,040	258	1,035 (2)	34	1,069	793
SB through	140	1,250 (2)	23	1,273	184	1,770 (2)	27	1,797	190
SB right turn	130	45	0	45	41	65	0	65	66



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### TABLE 4 (cont'd) 2027 PLUS PROJECT PEAK HOUR QUEUES AT SIGNALIZED INTERSECTIONS

			AM Pe	ak Hour			eak Hour		
			VPH		2027 Plus		VPH		2027 Plus
	Capacity		Project		Project		Project		<b>Project Queue</b>
Location	(feet)	2027	Only	Total	Queue (feet)	2027	Only	Total	(feet)
5. Missouri Flat Road / Forni Road	1	ı			<del>,</del> ,		Т	1	1
NB left turn	250	55	1	56	139	80	1	81	175
NB through	1,000	1,000 (2)	21	1,021	378	935 (2)	46	981	376
NB right turn	160	60	0	60	146	25	0	25	82
SB left turn	300	255	0	255	372	160	0	160	286
SB through	2,300	765 (2)	24	789	455	1,195 (2)	28	1,223	452
SB right turn	150	255	0	255	187	415	0	415	235
6. Missouri Flat Road / Golden Center Drive									
NB left turn	120	40	0	40	90	85	0	85	184
SB left turn	160	80	0	80	132	70	0	70	174
10. Missouri Flat Road / SR 49 (Pleasant Valley I	Rd)								
SB left turn	600	180	0	180	120	540	0	540	223
SB right turn	600	170	0	170	73	355	0	355	106
EB left turn	160	375 (2)	0	375	276	260 (2)	0	260	253
WB right turn	190	480	0	480	164	275	0	275	115
12. Diamond Road (SR 49) / Pleasant Valley Rd	(SR 49)								•
SB left turn	340	110	7	117	101	305	16	321	222
SB through+right	340	105	9	114	77	160	15	175	118
NB right turn	100	25	0	25	57	50	0	50	77
NB left+through	600	115	3	118	132	110	3	113	126
EB left turn	200	100	7	107	116	105	6	111	167
WB right turn	170	320	9	329	256	185	10	195	191
WB left turn	100	20	0	20	76	50	0	50	109
Highlighted values indicate queue length in excess	s of available sto	rage						•	



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### TABLE 4 (cont'd) 2027 PLUS PROJECT PEAK HOUR QUEUES AT SIGNALIZED INTERSECTIONS

			AM Pe	ak Hour			PM P	eak Hour	
			VPH		2027 Plus		VPH		2027 Plus
	Capacity		Project		Project		Project		Project Queue
Location	(feet)	2027	Only	Total	Queue (feet)	2027	Only	Total	(feet)
17. Diamond Road (SR 49) / Diamond Springs F	arkway								
NB left	350	160 (2)	0	160	66	125 (2)	0	125	61
SB right	465	130	0	130	61	85	0	85	50
EB left	995	55	0	55	58	65	0	65	69
EB right	995	125	0	125	51	295	0	295	120
WB left	200		16	16	42		31	31	55
WB through-right	600		37	37	58		83	83	74
18. Missouri Flat Rd / Diamond Springs Pkwy									
NB left	275	920 (2)	0	920	213	835 (2)	0	835	210
EB through	1,600	165 (2)	33	198	88	295 (2)	40	335	110
WB left	500	40	0	40	55	35	0	35	50
WB Through	1,600	335 (2)	97	364	106	220(2)			86
19. Diamond Springs Pkwy / Throwita Way									
NB right	200	15	0	15	31	35	0	35	47
EB left	200	15	0	15	43	25	0	25	61
EB right	200	15	0	15	15	30	0	30	34
WB left	200	30	0	30	76	25	0	25	61
Highlighted values indicate queue length in excess	of available sto	rage							



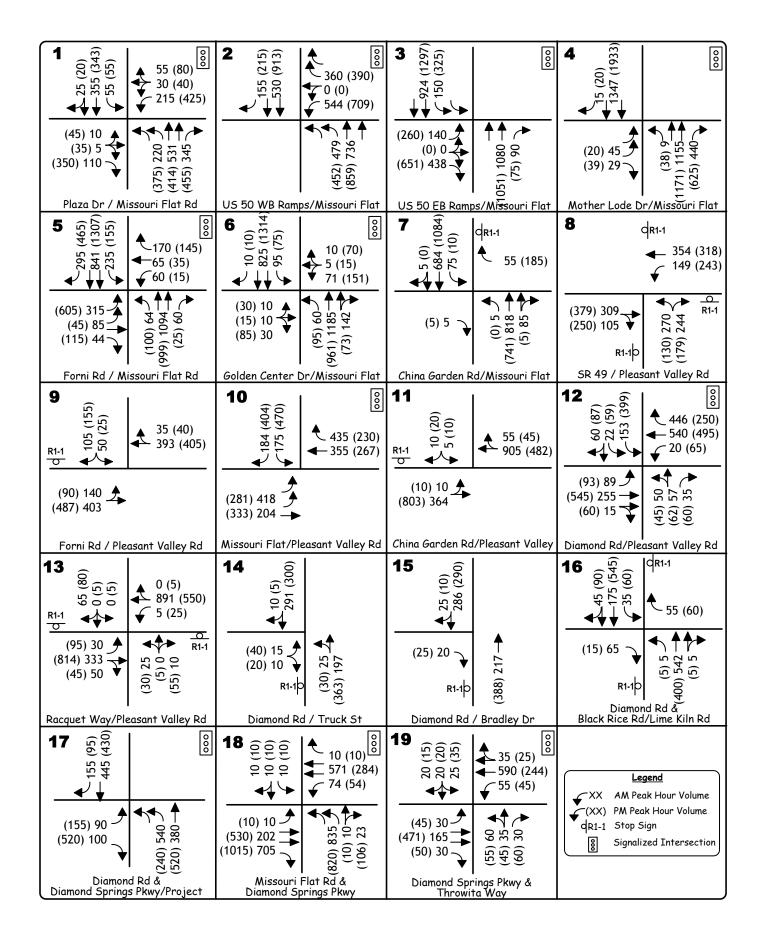
#### **2035 Traffic Conditions**

2035 traffic conditions were previously established to analyze the Near-Term scenarios. The County's traffic model includes land uses consistent with the project within the project's Traffic Analysis Zone (TAZ); therefore, the 2035 No Project volumes were developed by subtracting project traffic from the forecasted volumes. Figure 4 presents the Year 2035 projected volumes.

**Intersection Levels of Service.** The identified Year 2035 volumes were used to project operating Levels of Service at the study intersections. Table 5 displays the a.m. and p.m. peak hour Levels of Service at each study intersection in the 2035 condition. All intersections are projected to operate within the County's LOS thresholds, at LOS E or better.

**Traffic Signal Warrants.** One unsignalized intersection is projected to have volumes that meet the peak hour signal warrant criteria during either peak period. This is the Pleasant Valley Road / SR 49 - South intersection where the peak hour signal warrant is met in both the a.m. and p.m. peak periods.

**Intersection Queues.** Table 6 identifies peak period queues for the Year 2035 No Project condition. The 95<sup>th</sup> percentile queue is projected to be exceeded at thirteen locations.



# 2035 NO PROJECT TRAFFIC VOLUMES AND LANE CONFIGURATIONS

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TABLE 5
PEAK HOUR INTERSECTION LEVELS OF SERVICE - 2035 PLUS PROJECT CONDITIONS

			AM Pe	ak Hour			PM Peal	k Hour		
		2	2035	2035 P	lus Project	2	035	2035 Pl	us Project	Traffic
			Average		Average		Average		Average	Signal
Location	Control	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	Warranted?
1. Missouri Flat Rd / Plaza Dr	Signal	В	14.8	В	15.0	C	26.2	С	26.6	N/A
2. Missouri Flat Rd / WB US 50 ramps	Signal	В	18.7	В	18.8	С	21.0	С	21.4	N/A
3. Missouri Flat Rd / EB US 50 ramps	Signal	В	13.8	В	14.4	С	23.5	С	24.5	N/A
4. Missouri Flat Rd / Mother Lode Dr	Signal	A	9.5	В	10.5	В	12.5	В	17.4	N/A
5. Missouri Flat Rd / Forni Rd	Signal	С	29.5	C	33.3	D	54.5	Е	55.7	N/A
6. Missouri Flat Rd / Golden Center Dr	Signal	С	23.4	С	23.5	D	35.9	D	36.0	N/A
7. Missouri Flat Rd / China Garden Rd	WB Stop									Yes‡
NB Left		A	5.7	A	9.4	$\Diamond$	<b>♦</b>	$\Diamond$	$\Diamond$	
SB Left		В	13.2	В	14.2	A	9.9	A	8.6	
EB		A	9.0	A	7.2	В	10.6	В	10.1	
WB		A	7.0	A	9.1	В	12.4	В	14.1	
8. Pleasant Valley Rd (SR 49) / SR-49 South	AWS Stop	Е	36.8	D	30.8	Е	47.0	Е	44.1	Yes
9. Pleasant Valley Rd (SR 49) / Forni Rd	SB Stop									Yes†
SB		E	43.4	Е	48.8	D	25.6	D	27.9	
EB Left		A	7.1	A	7.4	A	7.1	A	7.4	
10. Missouri Flat Rd / Pleasant Valley Rd (SR 49)	Signal	D	37.1	D	42.4	В	13.8	В	14.0	N/A
11. Pleasant Valley Rd (SR 49) / China Garden Rd	SB Stop									No
SB		В	13.5	В	12.6	В	10.2	Α	8.9	
EB Left		В	13.7	В	14.8	A	7.1	A	9.8	
12. Diamond Road (SR 49) / Pleasant Valley Rd	Signal	В	15.7	В	17.3	С	21.4	С	22.0	N/A
(SR 49)										

<sup>‡</sup> meets volume portion of warrant in PM peak hour

♦ no delay reported

Red indicated threshold exceeded



<sup>†</sup> meets volume portion of warrant in AM and PM peak hours

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# TABLE 5 (cont'd) PEAK HOUR INTERSECTION LEVELS OF SERVICE 2035 PLUS PROJECT CONDITIONS

			AM Pea	ık Hour			PM Pea	k Hour		
		2	035	2035 Pl	us Project	2	2035	2035 Pl	us Project	Traffic
			Average		Average		Average		Average	Signal
Location	Control	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	Warranted?
13. Pleasant Valley Rd / Racquet Way	NB/SB									Yes‡
NB	Stop	В	14.7	C	17.6	C	24.6	C	22.7	
SB		В	12.1	В	11.4	В	10.8	В	10.3	
EB Left		A	7.0	A	7.1	A	5.1	A	5.2	
WB Left		A	8.3	A	9.3	В	11.5	В	11.4	
14. Diamond Road (SR 49) / Truck St	EB Stop									No
NB Left		A	3.2	A	3.1	A	3.2	A	3.1	
EB		A	5.4	A	5.8	A	7.7	A	7.8	
15. Diamond Road (SR 49) / Bradley Dr	EB Stop									No
EB right		A	3.3	A	4.7	A	3.0	A	3.7	
16. Diamond Rd (SR 49) / Lime Kiln Rd – Black Rice Ln	EB/WB									No
NB Left	Stop	A	4.4	A	4.7	A	6.8	A	8.5	
SB Left		A	6.0	A	6.7	A	5.0	A	5.3	
EB right		A	3.3	A	3.5	A	4.3	A	5.7	
WB right		A	4.9	Α	5.4	A	4.2	A	4.8	
17. Diamond Rd (SR 49) / Diamond Springs Pkwy -	Signal	D	38.6	D	44.2	C	27.6	С	34.2	N/A
Project Access										
18. Missouri Flat Road / Diamond Springs Pkwy	Signal	В	15.8	В	16.2	В	18.8	В	19.4	N/A
19. Diamond Springs Pkwy / Throwita Way	Signal	В	17.2	В	14.7	В	17.2	В	16.9	N/A

<sup>‡</sup> meets volume portion of warrant in PM peak hour

† meets volume portion of warrant in AM and PM peak hours

◊ no delay reported

Red indicated threshold exceeded



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### TABLE 6 2035 PEAK HOUR QUEUES AT SIGNALIZED INTERSECTIONS

			AM Pea	k Hour	PM Peak Hour		
		Capacity		Queue		Queue	
	Location	(feet)	VPH	(feet)	VPH	(feet)	
1.	Missouri Flat Road / Plaza Drive						
	NB left turn	330	220 (2)	104	375 (2)	174	
	NB through	450	531 (2)	141	414 (2)	186	
	NB right turn	450	345	138	455	195	
	SB left turn	110	55	67	55	76	
	EB left+through+right	120	125 (2)	71	430 (2)	203	
	WB left +through+right turn	275	300 (2)	118	545 (2)	222	
2.	Missouri Flat Road / WB US 50 ramps						
	NB left turn	160	479 (2)	168	452 (2)	164	
	NB through	360	736 (2)	400	859 (2)	264	
	SB through	520	530 (2)	156	913 (2)	271	
	WB left turn	410	544 (2)	185	709 (2)	347	
	WB right turn	410	360 (2)	152	390 (2)	217	
3.	Missouri Flat Road / EB US 50 ramps						
	NB through	160	1,080 (2)	195	1,051 (2)	187	
	NB right turn	140	90	35	75	15	
	SB left	160	150 (2)	94	325 (2)	187	
	SB through	380	924 (2)	99	1,297 (2)	326	
	EB left+through+right turn	540	578 (3)	177	911 (3)	293	
4.	Missouri Flat Road / Mother Lode Drive						
	NB left turn	150	9	44	38	147	
	NB through	2,300	1,155 (2)	344	1,171 (2)	490	
	SB through	140	1,347 (2)	191	1,933 (2)	204	
	SB right turn	130	15	29	20	41	
5.	Missouri Flat Road / Forni Road						
	NB left turn	250	64	184	100	230	
	NB through	1,000	1,094 (2)	403	999 (2)	404	
	NB right turn	160	60	143	25	99	
	SB left turn	300	235	353	155	306	
	SB through	2,300	841 (2)	402	1,307 (2)	462	
	SB right turn	150	295	208	465	228	
6.	Missouri Flat Road / Golden Center Drive						
	NB left turn	120	60	149	95	203	
	SB left turn	160	95	176	75	194	
10.	Missouri Flat Road / SR 49 (Pleasant Valle	ey Rd)					
	SB left turn	600	175	117	470	212	
	SB right turn	600	184	82	404	123	
	EB left turn	160	418 (2)	291	281 (2)	135	
	WB right turn	190	435	127	230	106	



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### TABLE 6 (cont'd) 2035 PEAK HOUR QUEUES AT SIGNALIZED INTERSECTIONS

			AM Pea	ık Hour	PM Peak Hour		
		Capacity		Queue		Queue	
	Location	(feet)	VPH	(feet)	VPH	(feet)	
12.	Diamond Rd (SR 49) / Pleasant Valley Rd (SR 4	19)					
	SB left turn	340	153	132	399	268	
	SB through+right	340	82	69	146	89	
	NB right turn	100	35	58	60	89	
	NB left+through	600	107	118	107	130	
	EB left turn	200	89	99	93	154	
	WB right turn	170	446	228	250	207	
	WB left turn	100	20	74	65	127	
17.	Diamond Rd (SR 49) / Diamond Springs Pkwy						
	NB left	350	540 (2)	236	240 (2)	144	
	SB right	465	155	94	95	55	
	EB left	995	90	86	155	133	
	EB right	995	100	66	520	339	
18.	Missouri Flat Rd / Diamond Springs Pkwy						
	NB left	275	835 (2)	233	820 (2)	234	
	EB through	1,600	202 (2)	98	530 (2)	172	
	WB left	500	74	93	54	72	
	WB Through	1,600	571 (2)	163	284 (2)	95	
19.	Diamond Springs Pkwy / Throwita Way						
	NB right	200	30	45	60	51	
	EB left	200	30	72	45	85	
	EB right	200	30	25	50	32	
	WB left	200	55	98	45	85	

#### 2035 Plus Project

**Intersection Levels of Service**. Year 2035 plus Project volumes were used to recalculate operating Levels of Service at the study intersections. Figure 5 displays the 2035 Plus Project traffic volumes at each study intersection in both a.m. and p.m. peak hours. Table 5 displays the a.m. and p.m. peak hour Levels of Service. All intersections are projected to continue to operate within accepted County LOS thresholds. This is the Pleasant Valley Road (SR 49) / Forni Road intersection which will decline to LOS F. This is not considered significant as the project will add less than 10 trips per hour and less than 100 daily trips to the intersection.



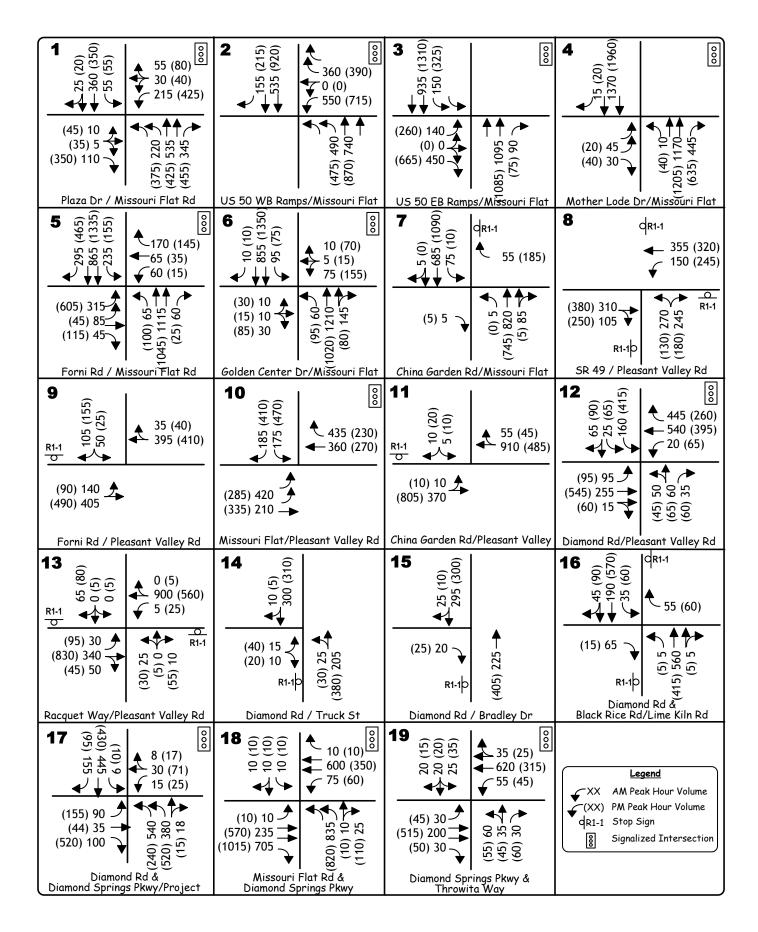
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**Traffic Signal Warrants.** 2035 plus Project traffic volumes at unsignalized intersections were compared to peak hour warrant requirements to determine whether traffic signals may be needed. One intersection, Pleasant Valley Road (SR 49) at SR 49 - South will continue to meet the peak hour warrant, in both a.m. and p.m. peak hours.

**Intersection Queues.** Table 7 identifies peak period queues for the Year 2035 plus Project condition. Those 95<sup>th</sup> percentile queues with lengths exceeding the available storage have been highlighted. Under 2035 plus Project conditions the same thirteen locations as the 2035 No Project scenario will exceed the available storage.



# 2035 PLUS PROJECT TRAFFIC VOLUMES AND LANE CONFIGURATIONS

TABLE 7
2035 PLUS PROJECT PEAK HOUR QUEUES AT SIGNALIZED INTERSECTIONS

			AM Pe	ak Hour			PM P	eak Hour	
			VPH		2035 Plus		VPH	•	2035 Plus
	Capacity	•••	Project		Project		Project		Project Queue
Location	(feet)	2035	Only	Total	Queue (feet)	2035	Only	Total	(feet)
1. Missouri Flat Road / Plaza Drive		1	Γ					1	T
NB left turn	330	220 (2)	0	220	108	375 (2)	0	375	173
NB through	450	531 (2)	4	535	147	414 (2)	11	425	180
NB right turn	450	345	0	345	138	455	0	455	198
SB left turn	110	55	0	55	62	55	0	55	77
EB left+through+right	120	125 (2)	0	125	68	430(2)	0	430	197
WB left +through+right turn	275	300 (2)	0	300	135	545 (2)	0	545	246
2. Missouri Flat Road / WB US 50 ramps									
NB left turn	160	479 (2)	11	490	166	452 (2)	23	475	164
NB through	360	736 (2)	4	740	405	859 (2)	11	870	231
SB through	520	530 (2)	5	535	157	913 (2)	7	920	279
WB left turn	410	544 (2)	6	550	192	709 (2)	6	715	316
WB right turn	410	360 (2)	0	360	147	390 (2)	0	390	183
3. Missouri Flat Road / EB US 50 ramps									
NB through	160	1,080 (2)	15	1,095	195	1,051 (2)	34	1,085	186
NB right turn	140	90	0	90	42	75	0	75	15
SB left	160	150 (2)	0	150	103	325 (2)	0	325	190
SB through	380	924 (2)	11	935	125	1,297 (2)	13	1,310	365
EB left+through+right turn	540	578 (3)	12	590	184	911 (3)	14	925	278
4. Missouri Flat Road / Mother Lode Drive									
NB left turn	150	9	1	10	59	38	2	40	149
NB through	2,300	1,155 (2)	15	1,170	363	1,171 (2)	34	1,205	851
SB through	140	1,347 (2)	23	1,370	194	1,933 (2)	27	1,960	204
SB right turn	130	15	0	15	32	20	0	20	20
Highlighted values indicate queue length in exces	s of available sto	rage							



### TABLE 7 (cont'd) 2027 PLUS PROJECT PEAK HOUR QUEUES AT SIGNALIZED INTERSECTIONS

			AM Pe	ak Hour			PM P	eak Hour	
			VPH		2035 Plus		VPH		2035 Plus
	Capacity		Project		Project		Project		<b>Project Queue</b>
Location	(feet)	2035	Only	Total	Queue (feet)	2035	Only	Total	(feet)
5. Missouri Flat Road / Forni Road									
NB left turn	250	64	1	65	213	100	1	100	245
NB through	1,000	1,094 (2)	21	1,115	439	999 (2)	46	1,045	407
NB right turn	160	60	0	60	152	25	0	25	97
SB left turn	300	235	0	235	374	155	0	155	312
SB through	2,300	841 (2)	24	865	459	1,307 (2)	28	1,335	462
SB right turn	150	295	0	295	217	465	0	465	232
6. Missouri Flat Road / Golden Center Drive									
NB left turn	120	60	0	60	148	95	0	95	197
SB left turn	160	95	0	95	183	75	0	75	186
10. Missouri Flat Road / SR 49 (Pleasant Valley F	Rd)								
SB left turn	600	175	0	175	125	470	0	470	212
SB right turn	600	184	0	185	86	404	0	410	134
EB left turn	160	418 (2)	0	420	285	281 (2)	0	285	122
WB right turn	190	435	0	435	161	230	0	230	118
12. Diamond Road (SR 49) / Pleasant Valley Rd (	(SR 49)								
SB left turn	340	153	7	160	141	399	16	415	292
SB through+right	340	82	9	90	74	146	15	155	127
NB right turn	100	35	0	35	66	60	0	60	80
NB left+through	600	107	3	110	119	107	3	110	135
EB left turn	200	89	7	95	114	93	6	95	152
WB right turn	170	446	9	455	229	250	10	260	210
WB left turn	100	20	0	20	67	65	0	65	120
Highlighted values indicate queue length in excess	of available sto	rage							

TABLE 7 (cont'd)
2027 PLUS PROJECT PEAK HOUR QUEUES AT SIGNALIZED INTERSECTIONS

			AM Pe	ak Hour			PM P	eak Hour	
			VPH		2035 Plus		VPH		2035 Plus
Location	Capacity (feet)	2035	Project Only	Total	Project Queue (feet)	2035	Project Only	Total	Project Queue (feet)
17. Diamond Road (SR 49) / Diamond S	Springs Parkway								
NB left	350	540 (2)	0	540	261	240 (2)	0	240	190
SB right	465	155	0	155	99	95	0	95	58
EB left	995	90	0	55	118	155	0	155	171
EB right	995	100	0	100	71	520	0	520	364
WB left	200		15	15	48		25	25	87
WB through-right	600		38	38	75		88	88	121
18. Missouri Flat Rd / Diamond Springs	s Pkwy								
NB left	275	835 (2)	0	835	248	820 (2)	0	820	214
EB through	1,600	202 (2)	33	235	111	530 (2)	40	570	174
WB left	500	74	0	40	94	54	0	60	87
WB Through	1,600	571 (2)	97	600	183	284 (2)		350	123
19. Diamond Springs Pkwy / Throwita	Way								
NB right	200	30	0	30	50	60	0	60	53
EB left	200	30	0	30	65	45	0	45	84
EB right	200	30	0	30	24	50	0	50	54
WB left	200	55	0	55	83	45	0	45	80
Highlighted values indicate queue length	in excess of available sto	rage							

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#### **Conclusions**

The analysis of 2027 and 2035 conditions indicates that the project will not create any significant impacts requiring mitigations.

Under 2027 plus Project conditions the Pleasant Valley Road (SR 2027 plus Project: 49) / Forni Road intersection will operate with the southbound approach at LOS F; however, this is not considered a significant impact as the project will not generate more than 10 peak hour trips nor more than 100 daily trips, nor will the peak hour traffic signal warrant be met. Queues at thirteen locations will exceed available turn pockets. A queue is considered significant if the queue under plus project conditions will extend into the adjacent through lane. If a queue under No Project conditions already extends beyond the available storage the additional queue generated under Plus Project conditions is not considered significant. For 2027 plus Project the westbound left turn queue along the westbound off-ramp at Missouri Flat Road will extend beyond the dual left turn lanes. However, these lanes are fed by a dedicated left turn lane for vehicles existing US 50. This provides additional left turn queueing, not requiring any mitigation. The queue in the southbound left turn lane at the Missouri Flat Road / Golden Center Drive intersection will exceed the marked left turn bay by 14'. The turn lane taper provides for about an additional 30' for vehicles to queue before blocking the adjacent through lane. Therefore, this is not considered significant.

<u>2035 plus Project:</u> Under 2035 plus Project conditions all intersections will operate at acceptable levels of service. Thirteen locations will exceed available turn pockets. These thirteen locations are identical to the locations under 2035 No Project conditions. Therefore, there are no significant impacts with regard to queuing.



#### 1: Missouri Flat Road & Plaza Drive Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.2	0.0	0.0	0.0
Total Del/Veh (s)	9.5	23.3	12.9	14.4	14.7

#### 2: Missouri Flat Road & WB Ramps Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	12	0.0	0.0	0.4
· ,	22.0			
Total Del/Veh (s)	22.9	16.9	13.5	18.3

#### 3: Missouri Flat Road & EB Ramps Performance by approach

Approach	ach EB NB SB	All
Denied Del/Veh (s)	d Del/Veh (s) 1.2 0.0 0.0	0.2
Total Del/Veh (s)	· · ·	12.7

#### 4: Missouri Flat Road & Mother Lode Drive Performance by approach

Approach	ch EB NB	SB	All
Denied Del/Veh (s)	Del/Veh (s) 1.6 0.0	0.0	0.1
Total Del/Veh (s)	` ,	5.7	9.8

#### 5: Missouri Flat Road & Forni Road Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	3.0	0.0	0.5	0.0	0.5
Total Del/Veh (s)	38.7	16.5	26.1	26.3	26.7

#### 6: Missouri Flat Road & Golden Center Drive Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	19.6	9.9	14.7	23.2	17.5

#### 7: Missouri Flat Road & China Garden Rd Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	6.7	9.0	4.1	2.6	3.7

#### 8: SR 49 & Pleasant Valley Rd Performance by approach

Approach	EB WB	NB	All
Denied Del/Veh (s)	0.3 0.0	3.3	1.3
Total Del/Veh (s)	12.7 9.5	33.0	19.1

#### 9: Pleasant Valley Rd & Forni Rd Performance by approach

Approach	Approach EB	WB	SB	All
Denied Del/Veh (s)	Denied Del/Veh (s) 0.0	0.0	0.2	0.0
Total Del/Veh (s)	Total Del/Veh (s) 4.1	2.8	35.7	8.2

#### 10: Pleasant Valley Rd & Missouri Flat Rd Performance by approach

Approach	EB	WB	SB	All
Tr		0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0
Total Del/Veh (s)	52.3	13.3	6.8	23.9

#### 11: Pleasant Valley Rd & China Garden Rd Performance by approach

#### 12: Fowler Ln/Diamond Rd & Pleasant Valley Rd Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	0.3	1.0	0.0	0.2
Total Del/Veh (s)	18.3	20.0	23.8	19.2	19.8

#### 13: Driveway/Racquet Way & Pleasant Valley Rd Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	0.9	0.1	0.1	0.6
Total Del/Veh (s)	1.7	5.4	15.3	10.5	4.8

#### 14: Diamond Rd & Truck St Performance by approach

Approach	proach EB	NB	SB	All
Denied Del/Veh (s)	nied Del/Veh (s) 0.1	0.0	0.2	0.1
Total Del/Veh (s)	tal Del/Veh (s) 4.9	8.0	0.6	8.0

#### 15: Diamond Rd & Bradley Dr Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0
	0.1	0.0	0.0	0.0
Total Del/Veh (s)	2.6	0.8	0.4	0.7

#### 16: Diamond Rd & Lime Kiln Rd/Black Rice Ln Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	3.2	4.5	2.0	1.5	2.1

#### 17: Diamond Rd & Diamond Springs Parkway/Project Access Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	/eh (s) 0.0	0.0	0.0	0.0
Total Del/Veh (s)	h (s) 6.6	5.7	6.1	6.0

#### 18: Missouri Flat Road & Missouri Flat Rd/Diamond Springs Parkway Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.4	0.0	0.0	1.3	0.2
Total Del/Veh (s)	13.9	14.8	11.5	21.8	13.1

#### 19: Throwita Way & Diamond Springs Parkway Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	0.1	1.0	0.1	0.2
Total Del/Veh (s)	11.0	7.9	43.6	41.1	14.2

#### **Total Zone Performance**

Denied Del/Veh (s)	1.4
Total Del/Veh (s)	277.8

#### 1: Missouri Flat Road & Plaza Drive Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.2	0.1	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	27.3	27.5	7.1	25.5	25.5	13.5	26.2	12.8	5.5	31.3	12.3	5.7

#### 1: Missouri Flat Road & Plaza Drive Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	14.7

#### 2: Missouri Flat Road & WB Ramps Performance by movement

Movement	WBL	WBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.4	2.5	0.0	0.0	0.0	0.0	0.4
Total Del/Veh (s)	29.1	11.4	30.1	8.1	16.4	3.4	18.3

#### 3: Missouri Flat Road & EB Ramps Performance by movement

Movement	EBL	EBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	1.1	1.2	0.0	0.0	0.0	0.0	0.2
Total Del/Veh (s)	28.4	21.0	11.5	4.1	35.7	5.8	12.7

#### 4: Missouri Flat Road & Mother Lode Drive Performance by movement

Movement	EBL	EBR	NBL	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)	0.6	3.9	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	68.5	11.9	85.2	11.1	4.4	5.9	2.1	9.8

#### 5: Missouri Flat Road & Forni Road Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.5	0.8	3.6	0.0	0.0	0.0	0.1	0.5	0.9	0.0	0.0	0.0
Total Del/Veh (s)	44.4	34.1	4.9	47.6	24.4	1.9	55.8	25.5	9.1	85.0	15.5	6.9

#### 5: Missouri Flat Road & Forni Road Performance by movement

Movement	All	
Denied Del/Veh (s)	0.5	
Total Del/Veh (s)	26.7	

#### 6: Missouri Flat Road & Golden Center Drive Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	35.6	30.3	13.0	31.5	1.4	18.1	40.4	14.0	11.6	48.4	21.0	3.3

#### 6: Missouri Flat Road & Golden Center Drive Performance by movement

Movement	All		
Denied Del/Veh (s)	0.0		
Total Del/Veh (s)	17.5		

#### 7: Missouri Flat Road & China Garden Rd Performance by movement

Movement	EBR	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All	
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Del/Veh (s)	6.7	0.1	9.0	5.9	4.2	2.0	14.2	1.1	0.0	3.7	

#### 8: SR 49 & Pleasant Valley Rd Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.3	0.3	0.1	0.0	3.1	3.5	1.3
Total Del/Veh (s)	13.6	10.4	9.1	9.7	33.3	32.8	19.1

#### 9: Pleasant Valley Rd & Forni Rd Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.2	0.2	0.0
Total Del/Veh (s)	6.3	3.2	2.9	2.2	45.8	30.8	8.2

#### 10: Pleasant Valley Rd & Missouri Flat Rd Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	71.1	24.8	18.9	8.6	12.7	0.9	4.1	23.9

#### 11: Pleasant Valley Rd & China Garden Rd Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.4	0.5	0.0	0.0	0.3
Total Del/Veh (s)	14.1	3.2	4.6	3.9	21.8	12.2	4.3

#### 12: Fowler Ln/Diamond Rd & Pleasant Valley Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.2	0.4	0.3	0.2	4.0	0.1	0.0	0.0
Total Del/Veh (s)	29.9	14.7	5.5	39.6	23.1	12.7	28.4	28.4	5.1	24.2	23.7	11.7

#### 12: Fowler Ln/Diamond Rd & Pleasant Valley Rd Performance by movement

Movement	All	
Denied Del/Veh (s)	0.2	
Total Del/Veh (s)	19.8	

#### 13: Driveway/Racquet Way & Pleasant Valley Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	NBL	NBR	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	1.2	0.9	0.1	0.1	0.1	0.6
Total Del/Veh (s)	7.8	1.3	0.7	8.2	5.4	20.7	5.3	10.5	4.8

#### 14: Diamond Rd & Truck St Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.2	0.2	0.1
Total Del/Veh (s)	5.8	3.2	2.9	0.5	0.6	0.3	0.8

#### 15: Diamond Rd & Bradley Dr Performance by movement

Movement	EBR	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	2.6	0.8	0.4	0.2	0.7

#### 16: Diamond Rd & Lime Kiln Rd/Black Rice Ln Performance by movement

Movement	EBR	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	3.2	4.5	4.0	2.0	2.1	4.2	1.4	1.1	2.1

#### 17: Diamond Rd & Diamond Springs Parkway/Project Access Performance by movement

Movement	EBL	EBT	EBR	NBL	NBT	SBT	SBR	All	
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Del/Veh (s)	13.2	0.6	4.2	9.8	3.4	9.7	3.1	6.0	

#### 18: Missouri Flat Road & Missouri Flat Rd/Diamond Springs Parkway Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.6	0.0	0.5	0.1	0.0	0.0	0.0	0.0	0.0	4.1	0.1	0.1
Total Del/Veh (s)	29.9	16.9	13.1	25.3	13.6	4.9	11.8	4.6	1.9	24.7	31.5	9.7

#### 18: Missouri Flat Road & Missouri Flat Rd/Diamond Springs Parkway Performance by movement

Movement	All
Denied Del/Veh (s)	0.2
Total Del/Veh (s)	13.1

#### 19: Throwita Way & Diamond Springs Parkway Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	1.1	0.0	0.0	0.1	0.2	4.2	0.1	0.1	0.1
Total Del/Veh (s)	59.5	6.8	4.5	56.4	3.7	1.8	53.0	55.0	4.2	51.3	42.8	16.4

#### 19: Throwita Way & Diamond Springs Parkway Performance by movement

Movement	All
Denied Del/Veh (s)	0.2
Total Del/Veh (s)	14.2

#### **Total Zone Performance**

#### 1: Missouri Flat Road & Plaza Drive Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.2	0.2	0.0	0.0	0.1
Total Del/Veh (s)	19.6	37.3	26.1	26.0	27.4

#### 2: Missouri Flat Road & WB Ramps Performance by approach

Approach	Approach	WB	NB	SB	All
Denied Del/Veh (s)	Denied Del/Veh (s)	1.1	0.0	0.0	0.3
Total Del/Veh (s)	otal Del/Veh (s)	26.6	12.8	18.4	18.8

#### 3: Missouri Flat Road & EB Ramps Performance by approach

Approach	n EB NB	SB	All
Denied Del/Veh (s)	el/Veh (s) 1.2 0.0	0.0	0.3
Total Del/Veh (s)	/Veh (s) 31.7 19.4	23.7	24.3

#### 4: Missouri Flat Road & Mother Lode Drive Performance by approach

Approach	EB NB SB	All
Denied Del/Veh (s)	h (s) 1.9 1.1 0.0	0.6
Total Del/Veh (s)	(s) 48.5 29.3 6.1	18.1

#### 5: Missouri Flat Road & Forni Road Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	3.5	0.0	0.2	0.0	0.7
Total Del/Veh (s)	82.0	13.3	27.2	26.5	35.7

#### 6: Missouri Flat Road & Golden Center Drive Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.3	1.5	0.0	0.0	0.1
Total Del/Veh (s)	34.0	43.1	23.9	34.3	31.0

#### 7: Missouri Flat Road & China Garden Rd Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	17.8	9.9	3.2	1.8	3.0

#### 8: SR 49 & Pleasant Valley Rd Performance by approach

Approach	EB	WB	NB	All
Denied Del/Veh (s)	8.0	0.1	0.3	3.4
Total Del/Veh (s)	51.7	8.5	8.2	26.8

## 9: Pleasant Valley Rd & Forni Rd Performance by approach

Approach	EB	WB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.2	0.1
Total Del/Veh (s)	3.4	2.7	13.6	4.7

### 10: Pleasant Valley Rd & Missouri Flat Rd Performance by approach

Approach	EB	WB	SB	All
Denied Del/Veh (s)	(s) 0.3	0.0	0.1	0.1
Total Del/Veh (s)	55.0	14.8	10.3	24.6

### 11: Pleasant Valley Rd & China Garden Rd Performance by approach

## 12: Fowler Ln/Diamond Rd & Pleasant Valley Rd Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	0.1	1.4	0.0	0.1
Total Del/Veh (s)	19.8	18.5	26.2	21.3	20.2

### 13: Driveway/Racquet Way & Pleasant Valley Rd Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	0.4	0.2	0.2	0.2
Total Del/Veh (s)	2.4	4.0	20.2	7.5	4.0

### 14: Diamond Rd & Truck St Performance by approach

Approach	Approach	EB	NB	SB	All
Denied Del/Veh (s)	Denied Del/Veh (s)	0.1	0.0	0.2	0.1
Total Del/Veh (s)	. ,	5.7	0.8	0.6	1.0

#### 15: Diamond Rd & Bradley Dr Performance by approach

### 16: Diamond Rd & Lime Kiln Rd/Black Rice Ln Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.1	0.0
Total Del/Veh (s)	4.8	3.4	2.3	2.1	2.4

# 17: Diamond Rd & Diamond Springs Parkway/Project Access Performance by approach

Approach	oach EE	B NB	SB	All
Denied Del/Veh (s)	ed Del/Veh (s) 0.0	0.0	0.0	0.0
Total Del/Veh (s)	Del/Veh (s) 8.4	9.8	9.7	9.3

# 18: Missouri Flat Road & Missouri Flat Rd/Diamond Springs Parkway Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.0	1.6	0.0
Total Del/Veh (s)	21.5	14.1	12.0	22.1	17.5

### 19: Throwita Way & Diamond Springs Parkway Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	0.1	1.7	0.1	0.2
Total Del/Veh (s)	10.3	8.7	32.5	45.3	14.3

Denied Del/Veh (s)	1.6
Total Del/Veh (s)	739.7

## 1: Missouri Flat Road & Plaza Drive Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.3	0.3	0.2	0.2	0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	33.5	33.3	16.5	38.9	39.7	27.4	48.5	24.1	9.8	42.1	24.6	11.6

#### 1: Missouri Flat Road & Plaza Drive Performance by movement

Movement	All		
Denied Del/Veh (s)	0.1		
Total Del/Veh (s)	27.4		

### 2: Missouri Flat Road & WB Ramps Performance by movement

Movement	WBL	WBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.4	2.5	0.0	0.0	0.0	0.0	0.3
Total Del/Veh (s)	33.2	14.9	19.6	9.3	21.6	3.8	18.8

### 3: Missouri Flat Road & EB Ramps Performance by movement

Movement	EBL	EBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	1.6	1.0	0.0	0.0	0.1	0.0	0.3
Total Del/Veh (s)	26.2	33.7	20.3	3.3	48.1	17.0	24.3

### 4: Missouri Flat Road & Mother Lode Drive Performance by movement

Movement	EBL	EBR	NBL	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)	0.4	4.0	1.3	1.1	1.2	0.0	0.0	0.6
Total Del/Veh (s)	68.8	18.9	103.6	41.3	4.0	6.2	2.2	18.1

### 5: Missouri Flat Road & Forni Road Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.6	1.8	3.7	0.0	0.0	0.0	0.0	0.2	0.5	0.0	0.0	0.0
Total Del/Veh (s)	91.3	69.2	31.4	59.4	34.4	1.8	64.4	24.5	8.6	64.2	24.9	17.4

### 5: Missouri Flat Road & Forni Road Performance by movement

Movement	All
Denied Del/Veh (s)	0.7
Total Del/Veh (s)	35.7

### 6: Missouri Flat Road & Golden Center Drive Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.4	0.4	0.2	1.2	1.8	2.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	47.9	50.1	27.4	47.0	47.4	34.6	90.9	18.3	15.6	78.5	32.1	8.1

### 6: Missouri Flat Road & Golden Center Drive Performance by movement

Movement	All
Denied Del/Veh (s)	eh (s) 0.1
Total Del/Veh (s)	(s) 31.0

### 7: Missouri Flat Road & China Garden Rd Performance by movement

Movement	EBR	WBT	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	17.8	0.2	10.0	3.2	1.3	8.1	1.5	3.0

### 8: SR 49 & Pleasant Valley Rd Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	8.2	7.6	0.1	0.0	0.3	0.3	3.4
Total Del/Veh (s)	52.8	49.9	9.5	7.8	9.4	7.3	26.8

### 9: Pleasant Valley Rd & Forni Rd Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.2	0.2	0.1
Total Del/Veh (s)	6.4	2.8	2.7	2.5	25.2	11.8	4.7

### 10: Pleasant Valley Rd & Missouri Flat Rd Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.2	0.4	0.0	0.1	0.2	0.0	0.0	0.1
Total Del/Veh (s)	89.0	30.4	22.7	6.8	15.4	1.8	3.9	24.6

### 11: Pleasant Valley Rd & China Garden Rd Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBT	SBR	All	
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Del/Veh (s)	10.8	4.6	3.9	3.7	19.8		6.2	4.5	

## 12: Fowler Ln/Diamond Rd & Pleasant Valley Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.3	0.1	0.2	0.4	0.3	3.8	0.0	0.0	0.0
Total Del/Veh (s)	36.3	18.3	10.9	39.2	21.6	6.6	35.3	34.5	6.5	26.3	16.1	10.1

### 12: Fowler Ln/Diamond Rd & Pleasant Valley Rd Performance by movement

Movement	All
Denied Del/Veh (s)	0.1
Total Del/Veh (s)	20.2

### 13: Driveway/Racquet Way & Pleasant Valley Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBT	SBR	All	
Denied Del/Veh (s)	0.0	0.0	0.1	0.4	0.4	0.3	0.2	0.2	0.1	0.2	0.2	
Total Del/Veh (s)	5.2	2.1	1.4	11.0	3.6	3.2	31.1	13.9	21.4	6.8	4.0	

### 14: Diamond Rd & Truck St Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.2	0.3	0.1
Total Del/Veh (s)	7.6	3.5	3.1	0.7	0.6	0.6	1.0

### 15: Diamond Rd & Bradley Dr Performance by movement

Movement	EBR	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	2.8	1.1	0.4	0.2	0.9

### 16: Diamond Rd & Lime Kiln Rd/Black Rice Ln Performance by movement

Movement	EBR	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.3	0.0	0.0	0.0
Total Del/Veh (s)	4.8	3.4	6.0	2.2	2.0	3.9	2.0	1.5	2.4

### 17: Diamond Rd & Diamond Springs Parkway/Project Access Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	15.8	6.9	14.2	7.6	12.1	2.7	9.3

# 18: Missouri Flat Road & Missouri Flat Rd/Diamond Springs Parkway Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	3.9	0.1	0.2
Total Del/Veh (s)	32.4	18.2	22.3	23.6	12.7	4.7	12.8	8.5	2.6	24.1	30.8	9.0

### 18: Missouri Flat Road & Missouri Flat Rd/Diamond Springs Parkway Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	17.5

### 19: Throwita Way & Diamond Springs Parkway Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.8	0.0	0.0	0.3	0.2	4.0	0.1	0.1	0.1
Total Del/Veh (s)	59.3	7.2	5.6	60.9	3.8	1.6	49.9	49.6	5.2	51.2	47.4	17.8

# 19: Throwita Way & Diamond Springs Parkway Performance by movement

Movement	All
Denied Del/Veh (s)	0.2
Total Del/Veh (s)	14.3

Denied Del/Veh (s)	1.6
Total Del/Veh (s)	739.7

### 1: Missouri Flat Road & Plaza Drive Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.2	0.0	0.0	0.0
Total Del/Veh (s)	9.5	23.9	12.7	14.4	14.6

#### 2: Missouri Flat Road & WB Ramps Performance by approach

Approach	WB	NB	SB	All
P.P. Taran	1.1	0.0	2.0	0.4
Denied Del/Veh (s)	1.1	0.0	0.0	0.4
Total Del/Veh (s)	23.5	17.3	13.6	18.7

### 3: Missouri Flat Road & EB Ramps Performance by approach

Approach	proach EB NB SB	All
Denied Del/Veh (s)	enied Del/Veh (s) 1.2 0.0 0.0	0.2
Total Del/Veh (s)	· ,	13.0

### 4: Missouri Flat Road & Mother Lode Drive Performance by approach

Approach	EB I	ΙB	SB	All
Denied Del/Veh (s)	1.5	.0	0.0	0.1
Total Del/Veh (s)		.0	50	9.7

#### 5: Missouri Flat Road & Forni Road Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	3.0	0.0	0.5	0.0	0.5
Total Del/Veh (s)	39.5	16.8	27.3	31.5	29.5

### 6: Missouri Flat Road & Golden Center Drive Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	16.7	11.4	15.3	22.0	17.4

#### 7: Missouri Flat Road & China Garden Rd Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	6.5	10.1	3.8	2.5	3.6

#### 8: SR 49 & Pleasant Valley Rd Performance by approach

# 9: Pleasant Valley Rd & Forni Rd Performance by approach

Approach	ch EB WB	SB	All
Denied Del/Veh (s)	Del/Veh (s) 0.0 0.0	0.2	0.0
Total Del/Veh (s)	el/Veh (s) 4.0 2.8	51.6	10.0

### 10: Pleasant Valley Rd & Missouri Flat Rd Performance by approach

Approach	EB WB	SB	All
I I T T T	0.0 0.0	0.0	0.1
Denied Del/Veh (s)	0.2 0.0	0.0	0.1
Total Del/Veh (s)	64.9 13.8	7.0	28.1

### 11: Pleasant Valley Rd & China Garden Rd Performance by approach

Approach	EB WE	SB	All
>	20 0 1	0.0	0.0
Denied Del/Veh (s)	0.0 0.4	0.0	0.3
Total Del/Veh (s)	3.3 4.6	145	4.3

## 12: Fowler Ln/Diamond Rd & Pleasant Valley Rd Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	0.3	0.9	0.0	0.3
Total Del/Veh (s)	18.6	20.0	25.6	18.7	20.0

### 13: Driveway/Racquet Way & Pleasant Valley Rd Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	0.8	0.1	0.1	0.5
Total Del/Veh (s)	1.5	5.4	13.4	9.8	4.8

### 14: Diamond Rd & Truck St Performance by approach

Approach	oach EB NB SB	All
Denied Del/Veh (s)	ed Del/Veh (s) 0.1 0.0 0.2	0.1
Total Del/Veh (s)	( )	0.8

#### 15: Diamond Rd & Bradley Dr Performance by approach

### 16: Diamond Rd & Lime Kiln Rd/Black Rice Ln Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	3.2	4.1	2.0	1.6	2.1

# 17: Diamond Rd & Diamond Springs Parkway/Project Access Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	0.1	0.0	0.0	0.0
Total Del/Veh (s)	8.6	13.6	7.4	7.3	8.0

# 18: Missouri Flat Road & Missouri Flat Rd/Diamond Springs Parkway Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.4	0.0	0.0	1.1	0.2
Total Del/Veh (s)	13.5	14.4	11.2	19.6	12.7

### 19: Throwita Way & Diamond Springs Parkway Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	0.1	1.1	0.1	0.2
Total Del/Veh (s)	11.8	8.8	42.3	45.3	14.7

Denied Del/Veh (s)	1.3
Total Del/Veh (s)	306.0

## 1: Missouri Flat Road & Plaza Drive Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.2	0.1	0.1	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	25.3	30.1	6.9	26.3	25.8	13.1	26.8	12.0	5.8	32.7	12.2	3.9

#### 1: Missouri Flat Road & Plaza Drive Performance by movement

### 2: Missouri Flat Road & WB Ramps Performance by movement

Movement	WBL	WBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.4	2.5	0.0	0.0	0.0	0.0	0.4
Total Del/Veh (s)	29.8	11.3	30.8	8.1	16.5	3.5	18.7

### 3: Missouri Flat Road & EB Ramps Performance by movement

Movement	EBL	EBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	1.0	1.2	0.0	0.0	0.0	0.0	0.2
Total Del/Veh (s)	28.2	20.7	11.8	3.8	35.0	6.7	13.0

### 4: Missouri Flat Road & Mother Lode Drive Performance by movement

Movement	EBL	EBR	NBL	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)	0.6	3.9	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	68.1	11.7	92.2	10.9	4.5	6.0	2.0	9.7

### 5: Missouri Flat Road & Forni Road Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.6	0.9	3.6	0.0	0.0	0.0	0.1	0.5	1.1	0.0	0.0	0.0
Total Del/Veh (s)	44.2	40.2	5.2	50.5	24.6	1.9	54.6	26.9	9.4	109.3	15.6	7.1

### 5: Missouri Flat Road & Forni Road Performance by movement

Movement	All	
Denied Del/Veh (s)	0.5	
Total Del/Veh (s)	29.5	

### 6: Missouri Flat Road & Golden Center Drive Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	33.0	32.6	10.3	33.0	1.5	19.2	41.6	14.6	12.9	51.3	19.4	3.6

### 6: Missouri Flat Road & Golden Center Drive Performance by movement

Movement	All	
Denied Del/Veh (s)	0.0	
Total Del/Veh (s)	17.4	

### 7: Missouri Flat Road & China Garden Rd Performance by movement

Movement	EBR	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All	
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Del/Veh (s)	6.5	0.2	10.3	6.0	3.9	1.8	12.6	1.1	0.1	3.6	

### 8: SR 49 & Pleasant Valley Rd Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.4	0.4	0.1	0.0	2.7	2.9	1.1
Total Del/Veh (s)	18.7	16.7	9.7	10.5	38.2	37.0	22.4

### 9: Pleasant Valley Rd & Forni Rd Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.2	0.2	0.0
Total Del/Veh (s)	6.2	3.2	2.8	2.6	70.2	43.4	10.0

# 10: Pleasant Valley Rd & Missouri Flat Rd Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	84.6	33.2	19.5	8.8	13.2	0.9	4.0	28.1

### 11: Pleasant Valley Rd & China Garden Rd Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.4	0.4	0.0	0.0	0.3
Total Del/Veh (s)	12.2	3.1	4.6	3.8	19.2	11.0	4.3

### 12: Fowler Ln/Diamond Rd & Pleasant Valley Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.6	0.3	0.5	0.3	0.2	3.9	0.0	0.0	0.0
Total Del/Veh (s)	30.1	14.6	5.3	38.4	23.4	12.4	28.1	32.0	5.6	24.0	20.7	11.4

### 12: Fowler Ln/Diamond Rd & Pleasant Valley Rd Performance by movement

Movement	All	
Denied Del/Veh (s)	0.3	
Total Del/Veh (s)	20.0	

## 13: Driveway/Racquet Way & Pleasant Valley Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	NBL	NBR	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.9	0.8	0.1	0.1	0.1	0.5
Total Del/Veh (s)	6.5	1.2	0.7	6.5	5.4	17.4	5.3	9.8	4.8

### 14: Diamond Rd & Truck St Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.2	0.3	0.1
Total Del/Veh (s)	6.0	3.3	2.9	0.5	0.5	0.4	0.8

#### 15: Diamond Rd & Bradley Dr Performance by movement

Movement	EBR	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	2.8	1.0	0.5	0.2	8.0

### 16: Diamond Rd & Lime Kiln Rd/Black Rice Ln Performance by movement

Movement	EBR	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	3.2	4.1	3.6	2.0	2.1	3.8	1.4	1.1	2.1

### 17: Diamond Rd & Diamond Springs Parkway/Project Access Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	17.4	10.1	4.3	14.1	15.3	6.1	12.8	4.5	2.5	10.8	11.7	3.5

