



MEMORANDUM

DATE: October 1, 2021

TO: Tab Johnson

FROM: Ambarish Mukherjee, P.E., AICP

SUBJECT: Apple Valley Commercial Project Focused Traffic Study (LSA Project No. RDE2101)

LSA has prepared this focused traffic study (TS) to identify potential traffic operational issues associated with the proposed Apple Valley Commercial Project (project) in the Town of Apple Valley (Town). Based on preliminary information received from the Town, the focused TS evaluates potential queuing and traffic operations issues at the intersection of Westmont Drive/Bear Valley Road and the project driveways under existing with project conditions. The project site is located to the east of the Apple Valley Towne Center, northeast of the intersection of Westmont Drive and Bear Valley Road. Figure 1 (all figures, tables, and appendices attached) illustrates the regional and project location. Figure 2 illustrates a conceptual site plan of the proposed project.

PROJECT DESCRIPTION AND BACKGROUND

The proposed project includes a 43,000 square feet (sf) supermarket and 6,995 sf of retail space. As shown in Figure 2, access to the project will be provided via the intersection of Westmont Drive/Bear Valley Road and two existing right-in right-out driveways of Sonic Drive-In and El Pollo Loco, located south of the project.

This focused Traffic Study (TS) has been prepared to address the concerns requested by Town staff. The Levels of Service (LOS) and queuing analysis generally follows the LOS analysis metrics included in the San Bernardino County (County) *Transportation Impact Study Guidelines* (Guidelines, dated July 9, 2019). As such, the TS will evaluate traffic operations at the Westmont Drive/Bear Valley Road intersections and the two existing project-access driveways. The purpose of this study is to identify and address both LOS and queuing concerns when the project is in operation. As such, the following three intersections have been included in this study:

1. Westmont Drive/Bear Valley Road;
2. El Pollo Loco Driveway/Bear Valley Road; and
3. Sonic Driveway/Bear Valley Road.

All study intersections are located in the Town of Apple Valley. Figure 3 illustrates the study intersections.

Traffic operations have been evaluated for weekday a.m. and p.m. peak hour traffic conditions. The a.m. peak hour is defined as the one hour of highest traffic volumes occurring between 7:00 and 9:00 a.m. The p.m. peak hour is the one hour of highest traffic volumes occurring between 4:00 and 6:00 p.m.

VOLUME DEVELOPMENT

Project Trip Generation

The trip generation for the proposed project was developed using rates from the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (10th Edition) for Land Uses 850 – “Supermarket” and 820 – “Shopping Center.” Table A summarizes the project trip generation.

Since the existing El Pollo Loco and Sonic Drive-in are connected to the project internally, it is estimated that a certain percentage of trips between the project and these existing fast food joints will occur internally between these uses. These trips will not utilize the major street system or the study intersections. The internal trips can be made either by walking or by vehicles using internal roadways, and therefore avoiding the external streets. The internal capture rates were obtained using the National Cooperative Highway Research Program (NCHRP 8-51) Internal Trip Capture Estimation Tool. The internal trip capture rate estimated for the project land uses was applied to the respective trip generation to determine the number of internal trips. The internal trips were then subtracted from the total trip generation for the land uses to establish the total external trips. Detailed internal capture worksheets for the project have been included as Appendix A.

Shopping centers and supermarkets typically draw some of their trips from the adjacent street traffic. Therefore, some of the external project trips will come from the adjacent street traffic. These trips are not actually “new” trips added to the surrounding circulation system. These trips are referred to as “pass-by” trips and are made as intermediate stops en route to a destination without diverting from the main route. For the proposed project, pass-by trips would occur on Bear Valley Road en route to a final destination.

The percentage of pass-by trips for each of the two land uses was obtained from the ITE *Trip Generation Handbook* (3rd Edition). The handbook only provides pass-by rates for the PM peak hour for both land uses. Therefore, the AM pass-by rate was considered as 0% and PM peak hour pass-by rate was applied as the daily pass-by rate. The project pass-by trip assignment was developed based on traffic counts collected on the adjacent street system. Figure 4 illustrates the pass-by trip assignment that was developed based on existing traffic volumes.

As summarized in Table A, the project is anticipated to generate 154 net trips in the a.m. peak hour, 241 net trips in the p.m. peak hour, and 2,901 net daily trips.

Project Trip Distribution and Assignment

The distribution of project trips was developed based on the regional roadway network and the locations of residential, employment, and commercial centers in relation to the proposed project. Figure 5 illustrates the trip distribution for the proposed project at the study intersections. The project trip assignment is the product of the project net trip generation and the corresponding trip distribution percentages. Figure 6 illustrates the project net trip assignment at the study intersections.

Traffic Volumes for Existing without and with Project Conditions

Traffic volumes for existing conditions are typically developed using existing count data collected at study intersections. Due to the current school and office closures statewide due to COVID-19, new traffic counts will not reflect realistic traffic conditions at the study intersections. Therefore, LSA consulted traffic counters to obtain historical traffic counts for the study intersections and major intersections

adjacent to the study area. Historic traffic counts (dated May 2015) were obtained for the intersection of Apple Valley Road/Bear Valley Road from Counts Unlimited, Inc. Current 2021 traffic counts were collected at the study intersections and the intersection of Apple Valley Road/Bear Valley Road. Detailed count sheets are included in Appendix B.

Truck classification counts at the intersections were converted to Passenger Car Equivalent (PCE) volumes. The concept of PCEs accounts for the larger impact of trucks on traffic operations, as compared to the impact of passenger vehicles. It does so by assigning a PCE factor that represents the number of passenger vehicles that could travel through an intersection in the same time that a truck could. PCE volumes at study intersections were computed using a PCE factor of 2.0, consistent with *Highway Capacity Manual – 6th Edition* (HCM 6) methodologies.

An ambient growth rate of 2 percent per annum from 2015 to 2021, was applied to these PCE volumes to obtain existing without project PCE traffic volumes at the Apple Valley Road/Bear Valley Road intersection. The percentage difference in the East Leg volumes of Apple Valley Road/Bear Valley Road for the 2015 + growth volumes and current 2021 counts was applied to the eastbound and westbound through movements at the study intersections. Conservation of flow was then applied along the intersections. Existing peak hour traffic volumes are illustrated in Figure 7.

Existing with project traffic volumes were obtained by adding net project traffic and pass-by trips to the corresponding without project traffic volumes. Existing with project peak hour traffic volumes are illustrated in Figure 8. Detailed volume development worksheets are included in Appendix C.

LEVEL OF SERVICE ANALYSIS

Existing study intersection geometrics and traffic control are illustrated in Figure 9.

As previously stated, traffic operations have been analyzed in terms of LOS and queues. A complete description of the meaning of LOS can be found in the Transportation Research Board Special Report 209, *Highway Capacity Manual*. The HCM establishes LOS A through F for intersections. A description of LOS for intersections is summarized in Table B. Table C shows the LOS criteria for unsignalized and signalized intersections. The LOS analysis was performed based on HCM 6 methodologies using the Synchro (Version 10) software.

All study intersections are under the jurisdiction of the Town of Apple Valley. The Town uses LOS D as the LOS standard for intersections, consistent with the County Guidelines.

Table D summarizes the results of the LOS analysis under existing without and with project conditions. As shown in Table D, all study intersections are forecast to operate at a satisfactory level of service under both existing without and with project conditions.

Detailed level of service worksheets are included in Appendix D.

QUEUING ANALYSIS

The queuing analysis was conducted using Synchro for the signalized study intersections, and using SimTraffic for the unsignalized study intersections.

Table E summarizes the results of the queuing analysis under existing without and with project conditions. As shown in Table E, all queues do not exceed the available storage lengths at the study intersections.

Detailed queuing analysis sheets are included in Appendix E.

TRUCK ACCESS AT THE PROJECT DRIVEWAY

Based on the land uses being proposed for the Project, it is anticipated that delivery trucks will access the project site at the study intersections. Additionally, it is anticipated that most delivery trucks will be accessing the site from the west via the Bear Valley Road. Therefore, this analysis evaluates the adequacy of truck turning radii at the intersection of Westmont Drive/Bear Valley Road for truck ingress and egress. As a conservative estimate, large semitrailer (WB-62) templates were used to evaluate the adequacy of truck turning radii. The truck template is in accordance with the 2018 Edition of the American Association of State Highway and Transportation Officials (AASHTO) Green Book. Figure 10 illustrates the truck turning template to and from the west along Bear Valley Road. As illustrated in Figure 10, there is adequate roadway width to accommodate both inbound and outbound truck turning radii.

CONCLUSION

The Apple Valley Commercial Project consists of a 43,000 sf supermarket and 6,995 sf of retail space. The project is anticipated to generate 154 net trips in the a.m. peak hour, 241 net trips in the p.m. peak hour, and 2,901 net daily trips. All study intersections are forecast to operate at a satisfactory LOS under both existing without and with project conditions. There is sufficient storage for vehicle queuing at all study intersections under both existing without and with project conditions. There is adequate turning radii for both inbound and outbound truck movements at the intersection of Westmont Drive/Bear Valley Road.

Should you have any questions, please do not hesitate to contact me at (951) 781-9310 or email me at Ambarish.Mukherjee@lsa.net.

ATTACHMENTS

Figures

- Figure 1: Regional and Project Location
- Figure 2: Conceptual Site Plan
- Figure 3: Study Area Intersections
- Figure 4: Pass-by Trip Assignment
- Figure 5: Project Trip Distribution
- Figure 6: Project Net Trip Assignment
- Figure 7: Existing Peak Hour Traffic Volumes
- Figure 8: Existing with Project Peak Hour Traffic Volumes
- Figure 9: Existing with Project Study Intersection Geometrics and Traffic Control
- Figure 10: (WB-62) Truck Turning Template Westmont Drive-Bear Valley Road

Tables

- Table A: Project Trip Generation
- Table B: Intersection Level of Service Definitions

Table C: Level of Service Criteria for Signalized and Unsignalized Intersections
Table D: Existing Intersection Levels of Service
Table E: Intersection Queuing Analysis

Appendices

Appendix A: NCHRP Internal Capture Tool
Appendix B: Traffic Count Sheets
Appendix C: Volume Development Worksheets
Appendix D: Level of Service Worksheets
Appendix E: Queuing Analysis Worksheets

FIGURES

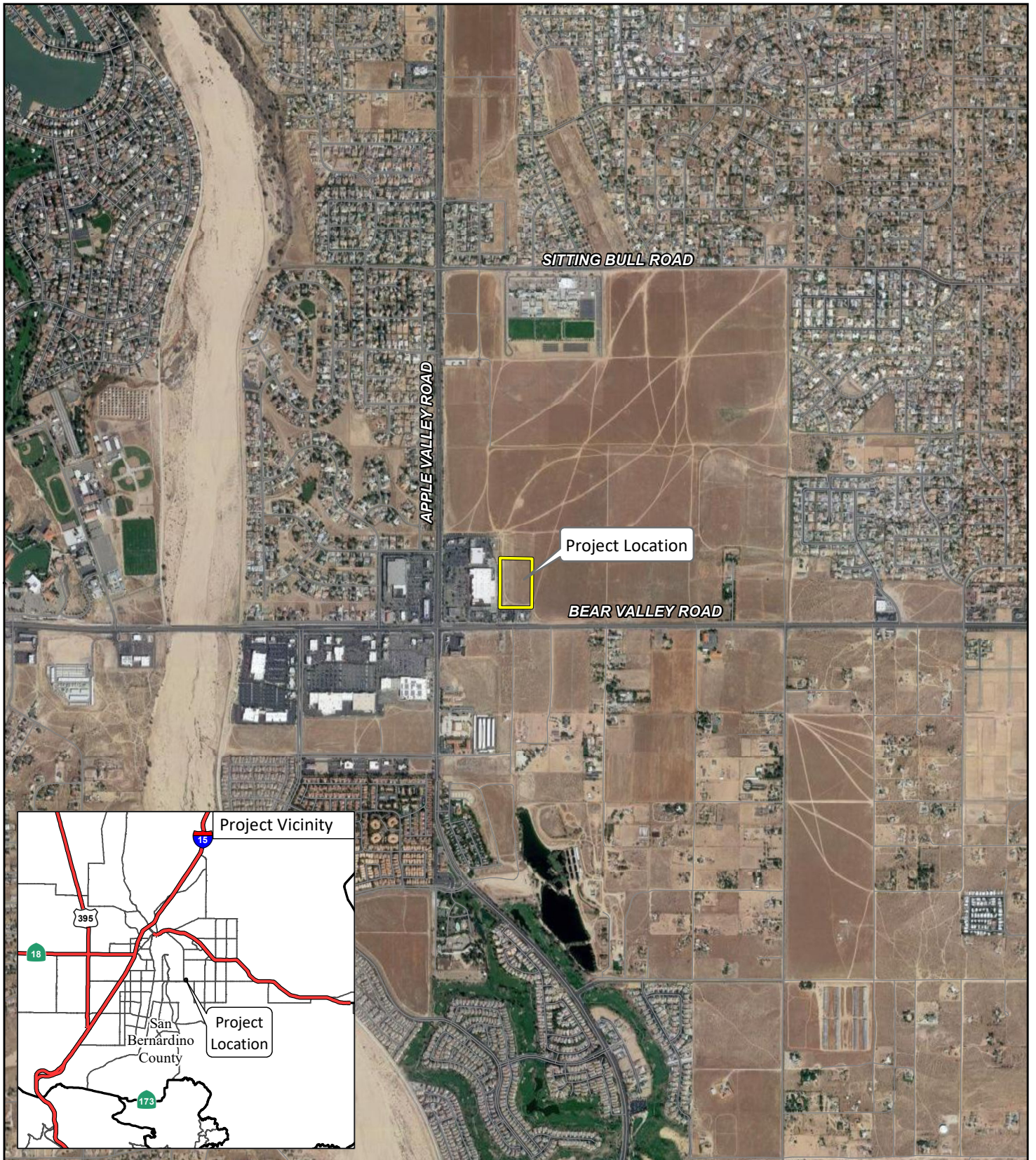
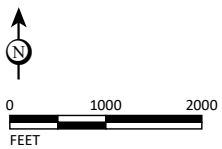


FIGURE 1

LSA



SOURCE: ESRI Streetmap, 2013; Google Earth, 2020.

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*Apple Valley Commercial Project
 Focused Traffic Study
 Regional and Project Location*

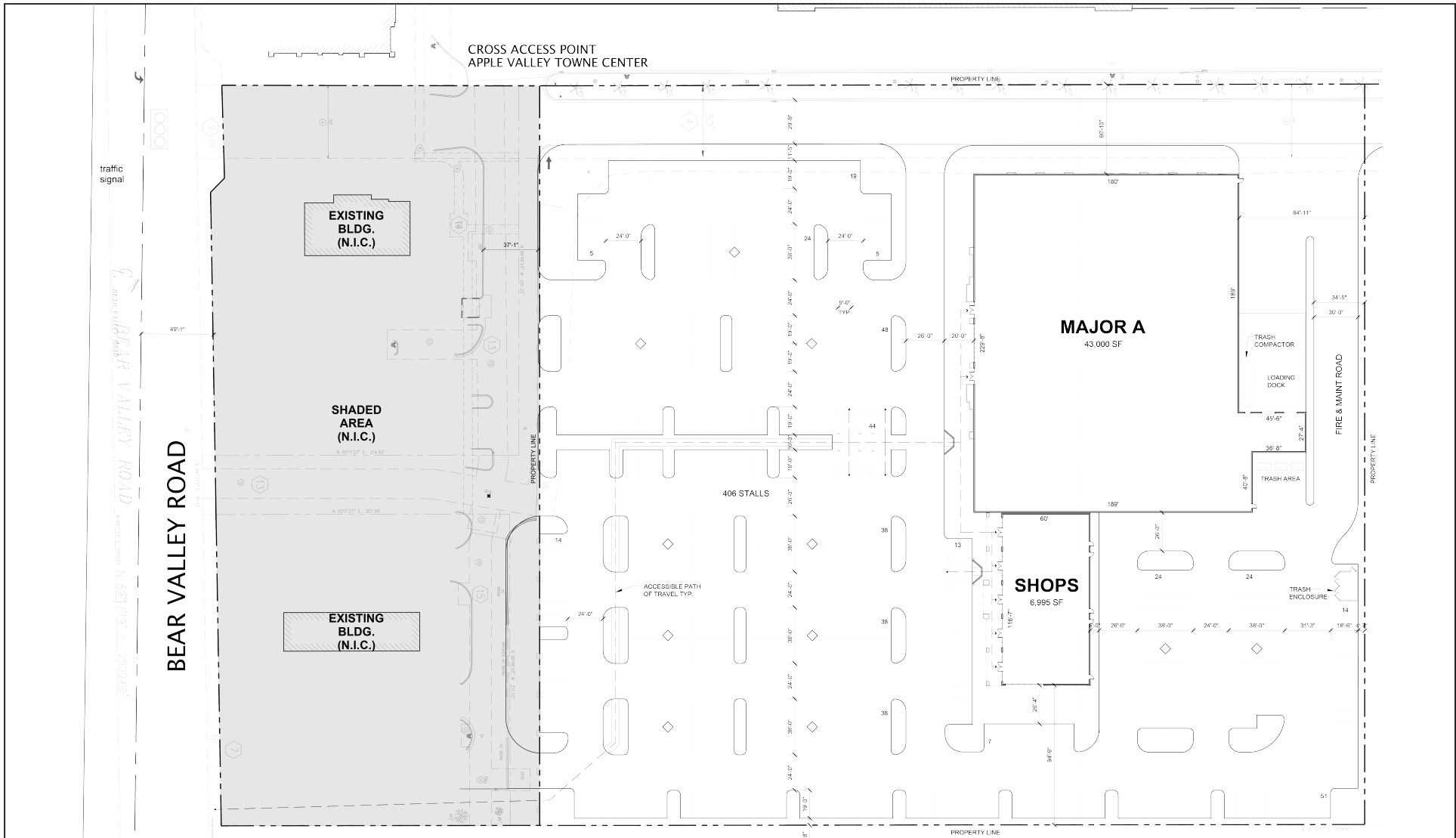
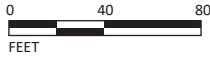


FIGURE 2



Apple Valley Commercial Center
 Focused Traffic Study

Conceptual Site Plan



LSA

LEGEND

- Project Site
- Study Intersection
- Driveway
- Existing Development

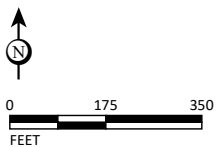


FIGURE 3

*Apple Valley Commercial Project
 Focused Traffic Study
 Study Area Intersections*

SOURCE: ESRI Streetmap, 2013.

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FIGURE 4



XX
PM Peak Hour Trips

----- Driveway

Apple Valley Commercial Project
Focused Traffic Study
Project Pass-By Trip Assignment

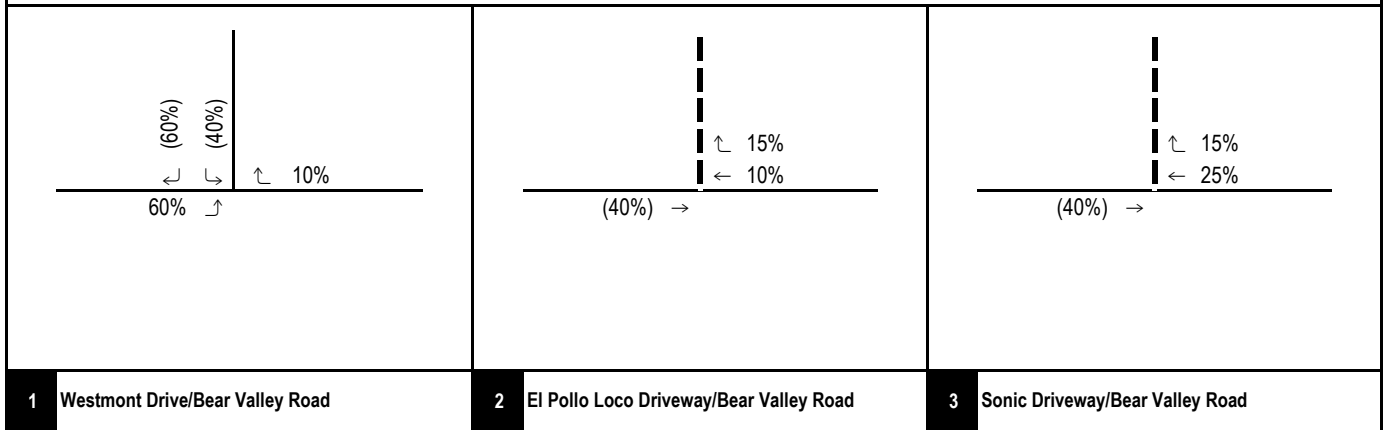
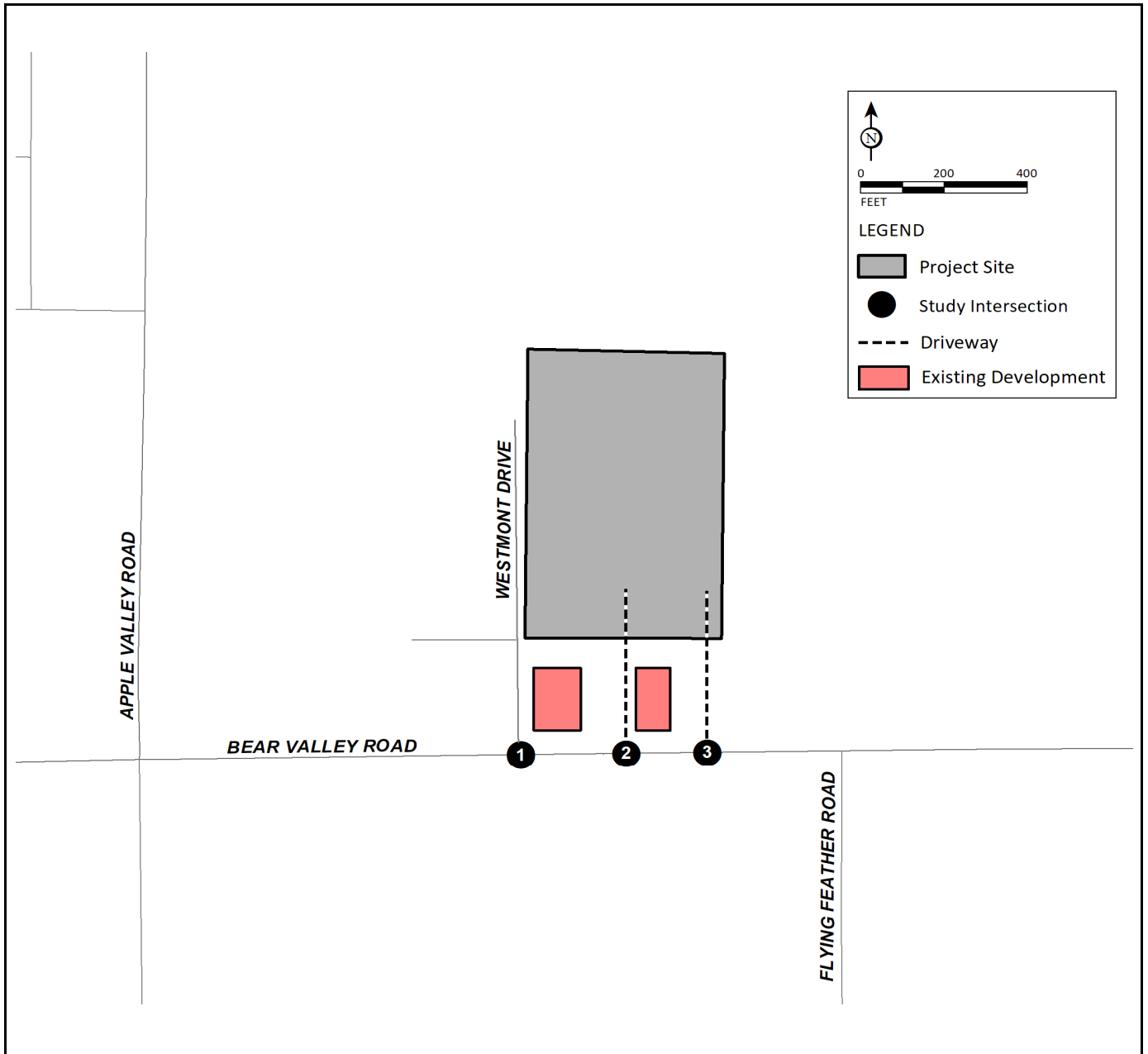


FIGURE 5

LSA

XX% (YY%)

