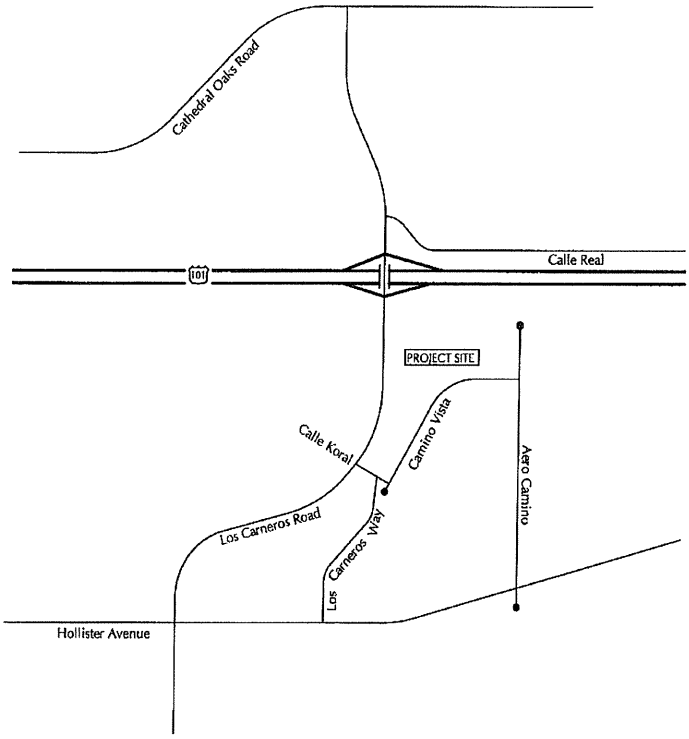
Appendix I

Traffic Study & Construction Trip Analysis

HERITAGE RIDGE PROJECT
CITY OF GOLETA, CALIFORNIA

UPDATED TRAFFIC, CIRCULATION, AND PARKING STUDY



January 29, 2016 **ATE Project #12089.01**

Prepared for:
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January 29, 2016 12089.01R05

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UPDATED TRAFFIC, CIRCULATION, AND PARKING STUDY FOR THE HERITAGE RIDGE PROJECT - CITY OF GOLETA

Associated Transportation Engineers (ATE) has prepared the following traffic, circulation, and parking study for the Heritage Ridge Project, located in the City of Goleta. The study evaluates potential traffic, circulation, and parking impacts associated with the project and identifies improvements where required. The following study has been updated to address comments provided in the Linscott, Law, & Greenspan peer review letter dated June 29, 2015 and by the City of Goleta in January 2016.

Associated Transportation Engineers

Scott A. Schell, AICP, PTP
Principal Transportation Planner

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INTRODUCTION

The following report contains an analysis of the potential traffic and circulation impacts associated with the Heritage Ridge Project, located in the City of Goleta. The report evaluates existing and future traffic conditions within the project study-area and recommends improvements where necessary. The report also contains an analysis of the project's site access, circulation, and parking plan. An analysis of the project's consistency with the policies outlined in the Congestion Management Program (CMP) is also provided. The following report has been updated to address comments provided in the Linscott, Law, & Greenspan peer review letter dated June 29, 2015 and additional comments provided by the City of Goleta in January 2016.

PROJECT DESCRIPTION

The project is proposing to construct 132 senior apartment units, 228 apartment units, and a 2-acre park on a currently vacant site located on the east side of Los Carneros Way north of the Calle Koral intersection in the western area of the City of Goleta. Figure 1 shows the project location within the City. Access to the site would be provided via three driveways on Camino Vista, which extends along the southern frontage of the site. The project is proposing to provide 152 parking spaces for the senior apartments, 345 parking spaces for the apartments, and 13 spaces for the public park. Figure 2 presents the project site plan.

EXISTING CONDITIONS

Street Network

The project site is served by a network of highways, arterial streets, and collector streets, as illustrated in Figure 1. The following text provides a brief discussion of the major components of the study-area street network.

U.S. Highway 101, located north of the project site, is a multi-lane interstate highway serving the Pacific coast between Los Angeles and the state of Washington. This highway is the principal route between the City of Goleta and the adjacent cities of Santa Barbara, Carpinteria, and Ventura to the south and the cities of Buellton and Santa Maria to the north. Access to U.S. Highway 101 would be provided via the Los Carneros Road interchange.