# 17: Diamond Rd & Diamond Springs Parkway/Project Access Performance by movement

Movement	All	
Denied Del/Veh (s)	0.0	
Total Del/Veh (s)	8.0	

## 18: Missouri Flat Road & Missouri Flat Rd/Diamond Springs Parkway Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.5	0.0	0.5	0.1	0.0	0.1	0.0	0.0	0.0	4.1	0.1	0.1
Total Del/Veh (s)	20.7	16.3	12.6	23.7	13.6	3.2	11.4	3.1	1.9	27.4	23.9	10.2

## 18: Missouri Flat Road & Missouri Flat Rd/Diamond Springs Parkway Performance by movement

Movement	All
Denied Del/Veh (s)	0.2
Total Del/Veh (s)	12.7

### 19: Throwita Way & Diamond Springs Parkway Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.9	0.0	0.1	0.2	0.2	4.1	0.1	0.1	0.1
Total Del/Veh (s)	62.7	8.4	4.3	61.3	4.2	2.2	54.7	50.2	4.6	54.1	50.5	22.7

# 19: Throwita Way & Diamond Springs Parkway Performance by movement

Movement	All
Denied Del/Veh (s)	0.2
Total Del/Veh (s)	14.7

Denied Del/Veh (s)	1.3
Total Del/Veh (s)	306.0

# 1: Missouri Flat Road & Plaza Drive Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.2	0.2	0.0	0.0	0.1
Total Del/Veh (s)	20.2	37.7	26.1	26.8	27.7

#### 2: Missouri Flat Road & WB Ramps Performance by approach

Approach	Approach	WB	NB	SB /	٩II
Denied Del/Veh (s)	Denied Del/Veh (s)	1.1	0.0	(1)(1) (1)	.3
Total Del/Veh (s)	Total Del/Veh (s)	3/I h 1	3.7	18.8 21	

### 3: Missouri Flat Road & EB Ramps Performance by approach

Approach	proach EB NB SB	All
Denied Del/Veh (s)	nied Del/Veh (s) 1.2 0.0 0.0	0.3
Total Del/Veh (s)	· · · · · · · · · · · · · · · · · · ·	25.8

### 4: Missouri Flat Road & Mother Lode Drive Performance by approach

#### 5: Missouri Flat Road & Forni Road Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	4.2	0.0	0.1	0.0	0.8
Total Del/Veh (s)	93.6	12.3	24.4	26.4	36.7

## 6: Missouri Flat Road & Golden Center Drive Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.2	0.7	0.0	0.0	0.1
Total Del/Veh (s)	36.2	41.6	25.2	42.5	35.2

# 7: Missouri Flat Road & China Garden Rd Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	18.8	10.2	3.3	1.8	3.1

# 8: SR 49 & Pleasant Valley Rd Performance by approach

# 9: Pleasant Valley Rd & Forni Rd Performance by approach

Approach	proach EB	WB	SB	All
Denied Del/Veh (s)	enied Del/Veh (s) 0.0	0.1	0.2	0.1
Total Del/Veh (s)	otal Del/Veh (s) 3.4	2.6	12.6	4.5

### 10: Pleasant Valley Rd & Missouri Flat Rd Performance by approach

#### 11: Pleasant Valley Rd & China Garden Rd Performance by approach

Approach	ach EB WB SB	All
Denied Del/Veh (s)	d Del/Veh (s) 0.0 0.0 0.0	0.0
Total Del/Veh (s)	` ,	4.3

### 12: Fowler Ln/Diamond Rd & Pleasant Valley Rd Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	0.2	1.4	0.0	0.2
Total Del/Veh (s)	20.6	19.6	25.2	21.4	20.9

### 13: Driveway/Racquet Way & Pleasant Valley Rd Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	0.4	0.4	0.1	0.2
Total Del/Veh (s)	2.3	4.0	22.2	8.5	4.1

### 14: Diamond Rd & Truck St Performance by approach

Approach	oach EB NE	3 S	B All
Denied Del/Veh (s)	ed Del/Veh (s) 0.1 0.0	) 0	.3 0.1
Total Del/Veh (s)	Del/Veh (s) 5.7 0.7	0	.7 1.0

#### 15: Diamond Rd & Bradley Dr Performance by approach

Approach
Denied Del/Veh (s)
Total Del/Veh (s)

### 16: Diamond Rd & Lime Kiln Rd/Black Rice Ln Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	5.1	3.5	2.3	2.1	2.4

# 17: Diamond Rd & Diamond Springs Parkway/Project Access Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	1.2	0.0	0.0	0.1
Total Del/Veh (s)	10.0	16.5	11.2	11.5	11.4

# 18: Missouri Flat Road & Missouri Flat Rd/Diamond Springs Parkway Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.0	1.5	0.0
Total Del/Veh (s)	21.6	14.2	11.8	20.5	17.4

### 19: Throwita Way & Diamond Springs Parkway Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	0.1	1.8	0.1	0.2
Total Del/Veh (s)	11.8	9.5	34.4	42.4	14.8

Denied Del/Veh (s)	1.6
Total Del/Veh (s)	806.5

## 1: Missouri Flat Road & Plaza Drive Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.3	0.3	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	34.2	35.1	17.1	38.9	42.4	28.0	48.3	24.3	10.4	43.5	25.0	12.1

#### 1: Missouri Flat Road & Plaza Drive Performance by movement

Movement	All
Denied Del/Veh (s)	0.1
Total Del/Veh (s)	27.7

### 2: Missouri Flat Road & WB Ramps Performance by movement

Movement	WBL	WBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.4	2.5	0.0	0.0	0.0	0.0	0.3
Total Del/Veh (s)	44.6	16.3	20.9	9.7	22.1	3.7	21.8

### 3: Missouri Flat Road & EB Ramps Performance by movement

Movement	EBL	EBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	1.6	1.0	0.0	0.0	0.1	0.0	0.3
Total Del/Veh (s)	27.3	36.8	20.4	3.0	48.4	19.6	25.8

### 4: Missouri Flat Road & Mother Lode Drive Performance by movement

Movement	EBL	EBR	NBL	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)	0.5	3.9	2.4	1.8	2.0	0.0	0.0	0.9
Total Del/Veh (s)	72.7	21.7	114.9	49.3	4.8	6.9	2.2	21.2

### 5: Missouri Flat Road & Forni Road Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	4.3	2.3	4.3	0.0	0.0	0.0	0.0	0.1	0.4	0.0	0.0	0.0
Total Del/Veh (s)	104.2	77.0	39.0	56.8	29.8	1.9	65.7	21.6	7.1	58.4	25.5	17.3

### 5: Missouri Flat Road & Forni Road Performance by movement

Movement	All	
Denied Del/Veh (s)	0.8	
Total Del/Veh (s)	36.7	

### 6: Missouri Flat Road & Golden Center Drive Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.2	0.2	0.2	0.7	1.2	0.6	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	48.7	44.9	29.5	44.8	50.2	34.5	97.5	19.2	17.5	88.4	40.1	11.5

### 6: Missouri Flat Road & Golden Center Drive Performance by movement

#### 7: Missouri Flat Road & China Garden Rd Performance by movement

Movement	EBR	WBT	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	18.8	0.2	10.3	3.3	1.5	8.4	1.4	3.1

### 8: SR 49 & Pleasant Valley Rd Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	4.7	5.1	0.1	0.0	0.3	0.3	2.1
Total Del/Veh (s)	48.7	49.1	9.1	7.8	9.0	7.8	25.3

### 9: Pleasant Valley Rd & Forni Rd Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.1	0.0	0.1	0.1	0.2	0.2	0.1
Total Del/Veh (s)	6.4	2.9	2.7	2.0	25.7	10.3	4.5

### 10: Pleasant Valley Rd & Missouri Flat Rd Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Del/Veh (s)	78.7	25.7	22.8	6.6	15.8	1.6	3.8	22.7

### 11: Pleasant Valley Rd & China Garden Rd Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBT	SBR	All	
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Del/Veh (s)	9.9	4.4	3.8	3.4	20.4		7.9	4.3	

### 12: Fowler Ln/Diamond Rd & Pleasant Valley Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.6	0.1	0.2	0.3	0.3	3.9	0.0	0.0	0.0
Total Del/Veh (s)	38.9	18.8	11.0	42.0	22.7	7.1	34.0	33.7	6.2	26.6	15.7	11.2

### 12: Fowler Ln/Diamond Rd & Pleasant Valley Rd Performance by movement

Movement	All	
Denied Del/Veh (s)	0.2	
Total Del/Veh (s)	20.9	

## 13: Driveway/Racquet Way & Pleasant Valley Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBT	SBR	All	
Denied Del/Veh (s)	0.0	0.0	0.0	0.5	0.4	0.4	0.4	0.3	0.1	0.1	0.2	
Total Del/Veh (s)	5.1	2.1	1.2	11.3	3.7	3.1	31.6	16.0	25.9	7.5	4.1	

### 14: Diamond Rd & Truck St Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.3	0.2	0.1
Total Del/Veh (s)	7.6	3.4	3.0	0.6	0.7	0.4	1.0

#### 15: Diamond Rd & Bradley Dr Performance by movement

Movement	EBR	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	3.0	1.2	0.4	0.3	0.9

### 16: Diamond Rd & Lime Kiln Rd/Black Rice Ln Performance by movement

Movement	EBR	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.1	0.0	0.0	0.2	0.0	0.0	0.0
Total Del/Veh (s)	5.1	3.5	6.6	2.1	1.8	4.2	2.1	1.6	2.4

### 17: Diamond Rd & Diamond Springs Parkway/Project Access Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.2	0.0	0.0	4.1	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	20.8	10.0	7.5	24.2	15.7	6.7	17.5	8.8	4.2	17.1	14.4	2.9

### 17: Diamond Rd & Diamond Springs Parkway/Project Access Performance by movement

# 18: Missouri Flat Road & Missouri Flat Rd/Diamond Springs Parkway Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	4.5	0.2	0.1
Total Del/Veh (s)	38.4	18.5	22.4	24.8	13.2	3.7	12.6	6.4	2.5	26.1	29.0	8.7

## 18: Missouri Flat Road & Missouri Flat Rd/Diamond Springs Parkway Performance by movement

Movement	All	
Denied Del/Veh (s)	0.0	
Total Del/Veh (s)	17.4	

### 19: Throwita Way & Diamond Springs Parkway Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.5	0.0	0.0	0.3	0.2	4.0	0.1	0.1	0.1
Total Del/Veh (s)	60.2	8.4	5.6	68.0	4.8	3.1	57.1	49.5	5.7	47.0	48.3	10.9

# 19: Throwita Way & Diamond Springs Parkway Performance by movement

Movement	All
Denied Del/Veh (s)	0.2
Total Del/Veh (s)	14.8

Denied Del/Veh (s)	1.6
Total Del/Veh (s)	806.5

## 1: Missouri Flat Road & Plaza Drive Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.2	0.0	0.0	0.0
Total Del/Veh (s)	10.2	23.5	13.1	14.7	14.8

### 2: Missouri Flat Road & WB Ramps Performance by approach

Approach	ı WB	NB	SB	All
Denied Del/Veh (s)	el/Veh (s) 1.3	0.0	0.0	0.4
Total Del/Veh (s)	Veh (s) 22.4	18.8	13.3	18.7

### 3: Missouri Flat Road & EB Ramps Performance by approach

Approach	EB NB	SB	All
Denied Del/Veh (s)	(s) 1.3 0.0	0.0	0.3
Total Del/Veh (s)	23.1 12.6	10.1	13.8

### 4: Missouri Flat Road & Mother Lode Drive Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	1.8	0.0	0.0	0.0
Total Del/Veh (s)	49.3	12.3	4.3	9.5

### 5: Missouri Flat Road & Forni Road Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	3.0	0.0	0.0	0.0	0.4
Total Del/Veh (s)	41.3	18.6	27.2	30.2	29.5

## 6: Missouri Flat Road & Golden Center Drive Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	24.5	14.8	19.5	30.8	23.4

## 7: Missouri Flat Road & China Garden Rd Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	7.0	9.0	4.4	2.3	3.6

# 8: SR 49 & Pleasant Valley Rd Performance by approach

Approach
Denied Del/Veh (s)
Total Del/Veh (s)

## 9: Pleasant Valley Rd & Forni Rd Performance by approach

Approach	pproach EB WB	SB All
Denied Del/Veh (s)	enied Del/Veh (s) 0.0 0.1	0.2 0.1
Total Del/Veh (s)		43.4 9.0

### 10: Pleasant Valley Rd & Missouri Flat Rd Performance by approach

Approach	EB	WB	SB	All
Denied Del/Veh (s)	11 0	0.0	0.0	3./
· · ·	05.0	40.0	7.0	37.1
Total Del/Veh (s)	95.6	12.0	7.0	37.1

### 11: Pleasant Valley Rd & China Garden Rd Performance by approach

Approach	pproach EB WB S	B All
Denied Del/Veh (s)	enied Del/Veh (s) 0.0 0.9 0	0.6
Total Del/Veh (s)	· /	. /1

# 12: Fowler Ln/Diamond Rd & Pleasant Valley Rd Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	0.2	1.2	0.0	0.2
Total Del/Veh (s)	17.5	13.8	21.0	18.5	15.7

### 13: Driveway/Racquet Way & Pleasant Valley Rd Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	0.8	0.1	0.1	0.5
Total Del/Veh (s)	1.5	5.6	14.7	12.1	4.9

## 14: Diamond Rd & Truck St Performance by approach

Approach	EB NB SB	All
Denied Del/Veh (s)	) 0.1 0.0 0.2	0.1
Total Del/Veh (s)	5.4 0.9 0.6	0.9

## 15: Diamond Rd & Bradley Dr Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0
Total Del/Veh (s)	3.3	1.3	1.5	1.4

# 16: Diamond Rd & Lime Kiln Rd/Black Rice Ln Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	3.3	4.9	2.4	2.8	2.7

# 17: Diamond Rd & Diamond Springs Parkway/Project Access Performance by approach

Approach	EB NB SB	All
Denied Del/Veh (s)	0.0 0.1 102.4	35.6
Total Del/Veh (s)	12.3 31.4 59.7	38.6

# 18: Missouri Flat Road & Missouri Flat Rd/Diamond Springs Parkway Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.0	1.6	0.0
Total Del/Veh (s)	15.8	16.6	14.8	25.7	15.8

### 19: Throwita Way & Diamond Springs Parkway Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	0.0	1.2	0.2	0.1
Total Del/Veh (s)	14.3	12.5	37.6	37.4	17.2

Denied Del/Veh (s)	13.5
Total Del/Veh (s)	376.1

## 1: Missouri Flat Road & Plaza Drive Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.1	0.1	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	28.5	29.1	7.5	25.4	27.5	13.6	26.8	12.2	5.7	30.2	13.0	6.4

#### 1: Missouri Flat Road & Plaza Drive Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	14.8

### 2: Missouri Flat Road & WB Ramps Performance by movement

Movement	WBL	WBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.5	2.6	0.0	0.0	0.0	0.0	0.4
Total Del/Veh (s)	28.1	13.8	34.4	9.1	16.2	3.6	18.7

### 3: Missouri Flat Road & EB Ramps Performance by movement

Movement	EBL	EBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	1.3	1.3	0.0	0.0	0.0	0.0	0.3
Total Del/Veh (s)	28.3	21.4	12.9	2.5	37.2	5.7	13.8

### 4: Missouri Flat Road & Mother Lode Drive Performance by movement

Movement	EBL	EBR	NBL	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)	0.2	4.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	74.4	12.5	100.4	14.4	5.1	4.3	1.9	9.5

### 5: Missouri Flat Road & Forni Road Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.5	1.0	3.5	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Del/Veh (s)	46.9	38.3	5.4	48.3	27.3	1.9	59.2	26.2	10.0	99.0	18.6	8.0

### 5: Missouri Flat Road & Forni Road Performance by movement

Movement	All	
Denied Del/Veh (s)	0.4	
Total Del/Veh (s)	29.5	

### 6: Missouri Flat Road & Golden Center Drive Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	32.5	33.4	17.9	38.0	2.0	20.4	57.4	18.0	15.4	77.8	25.9	3.7

### 6: Missouri Flat Road & Golden Center Drive Performance by movement

Movement	All	
Denied Del/Veh (s)	0.0	
Total Del/Veh (s)	23.4	

### 7: Missouri Flat Road & China Garden Rd Performance by movement

Movement	EBR	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All	
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Del/Veh (s)	7.0	0.0	9.0	5.7	4.6	2.2	13.2	1.2	0.0	3.6	

### 8: SR 49 & Pleasant Valley Rd Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	1.0	1.0	0.1	0.0	24.0	25.9	9.2
Total Del/Veh (s)	38.1	33.6	10.9	12.0	63.1	60.2	36.8

### 9: Pleasant Valley Rd & Forni Rd Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.1	0.1	0.2	0.2	0.1
Total Del/Veh (s)	7.1	3.6	2.9	2.3	57.0	36.5	9.0

### 10: Pleasant Valley Rd & Missouri Flat Rd Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	13.0	6.8	0.0	0.0	0.0	0.0	0.0	3.4
Total Del/Veh (s)	114.0	56.3	16.0	7.7	13.1	0.9	4.2	37.1

### 11: Pleasant Valley Rd & China Garden Rd Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.9	0.8	0.0	0.0	0.6
Total Del/Veh (s)	13.7	3.3	4.3	3.6	17.5	12.1	4.1

## 12: Fowler Ln/Diamond Rd & Pleasant Valley Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.1	0.3	0.2	0.3	4.0	0.0	0.0	0.0
Total Del/Veh (s)	28.0	14.5	5.4	33.0	17.0	8.9	26.1	26.3	5.1	22.6	16.3	8.6

### 12: Fowler Ln/Diamond Rd & Pleasant Valley Rd Performance by movement

Movement	All	
Denied Del/Veh (s)	0.2	
Total Del/Veh (s)	15.7	

### 13: Driveway/Racquet Way & Pleasant Valley Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	NBL	NBR	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.9	0.8	0.1	0.1	0.1	0.5
Total Del/Veh (s)	7.0	1.1	0.7	8.3	5.5	17.7	6.2	11.9	4.9

### 14: Diamond Rd & Truck St Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.2	0.2	0.1
Total Del/Veh (s)	7.0	3.2	3.2	0.6	0.6	0.6	0.9

### 15: Diamond Rd & Bradley Dr Performance by movement

Movement	EBR	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	3.3	1.3	1.5	0.8	1.4

#### 16: Diamond Rd & Lime Kiln Rd/Black Rice Ln Performance by movement

Movement	EBR	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	3.3	5.0	4.4	2.4	1.7	6.0	2.6	2.5	2.7

### 17: Diamond Rd & Diamond Springs Parkway/Project Access Performance by movement

Movement	EBL	EBT	EBR	NBL	NBT	SBT	SBR	All	
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.1	104.5	96.3	35.6	
Total Del/Veh (s)	20.3	1.1	8.5	40.0	19.4	77.8	6.9	38.6	

# 18: Missouri Flat Road & Missouri Flat Rd/Diamond Springs Parkway Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	0.2	0.2
Total Del/Veh (s)	34.8	18.3	14.7	28.5	15.2	7.2	15.4	5.8	3.3	29.3	34.3	12.1

### 18: Missouri Flat Road & Missouri Flat Rd/Diamond Springs Parkway Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	15.8

### 19: Throwita Way & Diamond Springs Parkway Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.1	0.0	0.0	0.0	0.3	0.2	3.8	0.2	0.2	0.1
Total Del/Veh (s)	58.2	8.2	4.9	59.3	9.0	7.5	49.3	45.1	4.7	48.1	45.7	18.6

# 19: Throwita Way & Diamond Springs Parkway Performance by movement

Movement	All
Denied Del/Veh (s)	0.1
Defiled Del/Vell (5)	0.1
Total Del/Veh (s)	17.2

Denied Del/Veh (s)	13.5
Total Del/Veh (s)	376.1

# 1: Missouri Flat Road & Plaza Drive Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.2	0.2	0.0	0.0	0.1
Total Del/Veh (s)	19.0	34.7	25.4	25.0	26.2

### 2: Missouri Flat Road & WB Ramps Performance by approach

Approach	WB NB SB	All
Denied Del/Veh (s)	(s) 1.2 0.0 0.0	0.4
Total Del/Veh (s)	31.1 14.3 18.9	21.0

### 3: Missouri Flat Road & EB Ramps Performance by approach

Approach	pproach EB NB SB	All
Denied Del/Veh (s)	Denied Del/Veh (s) 1.7 0.0 0.0	0.4
Total Del/Veh (s)	· ,	23.5

### 4: Missouri Flat Road & Mother Lode Drive Performance by approach

Approach	EB		SB	All
Denied Del/Veh (s)	2.8		0.0	0.0
Total Del/Veh (s)	45.5	19.1	5.4	12.5

### 5: Missouri Flat Road & Forni Road Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	54.5	0.0	0.3	0.0	10.3
Total Del/Veh (s)	174.6	13.8	29.8	26.4	54.5

## 6: Missouri Flat Road & Golden Center Drive Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.3	2.0	0.2	0.0	0.3
Total Del/Veh (s)	35.6	44.1	32.7	37.1	35.9

### 7: Missouri Flat Road & China Garden Rd Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	12.4	10.6	2.7	4.0	4.2

# 8: SR 49 & Pleasant Valley Rd Performance by approach

Approach	EB	WB	NB	All
Denied Del/Veh (s)	45.3	0.0	0.3	18.8
` ,				
Total Del/Veh (s)	98.8	10.3	10.8	47.0

## 9: Pleasant Valley Rd & Forni Rd Performance by approach

Approach	Approach EB	WB	SB	All
Denied Del/Veh (s)	Denied Del/Veh (s) 0.0	0.1	0.2	0.1
Total Del/Veh (s)	,	2.9	25.6	6.8

### 10: Pleasant Valley Rd & Missouri Flat Rd Performance by approach

Approach
Denied Del/Veh (s)
Total Del/Veh (s)

### 11: Pleasant Valley Rd & China Garden Rd Performance by approach

Approach	proach EE	B WB	SB	All
Denied Del/Veh (s)	nied Del/Veh (s) 0.0	0.0	0.0	0.0
Total Del/Veh (s)	tal Del/Veh (s) 4.	4.0	10.2	4.2

# 12: Fowler Ln/Diamond Rd & Pleasant Valley Rd Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	0.3	1.6	0.0	0.2
Total Del/Veh (s)	20.3	20.2	26.0	23.2	21.4

### 13: Driveway/Racquet Way & Pleasant Valley Rd Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	0.4	0.9	0.2	0.2
Total Del/Veh (s)	2.3	4.0	24.6	10.8	4.4

### 14: Diamond Rd & Truck St Performance by approach

Approach	Approach	EB	NB	SB	All
Denied Del/Veh (s)	Denied Del/Veh (s)	0.1	0.0	0.3	0.1
Total Del/Veh (s)	( )	7.7	1.1	0.6	1.4

### 15: Diamond Rd & Bradley Dr Performance by approach

# 16: Diamond Rd & Lime Kiln Rd/Black Rice Ln Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	4.3	4.2	2.3	2.6	2.6

# 17: Diamond Rd & Diamond Springs Parkway/Project Access Performance by approach

Approach	EB NB S	B All
Denied Del/Veh (s)	01 03 2	<i>1</i> Ω Ω
` '	0.1 0.5 2	
Total Del/Veh (s)	19.4 30.7 33	

### 18: Missouri Flat Road & Missouri Flat Rd/Diamond Springs Parkway Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	0.1	0.0	1.3	0.0
Total Del/Veh (s)	20.3	15.6	17.2	25.4	18.8

### 19: Throwita Way & Diamond Springs Parkway Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	0.0	1.7	0.1	0.2
Total Del/Veh (s)	12.6	13.0	31.8	43.9	17.2

Denied Del/Veh (s)	9.9
Total Del/Veh (s)	566.7

## 1: Missouri Flat Road & Plaza Drive Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.3	0.3	0.2	0.2	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	32.0	33.8	15.9	35.7	38.2	27.8	47.8	22.9	9.6	38.4	23.8	10.9

#### 1: Missouri Flat Road & Plaza Drive Performance by movement

### 2: Missouri Flat Road & WB Ramps Performance by movement

Movement	WBL	WBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.5	2.4	0.0	0.0	0.0	0.0	0.4
Total Del/Veh (s)	39.4	16.0	22.3	10.1	22.5	3.8	21.0

### 3: Missouri Flat Road & EB Ramps Performance by movement

Movement	EBL	EBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	1.8	1.7	0.0	0.0	0.0	0.0	0.4
Total Del/Veh (s)	26.0	35.6	18.1	1.7	46.4	16.3	23.5

### 4: Missouri Flat Road & Mother Lode Drive Performance by movement

Movement	EBL	EBR	NBL	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)	0.2	4.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	79.8	28.8	89.7	23.6	5.8	5.4	2.3	12.5

### 5: Missouri Flat Road & Forni Road Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	54.4	54.3	55.4	0.0	0.0	0.0	0.1	0.3	1.2	0.0	0.0	0.0
Total Del/Veh (s)	187.2	152.5	114.4	55.0	29.4	1.8	77.6	25.6	9.2	65.1	25.0	17.4

## 5: Missouri Flat Road & Forni Road Performance by movement

Movement	All	
Denied Del/Veh (s)	10.3	
Total Del/Veh (s)	54.5	

### 6: Missouri Flat Road & Golden Center Drive Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.2	0.2	0.3	2.1	2.8	1.9	1.2	0.2	0.2	0.0	0.0	0.0
Total Del/Veh (s)	44.3	54.1	29.7	47.6	48.5	35.8	141.7	22.7	17.4	95.2	33.9	7.3

### 6: Missouri Flat Road & Golden Center Drive Performance by movement

Movement	All	
Denied Del/Veh (s)	0.3	
Total Del/Veh (s)	35.9	

#### 7: Missouri Flat Road & China Garden Rd Performance by movement

Movement	EBR	WBT	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Total Del/Veh (s)	12.4	1.0	10.7	2.8	0.6	9.9	3.9	4.2

### 8: SR 49 & Pleasant Valley Rd Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	44.2	47.0	0.1	0.0	0.3	0.3	18.8
Total Del/Veh (s)	100.1	96.8	11.2	9.6	12.2	9.8	47.0

### 9: Pleasant Valley Rd & Forni Rd Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.1	0.1	0.2	0.2	0.1
Total Del/Veh (s)	7.1	3.2	3.0	2.6	38.1	23.9	6.8

### 10: Pleasant Valley Rd & Missouri Flat Rd Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	25.1	16.2	21.8	6.3	14.3	2.3	4.2	13.8

### 11: Pleasant Valley Rd & China Garden Rd Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBT	SBR	All	
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Del/Veh (s)	7.1	4.1	4.0	3.5	19.3	0.1	6.4	4.2	

### 12: Fowler Ln/Diamond Rd & Pleasant Valley Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.6	0.2	0.4	0.4	0.3	3.9	0.0	0.0	0.0
Total Del/Veh (s)	38.9	18.6	11.0	45.0	23.8	7.8	37.1	35.6	6.7	27.2	16.5	9.7

#### 12: Fowler Ln/Diamond Rd & Pleasant Valley Rd Performance by movement

Movement	All	
Denied Del/Veh (s)	0.2	
Total Del/Veh (s)	21.4	

### 13: Driveway/Racquet Way & Pleasant Valley Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.4	0.4	0.4	0.6	0.9	1.1	0.1	0.2	0.2
Total Del/Veh (s)	5.1	2.0	1.3	10.5	3.8	4.0	38.4	35.7	17.1	23.0	29.2	8.9

### 13: Driveway/Racquet Way & Pleasant Valley Rd Performance by movement

Movement	All	
Denied Del/Veh (s)	0.2	
Total Del/Veh (s)	4.4	

### 14: Diamond Rd & Truck St Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.3	0.3	0.1
Total Del/Veh (s)	9.5	4.3	3.2	0.9	0.6	0.5	1.4

### 15: Diamond Rd & Bradley Dr Performance by movement

Movement	EBR	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	3.0	1.6	0.4	0.3	1.3

#### 16: Diamond Rd & Lime Kiln Rd/Black Rice Ln Performance by movement

Movement	EBR	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	4.3	4.2	6.8	2.2	1.2	5.0	2.4	2.0	2.6

### 17: Diamond Rd & Diamond Springs Parkway/Project Access Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.1	0.1	0.3	2.6	1.4	0.8
Total Del/Veh (s)	18.1	19.8	45.6	24.2	40.3	3.8	27.6

# 18: Missouri Flat Road & Missouri Flat Rd/Diamond Springs Parkway Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.4	0.0	0.3	0.0	0.0	0.0	4.2	0.1	0.2
Total Del/Veh (s)	43.5	20.7	19.9	28.2	13.6	5.0	18.9	13.0	5.1	29.8	36.5	9.8

### 18: Missouri Flat Road & Missouri Flat Rd/Diamond Springs Parkway Performance by movement

Movement	All	
Denied Del/Veh (s)	0.0	
Total Del/Veh (s)	18.8	

### 19: Throwita Way & Diamond Springs Parkway Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.3	3.9	0.1	0.2	0.2
Total Del/Veh (s)	58.0	9.4	7.3	55.2	6.6	5.6	47.2	46.6	6.6	51.1	47.4	25.2

# 19: Throwita Way & Diamond Springs Parkway Performance by movement

Movement	All
Denied Del/Veh (s)	0.2
Total Del/Veh (s)	17.2

## 1: Missouri Flat Road & Plaza Drive Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.2	0.0	0.0	0.0
Total Del/Veh (s)	10.6	24.1	13.3	14.5	15.0

#### 2: Missouri Flat Road & WB Ramps Performance by approach

Approach	roach WB NB	SB	All
Denied Del/Veh (s)	nied Del/Veh (s) 1.3 0.0	0.0	0.4
Total Del/Veh (s)	al Del/Veh (s) 22.5 18.8	13.9	18.8

### 3: Missouri Flat Road & EB Ramps Performance by approach

Approach	ach EB NB SE	All
Denied Del/Veh (s)	d Del/Veh (s) 1.3 0.0 0.0	0.3
Total Del/Veh (s)	Del/Veh (s) 24.3 12.7 10.8	14.4

### 4: Missouri Flat Road & Mother Lode Drive Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	1.8	0.0	0.0	0.1
Defiled Deli veri (8)	1.0	0.0	0.0	0.1
Total Del/Veh (s)	48.0	13.8	4.8	10.5

#### 5: Missouri Flat Road & Forni Road Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	3.0	0.0	0.1	0.5	0.6
Total Del/Veh (s)	43.0	20.3	30.5	35.7	33.3

### 6: Missouri Flat Road & Golden Center Drive Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	27.6	17.2	18.9	31.5	23.5

### 7: Missouri Flat Road & China Garden Rd Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	9.1	7.2	4.5	2.4	3.7

#### 8: SR 49 & Pleasant Valley Rd Performance by approach

Approach
Denied Del/Veh (s)
Total Del/Veh (s)

# 9: Pleasant Valley Rd & Forni Rd Performance by approach

Approach	oproach EB W	SB SB	All
Denied Del/Veh (s)	enied Del/Veh (s) 0.0 0.	0.2	0.1
Total Del/Veh (s)	· ,	48.8	10.1

### 10: Pleasant Valley Rd & Missouri Flat Rd Performance by approach

### 11: Pleasant Valley Rd & China Garden Rd Performance by approach

## 12: Fowler Ln/Diamond Rd & Pleasant Valley Rd Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	0.2	1.1	0.0	0.2
Total Del/Veh (s)	17.9	15.9	22.6	19.2	17.3

### 13: Driveway/Racquet Way & Pleasant Valley Rd Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	0.9	0.1	0.1	0.6
Total Del/Veh (s)	1.5	5.4	17.6	11.4	4.8

### 14: Diamond Rd & Truck St Performance by approach

#### 15: Diamond Rd & Bradley Dr Performance by approach

Approach	EB	NB	SB	All
pproacri	EB	IND	OD.	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0
Total Del/Veh (s)	4.7	1.6	1.5	1.6

### 16: Diamond Rd & Lime Kiln Rd/Black Rice Ln Performance by approach

Approach	EB	WB	NB	SB	All	
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	
Total Del/Veh (s)	3.5	5.4	2.3	2.8	2.7	

# 17: Diamond Rd & Diamond Springs Parkway/Project Access Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	1.2	0.2	230.5	75.7
Total Del/Veh (s)	19.8	43.4	36.7	69.2	44.2

# 18: Missouri Flat Road & Missouri Flat Rd/Diamond Springs Parkway Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.0	1.6	0.0
Total Del/Veh (s)	15.8	16.1	16.3	22.1	16.2

## 19: Throwita Way & Diamond Springs Parkway Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	0.0	1.2	0.1	0.1
Total Del/Veh (s)	13.2	9.0	36.8	36.6	14.7

#### **Total Zone Performance**

Denied Del/Veh (s)	25.3
Total Del/Veh (s)	401.8

## 1: Missouri Flat Road & Plaza Drive Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.2	0.1	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	29.6	31.1	7.6	25.6	28.0	16.4	26.9	12.4	5.9	31.0	12.7	7.1

#### 1: Missouri Flat Road & Plaza Drive Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	15.0

#### 2: Missouri Flat Road & WB Ramps Performance by movement

Movement	WBL	WBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.5	2.6	0.0	0.0	0.0	0.0	0.4
Total Del/Veh (s)	28.2	13.8	33.7	8.9	16.8	3.6	18.8

#### 3: Missouri Flat Road & EB Ramps Performance by movement

Movement	EBL	EBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	1.3	1.3	0.0	0.0	0.0	0.0	0.3
Total Del/Veh (s)	28.9	22.8	13.1	2.5	37.3	6.7	14.4

## 4: Missouri Flat Road & Mother Lode Drive Performance by movement

Movement	EBL	EBR	NBL	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)	0.2	4.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	70.5	12.6	91.3	16.2	5.4	4.9	2.1	10.5

#### 5: Missouri Flat Road & Forni Road Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.5	1.0	3.4	0.0	0.0	0.0	0.0	0.1	0.2	0.9	0.5	0.2
Total Del/Veh (s)	49.6	40.0	5.1	56.4	28.0	1.9	65.3	29.6	11.8	122.0	20.3	9.7

#### 5: Missouri Flat Road & Forni Road Performance by movement

Movement	All	
Denied Del/Veh (s)	0.6	
Total Del/Veh (s)	33.3	

### 6: Missouri Flat Road & Golden Center Drive Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	43.5	45.2	17.1	42.3	1.9	27.4	55.5	17.6	15.0	78.5	26.9	4.8

### 6: Missouri Flat Road & Golden Center Drive Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	23.5

#### 7: Missouri Flat Road & China Garden Rd Performance by movement

Movement	EBR	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All	
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Del/Veh (s)	9.1	0.0	7.4	9.4	4.7	2.2	14.2	1.2	0.1	3.7	

### 8: SR 49 & Pleasant Valley Rd Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.4	0.4	0.1	0.0	14.8	15.6	5.6
Total Del/Veh (s)	22.4	18.3	9.9	10.9	58.7	57.3	30.8

## 9: Pleasant Valley Rd & Forni Rd Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.1	0.0	0.2	0.2	0.1
Total Del/Veh (s)	7.4	3.5	2.9	2.4	61.0	43.7	10.1

# 10: Pleasant Valley Rd & Missouri Flat Rd Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	19.4	19.5	0.0	0.0	0.0	0.0	0.0	6.1
Total Del/Veh (s)	132.2	67.7	16.6	8.0	13.8	1.0	4.6	42.4

# 11: Pleasant Valley Rd & China Garden Rd Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	1.0	1.2	0.0	0.0	0.7
Total Del/Veh (s)	14.8	3.7	4.3	3.8	20.4	10.5	4.3

### 12: Fowler Ln/Diamond Rd & Pleasant Valley Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.2	0.2	0.3	0.3	0.2	4.0	0.0	0.0	0.0
Total Del/Veh (s)	29.3	14.3	5.6	35.9	19.4	10.7	28.5	27.3	4.9	23.3	17.4	9.5

#### 12: Fowler Ln/Diamond Rd & Pleasant Valley Rd Performance by movement

Movement	All
Denied Del/Veh (s)	0.2
Total Del/Veh (s)	17.3

#### 13: Driveway/Racquet Way & Pleasant Valley Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	NBL	NBR	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	1.0	0.9	0.1	0.1	0.1	0.6
Total Del/Veh (s)	7.1	1.2	0.7	9.3	5.4	20.9	10.0	11.4	4.8

#### 14: Diamond Rd & Truck St Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.2	0.2	0.1
Total Del/Veh (s)	7.1	3.9	3.1	0.7	0.6	0.4	1.0

#### 15: Diamond Rd & Bradley Dr Performance by movement

Movement	EBR	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	4.5	1.6	1.5	0.6	1.6

# 16: Diamond Rd & Lime Kiln Rd/Black Rice Ln Performance by movement

Movement	EBR	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	3.5	5.4	4.7	2.3	2.0	6.7	2.6	2.6	2.7

#### 17: Diamond Rd & Diamond Springs Parkway/Project Access Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	4.0	0.2	0.2	0.1	0.2	0.6	244.6	232.4	224.6
Total Del/Veh (s)	33.6	13.5	11.5	62.6	43.9	15.7	45.3	25.8	17.7	96.9	90.7	7.2

## 17: Diamond Rd & Diamond Springs Parkway/Project Access Performance by movement

Movement	All	
Denied Del/Veh (s)	75.7	
Total Del/Veh (s)	44.2	

# 18: Missouri Flat Road & Missouri Flat Rd/Diamond Springs Parkway Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	0.1	0.1
Total Del/Veh (s)	31.8	17.8	14.9	29.9	14.5	7.2	17.0	5.7	2.7	30.0	25.5	11.1

# 18: Missouri Flat Road & Missouri Flat Rd/Diamond Springs Parkway Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	16.2

#### 19: Throwita Way & Diamond Springs Parkway Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	4.0	0.1	0.2	0.2
Total Del/Veh (s)	57.7	9.1	4.8	58.1	5.4	3.5	47.8	47.3	4.7	45.9	42.2	19.5

# 19: Throwita Way & Diamond Springs Parkway Performance by movement

Movement	All		
Denied Del/Veh (s)	0.1		
Total Del/Veh (s)	14.7		

#### **Total Zone Performance**

Denied Del/Veh (s)	d Del/Veh (s) 25.3
Total Del/Veh (s)	Del/Veh (s) 401.8

# 1: Missouri Flat Road & Plaza Drive Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.2	0.2	0.0	0.0	0.1
Total Del/Veh (s)	18.6	36.6	25.2	26.0	26.6

#### 2: Missouri Flat Road & WB Ramps Performance by approach

Approach	ch WB NB	SB AI
Denied Del/Veh (s)		0.0 0.4
Total Del/Veh (s)	` '	9.2 21.4

#### 3: Missouri Flat Road & EB Ramps Performance by approach

#### 4: Missouri Flat Road & Mother Lode Drive Performance by approach

#### 5: Missouri Flat Road & Forni Road Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	68.5	0.0	0.2	0.1	12.8
Total Del/Veh (s)	181.2	13.4	29.6	29.1	55.7

# 6: Missouri Flat Road & Golden Center Drive Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.2	1.6	0.5	0.0	0.3
Total Del/Veh (s)	37.4	43.9	28.7	40.5	36.0

#### 7: Missouri Flat Road & China Garden Rd Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	14.1	10.1	2.7	4.0	4.1

#### 8: SR 49 & Pleasant Valley Rd Performance by approach

Approach
Denied Del/Veh (s)
Total Del/Veh (s)

# 9: Pleasant Valley Rd & Forni Rd Performance by approach

Approach	Approach	EB	WB	SB	All
Denied Del/Veh (s)	Denied Del/Veh (s)	0.0	0.1	0.2	0.1
Total Del/Veh (s)	Total Del/Veh (s)	3.9	2.8	27.9	7.2

#### 10: Pleasant Valley Rd & Missouri Flat Rd Performance by approach

#### 11: Pleasant Valley Rd & China Garden Rd Performance by approach

Approach
Denied Del/Veh (s)
Total Del/Veh (s)

#### 12: Fowler Ln/Diamond Rd & Pleasant Valley Rd Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	0.2	1.5	0.0	0.2
Total Del/Veh (s)	20.6	20.3	26.1	24.9	22.0

## 13: Driveway/Racquet Way & Pleasant Valley Rd Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	0.4	0.4	0.1	0.2
Total Del/Veh (s)	2.3	4.0	22.7	10.3	4.3

#### 14: Diamond Rd & Truck St Performance by approach

Approach	oach EB NB	SB	All
Denied Del/Veh (s)	ed Del/Veh (s) 0.1 0.0	0.3	0.1
Total Del/Veh (s)	Del/Veh (s) 7.8 0.9	0.7	1.3

#### 15: Diamond Rd & Bradley Dr Performance by approach

Approach
Denied Del/Veh (s)
Total Del/Veh (s)

## 16: Diamond Rd & Lime Kiln Rd/Black Rice Ln Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	5.7	4.8	2.4	2.6	2.6

# 17: Diamond Rd & Diamond Springs Parkway/Project Access Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.2	1.1	0.7	7.7	2.3
Total Del/Veh (s)	25.9	44.3	36.9	39.0	34.2

# 18: Missouri Flat Road & Missouri Flat Rd/Diamond Springs Parkway Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	0.1	0.0	1.3	0.0
Total Del/Veh (s)	20.9	17.1	17.7	25.1	19.4

## 19: Throwita Way & Diamond Springs Parkway Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	0.0	1.7	0.1	0.2
Total Del/Veh (s)	13.3	12.9	31.9	40.5	16.9

#### **Total Zone Performance**

Denied Del/Veh (s)	10.7
Total Del/Veh (s)	614.1

## 1: Missouri Flat Road & Plaza Drive Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.3	0.3	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	31.7	31.0	15.7	37.4	39.7	30.5	46.3	23.5	9.9	39.7	24.7	12.6

#### 1: Missouri Flat Road & Plaza Drive Performance by movement

Movement	All	
Denied Del/Veh (s)	0.1	
Total Del/Veh (s)	26.6	

#### 2: Missouri Flat Road & WB Ramps Performance by movement

Movement	WBL	WBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.5	2.4	0.0	0.0	0.0	0.0	0.4
Total Del/Veh (s)	41.5	16.3	21.2	10.2	22.9	4.0	21.4

#### 3: Missouri Flat Road & EB Ramps Performance by movement

Movement	EBL	EBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	1.8	1.7	0.0	0.0	0.0	0.0	0.4
Total Del/Veh (s)	25.3	34.1	19.1	1.5	46.5	19.1	24.5

## 4: Missouri Flat Road & Mother Lode Drive Performance by movement

Movement	EBL	EBR	NBL	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)	0.2	4.1	2.1	0.3	0.4	0.0	0.0	0.2
Total Del/Veh (s)	73.5	29.3	111.9	38.1	6.8	5.9	2.2	17.4

#### 5: Missouri Flat Road & Forni Road Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	69.1	58.1	69.3	0.0	0.0	0.0	0.0	0.2	0.7	0.0	0.1	0.2
Total Del/Veh (s)	194.8	149.4	119.5	56.1	27.1	1.8	95.9	23.9	7.3	63.0	28.6	18.9

### 5: Missouri Flat Road & Forni Road Performance by movement

Movement	All	
Denied Del/Veh (s)	12.8	
Total Del/Veh (s)	55.7	

### 6: Missouri Flat Road & Golden Center Drive Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.2	0.2	0.2	1.7	2.4	1.3	1.7	0.4	0.2	0.0	0.0	0.0
Total Del/Veh (s)	47.5	49.6	31.1	47.1	45.1	35.5	115.7	21.8	17.4	97.2	37.7	9.7

#### 6: Missouri Flat Road & Golden Center Drive Performance by movement

Movement	All
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	36.0

#### 7: Missouri Flat Road & China Garden Rd Performance by movement

Movement	EBR	WBT	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Total Del/Veh (s)	14.1	0.7	10.2	2.7	0.6	8.6	4.0	4.1

#### 8: SR 49 & Pleasant Valley Rd Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	34.4	32.4	0.1	0.0	0.3	0.3	14.2
Total Del/Veh (s)	93.0	87.9	10.8	8.7	10.9	9.4	44.1

## 9: Pleasant Valley Rd & Forni Rd Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.1	0.1	0.2	0.2	0.1
Total Del/Veh (s)	7.4	3.3	2.9	2.2	46.8	25.1	7.2

### 10: Pleasant Valley Rd & Missouri Flat Rd Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	24.6	16.2	22.6	6.4	14.4	2.4	4.6	14.0

#### 11: Pleasant Valley Rd & China Garden Rd Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBT	SBR	All	
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Del/Veh (s)	9.8	4.4	4.0	3.4	17.2	0.0	5.6	4.4	

## 12: Fowler Ln/Diamond Rd & Pleasant Valley Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.3	0.1	0.4	0.4	0.3	3.9	0.0	0.0	0.0
Total Del/Veh (s)	39.3	18.8	11.3	45.9	24.0	7.8	35.1	36.8	6.3	29.3	17.8	10.7

#### 12: Fowler Ln/Diamond Rd & Pleasant Valley Rd Performance by movement

Movement	All
Denied Del/Veh (s)	0.2
Total Del/Veh (s)	22.0

### 13: Driveway/Racquet Way & Pleasant Valley Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.4	0.5	0.4	0.4	0.1	0.5	0.1	0.2	0.1
Total Del/Veh (s)	5.2	2.0	1.3	11.4	3.7	2.3	31.9	27.4	17.1	27.6	27.0	8.3

# 13: Driveway/Racquet Way & Pleasant Valley Rd Performance by movement

Movement	All	
Denied Del/Veh (s)	0.2	
Total Del/Veh (s)	4.3	

## 14: Diamond Rd & Truck St Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.3	0.1	0.1
Total Del/Veh (s)	9.7	4.3	3.1	0.8	0.7	0.5	1.3

#### 15: Diamond Rd & Bradley Dr Performance by movement

Movement	EBR	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	3.7	1.8	0.7	0.2	1.5

### 16: Diamond Rd & Lime Kiln Rd/Black Rice Ln Performance by movement

Movement	EBR	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All	
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Del/Veh (s)	5.7	4.7	8.5	2.3	1.8	5.3	2.4	2.1	2.6	

## 17: Diamond Rd & Diamond Springs Parkway/Project Access Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.6	0.1	0.1	4.1	0.2	0.2	0.3	0.8	0.5	8.6	7.8	6.9
Total Del/Veh (s)	35.2	21.8	23.5	62.6	41.7	26.3	50.3	31.0	22.3	83.0	46.1	4.1

#### 17: Diamond Rd & Diamond Springs Parkway/Project Access Performance by movement

Movement	All	
Denied Del/Veh (s)	2.3	
Total Del/Veh (s)	34.2	

### 18: Missouri Flat Road & Missouri Flat Rd/Diamond Springs Parkway Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.0	0.0	0.4	0.0	0.3	0.0	0.0	0.0	4.2	0.1	0.1
Total Del/Veh (s)	40.7	20.8	20.8	31.1	15.0	5.2	19.6	12.2	4.4	34.9	34.3	9.3

### 18: Missouri Flat Road & Missouri Flat Rd/Diamond Springs Parkway Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Jenied Del/Ven (S)	0.0
Total Del/Veh (s)	19.4

## 19: Throwita Way & Diamond Springs Parkway Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	3.9	0.1	0.2	0.2
Total Del/Veh (s)	61.2	10.2	6.9	64.9	6.8	4.2	47.9	47.4	6.8	47.8	42.1	20.6

# 19: Throwita Way & Diamond Springs Parkway Performance by movement

#### **Total Zone Performance**

Denied Del/Veh (s)	10.7	
Total Del/Veh (s)	614.1	

# Intersection: 1: Missouri Flat Road & Plaza Drive

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	R	L	LTR	L	L	Т	Т	R	L	Т	TR
Maximum Queue (ft)	79	53	137	154	100	113	164	171	192	87	107	118
Average Queue (ft)	36	21	62	62	33	63	59	80	67	31	42	38
95th Queue (ft)	65	47	113	122	82	100	132	144	136	69	85	89
Link Distance (ft)	740	740	734	734			459	459	459		200	200
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)					330	330				150		
Storage Blk Time (%)												
Queuing Penalty (veh)												

# Intersection: 2: Missouri Flat Road & WB Ramps

Movement	WB	WB	WB	WB	NB	NB	NB	NB	SB	SB	
Directions Served	L	LT	R	R	L	L	T	T	T	Т	
Maximum Queue (ft)	231	229	162	115	137	149	376	250	180	167	
Average Queue (ft)	146	142	77	30	120	132	123	53	84	63	
95th Queue (ft)	215	210	130	75	164	169	323	145	152	128	
Link Distance (ft)	983	983					395	395	459	459	
Upstream Blk Time (%)							0	0			
Queuing Penalty (veh)							2	0			
Storage Bay Dist (ft)			400	400	125	125					
Storage Blk Time (%)					1	10	0				
Queuing Penalty (veh)					4	33	0				

## Intersection: 3: Missouri Flat Road & EB Ramps

Movement	EB	EB	EB	NB	NB	NB	SB	SB	SB	SB	
Directions Served	L	LTR	R	Т	T	R	L	L	Т	Т	
Maximum Queue (ft)	145	199	187	166	166	105	98	128	131	154	
Average Queue (ft)	41	102	78	139	113	22	33	60	27	36	
95th Queue (ft)	100	170	148	199	189	74	74	94	81	101	
Link Distance (ft)		1460		138	138	138			395	395	
Upstream Blk Time (%)				14	6	0					
Queuing Penalty (veh)				50	21	0					
Storage Bay Dist (ft)	700		550				150	150			
Storage Blk Time (%)								0	0		
Queuing Penalty (veh)								0	0		

# Intersection: 4: Missouri Flat Road & Mother Lode Drive

Movement	EB	EB	EB	NB	NB	NB	SB	SB	SB	
Directions Served	L	L	R	L	Т	Т	Т	T	R	
Maximum Queue (ft)	42	191	81	89	330	222	161	169	82	
Average Queue (ft)	7	74	23	13	123	55	101	113	7	
95th Queue (ft)	30	145	64	51	278	156	179	184	55	
Link Distance (ft)		633			1547	1547	138	138		
Upstream Blk Time (%)							5	7	0	
Queuing Penalty (veh)							35	48	0	
Storage Bay Dist (ft)	200		200	150					200	
Storage Blk Time (%)		1			6	0		7	0	
Queuing Penalty (veh)		1			1	0		3	0	

## Intersection: 5: Missouri Flat Road & Forni Road

Movement	EB	EB	EB	EB	WB	WB	NB	NB	NB	NB	B25	B25
Directions Served	L	L	Т	R	L	T	L	Т	T	R	T	T
Maximum Queue (ft)	181	182	143	48	110	120	256	360	369	175	33	47
Average Queue (ft)	73	97	49	17	44	51	51	202	204	36	2	3
95th Queue (ft)	150	167	106	42	91	100	158	344	355	147	29	35
Link Distance (ft)			1180			265		317	317		652	652
Upstream Blk Time (%)								2	2			
Queuing Penalty (veh)								9	10			
Storage Bay Dist (ft)	195	195		150	190		250			150		
Storage Blk Time (%)	0	0	0			0		5	16	0		
Queuing Penalty (veh)	0	0	0			0		3	10	0		

## Intersection: 5: Missouri Flat Road & Forni Road

Movement	SB	SB	SB	SB	
Directions Served	L	Т	Т	R	
Maximum Queue (ft)	324	388	375	175	
Average Queue (ft)	212	173	173	76	
95th Queue (ft)	334	373	328	181	
Link Distance (ft)		365	365		
Upstream Blk Time (%)		5	1		
Queuing Penalty (veh)		37	3		
Storage Bay Dist (ft)	300			150	
Storage Blk Time (%)	8	2	8	0	
Queuing Penalty (veh)	30	4	21	0	

# Intersection: 6: Missouri Flat Road & Golden Center Drive

Movement	EB	WB	NB	NB	NB	B43	B43	SB	SB	SB	SB
Directions Served	LTR	LTR	L	T	TR	T	Т	L	T	T	R
Maximum Queue (ft)	55	106	157	286	295	87	113	190	361	487	18
Average Queue (ft)	18	45	38	160	182	4	7	62	102	199	2
95th Queue (ft)	44	91	98	265	290	40	51	135	261	395	12
Link Distance (ft)	184	339		216	216	1589	1589		652	652	
Upstream Blk Time (%)				3	5						
Queuing Penalty (veh)				17	29						
Storage Bay Dist (ft)			150					175			500
Storage Blk Time (%)				7				0	4	0	
Queuing Penalty (veh)				3				0	3	0	

## Intersection: 7: Missouri Flat Road & China Garden Rd

Movement	EB	WB	NB	NB	SB
Directions Served	R	R	L	TR	L
Maximum Queue (ft)	37	90	22	27	98
Average Queue (ft)	6	38	3	2	39
95th Queue (ft)	27	69	16	14	78
Link Distance (ft)	158	1439		558	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			200		190
Storage Blk Time (%)					
Queuing Penalty (veh)					

## Intersection: 8: SR 49 & Pleasant Valley Rd

Movement	EB	WB	WB	NB	
Directions Served	TR	L	T	LR	
Maximum Queue (ft)	220	104	188	529	
Average Queue (ft)	91	54	77	188	
95th Queue (ft)	169	99	135	465	
Link Distance (ft)	797		363	576	
Upstream Blk Time (%)				6	
Queuing Penalty (veh)				0	
Storage Bay Dist (ft)		80			
Storage Blk Time (%)		1	6		
Queuing Penalty (veh)		3	10		