Inbound% (Outbound%) Distribution

----- Driveway

*Apple Valley Commercial Project
Focused Traffic Study*

Project Trip Distribution

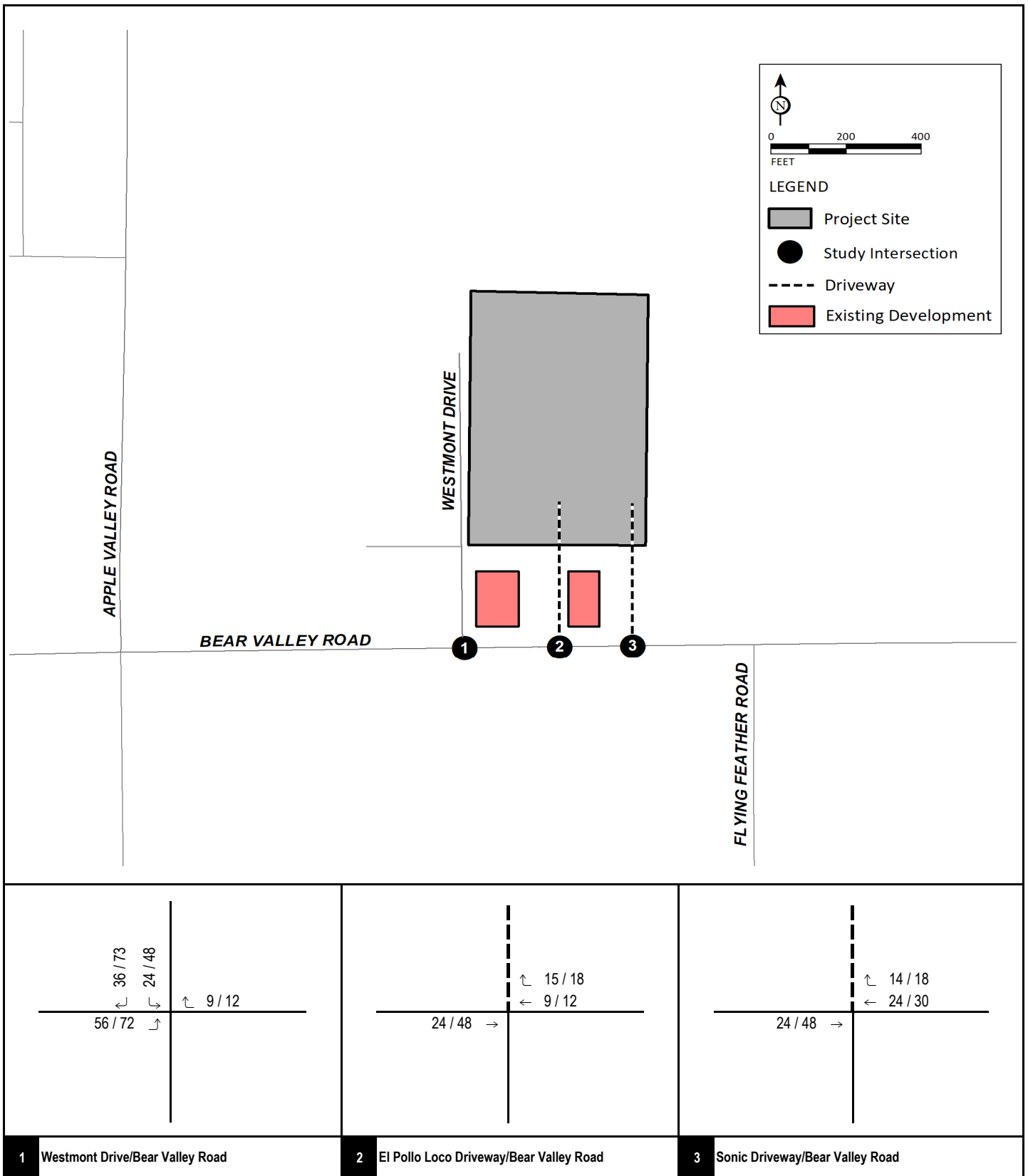


FIGURE 6

LSA

XX / YY
AM / PM Peak Hour Trips

----- Driveway

*Apple Valley Commercial Project
Focused Traffic Study*

Project Net Trip Assignment

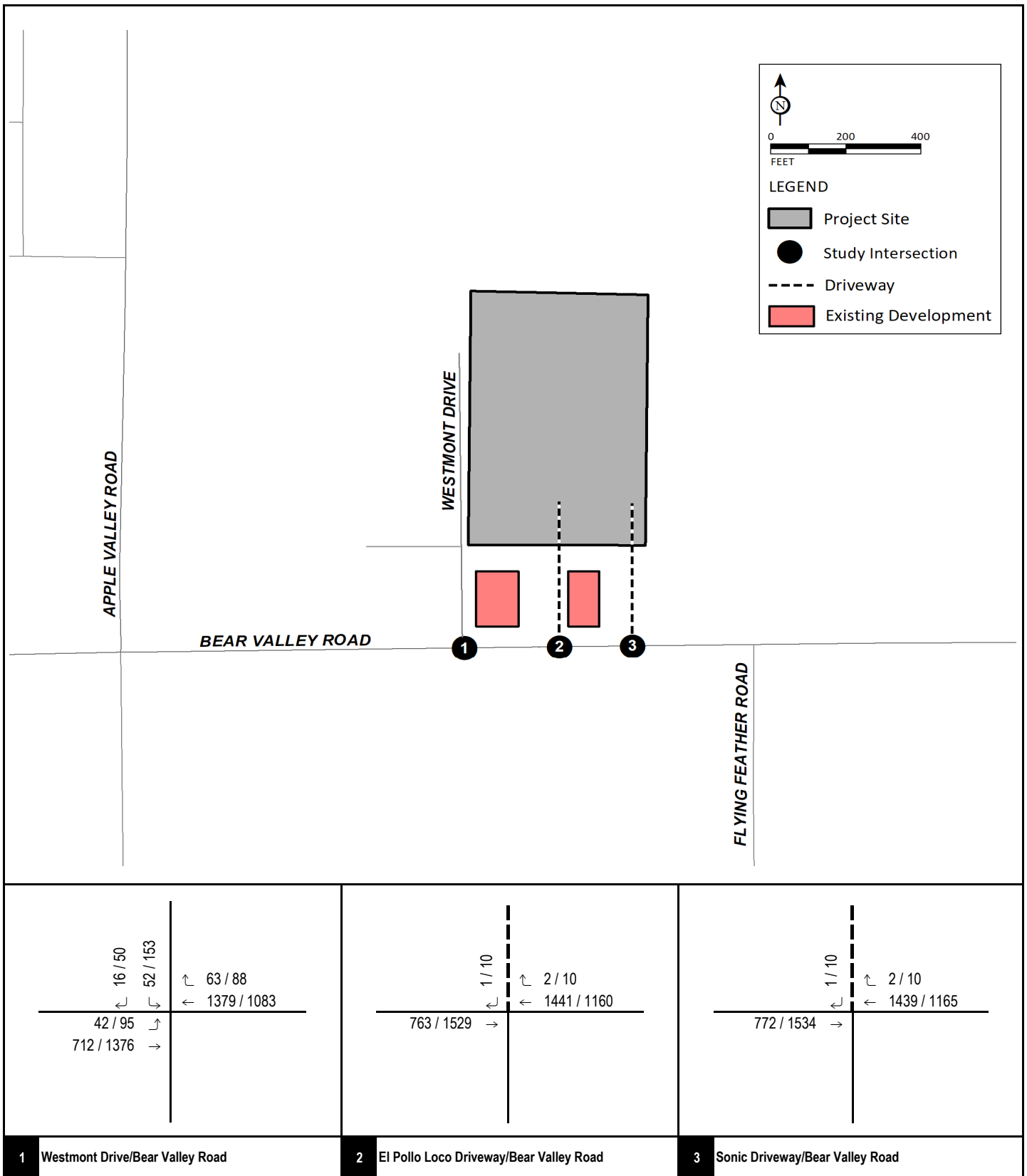


FIGURE 7

LSA

XXXX / YYYY
AM / PM Peak Hour Trips

----- Driveway

Apple Valley Commercial Project
Focused Traffic Study

Existing Peak Hour Traffic Volumes

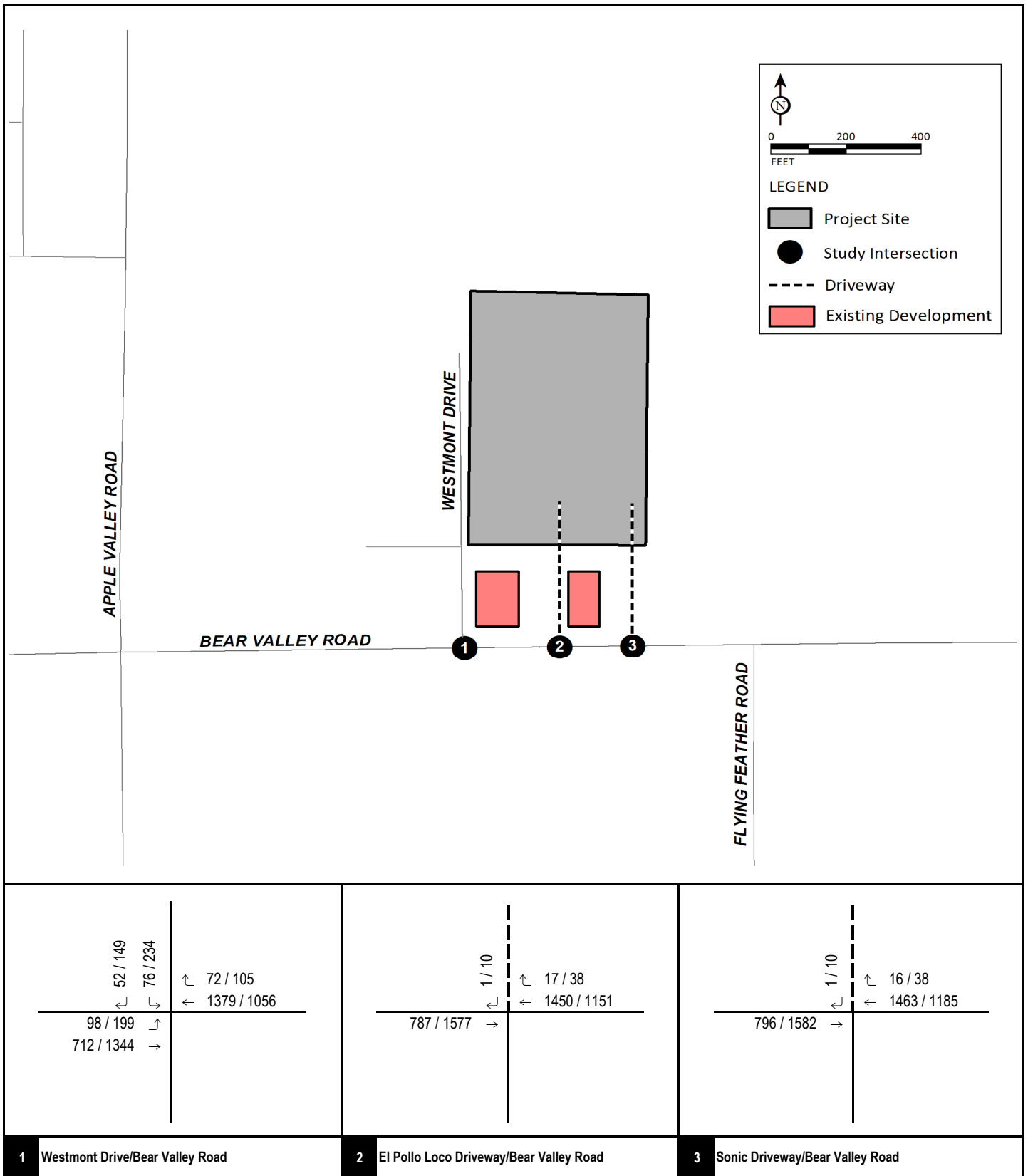


FIGURE 8

LSA

XXXX / YYYY
AM / PM Peak Hour Trips

----- Driveway

*Apple Valley Commercial Project
Focused Traffic Study*

Existing with Project Peak Hour Traffic Volumes

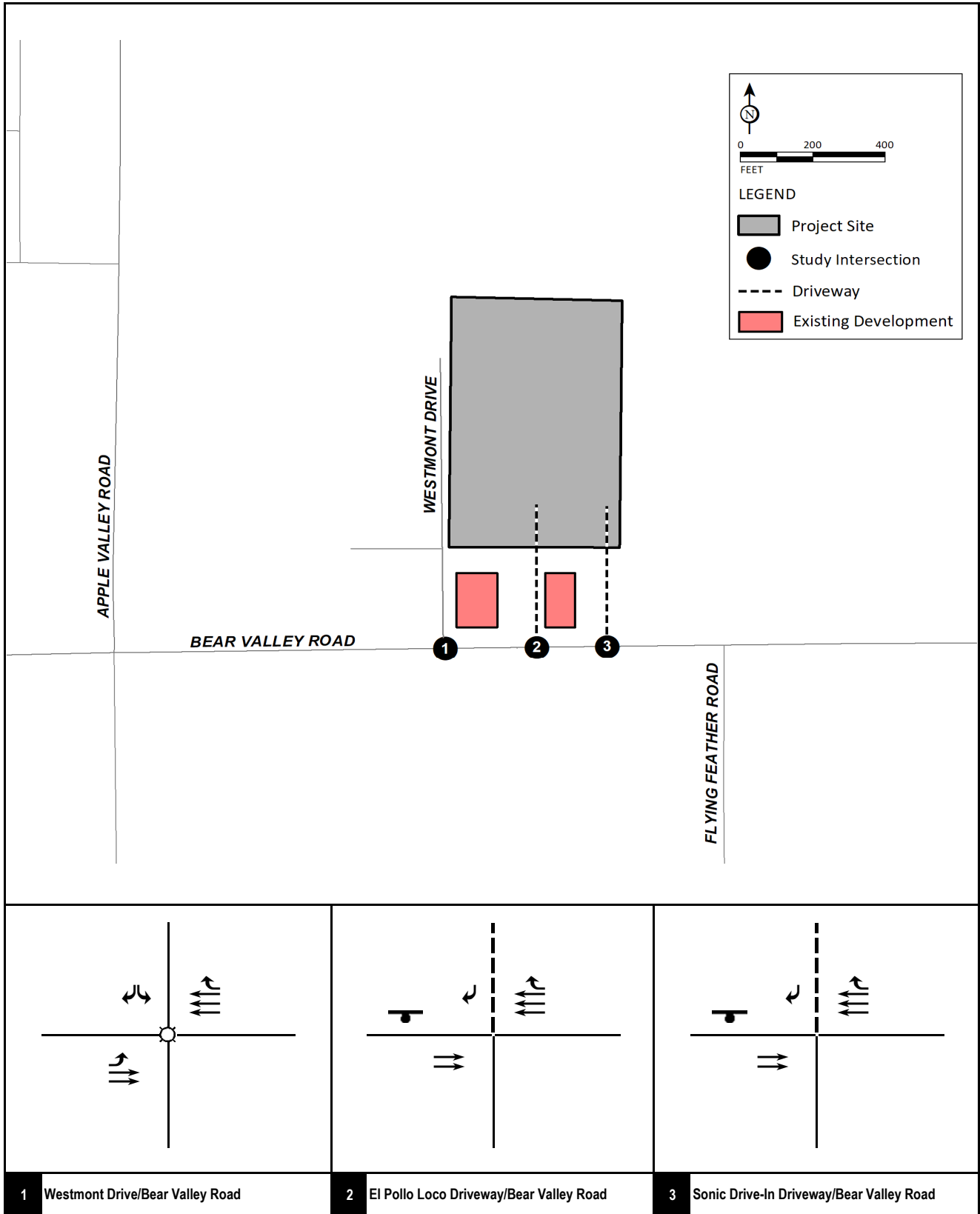


FIGURE 9

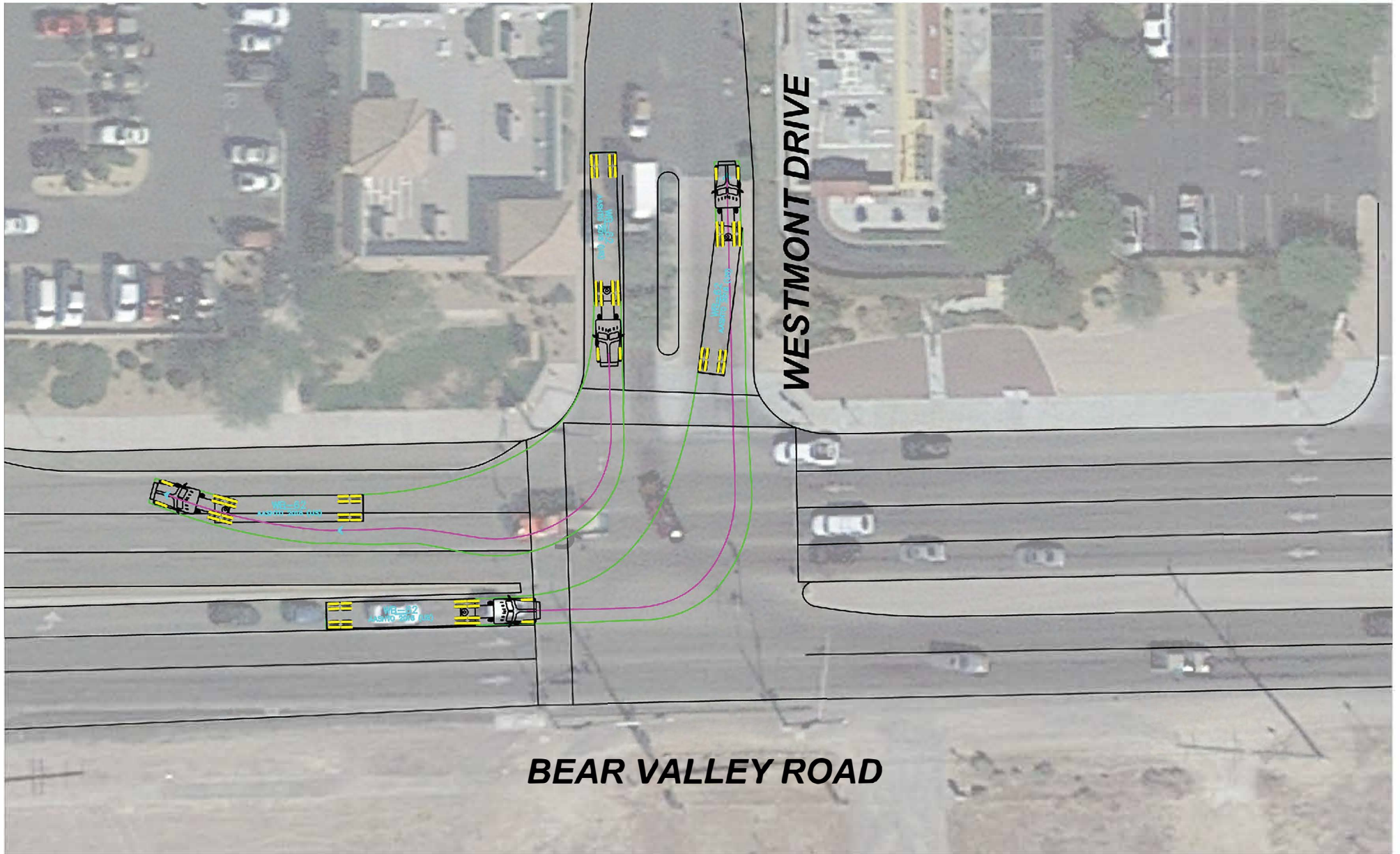
LSA

Legend

- ⊙ Stop Sign
- ⊙ Signal
- Driveway

*Apple Valley Commercial Project
 Focused Traffic Study*

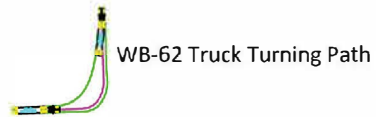
Existing Study Intersection Geometrics and Traffic Control



LSA

LEGEND

— Existing Lane



0 25 50
FEET

SOURCE: Google Earth, 2018.

R:\R0621011\Traffic\Files from client\CAD\002106115 SP_Apple Valley Concept Plan 5\Truck Turning.dwg (C7/21/2021)

FIGURE 10

*Apple Valley Commercial
Focused Traffic Study*

(WB-62) Truck Turning Template
Westmont Drive-Bear Valley Road (Towards Apple Valley Road)

TABLES

Table A - Project Trip Generation

Land Use	Units	A.M. Peak Hour			P.M. Peak Hour			Daily
		In	Out	Total	In	Out	Total	
Major A - Supermarket	43.000 TSF							
Trips/Unit ¹		2.29	1.53	3.82	4.71	4.53	9.24	106.78
Trip Generation		98	66	164	203	195	398	4,592
Internal Capture ²		(8)	(9)	(17)	(26)	(20)	(46)	(315)
Total External Trips		90	57	147	177	175	352	4,277
Pass-By Trips ³		0	0	0	(64)	(63)	(127)	(1,540)
Net External Trips		90	57	147	113	112	225	2,737
Shops - Retail	6.995 TSF							
Trips/Unit ⁴		0.58	0.36	0.94	1.83	1.98	3.81	37.75
Trip Generation		4	3	7	13	14	27	264
Internal Capture ²		0	0	0	(2)	(1)	(3)	(15)
Total External Trips		4	3	7	11	13	24	249
Pass-By Trips ⁵		0	0	0	(4)	(4)	(8)	(85)
Net External Trips		4	3	7	7	9	16	164
Total Gross Trip Generation		102	69	171	216	209	425	4,856
Total Internal Trips		(8)	(9)	(17)	(28)	(21)	(49)	(330)
Total Net External Trips		94	60	154	188	188	376	4,526
Total Pass-By Trips		0	0	0	(68)	(67)	(135)	(1,625)
Total Net Trip Generation		94	60	154	120	121	241	2,901

Notes:

TSF = Thousand Square Feet

¹ Rates from the Institute of Transportation Engineers *Trip Generation Manual* (10th Edition), Land Use 850 - "Supermarket", Setting/Location - "General Urban/Suburban."

² Internal capture rates obtained using the National Cooperative Highway Research Program (NCHRP) 8-51 Internal Trip Capture Estimation Tool.

³ Pass-by rates from the ITE Trip Generation Handbook, 3rd Edition for Land Use 850 - "Supermarket." A pass-by rate of 36% was used for the p.m. peak hour. No a.m. peak and daily pass-by rates are provided; therefore, the p.m. pass-by rate was used as the daily pass-by rate.

⁴ Rates from the Institute of Transportation Engineers Trip Generation Manual (10th Edition), Land Use 820 - "Shopping Center", Setting/Location - "General Urban/Suburban."

⁵ Pass-by rates from the ITE Trip Generation Handbook, 3rd Edition for Land Use 820 - "Shopping Center." A pass-by rate of 34% was used for the p.m. peak hour. No a.m. peak and daily pass-by rates are provided; therefore, the p.m. pass-by rate was used as the daily pass-by rate.

Table B – Intersection Level of Service Definitions

LOS	Description
A	Traffic operations with a control delay of 10 seconds per vehicle or less and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is exceptionally favorable or the cycle length is very short. If LOS A is the result of favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.
B	Traffic operations with control delay between 10 seconds per vehicle and 20 seconds per vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is highly favorable or the cycle length is short. More vehicles stop than with LOS A.
C	Traffic operations with control delay between 20 and 35 seconds per vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when progression is favorable or the cycle length is moderate. Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of the insufficient capacity during the cycle) may begin to appear at this level. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.
D	Traffic operations with control delay between 35 and 55 seconds per vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high and either progression is ineffective or the cycle length is long. Many vehicles stop and individual cycle failures are noticeable.
E	Traffic operations with control delay between 55 and 80 seconds per vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent.
F	Traffic operations with control delay exceeding 80 seconds per vehicle or a volume-to-capacity ratio greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.

Source: Highway Capacity Manual (6th Edition)

**Table C - Level of Service Criteria for
Unsignalized and Signalized Intersections**

Level of Service	Unsignalized Intersection Average Delay per Vehicle (sec.)	Signalized Intersection Average Delay per Vehicle (sec.)
A	≤ 10	≤ 10
B	> 10 and ≤ 15	> 10 and ≤ 20
C	> 15 and ≤ 25	> 20 and ≤ 35
D	> 25 and ≤ 35	> 35 and ≤ 55
E	> 35 and ≤ 50	> 55 and ≤ 80
F	> 50	> 80

Table D - Existing Intersection Levels of Service

Intersection	Jurisdiction	LOS Standard	Control	Without Project				Control	With Project				A.M. Peak Hour Increase in Delay (sec.)	P.M. Peak Hour Increase in Delay (sec.)	Exceeds LOS Standard
				A.M. Peak Hour		P.M. Peak Hour			A.M. Peak Hour		P.M. Peak Hour				
				Delay (sec.)	LOS	Delay (sec.)	LOS		Delay (sec.)	LOS	Delay (sec.)	LOS			
1 . Westmont Drive/Bear Valley Road	Town of Apple Valley	D	Signal	11.2	B	13.3	B	Signal	13.4	B	16.4	B	2.2	3.1	No
2 . El Pollo Loco Driveway/Bear Valley Road	Town of Apple Valley	D	OWSC	16.7	C	14.6	B	OWSC	16.7	C	14.5	B	0.0	-0.1	No
3 . Sonic Driveway/Bear Valley Road	Town of Apple Valley	D	OWSC	16.8	C	14.7	B	OWSC	17.0	C	14.9	B	0.2	0.2	No

Notes:

OWSC = One-Way Stop Control; LOS = Level of Service

Delay = Average control delay in seconds (For OWSC and TWSC intersections, reported delay is for worst-case movement).

* Exceeds LOS Standard

Table E - Existing Intersection Queuing Analysis

Intersection	Movement	Storage Length ¹ (ft/ln)	Without Project ²		With Project ²	
			AM	PM	AM	PM
1 . Westmont Drive/Bear Valley Road Signal	SBL	175	50	120	70	175
	SBR	75	15	30	30	65
	EBL	165	50	90	95	155
	WBR	430	20	30	25	35
2 . El Pollo Loco Driveway/Bear Valley Road OWSC	SBR	50	0	30	15	30
3 . Sonic Driveway/Bear Valley Road OWSC	SBR	50	0	30	0	25

Notes:

ft/ln = feet per lane

OWSC = One-Way Stop Control

EB = Eastbound; WB = Westbound; NB = Northbound; SB = Southbound

L = Left; T = Through; R = Right

Bold = Queue exceeds available storage.

¹ Storage length for all movements obtained from Google Earth measurements.

² All queues reported are 95th percentile queues. Queues for signalized intersections have been reported from Synchro, while queues for unsignalized intersections have been reported from SimTraffic.

APPENDIX A

NCHRP Internal Capture Tool

NCHRP 8-51 Internal Trip Capture Estimation Tool			
Project Name:	Apple Valley Commercial Project	Organization:	LSA Associates Inc
Project Location:	Apple Valley, CA	Performed By:	
Scenario Description:		Date:	
Analysis Year:		Checked By:	
Analysis Period:	AM Street Peak Hour	Date:	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips		
	ITE LUCs ¹	Quantity	Units	Total	Entering	Exiting
Office				0		
Retail	820, 850	12,00,43.00	TSF	171	102	69
Restaurant	934	4,347	TSF	175	89	86
Cinema/Entertainment				0		
Residential				0		
Hotel				0		
All Other Land Uses ²				0		
Total				346	191	155

Table 2-A: Mode Split and Vehicle Occupancy Estimates						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail	1.00	0%	0%	1.00	0%	0%
Restaurant	1.00	0%	0%	1.00	0%	0%
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses ²						

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		9	0	0	0
Restaurant	0	8		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	346	191	155
Internal Capture Percentage	10%	9%	11%
External Vehicle-Trips ³	312	174	138
External Transit-Trips ⁴	0	0	0
External Non-Motorized Trips ⁴	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	8%	13%
Restaurant	10%	9%
Cinema/Entertainment	N/A	N/A
Residential	N/A	N/A
Hotel	N/A	N/A

¹Land Use Codes (LUCs) from *Trip Generation Informational Report*, published by the Institute of Transportation Engineers.

²Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

³Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

⁴Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

Project Name:	Apple Valley Commercial Project
Analysis Period:	AM Street Peak Hour

Apple Valley, CA

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends						
Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	0	0	1.00	0	0
Retail	1.00	102	102	1.00	69	69
Restaurant	1.00	89	89	1.00	86	86
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	0	0	1.00	0	0
Hotel	1.00	0	0	1.00	0	0

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	20		9	0	10	0
Restaurant	27	12		0	3	3
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	0	0	0	0	

Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		33	20	0	0	0
Retail	0		45	0	0	0
Restaurant	0	8		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	17	18	0		0
Hotel	0	4	5	0	0	

Table 9-A (D): Internal and External Trips Summary (Entering Trips)						
Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	0	0	0	0	0	0
Retail	8	94	102	94	0	0
Restaurant	9	80	89	80	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	0	0	0	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	0	0	0	0	0

Table 9-A (O): Internal and External Trips Summary (Exiting Trips)						
Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	0	0	0	0	0	0
Retail	9	60	69	60	0	0
Restaurant	8	78	86	78	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	0	0	0	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	0	0	0	0	0

¹Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

²Person-Trips

³Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

NCHRP 8-51 Internal Trip Capture Estimation Tool			
Project Name:	Apple Valley Commercial Project	Organization:	LSA Associates Inc
Project Location:	Apple Valley, CA	Performed By:	
Scenario Description:		Date:	
Analysis Year:		Checked By:	
Analysis Period:	PM Street Peak Hour	Date:	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips		
	ITE LUCs ¹	Quantity	Units	Total	Entering	Exiting
Office				0		
Retail	820, 850	12.00,43.00	TSF	425	216	209
Restaurant	934	4.347	TSF	142	74	68
Cinema/Entertainment				0		
Residential				0		
Hotel				0		
All Other Land Uses ²				0		
Total				567	290	277

Table 2-P: Mode Split and Vehicle Occupancy Estimates						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail	1.00	0%	0%	1.00	0%	0%
Restaurant	1.00	0%	0%	1.00	0%	0%
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses ²						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		21	0	0	0
Restaurant	0	28		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	567	290	277
Internal Capture Percentage	17%	17%	18%
External Vehicle-Trips ³	469	241	228
External Transit-Trips ⁴	0	0	0
External Non-Motorized Trips ⁴	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	13%	10%
Restaurant	28%	41%
Cinema/Entertainment	N/A	N/A
Residential	N/A	N/A
Hotel	N/A	N/A

¹Land Use Codes (LUCs) from *Trip Generation Informational Report*, published by the Institute of Transportation Engineers.

²Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

³Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

⁴Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

Project Name:	Apple Valley Commercial Project
Analysis Period:	Apple Valley Commercial Project

Apple Valley, CA

Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	0	0	1.00	0	0
Retail	1.00	216	216	1.00	209	209
Restaurant	1.00	74	74	1.00	68	68
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	0	0	1.00	0	0
Hotel	1.00	0	0	1.00	0	0

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	4		61	8	54	10
Restaurant	2	28		5	12	5
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	0	0	0	0	

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		17	1	0	0	0
Retail	0		21	0	0	0
Restaurant	0	108		0	0	0
Cinema/Entertainment	0	9	2		0	0
Residential	0	22	10	0		0
Hotel	0	4	4	0	0	

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	0	0	0	0	0	0
Retail	28	188	216	188	0	0
Restaurant	21	53	74	53	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	0	0	0	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	0	0	0	0	0

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	0	0	0	0	0	0
Retail	21	188	209	188	0	0
Restaurant	28	40	68	40	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	0	0	0	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	0	0	0	0	0

¹Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

²Person-Trips

³Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

APPENDIX B

Traffic Count Sheets

City of Apple Valley
 N/S: Westmont Drive
 E/W: Bear Valley Road
 Weather: Clear

File Name : 01_APV_Westmont_BV AM
 Site Code : 00321196
 Start Date : 5/6/2021
 Page No : 1

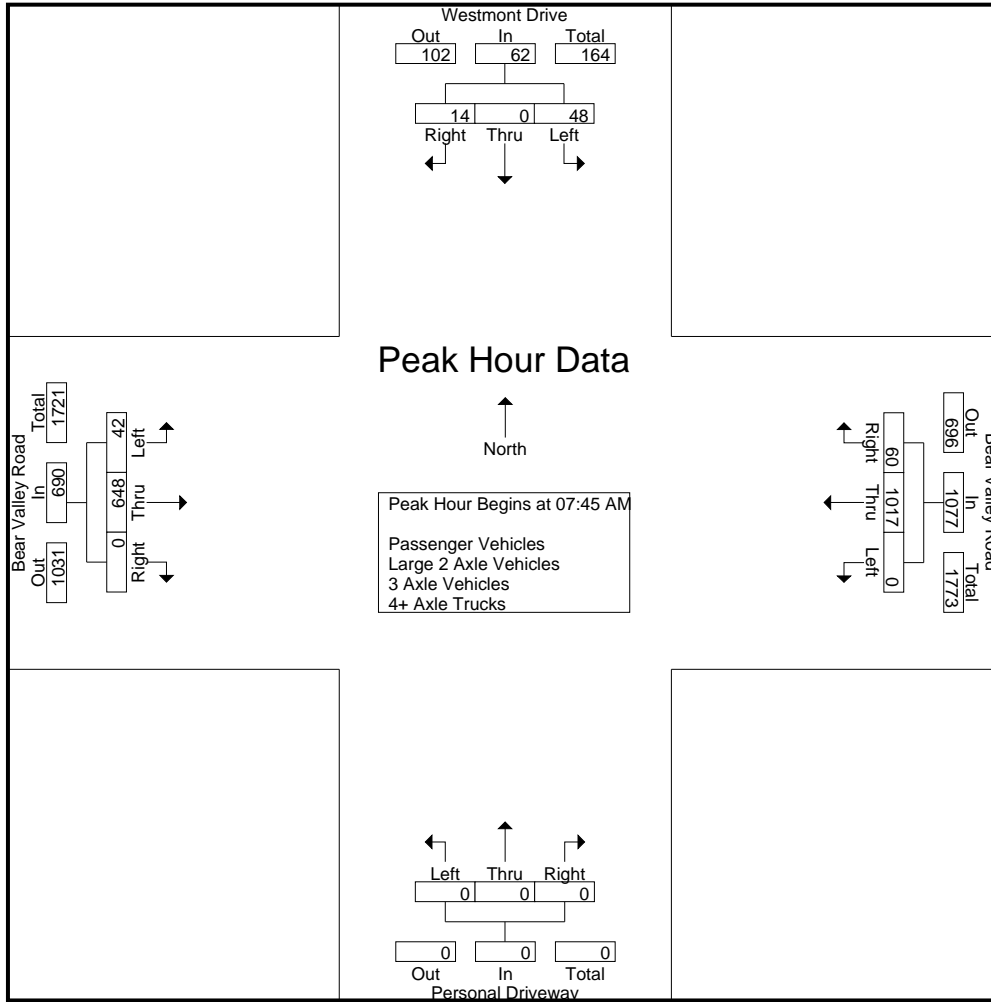
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Westmont Drive Southbound				Bear Valley Road Westbound				Personal Driveway Northbound				Bear Valley Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	4	0	0	4	0	202	5	207	0	0	0	0	3	123	0	126	337
07:15 AM	2	0	3	5	0	243	4	247	0	0	0	0	6	131	0	137	389
07:30 AM	9	0	3	12	0	257	10	267	0	0	0	0	5	146	0	151	430
07:45 AM	6	0	2	8	0	322	14	336	0	0	0	0	8	173	0	181	525
Total	21	0	8	29	0	1024	33	1057	0	0	0	0	22	573	0	595	1681
08:00 AM	12	0	4	16	0	213	10	223	0	0	0	0	11	159	0	170	409
08:15 AM	10	0	3	13	0	219	19	238	0	0	0	0	10	167	0	177	428
08:30 AM	20	0	5	25	0	263	17	280	0	0	0	0	13	149	0	162	467
08:45 AM	9	0	2	11	0	306	16	322	0	0	0	0	14	172	0	186	519
Total	51	0	14	65	0	1001	62	1063	0	0	0	0	48	647	0	695	1823
Grand Total	72	0	22	94	0	2025	95	2120	0	0	0	0	70	1220	0	1290	3504
Apprch %	76.6	0	23.4		0	95.5	4.5		0	0	0		5.4	94.6	0		
Total %	2.1	0	0.6	2.7	0	57.8	2.7	60.5	0	0	0	0	2	34.8	0	36.8	
Passenger Vehicles	69	0	19	88	0	1920	90	2010	0	0	0	0	68	1128	0	1196	3294
% Passenger Vehicles	95.8	0	86.4	93.6	0	94.8	94.7	94.8	0	0	0	0	97.1	92.5	0	92.7	94
Large 2 Axle Vehicles	1	0	1	2	0	64	5	69	0	0	0	0	2	44	0	46	117
% Large 2 Axle Vehicles	1.4	0	4.5	2.1	0	3.2	5.3	3.3	0	0	0	0	2.9	3.6	0	3.6	3.3
3 Axle Vehicles	1	0	1	2	0	7	0	7	0	0	0	0	0	9	0	9	18
% 3 Axle Vehicles	1.4	0	4.5	2.1	0	0.3	0	0.3	0	0	0	0	0	0.7	0	0.7	0.5
4+ Axle Trucks	1	0	1	2	0	34	0	34	0	0	0	0	0	39	0	39	75
% 4+ Axle Trucks	1.4	0	4.5	2.1	0	1.7	0	1.6	0	0	0	0	0	3.2	0	3	2.1