Hollister Avenue, located south of the project, is an arterial roadway that serves as the main east-west surface street through the community of Goleta. Hollister Avenue is a 4-lane divided arterial with on-street bike lanes. Within the study area, Hollister Avenue is signalized at the Los Carneros Road, Los Carneros Way, and Aero Camino intersections.

Source: Google Maps

Associated Transportation Engineers

EXISTING STREET NETWORK AND PROJECT SITE LOCATION

FIGURE 1

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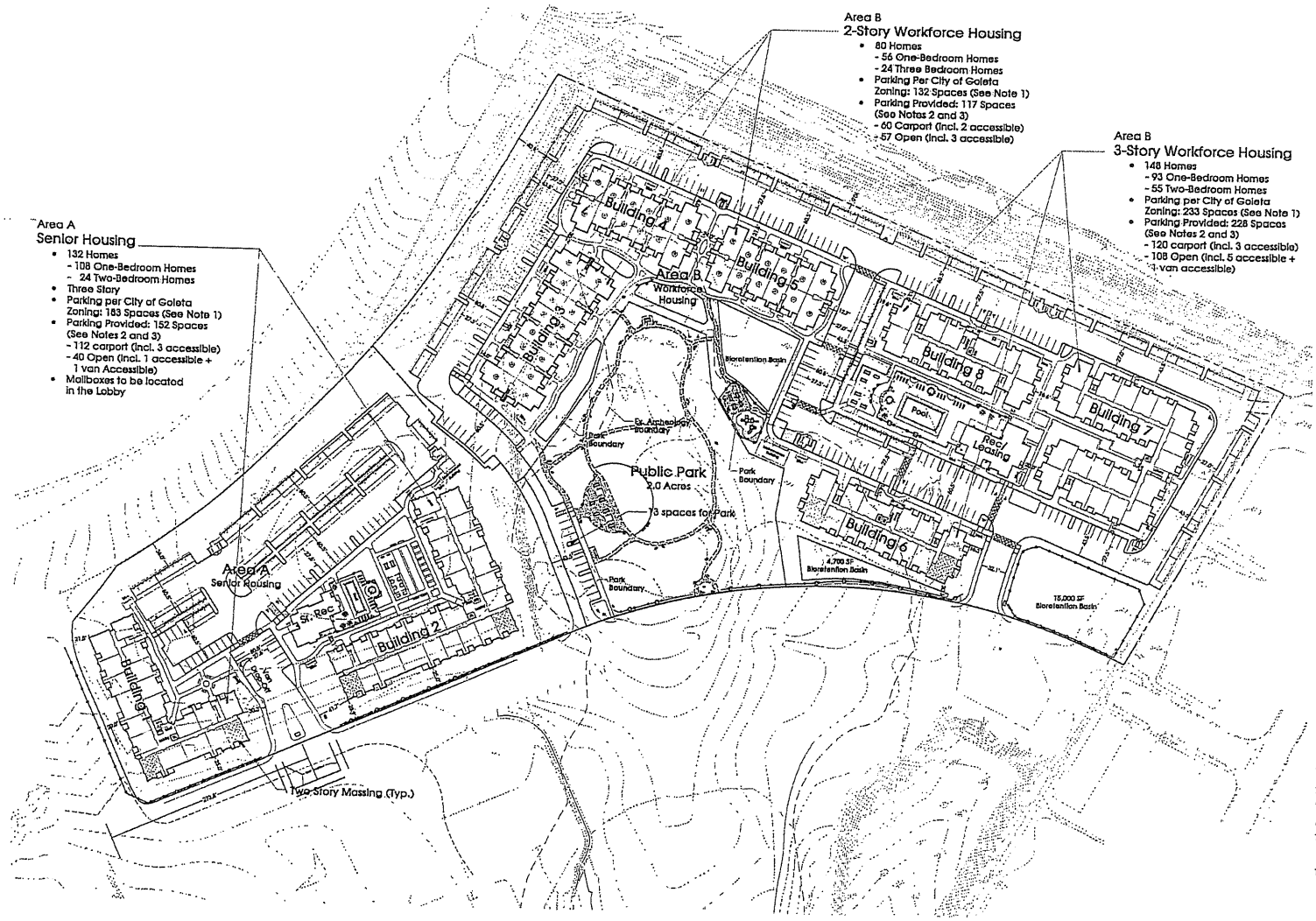