# Intersection: 9: Pleasant Valley Rd & Forni Rd

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	174	6	287
Average Queue (ft)	55	0	71
95th Queue (ft)	120	5	225
Link Distance (ft)	363	1758	930
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

# Intersection: 10: Pleasant Valley Rd & Missouri Flat Rd

Movement	EB	EB	EB	WB	WB	SB	SB	B68	
Directions Served	L	L	T	Т	R	L	R	T	
Maximum Queue (ft)	211	224	559	255	214	159	98	2	
Average Queue (ft)	154	138	191	125	78	65	37	0	
95th Queue (ft)	233	261	542	208	157	123	81	2	
Link Distance (ft)			658	1506		127	127	419	
Upstream Blk Time (%)			2			1	0		
Queuing Penalty (veh)			12			2	0		
Storage Bay Dist (ft)	200	200			200				
Storage Blk Time (%)	16	16	0	1	0				
Queuing Penalty (veh)	32	32	1	4	0				

# Intersection: 11: Pleasant Valley Rd & China Garden Rd

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	136	2	40
Average Queue (ft)	15	0	12
95th Queue (ft)	77	2	38
Link Distance (ft)	1506	1257	266
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

# Intersection: 12: Fowler Ln/Diamond Rd & Pleasant Valley Rd

Movement	EB	EB	EB	WB	WB	WB	B60	NB	NB	SB	SB	
Directions Served	L	Т	TR	L	T	R	T	LT	R	L	TR	
Maximum Queue (ft)	134	151	117	130	590	195	98	140	62	123	114	
Average Queue (ft)	65	76	31	22	286	133	5	63	20	56	43	
95th Queue (ft)	115	136	85	84	540	252	66	114	54	106	86	
Link Distance (ft)		1257			549		458	614			1686	
Upstream Blk Time (%)					2		0					
Queuing Penalty (veh)					21		0					
Storage Bay Dist (ft)	180		250	105		170			90	340		
Storage Blk Time (%)		0			27	0		3	0			
Queuing Penalty (veh)		0			93	2		1	0			

# Intersection: 13: Driveway/Racquet Way & Pleasant Valley Rd

Movement	EB	EB	WB	WB	NB	SB
Directions Served	L	TR	L	TR	LTR	LTR
Maximum Queue (ft)	52	2	18	15	61	76
Average Queue (ft)	15	0	1	1	21	30
95th Queue (ft)	44	0	9	12	51	59
Link Distance (ft)		458		2746	122	679
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	90		60			
Storage Blk Time (%)				0		
Queuing Penalty (veh)				0		

## Intersection: 14: Diamond Rd & Truck St

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	31	54
Average Queue (ft)	11	7
95th Queue (ft)	33	35
Link Distance (ft)	488	395
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

# Intersection: 15: Diamond Rd & Bradley Dr

Movement	EB
Directions Served	R
Maximum Queue (ft)	33
Average Queue (ft)	12
95th Queue (ft)	35
Link Distance (ft)	627
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

## Intersection: 16: Diamond Rd & Lime Kiln Rd/Black Rice Ln

Movement	EB	WB	NB	SB
Directions Served	R	R	L	L
Maximum Queue (ft)	59	60	28	31
Average Queue (ft)	25	23	2	5
95th Queue (ft)	48	51	13	23
Link Distance (ft)	602	1011		
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			200	100
Storage Blk Time (%)				
Queuing Penalty (veh)				

## Intersection: 17: Diamond Rd & Diamond Springs Parkway/Project Access

Movement	EB	EB	NB	NB	NB	SB	SB
Directions Served	L	R	L	L	T	Т	R
Maximum Queue (ft)	66	77	68	60	80	76	75
Average Queue (ft)	19	24	22	28	17	27	30
95th Queue (ft)	50	55	50	53	51	59	57
Link Distance (ft)	893	893			570	386	386
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)			350	350			
Storage Blk Time (%)							
Queuing Penalty (veh)							

# Intersection: 18: Missouri Flat Road & Missouri Flat Rd/Diamond Springs Parkway

Movement	EB	EB	EB	B43	WB	WB	WB	WB	NB	NB	NB	B81
Directions Served	L	Т	Т	T	L	Т	Т	R	L	L	TR	T
Maximum Queue (ft)	29	90	94	9	74	112	130	24	225	282	37	82
Average Queue (ft)	4	38	34	0	25	48	51	3	117	130	9	3
95th Queue (ft)	21	74	76	7	58	90	97	15	201	225	32	36
Link Distance (ft)		1589	1589	216		2037	2037			225	225	172
Upstream Blk Time (%)									0	1		0
Queuing Penalty (veh)									0	5		0
Storage Bay Dist (ft)	125				500			175	275			
Storage Blk Time (%)		0							0	1		
Queuing Penalty (veh)		0							1	5		

#### Intersection: 18: Missouri Flat Road & Missouri Flat Rd/Diamond Springs Parkway

Movement	SB	SB
Directions Served	L	TR
Maximum Queue (ft)	27	30
Average Queue (ft)	4	8
95th Queue (ft)	20	26
Link Distance (ft)		278
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	50	
Storage Blk Time (%)		0
Queuing Penalty (veh)		0

# Intersection: 19: Throwita Way & Diamond Springs Parkway

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	SB	
Directions Served	L	T	Т	R	L	Т	TR	LT	R	LTR	
Maximum Queue (ft)	60	62	95	33	81	77	77	127	30	83	
Average Queue (ft)	14	7	14	3	27	16	19	44	8	29	
95th Queue (ft)	44	34	56	18	65	50	55	92	28	67	
Link Distance (ft)		2037	2037			893	893	462		282	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	200			200	200				200		
Storage Blk Time (%)											
Queuing Penalty (veh)											

## Zone Summary

Zone wide Queuing Penalty: 603

# Intersection: 1: Missouri Flat Road & Plaza Drive

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	R	L	LTR	L	L	T	Т	R	L	Т	TR
Maximum Queue (ft)	245	186	284	252	181	184	186	176	226	96	145	145
Average Queue (ft)	127	57	157	138	102	120	99	101	106	31	70	59
95th Queue (ft)	207	129	241	232	172	179	179	162	191	70	124	118
Link Distance (ft)	740	740	734	734			459	459	459		200	200
Upstream Blk Time (%)											0	
Queuing Penalty (veh)											0	
Storage Bay Dist (ft)					330	330				150		
Storage Blk Time (%)											0	
Queuing Penalty (veh)											0	

# Intersection: 2: Missouri Flat Road & WB Ramps

Movement	WB	WB	WB	WB	NB	NB	NB	NB	SB	SB	
Directions Served	L	LT	R	R	L	L	T	Т	T	T	
Maximum Queue (ft)	301	260	198	168	137	148	258	152	287	258	
Average Queue (ft)	172	146	95	35	107	118	84	59	161	138	
95th Queue (ft)	261	233	163	99	161	158	187	120	268	246	
Link Distance (ft)	983	983					395	395	459	459	
Upstream Blk Time (%)							0	0			
Queuing Penalty (veh)							0	0			
Storage Bay Dist (ft)			400	400	125	125					
Storage Blk Time (%)					0	2	1				
Queuing Penalty (veh)					2	10	2				

## Intersection: 3: Missouri Flat Road & EB Ramps

Movement	EB	EB	EB	NB	NB	NB	SB	SB	SB	SB	
Directions Served	L	LTR	R	Т	T	R	L	L	Т	Т	
Maximum Queue (ft)	285	325	311	167	165	87	161	174	375	383	
Average Queue (ft)	111	187	163	161	128	16	102	126	140	157	
95th Queue (ft)	218	279	259	166	183	57	167	187	317	322	
Link Distance (ft)		1460		138	138	138			395	395	
Upstream Blk Time (%)				41	9				0	0	
Queuing Penalty (veh)				152	33				2	2	
Storage Bay Dist (ft)	700		550				150	150			
Storage Blk Time (%)							1	5	7		
Queuing Penalty (veh)							6	29	24		

# Intersection: 4: Missouri Flat Road & Mother Lode Drive

Movement	EB	EB	EB	NB	NB	NB	NB	SB	SB	SB	
Directions Served	L	L	R	L	T	T	R	Т	T	R	
Maximum Queue (ft)	37	135	64	174	756	661	78	170	171	110	
Average Queue (ft)	4	57	25	71	398	281	3	125	127	9	
95th Queue (ft)	22	112	53	183	705	596	47	193	188	65	
Link Distance (ft)		633			1533	1533		138	138		
Upstream Blk Time (%)								10	11	0	
Queuing Penalty (veh)								95	102	0	
Storage Bay Dist (ft)	200		200	150			250			200	
Storage Blk Time (%)				0	46	1	0		11	0	
Queuing Penalty (veh)				0	21	3	0		7	1	

## Intersection: 5: Missouri Flat Road & Forni Road

Movement	EB	EB	EB	EB	WB	WB	NB	NB	NB	NB	B25	B25
Directions Served	L	L	Т	R	L	T	L	Т	Т	R	Т	T
Maximum Queue (ft)	207	220	934	88	61	86	259	370	379	126	48	71
Average Queue (ft)	193	208	361	32	15	32	73	181	192	12	2	3
95th Queue (ft)	235	243	869	69	45	73	174	338	361	80	26	33
Link Distance (ft)			1180			265		317	317		652	652
Upstream Blk Time (%)			1					2	3			
Queuing Penalty (veh)			0					9	13			
Storage Bay Dist (ft)	195	195		150	190		250			150		
Storage Blk Time (%)	7	35	0				0	5	16	0		
Queuing Penalty (veh)	9	47	1				0	4	4	0		

## Intersection: 5: Missouri Flat Road & Forni Road

Movement	SB	SB	SB	SB
Directions Served	L	T	Т	R
Maximum Queue (ft)	324	391	387	175
Average Queue (ft)	158	285	343	148
95th Queue (ft)	301	440	454	234
Link Distance (ft)		365	365	
Upstream Blk Time (%)		4	13	
Queuing Penalty (veh)		37	128	
Storage Bay Dist (ft)	300			150
Storage Blk Time (%)	1	8	29	1
Queuing Penalty (veh)	4	13	122	3

# Intersection: 6: Missouri Flat Road & Golden Center Drive

Movement	EB	WB	NB	NB	NB	B43	B43	SB	SB	SB	SB	B25
Directions Served	LTR	LTR	L	Т	TR	Т	Т	L	Т	Т	R	T
Maximum Queue (ft)	165	245	174	283	291	110	125	199	641	690	322	58
Average Queue (ft)	64	138	90	170	184	9	12	72	265	375	13	3
95th Queue (ft)	128	230	174	286	298	69	80	155	590	697	138	44
Link Distance (ft)	184	339		216	216	1589	1589		652	652		317
Upstream Blk Time (%)	0			5	6				0	2		
Queuing Penalty (veh)	0			27	35				3	14		
Storage Bay Dist (ft)			150					175			500	
Storage Blk Time (%)			5	10				0	11	8	0	
Queuing Penalty (veh)			22	9				0	8	1	0	

#### Intersection: 6: Missouri Flat Road & Golden Center Drive

Movement	B25
Directions Served	Т
Maximum Queue (ft)	136
Average Queue (ft)	8
95th Queue (ft)	80
Link Distance (ft)	317
Upstream Blk Time (%)	0
Queuing Penalty (veh)	0
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

## Intersection: 7: Missouri Flat Road & China Garden Rd

Movement	EB	WB	NB	SB
Directions Served	R	R	TR	L
Maximum Queue (ft)	32	123	4	70
Average Queue (ft)	4	54	0	26
95th Queue (ft)	21	96	3	56
Link Distance (ft)	158	1440	558	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				150
Storage Blk Time (%)				
Queuing Penalty (veh)				

# Intersection: 8: SR 49 & Pleasant Valley Rd

Movement	EB	WB	WB	NB
Directions Served	TR	L	T	LR
Maximum Queue (ft)	739	104	162	125
Average Queue (ft)	309	59	62	65
95th Queue (ft)	760	98	109	106
Link Distance (ft)	797		363	576
Upstream Blk Time (%)	13			
Queuing Penalty (veh)	0			
Storage Bay Dist (ft)		80		
Storage Blk Time (%)		3	2	
Queuing Penalty (veh)		9	4	

# Intersection: 9: Pleasant Valley Rd & Forni Rd

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	154	12	173
Average Queue (ft)	39	0	48
95th Queue (ft)	107	7	121
Link Distance (ft)	363	1758	930
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

# Intersection: 10: Pleasant Valley Rd & Missouri Flat Rd

Movement	EB	EB	EB	WB	WB	SB	SB	B68	
Directions Served	L	L	T	Т	R	L	R	Т	
Maximum Queue (ft)	212	224	635	248	188	208	128	145	
Average Queue (ft)	156	109	237	113	57	153	56	21	
95th Queue (ft)	246	278	588	199	136	224	104	93	
Link Distance (ft)			658	1506		127	127	419	
Upstream Blk Time (%)			2			16	0		
Queuing Penalty (veh)			14			74	1		
Storage Bay Dist (ft)	200	200			200				
Storage Blk Time (%)	27	19	2	0	0				
Queuing Penalty (veh)	91	65	5	1	0				

# Intersection: 11: Pleasant Valley Rd & China Garden Rd

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	197	52
Average Queue (ft)	17	20
95th Queue (ft)	102	48
Link Distance (ft)	1506	266
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

#### Intersection: 12: Fowler Ln/Diamond Rd & Pleasant Valley Rd

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB	
Directions Served	L	T	TR	L	Т	R	LT	R	L	TR	
Maximum Queue (ft)	204	343	263	129	388	195	172	99	271	128	
Average Queue (ft)	76	163	102	38	169	69	70	30	135	53	
95th Queue (ft)	161	272	204	101	320	182	136	70	223	99	
Link Distance (ft)		1257			549		614			1686	
Upstream Blk Time (%)					0						
Queuing Penalty (veh)					0						
Storage Bay Dist (ft)	180		250	105		170		90	340		
Storage Blk Time (%)	0	5	0	0	19	0	6	0	0		
Queuing Penalty (veh)	2	25	1	1	45	0	3	0	0		

# Intersection: 13: Driveway/Racquet Way & Pleasant Valley Rd

Movement	EB	EB	B60	WB	WB	NB	SB
Directions Served	L	TR	T	L	TR	LTR	LTR
Maximum Queue (ft)	71	15	50	48	7	111	75
Average Queue (ft)	26	1	2	13	0	44	35
95th Queue (ft)	58	14	51	41	4	88	61
Link Distance (ft)		458	549		2746	122	679
Upstream Blk Time (%)						1	
Queuing Penalty (veh)						0	
Storage Bay Dist (ft)	90			60			
Storage Blk Time (%)	0			0			
Queuing Penalty (veh)	1			1			

# Intersection: 14: Diamond Rd & Truck St

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	50	50
Average Queue (ft)	23	6
95th Queue (ft)	44	31
Link Distance (ft)	488	395
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

## Intersection: 15: Diamond Rd & Bradley Dr

Movement	EB
Directions Served	R
Maximum Queue (ft)	41
Average Queue (ft)	18
95th Queue (ft)	41
Link Distance (ft)	627
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

## Intersection: 16: Diamond Rd & Lime Kiln Rd/Black Rice Ln

Movement	EB	WB	NB	SB	SB	
Directions Served	R	R	L	L	TR	
Maximum Queue (ft)	65	52	32	35	3	
Average Queue (ft)	29	21	6	7	0	
95th Queue (ft)	54	46	25	27	3	
Link Distance (ft)	606	1004			569	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			200	100		
Storage Blk Time (%)						
Queuing Penalty (veh)						

# Intersection: 17: Diamond Rd & Diamond Springs Parkway/Project Access

Movement	EB	EB	NB	NB	NB	SB	SB
Directions Served	L	R	L	L	Т	T	R
Maximum Queue (ft)	71	133	57	67	128	138	61
Average Queue (ft)	25	50	20	28	41	58	24
95th Queue (ft)	56	101	47	56	91	111	50
Link Distance (ft)	893	893		569	569	386	386
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)			350				
Storage Blk Time (%)							
Queuing Penalty (veh)							

#### Intersection: 18: Missouri Flat Road & Missouri Flat Rd/Diamond Springs Parkway

Movement	EB	EB	EB	B43	B43	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	Т	Т	L	T	T	R	L	L	TR
Maximum Queue (ft)	42	129	262	38	110	55	86	75	22	205	255	67
Average Queue (ft)	5	53	60	1	5	22	36	33	2	108	129	21
95th Queue (ft)	23	101	210	27	52	51	73	66	14	185	213	49
Link Distance (ft)		1589	1589	216	216		2037	2037			209	209
Upstream Blk Time (%)					0					0	1	
Queuing Penalty (veh)					1					0	4	
Storage Bay Dist (ft)	125					500			175	275		
Storage Blk Time (%)		0								0	1	
Queuing Penalty (veh)		0								1	4	

# Intersection: 18: Missouri Flat Road & Missouri Flat Rd/Diamond Springs Parkway

Movement	B81	SB	SB
Directions Served	Т	L	TR
Maximum Queue (ft)	57	30	37
Average Queue (ft)	3	6	7
95th Queue (ft)	33	23	26
Link Distance (ft)	189		278
Upstream Blk Time (%)	0		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)		50	
Storage Blk Time (%)		0	0
Queuing Penalty (veh)		0	0

# Intersection: 19: Throwita Way & Diamond Springs Parkway

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	SB	
Directions Served	L	T	Т	R	L	T	TR	LT	R	LTR	
Maximum Queue (ft)	76	75	125	41	70	55	58	107	57	89	
Average Queue (ft)	22	10	27	6	21	10	12	46	18	32	
95th Queue (ft)	58	42	85	26	55	36	41	92	44	73	
Link Distance (ft)		2037	2037			893	893	462		282	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	200			200	200				200		
Storage Blk Time (%)											
Queuing Penalty (veh)											

## Zone Summary

Zone wide Queuing Penalty: 1358

# Intersection: 1: Missouri Flat Road & Plaza Drive

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	R	L	LTR	L	L	Т	T	R	L	T	TR
Maximum Queue (ft)	89	56	150	134	101	112	168	188	209	73	107	106
Average Queue (ft)	37	21	66	60	31	60	54	78	68	30	43	36
95th Queue (ft)	70	48	118	115	81	98	127	146	146	62	87	81
Link Distance (ft)	740	740	734	734			459	459	459		200	200
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)					330	330				150		
Storage Blk Time (%)											0	
Queuing Penalty (veh)											0	

## Intersection: 2: Missouri Flat Road & WB Ramps

Movement	WB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	LT	R	R	L	L	T	T	T	T
Maximum Queue (ft)	248	243	155	109	137	149	362	281	189	165
Average Queue (ft)	152	148	77	28	125	136	138	58	85	65
95th Queue (ft)	229	223	130	70	158	166	345	182	159	132
Link Distance (ft)	983	983					395	395	459	459
Upstream Blk Time (%)							0	0		
Queuing Penalty (veh)							1	0		
Storage Bay Dist (ft)			400	400	125	125				
Storage Blk Time (%)					1	11	0			
Queuing Penalty (veh)					5	36	0			

# Intersection: 3: Missouri Flat Road & EB Ramps

Movement	EB	EB	EB	NB	NB	NB	SB	SB	SB	SB	
Directions Served	L	LTR	R	Т	Т	R	L	L	Т	Т	
Maximum Queue (ft)	131	176	161	169	166	106	89	99	145	150	
Average Queue (ft)	39	103	73	138	113	20	33	58	35	49	
95th Queue (ft)	88	158	134	199	188	69	74	89	102	120	
Link Distance (ft)		1460		138	138	138			395	395	
Upstream Blk Time (%)				14	6	0					
Queuing Penalty (veh)				53	22	0					
Storage Bay Dist (ft)	700		550				150	150			
Storage Blk Time (%)									0		
Queuing Penalty (veh)									0		

# Intersection: 4: Missouri Flat Road & Mother Lode Drive

Movement	EB	EB	EB	NB	NB	NB	SB	SB	SB	
Directions Served	L	L	R	L	T	T	Т	T	R	
Maximum Queue (ft)	69	180	61	82	305	213	162	167	82	
Average Queue (ft)	10	67	19	16	120	53	102	110	4	
95th Queue (ft)	42	138	47	54	258	152	184	184	41	
Link Distance (ft)		633			1547	1547	138	138		
Upstream Blk Time (%)							7	8	0	
Queuing Penalty (veh)							43	53	0	
Storage Bay Dist (ft)	200		200	150					200	
Storage Blk Time (%)		0			6	0		8	0	
Queuing Penalty (veh)		0			1	0		4	0	

## Intersection: 5: Missouri Flat Road & Forni Road

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	B25
Directions Served	L	L	T	R	L	Т	R	L	Т	T	R	T
Maximum Queue (ft)	178	189	124	50	107	114	5	227	378	383	175	64
Average Queue (ft)	78	98	52	20	48	46	0	46	207	212	35	3
95th Queue (ft)	155	165	105	45	92	92	5	139	362	378	146	31
Link Distance (ft)			1180			265			317	317		652
Upstream Blk Time (%)									3	3		
Queuing Penalty (veh)									15	17		
Storage Bay Dist (ft)	195	195		150	190		175	250			150	
Storage Blk Time (%)	0	0	0						7	18	0	
Queuing Penalty (veh)	0	0	0						4	11	0	

## Intersection: 5: Missouri Flat Road & Forni Road

Movement	B25	SB	SB	SB	SB	
Directions Served	T	L	Т	Т	R	
Maximum Queue (ft)	62	321	403	369	175	
Average Queue (ft)	4	240	219	179	78	
95th Queue (ft)	37	372	455	339	187	
Link Distance (ft)	652		365	365		
Upstream Blk Time (%)			16	1		
Queuing Penalty (veh)			113	5		
Storage Bay Dist (ft)		300			150	
Storage Blk Time (%)		24	2	8	0	
Queuing Penalty (veh)		94	5	20	0	

# Intersection: 6: Missouri Flat Road & Golden Center Drive

Movement	EB	WB	NB	NB	NB	B43	B43	SB	SB	SB	SB	
Directions Served	LTR	LTR	L	T	TR	T	T	L	Т	T	R	
Maximum Queue (ft)	50	117	130	286	290	119	155	177	375	464	18	
Average Queue (ft)	17	49	33	164	183	10	13	63	102	192	2	
95th Queue (ft)	42	95	90	280	295	72	86	132	268	396	12	
Link Distance (ft)	184	339		216	216	1589	1589		652	652		
Upstream Blk Time (%)				4	6							
Queuing Penalty (veh)				24	40							
Storage Bay Dist (ft)			150					175			500	
Storage Blk Time (%)				8				0	3	0		
Queuing Penalty (veh)				3				0	2	0		

## Intersection: 7: Missouri Flat Road & China Garden Rd

Movement	EB	WB	NB	NB	SB	SB	B81
Directions Served	R	R	L	TR	L	TR	T
Maximum Queue (ft)	30	100	31	23	91	15	2
Average Queue (ft)	5	38	2	2	39	0	0
95th Queue (ft)	24	73	16	12	75	0	2
Link Distance (ft)	158	1439		558		172	225
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)			200		190		
Storage Blk Time (%)							
Queuing Penalty (veh)							

## Intersection: 8: SR 49 & Pleasant Valley Rd

Movement	EB	WB	WB	NB	
Directions Served	TR	L	T	LR	
Maximum Queue (ft)	320	105	239	518	
Average Queue (ft)	108	58	83	206	
95th Queue (ft)	239	103	162	506	
Link Distance (ft)	797		363	576	
Upstream Blk Time (%)				8	
Queuing Penalty (veh)				0	
Storage Bay Dist (ft)		80			
Storage Blk Time (%)		1	7		
Queuing Penalty (veh)		3	11		

# Intersection: 9: Pleasant Valley Rd & Forni Rd

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	140	13	319
Average Queue (ft)	53	0	84
95th Queue (ft)	112	6	250
Link Distance (ft)	363	1758	930
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

# Intersection: 10: Pleasant Valley Rd & Missouri Flat Rd

Movement	EB	EB	EB	WB	WB	SB	SB	B68
Directions Served	L	L	T	Т	R	L	R	Т
Maximum Queue (ft)	212	225	621	292	217	136	94	3
Average Queue (ft)	158	148	248	130	80	63	33	0
95th Queue (ft)	248	276	665	226	164	120	73	3
Link Distance (ft)			658	1506		127	127	419
Upstream Blk Time (%)			6			1	0	
Queuing Penalty (veh)			36			1	0	
Storage Bay Dist (ft)	200	200			200			
Storage Blk Time (%)	24	23	0	1	0			
Queuing Penalty (veh)	50	48	2	4	1			

# Intersection: 11: Pleasant Valley Rd & China Garden Rd

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	130	2	52
Average Queue (ft)	13	0	14
95th Queue (ft)	69	2	42
Link Distance (ft)	1506	1257	266
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

# Intersection: 12: Fowler Ln/Diamond Rd & Pleasant Valley Rd

Movement	EB	EB	EB	WB	WB	WB	B60	NB	NB	SB	SB	
Directions Served	L	Т	TR	L	T	R	T	LT	R	L	TR	
Maximum Queue (ft)	145	138	94	120	567	195	43	162	90	124	99	
Average Queue (ft)	65	73	29	21	285	139	4	73	19	56	41	
95th Queue (ft)	116	122	74	76	535	256	52	132	57	101	77	
Link Distance (ft)		1257			549		458	614			1686	
Upstream Blk Time (%)					1							
Queuing Penalty (veh)					12							
Storage Bay Dist (ft)	180		250	105		170			90	340		
Storage Blk Time (%)	0	0			28	0		6	0			
Queuing Penalty (veh)	0	0			98	1		2	0			

# Intersection: 13: Driveway/Racquet Way & Pleasant Valley Rd

Movement	EB	WB	NB	SB
Directions Served	L	L	LTR	LTR
Maximum Queue (ft)	47	24	59	68
Average Queue (ft)	14	1	23	31
95th Queue (ft)	41	10	50	57
Link Distance (ft)			122	679
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	90	60		
Storage Blk Time (%)				
Queuing Penalty (veh)				

## Intersection: 14: Diamond Rd & Truck St

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	31	57
Average Queue (ft)	11	7
95th Queue (ft)	33	35
Link Distance (ft)	488	394
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

## Intersection: 15: Diamond Rd & Bradley Dr

Movement	EB
Directions Served	R
Maximum Queue (ft)	28
Average Queue (ft)	13
95th Queue (ft)	35
Link Distance (ft)	621
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

## Intersection: 16: Diamond Rd & Lime Kiln Rd/Black Rice Ln

Movement	EB	WB	NB	SB
Directions Served	R	R	L	L
Maximum Queue (ft)	53	49	23	26
Average Queue (ft)	23	21	1	5
95th Queue (ft)	45	46	11	22
Link Distance (ft)	602	1011		
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			200	100
Storage Blk Time (%)				
Queuing Penalty (veh)				

# Intersection: 17: Diamond Rd & Diamond Springs Parkway/Project Access

Movement	EB	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB	
Directions Served	L	T	R	L	TR	L	L	TR	L	Т	R	
Maximum Queue (ft)	75	43	75	50	70	74	78	97	28	92	74	
Average Queue (ft)	25	9	21	15	24	26	37	31	4	35	35	
95th Queue (ft)	58	31	51	42	58	59	66	72	19	73	61	
Link Distance (ft)		894	894	561	561			558		388	388	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	250					350	350		100			
Storage Blk Time (%)										0		
Queuing Penalty (veh)										0		

# Intersection: 18: Missouri Flat Road & Missouri Flat Rd/Diamond Springs Parkway

Movement	EB	EB	EB	B43	WB	WB	WB	WB	NB	NB	NB	B81
Directions Served	L	Т	T	Т	L	Т	Т	R	L	L	TR	T
Maximum Queue (ft)	33	107	100	14	72	113	121	25	212	260	39	25
Average Queue (ft)	4	45	37	0	23	53	55	2	115	126	8	1
95th Queue (ft)	22	88	81	9	55	98	106	11	189	213	29	15
Link Distance (ft)		1589	1589	216		2037	2037			225	225	172
Upstream Blk Time (%)									0	1		
Queuing Penalty (veh)									0	2		
Storage Bay Dist (ft)	125				500			175	275			
Storage Blk Time (%)		0					0		0	1		
Queuing Penalty (veh)		0					0		0	2		

#### Intersection: 18: Missouri Flat Road & Missouri Flat Rd/Diamond Springs Parkway

Movement	SB	SB
Directions Served	L	TR
Maximum Queue (ft)	30	32
Average Queue (ft)	4	7
95th Queue (ft)	18	26
Link Distance (ft)		278
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	50	
Storage Blk Time (%)	0	0
Queuing Penalty (veh)	0	0

# Intersection: 19: Throwita Way & Diamond Springs Parkway

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	SB	
Directions Served	L	T	Т	R	L	Т	TR	LT	R	LTR	
Maximum Queue (ft)	59	86	96	27	91	75	79	121	28	100	
Average Queue (ft)	15	14	16	2	33	19	22	47	10	33	
95th Queue (ft)	43	54	59	15	76	57	61	100	31	77	
Link Distance (ft)		2037	2037			894	894	462		282	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	200			200	200				200		
Storage Blk Time (%)											
Queuing Penalty (veh)											

## Zone Summary

Zone wide Queuing Penalty: 848

# Intersection: 1: Missouri Flat Road & Plaza Drive

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	R	L	LTR	L	L	T	Т	R	L	Т	TR
Maximum Queue (ft)	254	185	268	274	176	191	194	188	237	95	160	143
Average Queue (ft)	128	61	154	139	99	117	104	107	110	34	76	62
95th Queue (ft)	216	138	233	241	168	177	184	168	196	75	137	121
Link Distance (ft)	740	740	734	734			459	459	459		200	200
Upstream Blk Time (%)											0	
Queuing Penalty (veh)											0	
Storage Bay Dist (ft)					330	330				150		
Storage Blk Time (%)											0	
Queuing Penalty (veh)											0	

## Intersection: 2: Missouri Flat Road & WB Ramps

Movement	WB	WB	WB	WB	NB	NB	NB	NB	SB	SB	
Directions Served	L	LT	R	R	L	L	T	Т	T	T	
Maximum Queue (ft)	466	378	222	154	137	149	297	180	294	272	
Average Queue (ft)	212	190	103	37	112	125	99	63	163	144	
95th Queue (ft)	441	421	227	98	166	164	224	132	272	255	
Link Distance (ft)	983	983					395	395	459	459	
Upstream Blk Time (%)	0	0					0	0			
Queuing Penalty (veh)	0	0					0	0			
Storage Bay Dist (ft)			400	400	125	125					
Storage Blk Time (%)		2	0		1	4	1				
Queuing Penalty (veh)		9	0		3	15	3				

# Intersection: 3: Missouri Flat Road & EB Ramps

Movement	EB	EB	EB	NB	NB	NB	SB	SB	SB	SB	
Directions Served	L	LTR	R	Т	Т	R	L	L	T	T	
Maximum Queue (ft)	307	391	360	168	168	80	161	174	391	396	
Average Queue (ft)	117	196	171	162	132	14	100	129	167	181	
95th Queue (ft)	233	307	282	170	184	53	162	194	348	349	
Link Distance (ft)		1460		138	138	138			395	395	
Upstream Blk Time (%)				43	10				1	1	
Queuing Penalty (veh)				162	39				9	8	
Storage Bay Dist (ft)	700		550				150	150			
Storage Blk Time (%)							1	4	10		
Queuing Penalty (veh)							6	26	34		

# Intersection: 4: Missouri Flat Road & Mother Lode Drive

Movement	EB	EB	EB	NB	NB	NB	NB	SB	SB	SB	
Directions Served	L	L	R	L	Т	Т	R	Т	Т	R	
Maximum Queue (ft)	39	128	76	175	721	671	106	168	169	135	
Average Queue (ft)	5	59	28	86	483	369	5	132	134	10	
95th Queue (ft)	24	111	62	202	793	698	63	190	181	66	
Link Distance (ft)		633			1533	1533		138	138		
Upstream Blk Time (%)								12	13	0	
Queuing Penalty (veh)								115	124	0	
Storage Bay Dist (ft)	200		200	150			250			200	
Storage Blk Time (%)		0		0	54	1	0		13	0	
Queuing Penalty (veh)		0		2	25	3	0		9	0	

## Intersection: 5: Missouri Flat Road & Forni Road

Movement	EB	EB	EB	EB	WB	WB	NB	NB	NB	NB	B25	B25
Directions Served	L	L	Т	R	L	T	L	T	Т	R	T	T
Maximum Queue (ft)	207	220	890	75	53	76	249	372	375	140	66	80
Average Queue (ft)	194	208	418	33	15	30	70	167	180	12	4	7
95th Queue (ft)	239	246	987	65	43	68	175	359	376	82	46	56
Link Distance (ft)			1180			265		317	317		652	652
Upstream Blk Time (%)			2					3	4			
Queuing Penalty (veh)			0					15	19			
Storage Bay Dist (ft)	195	195		150	190		250			150		
Storage Blk Time (%)	7	39						5	14	0		
Queuing Penalty (veh)	10	53						4	3	0		

## Intersection: 5: Missouri Flat Road & Forni Road

Movement	SB	SB	SB	SB	
Directions Served	L	T	T	R	
Maximum Queue (ft)	302	386	393	175	
Average Queue (ft)	146	286	343	147	
95th Queue (ft)	286	439	452	235	
Link Distance (ft)		365	365		
Upstream Blk Time (%)		4	13		
Queuing Penalty (veh)		38	125		
Storage Bay Dist (ft)	300			150	
Storage Blk Time (%)	0	8	30	1	
Queuing Penalty (veh)	1	13	124	3	

## Intersection: 6: Missouri Flat Road & Golden Center Drive

Movement	EB	WB	NB	NB	NB	B43	B43	SB	SB	SB	SB	B25
Directions Served	LTR	LTR	L	Т	TR	Т	Т	L	Т	T	R	T
Maximum Queue (ft)	136	226	174	292	297	170	184	200	661	701	276	158
Average Queue (ft)	65	135	99	184	201	13	15	83	329	441	23	13
95th Queue (ft)	119	213	184	301	312	93	99	174	673	750	190	107
Link Distance (ft)	184	339		216	216	1589	1589		652	652		317
Upstream Blk Time (%)	0			8	9				1	5		0
Queuing Penalty (veh)	0			43	49				10	33		1
Storage Bay Dist (ft)			150					175			500	
Storage Blk Time (%)			7	13				2	15	14	0	
Queuing Penalty (veh)			34	11				12	11	1	0	

#### Intersection: 6: Missouri Flat Road & Golden Center Drive

Movement	B25	B25		
Directions Served	T			
Maximum Queue (ft)	209	32		
Average Queue (ft)	22	1		
95th Queue (ft)	147	33		
Link Distance (ft)	317	317		
Upstream Blk Time (%)	0	0		
Queuing Penalty (veh)	2	0		
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

## Intersection: 7: Missouri Flat Road & China Garden Rd

Movement	EB	WB	NB	SB	SB	
Directions Served	R	R	TR	L	TR	
Maximum Queue (ft)	34	128	9	67	18	
Average Queue (ft)	4	55	0	25	1	
95th Queue (ft)	23	102	6	55	19	
Link Distance (ft)	158	1438	558		189	
Upstream Blk Time (%)					0	
Queuing Penalty (veh)					0	
Storage Bay Dist (ft)				150		
Storage Blk Time (%)					0	
Queuing Penalty (veh)					0	

# Intersection: 8: SR 49 & Pleasant Valley Rd

Movement	EB	WB	WB	NB	
Directions Served	TR	L	T	LR	
Maximum Queue (ft)	747	103	150	155	
Average Queue (ft)	290	58	63	66	
95th Queue (ft)	726	95	111	115	
Link Distance (ft)	797		363	576	
Upstream Blk Time (%)	9				
Queuing Penalty (veh)	0				
Storage Bay Dist (ft)		80			
Storage Blk Time (%)		2	2		
Queuing Penalty (veh)		7	5		

## Intersection: 9: Pleasant Valley Rd & Forni Rd

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	174	11	137
Average Queue (ft)	44	0	45
95th Queue (ft)	122	6	102
Link Distance (ft)	363	1758	930
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

# Intersection: 10: Pleasant Valley Rd & Missouri Flat Rd

Movement	EB	EB	EB	WB	WB	SB	SB	B68	B68	
Directions Served	L	L	Т	Т	R	L	R	Т	Т	
Maximum Queue (ft)	207	218	515	224	168	202	134	138	3	
Average Queue (ft)	150	88	203	112	51	154	54	21	0	
95th Queue (ft)	231	253	514	186	115	223	106	90	3	
Link Distance (ft)			658	1506		127	127	419	419	
Upstream Blk Time (%)			2			16	0			
Queuing Penalty (veh)			14			75	1			
Storage Bay Dist (ft)	200	200			200					
Storage Blk Time (%)	20	14	1	0	0					
Queuing Penalty (veh)	66	47	4	1	0					

# Intersection: 11: Pleasant Valley Rd & China Garden Rd

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	168	51
Average Queue (ft)	17	19
95th Queue (ft)	91	47
Link Distance (ft)	1506	266
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

#### Intersection: 12: Fowler Ln/Diamond Rd & Pleasant Valley Rd

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB	
Directions Served	L	Т	TR	L	Т	R	LT	R	L	TR	
Maximum Queue (ft)	204	325	274	130	420	195	160	108	254	153	
Average Queue (ft)	81	160	101	44	179	75	71	32	139	56	
95th Queue (ft)	167	259	210	109	341	191	126	77	222	118	
Link Distance (ft)		1257			549		614			1686	
Upstream Blk Time (%)					0						
Queuing Penalty (veh)					1						
Storage Bay Dist (ft)	180		250	105		170		90	340		
Storage Blk Time (%)	0	5	0	0	20	0	6	0		0	
Queuing Penalty (veh)	2	25	1	1	48	0	3	0		0	

# Intersection: 13: Driveway/Racquet Way & Pleasant Valley Rd

Movement	EB	EB	B60	WB	WB	NB	SB	
Directions Served	L	TR	Т	L	TR	LTR	LTR	
Maximum Queue (ft)	64	22	56	44	2	117	83	
Average Queue (ft)	22	1	2	12	0	44	37	
95th Queue (ft)	51	10	57	38	2	89	66	
Link Distance (ft)		458	549		2746	122	679	
Upstream Blk Time (%)			0			1		
Queuing Penalty (veh)			0			0		
Storage Bay Dist (ft)	90			60				
Storage Blk Time (%)	0	0		0				
Queuing Penalty (veh)	0	0		0				

## Intersection: 14: Diamond Rd & Truck St

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	50	46
Average Queue (ft)	23	5
95th Queue (ft)	45	29
Link Distance (ft)	488	394
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

## Intersection: 15: Diamond Rd & Bradley Dr

Movement	EB
Directions Served	R
Maximum Queue (ft)	52
Average Queue (ft)	19
95th Queue (ft)	44
Link Distance (ft)	621
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

## Intersection: 16: Diamond Rd & Lime Kiln Rd/Black Rice Ln

Movement	EB	WB	NB	SB	SB	
Directions Served	R	R	L	L	TR	
Maximum Queue (ft)	64	52	32	40	1	
Average Queue (ft)	28	22	7	8	0	
95th Queue (ft)	54	47	28	28	1	
Link Distance (ft)	606	1004			558	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			200	100		
Storage Blk Time (%)						
Queuing Penalty (veh)						

# Intersection: 17: Diamond Rd & Diamond Springs Parkway/Project Access

Movement	EB	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB	
Directions Served	L	Т	R	L	TR	L	L	TR	L	T	R	
Maximum Queue (ft)	89	50	163	60	87	60	66	136	46	159	63	
Average Queue (ft)	32	11	56	24	38	23	32	55	5	72	26	
95th Queue (ft)	69	35	120	55	74	52	61	110	20	132	50	
Link Distance (ft)		894	894		562		558	558		388	388	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	250			200		350			100			
Storage Blk Time (%)										2		
Queuing Penalty (veh)										0		

#### Intersection: 18: Missouri Flat Road & Missouri Flat Rd/Diamond Springs Parkway

Movement	EB	EB	EB	B43	B43	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	Т	T	L	Т	T	R	L	L	TR
Maximum Queue (ft)	41	136	136	6	70	58	102	101	22	205	261	50
Average Queue (ft)	4	63	59	0	4	22	45	43	3	111	126	20
95th Queue (ft)	21	110	107	6	34	50	86	83	15	186	210	45
Link Distance (ft)		1589	1589	216	216		2037	2037			209	209
Upstream Blk Time (%)					0					0	1	
Queuing Penalty (veh)					0					0	4	
Storage Bay Dist (ft)	125					500			175	275		
Storage Blk Time (%)		0								0	1	
Queuing Penalty (veh)		0								1	4	

# Intersection: 18: Missouri Flat Road & Missouri Flat Rd/Diamond Springs Parkway

Movement	B81	SB	SB
Directions Served	T	L	TR
Maximum Queue (ft)	53	35	32
Average Queue (ft)	3	5	7
95th Queue (ft)	29	22	25
Link Distance (ft)	189		278
Upstream Blk Time (%)	0		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)		50	
Storage Blk Time (%)		0	0
Queuing Penalty (veh)		0	0

# Intersection: 19: Throwita Way & Diamond Springs Parkway

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	SB	
Directions Served	L	T	Т	R	L	T	TR	LT	R	LTR	
Maximum Queue (ft)	75	120	161	58	77	68	71	143	64	81	
Average Queue (ft)	26	15	29	5	23	18	19	50	20	31	
95th Queue (ft)	61	66	98	34	61	53	53	109	47	69	
Link Distance (ft)		2037	2037			894	894	462		282	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	200			200	200				200		
Storage Blk Time (%)			0					0			
Queuing Penalty (veh)			0					0			

## Zone Summary

Zone wide Queuing Penalty: 1519

## Intersection: 1: Missouri Flat Road & Plaza Drive

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	R	L	LTR	L	L	Т	Т	R	L	Т	TR
Maximum Queue (ft)	90	56	145	138	116	118	147	159	173	89	125	133
Average Queue (ft)	38	24	60	66	39	67	62	81	72	30	51	47
95th Queue (ft)	71	51	111	118	92	104	129	141	138	67	102	103
Link Distance (ft)	740	740	734	734			459	459	459		200	200
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)					330	330				150		
Storage Blk Time (%)											0	
Queuing Penalty (veh)											0	

# Intersection: 2: Missouri Flat Road & WB Ramps

Movement	WB	WB	WB	WB	NB	NB	NB	NB	SB	SB	
Directions Served	L	LT	R	R	L	L	T	Т	T	T	
Maximum Queue (ft)	201	202	182	140	137	149	394	316	185	162	
Average Queue (ft)	126	120	90	36	124	135	168	66	86	71	
95th Queue (ft)	185	184	152	94	162	168	400	198	156	135	
Link Distance (ft)	983	983					395	395	459	459	
Upstream Blk Time (%)							2	0			
Queuing Penalty (veh)							11	0			
Storage Bay Dist (ft)			400	400	125	125					
Storage Blk Time (%)					2	13	0				
Queuing Penalty (veh)					6	49	1				

## Intersection: 3: Missouri Flat Road & EB Ramps

Movement	EB	EB	EB	NB	NB	NB	SB	SB	SB	SB	
Directions Served	L	LTR	R	Т	T	R	L	L	Т	Т	
Maximum Queue (ft)	145	200	201	173	170	63	96	109	108	130	
Average Queue (ft)	50	113	90	146	123	7	34	61	28	39	
95th Queue (ft)	113	177	161	195	192	35	77	94	80	99	
Link Distance (ft)		1460		138	138	138			395	395	
Upstream Blk Time (%)				19	7						
Queuing Penalty (veh)				76	30						
Storage Bay Dist (ft)	700		550				150	150			
Storage Blk Time (%)									0		
Queuing Penalty (veh)									0		

## Intersection: 4: Missouri Flat Road & Mother Lode Drive

Movement	EB	EB	NB	NB	NB	SB	SB	SB	
Directions Served	L	R	L	T	T	T	T	R	
Maximum Queue (ft)	120	67	87	400	251	161	172	55	
Average Queue (ft)	41	18	8	147	63	82	95	2	
95th Queue (ft)	93	48	44	344	188	178	191	29	
Link Distance (ft)	633			1547	1547	138	138		
Upstream Blk Time (%)						4	5	0	
Queuing Penalty (veh)						24	36	0	
Storage Bay Dist (ft)		200	150					200	
Storage Blk Time (%)				10	0		5	0	
Queuing Penalty (veh)				1	0		1	0	

## Intersection: 5: Missouri Flat Road & Forni Road

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	B25
Directions Served	L	L	Т	R	L	T	R	L	Т	T	R	T
Maximum Queue (ft)	200	209	219	68	138	128	20	274	380	390	175	92
Average Queue (ft)	93	116	57	22	50	53	1	64	221	224	33	9
95th Queue (ft)	176	186	144	53	104	104	20	184	391	403	143	58
Link Distance (ft)			1180			265			317	317		652
Upstream Blk Time (%)									4	5		
Queuing Penalty (veh)									24	28		
Storage Bay Dist (ft)	195	195		150	190		175	250			150	
Storage Blk Time (%)	0	1	0		0	0		0	8	18	0	
Queuing Penalty (veh)	0	1	1		0	0		0	5	11	0	

## Intersection: 5: Missouri Flat Road & Forni Road

Movement	B25	SB	SB	SB	SB	
Directions Served	T	L	Т	Т	R	
Maximum Queue (ft)	96	320	381	378	175	
Average Queue (ft)	10	220	203	199	100	
95th Queue (ft)	64	353	402	353	208	
Link Distance (ft)	652		365	365		
Upstream Blk Time (%)			8	1		
Queuing Penalty (veh)			56	5		
Storage Bay Dist (ft)		300			150	
Storage Blk Time (%)		13	2	11	0	
Queuing Penalty (veh)		54	4	32	0	

## Intersection: 6: Missouri Flat Road & Golden Center Drive

Movement	EB	WB	NB	NB	NB	B43	B43	SB	SB	SB	SB	B25
Directions Served	LTR	LTR	L	Т	TR	Т	Т	L	Т	Т	R	T
Maximum Queue (ft)	75	139	174	298	298	199	226	195	544	586	68	5
Average Queue (ft)	28	55	65	206	224	28	36	88	160	243	4	0
95th Queue (ft)	63	110	149	324	333	125	142	176	405	490	56	5
Link Distance (ft)	184	339		216	216	1589	1589		652	652		317
Upstream Blk Time (%)				9	12				0	0		
Queuing Penalty (veh)				64	83				0	1		
Storage Bay Dist (ft)			150					175			500	
Storage Blk Time (%)			0	15				3	6	2		
Queuing Penalty (veh)			2	9				11	6	0		

## Intersection: 7: Missouri Flat Road & China Garden Rd

Movement	EB	WB	NB	NB	SB	SB	B81
Directions Served	R	R	L	TR	L	TR	T
Maximum Queue (ft)	32	63	30	48	81	19	43
Average Queue (ft)	6	26	2	4	35	1	2
95th Queue (ft)	25	54	15	27	66	20	31
Link Distance (ft)	158	1438		558		172	225
Upstream Blk Time (%)						0	0
Queuing Penalty (veh)						0	0
Storage Bay Dist (ft)			200		190		
Storage Blk Time (%)						0	
Queuing Penalty (veh)						0	

## Intersection: 8: SR 49 & Pleasant Valley Rd

Movement	EB	WB	WB	NB	
Directions Served	TR	L	T	LR	
Maximum Queue (ft)	500	105	210	617	
Average Queue (ft)	179	62	91	305	
95th Queue (ft)	472	109	174	665	
Link Distance (ft)	797		363	576	
Upstream Blk Time (%)	2		0	25	
Queuing Penalty (veh)	0		0	0	
Storage Bay Dist (ft)		80			
Storage Blk Time (%)		1	11		
Queuing Penalty (veh)		5	18		

# Intersection: 9: Pleasant Valley Rd & Forni Rd

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	191	13	295
Average Queue (ft)	61	1	78
95th Queue (ft)	137	7	222
Link Distance (ft)	363	1758	930
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

## Intersection: 10: Pleasant Valley Rd & Missouri Flat Rd

Movement	EB	EB	EB	WB	WB	SB	SB
Directions Served	L	L	T	Т	R	L	R
Maximum Queue (ft)	212	225	659	234	192	141	117
Average Queue (ft)	183	181	392	120	66	61	37
95th Queue (ft)	254	291	839	190	127	117	82
Link Distance (ft)			658	1506		127	127
Upstream Blk Time (%)			12			1	0
Queuing Penalty (veh)			72			1	0
Storage Bay Dist (ft)	200	200			200		
Storage Blk Time (%)	38	40	1	0	0		
Queuing Penalty (veh)	79	82	4	2	0		

# Intersection: 11: Pleasant Valley Rd & China Garden Rd

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	137	4	44
Average Queue (ft)	14	0	13
95th Queue (ft)	72	4	39
Link Distance (ft)	1506	1257	266
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

# Intersection: 12: Fowler Ln/Diamond Rd & Pleasant Valley Rd

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB	
Directions Served	L	T	TR	L	T	R	LT	R	L	TR	
Maximum Queue (ft)	122	156	103	109	441	195	141	79	164	90	
Average Queue (ft)	52	74	29	21	194	121	64	22	72	31	
95th Queue (ft)	99	129	75	74	367	228	118	58	132	69	
Link Distance (ft)		1257			549		614			1686	
Upstream Blk Time (%)					0						
Queuing Penalty (veh)					0						
Storage Bay Dist (ft)	180		250	105		170		90	340		
Storage Blk Time (%)		0			18	0	3	0			
Queuing Penalty (veh)		0			84	2	1	0			

## Intersection: 13: Driveway/Racquet Way & Pleasant Valley Rd

Movement	EB	EB	WB	NB	SB
Directions Served	L	TR	L	LTR	LTR
Maximum Queue (ft)	48	2	20	65	78
Average Queue (ft)	14	0	1	25	34
95th Queue (ft)	40	0	10	55	65
Link Distance (ft)		458		122	679
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	90		60		
Storage Blk Time (%)					
Queuing Penalty (veh)					

## Intersection: 14: Diamond Rd & Truck St

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	37	60	2
Average Queue (ft)	15	9	0
95th Queue (ft)	39	38	2
Link Distance (ft)	488	395	1146
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

# Intersection: 15: Diamond Rd & Bradley Dr

Movement	EB	SB
Directions Served	R	TR
Maximum Queue (ft)	33	112
Average Queue (ft)	14	10
95th Queue (ft)	36	63
Link Distance (ft)	627	395
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

## Intersection: 16: Diamond Rd & Lime Kiln Rd/Black Rice Ln

Movement	EB	WB	NB	SB
Directions Served	R	R	L	L
Maximum Queue (ft)	53	61	24	40
Average Queue (ft)	25	26	1	9
95th Queue (ft)	45	50	11	31
Link Distance (ft)	602	1011		
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			200	100
Storage Blk Time (%)				
Queuing Penalty (veh)				

## Intersection: 17: Diamond Rd & Diamond Springs Parkway/Project Access

Movement	EB	EB	NB	NB	NB	SB	SB
Directions Served	L	R	L	L	Т	T	R
Maximum Queue (ft)	115	96	267	260	280	394	123
Average Queue (ft)	37	25	157	149	132	317	49
95th Queue (ft)	86	66	236	233	238	410	94
Link Distance (ft)	893	893			570	386	386
Upstream Blk Time (%)						3	
Queuing Penalty (veh)						4	
Storage Bay Dist (ft)			350	350			
Storage Blk Time (%)							
Queuing Penalty (veh)							

## Intersection: 18: Missouri Flat Road & Missouri Flat Rd/Diamond Springs Parkway

Movement	EB	EB	EB	B43	WB	WB	WB	WB	NB	NB	NB	B81
Directions Served	L	T	Т	Т	L	Т	T	R	L	L	TR	T
Maximum Queue (ft)	44	121	111	56	122	193	201	62	225	290	58	109
Average Queue (ft)	10	48	44	2	43	75	82	5	128	140	15	6
95th Queue (ft)	33	98	94	33	93	154	163	35	207	233	42	57
Link Distance (ft)		1589	1589	216		2037	2037			225	225	172
Upstream Blk Time (%)				0					0	1		0
Queuing Penalty (veh)				0					0	4		1
Storage Bay Dist (ft)	125				500			175	275			
Storage Blk Time (%)		0					1	0	0	1		
Queuing Penalty (veh)		0					0	0	1	4		

# Intersection: 18: Missouri Flat Road & Missouri Flat Rd/Diamond Springs Parkway

Movement	SB	SB
Directions Served	L	TR
Maximum Queue (ft)	34	51
Average Queue (ft)	8	12
95th Queue (ft)	28	36
Link Distance (ft)		278
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	50	
Storage Blk Time (%)	0	1
Queuing Penalty (veh)	0	0