Start Time	Westmont Drive Southbound				Bear Valley Road Westbound				Personal Driveway Northbound				Bear Valley Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	6	0	2	8	0	322	14	336	0	0	0	0	8	173	0	181	525
08:00 AM	12	0	4	16	0	213	10	223	0	0	0	0	11	159	0	170	409
08:15 AM	10	0	3	13	0	219	19	238	0	0	0	0	10	167	0	177	428
08:30 AM	20	0	5	25	0	263	17	280	0	0	0	0	13	149	0	162	467
Total Volume	48	0	14	62	0	1017	60	1077	0	0	0	0	42	648	0	690	1829
% App. Total	77.4	0	22.6		0	94.4	5.6		0	0	0		6.1	93.9	0		
PHF	.600	.000	.700	.620	.000	.790	.789	.801	.000	.000	.000	.000	.808	.936	.000	.953	.871

City of Apple Valley
 N/S: Westmont Drive
 E/W: Bear Valley Road
 Weather: Clear

File Name : 01_APV_Westmont_BV AM
 Site Code : 00321196
 Start Date : 5/6/2021
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	08:00 AM				07:45 AM				07:00 AM				08:00 AM			
+0 mins.	12	0	4	16	0	322	14	336	0	0	0	0	11	159	0	170
+15 mins.	10	0	3	13	0	213	10	223	0	0	0	0	10	167	0	177
+30 mins.	20	0	5	25	0	219	19	238	0	0	0	0	13	149	0	162
+45 mins.	9	0	2	11	0	263	17	280	0	0	0	0	14	172	0	186
Total Volume	51	0	14	65	0	1017	60	1077	0	0	0	0	48	647	0	695
% App. Total	78.5	0	21.5		0	94.4	5.6		0	0	0		6.9	93.1	0	
PHF	.638	.000	.700	.650	.000	.790	.789	.801	.000	.000	.000	.000	.857	.940	.000	.934

City of Apple Valley
 N/S: Westmont Drive
 E/W: Bear Valley Road
 Weather: Clear

File Name : 01_APV_Westmont_BV AM
 Site Code : 00321196
 Start Date : 5/6/2021
 Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Westmont Drive Southbound				Bear Valley Road Westbound				Personal Driveway Northbound				Bear Valley Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	4	0	0	4	0	196	4	200	0	0	0	0	2	117	0	119	323
07:15 AM	2	0	2	4	0	225	4	229	0	0	0	0	5	117	0	122	355
07:30 AM	9	0	3	12	0	244	9	253	0	0	0	0	5	137	0	142	407
07:45 AM	6	0	1	7	0	309	13	322	0	0	0	0	8	159	0	167	496
Total	21	0	6	27	0	974	30	1004	0	0	0	0	20	530	0	550	1581
08:00 AM	12	0	3	15	0	201	9	210	0	0	0	0	11	145	0	156	381
08:15 AM	9	0	3	12	0	208	18	226	0	0	0	0	10	158	0	168	406
08:30 AM	18	0	5	23	0	248	17	265	0	0	0	0	13	135	0	148	436
08:45 AM	9	0	2	11	0	289	16	305	0	0	0	0	14	160	0	174	490
Total	48	0	13	61	0	946	60	1006	0	0	0	0	48	598	0	646	1713
Grand Total	69	0	19	88	0	1920	90	2010	0	0	0	0	68	1128	0	1196	3294
Apprch %	78.4	0	21.6		0	95.5	4.5		0	0	0		5.7	94.3	0		
Total %	2.1	0	0.6	2.7	0	58.3	2.7	61	0	0	0	0	2.1	34.2	0	36.3	

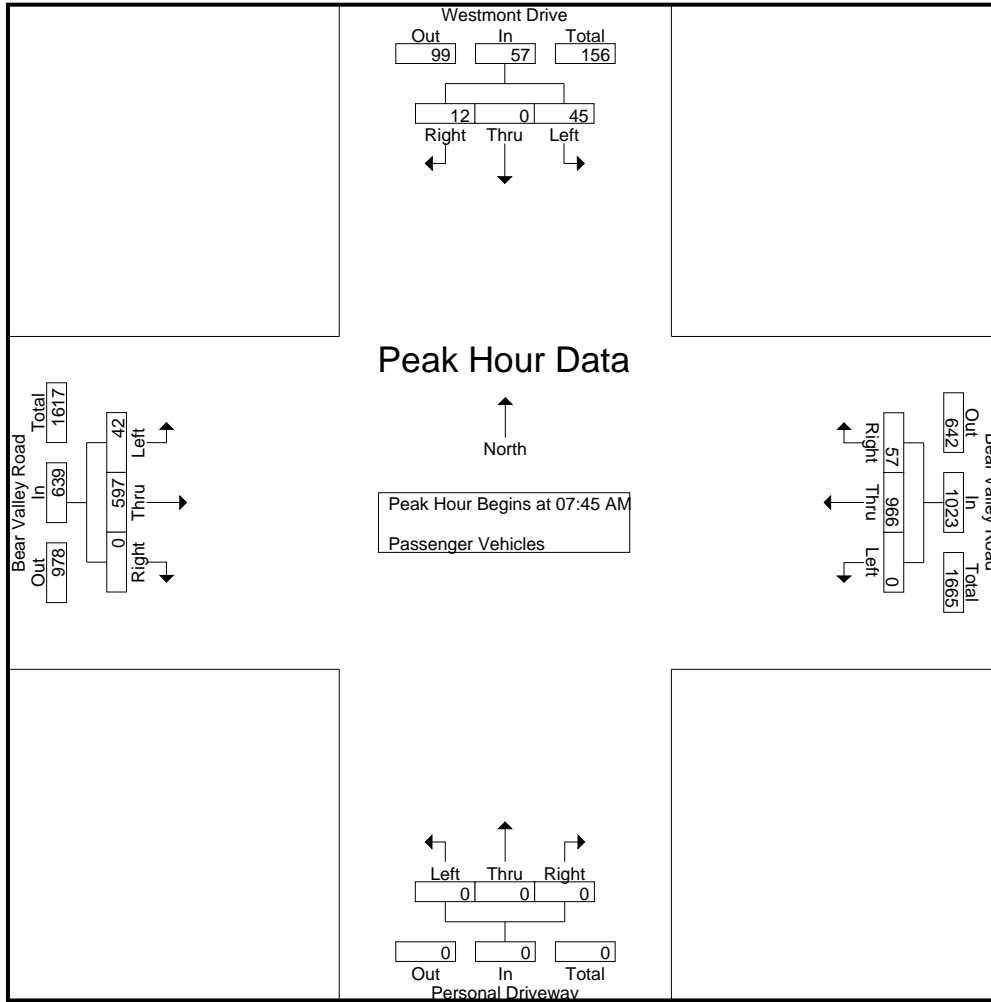
Start Time	Westmont Drive Southbound				Bear Valley Road Westbound				Personal Driveway Northbound				Bear Valley Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:45 AM	6	0	1	7	0	309	13	322	0	0	0	0	8	159	0	167	496
08:00 AM	12	0	3	15	0	201	9	210	0	0	0	0	11	145	0	156	381
08:15 AM	9	0	3	12	0	208	18	226	0	0	0	0	10	158	0	168	406
08:30 AM	18	0	5	23	0	248	17	265	0	0	0	0	13	135	0	148	436
Total Volume	45	0	12	57	0	966	57	1023	0	0	0	0	42	597	0	639	1719
% App. Total	78.9	0	21.1		0	94.4	5.6		0	0	0		6.6	93.4	0		
PHF	.625	.000	.600	.620	.000	.782	.792	.794	.000	.000	.000	.000	.808	.939	.000	.951	.866

Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:45 AM

City of Apple Valley
 N/S: Westmont Drive
 E/W: Bear Valley Road
 Weather: Clear

File Name : 01_APV_Westmont_BV AM
 Site Code : 00321196
 Start Date : 5/6/2021
 Page No : 2



Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:45 AM				07:45 AM				07:45 AM				07:45 AM			
+0 mins.	6	0	1	7	0	309	13	322	0	0	0	0	8	159	0	167
+15 mins.	12	0	3	15	0	201	9	210	0	0	0	0	11	145	0	156
+30 mins.	9	0	3	12	0	208	18	226	0	0	0	0	10	158	0	168
+45 mins.	18	0	5	23	0	248	17	265	0	0	0	0	13	135	0	148
Total Volume	45	0	12	57	0	966	57	1023	0	0	0	0	42	597	0	639
% App. Total	78.9	0	21.1		0	94.4	5.6		0	0	0		6.6	93.4	0	
PHF	.625	.000	.600	.620	.000	.782	.792	.794	.000	.000	.000	.000	.808	.939	.000	.951

City of Apple Valley
 N/S: Westmont Drive
 E/W: Bear Valley Road
 Weather: Clear

File Name : 01_APV_Westmont_BV AM
 Site Code : 00321196
 Start Date : 5/6/2021
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

Start Time	Westmont Drive Southbound				Bear Valley Road Westbound				Personal Driveway Northbound				Bear Valley Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	2	1	3	0	0	0	0	1	4	0	5	8
07:15 AM	0	0	0	0	0	14	0	14	0	0	0	0	1	3	0	4	18
07:30 AM	0	0	0	0	0	8	1	9	0	0	0	0	0	1	0	1	10
07:45 AM	0	0	0	0	0	7	1	8	0	0	0	0	0	7	0	7	15
Total	0	0	0	0	0	31	3	34	0	0	0	0	2	15	0	17	51
08:00 AM	0	0	1	1	0	7	1	8	0	0	0	0	0	9	0	9	18
08:15 AM	0	0	0	0	0	7	1	8	0	0	0	0	0	6	0	6	14
08:30 AM	1	0	0	1	0	10	0	10	0	0	0	0	0	7	0	7	18
08:45 AM	0	0	0	0	0	9	0	9	0	0	0	0	0	7	0	7	16
Total	1	0	1	2	0	33	2	35	0	0	0	0	0	29	0	29	66
Grand Total	1	0	1	2	0	64	5	69	0	0	0	0	2	44	0	46	117
Apprch %	50	0	50		0	92.8	7.2		0	0	0		4.3	95.7	0		
Total %	0.9	0	0.9	1.7	0	54.7	4.3	59	0	0	0	0	1.7	37.6	0	39.3	

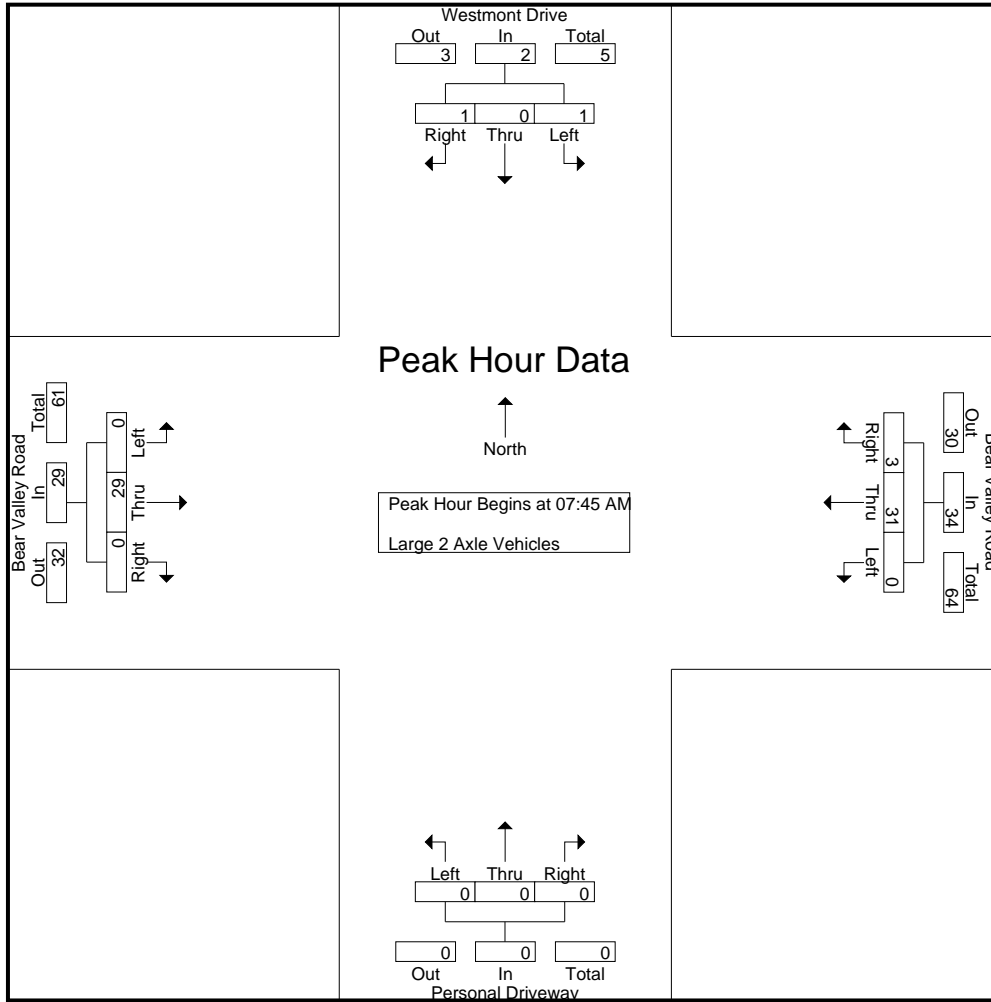
Start Time	Westmont Drive Southbound				Bear Valley Road Westbound				Personal Driveway Northbound				Bear Valley Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:45 AM	0	0	0	0	0	7	1	8	0	0	0	0	0	7	0	7	15
08:00 AM	0	0	1	1	0	7	1	8	0	0	0	0	0	9	0	9	18
08:15 AM	0	0	0	0	0	7	1	8	0	0	0	0	0	6	0	6	14
08:30 AM	1	0	0	1	0	10	0	10	0	0	0	0	0	7	0	7	18
Total Volume	1	0	1	2	0	31	3	34	0	0	0	0	0	29	0	29	65
% App. Total	50	0	50		0	91.2	8.8		0	0	0		0	100	0		
PHF	.250	.000	.250	.500	.000	.775	.750	.850	.000	.000	.000	.000	.000	.806	.000	.806	.903

Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:45 AM

City of Apple Valley
 N/S: Westmont Drive
 E/W: Bear Valley Road
 Weather: Clear

File Name : 01_APV_Westmont_BV AM
 Site Code : 00321196
 Start Date : 5/6/2021
 Page No : 2



Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:45 AM				07:45 AM				07:45 AM				07:45 AM			
+0 mins.	0	0	0	0	0	7	1	8	0	0	0	0	0	7	0	7
+15 mins.	0	0	1	1	0	7	1	8	0	0	0	0	0	9	0	9
+30 mins.	0	0	0	0	0	7	1	8	0	0	0	0	0	6	0	6
+45 mins.	1	0	0	1	0	10	0	10	0	0	0	0	0	7	0	7
Total Volume	1	0	1	2	0	31	3	34	0	0	0	0	0	29	0	29
% App. Total	50	0	50		0	91.2	8.8		0	0	0		0	100	0	
PHF	.250	.000	.250	.500	.000	.775	.750	.850	.000	.000	.000	.000	.000	.806	.000	.806

City of Apple Valley
 N/S: Westmont Drive
 E/W: Bear Valley Road
 Weather: Clear

File Name : 01_APV_Westmont_BV AM
 Site Code : 00321196
 Start Date : 5/6/2021
 Page No : 1

Groups Printed- 3 Axle Vehicles

Start Time	Westmont Drive Southbound				Bear Valley Road Westbound				Personal Driveway Northbound				Bear Valley Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
07:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	3	0	3	4
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
07:45 AM	0	0	1	1	0	1	0	1	0	0	0	0	0	1	0	1	3
Total	0	0	1	1	0	3	0	3	0	0	0	0	0	7	0	7	11
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	1	0	0	1	0	2	0	2	0	0	0	0	0	2	0	2	5
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
Total	1	0	0	1	0	4	0	4	0	0	0	0	0	2	0	2	7
Grand Total	1	0	1	2	0	7	0	7	0	0	0	0	0	9	0	9	18
Apprch %	50	0	50		0	100	0		0	0	0		0	100	0		
Total %	5.6	0	5.6	11.1	0	38.9	0	38.9	0	0	0	0	0	50	0	50	

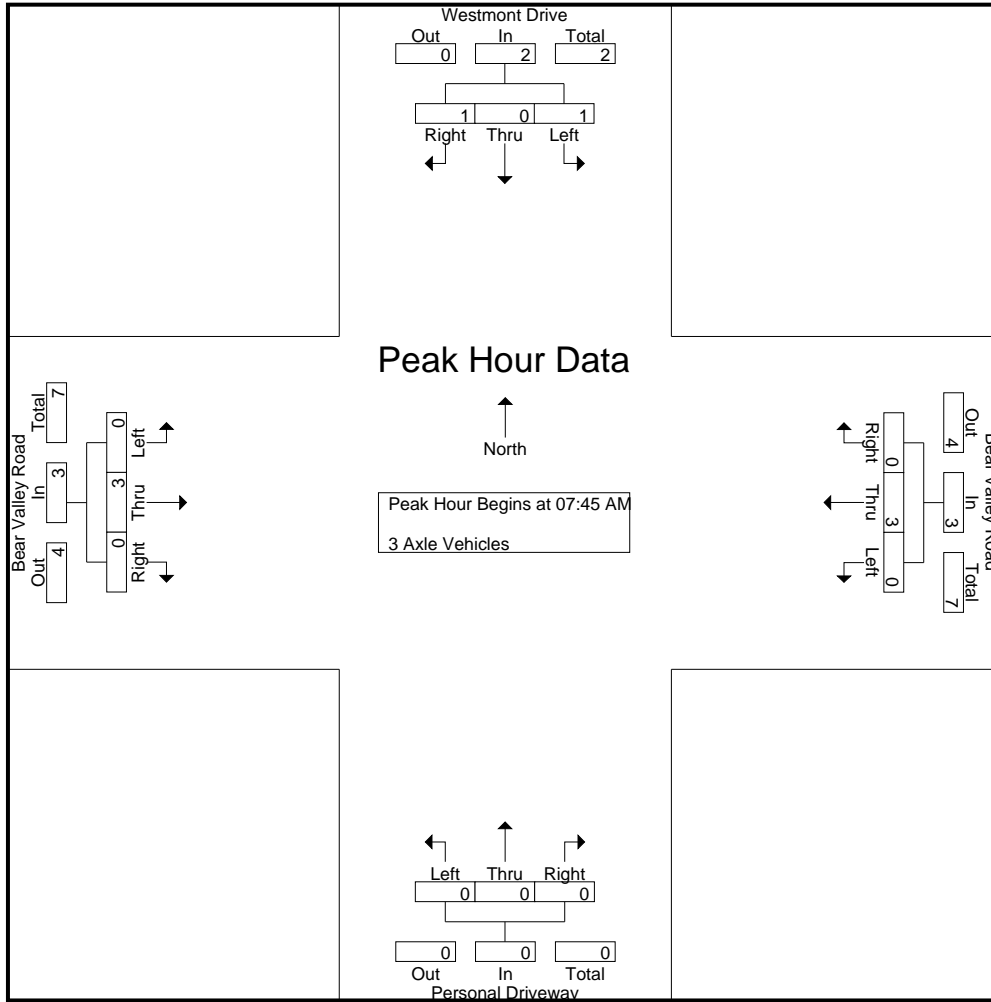
Start Time	Westmont Drive Southbound				Bear Valley Road Westbound				Personal Driveway Northbound				Bear Valley Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:45 AM	0	0	1	1	0	1	0	1	0	0	0	0	0	1	0	1	3
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	1	0	0	1	0	2	0	2	0	0	0	0	0	2	0	2	5
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	1	0	1	2	0	3	0	3	0	0	0	0	0	3	0	3	8
% App. Total	50	0	50		0	100	0		0	0	0		0	100	0		
PHF	.250	.000	.250	.500	.000	.375	.000	.375	.000	.000	.000	.000	.000	.375	.000	.375	.400

Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:45 AM

City of Apple Valley
 N/S: Westmont Drive
 E/W: Bear Valley Road
 Weather: Clear

File Name : 01_APV_Westmont_BV AM
 Site Code : 00321196
 Start Date : 5/6/2021
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Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:45 AM				07:45 AM				07:45 AM				07:45 AM			
+0 mins.	0	0	1	1	0	1	0	1	0	0	0	0	0	1	0	1
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	1	0	0	1	0	2	0	2	0	0	0	0	0	2	0	2
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	1	0	1	2	0	3	0	3	0	0	0	0	0	3	0	3
% App. Total	50	0	50		0	100	0		0	0	0		0	100	0	
PHF	.250	.000	.250	.500	.000	.375	.000	.375	.000	.000	.000	.000	.000	.375	.000	.375

City of Apple Valley
 N/S: Westmont Drive
 E/W: Bear Valley Road
 Weather: Clear

File Name : 01_APV_Westmont_BV AM
 Site Code : 00321196
 Start Date : 5/6/2021
 Page No : 1

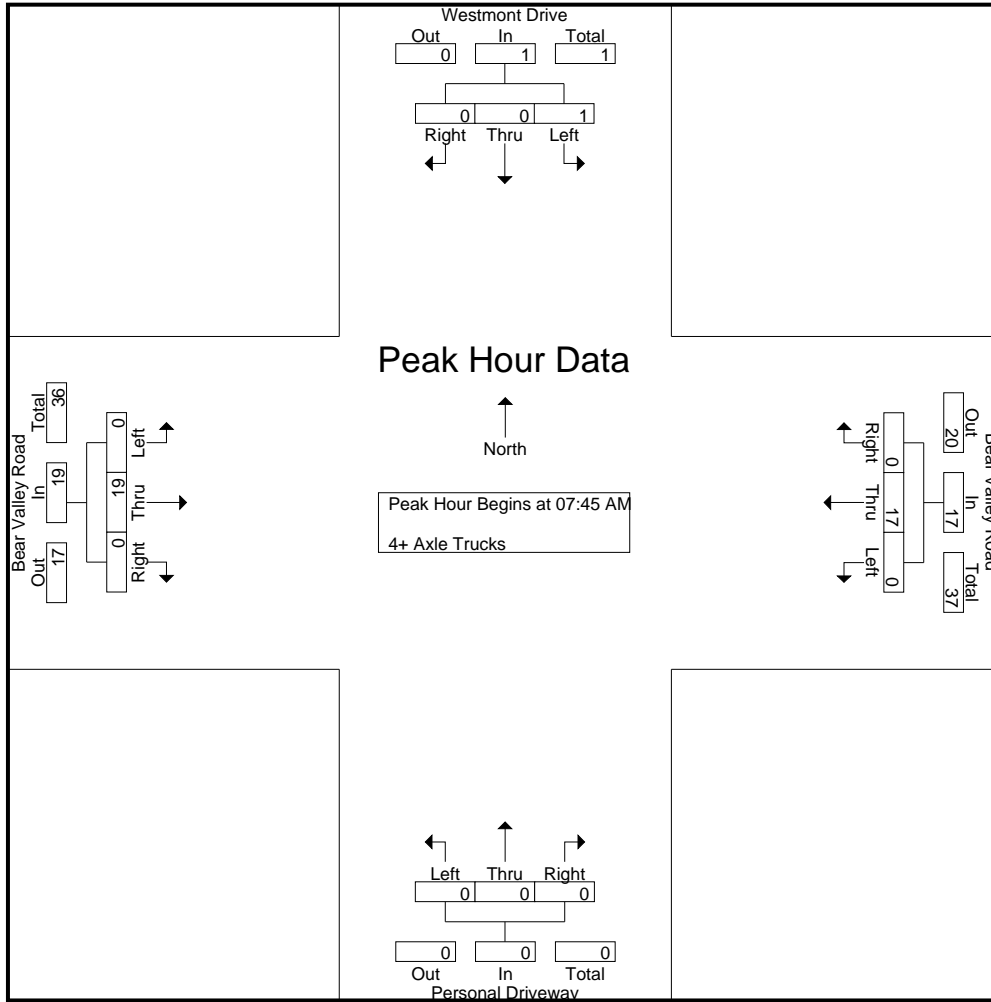
Groups Printed- 4+ Axle Trucks

Start Time	Westmont Drive Southbound				Bear Valley Road Westbound				Personal Driveway Northbound				Bear Valley Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	3
07:15 AM	0	0	1	1	0	3	0	3	0	0	0	0	0	8	0	8	12
07:30 AM	0	0	0	0	0	5	0	5	0	0	0	0	0	7	0	7	12
07:45 AM	0	0	0	0	0	5	0	5	0	0	0	0	0	6	0	6	11
Total	0	0	1	1	0	16	0	16	0	0	0	0	0	21	0	21	38
08:00 AM	0	0	0	0	0	5	0	5	0	0	0	0	0	5	0	5	10
08:15 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
08:30 AM	1	0	0	1	0	5	0	5	0	0	0	0	0	7	0	7	13
08:45 AM	0	0	0	0	0	6	0	6	0	0	0	0	0	5	0	5	11
Total	1	0	0	1	0	18	0	18	0	0	0	0	0	18	0	18	37
Grand Total	1	0	1	2	0	34	0	34	0	0	0	0	0	39	0	39	75
Apprch %	50	0	50		0	100	0		0	0	0		0	100	0		
Total %	1.3	0	1.3	2.7	0	45.3	0	45.3	0	0	0	0	0	52	0	52	

Start Time	Westmont Drive Southbound				Bear Valley Road Westbound				Personal Driveway Northbound				Bear Valley Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	0	0	0	0	5	0	5	0	0	0	0	0	6	0	6	11
08:00 AM	0	0	0	0	0	5	0	5	0	0	0	0	0	5	0	5	10
08:15 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
08:30 AM	1	0	0	1	0	5	0	5	0	0	0	0	0	7	0	7	13
Total Volume	1	0	0	1	0	17	0	17	0	0	0	0	0	19	0	19	37
% App. Total	100	0	0		0	100	0		0	0	0		0	100	0		
PHF	.250	.000	.000	.250	.000	.850	.000	.850	.000	.000	.000	.000	.000	.679	.000	.679	.712

City of Apple Valley
 N/S: Westmont Drive
 E/W: Bear Valley Road
 Weather: Clear

File Name : 01_APV_Westmont_BV AM
 Site Code : 00321196
 Start Date : 5/6/2021
 Page No : 2



Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:45 AM				07:45 AM				07:45 AM				07:45 AM			
+0 mins.	0	0	0	0	0	5	0	5	0	0	0	0	0	6	0	6
+15 mins.	0	0	0	0	0	5	0	5	0	0	0	0	0	5	0	5
+30 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1
+45 mins.	1	0	0	1	0	5	0	5	0	0	0	0	0	7	0	7
Total Volume	1	0	0	1	0	17	0	17	0	0	0	0	0	19	0	19
% App. Total	100	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0
PHF	.250	.000	.000	.250	.000	.850	.000	.850	.000	.000	.000	.000	.000	.679	.000	.679

City of Apple Valley
 N/S: Westmont Drive
 E/W: Bear Valley Road
 Weather: Clear

File Name : 01_APV_Westmont_BV PM
 Site Code : 00321196
 Start Date : 5/6/2021
 Page No : 1