Summary

Site Area:	16.2 Acres
Public Park:	2.0 Acres
Net Site:	14.2 Acres
Total Homes:	360 Homes • 132 Senior Homes • 228 Workforce Homes
Density:	22.2 Homes/Acre (25.3 Homes/Net Acre)

Notes:

1. Parking per Goleta Zoning, Municipal Code Division 6, Section 35-251 et seq.:
   a. Single bedroom or studio dwelling unit: One space per dwelling unit.
   b. Two bedroom dwelling: Two spaces per dwelling unit. Such spaces shall be located within 200 feet from the building served by such spaces.
   c. Three or more bedroom dwellings: Two and one-half (2.5) spaces per dwelling unit, located as required in b., above.
   d. Visitor parking: One space per five dwelling units.
2. Parking Provided based on the Towbes Group Parking Demand Study:
   a. Senior:
      - 1 spaces per One Bedroom
      - 1.3 spaces per Two Bedroom
      - 1 Guest per 10 units
   c. Workforce:
      - 1 spaces per One Bedroom
      - 2 spaces per Two Bedroom
      - 2 spaces per Three Bedroom
      - 1 Guest per 6 units
3. Summary of accessible parking required per State of California Building Code Section 1109A Parking Facilities (refer to code for full requirements:
   a. At least 2% of assigned parking spaces in each type of parking facility
   b. At least 5% of unassigned parking spaces
   c. At least one in every eight accessible space shall be van accessible
   d. Accessible spaces shall be located on the shortest possible accessible route to an accessible building or unit entrance
   e. Accessible spaces shall be located so that persons with disabilities are not compelled to wheel or walk behind parked cars other than their own.
   f. When practical, the accessible route shall not cross lanes for vehicular traffic. When crossing lanes is necessary, the route shall be designated and marked as a crosswalk.
4. Building Coverage (Total Buildings/Net Area) = 22.06%
5. Common Open Space (Total Net area less parking, drive aisles, Buildings and Sidewalks; excludes park) = 5.93 Acres (41.8% of the Net Site)
6. Assumes one trash enclosure per 50 units. Number and design of trash enclosures to be confirmed with Marlborg Industries.
7. Site plan is for conceptual purposes only.
8. Site plan must be reviewed by planning, building, and fire departments for code compliance.
9. Base information per civil engineer.
10. Engineer to verify all setbacks and grading information Building Footprints might change due to the final design elevation style.
11. Building setbacks are measured from property lines to building foundation lines.

Corrected
Conceptual Site Plan

September 12, 2014

Professionally Owned and Managed by THE TOWBES GROUP, INC.

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Goleta , Ca
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SP-1

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PROJECT SITE PLAN

FIGURE 2

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Los Carneros Road, located west of the project site, is a north-south arterial street. North of Hollister Avenue, Los Carneros Road extends as a 4- to 5-lane roadway connecting with the U.S. 101 interchange and continues north to its terminus at Cathedral Oak Road. Los Carneros Road has recently been widened to 4-lanes south of Hollister Avenue to Discovery Drive. South of Discovery Drive, Los Carneros Road continues as a 2-lane roadway with in Santa Barbara County and provides access to the Isla Vista-UCSB area. Within the study-area, Los Carneros Road is signalized at the U.S. 101 Northbound Ramps, Southbound Ramps, Calle Koral, and Hollister Avenue intersections.

Los Carneros Way is a 2-lane road located south of the project site that extends between Calle Koral and Hollister Avenue. Los Carneros Way is stop controlled at the Calle Koral intersection, and the Hollister Avenue/Los Carneros Way intersection is controlled by traffic signals.

Calle Koral, located southwest of the project, is a 2-lane road that extends from Los Carneros Road to Camino Vista. The Calle Koral/Los Carneros Road intersection is controlled by traffic signals and the Calle Koral/Camino Vista intersection is uncontrolled.

Aero Camino, located east of the project site, is a 2-lane road that serves the existing industrial land uses and extends north from Hollister Avenue to its terminus south of U.S. Highway 101. The Hollister Avenue/Aero Camino intersection is controlled by traffic signals.

Camino Vista, located along the southern frontage of the project site, is a 2-lane road that extends easterly from Calle Koral serving the Willow Springs I and Willow Springs II apartment complexes. The segment of Camino Vista between the Willow Springs I apartments and Aero Camino was recently constructed as part of the Willow Springs II development and is now open for public travel.