# Intersection: 19: Throwita Way & Diamond Springs Parkway

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	SB	
Directions Served	L	T	Т	R	L	T	TR	LT	R	LTR	
Maximum Queue (ft)	93	81	94	43	132	234	226	157	56	115	
Average Queue (ft)	29	16	16	5	44	53	62	73	18	47	
95th Queue (ft)	72	54	57	25	98	158	168	132	45	95	
Link Distance (ft)		2037	2037			893	893	462		282	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	200			200	200				200		
Storage Blk Time (%)						0		0			
Queuing Penalty (veh)						0		0			

## Zone Summary

Zone wide Queuing Penalty: 999

## Intersection: 1: Missouri Flat Road & Plaza Drive

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	R	L	LTR	L	L	Т	Т	R	L	Т	TR
Maximum Queue (ft)	226	180	235	246	191	206	207	201	254	106	169	142
Average Queue (ft)	123	66	134	137	100	119	104	104	108	33	76	67
95th Queue (ft)	203	136	211	222	167	174	186	170	195	76	135	124
Link Distance (ft)	740	740	734	734			459	459	459		200	200
Upstream Blk Time (%)											0	
Queuing Penalty (veh)											0	
Storage Bay Dist (ft)					330	330				150		
Storage Blk Time (%)											1	
Queuing Penalty (veh)											0	

# Intersection: 2: Missouri Flat Road & WB Ramps

Movement	WB	WB	WB	WB	NB	NB	NB	NB	SB	SB	
Directions Served	L	LT	R	R	L	L	T	T	T	T	
Maximum Queue (ft)	339	437	244	158	137	148	326	179	305	260	
Average Queue (ft)	182	192	109	41	115	125	116	68	168	138	
95th Queue (ft)	304	347	217	110	163	164	264	133	271	230	
Link Distance (ft)	983	983					395	395	459	459	
Upstream Blk Time (%)		0					0	0			
Queuing Penalty (veh)		0					1	0			
Storage Bay Dist (ft)			400	400	125	125					
Storage Blk Time (%)		1	0		1	4	1				
Queuing Penalty (veh)		2	0		3	18	5				

## Intersection: 3: Missouri Flat Road & EB Ramps

Movement	EB	EB	EB	NB	NB	NB	SB	SB	SB	SB	
Directions Served	L	LTR	R	Т	Т	R	L	L	T	Т	
Maximum Queue (ft)	281	349	337	167	163	32	161	174	376	383	
Average Queue (ft)	109	182	180	158	132	2	95	124	140	148	
95th Queue (ft)	223	293	300	178	187	15	166	187	326	325	
Link Distance (ft)		1460		138	138	138			395	395	
Upstream Blk Time (%)				37	11				0	0	
Queuing Penalty (veh)				147	42				2	2	
Storage Bay Dist (ft)	700		550				150	150			
Storage Blk Time (%)							0	3	6		
Queuing Penalty (veh)							3	20	20		

## Intersection: 4: Missouri Flat Road & Mother Lode Drive

Movement	EB	EB	NB	NB	NB	NB	SB	SB	SB	
Directions Served	L	R	L	T	Т	R	T	T	R	
Maximum Queue (ft)	80	74	175	532	403	80	161	177	68	
Average Queue (ft)	19	26	51	251	80	3	100	110	4	
95th Queue (ft)	57	58	147	490	259	48	197	204	41	
Link Distance (ft)	633			1533	1533		138	138		
Jpstream Blk Time (%)							8	9	0	
Queuing Penalty (veh)							75	89	0	
Storage Bay Dist (ft)		200	150			250			200	
Storage Blk Time (%)				27	0	0		9	0	
Queuing Penalty (veh)				10	0	0		2	0	

## Intersection: 5: Missouri Flat Road & Forni Road

Movement	EB	EB	EB	EB	WB	WB	NB	NB	NB	NB	B25	B25
Directions Served	L	L	Т	R	L	T	L	Т	Т	R	Т	T
Maximum Queue (ft)	207	220	1172	104	52	84	274	390	388	156	104	117
Average Queue (ft)	204	218	950	36	15	34	104	209	216	17	8	9
95th Queue (ft)	221	226	1498	75	43	72	230	392	404	99	56	57
Link Distance (ft)			1180			265		317	317		652	652
Upstream Blk Time (%)			36					4	5			
Queuing Penalty (veh)			0					21	24			
Storage Bay Dist (ft)	195	195		150	190		250			150		
Storage Blk Time (%)	22	57		0			0	8	17	0		
Queuing Penalty (veh)	35	91		1			0	8	4	0		

## Intersection: 5: Missouri Flat Road & Forni Road

Movement	SB	SB	SB	SB	
Directions Served	L	T	T	R	
Maximum Queue (ft)	321	386	396	175	
Average Queue (ft)	164	273	326	151	
95th Queue (ft)	306	434	462	228	
Link Distance (ft)		365	365		
Upstream Blk Time (%)		3	10		
Queuing Penalty (veh)		29	95		
Storage Bay Dist (ft)	300			150	
Storage Blk Time (%)	0	8	26	1	
Queuing Penalty (veh)	0	12	122	7	

## Intersection: 6: Missouri Flat Road & Golden Center Drive

Movement	EB	WB	NB	NB	NB	B43	B43	SB	SB	SB	SB	B25
Directions Served	LTR	LTR	L	Т	TR	Т	Т	L	Т	Т	R	T
Maximum Queue (ft)	170	238	175	303	293	272	259	199	647	679	218	69
Average Queue (ft)	75	153	117	217	208	63	51	95	320	393	11	2
95th Queue (ft)	144	231	203	338	324	273	231	194	616	684	125	41
Link Distance (ft)	184	339		216	216	1589	1589		652	652		317
Upstream Blk Time (%)	1			21	10				0	1		
Queuing Penalty (veh)	0			115	57				1	5		
Storage Bay Dist (ft)			150					175			500	
Storage Blk Time (%)			22	15				1	17	8	0	
Queuing Penalty (veh)			104	15				6	12	1	0	

#### Intersection: 6: Missouri Flat Road & Golden Center Drive

Movement	B25
Directions Served	T
Maximum Queue (ft)	139
Average Queue (ft)	6
95th Queue (ft)	74
Link Distance (ft)	317
Upstream Blk Time (%)	0
Queuing Penalty (veh)	0
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

## Intersection: 7: Missouri Flat Road & China Garden Rd

Movement	EB	WB	SB
Directions Served	R	R	L
Maximum Queue (ft)	32	145	42
Average Queue (ft)	5	58	6
95th Queue (ft)	23	110	26
Link Distance (ft)	145	1439	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			150
Storage Blk Time (%)			
Queuing Penalty (veh)			

# Intersection: 8: SR 49 & Pleasant Valley Rd

Movement	EB	WB	WB	NB
Directions Served	TR	L	Т	LR
Maximum Queue (ft)	850	104	214	186
Average Queue (ft)	538	66	76	79
95th Queue (ft)	1054	106	160	147
Link Distance (ft)	797		363	576
Upstream Blk Time (%)	44		0	
Queuing Penalty (veh)	0		0	
Storage Bay Dist (ft)		80		
Storage Blk Time (%)		4	5	
Queuing Penalty (veh)		15	13	

## Intersection: 9: Pleasant Valley Rd & Forni Rd

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	196	17	262
Average Queue (ft)	50	1	65
95th Queue (ft)	133	9	200
Link Distance (ft)	363	1758	930
Upstream Blk Time (%)	0		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

# Intersection: 10: Pleasant Valley Rd & Missouri Flat Rd

Movement	EB	EB	EB	WB	WB	SB	SB	B68	B68	
Directions Served	L	L	Т	Т	R	L	R	Т	T	
Maximum Queue (ft)	136	175	233	246	174	205	161	104	10	
Average Queue (ft)	67	72	102	107	46	140	63	10	0	
95th Queue (ft)	112	135	186	187	106	212	123	55	6	
Link Distance (ft)			658	1506		127	127	419	419	
Upstream Blk Time (%)						10	1			
Queuing Penalty (veh)						50	3			
Storage Bay Dist (ft)	200	200			200					
Storage Blk Time (%)		0	1	1	0					
Queuing Penalty (veh)		0	2	2	0					

# Intersection: 11: Pleasant Valley Rd & China Garden Rd

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	121	53
Average Queue (ft)	10	22
95th Queue (ft)	64	49
Link Distance (ft)	1506	266
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

#### Intersection: 12: Fowler Ln/Diamond Rd & Pleasant Valley Rd

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB	
Directions Served	L	T	TR	L	Т	R	LT	R	L	TR	
Maximum Queue (ft)	195	268	240	130	419	195	169	115	316	176	
Average Queue (ft)	72	156	99	57	181	88	70	38	175	46	
95th Queue (ft)	154	241	199	127	344	207	130	89	268	89	
Link Distance (ft)		1257			549		614			1686	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	180		250	105		170		90	340		
Storage Blk Time (%)	0	5	0	0	22	0	6	0	0		
Queuing Penalty (veh)	0	19	0	2	68	0	4	0	0		

# Intersection: 13: Driveway/Racquet Way & Pleasant Valley Rd

Movement	EB	EB	B60	WB	NB	SB
Directions Served	L	TR	Т	L	LTR	LTR
Maximum Queue (ft)	65	13	48	40	112	90
Average Queue (ft)	26	1	2	13	50	40
95th Queue (ft)	54	6	49	38	98	71
Link Distance (ft)		458	549		122	679
Upstream Blk Time (%)					2	
Queuing Penalty (veh)					0	
Storage Bay Dist (ft)	90			60		
Storage Blk Time (%)	0			0		
Queuing Penalty (veh)	0			0		

## Intersection: 14: Diamond Rd & Truck St

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	62	76
Average Queue (ft)	28	12
95th Queue (ft)	51	47
Link Distance (ft)	488	395
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

## Intersection: 15: Diamond Rd & Bradley Dr

Movement	EB
Directions Served	R
Maximum Queue (ft)	45
Average Queue (ft)	16
95th Queue (ft)	40
Link Distance (ft)	627
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

## Intersection: 16: Diamond Rd & Lime Kiln Rd/Black Rice Ln

Movement	EB	WB	NB	NB	SB	SB
Directions Served	R	R	L	TR	L	TR
Maximum Queue (ft)	30	64	27	2	45	1
Average Queue (ft)	11	28	3	0	15	0
95th Queue (ft)	33	51	18	2	39	1
Link Distance (ft)	602	1011		1686		570
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			200		100	
Storage Blk Time (%)						
Queuing Penalty (veh)						

# Intersection: 17: Diamond Rd & Diamond Springs Parkway/Project Access

Movement	EB	EB	NB	NB	NB	SB	SB
Directions Served	L	R	L	L	T	T	R
Maximum Queue (ft)	161	380	176	202	356	339	69
Average Queue (ft)	61	180	84	72	201	216	30
95th Queue (ft)	133	339	144	138	322	314	55
Link Distance (ft)	893	893			570	386	386
Upstream Blk Time (%)						0	
Queuing Penalty (veh)						0	
Storage Bay Dist (ft)			350	350			
Storage Blk Time (%)					0		
Queuing Penalty (veh)					0		

#### Intersection: 18: Missouri Flat Road & Missouri Flat Rd/Diamond Springs Parkway

Movement	EB	EB	EB	EB	B43	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	Т	R	T	L	T	T	R	L	L	TR
Maximum Queue (ft)	75	214	221	108	92	86	109	112	22	264	275	95
Average Queue (ft)	11	95	95	4	5	34	47	44	3	132	146	35
95th Queue (ft)	47	172	172	57	46	72	95	92	15	222	234	70
Link Distance (ft)		1589	1589		216		2033	2033			451	451
Upstream Blk Time (%)					0							
Queuing Penalty (veh)					0							
Storage Bay Dist (ft)	125			250		500			175	275		
Storage Blk Time (%)		3	0	0						0	0	
Queuing Penalty (veh)		0	1	0						1	1	

# Intersection: 18: Missouri Flat Road & Missouri Flat Rd/Diamond Springs Parkway

Movement	SB	SB
Directions Served	L	TR
Maximum Queue (ft)	36	56
Average Queue (ft)	8	14
95th Queue (ft)	27	39
Link Distance (ft)		278
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	50	
Storage Blk Time (%)	0	1
Queuing Penalty (veh)	0	0

# Intersection: 19: Throwita Way & Diamond Springs Parkway

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	SB	
Directions Served	L	T	Т	R	L	Т	TR	LT	R	LTR	
Maximum Queue (ft)	96	154	192	44	107	97	115	162	61	132	
Average Queue (ft)	40	28	52	9	39	18	27	74	25	56	
95th Queue (ft)	85	95	140	32	85	66	82	135	51	111	
Link Distance (ft)		2033	2033			893	893	462		282	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	200			200	200				200		
Storage Blk Time (%)		0	0					0			
Queuing Penalty (veh)		0	0					0			

## Zone Summary

Zone wide Queuing Penalty: 1391

## Intersection: 1: Missouri Flat Road & Plaza Drive

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	R	L	LTR	L	L	T	Т	R	L	Т	TR
Maximum Queue (ft)	80	57	132	170	109	122	163	176	180	77	126	159
Average Queue (ft)	39	24	60	67	39	69	64	84	71	29	50	52
95th Queue (ft)	68	50	108	135	92	108	131	147	138	62	101	115
Link Distance (ft)	740	740	734	734			459	459	459		200	200
Upstream Blk Time (%)												0
Queuing Penalty (veh)												0
Storage Bay Dist (ft)					330	330				150		
Storage Blk Time (%)											0	
Queuing Penalty (veh)											0	

#### Intersection: 2: Missouri Flat Road & WB Ramps

Movement	WB	WB	WB	WB	NB	NB	NB	NB	SB	SB	
Directions Served	L	LT	R	R	L	L	T	Т	T	T	
Maximum Queue (ft)	201	208	170	142	137	149	409	319	176	164	
Average Queue (ft)	120	120	88	36	128	139	186	67	87	72	
95th Queue (ft)	187	192	147	93	159	166	405	196	157	140	
Link Distance (ft)	983	983					395	395	459	459	
Upstream Blk Time (%)							1	0			
Queuing Penalty (veh)							5	0			
Storage Bay Dist (ft)			400	400	125	125					
Storage Blk Time (%)					1	14	0				
Queuing Penalty (veh)					5	52	0				

## Intersection: 3: Missouri Flat Road & EB Ramps

Movement	EB	EB	EB	NB	NB	NB	SB	SB	SB	SB	
Directions Served	L	LTR	R	Т	Т	R	L	L	T	Т	
Maximum Queue (ft)	158	208	195	166	172	73	105	122	150	183	
Average Queue (ft)	50	116	93	150	127	9	35	62	34	46	
95th Queue (ft)	116	184	169	188	195	42	82	103	100	125	
Link Distance (ft)		1460		138	138	138			395	395	
Upstream Blk Time (%)				20	9	0					
Queuing Penalty (veh)				82	35	0					
Storage Bay Dist (ft)	700		550				150	150			
Storage Blk Time (%)									0		
Queuing Penalty (veh)									1		

## Intersection: 4: Missouri Flat Road & Mother Lode Drive

Movement	EB	EB	EB	NB	NB	NB	NB	SB	SB	SB	
Directions Served	L	L	R	L	Т	Т	R	T	Т	R	
Maximum Queue (ft)	5	116	58	116	408	305	110	158	176	67	
Average Queue (ft)	0	44	18	12	173	73	4	89	100	2	
95th Queue (ft)	5	94	45	59	363	207	58	183	194	32	
Link Distance (ft)		633			1547	1547		138	138		
Upstream Blk Time (%)								5	6	0	
Queuing Penalty (veh)								31	44	0	
Storage Bay Dist (ft)	200		200	150			250			200	
Storage Blk Time (%)		0			13	0	0		6	0	
Queuing Penalty (veh)		0			1	1	0		1	0	

## Intersection: 5: Missouri Flat Road & Forni Road

Movement	EB	EB	EB	EB	WB	WB	NB	NB	NB	NB	B25	B25
Directions Served	L	L	T	R	L	T	L	T	T	R	T	T
Maximum Queue (ft)	197	200	183	84	118	120	274	396	400	175	160	167
Average Queue (ft)	94	113	55	23	53	52	74	249	251	38	17	18
95th Queue (ft)	173	179	122	60	104	100	213	434	439	152	88	95
Link Distance (ft)			1180			265		317	317		652	652
Upstream Blk Time (%)								8	8			
Queuing Penalty (veh)								48	51			
Storage Bay Dist (ft)	195	195		150	190		250			150		
Storage Blk Time (%)	0	1	0	0	0	0	0	13	22	0		
Queuing Penalty (veh)	0	1	1	0	0	0	0	8	13	0		

## Intersection: 5: Missouri Flat Road & Forni Road

Movement	SB	SB	SB	SB
Directions Served	L	T	Т	R
Maximum Queue (ft)	325	415	378	175
Average Queue (ft)	249	249	229	106
95th Queue (ft)	374	459	397	217
Link Distance (ft)		365	365	
Upstream Blk Time (%)		14	2	
Queuing Penalty (veh)		94	11	
Storage Bay Dist (ft)	300			150
Storage Blk Time (%)	22	4	13	0
Queuing Penalty (veh)	95	9	39	1

## Intersection: 6: Missouri Flat Road & Golden Center Drive

Movement	EB	WB	NB	NB	NB	B43	B43	SB	SB	SB	SB	B25
Directions Served	LTR	LTR	L	Т	TR	Т	Т	L	Т	Т	R	T
Maximum Queue (ft)	76	136	174	301	294	208	218	195	485	558	67	12
Average Queue (ft)	29	63	63	205	223	28	32	92	159	253	4	0
95th Queue (ft)	63	118	148	322	328	123	130	183	379	492	56	9
Link Distance (ft)	184	339		216	216	1589	1589		652	652		317
Upstream Blk Time (%)				9	12				0	0		
Queuing Penalty (veh)				65	87				0	1		
Storage Bay Dist (ft)			150					175			500	
Storage Blk Time (%)			0	15				1	8	1		
Queuing Penalty (veh)			0	9				6	7	0		

## Intersection: 7: Missouri Flat Road & China Garden Rd

Movement	EB	WB	NB	NB	SB	B81
Directions Served	R	R	L	TR	L	T
Maximum Queue (ft)	32	76	27	30	84	27
Average Queue (ft)	5	27	3	2	36	1
95th Queue (ft)	23	55	18	14	71	23
Link Distance (ft)	158	1439		558		225
Upstream Blk Time (%)						0
Queuing Penalty (veh)						0
Storage Bay Dist (ft)			200		190	
Storage Blk Time (%)						
Queuing Penalty (veh)						

## Intersection: 8: SR 49 & Pleasant Valley Rd

Movement	EB	WB	WB	NB	
Directions Served	TR	L	Т	LR	
Maximum Queue (ft)	328	104	213	616	
Average Queue (ft)	127	59	87	301	
95th Queue (ft)	272	104	160	653	
Link Distance (ft)	797		363	576	
Upstream Blk Time (%)				19	
Queuing Penalty (veh)				0	
Storage Bay Dist (ft)		80			
Storage Blk Time (%)		1	8		
Queuing Penalty (veh)		4	14		

# Intersection: 9: Pleasant Valley Rd & Forni Rd

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	203	17	326
Average Queue (ft)	61	1	88
95th Queue (ft)	141	7	258
Link Distance (ft)	363	1758	930
Upstream Blk Time (%)	0		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

## Intersection: 10: Pleasant Valley Rd & Missouri Flat Rd

Movement	EB	EB	EB	WB	WB	SB	SB	B68
Directions Served	L	L	T	Т	R	L	R	T
Maximum Queue (ft)	212	225	674	267	212	153	117	3
Average Queue (ft)	195	200	468	127	75	66	38	0
95th Queue (ft)	251	285	885	212	161	125	86	3
Link Distance (ft)			658	1506		127	127	419
Upstream Blk Time (%)			16			1	0	
Queuing Penalty (veh)			102			2	0	
Storage Bay Dist (ft)	200	200			200			
Storage Blk Time (%)	47	48	1	1	0			
Queuing Penalty (veh)	100	101	3	4	0			

# Intersection: 11: Pleasant Valley Rd & China Garden Rd

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	155	2	40
Average Queue (ft)	17	0	12
95th Queue (ft)	90	2	38
Link Distance (ft)	1506	1257	266
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

# Intersection: 12: Fowler Ln/Diamond Rd & Pleasant Valley Rd

Movement	EB	EB	EB	WB	WB	WB	B60	NB	NB	SB	SB	
Directions Served	L	Т	TR	L	T	R	T	LT	R	L	TR	
Maximum Queue (ft)	146	159	108	119	580	195	67	150	96	169	98	
Average Queue (ft)	60	76	28	19	225	121	5	64	25	77	35	
95th Queue (ft)	114	132	77	67	462	229	69	119	66	141	74	
Link Distance (ft)		1257			549		458	614			1686	
Upstream Blk Time (%)					1							
Queuing Penalty (veh)					11							
Storage Bay Dist (ft)	180		250	105		170			90	340		
Storage Blk Time (%)	0	0			20	1		4	0			
Queuing Penalty (veh)	0	0			94	3		1	0			

## Intersection: 13: Driveway/Racquet Way & Pleasant Valley Rd

Movement	EB	WB	WB	NB	SB
Directions Served	L	L	TR	LTR	LTR
Maximum Queue (ft)	44	21	5	71	81
Average Queue (ft)	12	2	0	26	33
95th Queue (ft)	38	13	4	58	66
Link Distance (ft)			2746	122	679
Upstream Blk Time (%)				0	
Queuing Penalty (veh)				0	
Storage Bay Dist (ft)	90	60			
Storage Blk Time (%)					
Queuing Penalty (veh)					

## Intersection: 14: Diamond Rd & Truck St

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	44	71
Average Queue (ft)	16	9
95th Queue (ft)	41	40
Link Distance (ft)	488	394
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

# Intersection: 15: Diamond Rd & Bradley Dr

Movement	EB	SB
Directions Served	R	TR
Maximum Queue (ft)	31	99
Average Queue (ft)	13	11
95th Queue (ft)	36	61
Link Distance (ft)	621	394
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

#### Intersection: 16: Diamond Rd & Lime Kiln Rd/Black Rice Ln

Movement	EB	WB	NB	SB
Directions Served	R	R	L	L
Maximum Queue (ft)	63	60	15	51
Average Queue (ft)	27	27	1	11
95th Queue (ft)	49	51	9	35
Link Distance (ft)	602	1011		
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			200	100
Storage Blk Time (%)				
Queuing Penalty (veh)				

## Intersection: 17: Diamond Rd & Diamond Springs Parkway/Project Access

Movement	EB	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB	
Directions Served	L	Т	R	L	TR	L	L	TR	L	T	R	
Maximum Queue (ft)	151	70	103	56	90	293	308	348	106	396	130	
Average Queue (ft)	53	15	27	17	35	173	169	173	11	328	52	
95th Queue (ft)	118	46	71	48	75	253	261	297	57	415	99	
Link Distance (ft)		894	894		562			558		388	388	
Upstream Blk Time (%)										3		
Queuing Penalty (veh)										5		
Storage Bay Dist (ft)	250			200		350	350		100			
Storage Blk Time (%)								0		77		
Queuing Penalty (veh)								1		7		

# Intersection: 18: Missouri Flat Road & Missouri Flat Rd/Diamond Springs Parkway

Movement	EB	EB	EB	B43	WB	WB	WB	WB	NB	NB	NB	B81
Directions Served	L	Т	Т	T	L	Т	T	R	L	L	TR	T
Maximum Queue (ft)	45	136	122	12	116	216	234	60	225	276	52	90
Average Queue (ft)	10	58	47	0	47	86	88	4	140	154	15	5
95th Queue (ft)	33	111	100	7	94	176	183	34	217	248	41	50
Link Distance (ft)		1589	1589	216		2037	2037			225	225	172
Upstream Blk Time (%)									0	1		0
Queuing Penalty (veh)									0	6		1
Storage Bay Dist (ft)	125				500			175	275			
Storage Blk Time (%)		0					1		0	1		
Queuing Penalty (veh)		0					0		2	6		

#### Intersection: 18: Missouri Flat Road & Missouri Flat Rd/Diamond Springs Parkway

Movement SB SB
Directions Served L TR
Maximum Queue (ft) 32 40
Average Queue (ft) 10 12
95th Queue (ft) 30 33
Link Distance (ft) 278
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft) 50
Storage Blk Time (%) 0 0
Queuing Penalty (veh) 0 0

# Intersection: 19: Throwita Way & Diamond Springs Parkway

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	SB	
Directions Served	L	Т	Т	R	L	Т	TR	LT	R	LTR	
Maximum Queue (ft)	80	113	96	39	95	68	80	170	69	129	
Average Queue (ft)	26	22	20	5	42	16	25	74	17	50	
95th Queue (ft)	65	77	66	24	83	48	63	138	50	100	
Link Distance (ft)		2037	2037			894	894	462		282	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	200			200	200				200		
Storage Blk Time (%)								0			
Queuing Penalty (veh)								0			

## Zone Summary

Zone wide Queuing Penalty: 1275

## Intersection: 1: Missouri Flat Road & Plaza Drive

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	R	L	LTR	L	L	T	Т	R	L	Т	TR
Maximum Queue (ft)	217	166	260	276	181	186	204	219	242	100	164	160
Average Queue (ft)	122	63	142	147	100	117	106	109	108	36	79	73
95th Queue (ft)	197	132	227	246	165	173	180	178	198	77	139	136
Link Distance (ft)	740	740	734	734			459	459	459		200	200
Upstream Blk Time (%)											0	0
Queuing Penalty (veh)											0	0
Storage Bay Dist (ft)					330	330				150		
Storage Blk Time (%)										0	1	
Queuing Penalty (veh)										0	0	

#### Intersection: 2: Missouri Flat Road & WB Ramps

Movement	WB	WB	WB	WB	NB	NB	NB	NB	SB	SB	
Directions Served	L	LT	R	R	L	L	T	Т	T	T	
Maximum Queue (ft)	364	382	224	162	137	148	292	160	311	288	
Average Queue (ft)	187	193	103	42	116	127	107	68	169	144	
95th Queue (ft)	310	316	183	109	164	164	231	131	279	249	
Link Distance (ft)	983	983					395	395	459	459	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)			400	400	125	125					
Storage Blk Time (%)		0	0		1	4	1				
Queuing Penalty (veh)		1	0		3	16	3				

## Intersection: 3: Missouri Flat Road & EB Ramps

Movement	EB	EB	EB	NB	NB	NB	SB	SB	SB	SB	
Directions Served	L	LTR	R	Т	Т	R	L	L	T	Т	
Maximum Queue (ft)	261	328	322	168	164	32	162	174	411	411	
Average Queue (ft)	108	179	177	159	136	2	94	125	170	180	
95th Queue (ft)	210	278	279	175	186	15	162	190	363	365	
Link Distance (ft)		1460		138	138	138			395	395	
Upstream Blk Time (%)				40	12				1	1	
Queuing Penalty (veh)				165	49				4	6	
Storage Bay Dist (ft)	700		550				150	150			
Storage Blk Time (%)							0	3	9		
Queuing Penalty (veh)							2	20	29		

## Intersection: 4: Missouri Flat Road & Mother Lode Drive

Movement	EB	EB	NB	NB	NB	NB	SB	SB	SB	
Directions Served	L	R	L	Т	T	R	T	T	R	
Maximum Queue (ft)	73	81	174	725	634	81	163	179	27	
Average Queue (ft)	23	28	53	386	184	2	116	124	1	
95th Queue (ft)	58	65	149	851	604	40	199	204	20	
Link Distance (ft)	633			1533	1533		138	138		
Upstream Blk Time (%)							9	11	0	
Queuing Penalty (veh)							87	105	0	
Storage Bay Dist (ft)		200	150			250			200	
Storage Blk Time (%)			0	38	0	0		11	0	
Queuing Penalty (veh)			2	15	0	0		2	0	

## Intersection: 5: Missouri Flat Road & Forni Road

Movement	EB	EB	EB	EB	WB	WB	NB	NB	NB	NB	B25	B25
Directions Served	L	L	T	R	L	Т	L	Т	Т	R	T	T
Maximum Queue (ft)	207	220	1227	84	57	100	261	390	392	140	110	115
Average Queue (ft)	200	214	924	34	16	34	108	203	206	16	8	10
95th Queue (ft)	230	242	1573	69	45	76	245	394	407	97	56	62
Link Distance (ft)			1180			265		317	317		652	652
Upstream Blk Time (%)			42					4	5			
Queuing Penalty (veh)			0					23	27			
Storage Bay Dist (ft)	195	195		150	190		250			150		
Storage Blk Time (%)	22	55					1	7	16	0		
Queuing Penalty (veh)	35	88					6	7	4	0		

## Intersection: 5: Missouri Flat Road & Forni Road

Movement	SB	SB	SB	SB	
Directions Served	L	T	Т	R	
Maximum Queue (ft)	324	392	396	175	
Average Queue (ft)	168	303	339	149	
95th Queue (ft)	312	457	462	232	
Link Distance (ft)		365	365		
Upstream Blk Time (%)		6	14		
Queuing Penalty (veh)		62	137		
Storage Bay Dist (ft)	300			150	
Storage Blk Time (%)	0	13	30	1	
Queuing Penalty (veh)	1	20	138	6	

## Intersection: 6: Missouri Flat Road & Golden Center Drive

Movement	EB	WB	NB	NB	NB	B43	B43	SB	SB	SB	SB	B25
Directions Served	LTR	LTR	L	Т	TR	Т	Т	L	Т	T	R	T
Maximum Queue (ft)	166	253	175	298	294	250	236	200	663	681	423	128
Average Queue (ft)	83	152	111	217	216	45	39	88	351	421	23	6
95th Queue (ft)	145	241	197	328	326	207	186	186	685	735	190	70
Link Distance (ft)	184	339		216	216	1589	1589		652	652		317
Upstream Blk Time (%)	0			14	11				1	3		0
Queuing Penalty (veh)	0			86	64				7	19		0
Storage Bay Dist (ft)			150					175			500	
Storage Blk Time (%)			11	17				2	19	11	0	
Queuing Penalty (veh)			57	16				12	15	1	0	

#### Intersection: 6: Missouri Flat Road & Golden Center Drive

Movement	B25	B25	
Directions Served	T		
Maximum Queue (ft)	221	4	
Average Queue (ft)	15	0	
95th Queue (ft)	122	4	
Link Distance (ft)	317	317	
Upstream Blk Time (%)	0		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

## Intersection: 7: Missouri Flat Road & China Garden Rd

Movement	EB	WB	SB
Directions Served	R	R	L
Maximum Queue (ft)	32	129	30
Average Queue (ft)	4	58	5
95th Queue (ft)	22	105	24
Link Distance (ft)	145	1441	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			150
Storage Blk Time (%)			
Queuing Penalty (veh)			

# Intersection: 8: SR 49 & Pleasant Valley Rd

Movement	EB	WB	WB	NB
Directions Served	TR	L	T	LR
Maximum Queue (ft)	850	104	184	176
Average Queue (ft)	512	67	71	77
95th Queue (ft)	1005	105	134	135
Link Distance (ft)	797		363	576
Upstream Blk Time (%)	36			
Queuing Penalty (veh)	0			
Storage Bay Dist (ft)		80		
Storage Blk Time (%)		4	3	
Queuing Penalty (veh)		15	9	

## Intersection: 9: Pleasant Valley Rd & Forni Rd

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	200	17	263
Average Queue (ft)	50	1	65
95th Queue (ft)	133	8	200
Link Distance (ft)	363	1758	930
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

# Intersection: 10: Pleasant Valley Rd & Missouri Flat Rd

Movement	EB	EB	EB	WB	WB	SB	SB	B68	B68	
Directions Served	L	L	Т	Т	R	L	R	T	T	
Maximum Queue (ft)	130	176	280	241	177	204	158	88	5	
Average Queue (ft)	66	68	101	117	47	138	71	8	0	
95th Queue (ft)	108	122	197	197	118	212	134	46	7	
Link Distance (ft)			658	1506		127	127	419	419	
Upstream Blk Time (%)			0			11	1			
Queuing Penalty (veh)			0			53	5			
Storage Bay Dist (ft)	200	200			200					
Storage Blk Time (%)			1	1	0					
Queuing Penalty (veh)			2	2	0					

# Intersection: 11: Pleasant Valley Rd & China Garden Rd

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	190	47
Average Queue (ft)	17	24
95th Queue (ft)	102	49
Link Distance (ft)	1506	266
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

#### Intersection: 12: Fowler Ln/Diamond Rd & Pleasant Valley Rd

Movement	EB	EB	EB	WB	WB	WB	B60	NB	NB	SB	SB	
Directions Served	L	Т	TR	L	T	R	Т	LT	R	L	TR	
Maximum Queue (ft)	204	301	270	125	429	195	4	159	109	329	157	
Average Queue (ft)	74	154	100	53	180	92	0	78	36	187	55	
95th Queue (ft)	152	246	202	120	334	210	4	135	80	292	127	
Link Distance (ft)		1257			549		458	614			1686	
Upstream Blk Time (%)					0							
Queuing Penalty (veh)					1							
Storage Bay Dist (ft)	180		250	105		170			90	340		
Storage Blk Time (%)	0	5	0	1	21	0		7	0	0		
Queuing Penalty (veh)	2	20	1	5	70	1		4	0	0		

# Intersection: 13: Driveway/Racquet Way & Pleasant Valley Rd

Movement	EB	EB	B60	WB	NB	SB
Directions Served	L	TR	T	L	LTR	LTR
Maximum Queue (ft)	77	16	115	43	125	98
Average Queue (ft)	26	1	4	13	50	38
95th Queue (ft)	59	9	84	38	96	71
Link Distance (ft)		458	549		122	679
Upstream Blk Time (%)			0		1	
Queuing Penalty (veh)			0		0	
Storage Bay Dist (ft)	90			60		
Storage Blk Time (%)	0	0		0		
Queuing Penalty (veh)	1	0		0		

## Intersection: 14: Diamond Rd & Truck St

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	66	75
Average Queue (ft)	29	9
95th Queue (ft)	55	41
Link Distance (ft)	488	394
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

## Intersection: 15: Diamond Rd & Bradley Dr

Movement	EB	SB
Directions Served	R	TR
Maximum Queue (ft)	37	33
Average Queue (ft)	17	2
95th Queue (ft)	40	22
Link Distance (ft)	621	394
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

## Intersection: 16: Diamond Rd & Lime Kiln Rd/Black Rice Ln

Movement	EB	WB	NB	NB	SB	SB	
Directions Served	R	R	L	TR	L	TR	
Maximum Queue (ft)	36	57	30	2	47	1	
Average Queue (ft)	11	28	2	0	14	0	
95th Queue (ft)	34	50	14	2	38	1	
Link Distance (ft)	602	1011		1686		558	
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)			200		100		
Storage Blk Time (%)							
Queuing Penalty (veh)							

# Intersection: 17: Diamond Rd & Diamond Springs Parkway/Project Access

Movement	EB	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB	
Directions Served	L	Т	R	L	TR	L	L	TR	L	T	R	
Maximum Queue (ft)	212	106	419	75	140	169	237	413	116	376	72	
Average Queue (ft)	90	18	200	29	68	94	90	242	13	254	32	
95th Queue (ft)	171	66	364	66	121	152	190	385	59	358	58	
Link Distance (ft)		894	894		562			558		388	388	
Upstream Blk Time (%)								0		1		
Queuing Penalty (veh)								0		1		
Storage Bay Dist (ft)	250			200		350	350		100			
Storage Blk Time (%)	0							1		48		
Queuing Penalty (veh)	0							3		5		

## Intersection: 18: Missouri Flat Road & Missouri Flat Rd/Diamond Springs Parkway

Movement	EB	EB	EB	EB	B43	B43	WB	WB	WB	WB	NB	NB
Directions Served	L	T	Т	R	Т	Т	L	Т	T	R	L	L
Maximum Queue (ft)	74	217	199	53	17	60	104	156	148	40	252	268
Average Queue (ft)	11	99	92	2	1	4	41	59	57	4	132	147
95th Queue (ft)	46	174	164	39	17	33	87	123	119	26	214	233
Link Distance (ft)		1589	1589		216	216		2033	2033			451
Upstream Blk Time (%)						0						
Queuing Penalty (veh)						0						
Storage Bay Dist (ft)	125			250			500			175	275	
Storage Blk Time (%)		3	0	0					0		0	0
Queuing Penalty (veh)		0	0	0					0		0	1

## Intersection: 18: Missouri Flat Road & Missouri Flat Rd/Diamond Springs Parkway

Movement	NB	SB	SB
Directions Served	TR	L	TR
Maximum Queue (ft)	85	37	38
Average Queue (ft)	34	8	13
95th Queue (ft)	68	28	34
Link Distance (ft)	451		278
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		50	
Storage Blk Time (%)		0	0
Queuing Penalty (veh)		0	0

# Intersection: 19: Throwita Way & Diamond Springs Parkway

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	SB	
Directions Served	L	T	Т	R	L	T	TR	LT	R	LTR	
Maximum Queue (ft)	107	164	198	75	95	78	95	156	69	128	
Average Queue (ft)	38	38	60	12	38	23	30	74	25	54	
95th Queue (ft)	84	111	156	54	80	60	75	135	53	102	
Link Distance (ft)		2033	2033			894	894	462		282	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	200			200	200				200		
Storage Blk Time (%)		0	0	0				0			
Queuing Penalty (veh)		0	0	0				0			

## Zone Summary

Zone wide Queuing Penalty: 1542

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#### 2027 AM

Signal	Warrant Summary Report	
Intersection	Base Met	Future Met
	[Del / Vol]	[Del / Vol]
# 7 China Garden Rd / MF Rd	No / Yes	No / Yes
# 8 SR 49 / Pleasant Valley Rd	Yes	Yes
# 9 Forni Rd / Pleasant Valley	Rd No / Yes	No / Yes
# 11 China Garden Rd / Pleasant	Valley R No / No	No / No
# 13 Racquet Way / Pleasant Vall	ey Rd No / No	No / No
# 14 Diamond Rd / Truck St	No / No	No / No
# 15 Diamond Rd / Bradley Dr	No / No	No / No
# 16 Diamond Rd / Black Rice Roa	d / Lime No / No	No / No

#### 2027 AM

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Peak Hour Delay Signal Warrant Report

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Intersection #7 China Garden Rd / MF Rd

\*

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach: North Bound South Bound East Bound West Bound Movement: L - T - R

Approach[eastbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.0]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=5]

FAIL - Approach volume less than 100 for one lane approach.

Signal Warrant Rule #3: [approach count=4][total volume=1715]

SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

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Approach[westbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.5]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=90]

FAIL - Approach volume less than 100 for one lane approach.

Signal Warrant Rule #3: [approach count=4][total volume=1715]

SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

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### SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

## 2027 AM \_\_\_\_\_\_

Peak Hour Volume Signal Warrant Report [Rural]

Intersection #7 China Garden Rd / MF Rd

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Base Volume Alternative: Peak Hour Warrant Met

-----| Approach: North Bound South Bound East Bound West Bound Movement: L-T-R L-T-R L-T-R-----||-----||-----| -----||-----||-----|

Major Street Volume: 1620 Minor Approach Volume: 90

Minor Approach Volume Threshold: 11 [less than minimum of 75]

#### SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

AM 2027 Tue Aug 29, 2017 17:25:40 Page 3-3 2027 AM plus Project \_\_\_\_\_\_ Peak Hour Delay Signal Warrant Report Intersection #7 China Garden Rd / MF Rd \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Future Volume Alternative: Peak Hour Warrant NOT Met -----| North Bound South Bound East Bound West Bound L - T - R L - T - R Approach: Movement: -----||-----||-----| Control: Uncontrolled Uncontrolled Stop Sign Stop Sign
Lanes: 1 0 0 1 0 1 0 0 1 0 0 0 0 1 0 0 0 0 1 Initial Vol: 5 845 55 85 625 5 0 0 5 0 0 90 ApproachDel: xxxxxx xxxxx 12.5 18.7 Approach[eastbound][lanes=1][control=Stop Sign] Signal Warrant Rule #1: [vehicle-hours=0.0] FAIL - Vehicle-hours less than 4 for one lane approach. Signal Warrant Rule #2: [approach volume=5] FAIL - Approach volume less than 100 for one lane approach. Signal Warrant Rule #3: [approach count=4][total volume=1715] SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches. \_\_\_\_\_\_ Approach[westbound][lanes=1][control=Stop Sign] Signal Warrant Rule #1: [vehicle-hours=0.5] FAIL - Vehicle-hours less than 4 for one lane approach. Signal Warrant Rule #2: [approach volume=90] FAIL - Approach volume less than 100 for one lane approach. Signal Warrant Rule #3: [approach count=4][total volume=1715] SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches. SIGNAL WARRANT DISCLAIMER This peak hour signal warrant analysis should be considered solely as an

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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AM 2027 Tue Aug 29, 2017 17:25:40 Page 3-4 2027 AM plus Project \_\_\_\_\_\_ Peak Hour Volume Signal Warrant Report [Rural] \* Intersection #7 China Garden Rd / MF Rd \* Future Volume Alternative: Peak Hour Warrant Met -----| Approach: North Bound South Bound East Bound West Bound Movement: L-T-R L-T-R L-T-R-----||-----||-----| -----||-----||-----| Major Street Volume: 1620 Minor Approach Volume: 90 Minor Approach Volume Threshold: 11 [less than minimum of 75]

# SIGNAL WARRANT DISCLAIMER

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2027 AM

Peak Hour Volume Signal Warrant Report [Rural]

Intersection #8 SR 49 / Pleasant Valley Rd

\*

Base Volume Alternative: Peak Hour Warrant Met

Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R L - T - R L - T - R Control: Stop Sign Stop Sign Stop Sign Stop Sign Stop Sign Stop Sign Initial Vol: 245 0 240 0 0 0 0 280 95 145 320 0

Major Street Volume: 840
Minor Approach Volume: 485
Minor Approach Volume Threshold: 162

\*\*

#### SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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2027 AM plus Project \_\_\_\_\_\_ Peak Hour Volume Signal Warrant Report [Rural] \* Intersection #8 SR 49 / Pleasant Valley Rd \* Future Volume Alternative: Peak Hour Warrant Met -----| Approach: North Bound South Bound East Bound West Bound Movement: L-T-R L-T-R L-T-R-----|----||------| -----|----||------| Major Street Volume: 843

Minor Approach Volume: Minor Approach Volume Threshold: 161

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#### SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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## 2027 AM \_\_\_\_\_\_

Peak Hour Delay Signal Warrant Report

Intersection #9 Forni Rd / Pleasant Valley Rd \*

Base Volume Alternative: Peak Hour Warrant NOT Met -----| North Bound South Bound East Bound West Bound L - T - R L - T - R Approach: Movement: -----||-----||-----|

 
 Stop Sign
 Stop Sign
 Uncontrolled
 Uncontrolled

 0 0 0 0 0 0 1! 0 0 0 1 0 0 0 0 0 1 0
 Control: Lanes: 

Approach[southbound][lanes=1][control=Stop Sign] Signal Warrant Rule #1: [vehicle-hours=0.8]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=150]

SUCCEED - Approach volume greater than or equal to 100 for one lane approach.

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Signal Warrant Rule #3: [approach count=3][total volume=1055]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

#### SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

2027 AM

Peak Hour Volume Signal Warrant Report [Rural]

Base Volume Alternative: Peak Hour Warrant Met

Major Street Volume: 905
Minor Approach Volume: 150
Minor Approach Volume Threshold: 111

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#### SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

#### SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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#### SIGNAL WARRANT DISCLAIMER

Minor Approach Volume Threshold: 110

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Approach[southbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.1]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=15]

FAIL - Approach volume less than 100 for one lane approach. Signal Warrant Rule #3: [approach count=3][total volume=1335]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

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#### SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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2027 AM

Peak Hour Volume Signal Warrant Report [Rural]

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R L - T - R L - T - R Control: Stop Sign Stop Sign Uncontrolled Uncontrolled Lanes: 0 0 0 0 0 0 0 1! 0 0 0 1 0 0 0 0 0 0 1 0 Initial Vol: 0 0 0 5 0 10 10 365 0 0 895 50

Major Street Volume: 1320
Minor Approach Volume: 15

Minor Approach Volume Threshold: 48 [less than minimum of 75]

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#### SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

AM 2027 Tue Aug 29, 2017 17:25:40 Page 3-13 2027 AM plus Project \_\_\_\_\_\_ Peak Hour Delay Signal Warrant Report \* Intersection #11 China Garden Rd / Pleasant Valley Rd \* Future Volume Alternative: Peak Hour Warrant NOT Met -----| North Bound South Bound East Bound West Bound L - T - R L - T - R Approach: Movement: -----||-----||-----| 
 Control:
 Stop Sign
 Stop Sign
 Uncontrolled
 Uncontrolled

 Lanes:
 0 0 0 0 0 0 0 1! 0 0 0 1 0 0 0 0 0 1 0
 Initial Vol: 0 0 0 5 0 10 10 372 0 0 901 50 ApproachDel: xxxxxx 20.1 xxxxxx xxxxx Approach[southbound][lanes=1][control=Stop Sign] Signal Warrant Rule #1: [vehicle-hours=0.1] FAIL - Vehicle-hours less than 4 for one lane approach. Signal Warrant Rule #2: [approach volume=15] FAIL - Approach volume less than 100 for one lane approach. Signal Warrant Rule #3: [approach count=3][total volume=1348] SUCCEED - Total volume greater than or equal to 650 for intersection

#### SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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with less than four approaches.

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Intersection #11 China Garden Rd / Pleasant Valley Rd \*

Future Volume Alternative: Peak Hour Warrant NOT Met

-----| Approach: North Bound South Bound East Bound West Bound Movement: L-T-R L-T-R L-T-R-----||-----||-----| -----||-----||-----|

1333 Major Street Volume: Minor Approach Volume: 15

Minor Approach Volume Threshold: 47 [less than minimum of 75]

#### SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

AM 2027 Tue Aug 29, 2017 17:25:40 Page 3-15 2027 AM \_\_\_\_\_\_ Peak Hour Delay Signal Warrant Report Intersection #13 Racquet Way / Pleasant Valley Rd \* Base Volume Alternative: Peak Hour Warrant NOT Met -----| North Bound South Bound East Bound West Bound L - T - R L - T - R Approach: Movement: -----||-----||-----| 
 Control:
 Stop Sign
 Stop Sign
 Uncontrolled
 Uncontrolled

 Lanes:
 0 0 1! 0 0 0 0 0 1 1 0 0 1 0 1 0 1 0
 1 0 0 1 0
 Initial Vol: 20 0 10 0 0 60 30 290 45 5 880 ApproachDel: 33.1 17.4 xxxxxx xxxxx Approach[northbound][lanes=1][control=Stop Sign] Signal Warrant Rule #1: [vehicle-hours=0.3] FAIL - Vehicle-hours less than 4 for one lane approach. Signal Warrant Rule #2: [approach volume=30] FAIL - Approach volume less than 100 for one lane approach. Signal Warrant Rule #3: [approach count=4][total volume=1340] SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches. \_\_\_\_\_\_ Approach[southbound][lanes=1][control=Stop Sign] Signal Warrant Rule #1: [vehicle-hours=0.3] FAIL - Vehicle-hours less than 4 for one lane approach. Signal Warrant Rule #2: [approach volume=60] FAIL - Approach volume less than 100 for one lane approach. Signal Warrant Rule #3: [approach count=4][total volume=1340] SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

#### SIGNAL WARRANT DISCLAIMER

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2027 AM

Peak Hour Volume Signal Warrant Report [Rural]

Intersection #13 Racquet Way / Pleasant Valley Rd

Base Volume Alternative: Peak Hour Warrant NOT Met

Major Street Volume: 1250 Minor Approach Volume: 60

Minor Approach Volume Threshold: 71 [less than minimum of 75]

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#### SIGNAL WARRANT DISCLAIMER

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The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

AM 2027 Tue Aug 29, 2017 17:25:40 Page 3-17 2027 AM plus Project \_\_\_\_\_\_ Peak Hour Delay Signal Warrant Report Intersection #13 Racquet Way / Pleasant Valley Rd \* Future Volume Alternative: Peak Hour Warrant NOT Met -----| North Bound South Bound East Bound West Bound L - T - R L - T - R Approach: Movement: -----||-----||-----| 
 Control:
 Stop Sign
 Stop Sign
 Uncontrolled
 Uncontrolled

 Lanes:
 0 0 1! 0 0 0 0 0 1 1 0 0 1 0 1 0 1 0
 1 0 0 1 0
 Initial Vol: 20 0 10 0 0 60 30 297 45 5 889
ApproachDel: 34.1 17.6 xxxxxx xxxxx Approach[northbound][lanes=1][control=Stop Sign] Signal Warrant Rule #1: [vehicle-hours=0.3] FAIL - Vehicle-hours less than 4 for one lane approach. Signal Warrant Rule #2: [approach volume=30] FAIL - Approach volume less than 100 for one lane approach. Signal Warrant Rule #3: [approach count=4][total volume=1356] SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches. \_\_\_\_\_\_ Approach[southbound][lanes=1][control=Stop Sign] Signal Warrant Rule #1: [vehicle-hours=0.3] FAIL - Vehicle-hours less than 4 for one lane approach. Signal Warrant Rule #2: [approach volume=60] FAIL - Approach volume less than 100 for one lane approach. Signal Warrant Rule #3: [approach count=4][total volume=1356] SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches. SIGNAL WARRANT DISCLAIMER This peak hour signal warrant analysis should be considered solely as an

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

AM 2027 Tue Aug 29, 2017 17:25:40 Page 3-18 2027 AM plus Project \_\_\_\_\_\_ Peak Hour Volume Signal Warrant Report [Rural] \* Intersection #13 Racquet Way / Pleasant Valley Rd \* Future Volume Alternative: Peak Hour Warrant NOT Met -----| Approach: North Bound South Bound East Bound West Bound Movement: L-T-R L-T-R L-T-RControl: Stop Sign Stop Sign Uncontrolled Uncontrolled Lanes: 0 0 1! 0 0 0 0 0 0 1 1 0 0 1 0 1 0 0 1 0 Initial Vol: 20 0 10 0 0 60 30 297 45 5 889 0 -----|----||------| 1266 Major Street Volume: Minor Approach Volume: 60 Minor Approach Volume Threshold: 68 [less than minimum of 75] SIGNAL WARRANT DISCLAIMER This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting

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AM 2027 Tue Aug 29, 2017 17:25:40 Page 3-19 2027 AM \_\_\_\_\_\_ Peak Hour Delay Signal Warrant Report Intersection #14 Diamond Rd / Truck St \* Base Volume Alternative: Peak Hour Warrant NOT Met -----| Approach: North Bound South Bound East Bound West Bound Movement: L-T-R L-T-R L-T-R-----||-----||-----| Control: Stop Sign Stop Sign Uncontrolled Uncontrolled Lanes: 0 1 0 0 0 0 0 1 0 0 0 1! 0 0 0 0 0 0 Initial Vol: 25 195 0 0 230 10 10 0 5 0 0 ApproachDel: 10.8 10.7 xxxxxx xxxxx Approach[northbound][lanes=1][control=Stop Sign] Signal Warrant Rule #1: [vehicle-hours=0.7] FAIL - Vehicle-hours less than 4 for one lane approach. Signal Warrant Rule #2: [approach volume=220] SUCCEED - Approach volume greater than or equal to 100 for one lane approach. Signal Warrant Rule #3: [approach count=3][total volume=475] FAIL - Total volume less than 650 for intersection with less than four approaches. \_\_\_\_\_\_ Approach[southbound][lanes=1][control=Stop Sign] Signal Warrant Rule #1: [vehicle-hours=0.7] FAIL - Vehicle-hours less than 4 for one lane approach. Signal Warrant Rule #2: [approach volume=240] SUCCEED - Approach volume greater than or equal to 100 for one lane approach. Signal Warrant Rule #3: [approach count=3][total volume=475] FAIL - Total volume less than 650 for intersection with less than four approaches. SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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2027 AM

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Peak Hour Volume Signal Warrant Report [Rural]

\*

Intersection #14 Diamond Rd / Truck St

\*

Base Volume Alternative: Peak Hour Warrant NOT Met

Major Street Volume: 15
Minor Approach Volume: 240
Minor Approach Volume Threshold: 792

\*\*

#### SIGNAL WARRANT DISCLAIMER

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The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

AM 2027 Tue Aug 29, 2017 17:25:40 Page 3-21 2027 AM plus Project \_\_\_\_\_\_ Peak Hour Delay Signal Warrant Report Intersection #14 Diamond Rd / Truck St \* Future Volume Alternative: Peak Hour Warrant NOT Met -----| North Bound South Bound East Bound West Bound L-T-R L-T-R Approach: Movement: -----||-----||-----| Control: Stop Sign Stop Sign Uncontrolled Uncontrolled Lanes: 0 1 0 0 0 0 0 1 0 0 0 1! 0 0 0 0 0 0 Initial Vol: 25 203 0 0 239 10 10 0 5 0 0 ApproachDel: 10.9 10.8 xxxxxx xxxxx Approach[northbound][lanes=1][control=Stop Sign] Signal Warrant Rule #1: [vehicle-hours=0.7] FAIL - Vehicle-hours less than 4 for one lane approach. Signal Warrant Rule #2: [approach volume=228] SUCCEED - Approach volume greater than or equal to 100 for one lane approach. Signal Warrant Rule #3: [approach count=3][total volume=492] FAIL - Total volume less than 650 for intersection with less than four approaches. \_\_\_\_\_\_ Approach[southbound][lanes=1][control=Stop Sign] Signal Warrant Rule #1: [vehicle-hours=0.7] FAIL - Vehicle-hours less than 4 for one lane approach. Signal Warrant Rule #2: [approach volume=249] SUCCEED - Approach volume greater than or equal to 100 for one lane approach. Signal Warrant Rule #3: [approach count=3][total volume=492] FAIL - Total volume less than 650 for intersection with less than four approaches. SIGNAL WARRANT DISCLAIMER This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting

This peak hour signal warrant analysis should be considered solely as ar "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Minor Approach Volume: 249
Minor Approach Volume Threshold: 792

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#### SIGNAL WARRANT DISCLAIMER

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Initial Vol: 0 215 0 0 220 20 0 0 20 0 0 0 ApproachDel: 10.3 10.5 xxxxxx xxxxxx

Approach[northbound][lanes=2][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.6]

FAIL - Vehicle-hours less than 5 for two or more lane approach.