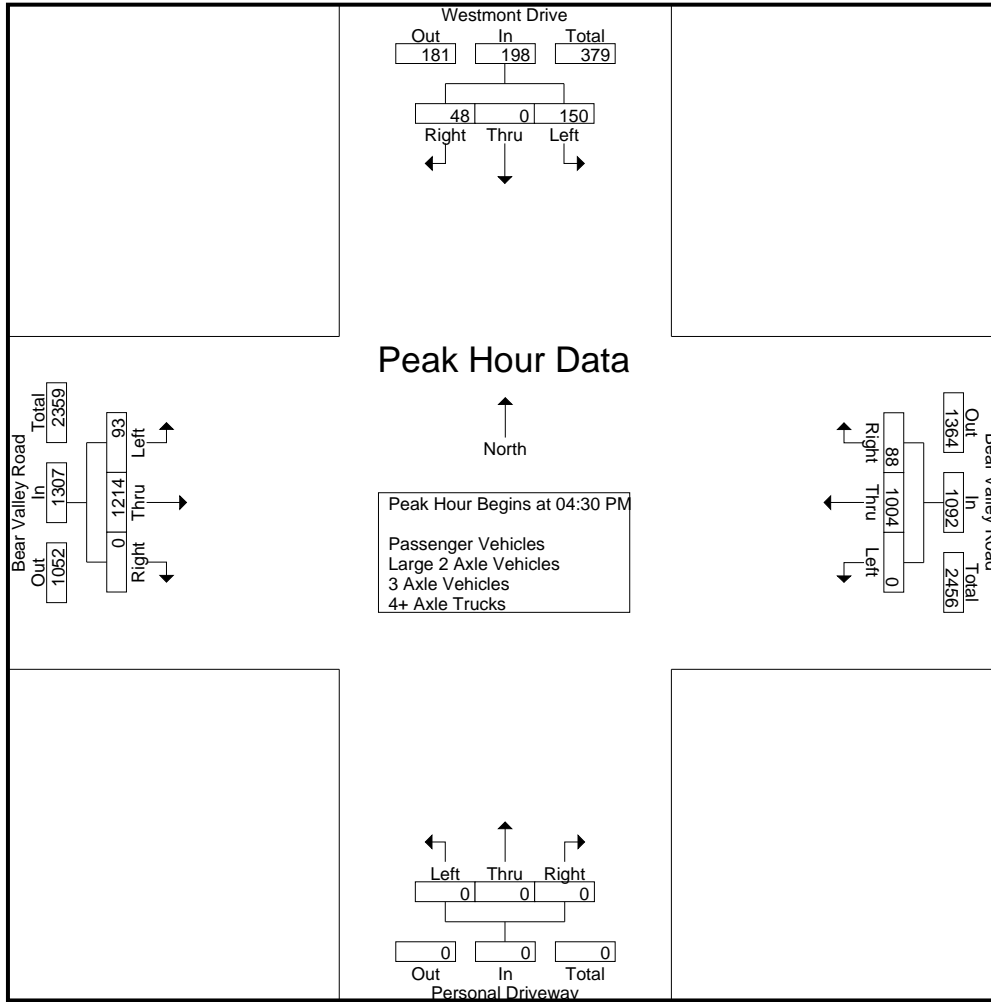
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Westmont Drive Southbound				Bear Valley Road Westbound				Personal Driveway Northbound				Bear Valley Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	44	0	16	60	0	276	31	307	0	0	0	0	22	294	0	316	683
04:15 PM	37	0	19	56	0	237	17	254	0	0	0	0	33	290	0	323	633
04:30 PM	32	0	14	46	0	240	36	276	0	0	0	0	29	288	0	317	639
04:45 PM	33	0	12	45	0	236	13	249	0	0	0	0	18	322	0	340	634
Total	146	0	61	207	0	989	97	1086	0	0	0	0	102	1194	0	1296	2589
05:00 PM	44	0	15	59	0	265	22	287	0	0	0	0	25	303	0	328	674
05:15 PM	41	0	7	48	0	263	17	280	0	0	0	0	21	301	0	322	650
05:30 PM	37	0	11	48	0	271	17	288	0	0	0	0	24	214	0	238	574
05:45 PM	42	0	18	60	0	227	22	249	0	0	0	0	18	204	0	222	531
Total	164	0	51	215	0	1026	78	1104	0	0	0	0	88	1022	0	1110	2429
Grand Total	310	0	112	422	0	2015	175	2190	0	0	0	0	190	2216	0	2406	5018
Apprch %	73.5	0	26.5		0	92	8		0	0	0		7.9	92.1	0		
Total %	6.2	0	2.2	8.4	0	40.2	3.5	43.6	0	0	0	0	3.8	44.2	0	47.9	
Passenger Vehicles	310	0	111	421	0	1957	174	2131	0	0	0	0	189	2172	0	2361	4913
% Passenger Vehicles	100	0	99.1	99.8	0	97.1	99.4	97.3	0	0	0	0	99.5	98	0	98.1	97.9
Large 2 Axle Vehicles	0	0	0	0	0	35	1	36	0	0	0	0	0	29	0	29	65
% Large 2 Axle Vehicles	0	0	0	0	0	1.7	0.6	1.6	0	0	0	0	0	1.3	0	1.2	1.3
3 Axle Vehicles	0	0	0	0	0	9	0	9	0	0	0	0	0	1	0	1	10
% 3 Axle Vehicles	0	0	0	0	0	0.4	0	0.4	0	0	0	0	0	0	0	0	0.2
4+ Axle Trucks	0	0	1	1	0	14	0	14	0	0	0	0	1	14	0	15	30
% 4+ Axle Trucks	0	0	0.9	0.2	0	0.7	0	0.6	0	0	0	0	0.5	0.6	0	0.6	0.6

Start Time	Westmont Drive Southbound				Bear Valley Road Westbound				Personal Driveway Northbound				Bear Valley Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	32	0	14	46	0	240	36	276	0	0	0	0	29	288	0	317	639
04:45 PM	33	0	12	45	0	236	13	249	0	0	0	0	18	322	0	340	634
05:00 PM	44	0	15	59	0	265	22	287	0	0	0	0	25	303	0	328	674
05:15 PM	41	0	7	48	0	263	17	280	0	0	0	0	21	301	0	322	650
Total Volume	150	0	48	198	0	1004	88	1092	0	0	0	0	93	1214	0	1307	2597
% App. Total	75.8	0	24.2		0	91.9	8.1		0	0	0		7.1	92.9	0		
PHF	.852	.000	.800	.839	.000	.947	.611	.951	.000	.000	.000	.000	.802	.943	.000	.961	.963

City of Apple Valley
 N/S: Westmont Drive
 E/W: Bear Valley Road
 Weather: Clear

File Name : 01_APV_Westmont_BV PM
 Site Code : 00321196
 Start Date : 5/6/2021
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	05:00 PM				04:45 PM				04:00 PM				04:15 PM			
+0 mins.	44	0	15	59	0	236	13	249	0	0	0	0	33	290	0	323
+15 mins.	41	0	7	48	0	265	22	287	0	0	0	0	29	288	0	317
+30 mins.	37	0	11	48	0	263	17	280	0	0	0	0	18	322	0	340
+45 mins.	42	0	18	60	0	271	17	288	0	0	0	0	25	303	0	328
Total Volume	164	0	51	215	0	1035	69	1104	0	0	0	0	105	1203	0	1308
% App. Total	76.3	0	23.7		0	93.8	6.2		0	0	0		8	92	0	
PHF	.932	.000	.708	.896	.000	.955	.784	.958	.000	.000	.000	.000	.795	.934	.000	.962

City of Apple Valley
 N/S: Westmont Drive
 E/W: Bear Valley Road
 Weather: Clear

File Name : 01_APV_Westmont_BV PM
 Site Code : 00321196
 Start Date : 5/6/2021
 Page No : 1

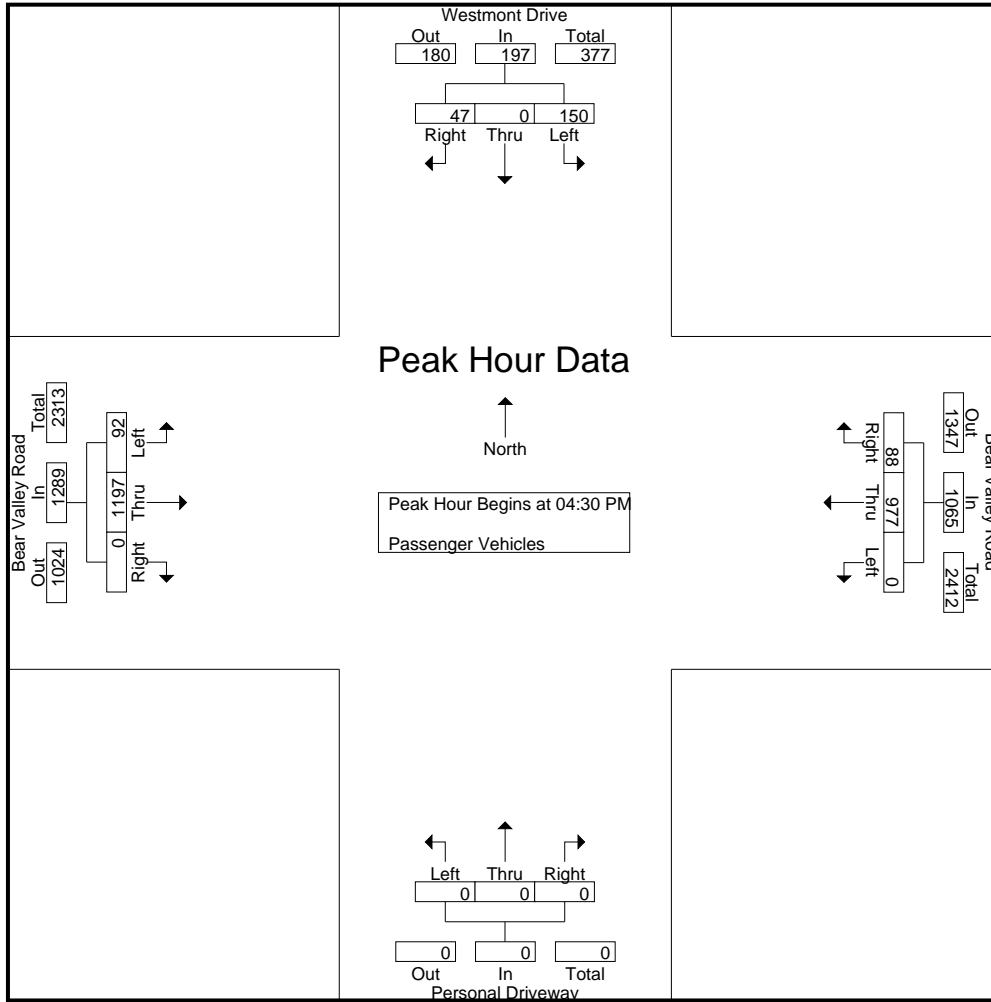
Groups Printed- Passenger Vehicles

Start Time	Westmont Drive Southbound				Bear Valley Road Westbound				Personal Driveway Northbound				Bear Valley Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	44	0	16	60	0	260	31	291	0	0	0	0	22	287	0	309	660
04:15 PM	37	0	19	56	0	228	16	244	0	0	0	0	33	279	0	312	612
04:30 PM	32	0	14	46	0	229	36	265	0	0	0	0	28	280	0	308	619
04:45 PM	33	0	12	45	0	228	13	241	0	0	0	0	18	319	0	337	623
Total	146	0	61	207	0	945	96	1041	0	0	0	0	101	1165	0	1266	2514
05:00 PM	44	0	14	58	0	264	22	286	0	0	0	0	25	299	0	324	668
05:15 PM	41	0	7	48	0	256	17	273	0	0	0	0	21	299	0	320	641
05:30 PM	37	0	11	48	0	268	17	285	0	0	0	0	24	212	0	236	569
05:45 PM	42	0	18	60	0	224	22	246	0	0	0	0	18	197	0	215	521
Total	164	0	50	214	0	1012	78	1090	0	0	0	0	88	1007	0	1095	2399
Grand Total	310	0	111	421	0	1957	174	2131	0	0	0	0	189	2172	0	2361	4913
Apprch %	73.6	0	26.4		0	91.8	8.2		0	0	0		8	92	0		
Total %	6.3	0	2.3	8.6	0	39.8	3.5	43.4	0	0	0	0	3.8	44.2	0	48.1	

Start Time	Westmont Drive Southbound				Bear Valley Road Westbound				Personal Driveway Northbound				Bear Valley Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	32	0	14	46	0	229	36	265	0	0	0	0	28	280	0	308	619
04:45 PM	33	0	12	45	0	228	13	241	0	0	0	0	18	319	0	337	623
05:00 PM	44	0	14	58	0	264	22	286	0	0	0	0	25	299	0	324	668
05:15 PM	41	0	7	48	0	256	17	273	0	0	0	0	21	299	0	320	641
Total Volume	150	0	47	197	0	977	88	1065	0	0	0	0	92	1197	0	1289	2551
% App. Total	76.1	0	23.9		0	91.7	8.3		0	0	0		7.1	92.9	0		
PHF	.852	.000	.839	.849	.000	.925	.611	.931	.000	.000	.000	.000	.821	.938	.000	.956	.955

City of Apple Valley
 N/S: Westmont Drive
 E/W: Bear Valley Road
 Weather: Clear

File Name : 01_APV_Westmont_BV PM
 Site Code : 00321196
 Start Date : 5/6/2021
 Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	32	0	14	46	0	229	36	265	0	0	0	0	28	280	0	308
+15 mins.	33	0	12	45	0	228	13	241	0	0	0	0	18	319	0	337
+30 mins.	44	0	14	58	0	264	22	286	0	0	0	0	25	299	0	324
+45 mins.	41	0	7	48	0	256	17	273	0	0	0	0	21	299	0	320
Total Volume	150	0	47	197	0	977	88	1065	0	0	0	0	92	1197	0	1289
% App. Total	76.1	0	23.9		0	91.7	8.3		0	0	0		7.1	92.9	0	
PHF	.852	.000	.839	.849	.000	.925	.611	.931	.000	.000	.000	.000	.821	.938	.000	.956

City of Apple Valley
 N/S: Westmont Drive
 E/W: Bear Valley Road
 Weather: Clear

File Name : 01_APV_Westmont_BV PM
 Site Code : 00321196
 Start Date : 5/6/2021
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

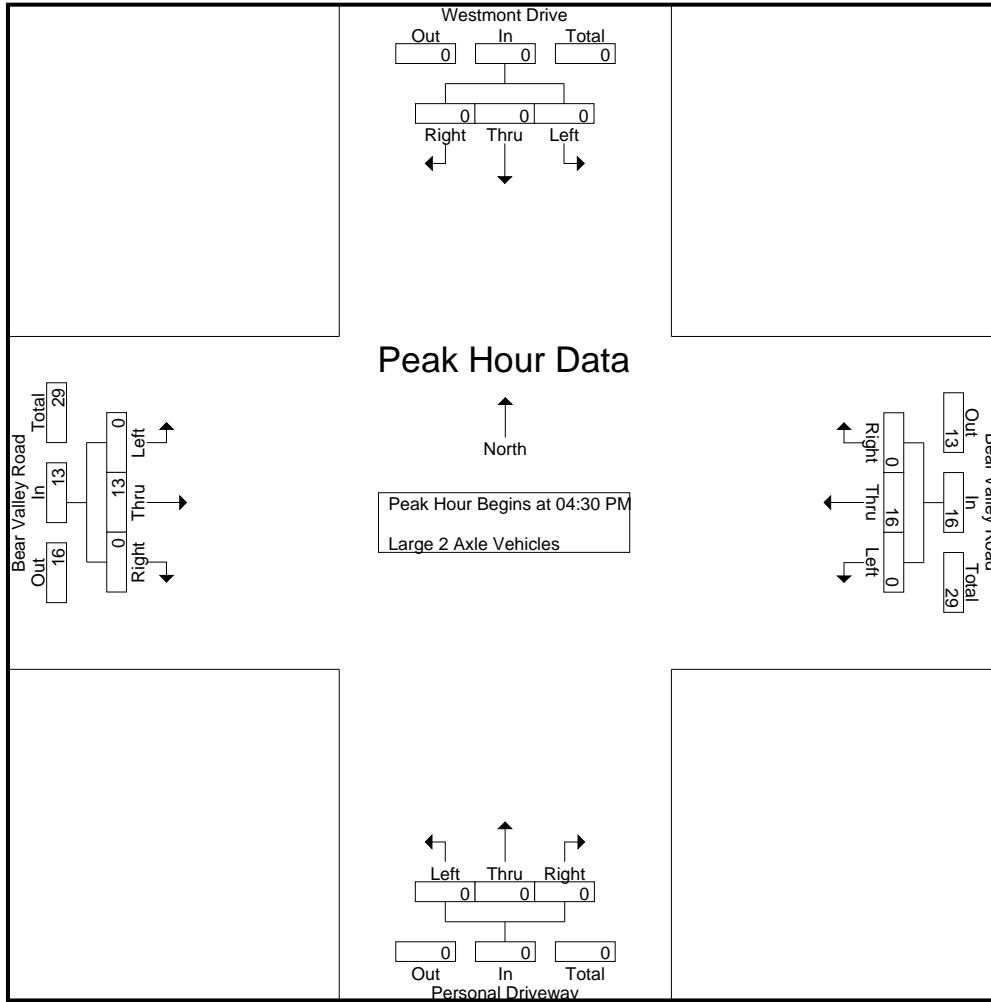
Start Time	Westmont Drive Southbound				Bear Valley Road Westbound				Personal Driveway Northbound				Bear Valley Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	7	0	7	0	0	0	0	0	5	0	5	12
04:15 PM	0	0	0	0	0	7	1	8	0	0	0	0	0	7	0	7	15
04:30 PM	0	0	0	0	0	5	0	5	0	0	0	0	0	5	0	5	10
04:45 PM	0	0	0	0	0	4	0	4	0	0	0	0	0	2	0	2	6
Total	0	0	0	0	0	23	1	24	0	0	0	0	0	19	0	19	43
05:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	4	0	4	5
05:15 PM	0	0	0	0	0	6	0	6	0	0	0	0	0	2	0	2	8
05:30 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	1	0	1	4
05:45 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	3	0	3	5
Total	0	0	0	0	0	12	0	12	0	0	0	0	0	10	0	10	22
Grand Total	0	0	0	0	0	35	1	36	0	0	0	0	0	29	0	29	65
Apprch %	0	0	0	0	0	97.2	2.8		0	0	0	0	0	100	0		
Total %	0	0	0	0	0	53.8	1.5	55.4	0	0	0	0	0	44.6	0	44.6	

Start Time	Westmont Drive Southbound				Bear Valley Road Westbound				Personal Driveway Northbound				Bear Valley Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:30 PM	0	0	0	0	0	5	0	5	0	0	0	0	0	5	0	5	10
04:45 PM	0	0	0	0	0	4	0	4	0	0	0	0	0	2	0	2	6
05:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	4	0	4	5
05:15 PM	0	0	0	0	0	6	0	6	0	0	0	0	0	2	0	2	8
Total Volume	0	0	0	0	0	16	0	16	0	0	0	0	0	13	0	13	29
% App. Total	0	0	0	0	0	100	0		0	0	0	0	0	100	0		
PHF	.000	.000	.000	.000	.000	.667	.000	.667	.000	.000	.000	.000	.000	.650	.000	.650	.725

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:30 PM

City of Apple Valley
 N/S: Westmont Drive
 E/W: Bear Valley Road
 Weather: Clear

File Name : 01_APV_Westmont_BV PM
 Site Code : 00321196
 Start Date : 5/6/2021
 Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	0	0	0	5	0	5	0	0	0	0	0	5	0	5
+15 mins.	0	0	0	0	0	4	0	4	0	0	0	0	0	2	0	2
+30 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	4	0	4
+45 mins.	0	0	0	0	0	6	0	6	0	0	0	0	0	2	0	2
Total Volume	0	0	0	0	0	16	0	16	0	0	0	0	0	13	0	13
% App. Total	0	0	0	0	0	100	0	100	0	0	0	0	0	100	0	100
PHF	.000	.000	.000	.000	.000	.667	.000	.667	.000	.000	.000	.000	.000	.650	.000	.650

City of Apple Valley
 N/S: Westmont Drive
 E/W: Bear Valley Road
 Weather: Clear

File Name : 01_APV_Westmont_BV PM
 Site Code : 00321196
 Start Date : 5/6/2021
 Page No : 1

Groups Printed- 3 Axle Vehicles

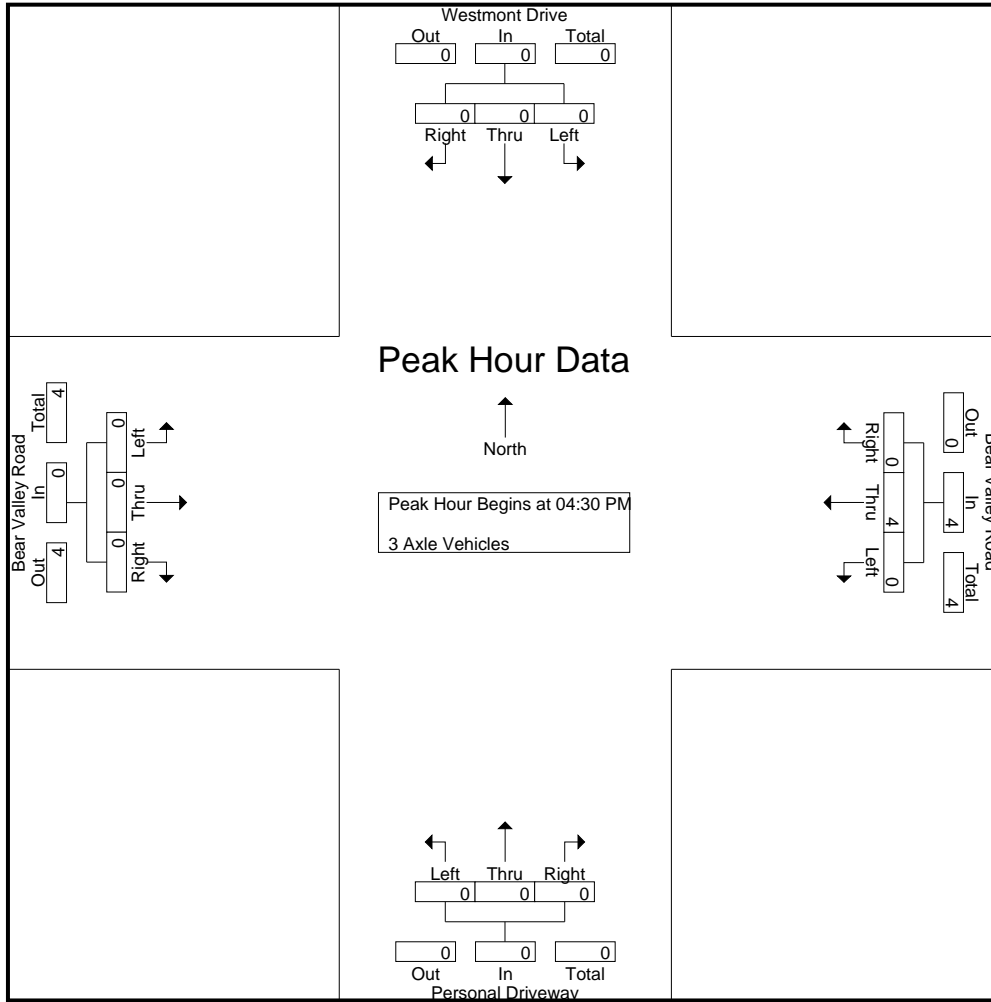
Start Time	Westmont Drive Southbound				Bear Valley Road Westbound				Personal Driveway Northbound				Bear Valley Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	4	0	4	0	0	0	0	0	0	0	0	4
04:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
04:30 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	3
04:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	9	0	9	0	0	0	0	0	1	0	1	10
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	9	0	9	0	0	0	0	0	1	0	1	10
Apprch %	0	0	0		0	100	0		0	0	0		0	100	0		
Total %	0	0	0		0	90	0	90	0	0	0		0	10	0	10	

Start Time	Westmont Drive Southbound				Bear Valley Road Westbound				Personal Driveway Northbound				Bear Valley Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:30 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	3
04:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	4	0	4	0	0	0	0	0	0	0	0	4
% App. Total	0	0	0		0	100	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.333	.000	.333	.000	.000	.000	.000	.000	.000	.000	.000	.333

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:30 PM

City of Apple Valley
 N/S: Westmont Drive
 E/W: Bear Valley Road
 Weather: Clear

File Name : 01_APV_Westmont_BV PM
 Site Code : 00321196
 Start Date : 5/6/2021
 Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	4	0	4	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.333	.000	.333	.000	.000	.000	.000	.000	.000	.000	.000

City of Apple Valley
 N/S: Westmont Drive
 E/W: Bear Valley Road
 Weather: Clear

File Name : 01_APV_Westmont_BV PM
 Site Code : 00321196
 Start Date : 5/6/2021
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	Westmont Drive Southbound				Bear Valley Road Westbound				Personal Driveway Northbound				Bear Valley Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	5	0	5	0	0	0	0	0	2	0	2	7
04:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	3	0	3	4
04:30 PM	0	0	0	0	0	3	0	3	0	0	0	0	1	3	0	4	7
04:45 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	1	0	1	4
Total	0	0	0	0	0	12	0	12	0	0	0	0	1	9	0	10	22
05:00 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	4	0	4	5
Total	0	0	1	1	0	2	0	2	0	0	0	0	0	5	0	5	8
Grand Total	0	0	1	1	0	14	0	14	0	0	0	0	1	14	0	15	30
Apprch %	0	0	100		0	100	0		0	0	0		6.7	93.3	0		
Total %	0	0	3.3	3.3	0	46.7	0	46.7	0	0	0	0	3.3	46.7	0	50	

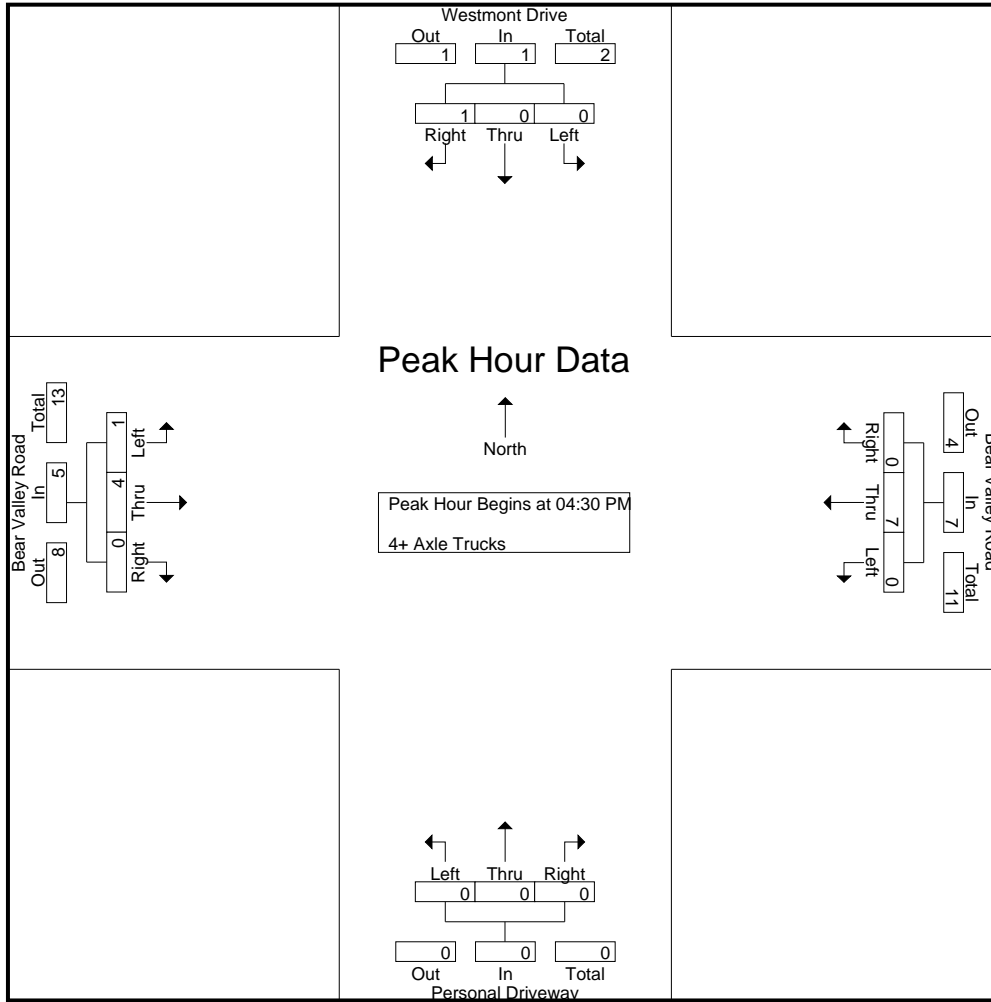
Start Time	Westmont Drive Southbound				Bear Valley Road Westbound				Personal Driveway Northbound				Bear Valley Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:30 PM	0	0	0	0	0	3	0	3	0	0	0	0	1	3	0	4	7
04:45 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	1	0	1	4
05:00 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total Volume	0	0	1	1	0	7	0	7	0	0	0	0	1	4	0	5	13
% App. Total	0	0	100		0	100	0		0	0	0		20	80	0		
PHF	.000	.000	.250	.250	.000	.583	.000	.583	.000	.000	.000	.000	.250	.333	.000	.313	.464

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:30 PM

City of Apple Valley
 N/S: Westmont Drive
 E/W: Bear Valley Road
 Weather: Clear

File Name : 01_APV_Westmont_BV PM
 Site Code : 00321196
 Start Date : 5/6/2021
 Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	0	0	0	3	0	3	0	0	0	0	1	3	0	4
+15 mins.	0	0	0	0	0	3	0	3	0	0	0	0	0	1	0	1
+30 mins.	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
Total Volume	0	0	1	1	0	7	0	7	0	0	0	0	1	4	0	5
% App. Total	0	0	100	100	0	100	0	100	0	0	0	0	20	80	0	100
PHF	.000	.000	.250	.250	.000	.583	.000	.583	.000	.000	.000	.000	.250	.333	.000	.313

City of Apple Valley
 N/S: El Pollo Loco Driveway
 E/W: Bear Valley Road
 Weather: Clear

File Name : 02_APV_EI Pollo_BV AM
 Site Code : 00321196
 Start Date : 5/6/2021
 Page No : 1

Groups Printed- Total Volume

Start Time	El Pollo Loco Driveway Southbound			Bear Valley Road Westbound			Bear Valley Road Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:00 AM	0	0	0	212	0	212	0	122	122	334
07:15 AM	0	0	0	248	0	248	0	135	135	383
07:30 AM	0	0	0	275	0	275	0	156	156	431
07:45 AM	0	0	0	329	1	330	0	177	177	507
Total	0	0	0	1064	1	1065	0	590	590	1655
08:00 AM	0	0	0	221	0	221	0	175	175	396
08:15 AM	0	1	1	241	1	242	0	179	179	422
08:30 AM	0	0	0	280	0	280	0	171	171	451
08:45 AM	0	0	0	314	0	314	0	175	175	489
Total	0	1	1	1056	1	1057	0	700	700	1758
Grand Total	0	1	1	2120	2	2122	0	1290	1290	3413
Apprch %	0	100		99.9	0.1		0	100		
Total %	0	0	0	62.1	0.1	62.2	0	37.8	37.8	