Recently Constructed Improvements

The City of Goleta recently finished replacing the Los Carneros Road bridge over the Union Pacific Railroad adjacent to the U.S. 101 interchange. The new bridge includes a dedicated right-turn lane for the northbound approach of Los Carneros Road to the U.S. 101 Southbound On-Ramp and two travel lanes in both directions. The right-turn lane extends southerly from the U.S. 101 Southbound On-Ramp to Calle Koral. Los Carneros Road was also widened south of the Calle Koral intersection to provide three northbound travel lanes. The construction project also installed Class II bike lanes in both directions and a pedestrian sidewalk along the west side of the road.

The segment of Camino Vista between the existing Willow Springs I apartments on the west and Aero Camino on the east was recently constructed as part of the Willow Springs II development. This new roadway segment is now open for public travel and provides a new travel route from the Aero Camino corridor to the Los Carneros Road interchange.

Existing Roadway Operations

Figure 3 shows the existing average daily traffic (ADT) volumes for the study-area roadways. Existing roadway volumes were obtained from counts conducted in 2013 (count data contained in the Technical Appendix for reference). The operational characteristics of the study-area roadways were analyzed based on the City of Goleta engineering roadway design capacities (summarized in the Technical Appendix). Table 1 shows the existing ADT volumes and the City's Acceptable Capacity thresholds for the key roadways in the project study-area.

Table 1
Existing Roadway Operations

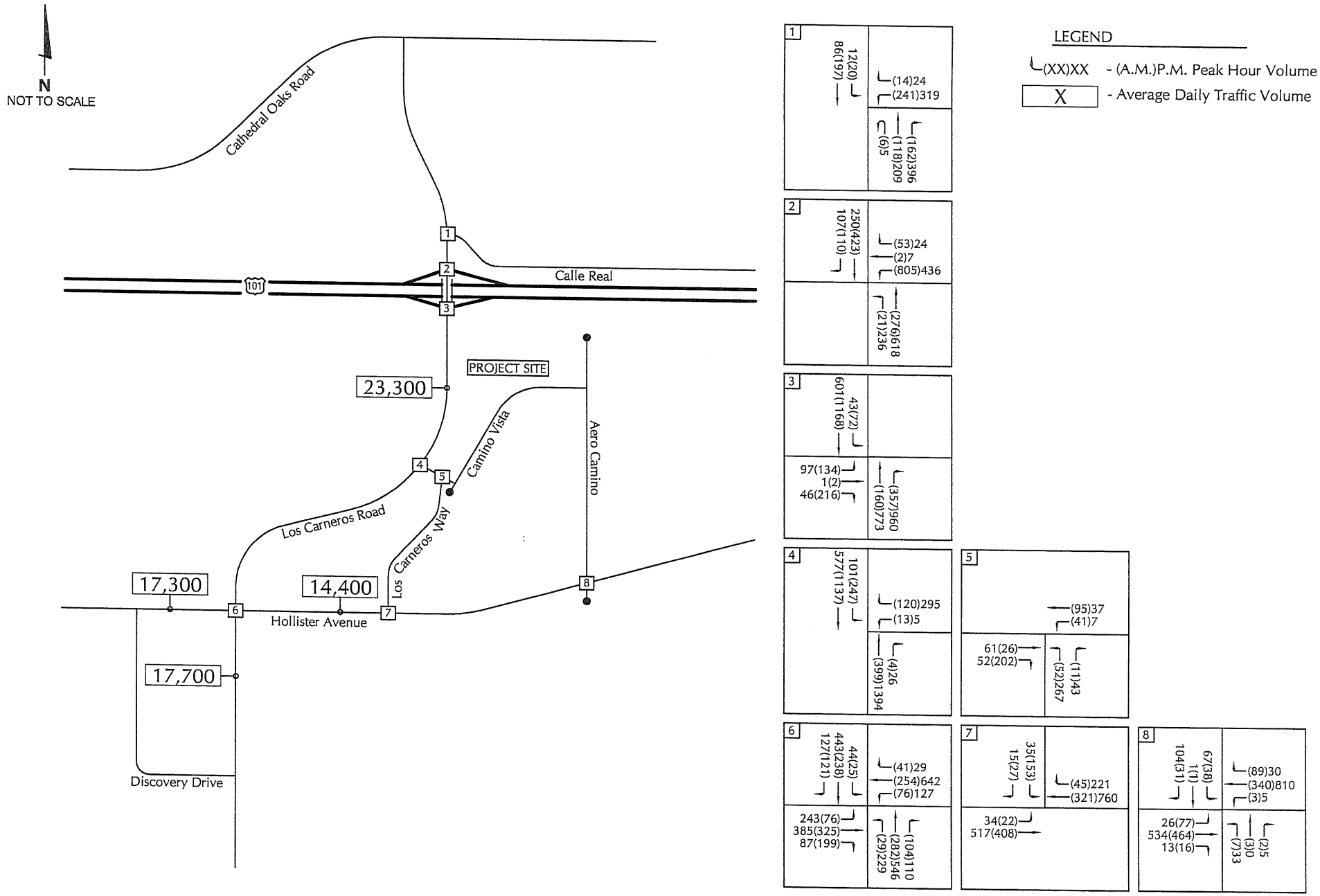
Roadway Segment	Roadway Classification	Geometry	Acceptable Capacity	Existing ADT
Los Carneros Road s/o U.S. 101 SB Ramps (a)	Major Arterial	5-Lane	47,000	23,300
Los Carneros Road s/o Hollister Avenue (b)	Major Arterial	4-Lane	34,000	17,700
Hollister Avenue w/o Los Carneros Road	Major Arterial	4-Lane	34,000	17,300
Hollister Avenue e/o Los Carneros Road	Major Arterial	4-Lane	34,000	14,400