Signal Warrant Rule #2: [approach volume=215]

SUCCEED - Approach volume >= 150 for two or more lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=475]

FAIL - Total volume less than 650 for intersection with less than four approaches.

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Approach[southbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.7]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=240]

SUCCEED - Approach volume greater than or equal to 100 for one lane approach. Signal Warrant Rule #3: [approach count=3][total volume=475]

FAIL - Total volume less than 650 for intersection with less than four approaches.

\_\_\_\_\_\_

#### SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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2027 AM

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Peak Hour Volume Signal Warrant Report [Rural]

Intersection #15 Diamond Rd / Bradley Dr

\*

Base Volume Alternative: Peak Hour Warrant NOT Met

Major Street Volume: 20 Minor Approach Volume: 240 Minor Approach Volume Threshold: 1022

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#### SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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AM 2027 Tue Aug 29, 2017 17:25:41 Page 3-25 2027 AM plus Project \_\_\_\_\_\_ Peak Hour Delay Signal Warrant Report Intersection #15 Diamond Rd / Bradley Dr \* Future Volume Alternative: Peak Hour Warrant NOT Met -----| North Bound South Bound East Bound West Bound L-T-R L-T-R Approach: Movement: Initial Vol: 0 223 0 0 229 20 0 0 20 0 0 ApproachDel: 10.4 10.6 xxxxxx xxxxx Approach[northbound][lanes=2][control=Stop Sign] Signal Warrant Rule #1: [vehicle-hours=0.6] FAIL - Vehicle-hours less than 5 for two or more lane approach. Signal Warrant Rule #2: [approach volume=223] SUCCEED - Approach volume >= 150 for two or more lane approach. Signal Warrant Rule #3: [approach count=3][total volume=492] FAIL - Total volume less than 650 for intersection with less than four approaches. \_\_\_\_\_\_ Approach[southbound][lanes=1][control=Stop Sign] Signal Warrant Rule #1: [vehicle-hours=0.7] FAIL - Vehicle-hours less than 4 for one lane approach. Signal Warrant Rule #2: [approach volume=249] SUCCEED - Approach volume greater than or equal to 100 for one lane approach. Signal Warrant Rule #3: [approach count=3][total volume=492] FAIL - Total volume less than 650 for intersection with less than four approaches. SIGNAL WARRANT DISCLAIMER This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting

a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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AM 2027 Tue Aug 29, 2017 17:25:41 Page 3-26 2027 AM plus Project \_\_\_\_\_\_ Peak Hour Volume Signal Warrant Report [Rural] Intersection #15 Diamond Rd / Bradley Dr \* Future Volume Alternative: Peak Hour Warrant NOT Met -----| Approach: North Bound South Bound East Bound West Bound Movement: L-T-R L-T-R L-T-R-----||-----||-----| 20 Major Street Volume: Minor Approach Volume: Minor Approach Volume Threshold: 1022

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#### SIGNAL WARRANT DISCLAIMER

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The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

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Base Volume Alternative: Peak Hour Warrant NOT Met

Approach[northbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=1.5]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=410]

SUCCEED - Approach volume greater than or equal to 100 for one lane approach. Signal Warrant Rule #3: [approach count=4][total volume=720]

FAIL - Total volume less than 650 for intersection with less than four approaches.

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Approach[southbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.7]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=220]

SUCCEED - Approach volume greater than or equal to 100 for one lane approach. Signal Warrant Rule #3: [approach count=4][total volume=720]

FAIL - Total volume less than 650 for intersection with less than four approaches.

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#### SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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2027 AM

Peak Hour Volume Signal Warrant Report [Rural]

\*\*\*\*\*\*\*\*\*\*\*\*\*

\_\_\_\_\_\_

Intersection #16 Diamond Rd / Black Rice Road / Lime Kiln Rd

Base Volume Alternative: Peak Hour Warrant NOT Met

Major Street Volume: 90
Minor Approach Volume: 410
Minor Approach Volume Threshold: 494

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#### SIGNAL WARRANT DISCLAIMER

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AM 2027 Tue Aug 29, 2017 17:25:41 Page 3-29 2027 AM plus Project \_\_\_\_\_\_ Peak Hour Delay Signal Warrant Report Intersection #16 Diamond Rd / Black Rice Road / Lime Kiln Rd \* Future Volume Alternative: Peak Hour Warrant NOT Met -----| North Bound South Bound East Bound West Bound L - T - R L - T - R Approach: Movement: -----||-----||-----| 
 Control:
 Stop Sign
 Stop Sign
 Uncontrolled
 Uncontrolled

 Lanes:
 0 0 1! 0 0 0 0 1! 0 0 0 0 0 1 0 0 0 1
 0 0 0 0 1
 Initial Vol: 10 414 5 20 176 40 0 0 55 0 0 35 ApproachDel: 13.3 11.2 xxxxxx xxxxx Approach[northbound][lanes=1][control=Stop Sign] Signal Warrant Rule #1: [vehicle-hours=1.6] FAIL - Vehicle-hours less than 4 for one lane approach. Signal Warrant Rule #2: [approach volume=429] SUCCEED - Approach volume greater than or equal to 100 for one lane approach. Signal Warrant Rule #3: [approach count=4][total volume=755] FAIL - Total volume less than 650 for intersection with less than four approaches. \_\_\_\_\_\_ Approach[southbound][lanes=1][control=Stop Sign] Signal Warrant Rule #1: [vehicle-hours=0.7] FAIL - Vehicle-hours less than 4 for one lane approach. Signal Warrant Rule #2: [approach volume=236] SUCCEED - Approach volume greater than or equal to 100 for one lane approach. Signal Warrant Rule #3: [approach count=4][total volume=755] FAIL - Total volume less than 650 for intersection with less than four approaches. SIGNAL WARRANT DISCLAIMER This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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AM 2027 Tue Aug 29, 2017 17:25:41 Page 3-30 2027 AM plus Project \_\_\_\_\_\_ Peak Hour Volume Signal Warrant Report [Rural] \* Intersection #16 Diamond Rd / Black Rice Road / Lime Kiln Rd \* Future Volume Alternative: Peak Hour Warrant NOT Met -----| Approach: North Bound South Bound East Bound West Bound Movement: L-T-R L-T-R L-T-R-----||-----||-----| Control: Stop Sign Stop Sign Uncontrolled Uncontrolled Lanes: 0 0 1! 0 0 0 0 1! 0 0 0 0 0 1 0 0 0 0 1 Initial Vol: 10 414 5 20 176 40 0 0 55 0 0 35 -----||-----||-----| 90 Major Street Volume: Minor Approach Volume: 429 Minor Approach Volume Threshold: 494 \_\_\_\_\_\_

#### SIGNAL WARRANT DISCLAIMER

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#### 2027 PM

Signal Warrant S	ummary Report	
Intersection	Base Met	Future Met
	[Del / Vol]	[Del / Vol]
# 7 China Garden Rd / MF Rd	No / Yes	No / Yes
# 8 SR 49 / Pleasant Valley Rd	Yes	Yes
# 9 Forni Rd / Pleasant Valley Rd	No / Yes	No / Yes
# 11 China Garden Rd / Pleasant Valley R	No / No	No / No
# 13 Racquet Way / Pleasant Valley Rd	No / Yes	No / Yes
# 14 Diamond Rd / Truck St	No / No	No / No
# 15 Diamond Rd / Bradley Dr	No / No	No / No
# 16 Diamond Rd / Black Rice Road / Lime	No / Yes	No / Yes

#### 2027 PM

\_\_\_\_\_\_

Peak Hour Delay Signal Warrant Report

Intersection #7 China Garden Rd / MF Rd

\*

Base Volume Alternative: Peak Hour Warrant NOT Met

-----| Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R-----||-----||-----| Control: Uncontrolled Uncontrolled Stop Sign Stop Sign
Lanes: 1 0 0 1 0 1 0 0 1 0 0 0 0 1 0 0 0 0 1 

Approach[eastbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.0]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=5]

FAIL - Approach volume less than 100 for one lane approach.

Signal Warrant Rule #3: [approach count=4][total volume=2040]

SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

\_\_\_\_\_\_

Approach[westbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=1.0]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=180]

SUCCEED - Approach volume greater than or equal to 100 for one lane approach. Signal Warrant Rule #3: [approach count=4][total volume=2040]

SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

#### SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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### 2027 PM \_\_\_\_\_\_

Peak Hour Volume Signal Warrant Report [Rural] Intersection #7 China Garden Rd / MF Rd

\*

Base Volume Alternative: Peak Hour Warrant Met

-----| Approach: North Bound South Bound East Bound West Bound Movement: L-T-R L-T-R L-T-R-----||-----||-----| -----|----|-----| Major Street Volume: 1855

Minor Approach Volume: 180

Minor Approach Volume Threshold: -20 [less than minimum of 75] \_\_\_\_\_\_

#### SIGNAL WARRANT DISCLAIMER

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2027 PM plus Project

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Peak Hour Delay Signal Warrant Report

Intersection #7 China Garden Rd / MF Rd

\*

Future Volume Alternative: Peak Hour Warrant NOT Met

-----| North Bound South Bound East Bound West Bound L - T - R L - T - R Approach: Movement: -----||-----||-----| Control: Uncontrolled Uncontrolled Stop Sign Stop Sign
Lanes: 1 0 0 1 0 1 0 0 1 0 0 0 0 1 0 0 0 0 1 Initial Vol: 0 710 10 65 1070 0 0 0 5 0 0 180 ApproachDel: xxxxxx xxxx 18.5 19.0 

Approach[eastbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.0]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=5]

FAIL - Approach volume less than 100 for one lane approach.

Signal Warrant Rule #3: [approach count=4][total volume=2040]

SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

\_\_\_\_\_\_

Approach[westbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=1.0]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=180]

SUCCEED - Approach volume greater than or equal to 100 for one lane approach. Signal Warrant Rule #3: [approach count=4][total volume=2040]

SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

#### SIGNAL WARRANT DISCLAIMER

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PM 2027	Tue Aug 29, 2017 17.29.40 Page 3-4
	2027 PM plus Project
*****	Peak Hour Volume Signal Warrant Report [Rural]  ***********************************
	#/ CIIIIIA GALUEII KU / MF KU
	e Alternative: Peak Hour Warrant Met
Approach:	North Bound South Bound East Bound West Bound
	L - T - R L - T - R L - T - R - T - R - T - R
Control:	Uncontrolled Uncontrolled Stop Sign Stop Sign
Initial Vol:	1 0 0 1 0 1 0 0 1 0 0 0 0 0 1 0 0 0 0 1 0 0 0 0 1 0 0 0 0 1 0 0 0 0 1 0 0 0 0 1 0 0 0 0 1 0 0 0 0 1 0
Major Street Minor Approac	Volume: 1855 th Volume: 180 th Volume Threshold: -20 [less than minimum of 75]
This peak how "indicator" of a traffic sign	OT DISCLAIMER OF signal warrant analysis should be considered solely as an of the likelihood of an unsignalized intersection warranting gnal in the future. Intersections that exceed this warrant more likely to meet one or more of the other volume based

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

signal warrant (such as the 4-hour or 8-hour warrants).

 ${\tt Traffix~8.0.0715~(c)~2008~Dowling~Assoc.~Licensed~to~kdANDERSON~TRANSP.}$ 

Page 3-5 2027 PM \_\_\_\_\_\_ Peak Hour Volume Signal Warrant Report [Rural] \* Intersection #8 SR 49 / Pleasant Valley Rd \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Base Volume Alternative: Peak Hour Warrant Met -----| Approach: North Bound South Bound East Bound West Bound Movement: L-T-R L-T-R L-T-R-----||-----||-----| Control: Stop Sign Stop Sign Stop Sign Stop Sign Stop Sign Lanes: 0 0 1! 0 0 0 0 0 0 0 0 0 1 0 1 0 1 0 0 Initial Vol: 115 0 165 0 0 0 0 0 350 225 230 295 0 -----|----|-----| Major Street Volume: 1100 Minor Approach Volume: Minor Approach Volume Threshold: 100 \_\_\_\_\_\_ SIGNAL WARRANT DISCLAIMER

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PM 2027	10	le Aug 29, 201	/ 1/-29-40		Page 3-6
			M plus Project	t	
		lume Signal Wa	rrant Report	[Rural]	
	#8 SR 49 / Pleas	-		******	*****
	e Alternative: Pe 				
Approach: Movement:	North Bound L - T - R	South Bound L - T -	d East I R L - T	Bound - R L	West Bound - T - R
Control: Lanes: Initial Vol:	Stop Sign 0 0 1! 0 0 115 0 166	Stop Sign 0 0 0 0 0 0	Stop 8 0 0 0 0 0 0 353	Sign 101 122523	Stop Sign 0 1 0 0 32 297 0
Major Street Minor Approac	Volume: ch Volume: ch Volume Thresho	1105 281			
	NT DISCLAIMER ur signal warrant	analysis sho	uld be conside	ered solely	as an

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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202	27 PM

Peak Hour Delay Signal Warrant Report

Intersection #9 Forni Rd / Pleasant Valley Rd

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Base Volume Alternative: Peak Hour Warrant NOT Met

-----| Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R -----||-----||-----| 
 Control:
 Stop Sign
 Stop Sign
 Uncontrolled
 Uncontrolled

 Lanes:
 0 0 0 0 0 0 0 1! 0 0 0 1 0 0 0 0 0 1 0
 

Approach[southbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.7]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=175]

SUCCEED - Approach volume greater than or equal to 100 for one lane approach.

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Signal Warrant Rule #3: [approach count=3][total volume=1115]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

### SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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2027 PM \_\_\_\_\_\_ Peak Hour Volume Signal Warrant Report [Rural] Intersection #9 Forni Rd / Pleasant Valley Rd \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Base Volume Alternative: Peak Hour Warrant Met -----| Approach: North Bound South Bound East Bound West Bound Movement: L-T-R L-T-R L-T-RControl: Stop Sign Stop Sign Uncontrolled Uncontrolled Lanes: 0 0 0 0 0 0 0 1! 0 0 0 1 0 0 0 0 1 0 0 1 0 0 0 1 0 0 0 0 370 35 -----||-----||-----| Major Street Volume: 940 Minor Approach Volume: 175 Minor Approach Volume Threshold: 105 \_\_\_\_\_\_ SIGNAL WARRANT DISCLAIMER This peak hour signal warrant analysis should be considered solely as an

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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2027 PM plus Project

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Peak Hour Delay Signal Warrant Report

\*

Intersection #9 Forni Rd / Pleasant Valley Rd

\*

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R L - T - R L - T - R Control: Stop Sign Stop Sign Uncontrolled Uncontrolled Lanes: 0 0 0 0 0 0 0 1! 0 0 0 1 0 0 0 0 0 0 1 0 Initial Vol: 0 0 0 25 0 150 85 453 0 0 375 35 ApproachDel: xxxxxx 15.0 xxxxxx xxxxxx

Approach[southbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.7]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=175]

SUCCEED - Approach volume greater than or equal to 100 for one lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=1123]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

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# SIGNAL WARRANT DISCLAIMER

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2027 PM plus Project \_\_\_\_\_\_ Peak Hour Volume Signal Warrant Report [Rural] \* Intersection #9 Forni Rd / Pleasant Valley Rd \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Future Volume Alternative: Peak Hour Warrant Met -----| North Bound South Bound East Bound West Bound L-T-R L-T-R Approach: Movement: -----|----||------| Control: Stop Sign Stop Sign Uncontrolled Uncontrolled Lanes: 0 0 0 0 0 0 0 1! 0 0 0 1 0 0 0 0 1 0 0 1 0 0 0 1 0 0 0 1 0 0 0 0 375 35 -----||-----||-----| Major Street Volume: 948 Minor Approach Volume: 175 Minor Approach Volume Threshold: 103 \_\_\_\_\_\_ SIGNAL WARRANT DISCLAIMER

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PM 2027 Tue Aug 29, 2017 17:29:40 Page 3-11 -----2027 PM \_\_\_\_\_\_ Peak Hour Delay Signal Warrant Report Intersection #11 China Garden Rd / Pleasant Valley Rd \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Base Volume Alternative: Peak Hour Warrant NOT Met -----| Approach: North Bound South Bound East Bound West Bound Movement: L-T-R L-T-R L-T-R-----||-----||-----| 
 Control:
 Stop Sign
 Stop Sign
 Uncontrolled
 Uncontrolled

 Lanes:
 0 0 0 0 0 0 0 1! 0 0 0 1 0 0 0 0 0 1 0
 Approach[southbound][lanes=1][control=Stop Sign] Signal Warrant Rule #1: [vehicle-hours=0.1] FAIL - Vehicle-hours less than 4 for one lane approach. Signal Warrant Rule #2: [approach volume=25] FAIL - Approach volume less than 100 for one lane approach. Signal Warrant Rule #3: [approach count=3][total volume=1450] SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

#### SIGNAL WARRANT DISCLAIMER

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PM 2027 Tue Aug 29, 2017 17:29:40 Page 3-12 \_\_\_\_\_\_ 2027 PM \_\_\_\_\_\_ Peak Hour Volume Signal Warrant Report [Rural] \* Intersection #11 China Garden Rd / Pleasant Valley Rd \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Base Volume Alternative: Peak Hour Warrant NOT Met -----| Approach: North Bound South Bound East Bound West Bound Movement: L-T-R L-T-R L-T-R-----||-----||-----| -----||-----||------| 1425 Major Street Volume: Minor Approach Volume: 25 Minor Approach Volume Threshold: 35 [less than minimum of 75] SIGNAL WARRANT DISCLAIMER This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant

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are probably more likely to meet one or more of the other volume based

signal warrant (such as the 4-hour or 8-hour warrants).

#### 2027 PM plus Project

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Peak Hour Delay Signal Warrant Report

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Intersection #11 China Garden Rd / Pleasant Valley Rd

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Future Volume Alternative: Peak Hour Warrant NOT Met

-----| North Bound South Bound East Bound West Bound L - T - R L - T - R Approach: Movement: -----||-----||-----| 
 Control:
 Stop Sign
 Stop Sign
 Uncontrolled
 Uncontrolled

 Lanes:
 0 0 0 0 0 0 0 1! 0 0 0 1 0 0 0 0 0 1 0
 

Approach[southbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.1]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=25]

FAIL - Approach volume less than 100 for one lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=1465] SUCCEED - Total volume greater than or equal to 650 for intersection

with less than four approaches.

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#### SIGNAL WARRANT DISCLAIMER

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2027 PM plus Project \_\_\_\_\_\_ Peak Hour Volume Signal Warrant Report [Rural] \* Intersection #11 China Garden Rd / Pleasant Valley Rd \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Future Volume Alternative: Peak Hour Warrant NOT Met -----| Approach: North Bound South Bound East Bound West Bound Movement: L-T-R L-T-R L-T-R-----||-----||-----| -----||-----||------| 1440 Major Street Volume: Minor Approach Volume: 25 Minor Approach Volume Threshold: 34 [less than minimum of 75] SIGNAL WARRANT DISCLAIMER This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based

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signal warrant (such as the 4-hour or 8-hour warrants).

PM 2027 Tue Aug 29, 2017 17:29:40 Page 3-15 2027 PM \_\_\_\_\_\_ Peak Hour Delay Signal Warrant Report Intersection #13 Racquet Way / Pleasant Valley Rd \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Base Volume Alternative: Peak Hour Warrant NOT Met -----| North Bound South Bound East Bound West Bound L - T - R L - T - R Approach: Movement: -----||-----||-----| Initial Vol: 30 0 50 0 5 80 95 805 45 25 510 ApproachDel: 68.9 15.2 xxxxxx xxxxx Approach[northbound][lanes=1][control=Stop Sign] Signal Warrant Rule #1: [vehicle-hours=1.5] FAIL - Vehicle-hours less than 4 for one lane approach. Signal Warrant Rule #2: [approach volume=80] FAIL - Approach volume less than 100 for one lane approach. Signal Warrant Rule #3: [approach count=4][total volume=1650] SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches. \_\_\_\_\_\_ Approach[southbound][lanes=1][control=Stop Sign] Signal Warrant Rule #1: [vehicle-hours=0.4] FAIL - Vehicle-hours less than 4 for one lane approach. Signal Warrant Rule #2: [approach volume=85] FAIL - Approach volume less than 100 for one lane approach. Signal Warrant Rule #3: [approach count=4][total volume=1650] SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches. SIGNAL WARRANT DISCLAIMER This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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PM 2027 Tue Aug 29, 2017 17:29:40 Page 3-16 2027 PM \_\_\_\_\_\_ Peak Hour Volume Signal Warrant Report [Rural] \* Intersection #13 Racquet Way / Pleasant Valley Rd \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Base Volume Alternative: Peak Hour Warrant Met -----| Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R L - T - R Control: Stop Sign Stop Sign Uncontrolled Uncontrolled Lanes: 0 0 1! 0 0 0 0 0 1 0 1 0 0 1 0 1 0 0 1 0 Initial Vol: 30 0 50 0 5 80 95 805 45 25 510 5 -----||-----||-----| Major Street Volume: 1485 Minor Approach Volume: 85 Minor Approach Volume Threshold: 31 [less than minimum of 75] SIGNAL WARRANT DISCLAIMER This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting

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PM 2027 Tue Aug 29, 2017 17:29:40 Page 3-17 2027 PM plus Project \_\_\_\_\_\_ Peak Hour Delay Signal Warrant Report Intersection #13 Racquet Way / Pleasant Valley Rd \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Future Volume Alternative: Peak Hour Warrant NOT Met -----| North Bound South Bound East Bound West Bound L - T - R L - T - R Approach: Movement: -----||-----||-----| Initial Vol: 30 0 50 0 5 80 95 821 45 25 520 ApproachDel: 74.5 15.5 xxxxxx Approach[northbound][lanes=1][control=Stop Sign] Signal Warrant Rule #1: [vehicle-hours=1.7] FAIL - Vehicle-hours less than 4 for one lane approach. Signal Warrant Rule #2: [approach volume=80] FAIL - Approach volume less than 100 for one lane approach. Signal Warrant Rule #3: [approach count=4][total volume=1676] SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches. \_\_\_\_\_\_ Approach[southbound][lanes=1][control=Stop Sign] Signal Warrant Rule #1: [vehicle-hours=0.4] FAIL - Vehicle-hours less than 4 for one lane approach. Signal Warrant Rule #2: [approach volume=85] FAIL - Approach volume less than 100 for one lane approach. Signal Warrant Rule #3: [approach count=4][total volume=1676] SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches. SIGNAL WARRANT DISCLAIMER This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting

a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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2027 PM plus Project \_\_\_\_\_\_ Peak Hour Volume Signal Warrant Report [Rural] \* Intersection #13 Racquet Way / Pleasant Valley Rd \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Future Volume Alternative: Peak Hour Warrant Met -----| North Bound South Bound East Bound West Bound L - T - R L - T - R Approach: Movement: -----||-----||-----| 1511 Major Street Volume: Minor Approach Volume: 85 Minor Approach Volume Threshold: 27 [less than minimum of 75] SIGNAL WARRANT DISCLAIMER This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based

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signal warrant (such as the 4-hour or 8-hour warrants).

2027 PM \_\_\_\_\_\_

Peak Hour Delay Signal Warrant Report

Intersection #14 Diamond Rd / Truck St

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Base Volume Alternative: Peak Hour Warrant NOT Met

-----| Approach: North Bound South Bound East Bound West Bound Movement: L-T-R L-T-R L-T-R-----||-----||-----| Control: Stop Sign Stop Sign Uncontrolled Uncontrolled Lanes: 0 1 0 0 0 0 0 1 0 0 0 1! 0 0 0 0 0 0 Initial Vol: 15 320 0 0 300 5 25 0 20 0 0 ApproachDel: 12.7 12.0 xxxxxx xxxxx 

Approach[northbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=1.2]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=335]

SUCCEED - Approach volume greater than or equal to 100 for one lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=685]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

\_\_\_\_\_\_

Approach[southbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=1.0]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=305]

SUCCEED - Approach volume greater than or equal to 100 for one lane approach. Signal Warrant Rule #3: [approach count=3][total volume=685]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

#### SIGNAL WARRANT DISCLAIMER

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2027 PM \_\_\_\_\_\_ Peak Hour Volume Signal Warrant Report [Rural] Intersection #14 Diamond Rd / Truck St \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Base Volume Alternative: Peak Hour Warrant NOT Met -----| Approach: North Bound South Bound East Bound West Bound Movement: L-T-R L-T-R L-T-R-----||-----||-----| -----|----|-----| 45 Major Street Volume: Minor Approach Volume: 335 Minor Approach Volume Threshold: 609 \_\_\_\_\_\_ SIGNAL WARRANT DISCLAIMER This peak hour signal warrant analysis should be considered solely as an

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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PM 2027 Tue Aug 29, 2017 17:29:40 Page 3-21 2027 PM plus Project \_\_\_\_\_\_ Peak Hour Delay Signal Warrant Report Intersection #14 Diamond Rd / Truck St \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Future Volume Alternative: Peak Hour Warrant NOT Met -----| Approach: North Bound South Bound East Bound West Bound Movement: L-T-R L-T-R L-T-R-----||-----||-----| Control: Stop Sign Stop Sign Uncontrolled Uncontrolled Lanes: 0 1 0 0 0 0 0 1 0 0 0 1! 0 0 0 0 0 0 Initial Vol: 15 337 0 0 310 5 25 0 20 0 0 0 ApproachDel: 13.0 12.2 xxxxxx xxxxx Approach[northbound][lanes=1][control=Stop Sign] Signal Warrant Rule #1: [vehicle-hours=1.3] FAIL - Vehicle-hours less than 4 for one lane approach. Signal Warrant Rule #2: [approach volume=352] SUCCEED - Approach volume greater than or equal to 100 for one lane approach. Signal Warrant Rule #3: [approach count=3][total volume=712] SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches. \_\_\_\_\_\_ Approach[southbound][lanes=1][control=Stop Sign] Signal Warrant Rule #1: [vehicle-hours=1.1] FAIL - Vehicle-hours less than 4 for one lane approach. Signal Warrant Rule #2: [approach volume=315] SUCCEED - Approach volume greater than or equal to 100 for one lane approach. Signal Warrant Rule #3: [approach count=3][total volume=712] SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches. SIGNAL WARRANT DISCLAIMER This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant

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2027 PM plus Project \_\_\_\_\_\_ Peak Hour Volume Signal Warrant Report [Rural] Intersection #14 Diamond Rd / Truck St \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Future Volume Alternative: Peak Hour Warrant NOT Met -----| Approach: North Bound South Bound East Bound West Bound Movement: L-T-R L-T-R L-T-R-----|----||------| -----|----|-----| Major Street Volume: 45 Minor Approach Volume: 352 Minor Approach Volume Threshold: 609 \_\_\_\_\_\_ SIGNAL WARRANT DISCLAIMER This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant

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are probably more likely to meet one or more of the other volume based

signal warrant (such as the 4-hour or 8-hour warrants).

PM 2027 Tue Aug 29, 2017 17:29:40 Page 3-23 2027 PM \_\_\_\_\_\_ Peak Hour Delay Signal Warrant Report Intersection #15 Diamond Rd / Bradley Dr \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Base Volume Alternative: Peak Hour Warrant NOT Met -----| Approach: North Bound South Bound East Bound West Bound Movement: L-T-R L-T-R L-T-RInitial Vol: 0 330 0 0 290 10 0 0 30 0 0 ApproachDel: 11.5 11.3 xxxxxx xxxxx -----|-----|------||----------| Approach[northbound][lanes=2][control=Stop Sign] Signal Warrant Rule #1: [vehicle-hours=1.1] FAIL - Vehicle-hours less than 5 for two or more lane approach. Signal Warrant Rule #2: [approach volume=330] SUCCEED - Approach volume >= 150 for two or more lane approach. Signal Warrant Rule #3: [approach count=3][total volume=660] SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches. \_\_\_\_\_\_ Approach[southbound][lanes=1][control=Stop Sign] Signal Warrant Rule #1: [vehicle-hours=0.9] FAIL - Vehicle-hours less than 4 for one lane approach. Signal Warrant Rule #2: [approach volume=300] SUCCEED - Approach volume greater than or equal to 100 for one lane approach. Signal Warrant Rule #3: [approach count=3][total volume=660] SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches. SIGNAL WARRANT DISCLAIMER This peak hour signal warrant analysis should be considered solely as an

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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2027 PM \_\_\_\_\_\_ Peak Hour Volume Signal Warrant Report [Rural] Intersection #15 Diamond Rd / Bradley Dr \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Base Volume Alternative: Peak Hour Warrant NOT Met -----| Approach: North Bound South Bound East Bound West Bound Movement: L-T-R L-T-R L-T-R-----||-----||-----| Major Street Volume: 30 Minor Approach Volume: Minor Approach Volume Threshold: 1213 \_\_\_\_\_\_ SIGNAL WARRANT DISCLAIMER This peak hour signal warrant analysis should be considered solely as an

"indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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PM 2027 Tue Aug 29, 2017 17:29:40 Page 3-25 2027 PM plus Project \_\_\_\_\_\_ Peak Hour Delay Signal Warrant Report Intersection #15 Diamond Rd / Bradley Dr \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Future Volume Alternative: Peak Hour Warrant NOT Met -----| Approach: North Bound South Bound East Bound West Bound Movement: L-T-R L-T-R L-T-RInitial Vol: 0 347 0 0 300 10 0 0 30 0 0 ApproachDel: 11.7 11.4 xxxxxx xxxxx -----|-----|------||----------| Approach[northbound][lanes=2][control=Stop Sign] Signal Warrant Rule #1: [vehicle-hours=1.1] FAIL - Vehicle-hours less than 5 for two or more lane approach. Signal Warrant Rule #2: [approach volume=347] SUCCEED - Approach volume >= 150 for two or more lane approach. Signal Warrant Rule #3: [approach count=3][total volume=687] SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches. \_\_\_\_\_\_ Approach[southbound][lanes=1][control=Stop Sign] Signal Warrant Rule #1: [vehicle-hours=1.0] FAIL - Vehicle-hours less than 4 for one lane approach. Signal Warrant Rule #2: [approach volume=310] SUCCEED - Approach volume greater than or equal to 100 for one lane approach. Signal Warrant Rule #3: [approach count=3][total volume=687] SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches. SIGNAL WARRANT DISCLAIMER This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting

a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Page 3-26 2027 PM plus Project \_\_\_\_\_\_ Peak Hour Volume Signal Warrant Report [Rural] Intersection #15 Diamond Rd / Bradley Dr \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Future Volume Alternative: Peak Hour Warrant NOT Met -----| Approach: North Bound South Bound East Bound West Bound Movement: L-T-R L-T-R L-T-R-----||-----||-----| 30 Major Street Volume: Minor Approach Volume: Minor Approach Volume Threshold: 1213 \_\_\_\_\_\_ SIGNAL WARRANT DISCLAIMER

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## 2027 PM \_\_\_\_\_\_

Peak Hour Delay Signal Warrant Report

Intersection #16 Diamond Rd / Black Rice Road / Lime Kiln Rd

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Base Volume Alternative: Peak Hour Warrant NOT Met

-----| Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R-----||-----||-----| 
 Control:
 Stop Sign
 Stop Sign
 Uncontrolled
 Uncontrolled

 Lanes:
 0 0 1! 0 0 0 0 1! 0 0 0 0 0 1 0 0 0 1
 0 0 0 0 1
 Initial Vol: 15 320 5 35 435 75 0 0 55 0 0 35 ApproachDel: 12.4 16.8 xxxxxx xxxxx 

Approach[northbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=1.2]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=340]

SUCCEED - Approach volume greater than or equal to 100 for one lane approach.

Signal Warrant Rule #3: [approach count=4][total volume=975]

SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

\_\_\_\_\_\_

Approach[southbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=2.5]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=545]

SUCCEED - Approach volume greater than or equal to 100 for one lane approach. Signal Warrant Rule #3: [approach count=4][total volume=975]

SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

#### SIGNAL WARRANT DISCLAIMER

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2027 PM \_\_\_\_\_\_ Peak Hour Volume Signal Warrant Report [Rural] Intersection #16 Diamond Rd / Black Rice Road / Lime Kiln Rd \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Base Volume Alternative: Peak Hour Warrant Met -----| Approach: North Bound South Bound East Bound West Bound Movement: L-T-R L-T-R L-T-RControl: Stop Sign Stop Sign Uncontrolled Uncontrolled Lanes: 0 0 1! 0 0 0 0 1! 0 0 0 0 0 1 0 0 0 0 1 Initial Vol: 15 320 5 35 435 75 0 0 55 0 0 35 -----||-----||-----| 90 Major Street Volume: Minor Approach Volume: 545 Minor Approach Volume Threshold: 494 \_\_\_\_\_\_ SIGNAL WARRANT DISCLAIMER This peak hour signal warrant analysis should be considered solely as an

"indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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# 2027 PM plus Project

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Peak Hour Delay Signal Warrant Report

\*

Intersection #16 Diamond Rd / Black Rice Road / Lime Kiln Rd

\*

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach[northbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=1.3]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=359]

SUCCEED - Approach volume greater than or equal to 100 for one lane approach.

Signal Warrant Rule #3: [approach count=4][total volume=1025]

SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

\_\_\_\_\_\_

Approach[southbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=2.9]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=576]

SUCCEED - Approach volume greater than or equal to 100 for one lane approach. Signal Warrant Rule #3: [approach count=4][total volume=1025]

SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

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#### SIGNAL WARRANT DISCLAIMER

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2027 PM plus Project \_\_\_\_\_\_ Peak Hour Volume Signal Warrant Report [Rural] \* Intersection #16 Diamond Rd / Black Rice Road / Lime Kiln Rd \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Future Volume Alternative: Peak Hour Warrant Met -----| Approach: North Bound South Bound East Bound West Bound Movement: L-T-R L-T-R L-T-RControl: Stop Sign Stop Sign Uncontrolled Uncontrolled Lanes: 0 0 1! 0 0 0 0 1! 0 0 0 0 0 1 0 0 0 0 1 Initial Vol: 15 339 5 35 466 75 0 0 55 0 0 35 -----||-----||-----| 90 Major Street Volume: Minor Approach Volume: 576 Minor Approach Volume Threshold: 494 \_\_\_\_\_\_ SIGNAL WARRANT DISCLAIMER This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting

This peak hour signal warrant analysis should be considered solely as ar "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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# 2035 AM - No Project

Signal Warrant	Summary Report	
Intersection	Base Met	Future Met
	[Del / Vol]	[Del / Vol]
# 7 China Garden Rd / MF Rd	??? / ???	No / No
# 8 SR 49 / Pleasant Valley Rd	333	Yes
# 9 Forni Rd / Pleasant Valley Rd	??? / ???	No / Yes
# 11 China Garden Rd / Pleasant Valley R	???? / ???	No / No
# 13 Racquet Way / Pleasant Valley Rd	??? / ???	No / No
# 14 Diamond Rd / Truck St	??? / ???	No / No
# 15 Diamond Rd / Bradley Dr	??? / ???	No / No

# 16 Diamond Rd / Black Rice Road / Lime ~??? / ??? No / No

Am 2035 Thu Aug 31, 2017 08:43:41 Page 3-1 2035 AM - No Project \_\_\_\_\_\_ Peak Hour Delay Signal Warrant Report Intersection #7 China Garden Rd / MF Rd \* Future Volume Alternative: Peak Hour Warrant NOT Met Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R L - T - R -----||-----||------| 
 Control:
 Uncontrolled
 Uncontrolled
 Stop Sign
 Stop Sign

 Lanes:
 1 0 1 1 0 1 0 1 1 0 0 0 0 0 1 0 0 0 0 1
 0 0 0 0 1 0 0 0 0 1

 Initial Vol:
 5 818 85 75 684 5 0 0 5 0 0 55

 ApproachDel:
 xxxxxxx
 xxxxxxx
 Approach[eastbound][lanes=1][control=Stop Sign] Signal Warrant Rule #1: [vehicle-hours=0.0] FAIL - Vehicle-hours less than 4 for one lane approach. Signal Warrant Rule #2: [approach volume=5] FAIL - Approach volume less than 100 for one lane approach. Signal Warrant Rule #3: [approach count=4][total volume=1732] SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches. \_\_\_\_\_\_ Approach[westbound][lanes=1][control=Stop Sign] Signal Warrant Rule #1: [vehicle-hours=0.2] FAIL - Vehicle-hours less than 4 for one lane approach. Signal Warrant Rule #2: [approach volume=55] FAIL - Approach volume less than 100 for one lane approach. Signal Warrant Rule #3: [approach count=4][total volume=1732] SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

#### SIGNAL WARRANT DISCLAIMER

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2035 AM - No Project

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Peak Hour Volume Signal Warrant Report [Rural]

\*

Intersection #7 China Garden Rd / MF Rd

\*

Future Volume Alternative: Peak Hour Warrant NOT Met

-----|----|-----|------| Approach: North Bound South Bound East Bound West Bound Movement: L-T-R L-T-R L-T-R-----|----||------| 

 Control:
 Uncontrolled
 Uncontrolled
 Stop Sign
 Stop Sign

 Lanes:
 1 0 1 1 0 1 1 0 0 0 0 0 1 0 0 0 0 1

 Initial Vol:
 5 818 85 75 684 5 0 0 5 0 0 55

 -----||-----||------|

Major Street Volume: 1672
Minor Approach Volume: 55 55 Minor Approach Volume:

Minor Approach Volume Threshold: 4 [less than minimum of 75]

\_\_\_\_\_\_

# SIGNAL WARRANT DISCLAIMER

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2035 AM - No Project

\_\_\_\_\_\_ Peak Hour Volume Signal Warrant Report [Rural]

\*

Intersection #8 SR 49 / Pleasant Valley Rd

Future Volume Alternative: Peak Hour Warrant Met

-----|----|-----|------| Approach: North Bound South Bound East Bound West Bound Movement: L-T-R L-T-R L-T-R-----||-----||------| Control: Stop Sign Stop Sign Stop Sign Stop Sign Stop Sign Initial Vol: 270 0 244 0 0 0 0 309 105 149 354 0 -----|----||------|

Major Street Volume: 917 Minor Approach Volume: Minor Approach Volume Threshold: 142

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# SIGNAL WARRANT DISCLAIMER

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Am 2035 Thu Aug 31, 2017 08:43:41 Page 3-4 2035 AM - No Project \_\_\_\_\_\_ Peak Hour Delay Signal Warrant Report \* Intersection #9 Forni Rd / Pleasant Valley Rd \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Future Volume Alternative: Peak Hour Warrant NOT Met Approach: North Bound South Bound East Bound West Bound Movement: L-T-R L-T-R L-T-R-----||-----||------| 
 Control:
 Stop Sign
 Stop Sign
 Uncontrolled
 Uncontrolled

 Lanes:
 0 0 0 0 0 0 0 1! 0 0 0 1 0 0 0 0 0 1 0
 0 0 0 1 0 0 0 0 1 0

 Initial Vol:
 0 0 0 0 50 0 105 140 403 0 0 393 35

 ApproachDel:
 xxxxxx
 20.1
 xxxxxxx
 xxxxxxx
 Approach[southbound][lanes=1][control=Stop Sign] Signal Warrant Rule #1: [vehicle-hours=0.9] FAIL - Vehicle-hours less than 4 for one lane approach. Signal Warrant Rule #2: [approach volume=155] SUCCEED - Approach volume greater than or equal to 100 for one lane approach. Signal Warrant Rule #3: [approach count=3][total volume=1126] SUCCEED - Total volume greater than or equal to 650 for intersection

#### SIGNAL WARRANT DISCLAIMER

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with less than four approaches.

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2035 AM - No Project

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Peak Hour Volume Signal Warrant Report [Rural]

Intersection #9 Forni Rd / Pleasant Valley Rd

\*

Future Volume Alternative: Peak Hour Warrant Met

Major Street Volume: 971
Minor Approach Volume: 155
Minor Approach Volume Threshold: 99

# SIGNAL WARRANT DISCLAIMER

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Approach[southbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.1]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=15]

FAIL - Approach volume less than 100 for one lane approach. Signal Warrant Rule #3: [approach count=3][total volume=1349]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

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#### SIGNAL WARRANT DISCLAIMER

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\* Intersection #11 China Garden Rd / Pleasant Valley Rd

Future Volume Alternative: Peak Hour Warrant NOT Met 

Approach: North Bound South Bound East Bound West Bound Movement: L-T-R L-T-R L-T-R-----|----||------| -----|----||------|

1334 Major Street Volume: Minor Approach Volume:

Minor Approach Volume Threshold: 46 [less than minimum of 75] \_\_\_\_\_\_

# SIGNAL WARRANT DISCLAIMER

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Am 2035 Thu Aug 31, 2017 08:43:41 Page 3-8 2035 AM - No Project \_\_\_\_\_\_ Peak Hour Delay Signal Warrant Report \* Intersection #13 Racquet Way / Pleasant Valley Rd \* Future Volume Alternative: Peak Hour Warrant NOT Met Approach: North Bound South Bound East Bound West Bound Movement: L-T-R L-T-R L-T-R-----|----||------| Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Lanes: 0 0 1! 0 0 0 0 0 0 1 1 0 0 1 0 1 0 0 1 0
Initial Vol: 25 0 10 0 0 65 30 333 50 5 891 0
ApproachDel: 41.3 17.9 xxxxxx xxxxx Approach[northbound][lanes=1][control=Stop Sign] Signal Warrant Rule #1: [vehicle-hours=0.4] FAIL - Vehicle-hours less than 4 for one lane approach. Signal Warrant Rule #2: [approach volume=35] FAIL - Approach volume less than 100 for one lane approach. Signal Warrant Rule #3: [approach count=4][total volume=1409] SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches. \_\_\_\_\_\_ Approach[southbound][lanes=1][control=Stop Sign] Signal Warrant Rule #1: [vehicle-hours=0.3] FAIL - Vehicle-hours less than 4 for one lane approach. Signal Warrant Rule #2: [approach volume=65] FAIL - Approach volume less than 100 for one lane approach. Signal Warrant Rule #3: [approach count=4][total volume=1409] SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches. SIGNAL WARRANT DISCLAIMER This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting

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2035 AM - No Project

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Peak Hour Volume Signal Warrant Report [Rural] \*

Intersection #13 Racquet Way / Pleasant Valley Rd

\*

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach: North Bound South Bound East Bound West Bound Movement: L-T-R L-T-R L-T-R-----|----||------| Control: Stop Sign Stop Sign Uncontrolled Uncontrolled Lanes: 0 0 1! 0 0 0 0 0 0 1 1 0 0 1 0 1 0 0 1 0 Initial Vol: 25 0 10 0 0 65 30 333 50 5 891 0 -----|----||------|

1309 Major Street Volume: Minor Approach Volume:

Minor Approach Volume Threshold: 60 [less than minimum of 75]

\_\_\_\_\_\_

# SIGNAL WARRANT DISCLAIMER

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2035 AM - No Project

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Peak Hour Delay Signal Warrant Report

\*

Intersection #14 Diamond Rd / Truck St

\*

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach: North Bound South Bound East Bound West Bound Movement: L - T - R

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Approach[eastbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.1]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=25]

FAIL - Approach volume less than 100 for one lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=548]

FAIL - Total volume less than 650 for intersection with less than four approaches.

#### SIGNAL WARRANT DISCLAIMER

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Major Street Volume: 523
Minor Approach Volume: 25
Minor Approach Volume Threshold: 271

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# SIGNAL WARRANT DISCLAIMER

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2035 AM - No Project

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Peak Hour Delay Signal Warrant Report

Intersection #15 Diamond Rd / Bradley Dr

\*

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach: North Bound South Bound East Bound West Bound Movement: L - T - R

\_\_\_\_\_\_

Approach[eastbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.1]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=20]

FAIL - Approach volume less than 100 for one lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=548]

FAIL - Total volume less than 650 for intersection with less than four approaches.

#### SIGNAL WARRANT DISCLAIMER

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2035 AM - No Project

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Peak Hour Volume Signal Warrant Report [Rural]

Intersection #15 Diamond Rd / Bradley Dr

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach: North Bound South Bound East Bound West Bound Movement: L-T-R L-T-R L-T-R-----|----||------| Control: Uncontrolled Uncontrolled Stop Sign Stop Sign
Lanes: 0 0 1 0 0 0 0 0 1 0 0 0 0 1 0 0 0 0 0
Initial Vol: 0 217 0 0 286 25 0 0 20 0 0 0 -----|----||------|

528 Major Street Volume: Minor Approach Volume: Minor Approach Volume Threshold: 200

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# SIGNAL WARRANT DISCLAIMER

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Am 2035 Thu Aug 31, 2017 08:43:41 Page 3-14 2035 AM - No Project \_\_\_\_\_\_ Peak Hour Delay Signal Warrant Report \* Intersection #16 Diamond Rd / Black Rice Road / Lime Kiln Rd \* Future Volume Alternative: Peak Hour Warrant NOT Met Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R L - T - R -----||-----||------| Approach[eastbound][lanes=1][control=Stop Sign] Signal Warrant Rule #1: [vehicle-hours=0.4] FAIL - Vehicle-hours less than 4 for one lane approach. Signal Warrant Rule #2: [approach volume=65] FAIL - Approach volume less than 100 for one lane approach. Signal Warrant Rule #3: [approach count=4][total volume=927] SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches. \_\_\_\_\_\_ Approach[westbound][lanes=1][control=Stop Sign] Signal Warrant Rule #1: [vehicle-hours=0.2] FAIL - Vehicle-hours less than 4 for one lane approach. Signal Warrant Rule #2: [approach volume=55] FAIL - Approach volume less than 100 for one lane approach.

Signal Warrant Rule #3: [approach count=4][total volume=927]

SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

#### SIGNAL WARRANT DISCLAIMER

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2035 AM - No Project

\_\_\_\_\_\_ Peak Hour Volume Signal Warrant Report [Rural]

\*

Intersection #16 Diamond Rd / Black Rice Road / Lime Kiln Rd 

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach: North Bound South Bound East Bound West Bound Movement: L-T-R L-T-R L-T-R-----|----||------| 

 Control:
 Uncontrolled
 Uncontrolled
 Stop Sign
 Stop Sign

 Lanes:
 1 0 0 1 0 1 0 0 1 0 0 0 1! 0 0 0 0 1! 0 0
 0 0 1! 0 0

 Initial Vol:
 5 542 5 35 175 45 60 0 5 5 0 50

 -----|----||------|

807 Major Street Volume: Minor Approach Volume: Minor Approach Volume Threshold: 171

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# SIGNAL WARRANT DISCLAIMER

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Am 2035 Thu Aug 31, 2017 08:47:10 Page 2-1

# 2035 AM - Plus Project

Signal Wa	arrant Summary Report	
Intersection	Base Met	Future Met
	[Del / Vol]	[Del / Vol]
# 7 China Garden Rd / MF Rd	No / No	333 / 333
# 8 SR 49 / Pleasant Valley Rd	Yes	333
# 9 Forni Rd / Pleasant Valley Rd	d No / Yes	333 / 333
# 11 China Garden Rd / Pleasant Va	alley R No / No	333 / 333
# 13 Racquet Way / Pleasant Valley	y Rd No / No	??? / ???
# 14 Diamond Rd / Truck St	No / No	333 / 333
# 15 Diamond Rd / Bradley Dr	No / No	333 / 333
# 16 Diamond Rd / Black Rice Road	/ Lime No / No	??? / ???

\_\_\_\_\_\_

Peak Hour Delay Signal Warrant Report

Intersection #7 China Garden Rd / MF Rd

\*

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R L - T - R -----||-----||------| 

 Control:
 Uncontrolled
 Uncontrolled
 Stop Sign
 Stop Sign

 Lanes:
 1 0 1 1 0 1 1 0 0 0 0 0 1 0 0 0 1
 0 0 0 0 1 0 0 0 1

 Initial Vol:
 5 820 85 75 685 5 0 0 5 0 0 5

 ApproachDel:
 xxxxxxx
 xxxxxxx

Approach[eastbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.0]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=5]

FAIL - Approach volume less than 100 for one lane approach.

Signal Warrant Rule #3: [approach count=4][total volume=1735]

SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

\_\_\_\_\_\_

Approach[westbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.2]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=55]

FAIL - Approach volume less than 100 for one lane approach.

Signal Warrant Rule #3: [approach count=4][total volume=1735]

SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

#### SIGNAL WARRANT DISCLAIMER

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Peak Hour Volume Signal Warrant Report [Rural]

\*

Intersection #7 China Garden Rd / MF Rd

\*

Base Volume Alternative: Peak Hour Warrant NOT Met

Major Street Volume: 1675
Minor Approach Volume: 55

Minor Approach Volume Threshold: 3 [less than minimum of 75]

# SIGNAL WARRANT DISCLAIMER

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2035 AM - Plus Project \_\_\_\_\_\_ Peak Hour Volume Signal Warrant Report [Rural] \* Intersection #8 SR 49 / Pleasant Valley Rd Base Volume Alternative: Peak Hour Warrant Met Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R L - T - R -----||-----||------| Control: Stop Sign Stop Sign Stop Sign Stop Sign Stop Sign Initial Vol: 270 0 245 0 0 0 0 0 310 105 150 355 0 -----|----||------| Major Street Volume: 920 Minor Approach Volume: Minor Approach Volume Threshold: 141 \_\_\_\_\_\_ SIGNAL WARRANT DISCLAIMER This peak hour signal warrant analysis should be considered solely as an

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Peak Hour Delay Signal Warrant Report

\*

Intersection #9 Forni Rd / Pleasant Valley Rd

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Base Volume Alternative: Peak Hour Warrant NOT Met

-----|----|-----|------| Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R L - T - R -----||-----||------| 
 Control:
 Stop Sign
 Stop Sign
 Uncontrolled
 Uncontrolled

 Lanes:
 0 0 0 0 0 0 0 1! 0 0 0 1 0 0 0 0 0 1 0
 0 0 0 1 0 0 0 0 1 0

 Initial Vol:
 0 0 0 50 0 105 140 405 0 0 395 35

 ApproachDel:
 xxxxxx
 20.2
 xxxxxx
 xxxxxx
 

Approach[southbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.9]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=155]

SUCCEED - Approach volume greater than or equal to 100 for one lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=1130]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

\_\_\_\_\_\_

# SIGNAL WARRANT DISCLAIMER

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2035 AM - Plus Project \_\_\_\_\_\_ Peak Hour Volume Signal Warrant Report [Rural] \* Intersection #9 Forni Rd / Pleasant Valley Rd Base Volume Alternative: Peak Hour Warrant Met Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R L - T - R -----|----||------| 

 Control:
 Stop Sign
 Stop Sign
 Uncontrolled
 Uncontrolled

 Lanes:
 0 0 0 0 0 0 0 1! 0 0 0 1 0 0 0 0 0 1 0

 Initial Vol:
 0 0 0 0 50 0 105 140 405 0 0 395 35

 -----||-----||------| 975 Major Street Volume: Minor Approach Volume: 155 Minor Approach Volume Threshold: 99 \_\_\_\_\_\_

#### SIGNAL WARRANT DISCLAIMER

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2035 AM - Plus Project

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Peak Hour Delay Signal Warrant Report

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Intersection #11 China Garden Rd / Pleasant Valley Rd

\*

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R L - T - R L - T - R L - T - R Control: Stop Sign Stop Sign Uncontrolled Uncontrolled Lanes: 0 0 0 0 0 0 0 1! 0 0 0 1 0 0 0 0 0 0 1 0 Initial Vol: 0 0 0 5 0 10 10 370 0 0 910 55 ApproachDel: xxxxxx 20.4 xxxxxx xxxxxx

Approach[southbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.1]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=15]

FAIL - Approach volume less than 100 for one lane approach. Signal Warrant Rule #3: [approach count=3][total volume=1360]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

\_\_\_\_\_\_

#### SIGNAL WARRANT DISCLAIMER

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Peak Hour Volume Signal Warrant Report [Rural]

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Intersection #11 China Garden Rd / Pleasant Valley Rd

\*

Base Volume Alternative: Peak Hour Warrant NOT Met

Major Street Volume: 1345
Minor Approach Volume: 15

Minor Approach Volume Threshold: 45 [less than minimum of 75]

\_\_\_\_\_\_

# SIGNAL WARRANT DISCLAIMER

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Peak Hour Delay Signal Warrant Report \*

Intersection #13 Racquet Way / Pleasant Valley Rd

\*

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach: North Bound South Bound East Bound West Bound Movement: L-T-R L-T-R L-T-R-----|----||------| Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Lanes: 0 0 1! 0 0 0 0 0 0 1 1 0 0 1 0 1 0 0 1 0
Initial Vol: 25 0 10 0 0 65 30 340 50 5 900 0
ApproachDel: 42.7 18.1 xxxxxx xxxxx 

Approach[northbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.4]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=35]

FAIL - Approach volume less than 100 for one lane approach.