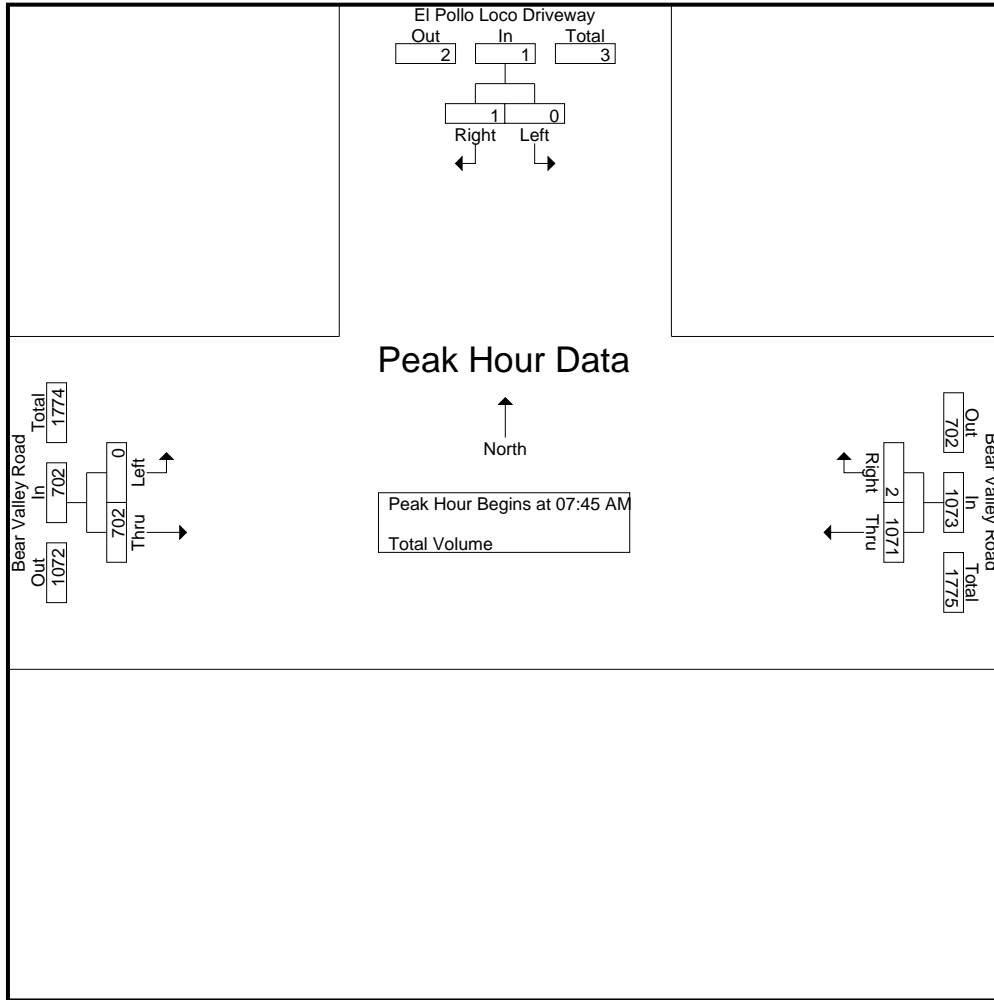
Start Time	El Pollo Loco Driveway Southbound			Bear Valley Road Westbound			Bear Valley Road Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:45 AM	0	0	0	329	1	330	0	177	177	507
08:00 AM	0	0	0	221	0	221	0	175	175	396
08:15 AM	0	1	1	241	1	242	0	179	179	422
08:30 AM	0	0	0	280	0	280	0	171	171	451
Total Volume	0	1	1	1071	2	1073	0	702	702	1776
% App. Total	0	100		99.8	0.2		0	100		
PHF	.000	.250	.250	.814	.500	.813	.000	.980	.980	.876

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:45 AM

City of Apple Valley
 N/S: El Pollo Loco Driveway
 E/W: Bear Valley Road
 Weather: Clear

File Name : 02_APV_El Pollo_BV AM
 Site Code : 00321196
 Start Date : 5/6/2021
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:30 AM			07:45 AM			07:45 AM		
+0 mins.	0	0	0	248	0	248	0	177	177
+15 mins.	0	0	0	275	0	275	0	175	175
+30 mins.	0	0	0	329	1	330	0	179	179
+45 mins.	0	1	1	221	0	221	0	171	171
Total Volume	0	1	1	1073	1	1074	0	702	702
% App. Total	0	100		99.9	0.1		0	100	
PHF	.000	.250	.250	.815	.250	.814	.000	.980	.980

City of Apple Valley
 N/S: El Pollo Loco Driveway
 E/W: Bear Valley Road
 Weather: Clear

File Name : 02_APV_EI Pollo_BV PM
 Site Code : 00321196
 Start Date : 5/6/2021
 Page No : 1

Groups Printed- Total Volume

Start Time	El Pollo Loco Driveway Southbound			Bear Valley Road Westbound			Bear Valley Road Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:00 PM	0	5	5	301	1	302	0	334	334	641
04:15 PM	0	2	2	251	2	253	0	327	327	582
04:30 PM	0	3	3	272	3	275	0	318	318	596
04:45 PM	0	3	3	246	4	250	0	349	349	602
Total	0	13	13	1070	10	1080	0	1328	1328	2421
05:00 PM	0	2	2	284	1	285	1	349	350	637
05:15 PM	1	2	3	276	2	278	0	349	349	630
05:30 PM	0	2	2	292	6	298	0	254	254	554
05:45 PM	0	5	5	244	2	246	0	243	243	494
Total	1	11	12	1096	11	1107	1	1195	1196	2315
Grand Total	1	24	25	2166	21	2187	1	2523	2524	4736
Apprch %	4	96		99	1		0	100		
Total %	0	0.5	0.5	45.7	0.4	46.2	0	53.3	53.3	

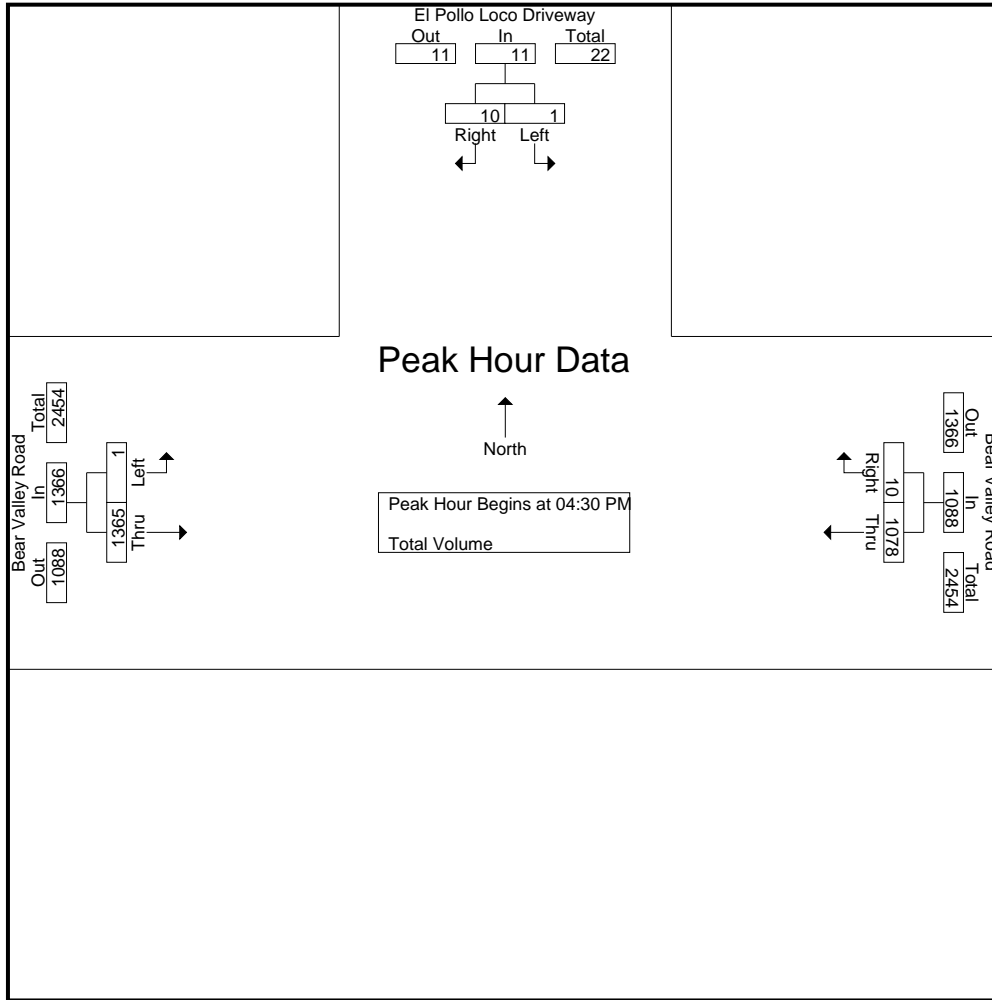
Start Time	El Pollo Loco Driveway Southbound			Bear Valley Road Westbound			Bear Valley Road Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:30 PM	0	3	3	272	3	275	0	318	318	596
04:45 PM	0	3	3	246	4	250	0	349	349	602
05:00 PM	0	2	2	284	1	285	1	349	350	637
05:15 PM	1	2	3	276	2	278	0	349	349	630
Total Volume	1	10	11	1078	10	1088	1	1365	1366	2465
% App. Total	9.1	90.9		99.1	0.9		0.1	99.9		
PHF	.250	.833	.917	.949	.625	.954	.250	.978	.976	.967

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:30 PM

City of Apple Valley
 N/S: El Pollo Loco Driveway
 E/W: Bear Valley Road
 Weather: Clear

File Name : 02_APV_El Pollo_BV PM
 Site Code : 00321196
 Start Date : 5/6/2021
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:00 PM			04:45 PM			04:30 PM		
+0 mins.	0	5	5	246	4	250	0	318	318
+15 mins.	0	2	2	284	1	285	0	349	349
+30 mins.	0	3	3	276	2	278	1	349	350
+45 mins.	0	3	3	292	6	298	0	349	349
Total Volume	0	13	13	1098	13	1111	1	1365	1366
% App. Total	0	100		98.8	1.2		0.1	99.9	
PHF	.000	.650	.650	.940	.542	.932	.250	.978	.976

City of Apple Valley
 N/S: Sonic Drive-In Driveway
 E/W: Bear Valley Road
 Weather: Clear

File Name : 03_APV_Sonic_BV AM
 Site Code : 00321196
 Start Date : 5/6/2021
 Page No : 1

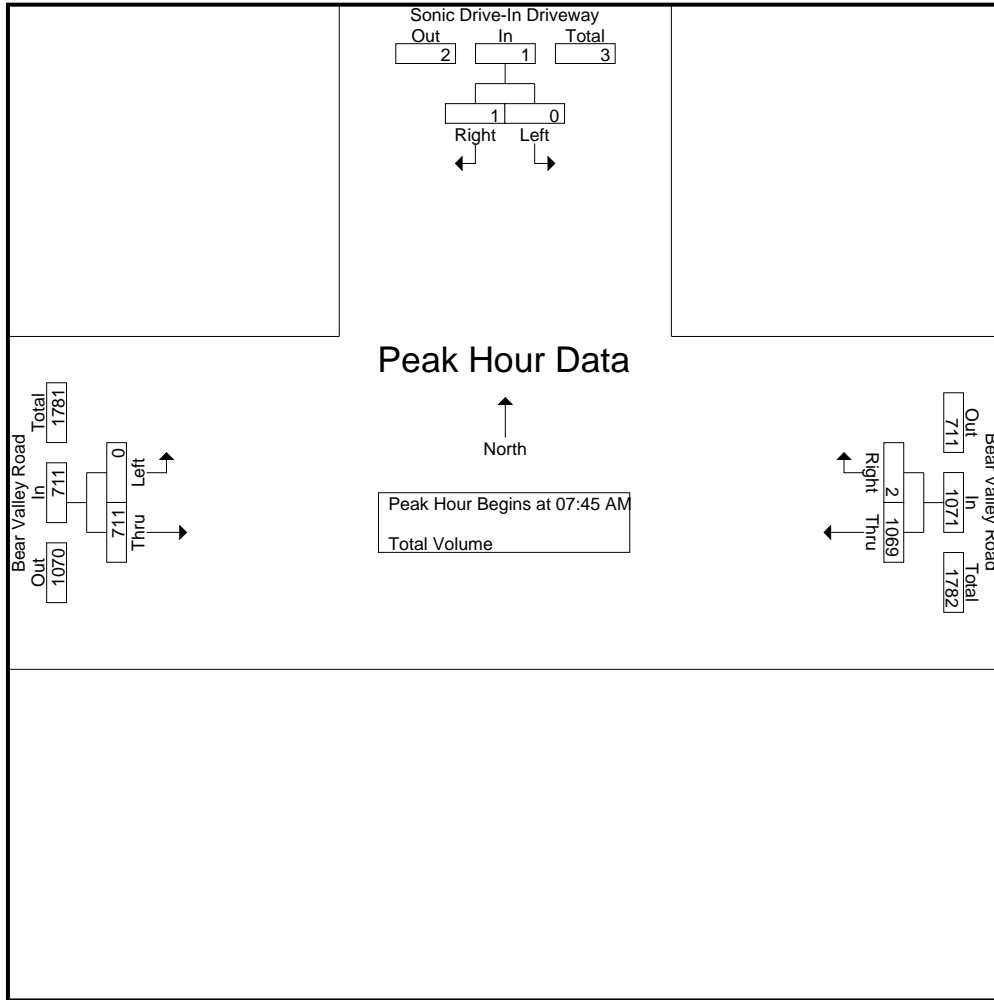
Groups Printed- Total Volume

Start Time	Sonic Drive-In Driveway Southbound			Bear Valley Road Westbound			Bear Valley Road Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:00 AM	0	0	0	217	0	217	0	120	120	337
07:15 AM	0	0	0	248	0	248	0	134	134	382
07:30 AM	0	0	0	277	0	277	0	153	153	430
07:45 AM	0	0	0	330	1	331	0	173	173	504
Total	0	0	0	1072	1	1073	0	580	580	1653
08:00 AM	0	0	0	220	0	220	0	181	181	401
08:15 AM	0	1	1	247	1	248	0	182	182	431
08:30 AM	0	0	0	272	0	272	0	175	175	447
08:45 AM	0	0	0	321	0	321	0	179	179	500
Total	0	1	1	1060	1	1061	0	717	717	1779
Grand Total	0	1	1	2132	2	2134	0	1297	1297	3432
Apprch %	0	100		99.9	0.1		0	100		
Total %	0	0	0	62.1	0.1	62.2	0	37.8	37.8	

Start Time	Sonic Drive-In Driveway Southbound			Bear Valley Road Westbound			Bear Valley Road Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:45 AM	0	0	0	330	1	331	0	173	173	504
08:00 AM	0	0	0	220	0	220	0	181	181	401
08:15 AM	0	1	1	247	1	248	0	182	182	431
08:30 AM	0	0	0	272	0	272	0	175	175	447
Total Volume	0	1	1	1069	2	1071	0	711	711	1783
% App. Total	0	100		99.8	0.2		0	100		
PHF	.000	.250	.250	.810	.500	.809	.000	.977	.977	.884

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:45 AM



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:30 AM			07:15 AM			08:00 AM		
+0 mins.	0	0	0	248	0	248	0	181	181
+15 mins.	0	0	0	277	0	277	0	182	182
+30 mins.	0	0	0	330	1	331	0	175	175
+45 mins.	0	1	1	220	0	220	0	179	179
Total Volume	0	1	1	1075	1	1076	0	717	717
% App. Total	0	100		99.9	0.1		0	100	
PHF	.000	.250	.250	.814	.250	.813	.000	.985	.985

City of Apple Valley
 N/S: Sonic Drive-In Driveway
 E/W: Bear Valley Road
 Weather: Clear

File Name : 03_APV_Sonic_BV PM
 Site Code : 00321196
 Start Date : 5/6/2021
 Page No : 1

Groups Printed- Total Volume

Start Time	Sonic Drive-In Driveway Southbound			Bear Valley Road Westbound			Bear Valley Road Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:00 PM	0	5	5	294	2	296	0	332	332	633
04:15 PM	0	2	2	250	2	252	0	332	332	586
04:30 PM	0	3	3	268	3	271	0	318	318	592
04:45 PM	0	3	3	243	4	247	0	349	349	599
Total	0	13	13	1055	11	1066	0	1331	1331	2410
05:00 PM	0	2	2	291	1	292	0	350	350	644
05:15 PM	1	2	3	280	2	282	0	352	352	637
05:30 PM	0	2	2	290	6	296	0	248	248	546
05:45 PM	0	4	4	249	2	251	0	243	243	498
Total	1	10	11	1110	11	1121	0	1193	1193	2325
Grand Total	1	23	24	2165	22	2187	0	2524	2524	4735
Apprch %	4.2	95.8		99	1		0	100		
Total %	0	0.5	0.5	45.7	0.5	46.2	0	53.3	53.3	

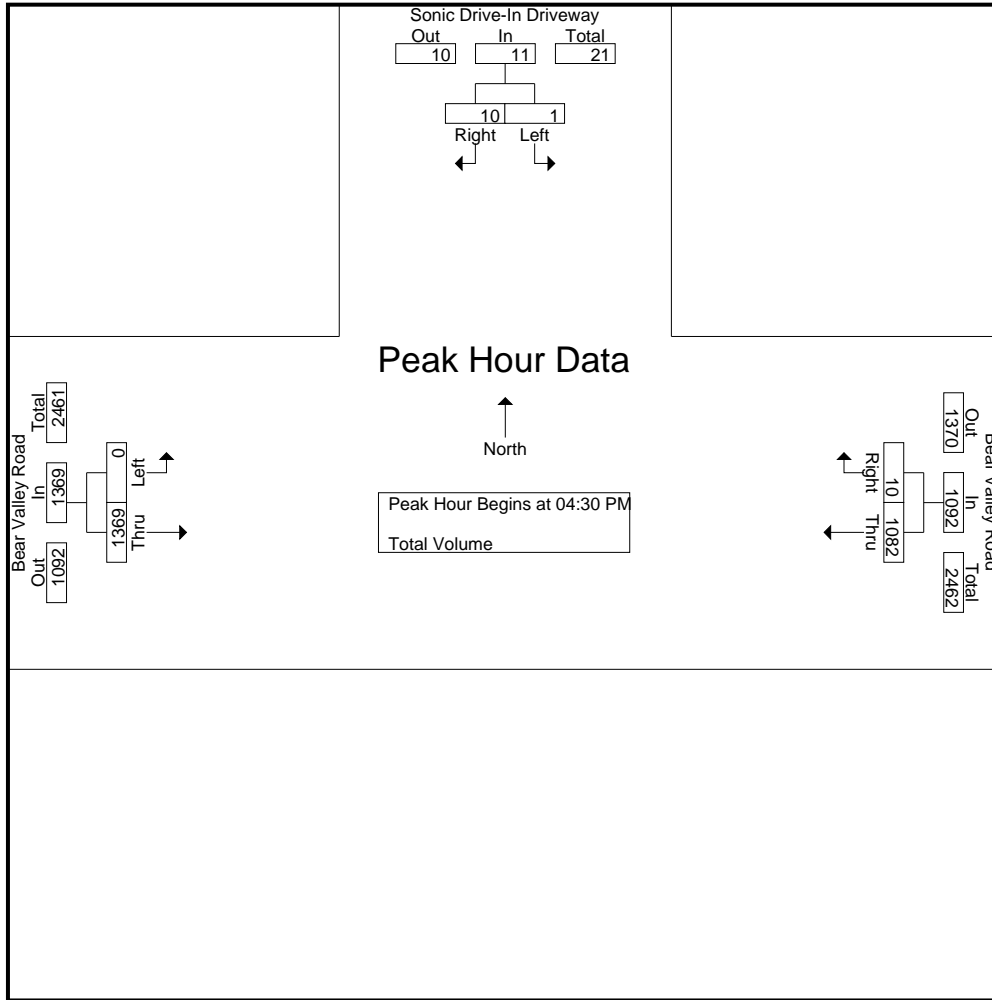
Start Time	Sonic Drive-In Driveway Southbound			Bear Valley Road Westbound			Bear Valley Road Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:30 PM	0	3	3	268	3	271	0	318	318	592
04:45 PM	0	3	3	243	4	247	0	349	349	599
05:00 PM	0	2	2	291	1	292	0	350	350	644
05:15 PM	1	2	3	280	2	282	0	352	352	637
Total Volume	1	10	11	1082	10	1092	0	1369	1369	2472
% App. Total	9.1	90.9		99.1	0.9		0	100		
PHF	.250	.833	.917	.930	.625	.935	.000	.972	.972	.960

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:30 PM

City of Apple Valley
 N/S: Sonic Drive-In Driveway
 E/W: Bear Valley Road
 Weather: Clear

File Name : 03_APV_Sonic_BV PM
 Site Code : 00321196
 Start Date : 5/6/2021
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:00 PM			05:00 PM			04:30 PM		
+0 mins.	0	5	5	291	1	292	0	318	318
+15 mins.	0	2	2	280	2	282	0	349	349
+30 mins.	0	3	3	290	6	296	0	350	350
+45 mins.	0	3	3	249	2	251	0	352	352
Total Volume	0	13	13	1110	11	1121	0	1369	1369
% App. Total	0	100		99	1		0	100	
PHF	.000	.650	.650	.954	.458	.947	.000	.972	.972

Town of Apple Valley
 N/S: Apple Valley Road
 E/W: Bear Valley Road
 Weather: Clear

File Name : APVAVBAM
 Site Code : 03315242
 Start Date : 5/7/2015
 Page No : 1

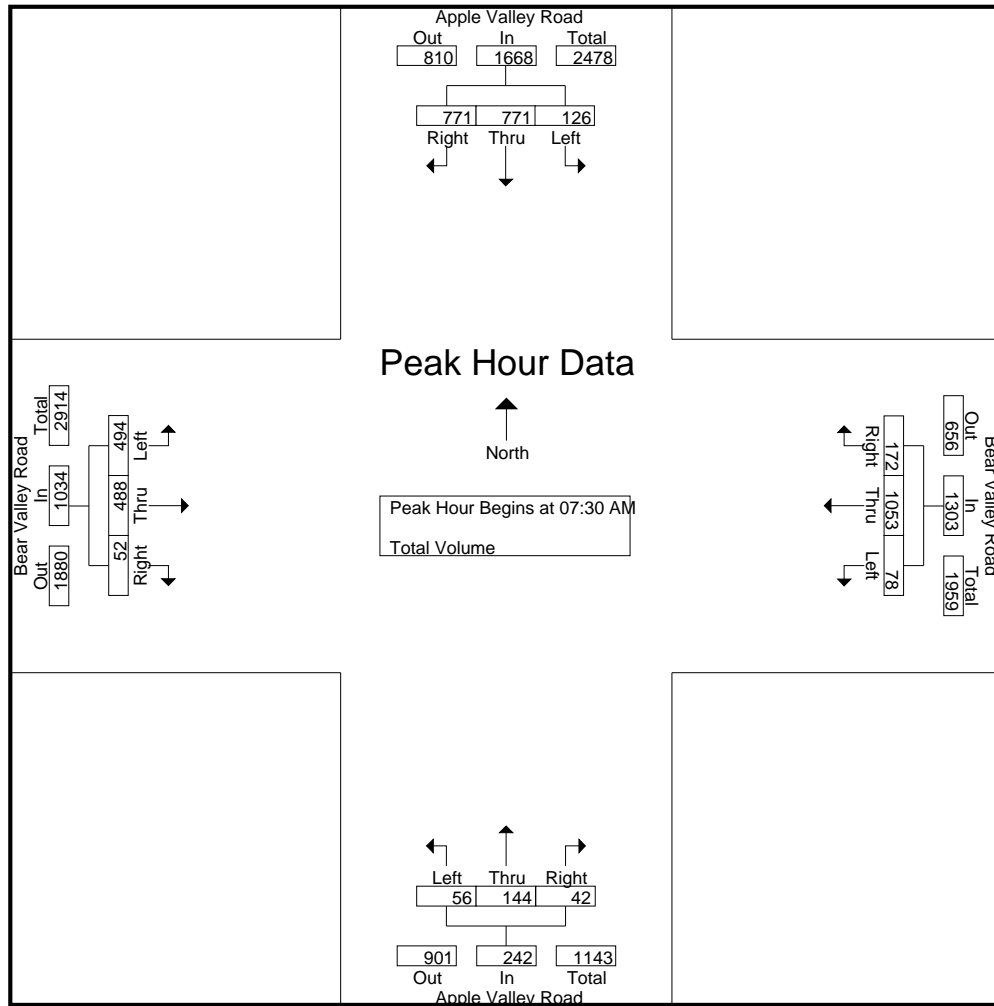
Groups Printed- Total Volume

Start Time	Apple Valley Road Southbound				Bear Valley Road Westbound				Apple Valley Road Northbound				Bear Valley Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	14	123	123	260	16	226	38	280	8	21	7	36	75	91	11	177	753
07:15 AM	20	128	128	276	16	223	32	271	13	31	11	55	106	114	6	226	828
07:30 AM	34	193	193	420	9	242	64	315	19	43	6	68	141	123	13	277	1080
07:45 AM	27	239	239	505	20	302	58	380	12	47	6	65	157	135	10	302	1252
Total	95	683	683	1461	61	993	192	1246	52	142	30	224	479	463	40	982	3913
08:00 AM	46	202	202	450	24	266	26	316	15	28	12	55	94	113	14	221	1042
08:15 AM	19	137	137	293	25	243	24	292	10	26	18	54	102	117	15	234	873
08:30 AM	22	150	150	322	29	224	28	281	15	39	16	70	109	123	10	242	915
08:45 AM	21	151	151	323	34	244	20	298	18	29	16	63	112	143	10	265	949
Total	108	640	640	1388	112	977	98	1187	58	122	62	242	417	496	49	962	3779
Grand Total	203	1323	1323	2849	173	1970	290	2433	110	264	92	466	896	959	89	1944	7692
Apprch %	7.1	46.4	46.4		7.1	81	11.9		23.6	56.7	19.7		46.1	49.3	4.6		
Total %	2.6	17.2	17.2	37	2.2	25.6	3.8	31.6	1.4	3.4	1.2	6.1	11.6	12.5	1.2	25.3	

Start Time	Apple Valley Road Southbound				Bear Valley Road Westbound				Apple Valley Road Northbound				Bear Valley Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	34	193	193	420	9	242	64	315	19	43	6	68	141	123	13	277	1080
07:45 AM	27	239	239	505	20	302	58	380	12	47	6	65	157	135	10	302	1252
08:00 AM	46	202	202	450	24	266	26	316	15	28	12	55	94	113	14	221	1042
08:15 AM	19	137	137	293	25	243	24	292	10	26	18	54	102	117	15	234	873
Total Volume	126	771	771	1668	78	1053	172	1303	56	144	42	242	494	488	52	1034	4247
% App. Total	7.6	46.2	46.2		6	80.8	13.2		23.1	59.5	17.4		47.8	47.2	5		
PHF	.685	.806	.806	.826	.780	.872	.672	.857	.737	.766	.583	.890	.787	.904	.867	.856	.848

Town of Apple Valley
 N/S: Apple Valley Road
 E/W: Bear Valley Road
 Weather: Clear

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Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:45 AM				07:30 AM			
+0 mins.	34	193	193	420	9	242	64	315	12	47	6	65	141	123	13	277
+15 mins.	27	239	239	505	20	302	58	380	15	28	12	55	157	135	10	302
+30 mins.	46	202	202	450	24	266	26	316	10	26	18	54	94	113	14	221
+45 mins.	19	137	137	293	25	243	24	292	15	39	16	70	102	117	15	234
Total Volume	126	771	771	1668	78	1053	172	1303	52	140	52	244	494	488	52	1034
% App. Total	7.6	46.2	46.2		6	80.8	13.2		21.3	57.4	21.3		47.8	47.2	5	
PHF	.685	.806	.806	.826	.780	.872	.672	.857	.867	.745	.722	.871	.787	.904	.867	.856

Town of Apple Valley
 N/S: Apple Valley Road
 E/W: Bear Valley Road
 Weather: Clear

File Name : APVAVBVP
 Site Code : 03315242
 Start Date : 5/7/2015
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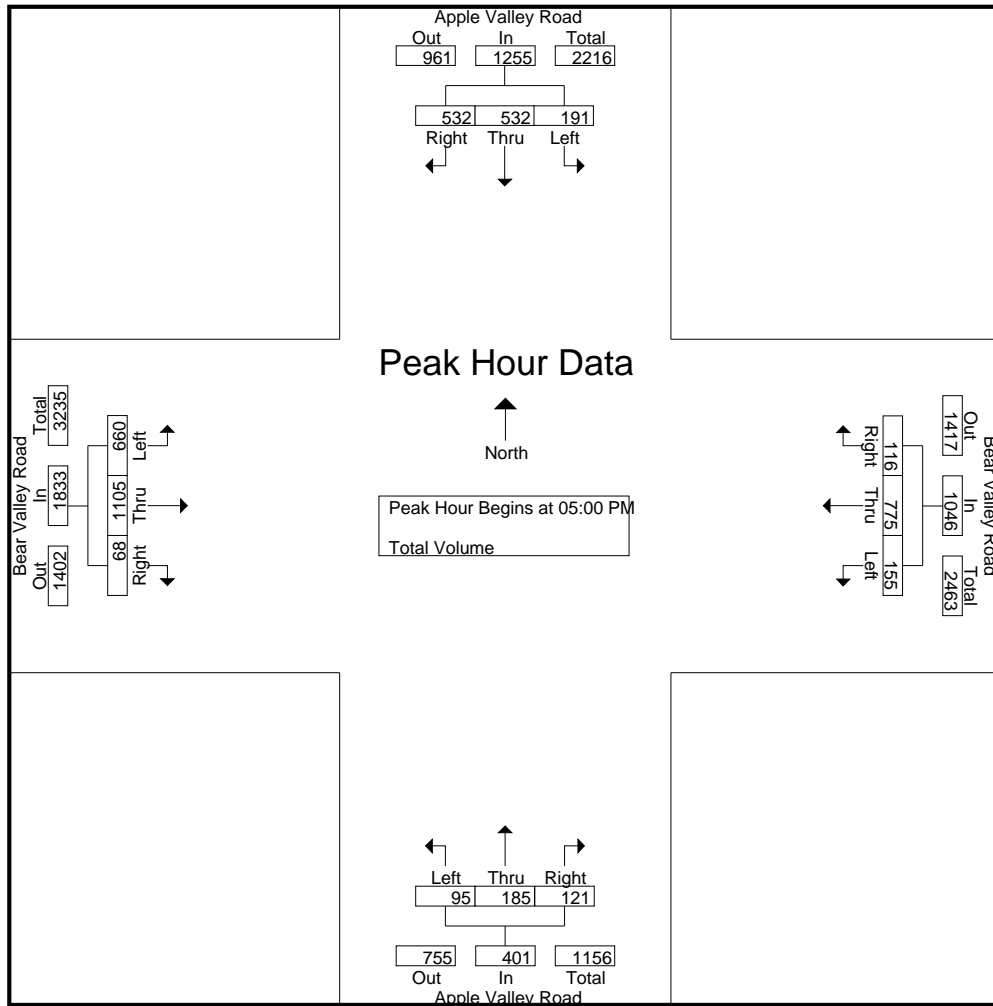
Groups Printed- Total Volume

Start Time	Apple Valley Road Southbound				Bear Valley Road Westbound				Apple Valley Road Northbound				Bear Valley Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	53	126	126	305	51	199	29	279	18	53	45	116	182	234	5	421	1121
04:15 PM	38	100	100	238	40	240	23	303	16	49	43	108	167	280	16	463	1112
04:30 PM	44	112	112	268	28	214	18	260	26	43	29	98	158	243	12	413	1039
04:45 PM	48	119	119	286	42	190	21	253	24	44	33	101	159	279	12	450	1090
Total	183	457	457	1097	161	843	91	1095	84	189	150	423	666	1036	45	1747	4362
05:00 PM	50	132	132	314	32	193	22	247	31	54	33	118	160	234	11	405	1084
05:15 PM	53	134	134	321	36	195	31	262	21	42	30	93	182	292	16	490	1166
05:30 PM	46	140	140	326	42	203	32	277	20	60	29	109	149	293	21	463	1175
05:45 PM	42	126	126	294	45	184	31	260	23	29	29	81	169	286	20	475	1110
Total	191	532	532	1255	155	775	116	1046	95	185	121	401	660	1105	68	1833	4535
Grand Total	374	989	989	2352	316	1618	207	2141	179	374	271	824	1326	2141	113	3580	8897
Apprch %	15.9	42	42		14.8	75.6	9.7		21.7	45.4	32.9		37	59.8	3.2		
Total %	4.2	11.1	11.1	26.4	3.6	18.2	2.3	24.1	2	4.2	3	9.3	14.9	24.1	1.3	40.2	