(a) Roadway recently widened to 5-lanes between U.S. 101 and Calle Koral.
(b) Roadway recently widened to 4-lanes between Hollister Avenue and Discovery Drive.

The data in Table 1 shows that the study-area roadway segments currently carry volumes within the City of Goleta's Acceptable Capacity designations.

Existing Intersection Operations

Because traffic flow on urban arterials is most constrained at intersections, detailed traffic flow analyses focus on the operating conditions of critical intersections during peak travel periods. In rating intersection operations, "Levels of Service" (LOS) A through F are used, with LOS A indicating free flow operations and LOS F indicating congested operations (more complete definitions of levels of service are included in the Technical Appendix). The City of Goleta has established LOS C as the minimum acceptable operating standard for intersections.



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EXISTING TRAFFIC VOLUMES

FIGURE 3

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Existing peak hour volumes for the study-area intersections were obtained from traffic counts conducted in 2013 and 2012 (traffic count data is contained in the Technical Appendix for reference). Figure 3 shows the peak hour turning movements for the study-area intersections. Figure 4 presents the existing lane geometry and traffic controls for the study-area intersections.

Levels of service were calculated for the signalized intersections using the "Intersection Capacity Utilization" (ICU) methodology. Levels of service for the stop-sign controlled and roundabout intersections were calculated using the methodology outlined in the Highway Capacity Manual (HCM).[1] Table 2 presents the existing levels of service for the study-area intersections (calculation worksheets are contained in the Technical Appendix).