Signal Warrant Rule #3: [approach count=4][total volume=1425]

SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

\_\_\_\_\_\_

Approach[southbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.3]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=65]

FAIL - Approach volume less than 100 for one lane approach.

Signal Warrant Rule #3: [approach count=4][total volume=1425]

SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

#### SIGNAL WARRANT DISCLAIMER

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Page 3-9 2035 AM - Plus Project \_\_\_\_\_\_ Peak Hour Volume Signal Warrant Report [Rural] \* Intersection #13 Racquet Way / Pleasant Valley Rd \* Base Volume Alternative: Peak Hour Warrant NOT Met Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R L - T - R -----|----||------| Control: Stop Sign Stop Sign Uncontrolled Uncontrolled Lanes: 0 0 1! 0 0 0 0 0 0 1 1 0 0 1 0 1 0 0 1 0 Initial Vol: 25 0 10 0 0 65 30 340 50 5 900 0 -----|----||------| 1325 Major Street Volume: Minor Approach Volume: Minor Approach Volume Threshold: 57 [less than minimum of 75] \_\_\_\_\_\_ SIGNAL WARRANT DISCLAIMER This peak hour signal warrant analysis should be considered solely as an

"indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Peak Hour Delay Signal Warrant Report

\*

Intersection #14 Diamond Rd / Truck St

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R L - T - R -----||-----||------| Control: Uncontrolled Uncontrolled Stop Sign Stop Sign

Lanes: 1 0 1 0 0 0 0 0 1 0 0 0 1! 0 0 0 0 0 0

Initial Vol: 25 205 0 0 300 10 15 0 10 0 0 0

ApproachDel: xxxxxx xxxxx 11.7 xxxxxxx 

\_\_\_\_\_\_

Approach[eastbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.1]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=25]

FAIL - Approach volume less than 100 for one lane approach. Signal Warrant Rule #3: [approach count=3][total volume=565]

FAIL - Total volume less than 650 for intersection with less than four approaches.

#### SIGNAL WARRANT DISCLAIMER

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2035 AM - Plus Project \_\_\_\_\_\_ Peak Hour Volume Signal Warrant Report [Rural] Intersection #14 Diamond Rd / Truck St Base Volume Alternative: Peak Hour Warrant NOT Met Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R L - T - R -----||-----||------| Control: Uncontrolled Uncontrolled Stop Sign Stop Sign
Lanes: 1 0 1 0 0 0 0 0 1 0 0 0 1! 0 0 0 0 0 0
Initial Vol: 25 205 0 0 300 10 15 0 10 0 0 0 -----|----||------| 540 Major Street Volume: Minor Approach Volume: Minor Approach Volume Threshold: 264 \_\_\_\_\_\_ SIGNAL WARRANT DISCLAIMER

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Peak Hour Delay Signal Warrant Report

\*

Intersection #15 Diamond Rd / Bradley Dr

\*

Base Volume Alternative: Peak Hour Warrant NOT Met

-----|----|-----|------| Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R L - T - R -----||-----||------| Control: Uncontrolled Uncontrolled Stop Sign Stop Sign

Lanes: 0 0 1 0 0 0 0 0 1 0 0 0 0 1 0 0 0 0 0

Initial Vol: 0 225 0 0 295 25 0 0 20 0 0 0

ApproachDel: xxxxxx xxxx 10.0 xxxxxx 

\_\_\_\_\_\_

Approach[eastbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.1]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=20]

FAIL - Approach volume less than 100 for one lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=565]

FAIL - Total volume less than 650 for intersection with less than four approaches.

#### SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Am 2035 Page 3-13 2035 AM - Plus Project \_\_\_\_\_\_ Peak Hour Volume Signal Warrant Report [Rural] Intersection #15 Diamond Rd / Bradley Dr Base Volume Alternative: Peak Hour Warrant NOT Met Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R L - T - R -----||-----||-----| Control: Uncontrolled Uncontrolled Stop Sign Stop Sign
Lanes: 0 0 1 0 0 0 0 0 1 0 0 0 0 1 0 0 0 0 0
Initial Vol: 0 225 0 0 295 25 0 0 20 0 0 0 -----|----||------| 545 Major Street Volume: Minor Approach Volume: Minor Approach Volume Threshold: 195 \_\_\_\_\_\_

# SIGNAL WARRANT DISCLAIMER

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Am 2035 Thu Aug 31, 2017 08:47:10 Page 3-14 2035 AM - Plus Project \_\_\_\_\_\_ Peak Hour Delay Signal Warrant Report \* Intersection #16 Diamond Rd / Black Rice Road / Lime Kiln Rd \* Base Volume Alternative: Peak Hour Warrant NOT Met Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R L - T - R -----||-----||------| Approach[eastbound][lanes=1][control=Stop Sign] Signal Warrant Rule #1: [vehicle-hours=0.4] FAIL - Vehicle-hours less than 4 for one lane approach. Signal Warrant Rule #2: [approach volume=65] FAIL - Approach volume less than 100 for one lane approach. Signal Warrant Rule #3: [approach count=4][total volume=960] SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches. \_\_\_\_\_\_ Approach[westbound][lanes=1][control=Stop Sign] Signal Warrant Rule #1: [vehicle-hours=0.2] FAIL - Vehicle-hours less than 4 for one lane approach. Signal Warrant Rule #2: [approach volume=55] FAIL - Approach volume less than 100 for one lane approach. Signal Warrant Rule #3: [approach count=4][total volume=960] SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches. SIGNAL WARRANT DISCLAIMER This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting

a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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2035 AM - Plus Project \_\_\_\_\_\_ Peak Hour Volume Signal Warrant Report [Rural] \* Intersection #16 Diamond Rd / Black Rice Road / Lime Kiln Rd \* Base Volume Alternative: Peak Hour Warrant NOT Met Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R L - T - R -----|----||------| Control: Uncontrolled Uncontrolled Stop Sign Stop Sign
Lanes: 1 0 0 1 0 1 0 0 1 0 0 0 1! 0 0 0 0 1! 0 0
Initial Vol: 5 560 5 35 190 45 60 0 5 5 0 50 Major Street Volume: 840 Minor Approach Volume: Minor Approach Volume Threshold: 162 \_\_\_\_\_\_ SIGNAL WARRANT DISCLAIMER

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# 2035 PM - No Project

Signal Warrant S	ummary Report	
Intersection	Base Met	Future Met
	[Del / Vol]	[Del / Vol]
# 7 China Garden Rd / MF Rd	??? / ???	No / Yes
# 8 SR 49 / Pleasant Valley Rd	???	Yes
# 9 Forni Rd / Pleasant Valley Rd	??? / ???	No / Yes
# 11 China Garden Rd / Pleasant Valley R	??? / ???	No / No
# 13 Racquet Way / Pleasant Valley Rd	??? / ???	No / Yes
# 14 Diamond Rd / Truck St	??? / ???	No / No
# 15 Diamond Rd / Bradley Dr	??? / ???	No / No
# 16 Diamond Rd / Black Rice Road / Lime	??? / ???	No / No

PM 2035 Thu Aug 31, 2017 08:48:28 Page 3-1 2035 PM - No Project \_\_\_\_\_\_ Peak Hour Delay Signal Warrant Report Intersection #7 China Garden Rd / MF Rd \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Future Volume Alternative: Peak Hour Warrant NOT Met Approach: North Bound South Bound East Bound West Bound Movement: L-T-R L-T-R L-T-R-----||-----||------| 
 Control:
 Uncontrolled
 Uncontrolled
 Stop Sign
 Stop Sign

 Lanes:
 1 0 1 1 0 1 0 1 0 0 0 0 1 0 0 0 0 1
 0 0 0 0 1 0 0 0 1

 Initial Vol:
 0 741 5 10 1084 0 0 0 5 0 0 185

 ApproachDel:
 xxxxxx
 xxxxxxx
 Approach[eastbound][lanes=1][control=Stop Sign] Signal Warrant Rule #1: [vehicle-hours=0.0] FAIL - Vehicle-hours less than 4 for one lane approach. Signal Warrant Rule #2: [approach volume=5] FAIL - Approach volume less than 100 for one lane approach. Signal Warrant Rule #3: [approach count=4][total volume=2030] SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches. \_\_\_\_\_\_ Approach[westbound][lanes=1][control=Stop Sign] Signal Warrant Rule #1: [vehicle-hours=0.7] FAIL - Vehicle-hours less than 4 for one lane approach. Signal Warrant Rule #2: [approach volume=185] SUCCEED - Approach volume greater than or equal to 100 for one lane approach. Signal Warrant Rule #3: [approach count=4][total volume=2030] SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

-----

#### SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Movement: L - T - R L - T

Major Street Volume: 1840
Minor Approach Volume: 185

Minor Approach Volume Threshold: -18 [less than minimum of 75]

# SIGNAL WARRANT DISCLAIMER

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Peak Hour Volume Signal Warrant Report [Rural]

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Intersection #8 SR 49 / Pleasant Valley Rd

\*

Future Volume Alternative: Peak Hour Warrant Met

Major Street Volume: 1190
Minor Approach Volume: 309
Minor Approach Volume Threshold: 82

# SIGNAL WARRANT DISCLAIMER

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#### 2035 PM - No Project

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Peak Hour Delay Signal Warrant Report

\*

Intersection #9 Forni Rd / Pleasant Valley Rd

\*

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R L - T - R L - T - R L - T - R Control: Stop Sign Stop Sign Uncontrolled Uncontrolled Lanes: 0 0 0 0 0 0 0 1! 0 0 0 1 0 0 0 0 0 0 1 0 Initial Vol: 0 0 0 25 0 155 90 487 0 0 405 40 ApproachDel: xxxxxx 16.0 xxxxxx xxxxxx

Approach[southbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.8]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=180]

SUCCEED - Approach volume greater than or equal to 100 for one lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=1202]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

CTOWN WARDING DIGGINATED

# SIGNAL WARRANT DISCLAIMER

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\_\_\_\_\_

Peak Hour Volume Signal Warrant Report [Rural]

Intersection #9 Forni Rd / Pleasant Valley Rd

\*

Future Volume Alternative: Peak Hour Warrant Met

Major Street Volume: 1022 Minor Approach Volume: 180 Minor Approach Volume Threshold: 91

# SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

PM 2035 Thu Aug 31, 2017 08:48:28 Page 3-6 2035 PM - No Project \_\_\_\_\_\_ Peak Hour Delay Signal Warrant Report \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Intersection #11 China Garden Rd / Pleasant Valley Rd \* Future Volume Alternative: Peak Hour Warrant NOT Met -----|----|-----|------| Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R L - T - R -----||-----||------| Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Lanes: 0 0 0 0 0 0 0 1! 0 0 0 1 0 0 0 0 1 0
Initial Vol: 0 0 0 10 0 20 10 803 0 0 482 45
ApproachDel: xxxxxx 17.3 xxxxxx xxxxxx

Approach[southbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.1]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=30]

FAIL - Approach volume less than 100 for one lane approach. Signal Warrant Rule #3: [approach count=3][total volume=1370]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

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#### SIGNAL WARRANT DISCLAIMER

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#### 2035 PM - No Project

Peak Hour Volume Signal Warrant Report [Rural]

Intersection #11 China Garden Rd / Pleasant Valley Rd

intersection #11 China Garden Rd / Pleasant Valley Rd

\*

Future Volume Alternative: Peak Hour Warrant NOT Met

Major Street Volume: 1340
Minor Approach Volume: 30

Minor Approach Volume Threshold: 46 [less than minimum of 75]

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#### SIGNAL WARRANT DISCLAIMER

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PM 2035 Thu Aug 31, 2017 08:48:28 Page 3-8 2035 PM - No Project \_\_\_\_\_\_ Peak Hour Delay Signal Warrant Report \* Intersection #13 Racquet Way / Pleasant Valley Rd \* Future Volume Alternative: Peak Hour Warrant NOT Met Approach: North Bound South Bound East Bound West Bound Movement: L-T-R L-T-R L-T-R-----|----||------| 
 Control:
 Stop Sign
 Stop Sign
 Uncontrolled
 Uncontrolled

 Lanes:
 0 0 1! 0 0 0 1! 0 0 1 0 1 0 1 0 1 0
 1 0 0 1 0
 Initial Vol: 30 5 55 5 80 95 814 45 25 550 ApproachDel: 89.0 21.4 xxxxxx xxxxx Approach[northbound][lanes=1][control=Stop Sign] Signal Warrant Rule #1: [vehicle-hours=2.2] FAIL - Vehicle-hours less than 4 for one lane approach. Signal Warrant Rule #2: [approach volume=90] FAIL - Approach volume less than 100 for one lane approach. Signal Warrant Rule #3: [approach count=4][total volume=1714] SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches. \_\_\_\_\_\_ Approach[southbound][lanes=1][control=Stop Sign] Signal Warrant Rule #1: [vehicle-hours=0.5] FAIL - Vehicle-hours less than 4 for one lane approach. Signal Warrant Rule #2: [approach volume=90] FAIL - Approach volume less than 100 for one lane approach. Signal Warrant Rule #3: [approach count=4][total volume=1714] SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches. SIGNAL WARRANT DISCLAIMER This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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# 2035 PM - No Project \_\_\_\_\_\_

Peak Hour Volume Signal Warrant Report [Rural] \*

Intersection #13 Racquet Way / Pleasant Valley Rd

Future Volume Alternative: Peak Hour Warrant Met

Approach: North Bound South Bound East Bound West Bound Movement: L-T-R L-T-R L-T-R-----|----||------| Control: Stop Sign Stop Sign Uncontrolled Uncontrolled Lanes: 0 0 1! 0 0 0 0 1! 0 0 1 0 0 1 0 1 0 0 1 0 Initial Vol: 30 5 55 5 5 80 95 814 45 25 550 5 -----|----||------|

1534 Major Street Volume: Minor Approach Volume: 90

Minor Approach Volume Threshold: 23 [less than minimum of 75]

\_\_\_\_\_\_

# SIGNAL WARRANT DISCLAIMER

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# 2035 PM - No Project

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#### Peak Hour Delay Signal Warrant Report

\*

Intersection #14 Diamond Rd / Truck St

\*

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach[eastbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.2]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=60]

FAIL - Approach volume less than 100 for one lane approach. Signal Warrant Rule #3: [approach count=3][total volume=758]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

-----

# SIGNAL WARRANT DISCLAIMER

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Peak Hour Volume Signal Warrant Report [Rural]

Intersection #14 Diamond Rd / Truck St

\*

Future Volume Alternative: Peak Hour Warrant NOT Met

Major Street Volume: 698
Minor Approach Volume: 60
Minor Approach Volume Threshold: 205

# SIGNAL WARRANT DISCLAIMER

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#### 2035 PM - No Project

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Peak Hour Delay Signal Warrant Report

\*

Intersection #15 Diamond Rd / Bradley Dr

\*

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach: North Bound South Bound East Bound West Bound Movement: L-T-R L-T-R L-T-R-----||-----||------| 

Approach[eastbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.1]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=25]

FAIL - Approach volume less than 100 for one lane approach. Signal Warrant Rule #3: [approach count=3][total volume=713]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

\_\_\_\_\_\_

## SIGNAL WARRANT DISCLAIMER

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2035 PM - No Project \_\_\_\_\_\_

Peak Hour Volume Signal Warrant Report [Rural]

Intersection #15 Diamond Rd / Bradley Dr

\*

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach: North Bound South Bound East Bound West Bound Movement: L-T-R L-T-R L-T-R-----|----||------| -----|----||------|

Major Street Volume: 688 Minor Approach Volume: Minor Approach Volume Threshold: 156

\_\_\_\_\_\_

## SIGNAL WARRANT DISCLAIMER

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PM 2035 Thu Aug 31, 2017 08:48:28 Page 3-14 2035 PM - No Project \_\_\_\_\_\_ Peak Hour Delay Signal Warrant Report \* Intersection #16 Diamond Rd / Black Rice Road / Lime Kiln Rd \* Future Volume Alternative: Peak Hour Warrant NOT Met Approach: North Bound South Bound East Bound West Bound Movement: L-T-R L-T-R L-T-R-----||-----||------| Approach[eastbound][lanes=1][control=Stop Sign] Signal Warrant Rule #1: [vehicle-hours=0.1] FAIL - Vehicle-hours less than 4 for one lane approach. Signal Warrant Rule #2: [approach volume=15] FAIL - Approach volume less than 100 for one lane approach. Signal Warrant Rule #3: [approach count=4][total volume=1180] SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches. \_\_\_\_\_\_ Approach[westbound][lanes=1][control=Stop Sign] Signal Warrant Rule #1: [vehicle-hours=0.2] FAIL - Vehicle-hours less than 4 for one lane approach. Signal Warrant Rule #2: [approach volume=60] FAIL - Approach volume less than 100 for one lane approach. Signal Warrant Rule #3: [approach count=4][total volume=1180] SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches. SIGNAL WARRANT DISCLAIMER This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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2035 PM - No Project \_\_\_\_\_\_ Peak Hour Volume Signal Warrant Report [Rural] \* Intersection #16 Diamond Rd / Black Rice Road / Lime Kiln Rd Future Volume Alternative: Peak Hour Warrant NOT Met Approach: North Bound South Bound East Bound West Bound Movement: L-T-R L-T-R L-T-R-----|----||------| 

 Control:
 Uncontrolled
 Uncontrolled
 Stop Sign
 Stop Sign

 Lanes:
 1 0 0 1 0 1 0 0 1 0 0 0 1! 0 0 0 0 1! 0 0
 0 0 1! 0 0

 Initial Vol:
 5 400 5 60 545 90 10 0 5 5 5 0 55

 -----|----||------| Major Street Volume: 1105 Minor Approach Volume: Minor Approach Volume Threshold: 99 \_\_\_\_\_\_ SIGNAL WARRANT DISCLAIMER This peak hour signal warrant analysis should be considered solely as an

"indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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PM 2035 Thu Aug 31, 2017 08:50:11 Page 2-1

2035	ΡM	-	Plus	Project		

Signal Warr	ant Summary Report	
Intersection	Base Met	Future Met
	[Del / Vol]	[Del / Vol]
# 7 China Garden Rd / MF Rd	No / Yes	??? / ???
# 8 SR 49 / Pleasant Valley Rd	Yes	333
# 9 Forni Rd / Pleasant Valley Rd	No / Yes	??? / ???
# 11 China Garden Rd / Pleasant Vall	ey R No / No	333 / 333
# 13 Racquet Way / Pleasant Valley R	d No / Yes	333 / 333
# 14 Diamond Rd / Truck St	No / No	333 / 333
# 15 Diamond Rd / Bradley Dr	No / No	??? / ???
# 16 Diamond Rd / Black Rice Road /	Lime No / No	??? / ???

PM 2035 Thu Aug 31, 2017 08:50:11 Page 3-1 2035 PM - Plus Project \_\_\_\_\_\_ Peak Hour Delay Signal Warrant Report Intersection #7 China Garden Rd / MF Rd \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Base Volume Alternative: Peak Hour Warrant NOT Met Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R L - T - R -----||-----||------| 
 Control:
 Uncontrolled
 Uncontrolled
 Stop Sign
 Stop Sign

 Lanes:
 1 0 1 1 0 1 0 1 0 0 0 0 1 0 0 0 0 1
 0 0 0 0 1 0 0 0 1

 Initial Vol:
 0 745 5 10 1090 0 0 0 5 0 0 185

 ApproachDel:
 xxxxxx
 xxxxxxx
 Approach[eastbound][lanes=1][control=Stop Sign] Signal Warrant Rule #1: [vehicle-hours=0.0] FAIL - Vehicle-hours less than 4 for one lane approach. Signal Warrant Rule #2: [approach volume=5] FAIL - Approach volume less than 100 for one lane approach. Signal Warrant Rule #3: [approach count=4][total volume=2040] SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches. \_\_\_\_\_\_ Approach[westbound][lanes=1][control=Stop Sign] Signal Warrant Rule #1: [vehicle-hours=0.7] FAIL - Vehicle-hours less than 4 for one lane approach. Signal Warrant Rule #2: [approach volume=185] SUCCEED - Approach volume greater than or equal to 100 for one lane approach. Signal Warrant Rule #3: [approach count=4][total volume=2040] SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches. SIGNAL WARRANT DISCLAIMER This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting

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Peak Hour Volume Signal Warrant Report [Rural]

Intersection #7 China Garden Rd / MF Rd

\*\*\*\*\*\*\*\*\*\*\*\*\*

Base Volume Alternative: Peak Hour Warrant Met

Major Street Volume: 1850 Minor Approach Volume: 185

Minor Approach Volume Threshold: -20 [less than minimum of 75]

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## SIGNAL WARRANT DISCLAIMER

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2035 PM - Plus Project \_\_\_\_\_\_ Peak Hour Volume Signal Warrant Report [Rural] \* Intersection #8 SR 49 / Pleasant Valley Rd Base Volume Alternative: Peak Hour Warrant Met Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R L - T - R -----|----||------| -----|----||------| Major Street Volume: 1195 Minor Approach Volume: Minor Approach Volume Threshold: 81 \_\_\_\_\_\_ SIGNAL WARRANT DISCLAIMER This peak hour signal warrant analysis should be considered solely as an

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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PM 2035 Thu Aug 31, 2017 08:50:11 Page 3-4 2035 PM - Plus Project \_\_\_\_\_\_ Peak Hour Delay Signal Warrant Report \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Intersection #9 Forni Rd / Pleasant Valley Rd \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Base Volume Alternative: Peak Hour Warrant NOT Met Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R L - T - R -----|----||------| 
 Control:
 Stop Sign
 Stop Sign
 Uncontrolled
 Uncontrolled

 Lanes:
 0 0 0 0 0 0 0 1! 0 0 0 1 0 0 0 0 0 1 0

 Initial Vol:
 0 0 0 0 25 0 155 90 490 0 0 410 40

 ApproachDel:
 xxxxxxx
 Approach[southbound][lanes=1][control=Stop Sign] Signal Warrant Rule #1: [vehicle-hours=0.8] FAIL - Vehicle-hours less than 4 for one lane approach. Signal Warrant Rule #2: [approach volume=180] SUCCEED - Approach volume greater than or equal to 100 for one lane approach. Signal Warrant Rule #3: [approach count=3][total volume=1210] SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches. \_\_\_\_\_\_

## SIGNAL WARRANT DISCLAIMER

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2035 PM - Plus Project \_\_\_\_\_\_ Peak Hour Volume Signal Warrant Report [Rural] \* Intersection #9 Forni Rd / Pleasant Valley Rd \* Base Volume Alternative: Peak Hour Warrant Met Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R L - T - R -----|----||------| Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Lanes: 0 0 0 0 0 0 1! 0 0 0 1 0 0 0 0 1 0
Initial Vol: 0 0 0 25 0 155 90 490 0 0 410 40 -----||-----||------| Major Street Volume: 1030 Minor Approach Volume: Minor Approach Volume Threshold: 89 \_\_\_\_\_\_ SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Peak Hour Delay Signal Warrant Report

\*

Intersection #11 China Garden Rd / Pleasant Valley Rd

\*

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach[southbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.1]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=30]

FAIL - Approach volume less than 100 for one lane approach. Signal Warrant Rule #3: [approach count=3][total volume=1375]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

\_\_\_\_\_\_

## SIGNAL WARRANT DISCLAIMER

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PM 2035 Page 3-7 2035 PM - Plus Project \_\_\_\_\_\_ Peak Hour Volume Signal Warrant Report [Rural] \* Intersection #11 China Garden Rd / Pleasant Valley Rd \* Base Volume Alternative: Peak Hour Warrant NOT Met Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R L - T - R -----|----||------| Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Lanes: 0 0 0 0 0 0 1! 0 0 0 1 0 0 0 0 1 0
Initial Vol: 0 0 0 10 0 20 10 805 0 0 485 45 -----||-----||------| 1345 Major Street Volume: Minor Approach Volume: Minor Approach Volume Threshold: 45 [less than minimum of 75] \_\_\_\_\_\_ SIGNAL WARRANT DISCLAIMER This peak hour signal warrant analysis should be considered solely as an

"indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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PM 2035 Thu Aug 31, 2017 08:50:11 Page 3-8 2035 PM - Plus Project \_\_\_\_\_\_ Peak Hour Delay Signal Warrant Report \* Intersection #13 Racquet Way / Pleasant Valley Rd \* Base Volume Alternative: Peak Hour Warrant NOT Met Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R -----|----||------| 
 Control:
 Stop Sign
 Stop Sign
 Uncontrolled
 Uncontrolled

 Lanes:
 0 0 1! 0 0 0 1! 0 0 1 0 1 0 1 0 1 0
 1 0 0 1 0
 Initial Vol: 30 5 55 5 5 80 95 830 45 25 560 ApproachDel: 97.3 22.1 xxxxxx xxxxx Approach[northbound][lanes=1][control=Stop Sign] Signal Warrant Rule #1: [vehicle-hours=2.4] FAIL - Vehicle-hours less than 4 for one lane approach. Signal Warrant Rule #2: [approach volume=90] FAIL - Approach volume less than 100 for one lane approach. Signal Warrant Rule #3: [approach count=4][total volume=1740] SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches. \_\_\_\_\_\_ Approach[southbound][lanes=1][control=Stop Sign] Signal Warrant Rule #1: [vehicle-hours=0.6] FAIL - Vehicle-hours less than 4 for one lane approach. Signal Warrant Rule #2: [approach volume=90] FAIL - Approach volume less than 100 for one lane approach. Signal Warrant Rule #3: [approach count=4][total volume=1740] SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches. SIGNAL WARRANT DISCLAIMER This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

2035 PM - Plus Project \_\_\_\_\_\_ Peak Hour Volume Signal Warrant Report [Rural] \* Intersection #13 Racquet Way / Pleasant Valley Rd \* Base Volume Alternative: Peak Hour Warrant Met Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R L - T - R -----|----||------| Control: Stop Sign Stop Sign Uncontrolled Uncontrolled Lanes: 0 0 1! 0 0 0 0 1! 0 0 1 0 0 1 0 1 0 0 1 0 Initial Vol: 30 5 55 5 5 80 95 830 45 25 560 5 -----|----||------| 1560 Major Street Volume: Minor Approach Volume: 90 Minor Approach Volume Threshold: 20 [less than minimum of 75] \_\_\_\_\_\_ SIGNAL WARRANT DISCLAIMER This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting

a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

-----

Peak Hour Delay Signal Warrant Report

\*

Intersection #14 Diamond Rd / Truck St

\*

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach[eastbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.2]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=60]

FAIL - Approach volume less than 100 for one lane approach. Signal Warrant Rule #3: [approach count=3][total volume=785]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

-----

## SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

2035 PM - Plus Project \_\_\_\_\_\_ Peak Hour Volume Signal Warrant Report [Rural] Intersection #14 Diamond Rd / Truck St \* Base Volume Alternative: Peak Hour Warrant NOT Met Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R L - T - R -----||-----||------| Control: Uncontrolled Uncontrolled Stop Sign Stop Sign
Lanes: 1 0 1 0 0 0 0 1 0 0 0 1! 0 0 0 0 0 0
Initial Vol: 30 380 0 0 310 5 40 0 20 0 0 0 -----|----||------| Major Street Volume: 725 Minor Approach Volume: Minor Approach Volume Threshold: 196 \_\_\_\_\_\_ SIGNAL WARRANT DISCLAIMER This peak hour signal warrant analysis should be considered solely as an

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

2035 PM - Plus Project

Peak Hour Delay Signal Warrant Report

\*

Intersection #15 Diamond Rd / Bradley Dr

\*

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach[eastbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.1]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=25]

FAIL - Approach volume less than 100 for one lane approach. Signal Warrant Rule #3: [approach count=3][total volume=740]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

\_\_\_\_\_

## SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

2035 PM - Plus Project \_\_\_\_\_\_ Peak Hour Volume Signal Warrant Report [Rural] Intersection #15 Diamond Rd / Bradley Dr \* Base Volume Alternative: Peak Hour Warrant NOT Met Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R L - T - R -----||-----||------| -----|----||------| Major Street Volume: 715 Minor Approach Volume: Minor Approach Volume Threshold: 150 \_\_\_\_\_\_ SIGNAL WARRANT DISCLAIMER This peak hour signal warrant analysis should be considered solely as an

"indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

PM 2035 Thu Aug 31, 2017 08:50:11 Page 3-14 2035 PM - Plus Project \_\_\_\_\_\_ Peak Hour Delay Signal Warrant Report Intersection #16 Diamond Rd / Black Rice Road / Lime Kiln Rd \* Base Volume Alternative: Peak Hour Warrant NOT Met -----|----|-----|------| Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R L - T - R -----||-----||------| Approach[eastbound][lanes=1][control=Stop Sign] Signal Warrant Rule #1: [vehicle-hours=0.1] FAIL - Vehicle-hours less than 4 for one lane approach. Signal Warrant Rule #2: [approach volume=15] FAIL - Approach volume less than 100 for one lane approach. Signal Warrant Rule #3: [approach count=4][total volume=1220] SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches. \_\_\_\_\_\_ Approach[westbound][lanes=1][control=Stop Sign] Signal Warrant Rule #1: [vehicle-hours=0.2] FAIL - Vehicle-hours less than 4 for one lane approach. Signal Warrant Rule #2: [approach volume=60] FAIL - Approach volume less than 100 for one lane approach. Signal Warrant Rule #3: [approach count=4][total volume=1220] SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches. SIGNAL WARRANT DISCLAIMER This peak hour signal warrant analysis should be considered solely as an

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Page 3-15 2035 PM - Plus Project \_\_\_\_\_\_ Peak Hour Volume Signal Warrant Report [Rural] \* Intersection #16 Diamond Rd / Black Rice Road / Lime Kiln Rd \* Base Volume Alternative: Peak Hour Warrant NOT Met Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R -----|----||------| Control: Uncontrolled Uncontrolled Stop Sign Stop Sign
Lanes: 1 0 0 1 0 1 0 0 1 0 0 0 1! 0 0 0 0 1! 0 0
Initial Vol: 5 415 5 60 570 90 10 0 5 5 0 55 Major Street Volume: 1145 Minor Approach Volume: Minor Approach Volume Threshold: 91 \_\_\_\_\_\_

## SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.



Rommel Pabalinas < rommel.pabalinas@edcgov.us>

## Piedmont Oaks Estates

2 messages

Katie Jackson <katie.jackson@edcgov.us>

Mon, May 8, 2017 at 10:50 AM

To: Rommel Pabalinas < rommel.pabalinas@edcgov.us>

Cc: Natalie Porter <natalie.porter@edcgov.us>, Dave Spiegelberg <dave.spiegelberg@edcgov.us>

Hi Mel.

As requested, I recalculated the trip generation of the Piedmont Oaks project assuming 75 SFDU's and 20 ksf of general office. The new trip generation summary is as follows:

Daily - 1,192 daily trips

AM Peak hour - 115 total trips, 62 inbound trips and 52 outbound trips

PM Peak hour - 182 total trips, 68 inbound trips and 114 outbound trips

With these revised trip generation numbers, the proposed project would send approximately 16 AM peak hour trips and 25 PM peak hour trips through the Pleasant Valley Rd/Racquet Way intersection.

## Katie

Katie Jackson, P.E., T.E. Transportation Engineer

County of El Dorado Community Development Agency Long Range Planning 2850 Fairlane Court Placerville, CA 95667 D: (530) 621-6624 / F: (530) 642-0508 katie.jackson@edcgov.us

Monday-Thursday

Rommel Pabalinas < rommel.pabalinas@edcgov.us> To: Katie Jackson < katie.jackson@edcgov.us>

Mon, May 8, 2017 at 11:36 AM

#### Thanks.

[Quoted text hidden]

\_\_\_\_\_

Rommel (Mel) Pabalinas, Senior Planner El Dorado County Community Development Agency-Development Services Division-Planning Services Planning Division 2850 Fairlane Court Placerville, CA 95667 Main Line 530-621-5355 Direct line 530-621-5363 Fax 530-642-0508

# TRAFFIC IMPACT ANALYSIS

# **FOR**

# PIEDMONT OAK ESTATES

El Dorado County CA

# Prepared For:

# JIM DAVIES 854 Diablo Road Danville, CA 94526

Prepared By:

KDAnderson & Associates, Inc.

3853 Taylor Road, Suite G Loomis, California 95650 (916) 660-1555



December 19, 2014

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0 Piedmont Oak Estates TIA.rpt

# TRAFFIC IMPACT ANALYSIS FOR PIEDMONT OAK ESTATES El Dorado County CA

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# TRAFFIC IMPACT ANALYSIS FOR PIEDMONT OAK ESTATES El Dorado County CA

## **EXECUTIVE SUMMARY**

- **Project Description.** The Piedmont Oak Estates project consists of 104 single family residential units and 20,000 square feet of business professional uses. The project is located along the east side of Diamond Road (State Route 49) in El Dorado County. Public access will be provided along Diamond Road and will be the east leg of the future Diamond Springs Parkway / Diamond Road intersection. The project is expected to generate approximately 1,475 new daily trips, with 135 new trips occurring during the a.m. peak hour and 210 new trips generated during the p.m. the p.m. peak hour.
- Existing Setting. The study areas addressed traffic conditions at sixteen existing intersections on Missouri Flat Road, Pleasant Valley Road and Diamond Road. Traffic volume data was obtained from the traffic study prepared for the *Diamond Springs / El Dorado Area Mobility and Livable Community Plan (DSEDAMLCP)* and from new counts made in April 2014 and July 2014.

Level of Service calculations were made using the analysis tools employed for the *DSEDAMLCP* (i.e., Synchro-Simtraffic). All study intersections operate at a Levels of Service that satisfies the County's Minimum Level of Service threshold. None of the unsignalized study intersections carry traffic volumes that meet peak hour signal warrants. No improvement recommendations were identified for existing conditions.

- Existing Plus Project Impacts. The operation of the proposed project will increase the volume of traffic on the study area circulation system. However all study intersections will continue to satisfy the County's minimum Level of Service standard and mitigation measures are not required. The following mitigations are made:
  - The project shall contribute its fair share to the cost of regional circulation improvements via the existing countywide traffic impact mitigation (TIM) fee program.
  - Sidewalk should be installed along the curb returns along the east side of Diamond Road as part of Piedmont Oaks development to provide contiguous access between the project site and the Diamond Dorado Center.

<u>Diamond Road / Project Access intersection:</u> A left turn lane with standard Caltrans transitions on each approach and departure should be constructed along Diamond Road for left turn access into the project site. The left turn lane should be constructed back to back with the left turn lane at Bradley Drive. The left turn lane for the project should be 100' with the left turn lane at Bradley Drive 120' long.

- Year 2019 Background Conditions. Year 2019 conditions were identified based on interpolation between current traffic volumes and Year 2035 traffic volume forecasts made for the DSEDAMLCP. Two approved / pending projects were added to these traffic volumes. These projects included The Crossing and Willow Creek Retail Center. The Crossing is located north of the Missouri Flat Road / US 50 interchange while Willow Creek is located in the northwest quadrant of the Missouri Flat Road / Forni Road intersection. One intersection, Missouri Flat Road at China Garden Road will decline below the County's minimum Level of Service standard. Although the County General Plan allows LOS F conditions along Missouri Flat Road between Mother Lode Drive and China Garden Road this does not apply to the intersections. The intersection meets the peak hour traffic signal warrant and signalization of this intersection will improve the operation in the a.m. peak hour to LOS B (18.4 seconds delay).
- 2019 Plus Project Conditions. The trips generated by the proposed project were superimposed onto the Year 2019 background conditions, and resulting peak hour Levels of Service were calculated. Three intersections will operate below the County's minimum Level of Service standard

Missouri Flat Road / China Garden Road intersection: Under project conditions the intersection will continue to operate at LOS F conditions on the eastbound driveway and westbound approach. The project should pay their fair share of signalizing the intersection identified in the 2019 Conditions section. The fair share is project traffic divided by the difference in future and existing volumes. With Diamond Springs Parkway (DSP) being constructed in the future, traffic will shift to DSP, resulting in a net decrease in traffic by 2035 at the Missouri Flat Road / China Garden Road intersection. The fair share methodology was determined using the total volumes at the Missouri Flat Road / DSP intersection as all traffic at this intersection would travel through the Missouri Flat Road / China Garden Road if DSP were not constructed. Using this method the project is responsible for 6.41% of the project cost. With signalization the intersection will operate at LOS B (18.7 seconds) in the a.m. peak hour and LOS C (30.2 seconds) in the p.m. peak hour.

Pleasant Valley Road / Forni Road intersection: This intersection will operate with the southbound Forni Road approach operating at LOS F in the AM peak hour. The volume portion of the peak hour signal warrant is met in both AM and PM peak hours. A traffic signal is not recommended at this time due to proximity of this intersection to the Pleasant Valley Road / SR-49 South intersection. This intersection is under Caltrans jurisdiction. As noted in the *Diamond Dorado Traffic Impact Analysis* prepared by Farhad & Associates in 2010 Caltrans indicated that a traffic signal should not be installed at this location until the Pleasant Valley Road / Forni Road intersection and the Pleasant Valley Road / SR-49 South intersection is realigned to constitute one intersection. Another possible solution may include a roundabout with the realignment of Pleasant Valley Road with SR 49 and Forni Road. No mitigation is recommended as part of this project.

<u>Pleasant Valley Road / Racquet Way intersection:</u> This intersection will operate with the southbound approach at LOS F in the AM peak hour. Installation of a traffic signal will improve the intersection operation to LOS C (31.4 seconds per vehicle). The project should pay their fair share of the improvement as the intersection will decline to LOS F in the 2035 No Project Condition. Using the Caltrans fair share methodology the project should pay 5.4% of the improvement.

• Year 2035 Background Conditions. Year 2035 traffic forecasts were based on the *DSEDAMLCP* traffic volumes and were expanded to account for traffic along the Diamond Springs Parkway Corridor and Diamond Road (SR 49). Traffic volumes not contained in the *DSEDAMLCP* were developed based upon the growth rates identified between Existing and 2035 *DSEDAMLCP* time periods, the *Diamond Springs Parkway EIR Circulation Element and the Diamond Dorado Retail Center EIR Traffic Impact Analysis*. Year 2019 conditions were identified based on interpolation between current traffic volumes and Year 2035 traffic volume forecasts made for the *DSEDAMLCP*.

Roadways in 2035 are projected to remain with their current lane configurations. The Diamond Springs Parkway, north of China Garden Road will connect Missouri Flat Road to Diamond Road (SR 49) and is projected to be completed by 2035. This roadway will include two through lanes in each direction with turn lanes at key intersections. Missouri Flat Road will become the west and south legs of the Missouri Flat Road / China Garden Road intersection. Missouri Flat Road south of China Garden Road will continue to include one through lane in each direction.

The Diamond Springs Parkway / Diamond Road intersection will include two left turn lanes and a through lane along the northbound approach, a through lane and a right turn lane along the southbound approach and a left lane and a right lane along the eastbound approach. The intersection will be signalized and was analyzed with the signal in 2035 conditions. As part of this project the Bradley Drive intersection will be modified to right-in, right-out access only. Additionally, the Diamond Road / Lime Kiln Road – Black Rice Lane will be modified to allow right-in, right-out and left-in movements only.

An intermediate intersection at Throwita Way will be constructed. This intersection will include a left turn lane, two through lanes and a right turn lane for eastbound traffic, a left turn lane, a through lane and a through-right lane for westbound traffic, a single lane for south bound traffic and a right lane and a through-left lane for northbound traffic. The intersection will be signalized and was analyzed as part of the 2035 conditions.

Four intersections will operate below the County's minimum Level of Service standard.

Missouri Flat Road / US 50 Eastbound and Westbound Ramp intersections: The westbound US 50 ramp intersections will operate at LOS F conditions in 2035. A single point urban interchange (SPUI) should be considered that will combine the eastbound and westbound ramp intersections into a single intersection along Missouri Flat Road. The

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SPUI would consist of two through lanes and two left turn lanes at the intersection with two left lanes and two right turn lane along the eastbound and westbound off-ramps. Implementation of this new interchange will result in LOS D (37.5 seconds per vehicle) operation at the new intersection. The County is currently undertaking the Missouri Flat Area Master Circulation and Funding Plan (MC&FP) Phase II analysis which will provide a mechanism for the County to fund improvements to the U.S. Highway 50/Missouri Flat Road Interchange and adjacent arterials and collector roads.

<u>Pleasant Valley Road/ SR 49 intersection:</u> This intersection will operate at LOS F conditions in the AM peak hour (58.7 seconds per vehicle) and the PM peak hour (70.0 seconds per vehicle). As noted in the *Diamond Dorado Traffic Impact Analysis* prepared by Farhad & Associates in 2010 Caltrans indicated that a traffic signal should not be installed at this location until the Pleasant Valley Road / Forni Road intersection and the Pleasant Valley Road / SR-49 South intersection is realigned to constitute one intersection. Another possible solution may include a roundabout with the realignment of Pleasant Valley Road with SR 49 and Forni Road.

Pleasant Valley Road/ Forni Road intersection: This intersection will operate with the southbound Forni Road approach operating at LOS F in the AM peak hour. The volume portion of the peak hour signal warrant is met in the AM and PM peak hour. A traffic signal is not recommended at this time due to proximity of this intersection to the Pleasant Valley Road / SR-49 South intersection. This intersection is under Caltrans jurisdiction. As noted in the *Diamond Dorado Traffic Impact Analysis* prepared by Farhad & Associates in 2010 Caltrans indicated that a traffic signal should not be installed at this location until the Pleasant Valley Road / Forni Road intersection and the Pleasant Valley Road / SR-49 South intersection is realigned to constitute one intersection. Another possible solution may include a roundabout with the realignment of Pleasant Valley Road with SR 49 and Forni Road.

<u>Pleasant Valley Road/ Racquet Way intersection:</u> The southbound approach of this intersection will operate at LOS F conditions in the AM peak hour (55.8 seconds per vehicle). The intersection meets the traffic volume section of the peak hour signal warrant in the AM peak hour and both delay and volume sections of the warrant in the PM peak hour. Signalization of this intersection will improve the operation to an LOS B condition (19.7 seconds per vehicle) in the AM peak hour.

• 2035 Plus Project Conditions. The trips generated by the proposed project were superimposed onto the Year 2035 background conditions, and resulting peak hour Levels of Service were calculated. Five intersections will operate below the County's minimum Level of Service standard.

Missouri Flat Road / US 50 Eastbound and Westbound Ramp intersections: The westbound US 50 ramp intersections will both operate at LOS F conditions in 2035. A single point urban interchange (SPUI) should be considered that will combine both ramp intersections into a single intersection along Missouri Flat Road. The SPUI would

consist of two through lanes and two left turn lanes at the intersection with two left lanes and two right turn lane along the eastbound and westbound off-ramps. Implementation of this new interchange will result in LOS D (38.6 seconds per vehicle) operation at the new intersection.

The County is currently undertaking the Missouri Flat Area Master Circulation and Funding Plan (MC&FP) Phase II analysis which will provide a mechanism for the County to fund improvements to the U.S. Highway 50/Missouri Flat Road Interchange and adjacent arterials and collector roads. Since there is no funding mechanism in place the project should pay their fair share of the improvements.

The project should pay their fair share of the improvement as the intersection will decline to LOS F in the 2035 No Project Condition. Using the Caltrans fair share methodology the project should pay 3.2% of the improvement.

Missouri Flat Road / China Garden Road intersection: Under project conditions the intersection will continue to operate at LOS F conditions on the eastbound driveway and westbound approach. The intersection was identified for signalization in the 2019 scenario. With signalization the intersection will operate at LOS A (9.7 seconds) in the PM peak hour.

<u>Pleasant Valley Road/ SR 49 intersection:</u> This intersection will operate at LOS F conditions in the AM peak hour (55.5 seconds per vehicle) and the PM peak hour (68.7 seconds per vehicle). As noted in the *Diamond Dorado Traffic Impact Analysis* prepared by Farhad & Associates in 2010 Caltrans indicated that a traffic signal should not be installed at this location until the Pleasant Valley Road / Forni Road intersection and the Pleasant Valley Road / SR-49 South intersection is realigned to constitute one intersection. Another possible solution may include a roundabout with the realignment of Pleasant Valley Road with SR 49 and Forni Road. Since there is no defined project at this time there are no mitigations required for the project.

Pleasant Valley Road/ Forni Road intersection: This intersection will operate with the southbound Forni Road approach operating at LOS F in the AM peak hour. The volume portion of the peak hour signal warrant is met in both AM and PM peak hours. A traffic signal is not recommended at this time due to proximity of this intersection to the Pleasant Valley Road / SR-49 South intersection. This intersection is under Caltrans jurisdiction. As noted in the *Diamond Dorado Traffic Impact Analysis* prepared by Farhad & Associates in 2010 Caltrans has indicated that a traffic signal should not be installed at this location until the Pleasant Valley Road / Forni Road intersection and the Pleasant Valley Road / SR-49 South intersection is realigned to constitute one intersection. Another possible solution may include a roundabout with the realignment of Pleasant Valley Road with SR 49 and Forni Road. Since there is no defined project at this time there are no mitigations required for the project.

# TRAFFIC IMPACT ANALYSIS FOR PIEDMONT OAK ESTATES El Dorado County CA

## INTRODUCTION

# **Study Purpose and Objectives**

This study evaluates the traffic impacts associated with the construction of the Piedmont Oak Estates project. The Piedmont Oak Estates project includes construction of 104 single family residential units and 20,000 square feet (sf) of business professional offices. The project is located east of Diamond Road (State Route 49) and north of Black Rice Lane in El Dorado County.

A previous study was completed in 2012 for the site. The scope of this traffic analysis was based on the previous study and was reviewed with the El Dorado County Department of Transportation (DOT) for concurrence of scope parameters. Based on direction from DOT this study addresses the following scenarios:

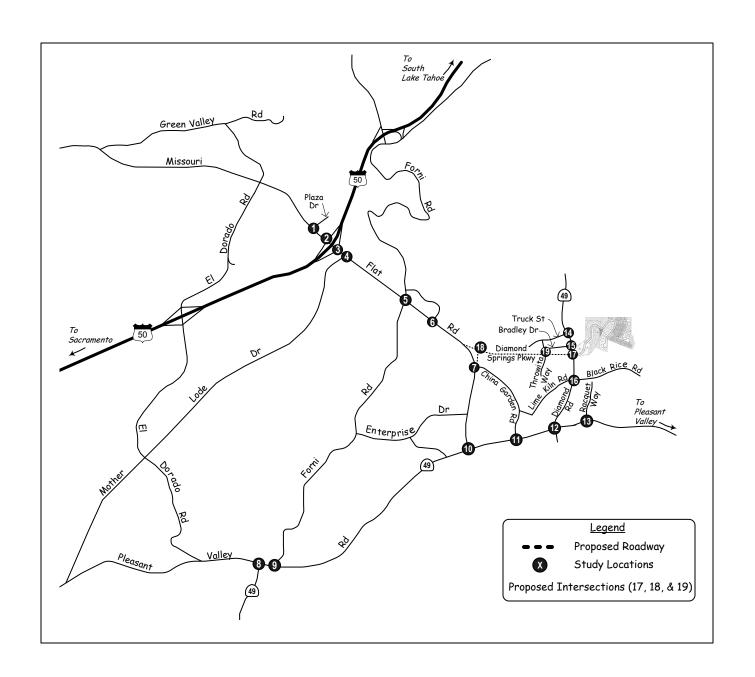
- 1. Existing (2014) Traffic Conditions
- 2. Existing (2014) Plus Project Conditions
- 3. 2019 Traffic Conditions
- 4. 2019 Plus Project Conditions
- 5. 2035 Traffic Conditions
- 6. 2035 Plus Project Conditions

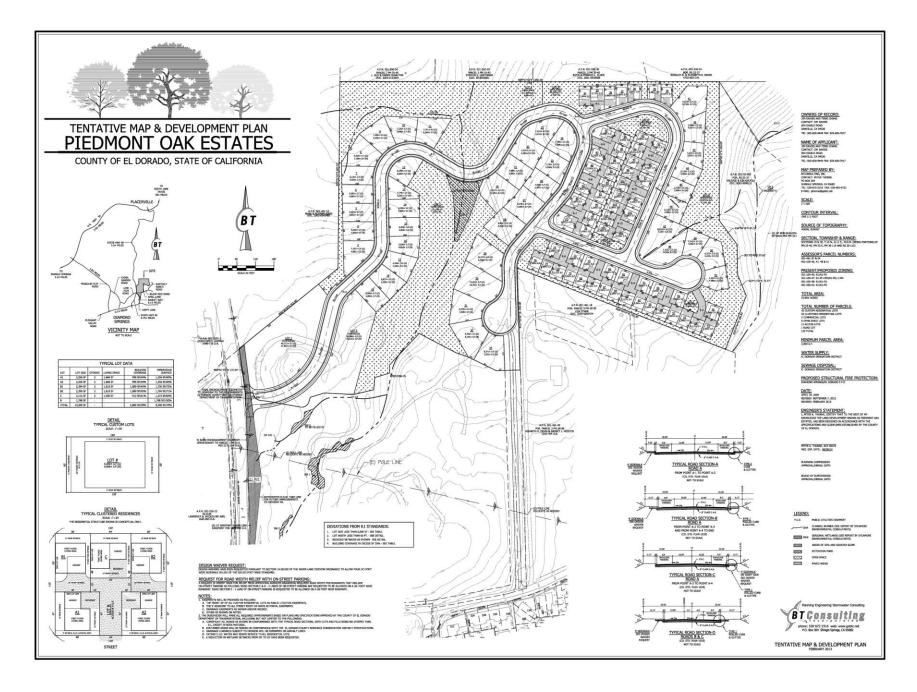
The objective of this study is to identify those roads and street intersections that may be impacted by development of this project based on El Dorado County significance criteria.

# **Project Description**

The proposed project includes 104 residential lots and 20,000 sf of professional office building space. The project is located east of Diamond Road (SR 49) and north of Black Rice Lane and is shown in Figure 1. Full access will be provided at a new intersection about 750' north of Lime Kiln Road-Black Rice Lane. This intersection will also serve as the eastern terminus to the future Diamond Springs Parkway. Figure 2 illustrates the proposed site plan and the proposed new intersection along Diamond Road.

The project is located within Traffic Analysis Zone (TAZ) 365 and is currently zoned R1 and R1-PF-CPO, One Family Residential and Professional Office Commercial districts. The zoning will be modified for the project to R1-PD and C-PD. These include One Family Residential and Commercial zoning in Planned Developments.





KD Anderson & Associates, Inc.

SITE PLAN

**Transportation Engineers** 

## **EXISTING SETTING**

# **Study Area**

This study addresses traffic conditions at sixteen (16) existing intersections along Missouri Flat Road, Pleasant Valley Drive and Diamond Road. Three additional intersections along Diamond Springs Parkway were evaluated under future buildout conditions. The limits of the study area were based on the previous traffic study for the Piedmont Oak Estates Traffic Impact Analysis prepared by AECOM in 2012 and reviewed with El Dorado County DOT and DOT's traffic engineering consultant (Kittelson & Associates [KAI]). The text that follows describes the roadway facilities included in this analysis.

The quality of traffic flow is typically governed by the operation of major intersections and the daily volume of traffic along the roadways. The physical characteristics of the study intersections are described in the text which follows.

# **Study Area Intersections**

The **Missouri Flat Road** / **Plaza Drive** intersection is located roughly 900 feet south of the project and is the most northerly intersection on a coordinated system of traffic signals at the US 50 intersection. Recent improvements have widened the intersection. Two through lanes are provided in each direction on Missouri Flat Road. The northbound approach includes dual left turn lanes and a separate right turn lane. The Plaza Drive approaches are each two lanes and operate with split phases. The eastbound approach is configured with a lane permitting all movements and a separate right turn lane. The westbound approach is similar but has a separate left turn lane.

The **Missouri Flat Road** / **Westbound US 50 ramps** intersection is controlled by a coordinated traffic signal. The Missouri Flat Road approaches feature dual northbound left turn lanes and a separate southbound right turn lane. The four lane exit from US 50 is configured with a dual left turn lane and dual right turn lanes.

The **Missouri Flat Road** / **Eastbound US 50 ramps** intersection is controlled by a coordinated traffic signal. The Missouri Flat Road approaches feature dual southbound left turn lanes and a separate northbound right turn lane. The three lane exit from US 50 is configured with a separate left turn lane and right turn lanes, as well as a combined left, thru and right turn lane.