Start Time	Apple Valley Road Southbound				Bear Valley Road Westbound				Apple Valley Road Northbound				Bear Valley Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	50	132	132	314	32	193	22	247	31	54	33	118	160	234	11	405	1084
05:15 PM	53	134	134	321	36	195	31	262	21	42	30	93	182	292	16	490	1166
05:30 PM	46	140	140	326	42	203	32	277	20	60	29	109	149	293	21	463	1175
05:45 PM	42	126	126	294	45	184	31	260	23	29	29	81	169	286	20	475	1110
Total Volume	191	532	532	1255	155	775	116	1046	95	185	121	401	660	1105	68	1833	4535
% App. Total	15.2	42.4	42.4		14.8	74.1	11.1		23.7	46.1	30.2		36	60.3	3.7		
PHF	.901	.950	.950	.962	.861	.954	.906	.944	.766	.771	.917	.850	.907	.943	.810	.935	.965

Town of Apple Valley
 N/S: Apple Valley Road
 E/W: Bear Valley Road
 Weather: Clear

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 Site Code : 03315242
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	05:00 PM				04:00 PM				04:15 PM				05:00 PM			
+0 mins.	50	132	132	314	51	199	29	279	16	49	43	108	160	234	11	405
+15 mins.	53	134	134	321	40	240	23	303	26	43	29	98	182	292	16	490
+30 mins.	46	140	140	326	28	214	18	260	24	44	33	101	149	293	21	463
+45 mins.	42	126	126	294	42	190	21	253	31	54	33	118	169	286	20	475
Total Volume	191	532	532	1255	161	843	91	1095	97	190	138	425	660	1105	68	1833
% App. Total	15.2	42.4	42.4		14.7	77	8.3		22.8	44.7	32.5		36	60.3	3.7	
PHF	.901	.950	.950	.962	.789	.878	.784	.903	.782	.880	.802	.900	.907	.943	.810	.935

City of Apple Valley
 N/S: Apple Valley Road
 E/W: Bear Valley Road
 Weather: Clear

File Name : 01_APV_Apple Valley_Bear Valley_AM
 Site Code : 00321222
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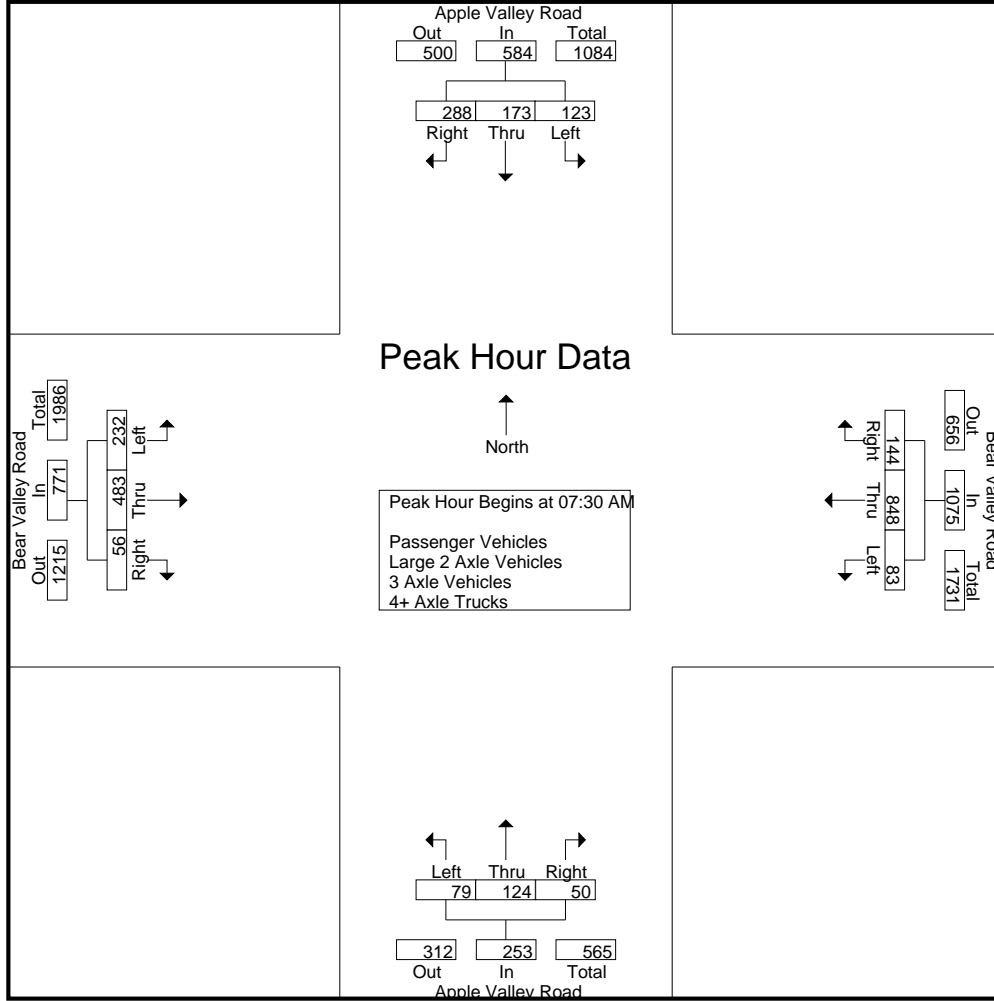
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Apple Valley Road Southbound				Bear Valley Road Westbound				Apple Valley Road Northbound				Bear Valley Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	23	19	50	92	6	208	28	242	15	27	8	50	44	86	6	136	520
07:15 AM	23	22	64	109	8	199	27	234	12	23	8	43	44	83	5	132	518
07:30 AM	33	28	65	126	17	232	37	286	20	33	4	57	62	127	11	200	669
07:45 AM	32	67	81	180	18	253	42	313	21	36	14	71	62	129	15	206	770
Total	111	136	260	507	49	892	134	1075	68	119	34	221	212	425	37	674	2477
08:00 AM	30	39	67	136	18	186	39	243	13	30	17	60	54	126	19	199	638
08:15 AM	28	39	75	142	30	177	26	233	25	25	15	65	54	101	11	166	606
08:30 AM	35	37	63	135	25	207	31	263	21	39	13	73	70	107	8	185	656
08:45 AM	45	48	73	166	25	231	30	286	21	37	20	78	57	137	11	205	735
Total	138	163	278	579	98	801	126	1025	80	131	65	276	235	471	49	755	2635
Grand Total	249	299	538	1086	147	1693	260	2100	148	250	99	497	447	896	86	1429	5112
Approch %	22.9	27.5	49.5		7	80.6	12.4		29.8	50.3	19.9		31.3	62.7	6		
Total %	4.9	5.8	10.5	21.2	2.9	33.1	5.1	41.1	2.9	4.9	1.9	9.7	8.7	17.5	1.7	28	
Passenger Vehicles	241	291	517	1049	144	1579	233	1956	146	244	96	486	419	792	81	1292	4783
% Passenger Vehicles	96.8	97.3	96.1	96.6	98	93.3	89.6	93.1	98.6	97.6	97	97.8	93.7	88.4	94.2	90.4	93.6
Large 2 Axle Vehicles	8	7	17	32	3	64	24	91	2	6	3	11	24	62	3	89	223
% Large 2 Axle Vehicles	3.2	2.3	3.2	2.9	2	3.8	9.2	4.3	1.4	2.4	3	2.2	5.4	6.9	3.5	6.2	4.4
3 Axle Vehicles	0	1	1	2	0	5	1	6	0	0	0	0	2	2	1	5	13
% 3 Axle Vehicles	0	0.3	0.2	0.2	0	0.3	0.4	0.3	0	0	0	0	0.4	0.2	1.2	0.3	0.3
4+ Axle Trucks	0	0	3	3	0	45	2	47	0	0	0	0	2	40	1	43	93
% 4+ Axle Trucks	0	0	0.6	0.3	0	2.7	0.8	2.2	0	0	0	0	0.4	4.5	1.2	3	1.8

Start Time	Apple Valley Road Southbound				Bear Valley Road Westbound				Apple Valley Road Northbound				Bear Valley Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	33	28	65	126	17	232	37	286	20	33	4	57	62	127	11	200	669
07:45 AM	32	67	81	180	18	253	42	313	21	36	14	71	62	129	15	206	770
08:00 AM	30	39	67	136	18	186	39	243	13	30	17	60	54	126	19	199	638
08:15 AM	28	39	75	142	30	177	26	233	25	25	15	65	54	101	11	166	606
Total Volume	123	173	288	584	83	848	144	1075	79	124	50	253	232	483	56	771	2683
% App. Total	21.1	29.6	49.3		7.7	78.9	13.4		31.2	49	19.8		30.1	62.6	7.3		
PHF	.932	.646	.889	.811	.692	.838	.857	.859	.790	.861	.735	.891	.935	.936	.737	.936	.871

City of Apple Valley
 N/S: Apple Valley Road
 E/W: Bear Valley Road
 Weather: Clear

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Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:45 AM				07:15 AM				08:00 AM				07:30 AM			
+0 mins.	32	67	81	180	8	199	27	234	13	30	17	60	62	127	11	200
+15 mins.	30	39	67	136	17	232	37	286	25	25	15	65	62	129	15	206
+30 mins.	28	39	75	142	18	253	42	313	21	39	13	73	54	126	19	199
+45 mins.	35	37	63	135	18	186	39	243	21	37	20	78	54	101	11	166
Total Volume	125	182	286	593	61	870	145	1076	80	131	65	276	232	483	56	771
% App. Total	21.1	30.7	48.2		5.7	80.9	13.5		29	47.5	23.6		30.1	62.6	7.3	
PHF	.893	.679	.883	.824	.847	.860	.863	.859	.800	.840	.813	.885	.935	.936	.737	.936

City of Apple Valley
 N/S: Apple Valley Road
 E/W: Bear Valley Road
 Weather: Clear

File Name : 01_APV_Apple Valley_Bear Valley_AM
 Site Code : 00321222
 Start Date : 5/18/2021
 Page No : 1

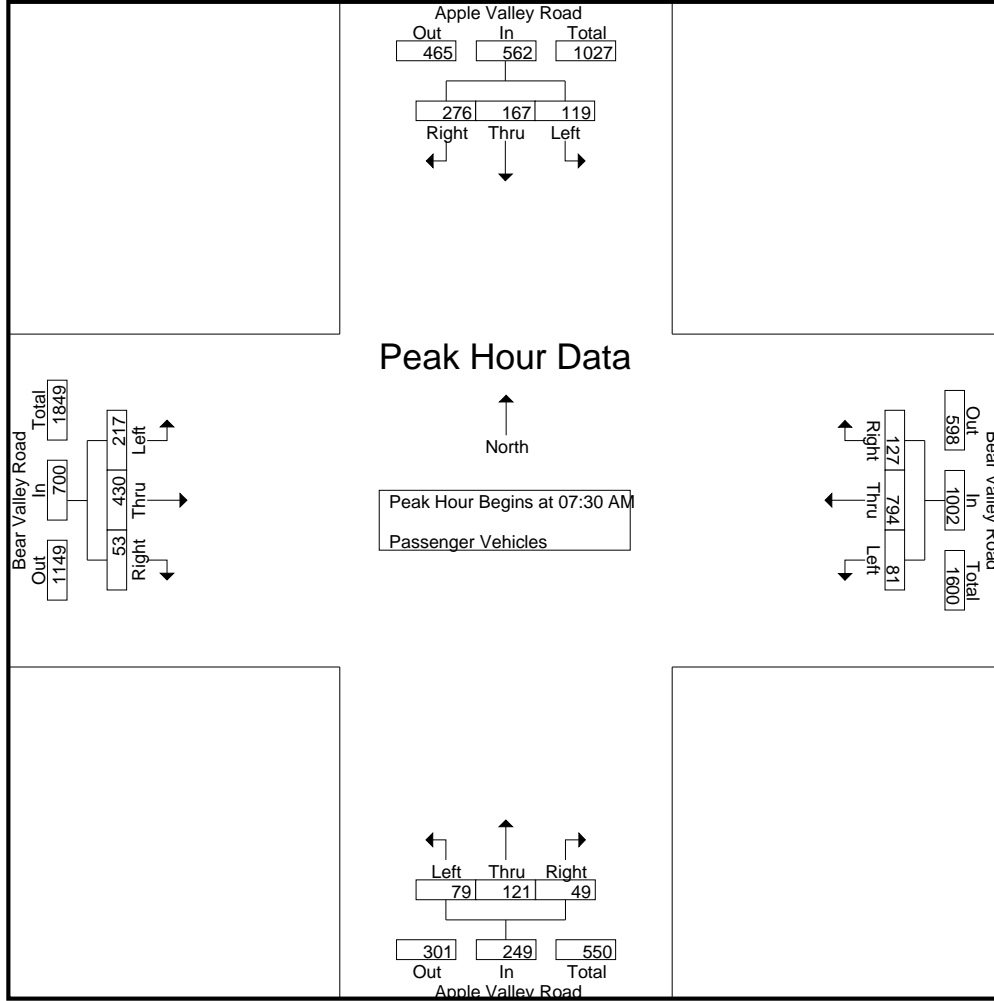
Groups Printed- Passenger Vehicles

Start Time	Apple Valley Road Southbound				Bear Valley Road Westbound				Apple Valley Road Northbound				Bear Valley Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	22	18	47	87	6	191	25	222	15	26	7	48	42	76	6	124	481
07:15 AM	22	21	63	106	7	184	23	214	12	23	7	42	40	71	3	114	476
07:30 AM	33	25	64	122	17	220	30	267	20	30	4	54	58	110	10	178	621
07:45 AM	30	66	79	175	18	238	37	293	21	36	13	70	56	116	15	187	725
Total	107	130	253	490	48	833	115	996	68	115	31	214	196	373	34	603	2303
08:00 AM	29	38	62	129	17	172	36	225	13	30	17	60	52	111	18	181	595
08:15 AM	27	38	71	136	29	164	24	217	25	25	15	65	51	93	10	154	572
08:30 AM	33	37	60	130	25	193	29	247	20	38	13	71	66	94	8	168	616
08:45 AM	45	48	71	164	25	217	29	271	20	36	20	76	54	121	11	186	697
Total	134	161	264	559	96	746	118	960	78	129	65	272	223	419	47	689	2480
Grand Total	241	291	517	1049	144	1579	233	1956	146	244	96	486	419	792	81	1292	4783
Apprch %	23	27.7	49.3		7.4	80.7	11.9		30	50.2	19.8		32.4	61.3	6.3		
Total %	5	6.1	10.8	21.9	3	33	4.9	40.9	3.1	5.1	2	10.2	8.8	16.6	1.7	27	

Start Time	Apple Valley Road Southbound				Bear Valley Road Westbound				Apple Valley Road Northbound				Bear Valley Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	33	25	64	122	17	220	30	267	20	30	4	54	58	110	10	178	621
07:45 AM	30	66	79	175	18	238	37	293	21	36	13	70	56	116	15	187	725
08:00 AM	29	38	62	129	17	172	36	225	13	30	17	60	52	111	18	181	595
08:15 AM	27	38	71	136	29	164	24	217	25	25	15	65	51	93	10	154	572
Total Volume	119	167	276	562	81	794	127	1002	79	121	49	249	217	430	53	700	2513
% App. Total	21.2	29.7	49.1		8.1	79.2	12.7		31.7	48.6	19.7		31	61.4	7.6		
PHF	.902	.633	.873	.803	.698	.834	.858	.855	.790	.840	.721	.889	.935	.927	.736	.936	.867

City of Apple Valley
 N/S: Apple Valley Road
 E/W: Bear Valley Road
 Weather: Clear

File Name : 01_APV_Apple Valley_Bear Valley_AM
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Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	33	25	64	122	17	220	30	267	20	30	4	54	58	110	10	178
+15 mins.	30	66	79	175	18	238	37	293	21	36	13	70	56	116	15	187
+30 mins.	29	38	62	129	17	172	36	225	13	30	17	60	52	111	18	181
+45 mins.	27	38	71	136	29	164	24	217	25	25	15	65	51	93	10	154
Total Volume	119	167	276	562	81	794	127	1002	79	121	49	249	217	430	53	700
% App. Total	21.2	29.7	49.1		8.1	79.2	12.7		31.7	48.6	19.7		31	61.4	7.6	
PHF	.902	.633	.873	.803	.698	.834	.858	.855	.790	.840	.721	.889	.935	.927	.736	.936

City of Apple Valley
 N/S: Apple Valley Road
 E/W: Bear Valley Road
 Weather: Clear

File Name : 01_APV_Apple Valley_Bear Valley_AM
 Site Code : 00321222
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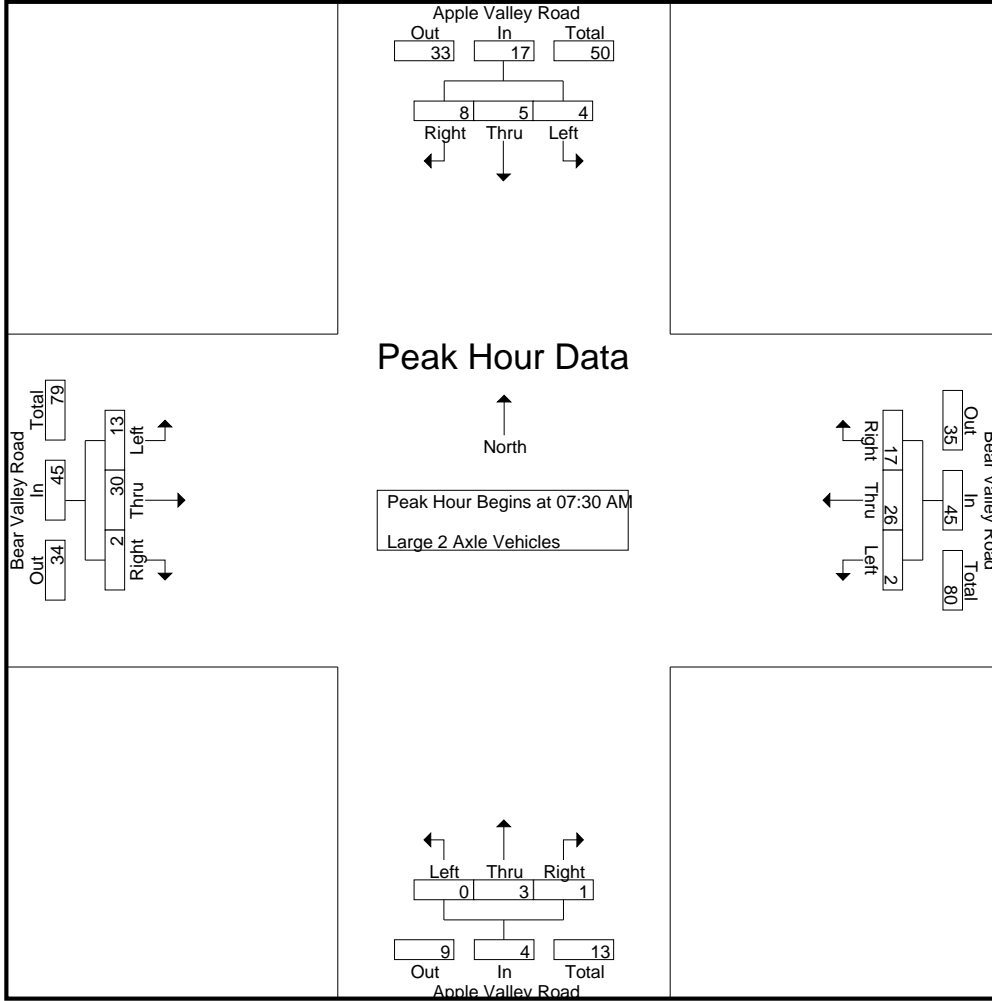
Groups Printed- Large 2 Axle Vehicles

Start Time	Apple Valley Road Southbound				Bear Valley Road Westbound				Apple Valley Road Northbound				Bear Valley Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	1	1	3	5	0	6	2	8	0	1	1	2	2	5	0	7	22
07:15 AM	1	1	1	3	1	13	3	17	0	0	1	1	3	6	1	10	31
07:30 AM	0	2	0	2	0	5	7	12	0	3	0	3	4	8	0	12	29
07:45 AM	2	1	2	5	0	10	5	15	0	0	1	1	4	8	0	12	33
Total	4	5	6	15	1	34	17	52	0	4	3	7	13	27	1	41	115
08:00 AM	1	1	2	4	1	7	3	11	0	0	0	0	2	10	1	13	28
08:15 AM	1	1	4	6	1	4	2	7	0	0	0	0	3	4	1	8	21
08:30 AM	2	0	3	5	0	12	1	13	1	1	0	2	3	8	0	11	31
08:45 AM	0	0	2	2	0	7	1	8	1	1	0	2	3	13	0	16	28
Total	4	2	11	17	2	30	7	39	2	2	0	4	11	35	2	48	108
Grand Total	8	7	17	32	3	64	24	91	2	6	3	11	24	62	3	89	223
Apprch %	25	21.9	53.1		3.3	70.3	26.4		18.2	54.5	27.3		27	69.7	3.4		
Total %	3.6	3.1	7.6	14.3	1.3	28.7	10.8	40.8	0.9	2.7	1.3	4.9	10.8	27.8	1.3	39.9	

Start Time	Apple Valley Road Southbound				Bear Valley Road Westbound				Apple Valley Road Northbound				Bear Valley Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	2	0	2	0	5	7	12	0	3	0	3	4	8	0	12	29
07:45 AM	2	1	2	5	0	10	5	15	0	0	1	1	4	8	0	12	33
08:00 AM	1	1	2	4	1	7	3	11	0	0	0	0	2	10	1	13	28
08:15 AM	1	1	4	6	1	4	2	7	0	0	0	0	3	4	1	8	21
Total Volume	4	5	8	17	2	26	17	45	0	3	1	4	13	30	2	45	111
% App. Total	23.5	29.4	47.1		4.4	57.8	37.8		0	75	25		28.9	66.7	4.4		
PHF	.500	.625	.500	.708	.500	.650	.607	.750	.000	.250	.250	.333	.813	.750	.500	.865	.841

City of Apple Valley
 N/S: Apple Valley Road
 E/W: Bear Valley Road
 Weather: Clear

File Name : 01_APV_Apple Valley_Bear Valley_AM
 Site Code : 00321222
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Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	2	0	2	0	5	7	12	0	3	0	3	4	8	0	12
+15 mins.	2	1	2	5	0	10	5	15	0	0	1	1	4	8	0	12
+30 mins.	1	1	2	4	1	7	3	11	0	0	0	0	2	10	1	13
+45 mins.	1	1	4	6	1	4	2	7	0	0	0	0	3	4	1	8
Total Volume	4	5	8	17	2	26	17	45	0	3	1	4	13	30	2	45
% App. Total	23.5	29.4	47.1		4.4	57.8	37.8		0	75	25		28.9	66.7	4.4	
PHF	.500	.625	.500	.708	.500	.650	.607	.750	.000	.250	.250	.333	.813	.750	.500	.865

City of Apple Valley
 N/S: Apple Valley Road
 E/W: Bear Valley Road
 Weather: Clear

File Name : 01_APV_Apple Valley_Bear Valley_AM
 Site Code : 00321222
 Start Date : 5/18/2021
 Page No : 1

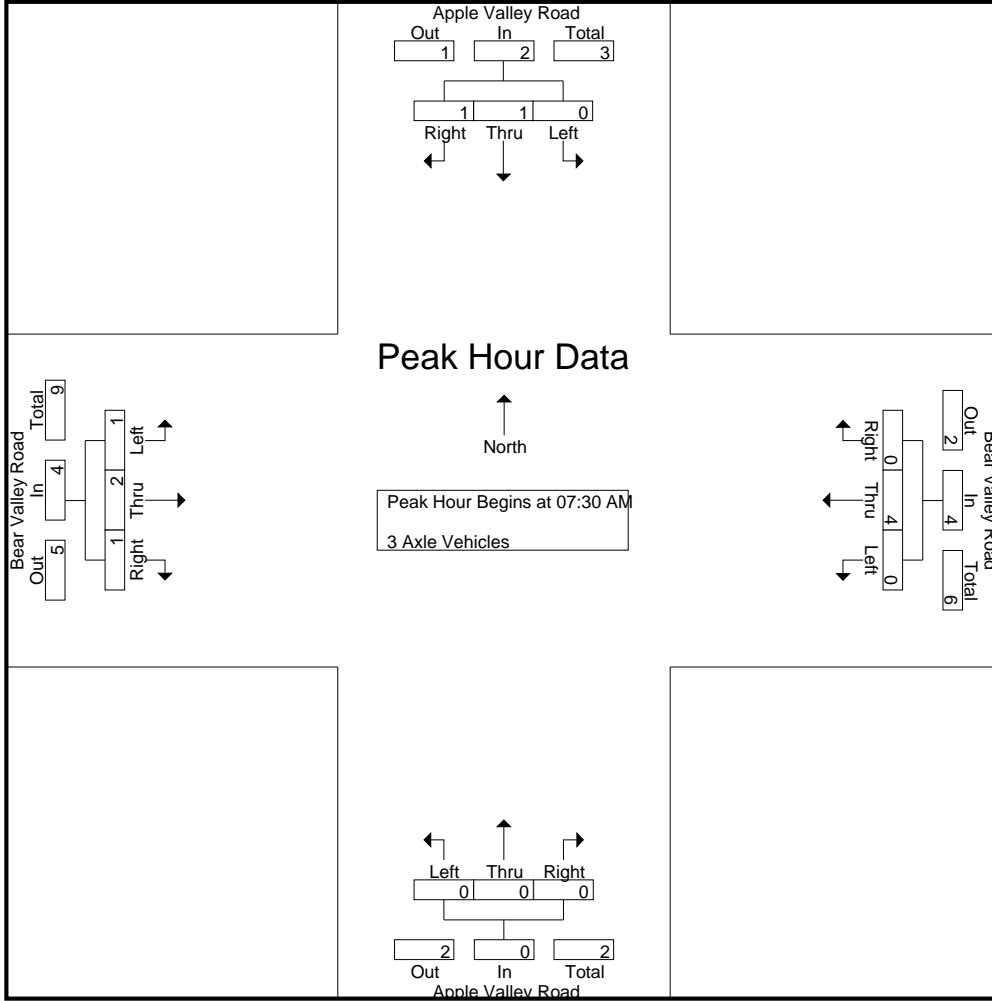
Groups Printed- 3 Axle Vehicles

Start Time	Apple Valley Road Southbound				Bear Valley Road Westbound				Apple Valley Road Northbound				Bear Valley Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	2
07:30 AM	0	1	1	2	0	2	0	2	0	0	0	0	0	0	1	1	5
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	0	1	1	2	0	3	1	4	0	0	0	0	1	0	1	2	8
08:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
08:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	2	0	2	0	0	0	0	1	2	0	3	5
Grand Total	0	1	1	2	0	5	1	6	0	0	0	0	2	2	1	5	13
Apprch %	0	50	50		0	83.3	16.7		0	0	0		40	40	20		
Total %	0	7.7	7.7	15.4	0	38.5	7.7	46.2	0	0	0	0	15.4	15.4	7.7	38.5	

Start Time	Apple Valley Road Southbound				Bear Valley Road Westbound				Apple Valley Road Northbound				Bear Valley Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	1	1	2	0	2	0	2	0	0	0	0	0	0	1	1	5
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
08:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
08:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Total Volume	0	1	1	2	0	4	0	4	0	0	0	0	1	2	1	4	10
% App. Total	0	50	50		0	100	0		0	0	0		25	50	25		
PHF	.000	.250	.250	.250	.000	.500	.000	.500	.000	.000	.000	.000	.250	.500	.250	1.00	.500

City of Apple Valley
 N/S: Apple Valley Road
 E/W: Bear Valley Road
 Weather: Clear

File Name : 01_APV_Apple Valley_Bear Valley_AM
 Site Code : 00321222
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Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	1	1	2	0	2	0	2	0	0	0	0	0	0	1	1
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
+30 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1
+45 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1
Total Volume	0	1	1	2	0	4	0	4	0	0	0	0	1	2	1	4
% App. Total	0	50	50		0	100	0		0	0	0		25	50	25	
PHF	.000	.250	.250	.250	.000	.500	.000	.500	.000	.000	.000	.000	.250	.500	.250	1.000

City of Apple Valley
 N/S: Apple Valley Road
 E/W: Bear Valley Road
 Weather: Clear

File Name : 01_APV_Apple Valley_Bear Valley_AM
 Site Code : 00321222
 Start Date : 5/18/2021
 Page No : 1