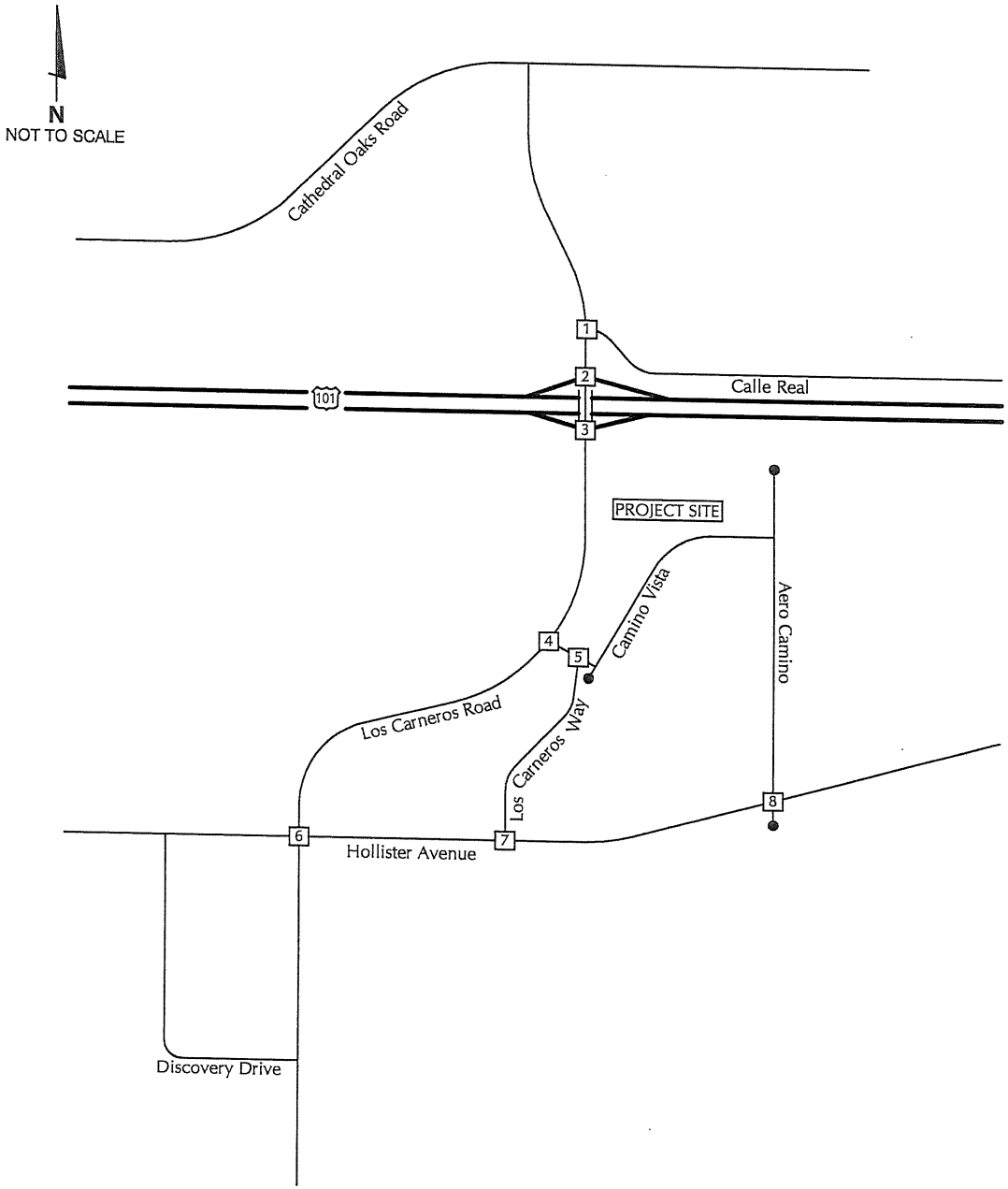
Table 2
Existing Intersection Operations