The **Missouri Flat Road** / **Mother Lode Drive** intersection is signalized and located roughly 250 feet from the Eastbound US 50 ramps intersection. The Missouri Flat Road approaches have separate left turn and right turn lanes. The eastbound Mother Lode Drive approach has three lanes configured as dual left turns and a separate right turn lane.

The **Missouri Flat Road** / **Forni Road** intersection is also signalized and located roughly ½ mile south of the Mother Lode Drive intersection. The Missouri Flat Road approaches each include separate left turn and right turn lanes. The Forni Road approaches have separate left turn,

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through and right turn lanes, and a second left turn lane has been provided on the eastbound approach.

The **Missouri Flat Road** / **Golden Center Drive** intersection is located about 1,100 feet south of Forni Road. This signalized intersection includes separate left turn lanes on the Missouri Flat Road approaches and a separate right turn lane on the southbound approach. The Golden Center Drive approaches are single lanes which operate with permitted phasing.

The **Missouri Flat Road** / **China Garden Road** intersection is located about 2,100 feet south of Golden Center Drive. This unsignalized intersection includes single lanes along Missouri Flat Road with a separate left turn lane on the southbound approach. A CLTL is present on the northbound approach of Missouri Flat Road and north of the southbound left turn lane. The China Garden Road approach consists of a single lane which is stop controlled.

The Missouri Flat Road / (SR 49) Pleasant Valley Road intersection is located at the southern end of Missouri Flat Road roughly two miles from the project site. This tee intersection is controlled by an actuated traffic signal. The Pleasant Valley Road approaches have single through lanes in each direction, with dual eastbound left turn lanes and a separate westbound right turn lane. The two lane southbound approach on Missouri Flat Road is configured as separate left turn and right turn lanes, and the right turn "overlaps" the eastbound left turn phase.

The **Pleasant Valley Road (SR 49)** / **SR-49 South** intersection is located about 2½ miles southwest of the project site. This tee intersection is all-way stop controlled. Eastbound Pleasant Valley Road and northbound SR 49 have single lane approaches while westbound Pleasant Valley Road includes a left turn lane and a through lane.

The **Pleasant Valley Road (SR 49)** / **Forni Road South** intersection is located about 500' east of the SR-49 South intersection. This tee intersection is stop controlled along Forni Road which intersects Pleasant Valley Road at about a 30° skew to the northeast. All roadway approaches are single lane.

The Pleasant Valley Road (SR 49) / China Garden Road intersection is located about ½ mile southwest of the project site. This tee intersection is stop controlled along China Garden Road, and all roadway approaches are single lane.

The Pleasant Valley Road (SR 49) / Diamond Road (SR 49 North) / Fowler Lane intersection is located about ¼ mile south of the project site. This intersection is controlled by an actuated traffic signal. The eastbound Pleasant Valley Road approach includes a left turn lane, a through lane and a through-right lane. The westbound Pleasant Valley Road approach includes left turn, through and right turn lanes. The northbound Fowler Lane approach consists of a through-left lane and a right turn lane while the southbound Diamond Road approach includes a left turn lane and a through-right lane. The Pleasant Valley Road approaches provide protected left turn phasing while the Diamond Road and Fowler Lane approaches are split phase.

The **Pleasant Valley Road (SR 49)** / **Racquet Way** intersection is located about <sup>1</sup>/<sub>4</sub> mile east of the Pleasant Valley Road / Diamond Road intersection. This intersection is stop controlled along Racquet Way to the north and a commercial driveway to the south. The Pleasant Valley Road approaches include left turn lanes and a through-right lane while Racquet Way and the driveway are single lane approaches.

The **Diamond Road** / **Truck Street** intersection is located about 700' north of the project's north intersection. This tee intersection is stop controlled along Truck Street, and all roadway approaches are single lane.

The **Diamond Road** / **Bradley Drive** intersection is located about 300' north of the project's north intersection. This tee intersection is stop controlled along Bradley Drive. The southbound Diamond Road approach and the Bradley Drive approach are single lane while the northbound Diamond Road approach consists of a left turn lane and a through lane. With the completion of the Diamond Springs Parkway in the future Bradley Drive will have only right-in, right-out movements.

The **Diamond Road** / **Lime Kiln Road** / **Black Rice Lane** intersection will provide emergency vehicle access to the project site. This intersection is stop controlled along Lime Kiln Road and Black Rice Lane. All approaches are single lane.

The Missouri Flat Road / Diamond Springs Parkway intersection is a future intersection that is part of the Diamond Springs Parkway project. This intersection when completed will consist of a left turn lane, two through lanes and a right turn lane along the eastbound (Missouri Flat Road) and westbound (Diamond Springs Parkway) approaches. The northbound Missouri Flat Road approach will consist of dual left turn lanes and a through-right lane. The opposing southbound approach will consist of a left turn lane and a through-right lane. This intersection will be signalized.

The **Diamond Springs Parkway** / **Throwita Way** intersection is a future intersection that will be located about 900' west of the Diamond Road / Diamond Springs Parkway intersection. This intersection will be signal controlled. The June 2010 Diamond Springs Parkway DEIR identifies the lane configuration at this intersection to include left and right turn lanes and two through lanes along Diamond Springs Parkway, a single lane along the southbound Throwita Way approach and a left-through lane and a right turn lane along the northbound Throwita Way approach.

The **Diamond Road** / **Diamond Springs Parkway** intersection is a future intersection that will provide direct access into the project site. This intersection will be signal controlled. The June 2010 Diamond Springs Parkway DEIR identifies the lane configuration at this intersection to include a left turn lane and a right turn lane along Diamond Springs Parkway, two left turn lanes and a through lane along the northbound Diamond Road approach and a right turn lane and a through lane along the southbound Diamond Road approach.

# **Analysis Criteria**

**Level of Service Methodology.** *Level of Service Analysis* has been employed to provide a basis for describing existing traffic conditions and for evaluating the significance of project traffic impacts. Level of Service measures the *quality* of traffic flow and is represented by letter designations from "A" to "F", with a grade of "A" referring to the best conditions, and "F" representing the worst conditions. The guidelines and analyses used for this report follow El Dorado County standards.

Local agencies adopt minimum Level of Service standards for their facilities. El Dorado County identifies LOS 'E' as the acceptable Level of Service on roadways and state highways within the unincorporated areas of the County in the Community Regions and LOS D in the Rural Centers and Rural Regions except as specified in the General Plan. Four roadway segments, none of which are part of this study, allow LOS F conditions after 2008. The analysis techniques presented in the 2010 Highway Capacity Manual were used to calculate Level of Service and to provide a basis for describing existing traffic conditions and evaluating the significance of project traffic impacts.

Various software programs have been developed to assist in calculating intersection Level of Service, and the level of sophistication of each program responds to factors that affect the overall flow of traffic. In this case, Synchro-Simtraffic software was employed in order to account for the effects of closely spaced traffic signals along Missouri Flat Road. The files originally developed for the El Dorado County Transportation Commission's *Diamond Springs and El Dorado Area Mobility and Livable Community Plan (DSEDAMLCP)* were obtained and, in consultation with El Dorado County DOT and KAI, applicable adjustments were made to reflect current geometry and operational characteristics. The simulation results contained herein reflect the average of the mean 10 one-hour simulation runs selected from a 20 run sample. Each run employed a 10 minute seeding period.

The intersection Levels of Service presented in this analysis are based on the weighted average total delay per vehicle for the intersection as a whole at signalized intersections and at locations controlled by all-way stops. The average delay experienced by motorists yielding the right of way is the basis for identification of Level of Service at locations controlled by side street stop signs. Applicable Level of Service thresholds based on average delay are shown in Table 1.

**Intersection Level of Service Thresholds of Significance.** A traffic impact is considered to be significant under El Dorado County guidelines if the project causes an intersection to change from LOS E to LOS F. Worsening of conditions at facilities already operating at unacceptable levels of service is also considered a significant impact. The County's General Plan Policy TC-Xe defines worsen as any of the following conditions:

- a. a 2% increase in traffic during the a.m. peak hour, p.m. peak hour or daily trips, or
- b. the addition of 100 or more daily trips, or
- c. the addition of 10 or more trips during the a.m. peak hour or the p.m. peak hour.

## TABLE 1 LEVEL OF SERVICE DEFINITIONS

Level of Service	Signalized Intersection	Unsignalized Intersection	Roadway (Daily)
"A"	Uncongested operations, all queues clear in a single-signal cycle. Delay ≤ 10.0 sec	Little or no delay. Delay ≤ 10 sec/veh	Completely free flow.
"B"	Uncongested operations, all queues clear in a single cycle. Delay > 10.0 sec and < 20.0 sec	Short traffic delays. Delay > 10 sec/veh and < 15 sec/veh	Free flow, presence of other vehicles noticeable.
"C"	Light congestion, occasional backups on critical approaches. Delay > 20.0 sec and ≤ 35.0 sec	Average traffic delays. Delay > 15 sec/veh and < 25 sec/veh	Ability to maneuver and select operating speed affected.
"D"	Significant congestion of critical approaches but intersection functional. Cars required to wait through more than one cycle during short peaks. No long queues formed. Delay > 35.0 sec and ≤ 55.0 sec	Delay > 25 sec/veh and ≤ 35 sec/veh	Unstable flow, speeds and ability to maneuver restricted.
"E"	Severe congestion with some long standing queues on critical approaches. Blockage of intersection may occur if traffic signal does not provide for protected turning movements. Traffic queue may block nearby intersection(s) upstream of critical approach(es). Delay > 55.0 sec and $\leq 80.0$ sec	extreme congestion. Delay > 35 sec/veh and ≤ 50 sec/veh	At or near capacity, flow quite unstable.
"F"	Total breakdown, stop-and-go	Intersection blocked by external causes. Delay > 50 sec/veh	Forced flow, breakdown.

**Intersection Queuing Analysis.** The quality of traffic flow can also be affected by queuing at signalized intersections. The lengths of peak period queues were identified and compared to available left lane storage to determine whether spillover from turn lanes would affect the adjoining travel lanes or extend through adjacent intersections. 95<sup>th</sup> percentile queue lengths have been calculated as a byproduct of the Synchro-Simtraffic simulation. Those locations where the 95<sup>th</sup> percentile queue exceeds the available storage have also been noted.

**Traffic Signal Warrants.** The extent to which existing or projected traffic volumes may justify signalization at un-signalized intersections has been determined based on consideration of traffic signal warrant presented in the Manual of Uniform Traffic Control Devices, 2012. For this analysis the volume thresholds associated with Warrant 3 (Peak Hour Volume) have been assessed. For this analysis the "rural" criteria have been employed based on speed limits in excess of 40 mph.

#### **Public Transit**

The El Dorado County Transit Authority offers local fixed route, regional commuter route, dialarride and para-transit services. The Diamond Springs Route (DS) is about ½ mile from the project site. This route travels along Pleasant Valley Road and loops along Racquet Way. Passengers can use this route to travel to the Missouri Flat Road Transit Center where they can transfer to other routes. The route operates from about 7:00 a.m. to about 6:00 p.m. Monday through Friday at one-hour headways.

The Western El Dorado County Short and Long Range Transit Plan has identified the following improvements for transit service in the Diamond Springs area. Short Range improvements include beginning the route schedule at 6:00 a.m., extending the existing weekday route schedule by one hour at the end of the day and instituting Saturday service between 9:00 a.m. and 5:00 p.m. Long Range improvements include revising the route as a result of completion of Diamond Springs Parkway. This will allow the route to be reconfigured to include the Diamond Dorado Shopping Center along Diamond Springs Parkway. This may allow El Dorado Transit to provide a bus stop at or near the project entrance at the Diamond Road / Diamond Springs Parkway intersection.

#### **Bicycle and Pedestrian Facilities**

Designated bicycle facilities do not exist in the vicinity of the project. According to the El Dorado County Bicycle Transportation Plan, Class II bike lanes are proposed along Diamond Road from Pleasant Valley Road to Diamond Springs Parkway. In addition, Class II bike facilities are also proposed along Pleasant Valley Road through Diamond Springs and along Diamond Springs Parkway between Diamond Road and Missouri Flat Road. The section of Missouri Flat Road, from about Forni Road to Pleasant Valley Road will also include Class II facilities. This network will provide bicyclists direct routes to and from the Piedmont Oaks site.

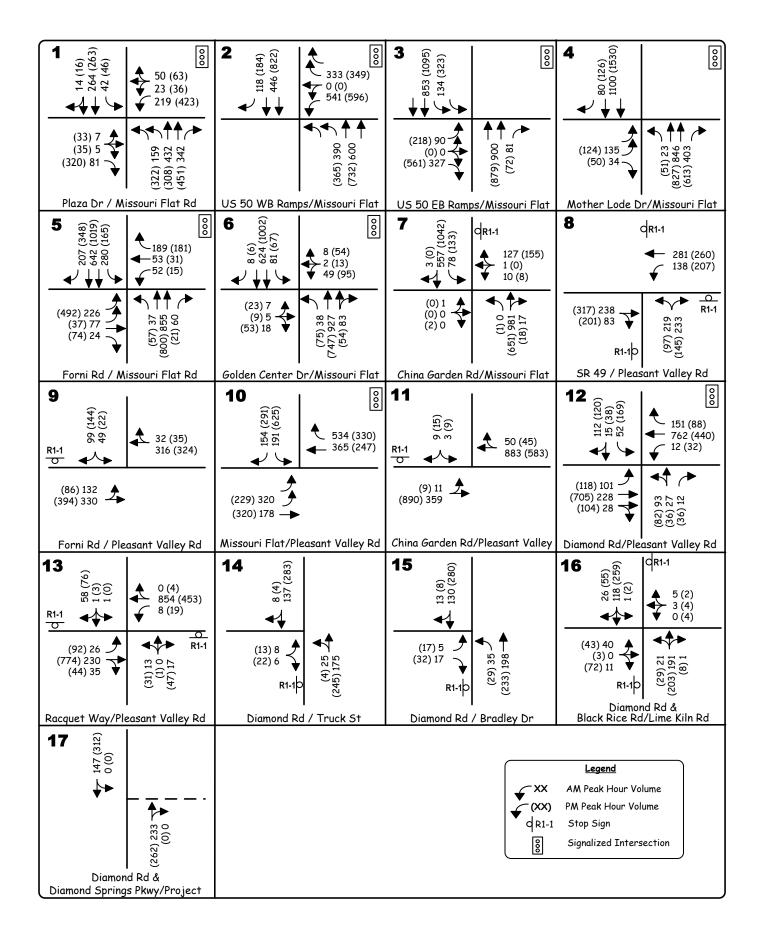
Diamond Road is a rural road and sidewalk is not present in the vicinity of the project. According to the El Dorado County Transportation Commission *El Dorado County Transportation Plan* new development has sidewalks fronting shopping centers and is contained in many residential subdivisions. It is possible that sidewalks will be installed along the west side of Diamond Road as part of the Diamond Dorado Center project. Sidewalks are proposed within the Piedmont Oaks project but not along the east side of Diamond Road. Sidewalk should be installed along the curb returns along the east side of Diamond Road as part of Piedmont Oaks development to provide a contiguous access between the project site and the Diamond Dorado Center.

#### **Existing Traffic Operating Conditions**

**Traffic Volume Counts.** This analysis makes use of peak hour traffic volume counts presented in the *Diamond Springs and El Dorado Area Mobility and Livable Community Plan* (DSEDAMLCP) traffic study, as well as new traffic counts conducted on April 8, 2014 and July 30, 2014. The July counts were adjusted based on turning movement counts that were conducted at adjacent intersections while school was in session. The counts are included in the Appendix, and the intersection turning movements are presented in Figure 3.

**Intersection Levels of Service.** Table 2 summarizes current operating Levels of Service at the study area intersections developed based on mean 10 simulation runs conducted for each time period. As indicated, all study intersections currently operate with acceptable Levels of Service during the a.m. and p.m. peak hours.

**Traffic Signal Warrants.** Two unsignalized intersections carry volumes that meet the peak hour signal warrant criteria during either peak period. These include the Missouri Flat Road / China Garden Road intersection and the Pleasant Valley Road / SR 49 (South) intersection where the peak hour signal warrant is met in both AM and PM peak periods. Two additional intersections meet the peak hour volume portion of the peak hour warrant. These include the Pleasant Valley Road / Forni Road intersection and the Pleasant Valley Road / Racquet Way intersection.



### EXISTING TRAFFIC VOLUMES AND LANE CONFIGURATIONS

#### TABLE 2 EXISTING PEAK HOUR LEVELS OF SERVICE AT INTERSECTIONS

		AM P	eak Hour	PM P	eak Hour	
			Average		Average	Traffic Signal
Location	Control	LOS	Delay	LOS	Delay	Warranted?
1. Missouri Flat Rd / Plaza Dr	Signal	В	16.7	C	27.7	N/A
2. Missouri Flat Rd / WB US 50 ramps	Signal	В	18.4	В	17.2	N/A
3. Missouri Flat Rd / EB US 50 ramps	Signal	В	16.2	С	21.3	N/A
4. Missouri Flat Rd / Mother Lode Dr	Signal	A	8.5	A	8.5	N/A
5. Missouri Flat Rd / Forni Rd	Signal	С	21.8	С	20.6	N/A
6. Missouri Flat Rd / Golden Center Dr	Signal	В	14.9	С	20.2	N/A
7. Missouri Flat Rd / China Garden Rd	WB Stop					Yes*
NB Left		$\Diamond$	$\Diamond$	$\Diamond$	♦	
SB Left		C	15.2	В	12.5	
EB		E	37.4	В	10.4	
WB		C	23.9	С	17.6	
8. Pleasant Valley Rd (SR 49) / SR-49 South	AWS Stop	В	12.5	С	15.3	Yes
9. Pleasant Valley Rd (SR 49) / Forni Rd	SB Stop					Yes†
SB		D	31.8	В	11.8	
EB Left		A	6.0	A	6.5	
10. Missouri Flat Rd / Pleasant Valley Rd (SR 49)	Signal	В	17.6	В	16.9	N/A
11. Pleasant Valley Rd (SR 49) / China Garden Rd	SB Stop					No
SB		A	1.8	A	2.3	
EB Left		В	13.8	A	8.1	
12. Diamond Rd (SR 49)/Pleasant Valley Rd (SR 49)	Signal	В	18.9	В	17.8	N/A
13. Pleasant Valley Rd / Racquet Way	NB / SB					Yes‡
NB	Stop	A	7.1	C	19.2	
SB		A	9.9	A	7.3	
EB Left		A	6.2	A	4.8	
WB Left		A	6.6	В	11.5	
14. Diamond Road (SR 49) / Truck St	EB Stop					No
NB Left		A	2.4	A	2.5	
EB		A	4.2	A	4.9	
15. Diamond Road (SR 49) / Bradley Dr	EB Stop					No
NB Left		A	3.1	A	3.7	
EB		A	3.6	A	7.4	
16. Diamond Road (SR 49) / Lime Kiln Rd – Black	EB/WB			-		No
Rice Ln	Stop					
NB Left		A	3.7	A	5.4	
SB Left		A	2.1	A	2.6	
EB		A	5.4	A	6.4	
* meets volume and delay warrant in AM and PM peak	1	<u>A</u>	4.1 neets volume	A	6.7	

<sup>\*</sup> meets volume and delay warrant in AM and PM peak hours † meets volume warrant in AM and PM peak hours

<sup>‡</sup> meets volume warrant in PM peak hour  $\Diamond$  no delay reported

**Intersection Queues.** Table 3 presents information regarding current peak period queuing in lanes at signalized study intersections. In each case, the available storage has been presented along with current peak hour traffic volumes and the 95<sup>th</sup> percentile queue length. On multiple lane approaches the longest queue amongst a group of common lanes has been noted.

Most intersections have lane storage capacity that can accommodate peak period queues. Those 95<sup>th</sup> percentile queues with length exceeding the available storage have been highlighted. The 95<sup>th</sup> percentile queue exceeds available storage in nine locations.

TABLE 3
EXISTING PEAK HOUR QUEUES AT SIGNALIZED INTERSECTIONS

		AM Pea	k Hour	PM Pea	k Hour
	Capacity		Queue		Queue
Location	(feet)	VPH	(feet)	VPH	(feet)
1. Missouri Flat Road / Plaza Drive					
NB left turn	330	159 (2)	105	322 (2)	191
NB through	450	432 (2)	100	308 (2)	196
NB right turn	450	342	100	451	131
SB left turn	110	42	64	46	70
EB left+through+right	120	93 (2)	66	388 (2)	203
WB left +through+right turn	275	282 (2)	159	522 (2)	232
2. Missouri Flat Road / WB US 50 ramps					
NB left turn	160	390 (2)	167	365 (2)	165
NB through	360	600 (2)	289	732 (2)	213
SB through	520	446 (2)	157	822 (2)	225
WB left turn	410	541 (2)	211	596 (2)	220
WB right turn	410	333 (2)	127	349 (2)	148
3. Missouri Flat Road / EB US 50 ramps					
NB through	160	900 (2)	206	879 (2)	185
NB right turn	140	81	73	72	85
SB left	160	134 (2)	192	323 (2)	214
SB through	380	853 (2)	353	1,095 (2)	419
EB left+through+right turn	540	417 (3)	137	779 (3)	213
4. Missouri Flat Road / Mother Lode Drive					
NB left turn	150	23	56	51	67
NB through	2,300	846 (2)	175	827 (2)	147
SB through	140	1,100 (2)	106	1,530 (2)	168
SB right turn	130	80	<25	126	66
5. Missouri Flat Road / Forni Road					
NB left turn	250	37	68	57	84
NB through	1,000	855 (2)	268	800 (2)	248
NB right turn	160	60	125	21	79
SB left turn	300	280	271	165	182
SB through	2,300	642 (2)	181	1,019 (2)	260
SB right turn	150	207	125	348	181
Highlighted values indicate queue length in excess of a	vailable storage				

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### TABLE 3 (cont'd) EXISTING PEAK HOUR QUEUES AT SIGNALIZED INTERSECTIONS

		AM Pea	ak Hour	PM Pea	k Hour
Location	Capacity (feet)	VPH	Queue (feet)	VPH	Queue (feet)
6. Missouri Flat Road / Golden Center Dri	ve				
NB left turn	120	38	68	75	100
SB left turn	160	81	115	67	151
10. Missouri Flat Road / SR 49 (Pleasant V	Valley Rd)				
SB left turn	600	191	153	625	238
SB right turn	600	154	72	291	93
EB left turn	160	320 (2)	176	229 (2)	137
WB right turn	190	534	221	330	153
12. Diamond Road (SR 49) / Pleasant Vall	ley Rd (SR 49)				
SB left turn	340	52	70	169	146
SB through+right	340	127	100	158	105
NB right turn	100	12	36	36	78
NB left+through	600	120	119	118	129
EB left turn	200	101	120	118	158
WB right turn	170	151	222	88	118
WB left turn	100	12	48	32	90

#### PROJECT CHARACTERISTICS

The development of this project will attract traffic to the project site. The amount of additional traffic on a particular section of the street network is dependent upon two factors:

- <u>Trip Generation</u>, the number of new trips generated by the project, and
- <u>Trip Distribution and Assignment</u>, the specific routes that the new traffic takes.

#### **Trip Generation**

Trip generation is determined by identifying the type and size of land use being developed. Recognized sources of trip generation data may then be used to calculate the total number of trip ends that the project creates.

The trip generation for this project was calculated using trip generation rates published in the *Trip Generation Manual* (Institute of Transportation Engineers, 9th Edition, 2012. Applicable rates are found in categories 210 (Single Family Residential) and 710 (General Office Building), as noted in Table 4.

TABLE 4
TRIP GENERATION

			Trips Per Unit								
	Unit			AN	1 Peak H	our	PN	I Peak H	our		
Land Use	Quantity	Size	Daily	In	Out	Total	In	Out	Total		
Single Family Residential (LU 210)	Unit	104	10.47	25%	75%	0.79	63%	37%	1.05		
General Office (LU 710)	KSF	20.0	19.32	88%	12%	2.64	17%	83%	5.04		
Single Family Residential (LU 210)			1,089	21	62	83	69	40	109		
General Office (LU 710)			386	46	6	53	17	84	101		
	v trips	1,475	67	68	135	86	124	210			

KSF – thousand square feet

Notes - no pass-by trip reduction; numbers may not add up due to rounding

Application of applicable trip generation rates yields a total of 1,475 new daily trips, with 135 new trips expected in the a.m. peak hour and 210 new trips generated during the p.m. peak hour.

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#### **Trip Distribution & Assignment**

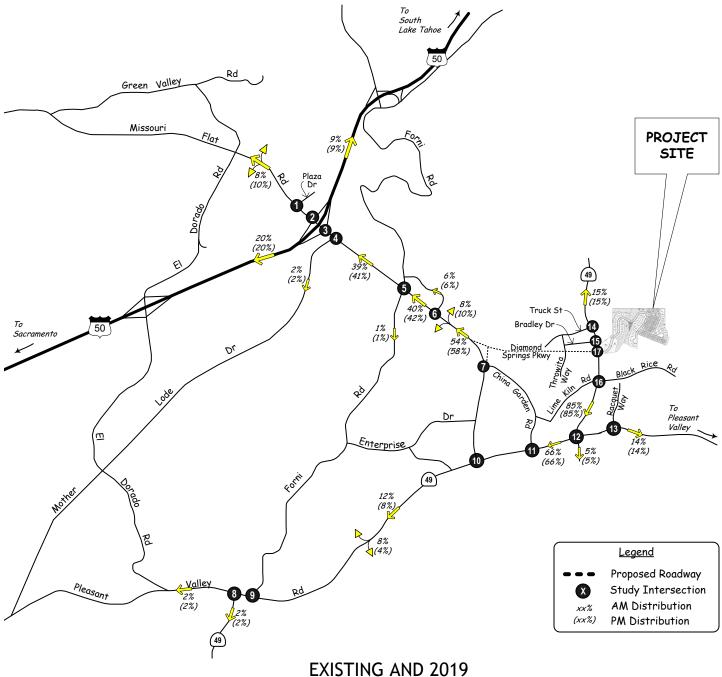
Two trip distribution patterns were applied to trips related to the Project. One pattern was applied to Existing and Near Term Conditions (i.e., Existing plus Project and 2019 plus Project) and another pattern was applied to Long-Term (2035) Conditions. Table 5 presents the project trip distributions.

**Existing and 2019.** To evaluate the traffic related effects of the Project, trips that would be generated by the Project were distributed onto the roadway network. Trip distribution simulates the geographical pattern of travel, matching trips generated by one type of land use (e.g. residential) with trips generated by other types of land uses (e.g., education, employment, and shopping). Trip distribution patterns to and from the Project were based on the previous traffic study for the project site conducted by AECOM in 2012 but adjusted to account for school-related traffic. The project trip distribution pattern is shown in Figure 4 with the project traffic shown in Figure 5.

TABLE 5 PROJECT TRIP DISTRIBUTION

		Distribut	tion
Direction	Route	Existing / 2019	2035
North	Diamond Road (SR 49)	15%	15%
	Missouri Flat Road, north of US 50	8%	10%
South	Fowler Lane	5%	5%
	Koki Lane / Paterson Drive	8%	4%
	SR 49 (South)	2%	2%
West	Pleasant Valley Road west of SR 49 (South)	2%	2%
	US 50 west of Missouri Flat Road	20%	20%
	Mother Lode Drive west of Missouri Flat Road	2%	2%
	Forni Road west of Missouri Flat Road	1%	1%
East	US 50 east of Missouri Flat Road	9%	9%
	Pleasant Valley Road east of Diamond Road	14%	14%
Internal along	Along Missouri Flat Road	8%	10%
Missouri Flat Road	Golden Center Drive	6%	6%
Total		100%	100%

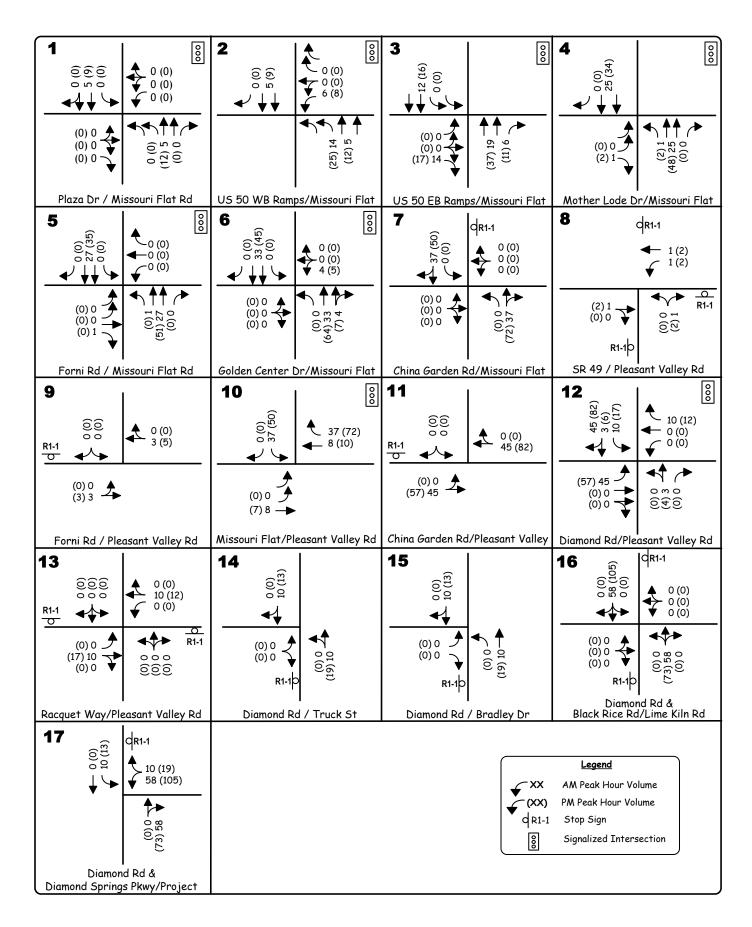
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KD Anderson & Associates, Inc.

Transportation Engineers

PROJECT TRIP DISTRIBUTION



### EXISTING & 2019 PROJECT ONLY TRAFFIC VOLUMES AND LANE CONFIGURATIONS

#### PROJECT TRAFFIC IMPACTS

#### **Existing Plus Project Conditions**

**Traffic Volumes** The impacts of developing the project uses on the project site have been identified by superimposing project traffic onto existing background conditions. Figure 6 displays the "Existing Plus Project" traffic volumes at each study intersection in both AM and PM peak hours.

**Circulation System Improvements.** Figure 6 also presents the intersection geometry and traffic controls resulting from implementation of the project's planned improvements along Diamond Springs Road. For purposes of the analysis it is assumed that a left turn lane will be added along southbound Diamond Road to provide left turn storage. The proposed access roadway will be stop controlled.

**Intersection Levels of Service.** Intersection Levels of Service were calculated and used as the basis for evaluating project impacts. Table 6 displays the peak hour Levels of Service at each study intersection and compares existing Levels of Service with those accompanying the project.

All intersections will continue to operate better than the minimum El Dorado County standard (i.e., LOS E or better).

**Traffic Signal Warrants.** Existing Plus Project traffic volumes at unsignalized intersections were compared to peak hour warrant requirements to determine whether traffic signals may be needed. Two unsignalized intersections will continue to carry volumes that meet the peak hour signal warrant criteria during either peak period. These include the Missouri Flat Road / China Garden Road intersection and the Pleasant Valley Road / SR 49 (South) intersection where the peak hour signal warrant is met in both AM and PM peak periods. Two additional intersections meet the peak hour volume portion of the peak hour warrant. These include the Pleasant Valley Road / Forni Road intersection and the Pleasant Valley Road / Racquet Way intersection.

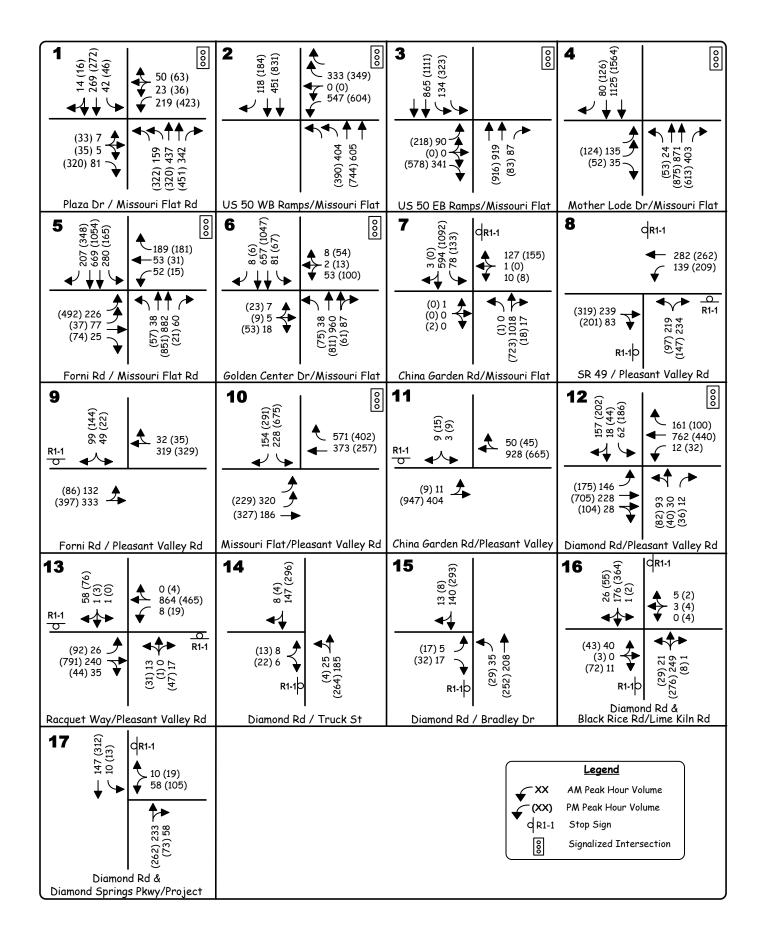
**Intersection Queues.** Table 7 identifies peak period queues assuming the addition of project trips. **Project** trips and the SimTraffic software may change the length of some queues. Those 95<sup>th</sup> percentile queues with length exceeding the available storage have been highlighted. Under Existing plus Project conditions eleven locations will exceed the available storage.

#### **Project Access**

Access is proposed via a stop control along the Project Access approach to the Diamond Road intersection. This access is projected to be the east leg of the proposed Diamond Springs Parkway / Diamond Road intersection. Emergency only vehicle access will be provided via Black Rice Lane south of the Project access intersection. The forecasted LOS for the intersection is LOS A for both the main line left turns and the side street approach.

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### EXISTING PLUS PROJECT TRAFFIC VOLUMES AND LANE CONFIGURATIONS

## TABLE 6 PEAK HOUR INTERSECTION LEVELS OF SERVICE EXISTING PLUS PROJECT CONDITIONS

			AM Pe	ak Hour			PM Pe	ak Hour		
		Ex	visting	Ex P	lus Project	Е	xisting	Ex Pl	lus Project	Traffic
			Average		Average		Average		Average	Signal
Location	Control	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	Warranted?
1. Missouri Flat Rd / Plaza Dr	Signal	В	16.7	В	16.1	C	27.7	C	27.7	N/A
2. Missouri Flat Rd / WB US 50 ramps	Signal	В	18.4	В	19.1	В	17.2	В	17.8	N/A
3. Missouri Flat Rd / EB US 50 ramps	Signal	В	16.2	В	16.5	C	21.3	C	21.7	N/A
4. Missouri Flat Rd / Mother Lode Dr	Signal	A	8.5	A	8.8	Α	8.5	Α	8.9	N/A
5. Missouri Flat Rd / Forni Rd	Signal	C	21.8	C	21.1	C	20.6	C	21.8	N/A
6. Missouri Flat Rd / Golden Center Dr	Signal	В	14.9	В	14.8	C	20.2	C	21.5	N/A
7. Missouri Flat Rd / China Garden Rd	WB Stop									Yes*
NB Left		$\Diamond$	$\Diamond$	<b>♦</b>	$\Diamond$	<b>♦</b>	$\Diamond$	$\Diamond$	$\Diamond$	
SB Left		C	15.2	С	16.4	В	12.5	В	13.9	
EB		E	37.4	С	19.0	В	10.4	В	11.9	
WB		C	23.9	Е	35.0	С	17.6	C	23.9	
8. Pleasant Valley Rd (SR 49) / SR-49 South	AWS Stop	В	12.5	В	11.1	С	15.3	С	17.4	Yes
9. Pleasant Valley Rd (SR 49) / Forni Rd	SB Stop									Yes†
SB		D	31.8	Е	37.0	В	11.8	В	11.1	
EB Left		A	6.0	A	5.9	A	6.5	A	6.3	
10. Missouri Flat Rd / Pleasant Valley Rd (SR 49)	Signal	В	17.6	В	19.3	В	16.9	В	18.4	N/A
11. Pleasant Valley Rd (SR 49) / China Garden Rd	SB Stop									No
SB		A	1.8	A	2.2	Α	2.3	Α	2.7	
EB Left		В	13.8	В	13.0	A	8.1	В	10.9	
12. Diamond Rd (SR 49) / Pleasant Valley Rd (SR 49)	Signal	В	18.9	C	25.3	В	17.8	C	19.7	N/A

<sup>\*</sup> meets volume and delay warrant in AM and PM peak hours

◊ no delay reported

<sup>‡</sup> meets volume warrant in PM peak hour

<sup>†</sup> meets volume warrant in AM and PM peak hours

# TABLE 6 (cont'd) PEAK HOUR INTERSECTION LEVELS OF SERVICE EXISTING PLUS PROJECT CONDITIONS

			AM Pe	ak Hour			PM Pe	ak Hour		
		Ex	kisting	Ex Pl	us Project	E	xisting	Ex Pl	lus Project	Traffic
			Average		Average		Average		Average	Signal
Location	Control	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	Warranted?
13. Pleasant Valley Rd / Racquet Way	NB/SB									Yes‡
NB	Stop	A	7.1	A	9.8	C	19.2	C	20.0	
SB		A	9.9	В	10.3	A	7.3	A	7.2	
EB Left		A	6.2	A	7.1	A	4.8	A	5.1	
WB Left		A	6.6	A	6.3	В	11.5	В	10.8	
14. Diamond Road (SR 49) / Truck St	EB Stop									No
NB Left		A	2.4	A	2.6	A	2.5	A	4.0	
EB		A	4.2	A	4.8	Α	4.9	A	5.1	
15. Diamond Road (SR 49) / Bradley Dr	EB Stop									No
NB Left		A	3.1	A	2.7	A	3.7	A	3.1	
EB		A	3.6	A	3.6	Α	7.4	Α	5.0	
16. Diamond Road (SR 49) / Lime Kiln Rd – Black	EB/WB									No
Rice Ln	Stop									
NB Left		A	3.7	A	4.2	A	5.4	A	5.8	
SB Left		A	2.1	A	1.7	A	2.6	A	4.3	
EB		A	5.4	Α	6.6	Α	6.4	A	7.5	
WB		A	4.1	A	4.8	A	6.7	A	8.0	
17. Diamond Road (SR 49) / Project Access	WB Stop									No
SB Left				A	3.7			A	3.7	
WB				A	6.3			A	8.8	

<sup>\*</sup> meets volume and delay warrant in AM and PM peak hours

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<sup>‡</sup> meets volume warrant in PM peak hour

<sup>†</sup> meets volume warrant in AM and PM peak hours

<sup>♦</sup> no delay reported

TABLE 7
EXISTING PLUS PROJECT PEAK HOUR QUEUES AT SIGNALIZED INTERSECTIONS

				ak Hour				eak Hour	
			VPH		Ex Plus		VPH	T	Ex Plus
I acation	Capacity	E-i-di	Project	Takal	Project	E:-4:	Project	Total	Project Queue
Location	(feet)	Existing	Only	Total	Queue (feet)	Existing	Only	1 otai	(feet)
1. Missouri Flat Road / Plaza Drive		4.50 (2)		1.50		222 (2)			105
NB left turn	330	159 (2)	0	159	97	322 (2)	0	322	195
NB through	450	432 (2)	5	437	95	308 (2)	12	320	199
NB right turn	450	342	0	342	96	451	0	451	136
SB left turn	110	42	0	42	61	46	0	46	76
EB left+through+right	120	93 (2)	0	93	67	388 (2)	0	388	203
WB left +through+right turn	275	282 (2)	0	282	151	522 (2)	0	522	229
2. Missouri Flat Road / WB US 50 ramps									
NB left turn	160	390 (2)	14	404	170	365 (2)	25	390	166
NB through	360	600 (2)	5	605	349	732 (2)	12	744	275
SB through	520	446 (2)	5	451	164	822 (2)	9	831	223
WB left turn	410	541 (2)	6	547	217	596 (2)	8	604	230
WB right turn	410	333 (2)	0	333	125	349 (2)	0	349	142
3. Missouri Flat Road / EB US 50 ramps									•
NB through	160	900 (2)	19	919	201	879 (2)	37	916	189
NB right turn	140	81	0	81	70	72	0	72	84
SB left	160	134 (2)	0	134	183	323 (2)	0	323	213
SB through	380	853 (2)	12	865	384	1,095 (2)	16	1,111	431
EB left+through+right turn	540	417 (3)	14	431	156	779 (3)	17	796	222
4. Missouri Flat Road / Mother Lode Drive					•				_
NB left turn	150	23	1	24	62	51	2	53	73
NB through	2,300	846 (2)	25	871	191	827 (2)	48	875	170
SB through	140	1,100 (2)	25	1,125	113	1,530 (2)	34	1,564	171
SB right turn	130	80	0	80	<25	126	0	126	81
Highlighted values indicate queue length in ea	xcess of availa	able storage							

### TABLE 7 (cont'd) EXISTING PLUS PROJECT PEAK HOUR QUEUES AT SIGNALIZED INTERSECTIONS

			AM Pe	ak Hour			PM P	eak Hour	
			VPH		Ex Plus		VPH		Ex Plus
	Capacity		Project		Project		Project		<b>Project Queue</b>
Location	(feet)	Existing	Only	Total	Queue (feet)	Existing	Only	Total	(feet)
5. Missouri Flat Road / Forni Road									
NB left turn	250	37	1	38	64	57	0	57	88
NB through	1,000	855 (2)	27	882	270	800(2)	51	851	276
NB right turn	160	60	0	60	134	21	0	21	72
SB left turn	300	280	0	280	275	165	0	165	185
SB through	2,300	642 (2)	27	669	187	1,019 (2)	35	1,054	247
SB right turn	150	207	1	208	122	348	5	353	167
6. Missouri Flat Road / Golden Center Drive	e								
NB left turn	120	38	0	38	77	75	0	75	122
SB left turn	160	81	0	81	125	67	0	67	142
10. Missouri Flat Road / SR 49 (Pleasant Val	ley Rd)								_
SB left turn	600	191	37	228	179	625	50	675	230
SB right turn	600	154	0	154	81	291	0	291	104
EB left turn	160	320	0	320	152	229	0	229	138
WB right turn	190	534	37	571	251	330	72	402	162
12. Diamond Road (SR 49) / Pleasant Valley	Rd (SR 49)								_
SB left turn	340	52	10	62	80	169	17	186	159
SB through+right	340	127	48	175	140	158	83	241	166
NB right turn	100	12	0	12	49	36	0	36	72
NB left+through	600	120	3	123	144	118	4	122	132
EB left turn	200	101	45	146	168	118	53	171	203
WB right turn	170	151	10	161	245	88	12	100	159
WB left turn	100	12	0	12	62	32	0	32	96
Highlighted values indicate queue length in ex	xcess of availa	ble storage							

#### **EXISTING PLUS APPROVED PROJECTS IMPACTS (2019)**

The analysis of the near term 2019 cumulative condition is intended to consider the impact of this project within the context of the "Existing Plus Approved Projects" (EPAP) conditions occurring within 5 years (i.e., by 2019).

#### **Analysis Methodology**

El Dorado County traffic study guidelines prescribe two methodologies to determine future short term traffic volumes. The two methodologies involve either 1) adding trips associated with specific approved projects located in the study area to current turning movement counts, or 2) interpolating short term growth based on information developed from long term traffic volumes projections.

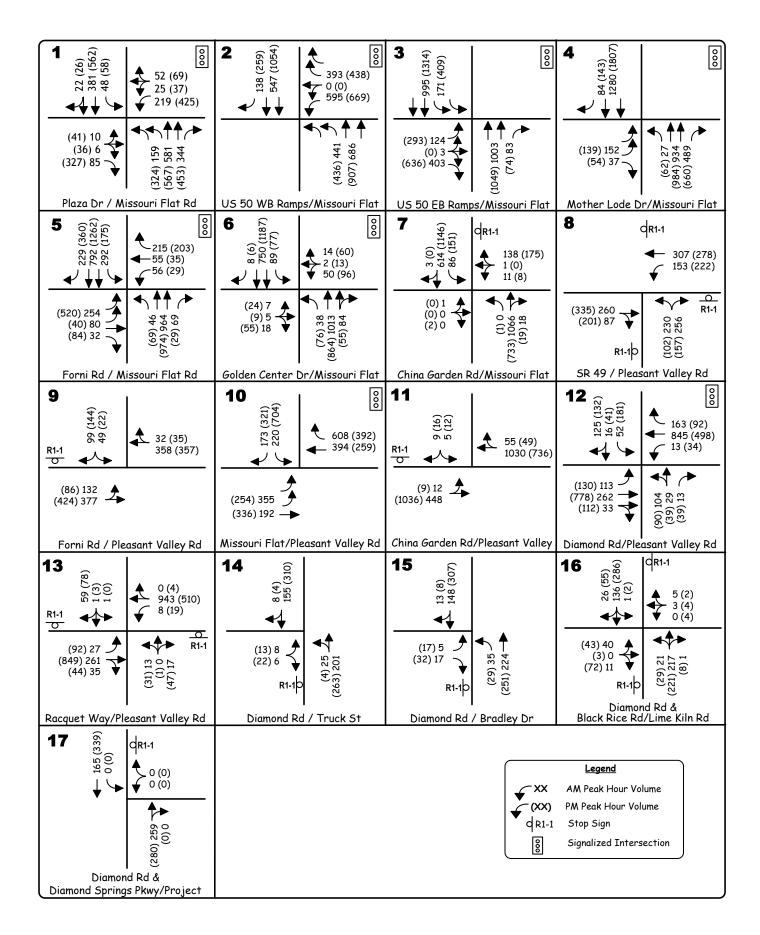
Direction regarding the analysis of Year 2019 conditions was provided by Caltrans in consultation with DOT. Because the study area circulation system is influenced by regional growth, interpolation of available long term forecasts is the preferred methodology for estimating year 2019 volumes.

The approach taken to produce Year 2019 volume follows El Dorado County traffic study guidelines. The Year 2035 traffic volumes presented in the *DSEDAMLCP* traffic study were selected as being representative of long term conditions, with adjustment of specific approach volumes. Peak hour approach volumes for 2019 were calculated using straight-line interpolation. The resulting approach growth rate at each intersection was determined to be between 5% and 9% on various intersection approaches. These volumes were developed in the preparation of *The Crossing Traffic Impact Analysis* prepared by KDAnderson & Associates, Inc. in 2014.

#### **Year 2019 Forecasts / Conditions**

**Traffic Volumes.** The identified short term growth rates described above were applied to the current traffic volumes at each intersection, and the resulting background base Year 2019 volumes determined. Two additional near term projects were identified by El Dorado County staff and were added to the base volumes. The two projects include Phase 1 of *The Crossing* and the *Willow Creek Retail Center*. The Crossing is located north of the Missouri Flat Road / US 50 interchange while Willow Creek is located in the northwest quadrant of the Missouri Flat Road / Forni Road intersection. 2019 No Project volumes are presented in Figure 7.

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### 2019 TRAFFIC VOLUMES AND LANE CONFIGURATIONS

**Intersection Levels of Service**. The identified Year 2019 volumes were used to recalculate operating Levels of Service at selected intersections. For the purpose of this analysis, no improvements to study area intersections have been assumed to occur by the Year 2019.

Table 8 displays the a.m. and p.m. peak hour Levels of Service at each study intersection in the 2019 condition. One unsignalized intersection, Missouri Flat Road at China Garden Road will operate at an LOS F condition along the eastbound (driveway) and westbound (China Garden Road) approaches in the AM peak hour. This intersection meets the peak hour warrant in both AM and PM peak periods.

**Intersection Queues.** Table 9 identifies peak period queues for the Year 2019 base condition. Approach queues are observed to increase as a result of the projected traffic increase in the next five years. Thirteen approaches are projected to exceed the available storage.