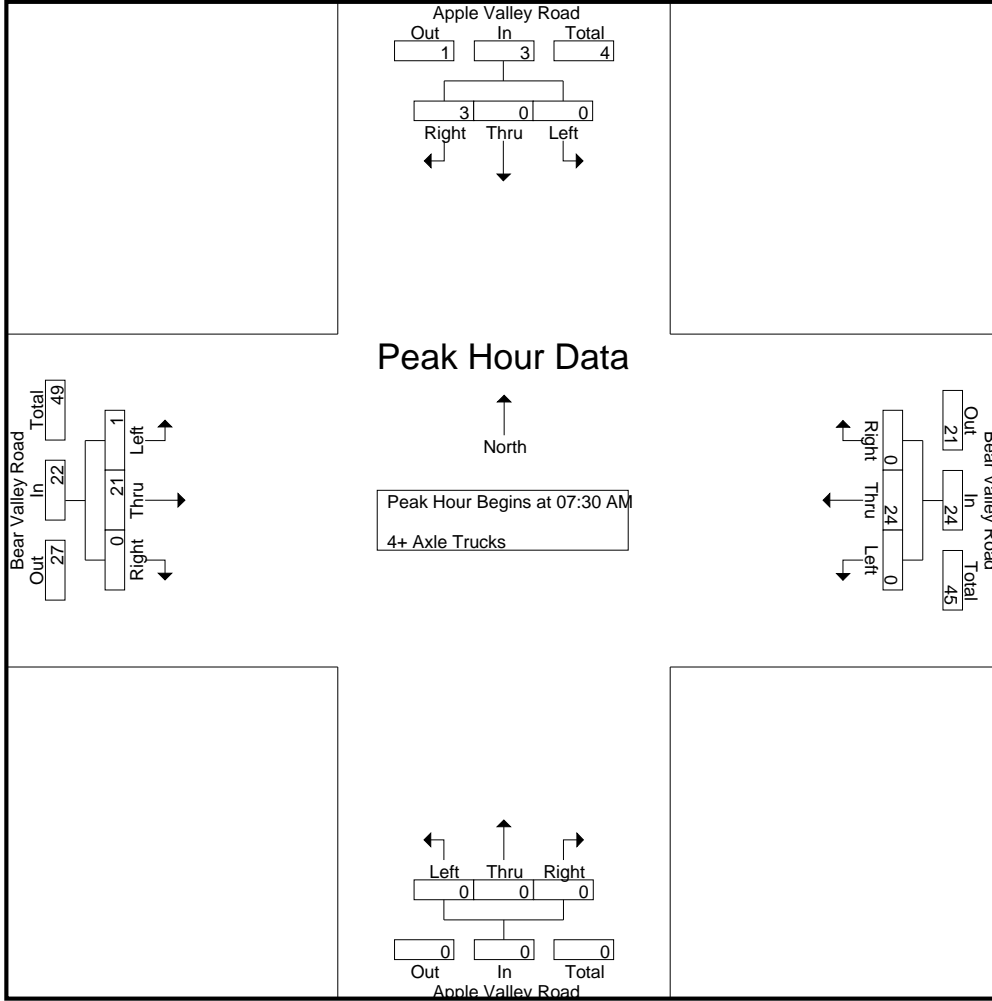
Groups Printed- 4+ Axle Trucks

Start Time	Apple Valley Road Southbound				Bear Valley Road Westbound				Apple Valley Road Northbound				Bear Valley Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	11	1	12	0	0	0	0	0	5	0	5	17
07:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	1	6	1	8	9
07:30 AM	0	0	0	0	0	5	0	5	0	0	0	0	0	9	0	9	14
07:45 AM	0	0	0	0	0	5	0	5	0	0	0	0	1	5	0	6	11
Total	0	0	0	0	0	22	1	23	0	0	0	0	2	25	1	28	51
08:00 AM	0	0	3	3	0	6	0	6	0	0	0	0	0	4	0	4	13
08:15 AM	0	0	0	0	0	8	0	8	0	0	0	0	0	3	0	3	11
08:30 AM	0	0	0	0	0	2	1	3	0	0	0	0	0	5	0	5	8
08:45 AM	0	0	0	0	0	7	0	7	0	0	0	0	0	3	0	3	10
Total	0	0	3	3	0	23	1	24	0	0	0	0	0	15	0	15	42
Grand Total	0	0	3	3	0	45	2	47	0	0	0	0	2	40	1	43	93
Apprch %	0	0	100		0	95.7	4.3		0	0	0		4.7	93	2.3		
Total %	0	0	3.2	3.2	0	48.4	2.2	50.5	0	0	0	0	2.2	43	1.1	46.2	

Start Time	Apple Valley Road Southbound				Bear Valley Road Westbound				Apple Valley Road Northbound				Bear Valley Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	5	0	5	0	0	0	0	0	9	0	9	14
07:45 AM	0	0	0	0	0	5	0	5	0	0	0	0	1	5	0	6	11
08:00 AM	0	0	3	3	0	6	0	6	0	0	0	0	0	4	0	4	13
08:15 AM	0	0	0	0	0	8	0	8	0	0	0	0	0	3	0	3	11
Total Volume	0	0	3	3	0	24	0	24	0	0	0	0	1	21	0	22	49
% App. Total	0	0	100		0	100	0		0	0	0		4.5	95.5	0		
PHF	.000	.000	.250	.250	.000	.750	.000	.750	.000	.000	.000	.000	.250	.583	.000	.611	.875

City of Apple Valley
 N/S: Apple Valley Road
 E/W: Bear Valley Road
 Weather: Clear

File Name : 01_APV_Apple Valley_Bear Valley_AM
 Site Code : 00321222
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Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	5	0	5	0	0	0	0	0	9	0	9
+15 mins.	0	0	0	0	0	5	0	5	0	0	0	0	1	5	0	6
+30 mins.	0	0	3	3	0	6	0	6	0	0	0	0	0	4	0	4
+45 mins.	0	0	0	0	0	8	0	8	0	0	0	0	0	3	0	3
Total Volume	0	0	3	3	0	24	0	24	0	0	0	0	1	21	0	22
% App. Total	0	0	100		0	100	0		0	0	0		4.5	95.5	0	
PHF	.000	.000	.250	.250	.000	.750	.000	.750	.000	.000	.000	.000	.250	.583	.000	.611

City of Apple Valley
 N/S: Apple Valley Road
 E/W: Bear Valley Road
 Weather: Clear

File Name : 01_APV_Apple Valley_Bear Valley_PM
 Site Code : 00321222
 Start Date : 5/18/2021
 Page No : 1

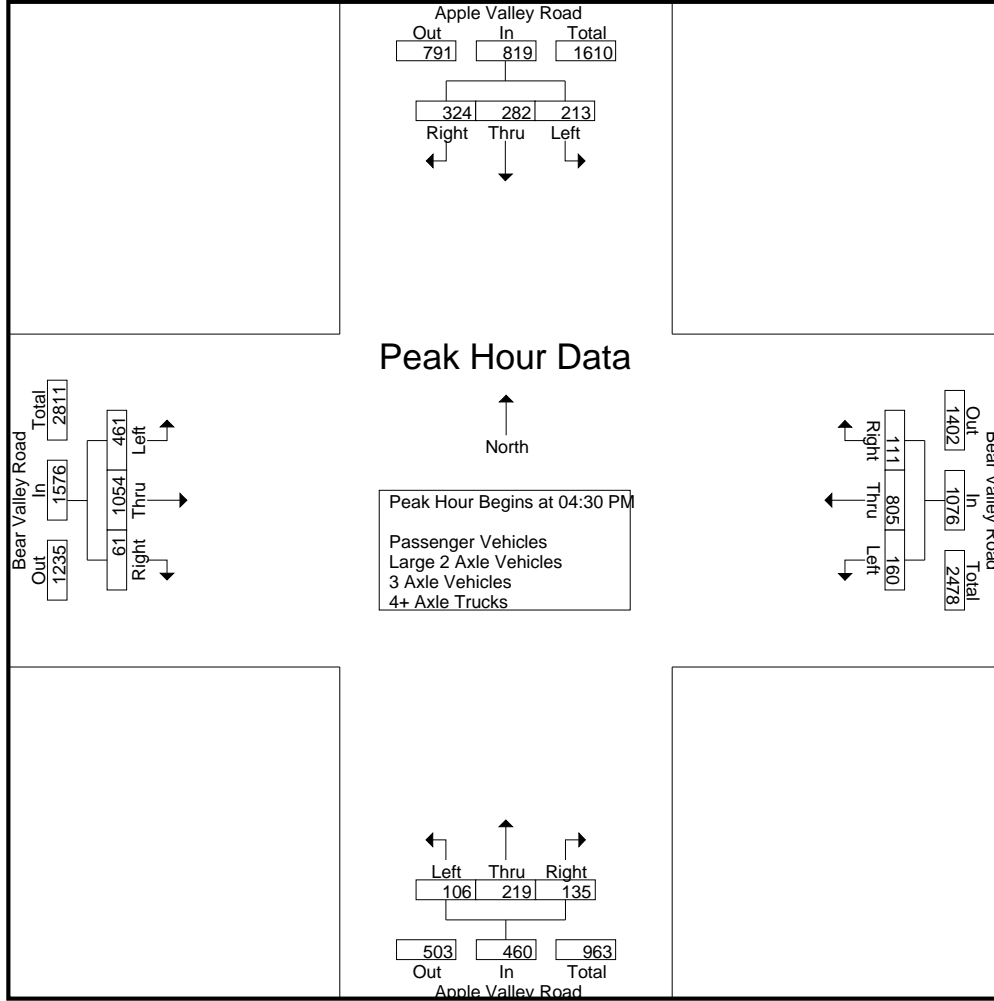
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Apple Valley Road Southbound				Bear Valley Road Westbound				Apple Valley Road Northbound				Bear Valley Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	52	61	68	181	41	228	28	297	28	54	36	118	133	255	14	402	998
04:15 PM	43	68	75	186	40	193	30	263	23	60	36	119	102	238	21	361	929
04:30 PM	53	68	72	193	58	176	44	278	22	50	37	109	137	274	15	426	1006
04:45 PM	50	82	96	228	38	214	27	279	33	47	27	107	95	239	15	349	963
Total	198	279	311	788	177	811	129	1117	106	211	136	453	467	1006	65	1538	3896
05:00 PM	46	59	84	189	30	218	20	268	23	62	35	120	113	288	17	418	995
05:15 PM	64	73	72	209	34	197	20	251	28	60	36	124	116	253	14	383	967
05:30 PM	54	70	69	193	31	204	32	267	18	52	33	103	93	263	20	376	939
05:45 PM	69	58	72	199	37	167	24	228	27	65	27	119	99	209	16	324	870
Total	233	260	297	790	132	786	96	1014	96	239	131	466	421	1013	67	1501	3771
Grand Total	431	539	608	1578	309	1597	225	2131	202	450	267	919	888	2019	132	3039	7667
Apprch %	27.3	34.2	38.5		14.5	74.9	10.6		22	49	29.1		29.2	66.4	4.3		
Total %	5.6	7	7.9	20.6	4	20.8	2.9	27.8	2.6	5.9	3.5	12	11.6	26.3	1.7	39.6	
Passenger Vehicles	422	530	601	1553	305	1552	222	2079	197	437	264	898	879	1970	130	2979	7509
% Passenger Vehicles	97.9	98.3	98.8	98.4	98.7	97.2	98.7	97.6	97.5	97.1	98.9	97.7	99	97.6	98.5	98	97.9
Large 2 Axle Vehicles	7	9	5	21	4	27	2	33	4	8	2	14	7	25	2	34	102
% Large 2 Axle Vehicles	1.6	1.7	0.8	1.3	1.3	1.7	0.9	1.5	2	1.8	0.7	1.5	0.8	1.2	1.5	1.1	1.3
3 Axle Vehicles	1	0	0	1	0	1	1	2	0	5	1	6	0	5	0	5	14
% 3 Axle Vehicles	0.2	0	0	0.1	0	0.1	0.4	0.1	0	1.1	0.4	0.7	0	0.2	0	0.2	0.2
4+ Axle Trucks	1	0	2	3	0	17	0	17	1	0	0	1	2	19	0	21	42
% 4+ Axle Trucks	0.2	0	0.3	0.2	0	1.1	0	0.8	0.5	0	0	0.1	0.2	0.9	0	0.7	0.5

Start Time	Apple Valley Road Southbound				Bear Valley Road Westbound				Apple Valley Road Northbound				Bear Valley Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	53	68	72	193	58	176	44	278	22	50	37	109	137	274	15	426	1006
04:45 PM	50	82	96	228	38	214	27	279	33	47	27	107	95	239	15	349	963
05:00 PM	46	59	84	189	30	218	20	268	23	62	35	120	113	288	17	418	995
05:15 PM	64	73	72	209	34	197	20	251	28	60	36	124	116	253	14	383	967
Total Volume	213	282	324	819	160	805	111	1076	106	219	135	460	461	1054	61	1576	3931
% App. Total	26	34.4	39.6		14.9	74.8	10.3		23	47.6	29.3		29.3	66.9	3.9		
PHF	.832	.860	.844	.898	.690	.923	.631	.964	.803	.883	.912	.927	.841	.915	.897	.925	.977

City of Apple Valley
 N/S: Apple Valley Road
 E/W: Bear Valley Road
 Weather: Clear

File Name : 01_APV_Apple Valley_Bear Valley_PM
 Site Code : 00321222
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:30 PM				04:00 PM				05:00 PM				04:30 PM			
+0 mins.	53	68	72	193	41	228	28	297	23	62	35	120	137	274	15	426
+15 mins.	50	82	96	228	40	193	30	263	28	60	36	124	95	239	15	349
+30 mins.	46	59	84	189	58	176	44	278	18	52	33	103	113	288	17	418
+45 mins.	64	73	72	209	38	214	27	279	27	65	27	119	116	253	14	383
Total Volume	213	282	324	819	177	811	129	1117	96	239	131	466	461	1054	61	1576
% App. Total	26	34.4	39.6		15.8	72.6	11.5		20.6	51.3	28.1		29.3	66.9	3.9	
PHF	.832	.860	.844	.898	.763	.889	.733	.940	.857	.919	.910	.940	.841	.915	.897	.925

City of Apple Valley
 N/S: Apple Valley Road
 E/W: Bear Valley Road
 Weather: Clear

File Name : 01_APV_Apple Valley_Bear Valley_PM
 Site Code : 00321222
 Start Date : 5/18/2021
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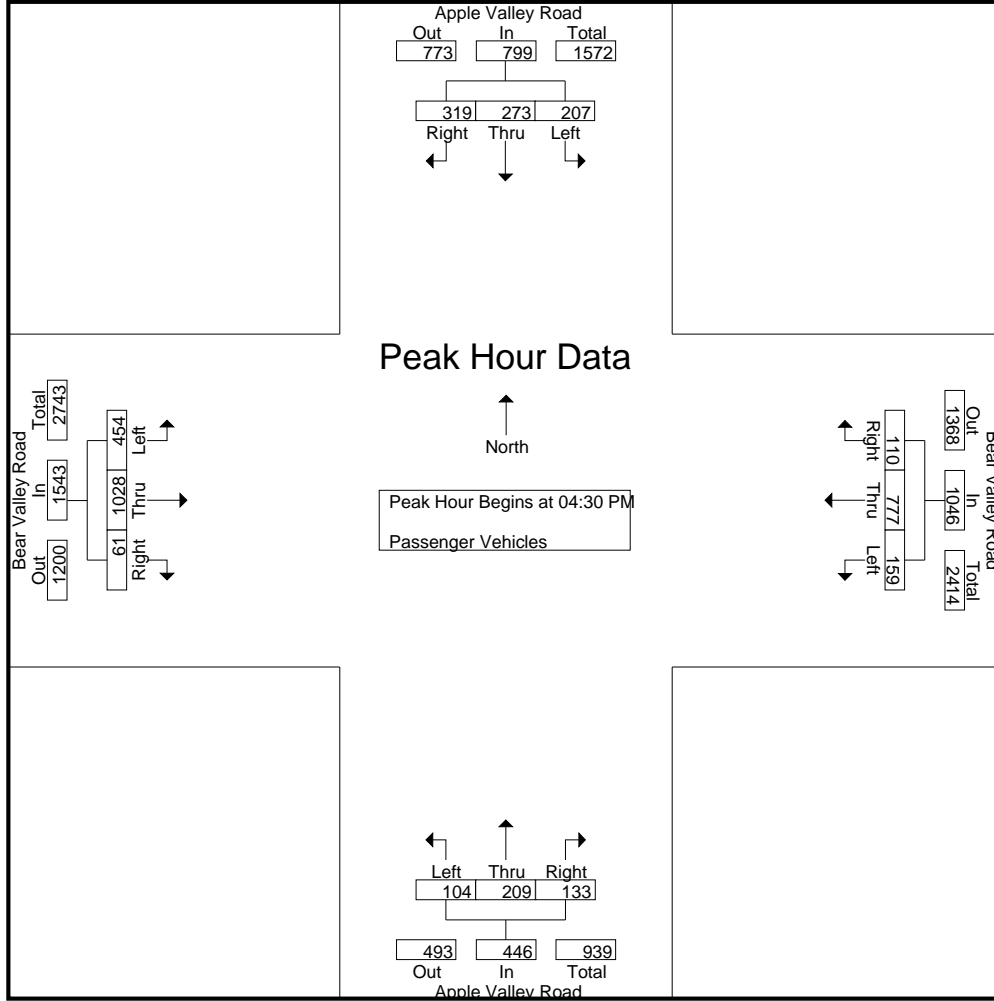
Groups Printed- Passenger Vehicles

Start Time	Apple Valley Road Southbound				Bear Valley Road Westbound				Apple Valley Road Northbound				Bear Valley Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	51	61	68	180	41	225	28	294	27	54	36	117	133	252	13	398	989
04:15 PM	43	68	75	186	38	187	29	254	23	58	35	116	101	232	20	353	909
04:30 PM	53	66	71	190	58	171	43	272	22	47	37	106	134	269	15	418	986
04:45 PM	49	78	96	223	38	206	27	271	32	45	27	104	94	234	15	343	941
Total	196	273	310	779	175	789	127	1091	104	204	135	443	462	987	63	1512	3825
05:00 PM	44	58	82	184	30	209	20	259	22	58	34	114	112	279	17	408	965
05:15 PM	61	71	70	202	33	191	20	244	28	59	35	122	114	246	14	374	942
05:30 PM	54	70	67	191	30	200	31	261	18	52	33	103	92	256	20	368	923
05:45 PM	67	58	72	197	37	163	24	224	25	64	27	116	99	202	16	317	854
Total	226	257	291	774	130	763	95	988	93	233	129	455	417	983	67	1467	3684
Grand Total	422	530	601	1553	305	1552	222	2079	197	437	264	898	879	1970	130	2979	7509
Apprch %	27.2	34.1	38.7		14.7	74.7	10.7		21.9	48.7	29.4		29.5	66.1	4.4		
Total %	5.6	7.1	8	20.7	4.1	20.7	3	27.7	2.6	5.8	3.5	12	11.7	26.2	1.7	39.7	

Start Time	Apple Valley Road Southbound				Bear Valley Road Westbound				Apple Valley Road Northbound				Bear Valley Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	53	66	71	190	58	171	43	272	22	47	37	106	134	269	15	418	986
04:45 PM	49	78	96	223	38	206	27	271	32	45	27	104	94	234	15	343	941
05:00 PM	44	58	82	184	30	209	20	259	22	58	34	114	112	279	17	408	965
05:15 PM	61	71	70	202	33	191	20	244	28	59	35	122	114	246	14	374	942
Total Volume	207	273	319	799	159	777	110	1046	104	209	133	446	454	1028	61	1543	3834
% App. Total	25.9	34.2	39.9		15.2	74.3	10.5		23.3	46.9	29.8		29.4	66.6	4		
PHF	.848	.875	.831	.896	.685	.929	.640	.961	.813	.886	.899	.914	.847	.921	.897	.923	.972

City of Apple Valley
 N/S: Apple Valley Road
 E/W: Bear Valley Road
 Weather: Clear

File Name : 01_APV_Apple Valley_Bear Valley_PM
 Site Code : 00321222
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 Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	53	66	71	190	58	171	43	272	22	47	37	106	134	269	15	418
+15 mins.	49	78	96	223	38	206	27	271	32	45	27	104	94	234	15	343
+30 mins.	44	58	82	184	30	209	20	259	22	58	34	114	112	279	17	408
+45 mins.	61	71	70	202	33	191	20	244	28	59	35	122	114	246	14	374
Total Volume	207	273	319	799	159	777	110	1046	104	209	133	446	454	1028	61	1543
% App. Total	25.9	34.2	39.9		15.2	74.3	10.5		23.3	46.9	29.8		29.4	66.6	4	
PHF	.848	.875	.831	.896	.685	.929	.640	.961	.813	.886	.899	.914	.847	.921	.897	.923

City of Apple Valley
 N/S: Apple Valley Road
 E/W: Bear Valley Road
 Weather: Clear

File Name : 01_APV_Apple Valley_Bear Valley_PM
 Site Code : 00321222
 Start Date : 5/18/2021
 Page No : 1

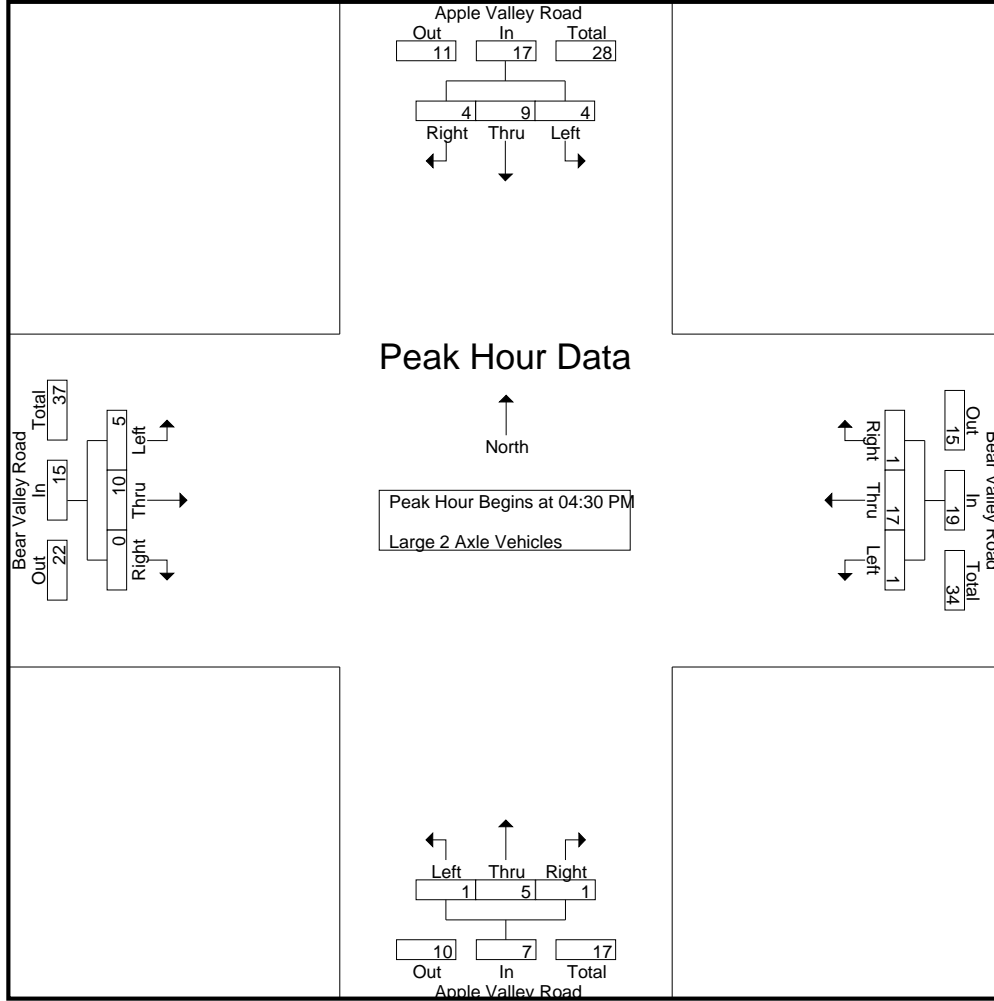
Groups Printed- Large 2 Axle Vehicles

Start Time	Apple Valley Road Southbound				Bear Valley Road Westbound				Apple Valley Road Northbound				Bear Valley Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	1	0	0	1	0	2	0	2	1	0	0	1	0	1	1	2	6
04:15 PM	0	0	0	0	2	4	0	6	0	2	1	3	1	5	1	7	16
04:30 PM	0	2	1	3	0	3	1	4	0	0	0	0	1	2	0	3	10
04:45 PM	1	4	0	5	0	5	0	5	0	1	0	1	1	3	0	4	15
Total	2	6	1	9	2	14	1	17	1	3	1	5	3	11	2	16	47
05:00 PM	1	1	2	4	0	6	0	6	1	3	0	4	1	3	0	4	18
05:15 PM	2	2	1	5	1	3	0	4	0	1	1	2	2	2	0	4	15
05:30 PM	0	0	1	1	1	3	1	5	0	0	0	0	1	5	0	6	12
05:45 PM	2	0	0	2	0	1	0	1	2	1	0	3	0	4	0	4	10
Total	5	3	4	12	2	13	1	16	3	5	1	9	4	14	0	18	55
Grand Total	7	9	5	21	4	27	2	33	4	8	2	14	7	25	2	34	102
Apprch %	33.3	42.9	23.8		12.1	81.8	6.1		28.6	57.1	14.3		20.6	73.5	5.9		
Total %	6.9	8.8	4.9	20.6	3.9	26.5	2	32.4	3.9	7.8	2	13.7	6.9	24.5	2	33.3	

Start Time	Apple Valley Road Southbound				Bear Valley Road Westbound				Apple Valley Road Northbound				Bear Valley Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	2	1	3	0	3	1	4	0	0	0	0	1	2	0	3	10
04:45 PM	1	4	0	5	0	5	0	5	0	1	0	1	1	3	0	4	15
05:00 PM	1	1	2	4	0	6	0	6	1	3	0	4	1	3	0	4	18
05:15 PM	2	2	1	5	1	3	0	4	0	1	1	2	2	2	0	4	15
Total Volume	4	9	4	17	1	17	1	19	1	5	1	7	5	10	0	15	58
% App. Total	23.5	52.9	23.5		5.3	89.5	5.3		14.3	71.4	14.3		33.3	66.7	0		
PHF	.500	.563	.500	.850	.250	.708	.250	.792	.250	.417	.250	.438	.625	.833	.000	.938	.806

City of Apple Valley
 N/S: Apple Valley Road
 E/W: Bear Valley Road
 Weather: Clear

File Name : 01_APV_Apple Valley_Bear Valley_PM
 Site Code : 00321222
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Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	2	1	3	0	3	1	4	0	0	0	0	1	2	0	3
+15 mins.	1	4	0	5	0	5	0	5	0	1	0	1	1	3	0	4
+30 mins.	1	1	2	4	0	6	0	6	1	3	0	4	1	3	0	4
+45 mins.	2	2	1	5	1	3	0	4	0	1	1	2	2	2	0	4
Total Volume	4	9	4	17	1	17	1	19	1	5	1	7	5	10	0	15
% App. Total	23.5	52.9	23.5		5.3	89.5	5.3		14.3	71.4	14.3		33.3	66.7	0	
PHF	.500	.563	.500	.850	.250	.708	.250	.792	.250	.417	.250	.438	.625	.833	.000	.938

City of Apple Valley
 N/S: Apple Valley Road
 E/W: Bear Valley Road
 Weather: Clear

File Name : 01_APV_Apple Valley_Bear Valley_PM
 Site Code : 00321222
 Start Date : 5/18/2021
 Page No : 1

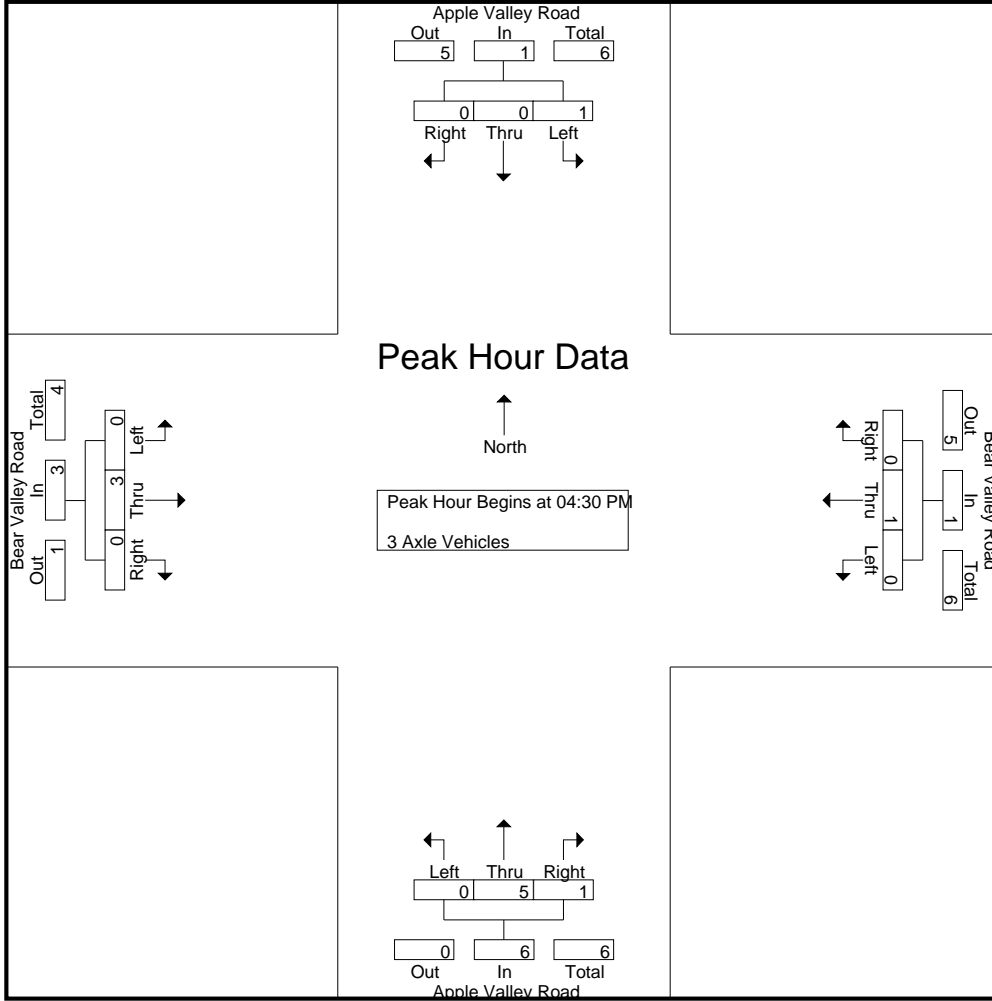
Groups Printed- 3 Axle Vehicles

Start Time	Apple Valley Road Southbound				Bear Valley Road Westbound				Apple Valley Road Northbound				Bear Valley Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
04:15 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	3
04:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	0	0	0	0	0	1	1	0	4	0	4	0	1	0	1	6
05:00 PM	1	0	0	1	0	1	0	1	0	1	1	2	0	2	0	2	6
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	1	0	0	1	0	1	0	1	0	1	1	2	0	4	0	4	8
Grand Total	1	0	0	1	0	1	1	2	0	5	1	6	0	5	0	5	14
Apprch %	100	0	0		0	50	50		0	83.3	16.7		0	100	0		
Total %	7.1	0	0	7.1	0	7.1	7.1	14.3	0	35.7	7.1	42.9	0	35.7	0	35.7	

Start Time	Apple Valley Road Southbound				Bear Valley Road Westbound				Apple Valley Road Northbound				Bear Valley Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	3
04:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:00 PM	1	0	0	1	0	1	0	1	0	1	1	2	0	2	0	2	6
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total Volume	1	0	0	1	0	1	0	1	0	5	1	6	0	3	0	3	11
% App. Total	100	0	0		0	100	0		0	83.3	16.7		0	100	0		
PHF	.250	.000	.000	.250	.000	.250	.000	.250	.000	.417	.250	.500	.000	.375	.000	.375	.458

City of Apple Valley
 N/S: Apple Valley Road
 E/W: Bear Valley Road
 Weather: Clear

File Name : 01_APV_Apple Valley_Bear Valley_PM
 Site Code : 00321222
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Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
+30 mins.	1	0	0	1	0	1	0	1	0	1	1	2	0	2	0	2
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Total Volume	1	0	0	1	0	1	0	1	0	5	1	6	0	3	0	3
% App. Total	100	0	0	0	0	100	0	0	0	83.3	16.7	0	0	100	0	0
PHF	.250	.000	.000	.250	.000	.250	.000	.250	.000	.417	.250	.500	.000	.375	.000	.375

City of Apple Valley
 N/S: Apple Valley Road
 E/W: Bear Valley Road
 Weather: Clear

File Name : 01_APV_Apple Valley_Bear Valley_PM
 Site Code : 00321222
 Start Date : 5/18/2021
 Page No : 1

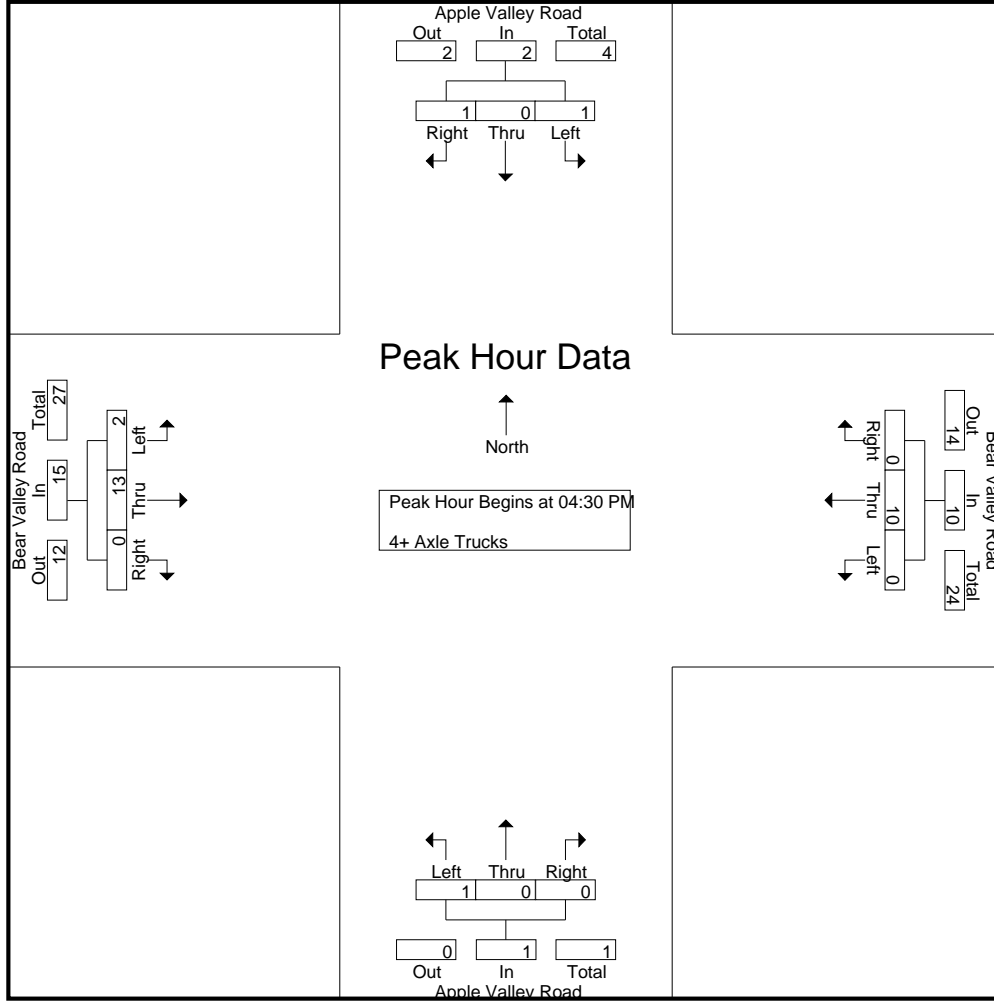
Groups Printed- 4+ Axle Trucks

Start Time	Apple Valley Road Southbound				Bear Valley Road Westbound				Apple Valley Road Northbound				Bear Valley Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
04:15 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
04:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	2	3	0	5	7
04:45 PM	0	0	0	0	0	3	0	3	1	0	0	1	0	2	0	2	6
Total	0	0	0	0	0	8	0	8	1	0	0	1	2	7	0	9	18
05:00 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	4	0	4	6
05:15 PM	1	0	1	2	0	3	0	3	0	0	0	0	0	4	0	4	9
05:30 PM	0	0	1	1	0	1	0	1	0	0	0	0	0	2	0	2	4
05:45 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	2	0	2	5
Total	1	0	2	3	0	9	0	9	0	0	0	0	0	12	0	12	24
Grand Total	1	0	2	3	0	17	0	17	1	0	0	1	2	19	0	21	42
Apprch %	33.3	0	66.7		0	100	0		100	0	0		9.5	90.5	0		
Total %	2.4	0	4.8	7.1	0	40.5	0	40.5	2.4	0	0	2.4	4.8	45.2	0	50	

Start Time	Apple Valley Road Southbound				Bear Valley Road Westbound				Apple Valley Road Northbound				Bear Valley Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	2	3	0	5	7
04:45 PM	0	0	0	0	0	3	0	3	1	0	0	1	0	2	0	2	6
05:00 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	4	0	4	6
05:15 PM	1	0	1	2	0	3	0	3	0	0	0	0	0	4	0	4	9
Total Volume	1	0	1	2	0	10	0	10	1	0	0	1	2	13	0	15	28
% App. Total	50	0	50		0	100	0		100	0	0		13.3	86.7	0		
PHF	.250	.000	.250	.250	.000	.833	.000	.833	.250	.000	.000	.250	.250	.813	.000	.750	.778

City of Apple Valley
 N/S: Apple Valley Road
 E/W: Bear Valley Road
 Weather: Clear

File Name : 01_APV_Apple Valley_Bear Valley_PM
 Site Code : 00321222
 Start Date : 5/18/2021
 Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	0	0	0	2	0	2	0	0	0	0	2	3	0	5
+15 mins.	0	0	0	0	0	3	0	3	1	0	0	1	0	2	0	2
+30 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	4	0	4
+45 mins.	1	0	1	2	0	3	0	3	0	0	0	0	0	4	0	4
Total Volume	1	0	1	2	0	10	0	10	1	0	0	1	2	13	0	15
% App. Total	50	0	50		0	100	0		100	0	0		13.3	86.7	0	
PHF	.250	.000	.250	.250	.000	.833	.000	.833	.250	.000	.000	.250	.250	.813	.000	.750

APPENDIX C

Volume Development Worksheets

Appendix C - Existing Peak Hour PCE Volume Summary

	AM Peak Hour							PM Peak Hour						
		Growth From	Adjusted	Balanced	Project	Pass-By	Existing		Growth From	Adjusted	Balanced	Net	Pass-By	Existing
	Historical	Historical Yr	2021	2021				Historical	Historical Yr	2021	2021			
Counts	to 2021	Volumes	Volumes	Trips	Trips	Project	Counts	to 2021	Volumes	Volumes	Trips	Trips	With	
1 Westmont Drive/Bear Valley Road														
Count Year: 2021														
NBL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NBT	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NBR	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SBL	52	0	52	52	24	0	76	150	0	150	153	48	33	234
SBT	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SBR	16	0	16	16	36	0	52	50	0	50	50	73	26	149
EBL	42	0	42	42	56	0	98	95	0	95	95	72	32	199
EBT	704	0	721	712	0	0	712	1,229	0	1,352	1,376	0	-32	1,344
EBR	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WBL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WBT	1,070	0	1,358	1,379	0	0	1,379	1,030	0	1,089	1,083	0	-27	1,056
WBR	62	0	62	63	9	0	72	88	0	88	88	12	5	105
North Leg														
Approach	68	0	68	68	60	0	128	200	0	200	203	121	59	383
Departure	104	0	104	105	65	0	170	183	0	183	183	84	37	304
Total	172	0	172	173	125	0	298	383	0	383	386	205	96	687
South Leg														
Approach	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
East Leg														
Approach	1,132	0	1,420	1,442	9	0	1,451	1,118	0	1,177	1,171	12	-22	1,161
Departure	756	0	773	764	24	0	788	1,379	0	1,502	1,529	48	1	1,578
Total	1,888	0	2,193	2,206	33	0	2,239	2,497	0	2,679	2,700	60	-21	2,739
West Leg														
Approach	746	0	763	754	56	0	810	1,324	0	1,447	1,471	72	0	1,543
Departure	1,086	0	1,374	1,395	36	0	1,431	1,080	0	1,139	1,133	73	-1	1,205
Total	1,832	0	2,137	2,149	92	0	2,241	2,404	0	2,586	2,604	145	-1	2,748
Total Approaches														
Approach	1,946	0	2,251	2,264	125	0	2,389	2,642	0	2,824	2,845	205	37	3,087
Departure	1,946	0	2,251	2,264	125	0	2,389	2,642	0	2,824	2,845	205	37	3,087
Total	3,892	0	4,502	4,528	250	0	4,778	5,284	0	5,648	5,690	410	74	6,174

Appendix C - Existing Peak Hour PCE Volume Summary

	AM Peak Hour							PM Peak Hour						
	Historical Counts	Growth From	Adjusted	Balanced	Project Trips	Pass-By Trips	Existing With Project	Historical Counts	Growth From	Adjusted	Balanced	Net Project Trips	Pass-By Trips	Existing With Project
		Historical Yr to 2021	2021 Volumes	2021 Volumes					Historical Yr to 2021	2021 Volumes	2021 Volumes			
2 El Pollo Loco Driveway/Bear Valley Road														
Count Year: 2021														
NBL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NBT	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NBR	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SBL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SBT	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SBR	1	0	1	1	0	0	1	10	0	10	10	0	0	10
EBL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EBT	745	0	763	763	24	0	787	1,389	0	1,529	1,529	48	0	1,577
EBR	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WBL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WBT	1,136	0	1,441	1,441	9	0	1,450	1,097	0	1,160	1,160	12	-21	1,151
WBR	2	0	2	2	15	0	17	10	0	10	10	18	10	38
North Leg														
Approach	1	0	1	1	0	0	1	10	0	10	10	0	0	10
Departure	2	0	2	2	15	0	17	10	0	10	10	18	10	38
Total	3	0	3	3	15	0	18	20	0	20	20	18	10	48
South Leg														
Approach	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
East Leg														
Approach	1,138	0	1,443	1,443	24	0	1,467	1,107	0	1,170	1,170	30	-11	1,189
Departure	745	0	763	763	24	0	787	1,389	0	1,529	1,529	48	0	1,577
Total	1,883	0	2,206	2,206	48	0	2,254	2,496	0	2,699	2,699	78	-11	2,766
West Leg														
Approach	745	0	763	763	24	0	787	1,389	0	1,529	1,529	48	0	1,577
Departure	1,137	0	1,442	1,442	9	0	1,451	1,107	0	1,170	1,170	12	-21	1,161
Total	1,882	0	2,205	2,205	33	0	2,238	2,496	0	2,699	2,699	60	-21	2,738
Total Approaches														
Approach	1,884	0	2,207	2,207	48	0	2,255	2,506	0	2,709	2,709	78	-11	2,776
Departure	1,884	0	2,207	2,207	48	0	2,255	2,506	0	2,709	2,709	78	-11	2,776
Total	3,768	0	4,414	4,414	96	0	4,510	5,012	0	5,418	5,418	156	-22	5,552

Appendix C - Existing Peak Hour PCE Volume Summary

	AM Peak Hour							PM Peak Hour						
	Historical	Growth From	Adjusted	Balanced	Project	Pass-By	Existing	Historical	Growth From	Adjusted	Balanced	Net	Pass-By	Existing
	Counts	Historical Yr to 2021	2021 Volumes	2021 Volumes				Counts	Historical Yr to 2021	2021 Volumes	2021 Volumes			
3 Sonic Drive-In Driveway/Bear Valley Road														
Count Year: 2021														
NBL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NBT	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NBR	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SBL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SBT	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SBR	1	0	1	1	0	0	1	10	0	10	10	0	0	10
EBL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EBT	754	0	772	772	24	0	796	1,394	0	1,534	1,534	48	0	1,582
EBR	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WBL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WBT	1,134	0	1,439	1,439	24	0	1,463	1,101	0	1,165	1,165	30	-10	1,185
WBR	2	0	2	2	14	0	16	10	0	10	10	18	10	38
North Leg														
Approach	1	0	1	1	0	0	1	10	0	10	10	0	0	10
Departure	2	0	2	2	14	0	16	10	0	10	10	18	10	38
Total	3	0	3	3	14	0	17	20	0	20	20	18	10	48
South Leg														
Approach	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
East Leg														
Approach	1,136	0	1,441	1,441	38	0	1,479	1,111	0	1,175	1,175	48	0	1,223
Departure	754	0	772	772	24	0	796	1,394	0	1,534	1,534	48	0	1,582
Total	1,890	0	2,213	2,213	62	0	2,275	2,505	0	2,709	2,709	96	0	2,805
West Leg														
Approach	754	0	772	772	24	0	796	1,394	0	1,534	1,534	48	0	1,582
Departure	1,135	0	1,440	1,440	24	0	1,464	1,111	0	1,175	1,175	30	-10	1,195
Total	1,889	0	2,212	2,212	48	0	2,260	2,505	0	2,709	2,709	78	-10	2,777
Total Approaches														
Approach	1,891	0	2,214	2,214	62	0	2,276	2,515	0	2,719	2,719	96	0	2,815
Departure	1,891	0	2,214	2,214	62	0	2,276	2,515	0	2,719	2,719	96	0	2,815
Total	3,782	0	4,428	4,428	124	0	4,552	5,030	0	5,438	5,438	192	0	5,630

APPENDIX D

LEVEL OF SERVICE WORKSHEETS

HCM 6th Signalized Intersection Summary
 1: Bear Valley Road & Westmont Drive



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↶	↷	↶↷	↶	↶	↶
Traffic Volume (veh/h)	42	712	1379	63	52	16
Future Volume (veh/h)	42	712	1379	63	52	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	44	742	1436	66	54	17
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	71	2324	2845	883	441	392
Arrive On Green	0.04	0.64	0.55	0.55	0.24	0.24
Sat Flow, veh/h	1810	3705	5358	1610	1810	1610
Grp Volume(v), veh/h	44	742	1436	66	54	17
Grp Sat Flow(s),veh/h/ln	1810	1805	1729	1610	1810	1610
Q Serve(g_s), s	1.9	7.4	13.8	1.5	1.9	0.6
Cycle Q Clear(g_c), s	1.9	7.4	13.8	1.5	1.9	0.6
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	71	2324	2845	883	441	392
V/C Ratio(X)	0.62	0.32	0.50	0.07	0.12	0.04
Avail Cap(c_a), veh/h	260	2324	2845	883	441	392
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.89	0.89	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.9	6.4	11.3	8.5	23.6	23.1
Incr Delay (d2), s/veh	7.8	0.3	0.6	0.2	0.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	2.0	4.3	0.5	0.8	0.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	45.6	6.7	11.9	8.7	24.1	23.3
LnGrp LOS	D	A	B	A	C	C
Approach Vol, veh/h		786	1502		71	
Approach Delay, s/veh		8.9	11.8		24.0	
Approach LOS		A	B		C	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		56.0		24.0	7.6	48.4
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		51.5		19.5	11.5	35.5
Max Q Clear Time (g_c+I1), s		9.4		3.9	3.9	15.8
Green Ext Time (p_c), s		5.1		0.1	0.0	9.6
Intersection Summary						
HCM 6th Ctrl Delay			11.2			
HCM 6th LOS			B			

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑↑	↑		↑
Traffic Vol, veh/h	0	763	1441	2	0	1
Future Vol, veh/h	0	763	1441	2	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	0	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	787	1486	2	0	1

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	-	0	-	0	- 743
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	-	-	- 7.1
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	- 3.9
Pot Cap-1 Maneuver	0	-	-	-	0 310
Stage 1	0	-	-	-	0 -
Stage 2	0	-	-	-	0 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	- 310
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	16.7
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	310
HCM Lane V/C Ratio	-	-	-	0.003
HCM Control Delay (s)	-	-	-	16.7
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑↑	↑		↑
Traffic Vol, veh/h	0	772	1439	2	0	1
Future Vol, veh/h	0	772	1439	2	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	0	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	804	1499	2	0	1

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	-	0	-	0	750
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	3.9
Pot Cap-1 Maneuver	0	-	-	-	307
Stage 1	0	-	-	-	-
Stage 2	0	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	307
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	16.8
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	307
HCM Lane V/C Ratio	-	-	-	0.003
HCM Control Delay (s)	-	-	-	16.8
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0

HCM 6th Signalized Intersection Summary
 1: Bear Valley Road & Westmont Drive

Apple Valley Commercial Project
 Exist NP - PM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↗	↑↑	↑↑↑	↗	↗	↗
Traffic Volume (veh/h)	95	1376	1083	88	153	50
Future Volume (veh/h)	95	1376	1083	88	153	50
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	99	1433	1128	92	159	52
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	130	2279	2611	810	464	413
Arrive On Green	0.07	0.63	0.50	0.50	0.26	0.26
Sat Flow, veh/h	1810	3705	5358	1610	1810	1610
Grp Volume(v), veh/h	99	1433	1128	92	159	52
Grp Sat Flow(s),veh/h/ln	1810	1805	1729	1610	1810	1610
Q Serve(g_s), s	4.3	19.4	11.0	2.4	5.7	2.0
Cycle Q Clear(g_c), s	4.3	19.4	11.0	2.4	5.7	2.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	130	2279	2611	810	464	413
V/C Ratio(X)	0.76	0.63	0.43	0.11	0.34	0.13
Avail Cap(c_a), veh/h	418	2279	2611	810	464	413
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.57	0.57	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.5	9.0	12.6	10.5	24.3	22.9
Incr Delay (d2), s/veh	5.3	0.8	0.5	0.3	2.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	5.5	3.6	0.8	2.6	2.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	41.7	9.8	13.1	10.7	26.3	23.5
LnGrp LOS	D	A	B	B	C	C
Approach Vol, veh/h		1532	1220		211	
Approach Delay, s/veh		11.8	13.0		25.6	
Approach LOS		B	B		C	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		55.0		25.0	10.2	44.8
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		50.5		20.5	18.5	27.5
Max Q Clear Time (g_c+I1), s		21.4		7.7	6.3	13.0
Green Ext Time (p_c), s		11.7		0.5	0.2	6.3
Intersection Summary						
HCM 6th Ctrl Delay			13.3			
HCM 6th LOS			B			

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑↑	↑		↑
Traffic Vol, veh/h	0	1529	1160	10	0	10
Future Vol, veh/h	0	1529	1160	10	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	0	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	1576	1196	10	0	10

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	-	0	-	0	598
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	3.9
Pot Cap-1 Maneuver	0	-	-	-	386
Stage 1	0	-	-	-	-
Stage 2	0	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	386
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	14.6
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	386
HCM Lane V/C Ratio	-	-	-	0.027
HCM Control Delay (s)	-	-	-	14.6
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.1

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑↑	↑		↑
Traffic Vol, veh/h	0	1534	1165	10	0	10
Future Vol, veh/h	0	1534	1165	10	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	0	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	1598	1214	10	0	10

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	-	0	-	0	607
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	3.9
Pot Cap-1 Maneuver	0	-	-	-	380
Stage 1	0	-	-	-	-
Stage 2	0	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	380
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	14.7
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	380
HCM Lane V/C Ratio	-	-	-	0.027
HCM Control Delay (s)	-	-	-	14.7
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.1

HCM 6th Signalized Intersection Summary
 1: Bear Valley Road & Westmont Drive

Apple Valley Commercial Project
 Exist WP - AM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↶	↶↶	↶↶↶	↶	↶	↶
Traffic Volume (veh/h)	98	712	1379	72	76	52
Future Volume (veh/h)	98	712	1379	72	76	52
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	102	742	1436	75	79	54
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	132	2324	2669	828	441	392
Arrive On Green	0.07	0.64	0.51	0.51	0.24	0.24
Sat Flow, veh/h	1810	3705	5358	1610	1810	1610
Grp Volume(v), veh/h	102	742	1436	75	79	54
Grp Sat Flow(s),veh/h/ln	1810	1805	1729	1610	1810	1610
Q Serve(g_s), s	4.4	7.4	14.9	1.9	2.8	2.1
Cycle Q Clear(g_c), s	4.4	7.4	14.9	1.9	2.8	2.1
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	132	2324	2669	828	441	392
V/C Ratio(X)	0.77	0.32	0.54	0.09	0.18	0.14
Avail Cap(c_a), veh/h	260	2324	2669	828	441	392
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.87	0.87	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.4	6.4	13.0	9.9	23.9	23.7
Incr Delay (d2), s/veh	8.1	0.3	0.8	0.2	0.9	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	2.0	4.8	0.6	1.3	2.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	44.5	6.7	13.8	10.1	24.8	24.4
LnGrp LOS	D	A	B	B	C	C
Approach Vol, veh/h		844	1511		133	
Approach Delay, s/veh		11.3	13.6		24.6	
Approach LOS		B	B		C	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		56.0		24.0	10.3	45.7
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		51.5		19.5	11.5	35.5
Max Q Clear Time (g_c+I1), s		9.4		4.8	6.4	16.9
Green Ext Time (p_c), s		5.1		0.3	0.1	9.3
Intersection Summary						
HCM 6th Ctrl Delay			13.4			
HCM 6th LOS			B			

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑↑↑	↑		↑
Traffic Vol, veh/h	0	787	1450	17	0	1
Future Vol, veh/h	0	787	1450	17	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	0	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	811	1495	18	0	1

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	-	0	-	0	748
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	3.9
Pot Cap-1 Maneuver	0	-	-	-	308
Stage 1	0	-	-	-	-
Stage 2	0	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	308
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	16.7
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	308
HCM Lane V/C Ratio	-	-	-	0.003
HCM Control Delay (s)	-	-	-	16.7
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑↑	↑		↑
Traffic Vol, veh/h	0	796	1463	16	0	1
Future Vol, veh/h	0	796	1463	16	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	0	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	829	1524	17	0	1

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	-	0	-	0	- 762
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	-	-	- 7.1
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	- 3.9
Pot Cap-1 Maneuver	0	-	-	-	0 302
Stage 1	0	-	-	-	0 -
Stage 2	0	-	-	-	0 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	- 302
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	17
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	302
HCM Lane V/C Ratio	-	-	-	0.003
HCM Control Delay (s)	-	-	-	17
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0

HCM 6th Signalized Intersection Summary
 1: Bear Valley Road & Westmont Drive

Apple Valley Commercial Project
 Exist WP - PM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	199	1344	1056	105	234	149
Future Volume (veh/h)	199	1344	1056	105	234	149
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	207	1400	1100	109	244	155
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	251	2279	2263	702	464	413
Arrive On Green	0.14	0.63	0.44	0.44	0.26	0.26
Sat Flow, veh/h	1810	3705	5358	1610	1810	1610
Grp Volume(v), veh/h	207	1400	1100	109	244	155
Grp Sat Flow(s),veh/h/ln	1810	1805	1729	1610	1810	1610
Q Serve(g_s), s	8.9	18.7	12.1	3.3	9.3	6.3
Cycle Q Clear(g_c), s	8.9	18.7	12.1	3.3	9.3	6.3
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	251	2279	2263	702	464	413
V/C Ratio(X)	0.82	0.61	0.49	0.16	0.53	0.38
Avail Cap(c_a), veh/h	418	2279	2263	702	464	413
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.54	0.54	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.5	8.9	16.1	13.6	25.6	24.5
Incr Delay (d2), s/veh	3.8	0.7	0.7	0.5	4.2	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	5.3	4.2	1.1	4.4	6.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	37.3	9.6	16.9	14.1	29.8	27.1
LnGrp LOS	D	A	B	B	C	C
Approach Vol, veh/h		1607	1209		399	
Approach Delay, s/veh		13.1	16.6		28.7	
Approach LOS		B	B		C	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		55.0		25.0	15.6	39.4
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		50.5		20.5	18.5	27.5
Max Q Clear Time (g_c+I1), s		20.7		11.3	10.9	14.1
Green Ext Time (p_c), s		11.4		0.9	0.3	6.0
Intersection Summary						
HCM 6th Ctrl Delay			16.4			
HCM 6th LOS			B			

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑↑	↑		↑
Traffic Vol, veh/h	0	1577	1151	38	0	10
Future Vol, veh/h	0	1577	1151	38	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	0	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	1626	1187	39	0	10

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	-	0	-	0	- 594
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	-	-	- 7.1
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	- 3.9
Pot Cap-1 Maneuver	0	-	-	-	0 388
Stage 1	0	-	-	-	0 -
Stage 2	0	-	-	-	0 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	- 388
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	14.5
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	388
HCM Lane V/C Ratio	-	-	-	0.027
HCM Control Delay (s)	-	-	-	14.5
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.1

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑↑	↑		↑
Traffic Vol, veh/h	0	1582	1185	38	0	10
Future Vol, veh/h	0	1582	1185	38	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	0	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	1648	1234	40	0	10

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	-	0	-	0	617
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	3.9
Pot Cap-1 Maneuver	0	-	-	-	375
Stage 1	0	-	-	-	-
Stage 2	0	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	375
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	14.9
HCM LOS			B

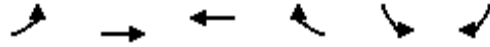
Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	375
HCM Lane V/C Ratio	-	-	-	0.028
HCM Control Delay (s)	-	-	-	14.9
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.1

APPENDIX E

QUEUING ANALYSIS WORKSHEETS

Queues

1: Bear Valley Road & Westmont Drive



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	44	742	1436	66	54	17
v/c Ratio	0.26	0.32	0.51	0.07	0.12	0.04
Control Delay	37.0	6.8	13.3	3.6	24.6	11.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.0	6.8	13.3	3.6	24.6	11.5
Queue Length 50th (ft)	21	76	173	0	21	0
Queue Length 95th (ft)	50	104	230	20	50	15
Internal Link Dist (ft)		849	170		260	
Turn Bay Length (ft)	165					50
Base Capacity (vph)	259	2323	2834	912	439	406
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.32	0.51	0.07	0.12	0.04

Intersection Summary

Intersection: 2: Bear Valley Road & El Pollo Loco Driveway

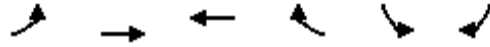
Movement	WB	WB
Directions Served	T	T
Maximum Queue (ft)	139	52
Average Queue (ft)	27	2
95th Queue (ft)	87	20
Link Distance (ft)	134	134
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	1	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Bear Valley Road & Sonic Driveway

Movement	WB
Directions Served	T
Maximum Queue (ft)	72
Average Queue (ft)	3
95th Queue (ft)	28
Link Distance (ft)	360
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Queues

1: Bear Valley Road & Westmont Drive



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	99	1433	1128	92	159	52
v/c Ratio	0.45	0.63	0.45	0.11	0.34	0.12
Control Delay	38.6	10.6	15.6	3.9	26.8	7.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.6	10.6	15.6	3.9	26.8	7.9
Queue Length 50th (ft)	47	204	138	0	65	0
Queue Length 95th (ft)	88	265	191	26	117	26
Internal Link Dist (ft)		849	170		260	
Turn Bay Length (ft)	165					50
Base Capacity (vph)	417	2278	2489	823	462	452
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.63	0.45	0.11	0.34	0.12

Intersection Summary

Intersection: 2: Bear Valley Road & El Pollo Loco Driveway

Movement	WB	SB
Directions Served	T	R
Maximum Queue (ft)	74	48
Average Queue (ft)	8	5
95th Queue (ft)	37	26
Link Distance (ft)	134	183
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Bear Valley Road & Sonic Driveway

Movement	SB
Directions Served	R
Maximum Queue (ft)	30
Average Queue (ft)	8
95th Queue (ft)	30
Link Distance (ft)	162
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Queues
1: Bear Valley Road & Westmont Drive



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	102	742	1436	75	79	54
v/c Ratio	0.48	0.32	0.56	0.09	0.18	0.12
Control Delay	40.3	6.8	16.1	3.8	25.3	8.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.3	6.8	16.1	3.8	25.3	8.1
Queue Length 50th (ft)	48	76	185	0	31	0
Queue Length 95th (ft)	93	104	241	22	66	27
Internal Link Dist (ft)		849	170		260	
Turn Bay Length (ft)	165					50
Base Capacity (vph)	259	2323	2575	839	439	434
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.32	0.56	0.09	0.18	0.12
Intersection Summary						

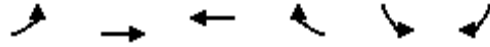
Intersection: 2: Bear Valley Road & El Pollo Loco Driveway

Movement	WB	WB	WB	SB
Directions Served	T	T	T	R
Maximum Queue (ft)	149	158	162	30
Average Queue (ft)	117	101	81	2
95th Queue (ft)	193	205	187	13
Link Distance (ft)	134	134	134	183
Upstream Blk Time (%)	35	19	12	
Queuing Penalty (veh)	128	70	43	
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: Bear Valley Road & Sonic Driveway

Movement	WB	WB	WB
Directions Served	T	T	T
Maximum Queue (ft)	376	323	248
Average Queue (ft)	201	125	41
95th Queue (ft)	447	325	161
Link Distance (ft)	360	360	360
Upstream Blk Time (%)	2		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Queues
1: Bear Valley Road & Westmont Drive



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	207	1400	1100	109	244	155
v/c Ratio	0.65	0.61	0.53	0.15	0.53	0.31
Control Delay	39.9	10.4	20.2	4.6	30.5	10.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.9	10.4	20.2	4.6	30.5	10.0
Queue Length 50th (ft)	97	196	150	0	105	15
Queue Length 95th (ft)	155	256	209	32	175	61
Internal Link Dist (ft)		849	170		260	
Turn Bay Length (ft)	165					50
Base Capacity (vph)	417	2278	2066	709	462	499
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.61	0.53	0.15	0.53	0.31
Intersection Summary						

Intersection: 2: Bear Valley Road & El Pollo Loco Driveway

Movement	WB	SB
Directions Served	T	R
Maximum Queue (ft)	114	30
Average Queue (ft)	23	8
95th Queue (ft)	85	29
Link Distance (ft)	134	183
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Bear Valley Road & Sonic Driveway

Movement	WB	SB
Directions Served	T	R
Maximum Queue (ft)	31	30
Average Queue (ft)	1	5
95th Queue (ft)	12	24
Link Distance (ft)	360	162
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		