## TABLE 8 PEAK HOUR INTERSECTION LEVELS OF SERVICE 2019 PLUS PROJECT CONDITIONS

			AM Peal	k Hour			PM Pe	ak Hour		
		2	2019	2019 PI	us Project	2	2019	2019 I	Plus Project	Traffic
T	C	1.00	Average	1.00	Average	1.00	Average	1.00	Average	Signal
Location	Control	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	Warranted?
1. Missouri Flat Rd / Plaza Dr	Signal	В	16.2	В	15.6	С	31.6	С	29.6	N/A
2. Missouri Flat Rd / WB US 50 ramps	Signal	C	20.1	С	20.5	C	25.4	C	27.2	N/A
3. Missouri Flat Rd / EB US 50 ramps	Signal	В	18.7	В	18.9	С	26.1	С	28.4	N/A
4. Missouri Flat Rd / Mother Lode Dr	Signal	A	9.7	В	10.3	В	10.2	В	10.2	N/A
5. Missouri Flat Rd / Forni Rd	Signal	С	22.6	С	21.5	С	26.2	С	31.5	N/A
6. Missouri Flat Rd / Golden Center Dr	Signal	В	15.6	В	15.8	C	23.7	C	29.7	N/A
7. Missouri Flat Rd / China Garden Rd	WB Stop									Yes*
NB Left		$\Diamond$	<b>♦</b>	♦	$\Diamond$	<b>♦</b>	$\Diamond$	<b>♦</b>	<b>♦</b>	
SB Left		C	19.8	C	18.6	C	15.2	Е	42.3	
EB		F	61.4	F	67.1	C	16.1	F	67.2	
WB		F	74.7	F	60.8	D	32.3	F	129.5	
8. Pleasant Valley Rd (SR 49) / SR-49 South	AWS Stop	C	21.2	С	18.0	C	21.9	C	22.2	Yes
9. Pleasant Valley Rd (SR 49) / Forni Rd	SB Stop									Yes†
SB		E	38.4	F	53.5	C	23.1	C	21.6	
EB Left		A	6.7	A	6.8	A	6.7	A	6.4	
10. Missouri Flat Rd / Pleasant Valley Rd (SR 49)	Signal	C	20.4	С	22.5	В	18.4	В	14.1	N/A
11. Pleasant Valley Rd (SR 49) / China Garden Rd	SB Stop									No
SB		A	2.8	A	3.4	A	4.2	A	4.5	
EB Left		C	21.1	C	15.6	В	11.0	В	14.6	

<sup>\*</sup> meets volume and delay warrant in AM and PM peak hours

<sup>†</sup> meets volume warrant in AM and PM peak hours

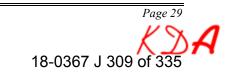
<sup>‡</sup> meets volume warrant in PM peak hour

<sup>♦</sup> no delay reported

### TABLE 8 (cont'd) PEAK HOUR INTERSECTION LEVELS OF SERVICE 2019 PLUS PROJECT CONDITIONS

			AM Pea	ak Hour			PM Pea	ak Hour		
		2	2019	2019 PI	us Project	2	019	2019 P	us Project	Traffic
			Average		Average		Average		Average	Signal
Location	Control	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	Warranted?
12. Diamond Rd (SR 49) / Pleasant Valley Rd (SR 49)	Signal	C	30.6	D	38.9	C	20.3	C	23.2	N/A
13. Pleasant Valley Rd / Racquet Way	NB/SB									Yes‡
NB	Stop	В	14.6	Е	49.5	С	21.8	C	20.8	
SB		Е	41.4	F	94.1	A	8.3	A	8.1	
EB Left		A	9.4	В	11.2	A	5.0	A	5.3	
WB Left		В	10.4	В	11.6	В	12.3	В	11.6	
14. Diamond Road (SR 49) / Truck St	EB Stop									No
NB Left		A	2.6	A	2.4	A	2.7	A	3.3	
EB		A	4.1	A	4.3	A	5.1	Α	4.5	
15. Diamond Road (SR 49) / Bradley Dr	EB Stop									No
NB Left		A	2.5	A	2.8	A	3.1	Α	3.7	
EB		A	4.2	A	3.8	A	5.1	Α	5.4	
16. Diamond Rd (SR 49) / Lime Kiln Rd – Black Rice Ln	$\mathrm{EB}/\mathrm{WB}$									No
NB Left	Stop	A	3.8	A	4.2	A	4.9	Α	6.5	
SB Left		A	1.4	A	1.6	A	2.3	Α	4.6	
EB		A	5.5	A	6.6	A	6.7	Α	8.5	
WB		A	4.6	A	4.9	A	7.5	Α	9.3	
17. Diamond Road (SR 49) / Project Access	WB Stop									No
SB Left				A	3.6			A	3.1	
WB				A	6.3			A	9.6	

<sup>\*</sup> meets volume and delay warrant in AM and PM peak hours † meets volume warrant in AM and PM peak hours



<sup>‡</sup> meets volume warrant in PM peak hour ◊ no delay reported

### TABLE 9 2019 PEAK HOUR QUEUES AT SIGNALIZED INTERSECTIONS

			AM Pea	k Hour	PM Pea	k Hour
		Capacity		Queue		Queue
Location		(feet)	VPH	(feet)	VPH	(feet)
1. Missour	ri Flat Road / Plaza Drive					
NB le	eft turn	330	159 (2)	99	324 (2)	211
NB th	nrough	450	581 (2)	117	567 (2)	240
NB ri	ght turn	450	344	103	453	228
SB le	ft turn	110	48	71	58	122
EB le	eft+through+right	120	101 (2)	77	404 (2)	224
WB 1	eft +through+right turn	275	296 (2)	147	531 (2)	252
2. Missour	ri Flat Road / WB US 50 ramps					
NB le	eft turn	160	441 (2)	170	436 (2)	168
NB th	nrough	360	686 (2)	421	907 (2)	343
SB th	rough	520	547 (2)	173	1,054 (2)	483
WB 1	eft turn	410	595 (2)	235	669 (2)	252
WB r	ight turn	410	393 (2)	155	438 (2)	199
3. Missour	ri Flat Road / EB US 50 ramps					
NB th	nrough	160	1,003 (2)	193	1,049 (2)	180
NB ri	ght turn	140	83	75	74	84
SB le	-ft	160	171 (2)	207	409 (2)	218
SB th	rough	380	995 (2)	406	1,314 (2)	454
EB le	eft+through+right turn	540	530 (3)	178	929 (3)	312
4. Missour	ri Flat Road / Mother Lode Drive					
NB le	eft turn	150	27	80	62	91
NB th	nrough	2,300	934 (2)	234	984 (2)	201
SB th	rough	140	1,280 (2)	133	1,807 (2)	180
SB ri	ght turn	130	84	41	143	104
5. Missour	ri Flat Road / Forni Road					
NB le	eft turn	250	46	97	69	111
NB th	nrough	1,000	964 (2)	317	974 (2)	323
NB ri	ght turn	160	69	157	29	113
SB le	ft turn	300	292	287	175	212
SB th	rough	2,300	792 (2)	246	1,262 (2)	294
SB ri	ght turn	150	229	127	360	190
6. Missour	ri Flat Road / Golden Center Drive					
NB le	eft turn	120	38	80	76	136
SB le	ft turn	160	89	138	77	175
10. Missou	uri Flat Road / SR 49 (Pleasant Valley Rd	)				
SB le	ft turn	600	220	174	704	223
SB ri	ght turn	600	173	98	321	123
EB le	eft turn	160	355 (2)	158	254 (2)	145
WB r	ight turn	190	608	271	392	175
<b>Highlighted</b>	values indicate queue length in excess of av	railable storage				

#### TABLE 9 (cont'd) 2019 PEAK HOUR OUEUES AT SIGNALIZED INTERSECTIONS

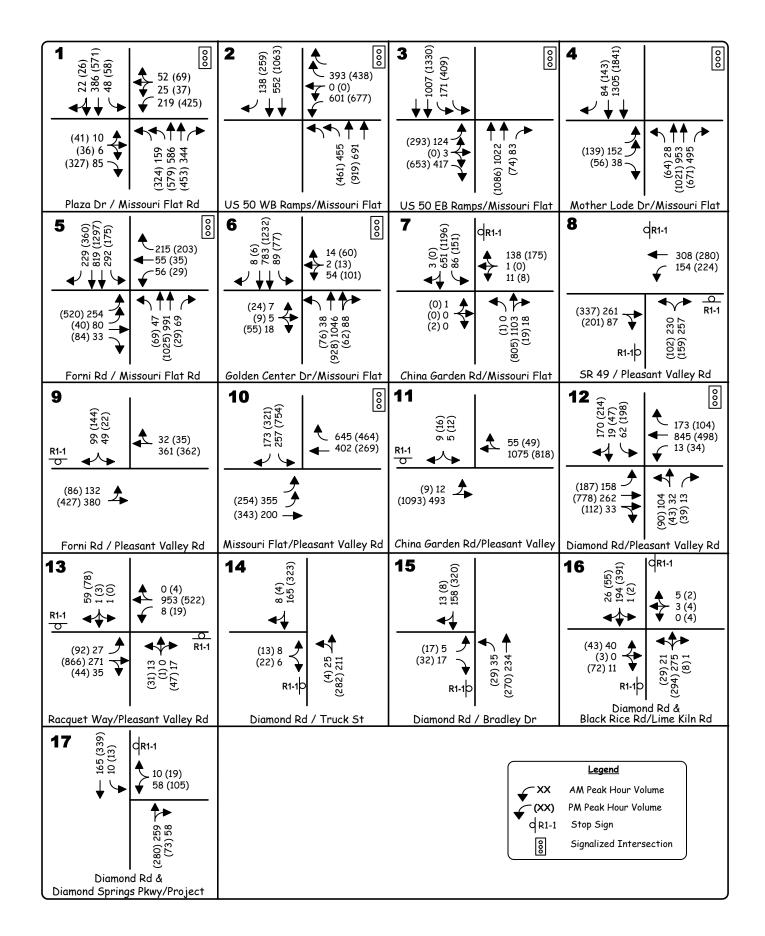
		AM Pe	ak Hour	PM Pea	ık Hour
Location	Capacity (feet)	VPH	Queue (feet)	VPH	Queue (feet)
12. Diamond Road (SR 49) / Pleasant Valley R	d (SR 49)				
SB left turn	340	52	81	181	173
SB through+right	340	141	124	173	129
NB right turn	100	13	55	39	73
NB left+through	600	133	152	129	143
EB left turn	200	113	143	130	184
WB right turn	170	163	256	92	159
WB left turn	100	13	67	34	90
Highlighted values indicate queue length in excess				<u> </u>	1

#### 2019 Plus Project

**Intersection Levels of Service**. The identified Year 2019 plus Project volumes were used to recalculate operating Levels of Service at selected intersections. Figure 8 displays the "2019 Plus Project" traffic volumes at each study intersection in both a.m. and p.m. peak hours. Table 8 displays the AM and PM peak hour Levels of Service at each study intersection in the 2019 plus Project condition. Three intersections will operate at LOS F conditions with the proposed project. These include the Missouri Flat Road / China Garden Road intersection which will continue to operate at LOS F in both AM and PM peak hours, the Pleasant Valley Road (SR 49) / Forni Road intersection which will decline to LOS F on the southbound approach and Pleasant Valley Road / Racquet Way which will decline to LOS F conditions on the northbound and southbound approaches. The Pleasant Valley Road (SR 49) / Forni Road intersection will meet the volume portion of the peak hour warrant in both AM and PM peak hours while the Pleasant Valley Road / Racquet Way intersection will meet the volume portion of the peak hour warrant in the PM peak hour.

**Intersection Queues.** Table 10 identifies peak period queues for the Year 2019 plus Project condition assuming the addition of project trips. Project trips will result in additional queuing throughout the study area with fourteen locations projected to exceed the available storage.

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### 2019 PLUS PROJECT TRAFFIC VOLUMES AND LANE CONFIGURATIONS

TABLE 10 2019 PLUS PROJECT PEAK HOUR QUEUES AT SIGNALIZED INTERSECTIONS

			AM Pe	ak Hour		PM Peak Hour				
			VPH		2019 Plus		VPH		2019 Plus	
Location	Capacity (feet)	2019	Project Only	Total	Project Queue (feet)	2019	Project Only	Total	Project Queue (feet)	
1. Missouri Flat Road / Plaza Drive										
NB left turn	330	159 (2)	0	159	100	324 (2)	0	324	168	
NB through	450	581 (2)	5	586	120	567 (2)	12	579	199	
NB right turn	450	344	0	344	117	453	0	453	197	
SB left turn	110	48	0	48	68	58	0	58	120	
EB left+through+right	120	101 (2)	0	101	73	404 (2)	0	404	229	
WB left +through+right turn	275	296 (2)	0	296	143	531 (2)	0	531	261	
2. Missouri Flat Road / WB US 50 ramps										
NB left turn	160	441 (2)	14	455	170	436 (2)	25	461	165	
NB through	360	686 (2)	5	691	447	907 (2)	12	919	346	
SB through	520	547 (2)	5	552	170	1,054 (2)	9	1,063	504	
WB left turn	410	595 (2)	6	601	237	669 (2)	8	677	243	
WB right turn	410	393 (2)	0	393	155	438 (2)	0	438	187	
3. Missouri Flat Road / EB US 50 ramps										
NB through	160	1,003 (2)	19	1,022	199	1,049 (2)	37	1,086	184	
NB right turn	140	83	0	83	73	74	0	74	85	
SB left	160	171 (2)	0	171	205	409 (2)	0	409	220	
SB through	380	995 (2)	12	1,007	409	1,314(2)	16	1,330	452	
EB left+through+right turn	540	530 (3)	14	544	177	929 (3)	17	946	373	
4. Missouri Flat Road / Mother Lode Drive										
NB left turn	150	27	1	28	78	62	2	64	102	
NB through	2,300	934 (2)	19	953	301	984 (2)	37	1,021	204	
SB through	140	1,280 (2)	25	1,305	131	1,807 (2)	34	1,841	177	
SB right turn	130	84	0	84	35	143	0	143	98	
Highlighted values indicate queue length in ex	cess of availa	ıble storage								

Traffic Impact Analysis for Piedmont Oak Estates El Dorado County, CA (December 19, 2014)

### TABLE 10 (cont'd) 2019 PLUS PROJECT PEAK HOUR QUEUES AT SIGNALIZED INTERSECTIONS

			AM Pe	ak Hour			PM P	eak Hour	
			VPH		2019 Plus		VPH		2019 Plus
Location	Capacity (feet)	2019	Project Only	Total	Project Queue (feet)	2019	Project Only	Total	Project Queue (feet)
5. Missouri Flat Road / Forni Road	(Teet)	2017	Omy	1000	Queue (reet)	2017	Omy	1000	(rect)
NB left turn	250	46	1	47	96	69	0	69	136
NB through	1,000	964 (2)	27	991	309	974 (2)	51	1,025	330
NB right turn	160	69	0	69	156	29	0	29	93
SB left turn	300	292	0	292	282	175	0	175	214
SB through	2,300	792 (2)	27	819	240	1,262 (2)	35	1,297	321
SB right turn	150	229	0	229	135	360	0	360	195
6. Missouri Flat Road / Golden Center Drive			-						
NB left turn	120	38	0	38	67	76	0	76	130
SB left turn	160	89	0	89	137	77	0	77	191
10. Missouri Flat Road / SR 49 (Pleasant Val	ley Rd)							l .	
SB left turn	600	220	37	257	203	704	50	754	217
SB right turn	600	173	0	173	94	321	0	321	122
EB left turn	160	355 (2)	0	355	158	254 (2)	0	254	147
WB right turn	190	608	37	645	276	392	72	464	198
12. Diamond Road (SR 49) / Pleasant Valley	Rd (SR 49)								•
SB left turn	340	52	10	62	85	181	17	198	190
SB through+right	340	141	48	189	176	173	88	261	200
NB right turn	100	13	0	13	53	39	0	39	82
NB left+through	600	133	3	136	172	129	4	133	143
EB left turn	200	113	45	158	178	130	57	187	211
WB right turn	170	163	10	173	269	92	12	104	179
WB left turn	100	13	0	13	56	34	0	34	94
Highlighted values indicate queue length in ea	xcess of availa	ble storage							

#### **CUMULATIVE IMPACTS (2035)**

The analysis of the long range 2035 cumulative condition is intended to consider the impact of this project within the context of buildout of the General Plan circulation element occurring in 2035.

#### **Year 2035 Forecasts / Conditions**

#### **Roadway Conditions**

Roadways in 2035 are projected to remain with their current lane configurations. The Diamond Springs Parkway, north of China Garden Road, will connect Missouri Flat Road to Diamond Road (SR 49) and is projected to be completed by 2035. This roadway will include two through lanes in each direction with turn lanes at key intersections. Missouri Flat Road will become the west and south legs of the Missouri Flat Road / China Garden Road intersection. Missouri Flat Road south of China Garden Road will continue to include one through lane in each direction. Diamond Road, as part of the Diamond Springs parkway connection will be widened to two lanes in each direction between Diamond Springs Parkway and Pleasant Valley Road. Dual left turn lanes will be provided for northbound Diamond Road at Diamond Springs Parkway and south Diamond Road at Pleasant Valley Road. The inside lanes will allow for u-turns as through movements and left turns across Diamond Road will be prohibited in this segment.

The Missouri Flat Road / Diamond Springs Parkway intersection will include two left turn lanes and a through-right lane along the northbound approach, a left turn lane, two through lanes and a right turn lane along the eastbound approach, a single lane along the southbound approach and a left turn lane, a through lane and a through-right lane on the westbound approach. The intersection will be signalized and was analyzed as part of the 2035 conditions.

The Diamond Springs Parkway / Diamond Road intersection will include two left turn lanes and a through lane along the northbound approach, a through lane and a right turn lane along the southbound approach and a left lane and a right lane along the eastbound approach. The intersection will be signalized and was analyzed with the signal in 2035 conditions. As part of this project the Bradley Drive intersection will be modified to right-in, right-out access only. Additionally, the Diamond Road / Lime Kiln Road – Black Rice Lane will be modified to allow right-in, right-out and left-in movements only.

An intermediate intersection at Throwita Way will be constructed. This intersection will include a left turn lane, two through lanes and a right turn lane for eastbound traffic, a left turn lane, a through lane and a through-right lane for westbound traffic, a single lane for south bound traffic and a right lane and a through-left lane for northbound traffic. The intersection will be signalized and was analyzed as part of the 2035 conditions.

#### 2035 Traffic Forecasts

Year 2035 traffic forecasts were based on the *DSEDAMLCP* traffic volumes and were expanded to account for traffic along the Diamond Springs Parkway Corridor and Diamond Road (SR 49). Traffic volumes not contained in the *DSEDAMLCP* were developed based upon the growth rates

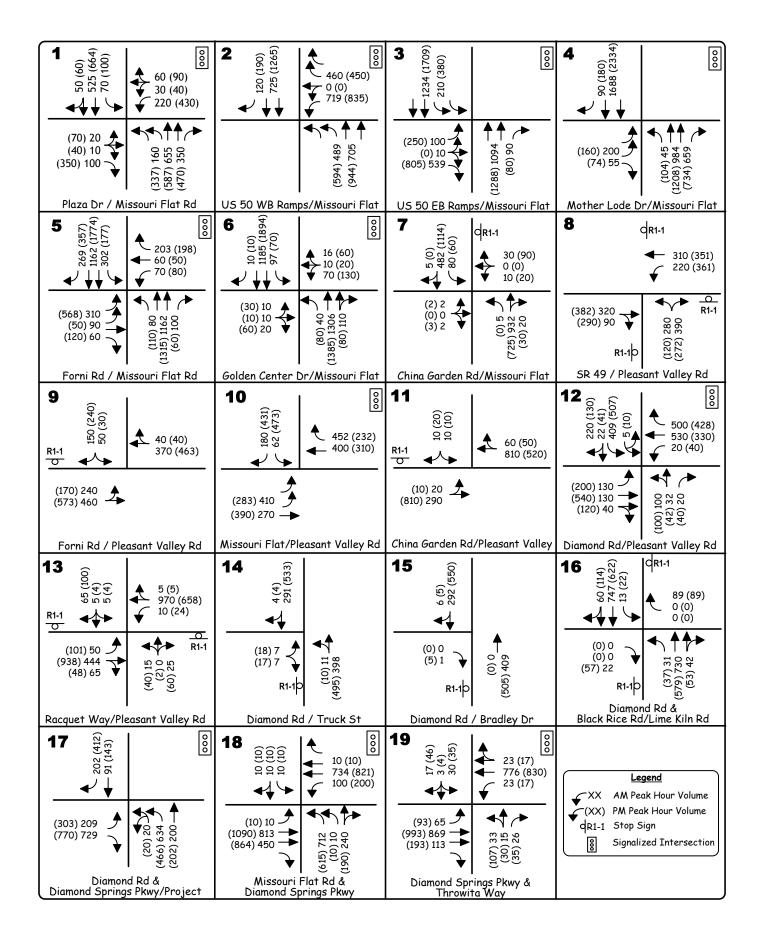
Page 35 18-0367 J 315 of 335 identified between Existing and 2035 *DSEDAMLCP* time periods, the *Diamond Springs Parkway EIR Circulation Element* prepared by Kimley Horn Associates and the *Diamond Dorado Retail Center EIR Traffic Impact Analysis* also prepared by Kimley Horn Associates. Intersection turning movements are presented in Figure 9.

**Intersection Levels of Service.** The identified Year 2035 volumes were used to recalculate operating Levels of Service at the study intersections. Table 11 displays the a.m. and p.m. peak hour Levels of Service at each study intersection in the 2035 condition. 2035 Synchro files developed for the *DESDAMLCP* were obtained and expanded to include study intersections that were identified for analysis for this project.

Four intersections will operate with LOS F conditions. These include the Missouri Flat Road / US 50 Westbound Ramps intersection which will operate at LOS F in the PM peak hour, the SR 49 / Pleasant Valley Road intersection which will operate at LOS F in both AM and PM peak hours, the Pleasant Valley Road / Racquet Way intersection which will operate with the southbound approach at LOS F in the AM peak hour and the Pleasant Valley Road / Forni Road intersection which will operate at LOS F along the southbound approach in the AM and PM peak hours.

**Traffic Signal Warrants.** Two unsignalized intersections carry volumes that meet the peak hour signal warrant criteria during either peak period. These include the Pleasant Valley Road / SR 49 (South) intersection where the peak hour signal warrant is met in both AM and PM peak periods and the Pleasant Valley Road / Racquet Way intersection where the peak hour signal warrant is met in the PM peak hour. Three additional intersections meet the peak hour volume portion of the peak hour warrant. These include the Missouri Flat Road / China Garden Road intersection, the Pleasant Valley Road / Forni Road intersection and the Diamond Road / Lime Kiln Road – Black Rice Lane intersection.

**Intersection Queues.** Table 12 identifies peak period queues for the Year 2035 base condition. Project trips will result in additional queuing throughout the study area with 24 locations projected to exceed the available storage. The most extensive queues are projected to occur in the vicinity of the US 50 / Missouri Flat Road interchange where the westbound US 50 off-ramp queue is projected to exceed 1,100 feet and the eastbound US 50 off-ramp is projected to exceed 1,700 feet. Additionally, the northbound queue along Missouri Flat Road at Mother Lode Drive is expected to exceed 2,200 feet.



## 2035 NO PROJECT TRAFFIC VOLUMES AND LANE CONFIGURATIONS

## TABLE 11 PEAK HOUR INTERSECTION LEVELS OF SERVICE 2035 PLUS PROJECT CONDITIONS

			AM Pe	ak Hour			PM Peal	k Hour		
		2	035	2035 P	lus Project	2	035	2035 Pl	us Project	Traffic
Location	Control	LOS	Average Delay	LOS	Average Delay	LOS	Average Delay	LOS	Average Delay	Signal Warranted?
1. Missouri Flat Rd / Plaza Dr	Signal	В	15.5	В	15.8	Е	57.3	Е	64.5	N/A
2. Missouri Flat Rd / WB US 50 ramps	Signal	С	31.1	С	21.3	F	109.3	F	111.1	N/A
3. Missouri Flat Rd / EB US 50 ramps	Signal	C	30.6	C	25.5	Е	71.9	Е	78.6	N/A
4. Missouri Flat Rd / Mother Lode Dr	Signal	В	17.2	В	16.1	D	50.1	Е	64.1	N/A
5. Missouri Flat Rd / Forni Rd	Signal	D	41.5	D	39.5	Е	59.1	Е	65.5	N/A
6. Missouri Flat Rd / Golden Center Dr	Signal	С	24.2	С	25.1	D	35.2	D	37.1	N/A
7. Missouri Flat Rd / China Garden Rd	WB Stop									Yes*
NB Left		A	3.4	A	3.9	<b>♦</b>	<b>♦</b>	<b>♦</b>	<b>♦</b>	
SB Left		В	14.8	C	17.8	В	11.1	В	12.0	
EB		В	14.5	C	20.5	Е	27.9	D	27.3	
WB		В	12.4	В	11.2	Е	47.9	F	56.6	
8. Pleasant Valley Rd (SR 49) / SR-49 South	AWS Stop	F	58.7	F	55.5	F	70.0	F	68.7	Yes
9. Pleasant Valley Rd (SR 49) / Forni Rd	SB Stop									Yes†
SB		F	220.9	F	212.9	F	97.7	F	179.0	
EB Left		A	8.5	A	8.8	A	9.7	A	9.9	
10. Missouri Flat Rd / Pleasant Valley Rd (SR 49)	Signal	D	48.9	D	51.8	С	30.6	С	30.3	N/A
11. Pleasant Valley Rd (SR 49) / China Garden Rd	SB Stop									No
SB		A	3.2	A	2.6	A	3.3	Α	4.1	
EB Left		В	11.7	В	11.0	A	7.8	A	7.8	
12. Diamond Road (SR 49) / Pleasant Valley Rd (SR 49)	Signal	С	26.9	С	26.0	С	22.6	С	22.8	N/A

<sup>\*</sup> meets volume and delay warrant in AM and PM peak hours

<sup>‡</sup> meets volume warrant in PM peak hour

<sup>†</sup> meets volume warrant in AM and PM peak hours

<sup>♦</sup> no delay reported

# TABLE 11 (cont'd) PEAK HOUR INTERSECTION LEVELS OF SERVICE 2035 PLUS PROJECT CONDITIONS

			AM Pea	ık Hour			PM Pea	k Hour		
		2	035	2035 PI	lus Project	2	2035	2035 PI	lus Project	Traffic
			Average		Average		Average		Average	Signal
Location	Control	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	Warranted?
13. Pleasant Valley Rd / Racquet Way	NB/SB									Yes‡
NB	Stop	Е	41.2	C	24.3	Е	41.7	Е	46.0	
SB		F	55.8	E	38.5	В	13.6	C	17.3	
EB Left		В	11.1	В	12.1	A	6.1	A	6.4	
WB Left		A	9.6	В	13.6	В	11.4	В	12.0	
14. Diamond Road (SR 49) / Truck St	EB Stop									No
NB Left		A	3.1	A	3.1	A	3.6	A	5.7	
EB		A	5.6	A	5.8	A	8.9	A	8.5	
15. Diamond Road (SR 49) / Bradley Dr	EB Stop									No
EB right		A	3.6	A	2.3	A	3.7	A	4.0	
16. Diamond Rd (SR 49) / Lime Kiln Rd – Black Rice Ln	EB/WB									Yes†
NB Left	Stop	A	7.8	A	7.1	A	6.8	A	6.9	
SB Left		A	5.7	A	5.6	A	4.7	A	5.2	
EB right		Α	4.2	A	4.7	A	3.8	Α	3.7	
WB right		A	6.0	A	5.6	A	4.9	A	4.9	
17. Diamond Rd (SR 49) / Diamond Springs Pkwy -	Signal	С	27.8	C	29.9	С	29.2	С	28.0	N/A
Project Access										
18. Missouri Flat Road / Diamond Springs Pkwy	Signal	C	20.8	C	21.7	C	23.7	C	25.1	N/A
19. Diamond Springs Pkwy / Throwita Way	Signal	В	14.6	В	13.1	В	17.0	В	16.8	N/A

<sup>\*</sup> meets volume and delay warrant in AM and PM peak hours

<sup>†</sup> meets volume warrant in AM and PM peak hours

<sup>‡</sup> meets volume warrant in PM peak hour

<sup>♦</sup> no delay reported

#### TABLE 12 2035 PEAK HOUR QUEUES AT SIGNALIZED INTERSECTIONS

			AM Pea	ık Hour	PM Peak Hour		
		Capacity		Queue		Queue	
Loc	eation	(feet)	VPH	(feet)	VPH	(feet)	
1.	Missouri Flat Road / Plaza Drive						
	NB left turn	330	160 (2)	87	330 (2)	147	
	NB through	450	655 (2)	170	574 (2)	218	
	NB right turn	450	350	170	460	248	
	SB left turn	110	70	79	100	236	
	EB left+through+right	120	130 (2)	78	460 (2)	241	
	WB left +through+right turn	275	310 (2)	125	560 (2)	390	
2.	Missouri Flat Road / WB US 50 ramps						
	NB left turn	160	489 (2)	169	594 (2)	169	
	NB through	360	705 (2)	308	914 (2)	357	
	SB through	520	725 (2)	265	1,265 (2)	545	
	WB left turn	410	719 (2)	677	835 (2)	1,158	
	WB right turn	410	460 (2)	352	450 (2)	522	
3.	Missouri Flat Road / EB US 50 ramps						
	NB through	160	1,094 (2)	194	1,288 (2)	188	
	NB right turn	140	90	99	80	85	
	SB left	160	210 (2)	196	380 (2)	198	
	SB through	380	1,234 (2)	443	1,709 (2)	422	
	EB left+through+right turn	540	649 (3)	337	925 (3)	1,728	
4.	Missouri Flat Road / Mother Lode Drive						
	NB left turn	150	45	115	104	226	
	NB through	2,300	984 (2)	355	1,208 (2)	2,137	
	SB through	140	1,688 (2)	168	2,244 (2)	165	
	SB right turn	130	90	96	170	109	
5.	Missouri Flat Road / Forni Road						
	NB left turn	250	80	224	110	286	
	NB through	1,000	1,162 (2)	446	1,315 (2)	490	
	NB right turn	160	100	190	60	163	
	SB left turn	300	302	367	177	347	
	SB through	2,300	1,162 (2)	548	1,774 (2)	528	
	SB right turn	150	269	229	357	235	
6.	Missouri Flat Road / Golden Center Drive						
	NB left turn	120	40	124	80	192	
	SB left turn	160	97	194	70	169	
10.	Missouri Flat Road / SR 49 (Pleasant Valley	Rd)					
	SB left turn	600	62	56	473	198	
	SB right turn	600	180	77	431	117	
	EB left turn	160	410 (2)	160	283 (2)	210	
	WB right turn	190	452	167	232	118	

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#### TABLE 12 (cont'd) 2035 PEAK HOUR QUEUES AT SIGNALIZED INTERSECTIONS

		AM Pea	ık Hour	PM Peak Hour		
	Capacity		Queue		Queue	
Location	(feet)	VPH	(feet)	VPH	(feet)	
12. Diamond Rd (SR 49) / Pleasant Valley Rd	d (SR 49)					
SB left turn	340	409	193	507	216	
SB through+right	340	242	136	171	101	
NB right turn	100	20	73	40	99	
NB left+through	600	132	171	142	184	
EB left turn	200	130	144	200	199	
WB right turn	170	500	246	428	204	
WB left turn	100	20	97	40	110	
17. Diamond Rd (SR 49) / Diamond Springs P	kwy					
NB left	350	634 (2)	366	466 (2)	329	
SB right	464	202	122	412	265	
EB left	995	209	211	303	260	
EB right	995	729	292	770	227	
18. Missouri Flat Rd / Diamond Springs Pkwy						
NB left	275	712 (2)	226	615 (2)	210	
EB through	1,600	813 (2)	352	1,090 (2)	372	
EB right	250	450	217	864	310	
WB left	500	100	123	200	217	
19. Diamond Springs Pkwy / Throwita Way						
NB right	200	26	42	35	65	
EB left	200	65	109	93	129	
EB right	200	113	121	193	127	
WB left	200	23	64	17	49	

#### **2035 Plus Project**

#### **Trip Distribution & Assignment**

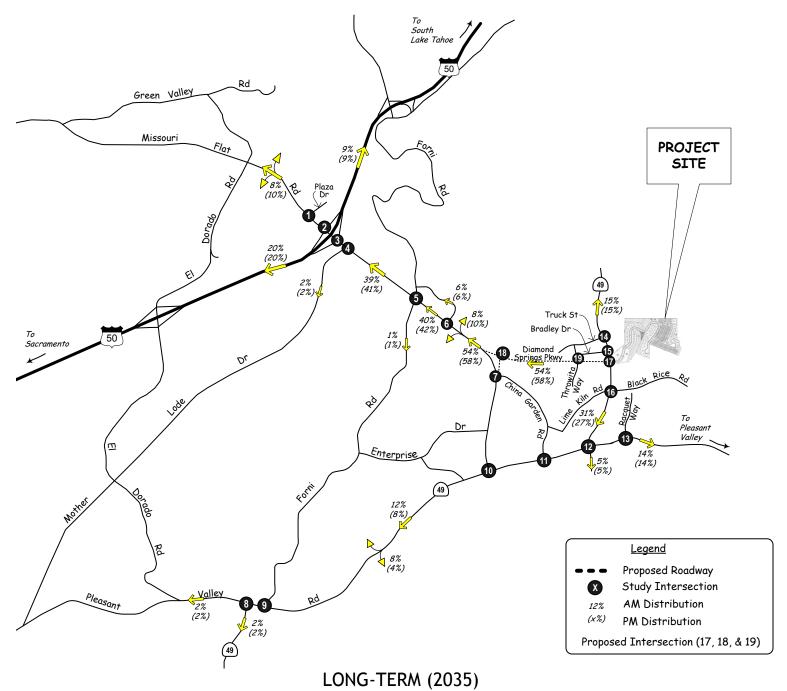
A new trip distribution pattern was applied to trips related to the Project in the future. Table 5 presents the project trip distributions for 2035. The Long-Term scenario considers the completion of the Diamond Springs Parkway (DSP), between Missouri Flat Road and Diamond Road. Project traffic that is projected to use Missouri Flat Road and Pleasant Valley Parkway to get to the project site in the short term will be able to use DSP by 2035 to access the site directly. Figure 10 presents the modified trip distribution with DSP completed.

Page 41 18-0367 J 321 of 335 **Intersection Levels of Service**. The Year 2035 plus Project volumes were used to recalculate operating Levels of Service at the study intersections. Figure 11 displays the "2035 Project Only" traffic volumes while Figure 12 present the "2035 Plus Project traffic" traffic volumes at each study intersection in both a.m. and p.m. peak hours. Table 11 displays the a.m. and p.m. peak hour Levels of Service at each study intersection in the 2035 plus Project condition. Four intersections will operate at LOS F conditions with the proposed project. These include Missouri Flat Road / US 50 Westbound Ramps intersection which will continue to operate at LOS F in the PM peak hour, the SR 49 / Pleasant Valley Road intersection which will continue to operate at LOS F in both AM and PM peak hours, the Pleasant Valley Road / Forni Road intersection which will continue to operate at LOS F along the southbound approach in the AM and PM peak hours and the Missouri Flat Road / China Garden Road intersection which will continue to operate at LOS F along the westbound approach.

**Traffic Signal Warrants.** Two unsignalized intersections carry volumes that meet the peak hour signal warrant criteria during either peak period. These include the Pleasant Valley Road / SR 49 (South) intersection where the peak hour signal warrant is met in both AM and PM peak periods and the Pleasant Valley Road / Racquet Way intersection where the peak hour signal warrant is met in the PM peak hour. Three additional intersections meet the peak hour volume portion of the peak hour warrant. These include the Missouri Flat Road / China Garden Road intersection, the Pleasant Valley Road / Forni Road intersection and the Diamond Road / Lime Kiln Road – Black Rice Lane intersection.

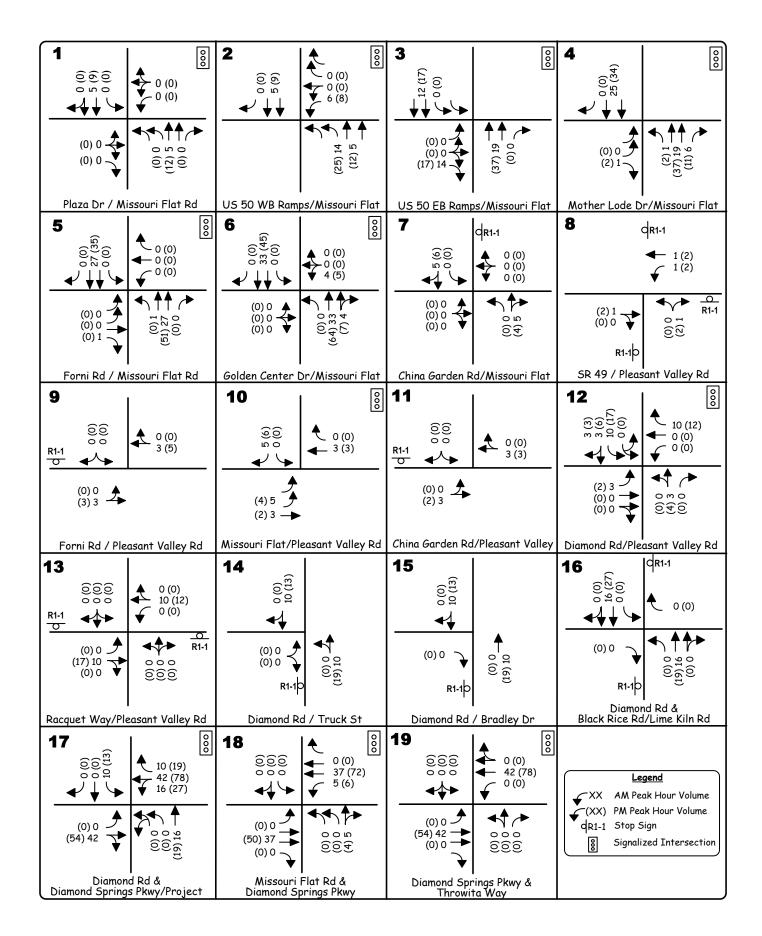
**Intersection Queues.** Table 13 identifies peak period queues for the Year 2035 plus Project condition assuming the addition of project trips. Project trips will result in additional queuing throughout the study area with 26 locations projected to exceed the available storage. The most extensive queues will continue to occur in the vicinity of the US 50 / Missouri Flat Road interchange where the westbound US 50 off-ramp queue is projected to exceed 1,100 feet, the eastbound US 50 off-ramp is projected to exceed 1,800 feet and the northbound Missouri Flat Road approach to Mother Lode Drive is projected to exceed 2,500 feet.

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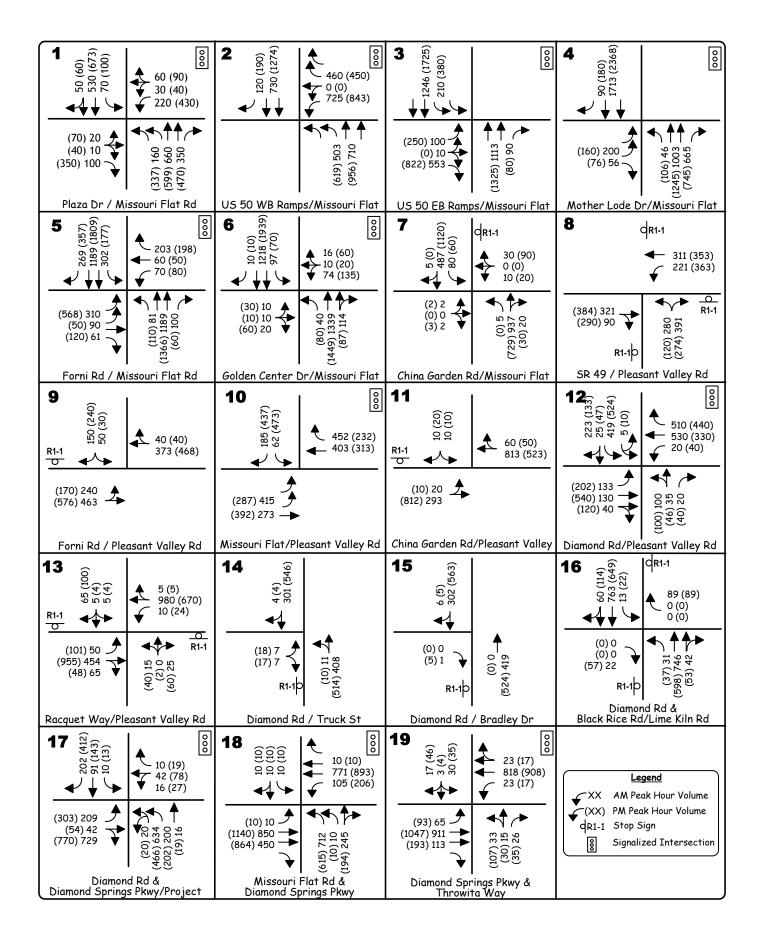


KD Anderson & Associates, Inc.

**Transportation Engineers** 



### 2035 PROJECT ONLY TRAFFIC VOLUMES AND LANE CONFIGURATIONS



### 2035 PLUS PROJECT TRAFFIC VOLUMES AND LANE CONFIGURATIONS

TABLE 13 2035 PLUS PROJECT PEAK HOUR QUEUES AT SIGNALIZED INTERSECTIONS

			AM Pe	ak Hour			PM P	eak Hour	
			VPH		2035 Plus		VPH		2035 Plus
Location	Capacity (feet)	2035	Project Only	Total	Project Queue (feet)	2035	Project Only	Total	Project Queue (feet)
1. Missouri Flat Rd / Plaza Drive									
NB left turn	330	160 (2)	0	160	92	330 (2)	0	330	147
NB through	450	655 (2)	5	660	181	574 (2)	12	586	204
NB right turn	450	350	0	350	182	460	0	460	221
SB left turn	110	70	0	70	85	100	0	100	241
EB left+through+right	120	130 (2)	0	130	83	460 (2)	0	460	257
WB left +through+right turn	275	310 (2)	0	310	121	560 (2)	0	560	569
2. Missouri Flat Rd / WB US 50 ramps									
NB left turn	160	489 (2)	14	503	171	594 (2)	25	619	170
NB through	360	705 (2)	5	710	326	914 (2)	12	926	371
SB through	520	725 (2)	5	730	218	1,265 (2)	9	1,274	546
WB left turn	410	719 (2)	6	725	283	835 (2)	8	843	1,122
WB right turn	410	460 (2)	0	460	186	450 (2)	0	450	515
3. Missouri Flat Rd / EB US 50 ramps									
NB through	160	1,094 (2)	19	1,113	195	1,288 (2)	37	1,325	192
NB right turn	140	90	0	90	94	80	0	80	90
SB left	160	210 (2)	0	210	171	380 (2)	0	380	197
SB through	380	1,234 (2)	12	1,246	367	1,709 (2)	16	1,725	429
EB left+through+right turn	540	649 (3)	14	663	301	925 (3)	17	942	1,873
4. Missouri Flat Rd / Mother Lode Drive	,								
NB left turn	150	45	1	46	127	104	2	106	223
NB through	2,300	984 (2)	19	1,003	323	1,208 (2)	37	1,245	2,590
SB through	140	1,688 (2)	25	1,713	138	2,244 (2)	34	2,278	165
SB right turn	130	90	0	90	81	170	0	170	95

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### TABLE 13 (cont'd) 2035 PLUS PROJECT PEAK HOUR QUEUES AT SIGNALIZED INTERSECTIONS

			AM Pe	ak Hour					
			VPH		2035 Plus		VPH	ı	2035 Plus
Location	Capacity (feet)	2035	Project Only	Total	Project Queue (feet)	2035	Project Only	Total	Project Queue (feet)
5. Missouri Flat Rd / Forni Rd	(Icct)	2055	Omy	Total	Queue (leet)	2033	Omy	Total	(icct)
NB left turn	250	80	1	81	222	110	0	110	328
NB through	1,000	1,162 (2)	27	1,189	461		51	1,366	495
		, , ,				1,315 (2)			
NB right turn	160	100	0	100	179	60	0	60	172
SB left turn	300	302	0	302	391	177	0	177	339
SB through	2,300	1,162 (2)	27	1,189	576	1,774 (2)	35	1,809	544
SB right turn	150	269	0	269	226	357	0	357	235
6. Missouri Flat Rd / Golden Center Drive	)								
NB left turn	120	40	0	40	126	80	0	80	192
SB left turn	160	97	0	97	187	70	0	70	170
10. Missouri Flat Rd / SR 49 (Pleasant Val	ley Rd)								
SB left turn	600	62	0	62	58	473	0	473	193
SB right turn	600	180	2	182	81	431	6	437	126
EB left turn	160	410 (2)	2	412	198	283 (2)	4	287	207
WB right turn	190	452	0	452	160	232	0	232	132
12. Diamond Rd (SR 49) / Pleasant Valley	Rd (SR 49)								
SB left turn	340	409	10	419	196	507	17	524	216
SB through+right	340	242	4	246	152	171	9	180	102
NB right turn	100	20	0	20	68	40	0	40	94
NB left+through	600	132	3	135	147	142	4	146	174
EB left turn	200	130	1	131	141	200	2	202	207
WB right turn	170	500	10	510	246	428	12	440	217
WB left turn	100	20	0	20	88	40	0	40	103
Highlighted values indicate queue length in e.	xcess of availa	able storage							

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## TABLE 13 (cont'd) 2035 PLUS PROJECT PEAK HOUR QUEUES AT SIGNALIZED INTERSECTIONS

			AM Peak Hour				PM P	M Peak Hour		
			VPH		2035 Plus		VPH		2035 Plus	
	Capacity		Project		Project		Project		<b>Project Queue</b>	
Location	(feet)	2035	Only	Total	Queue (feet)	2035	Only	Total	(feet)	
17. Diamond Rd (SR 49) / Diamon	nd Springs Pkwy									
NB left	350	634 (2)	0	634	297	466 (2)	0	466	233	
SB left	100	0	10	10	34	0	13	13	55	
SB right	464	202	0	202	115	412	0	412	214	
EB left	995	209	0	209	201	303	54	357	241	
EB right	995	729	0	729	398	770	0	770	336	
WB left	200	0	14	14	48	0	27	27	72	
18. Missouri Flat Rd / Diamond Sp	orings Pkwy									
NB left	275	712 (2)	0	712	271	615 (2)	0	615	220	
EB through	1,600	813 (2)	37	850	329	1,090 (2)	50	1,140	399	
EB right	250	450	0	450	220	864	0	864	299	
WB left	500	100	2	102	121	200	6	206	231	
19. Diamond Springs Pkwy / Thro	wita Way								•	
NB right	200	26	0	26	46	35	0	35	43	
EB left	200	65	0	65	114	93	0	93	137	
EB right	200	113	0	113	118	193	0	193	144	
WB left	200	23	0	23	57	17	0	17	47	
Highlighted values indicate queue le	<u>'</u>		0		] 3/ ]	1 /		17	7/	

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#### FINDINGS / RECOMMENDATIONS / MITIGATIONS

The preceding analysis has identified project impacts that may occur without mitigation. The text that follows identifies a strategy for mitigating the impacts of the proposed project. Recommendations are identified for facilities that have deficiencies in the roadway network without the project. If the project causes a significant impact, mitigations are identified for the facility.

#### **Existing Conditions**

All intersections operate within acceptable El Dorado County LOS thresholds. No recommendations are made.

#### **Existing plus Project Conditions - Mitigations**

All intersections will operate within acceptable El Dorado County LOS thresholds. The following mitigations are made:

- The project shall contribute its fair share to the cost of regional circulation improvements via the existing countywide traffic impact mitigation (TIM) fee program.
- Sidewalk should be installed along the curb returns along the east side of Diamond Road as part of Piedmont Oaks development to provide contiguous access between the project site and the Diamond Dorado Center.

<u>Diamond Road / Project Access intersection:</u> A left turn lane with standard Caltrans transitions on each approach and departure should be constructed along Diamond Road for left turn access into the project site. The left turn lane should be constructed back to back with the left turn lane at Bradley Drive. The left turn lane for the project should be 100' with the left turn lane at Bradley Drive 120' long.

No additional mitigations are made at this time.

#### **2019 Conditions - Recommendations**

Missouri Flat Road / China Garden Road intersection: This intersection will operate with the eastbound driveway and westbound China Garden Road approach operating at LOS F in the AM peak hour. Although the County General Plan allows LOS F conditions along Missouri Flat Road between Mother Lode Drive and China Garden Road this does not apply to the intersections. The intersection meets the peak hour traffic signal warrant and signalization of this intersection will improve the operation in the a.m. peak hour to LOS B (18.4 seconds delay).

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#### **2019 plus Project Conditions - Mitigations**

Missouri Flat Road / China Garden Road intersection: Under project conditions the intersection will continue to operate at LOS F conditions on the eastbound driveway and westbound approach. The project should pay their fair share of signalizing the intersection identified in the 2019 Conditions section. The fair share is project traffic divided by the difference in future and existing volumes. With Diamond Springs Parkway (DSP) being constructed in the future, traffic will shift to DSP, resulting in a net decrease in traffic by 2035 at the Missouri Flat Road / China Garden Road intersection. The fair share methodology was determined using the total volumes at the Missouri Flat Road / DSP intersection as all traffic at this intersection would travel through the Missouri Flat Road / China Garden Road if DSP were not constructed. Using this method the project is responsible for 6.41% of the project cost. With signalization the intersection will operate at LOS B (18.7 seconds) in the a.m. peak hour and LOS C (30.2 seconds) in the PM peak hour.

Pleasant Valley Road / Forni Road intersection: This intersection will operate with the southbound Forni Road approach operating at LOS F in the AM peak hour. The volume portion of the peak hour signal warrant is met in both AM and PM peak hours. A traffic signal is not recommended at this time due to proximity of this intersection to the Pleasant Valley Road / SR-49 South intersection. This intersection is under Caltrans jurisdiction. As noted in the *Diamond Dorado Traffic Impact Analysis* prepared by Farhad & Associates in 2010 Caltrans indicated that a traffic signal should not be installed at this location until the Pleasant Valley Road / Forni Road intersection and the Pleasant Valley Road / SR-49 South intersection is realigned to constitute one intersection. Another possible solution may include a roundabout with the realignment of Pleasant Valley Road with SR 49 and Forni Road. No mitigation is recommended as part of this project.

<u>Pleasant Valley Road / Racquet Way intersection:</u> This intersection will operate with the southbound approach at LOS F in the AM peak hour. Installation of a traffic signal will improve the intersection operation to LOS C (31.4 seconds per vehicle). The project should pay their fair share of the improvement as the intersection will decline to LOS F in the 2035 No Project Condition. Using the Caltrans fair share methodology the project should pay 5.4% of the improvement.

No other mitigations are necessary.

#### **2035 Conditions - Recommendations**

Missouri Flat Road / US 50 Eastbound and Westbound Ramp intersections: The westbound US 50 ramp intersections will operate at LOS F conditions in 2035. A single point urban interchange (SPUI) should be considered that will combine the eastbound and westbound ramp intersections into a single intersection along Missouri Flat Road. The SPUI would consist of two through lanes and two left turn lanes at the intersection with two left lanes and two right turn lane along the eastbound and westbound off-ramps. Implementation of this new interchange will result in LOS D (37.5 seconds per vehicle) operation at the new intersection. The County is

Page 50 18-0367 J 330 of 335 currently undertaking the Missouri Flat Area Master Circulation and Funding Plan (MC&FP) Phase II analysis which will provide a mechanism for the County to fund improvements to the U.S. Highway 50/Missouri Flat Road Interchange and adjacent arterials and collector roads.

<u>Pleasant Valley Road/ SR 49 intersection:</u> This intersection will operate at LOS F conditions in the AM peak hour (58.7 seconds per vehicle) and the PM peak hour (70.0 seconds per vehicle). As noted in the *Diamond Dorado Traffic Impact Analysis* prepared by Farhad & Associates in 2010 Caltrans indicated that a traffic signal should not be installed at this location until the Pleasant Valley Road / Forni Road intersection and the Pleasant Valley Road / SR-49 South intersection is realigned to constitute one intersection. Another possible solution may include a roundabout with the realignment of Pleasant Valley Road with SR 49 and Forni Road.

<u>Pleasant Valley Road/ Forni Road intersection:</u> This intersection will operate with the southbound Forni Road approach operating at LOS F in the AM peak hour. The volume portion of the peak hour signal warrant is met in the AM and PM peak hour. A traffic signal is not recommended at this time due to proximity of this intersection to the Pleasant Valley Road / SR-49 South intersection. This intersection is under Caltrans jurisdiction. As noted in the *Diamond Dorado Traffic Impact Analysis* prepared by Farhad & Associates in 2010 Caltrans indicated that a traffic signal should not be installed at this location until the Pleasant Valley Road / Forni Road intersection and the Pleasant Valley Road / SR-49 South intersection is realigned to constitute one intersection. Another possible solution may include a roundabout with the realignment of Pleasant Valley Road with SR 49 and Forni Road.

<u>Pleasant Valley Road/ Racquet Way intersection:</u> The southbound approach of this intersection will operate at LOS F conditions in the AM peak hour (55.8 seconds per vehicle). The intersection meets the traffic volume section of the peak hour signal warrant in the AM peak hour and both delay and volume sections of the warrant in the PM peak hour. Signalization of this intersection will improve the operation to an LOS B condition (19.7 seconds per vehicle) in the AM peak hour.

#### **2035 plus Project Conditions - Mitigations**

Missouri Flat Road / US 50 Eastbound and Westbound Ramp intersections: The westbound US 50 ramp intersections will both operate at LOS F conditions in 2035. A single point urban interchange (SPUI) should be considered that will combine both ramp intersections into a single intersection along Missouri Flat Road. The SPUI would consist of two through lanes and two left turn lanes at the intersection with two left lanes and two right turn lane along the eastbound and westbound off-ramps. Implementation of this new interchange will result in LOS D (38.6 seconds per vehicle) operation at the new intersection.

The County is currently undertaking the Missouri Flat Area Master Circulation and Funding Plan (MC&FP) Phase II analysis which will provide a mechanism for the County to fund improvements to the U.S. Highway 50/Missouri Flat Road Interchange and adjacent arterials and collector roads. Since there is no funding mechanism in place the project should pay their fair share of the improvements.

Page 51 18-0367 J 331 of 335 The project should pay their fair share of the improvement as the intersection will decline to LOS F in the 2035 No Project Condition. Using the Caltrans fair share methodology the project should pay 3.2% of the improvement.

Missouri Flat Road / China Garden Road intersection: Under project conditions the intersection will continue to operate at LOS F conditions on the eastbound driveway and westbound approach. The intersection was identified for signalization in the 2019 scenario. With signalization the intersection will operate at LOS A (9.7 seconds) in the PM peak hour.

Pleasant Valley Road/ SR 49 intersection: This intersection will operate at LOS F conditions in the AM peak hour (55.5 seconds per vehicle) and the PM peak hour (68.7 seconds per vehicle). As noted in the *Diamond Dorado Traffic Impact Analysis* prepared by Farhad & Associates in 2010 Caltrans indicated that a traffic signal should not be installed at this location until the Pleasant Valley Road / Forni Road intersection and the Pleasant Valley Road / SR-49 South intersection is realigned to constitute one intersection. Another possible solution may include a roundabout with the realignment of Pleasant Valley Road with SR 49 and Forni Road. Since there is no defined project at this time there are no mitigations required for the project.

<u>Pleasant Valley Road/ Forni Road intersection:</u> This intersection will operate with the southbound Forni Road approach operating at LOS F in the AM peak hour. The volume portion of the peak hour signal warrant is met in both AM and PM peak hours. A traffic signal is not recommended at this time due to proximity of this intersection to the Pleasant Valley Road / SR-49 South intersection. This intersection is under Caltrans jurisdiction. As noted in the *Diamond Dorado Traffic Impact Analysis* prepared by Farhad & Associates in 2010 Caltrans has indicated that a traffic signal should not be installed at this location until the Pleasant Valley Road / Forni Road intersection and the Pleasant Valley Road / SR-49 South intersection is realigned to constitute one intersection. Another possible solution may include a roundabout with the realignment of Pleasant Valley Road with SR 49 and Forni Road. Since there is no defined project at this time there are no mitigations required for the project.

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### **APPENDICES**

(under separate cover)

### APPENDIX FAIR SHARE PERCENTAGES & COSTS

#### (Future + Project Volumes) - Future (Future + Project) - Existing

**US 50 Eastbound - Westbound Ramps / Missouri Flat Road (Single Point Interchange)** 

AM	$\frac{4,201 - 4,170}{4,201 - 3,060}$	PM	5,764 - 5,710 5,764 - 4,222
	= 2.7%		= 3.5%

**Average Fair Share Percentage: 3.1%** 

Pleasant Valley Road / Racquet Way

AM 
$$\frac{1,679 - 1,659}{1,679 - 1,243}$$
 PM 
$$\frac{2,013 - 1,984}{2,013 - 1,544}$$
$$= 4.6\%$$
 
$$= 6.2\%$$

Average Fair Share Percentage: 5.4%

Missouri Flat Road / China Garden Road

AM 
$$\frac{3,197 - 3,109}{3,197 - 1813}$$
 PM  $\frac{3,967 - 3,430}{3,967 - 2,001}$  = -6.36% = -6.46%

Average Fair Share Percentage: 6.41%