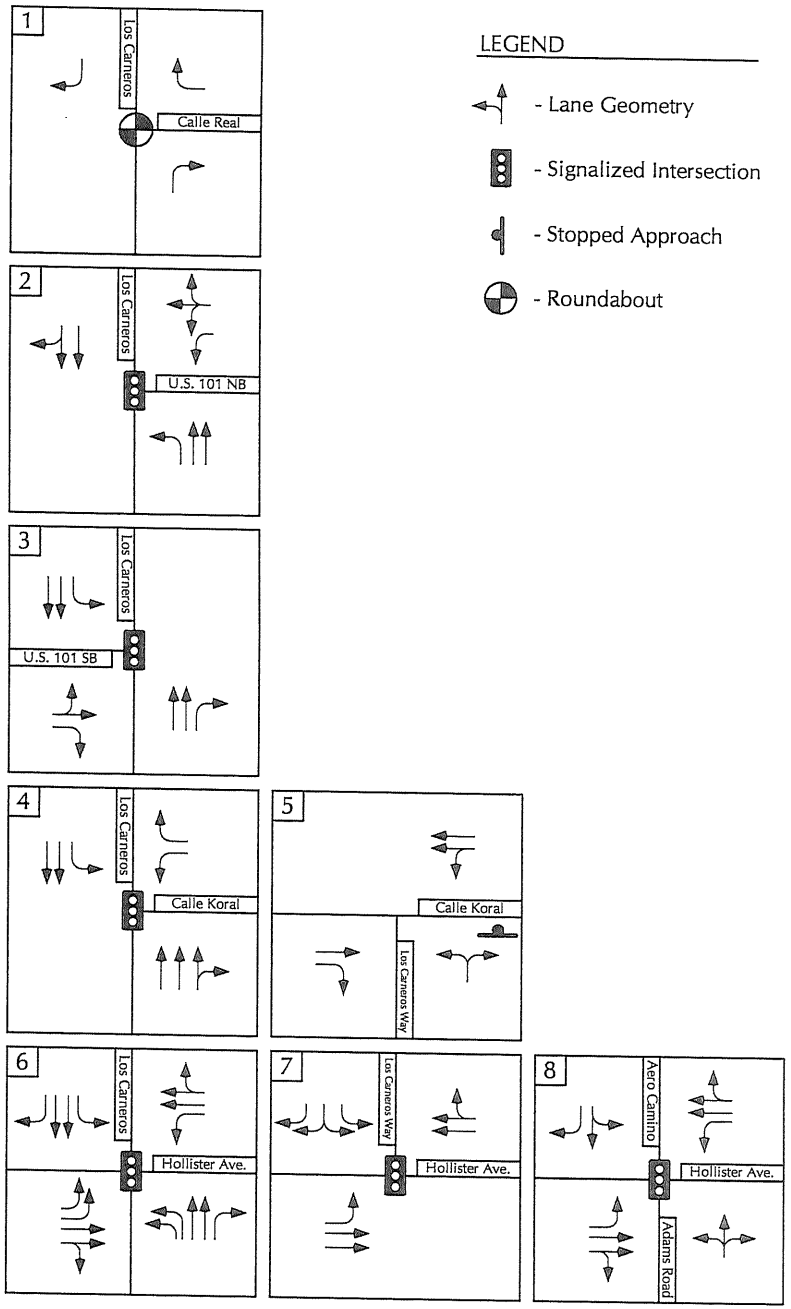
Intersection	Control	A.M. Peak Hour		P.M. Peak hour	
		V/C	LOS	V/C	LOS
Los Carneros Road/Calle Real (a)	Roundabout	6.4 sec.	LOS A	9.4 sec.	LOS A
Los Carneros Road/U.S. 101 NB Ramps	Signal	0.54	LOS A	0.49	LOS A
Los Carneros Road/U.S. 101 SB Ramps (b)	Signal	0.55	LOS A	0.72	LOS C
Los Carneros Road/Calle Koral (b)	Signal	0.46	LOS A	0.51	LOS A
Calle Koral/Los Carneros Way (a)	Stop Sign	8.3 sec.	LOS A	9.8 sec.	LOS A
Calle/Koral/Camino Vista	Yield	N/A	N/A	N/A	N/A
Los Carneros Road/Hollister Avenue	Signal	0.39	LOS A	0.59	LOS A
Los Carneros Way/Hollister Avenue	Signal	0.28	LOS A	0.43	LOS A
Aero Camino/Hollister Avenue	Signal	0.31	LOS A	0.44	LOS A

(a) Unsignalized intersection. LOS based on average weighted delay per vehicle in seconds.
(b) LOS assumes recently completed improvements.

The data presented in Table 2 show that the study-area intersections currently operate acceptably at LOS C or better.

[1] Highway Capacity Manual, Transportation Research Special Report 209, National Research Council, 2010.





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INTERSECTION LANE GEOMETRY AND TRAFFIC CONTROLS

FIGURE 4

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THRESHOLDS OF SIGNIFICANCE

The City of Goleta's CEQA traffic impact thresholds were used for this analysis and include the following criteria:

A. The project will result in a significant impact on transportation and circulation if proposed project traffic increases the volume to capacity (V/C) ratio at local intersections by the values provided in the following table:

Significant Changes in Levels of Service	
Intersection Level of Service (Including Project)	**Increase in V/C or Trips Greater Than**
LOS A	0.20
LOS B	0.15
LOS C	0.10
LOS D	15 Trips
LOS E	10 Trips
LOS F	5 Trips

B. The project's access to a major road or arterial road would require access that would create an unsafe situation, a new traffic signal, or major revisions to an existing traffic signal.

C. The project would add traffic to a roadway that has design features (e.g., narrow width, road-side ditches, sharp curves, poor sight distance, inadequate pavement structure) that would become a potential safety problem with the addition of project traffic.

D. Project traffic would utilize a substantial portion of an intersection's capacity where the intersection is currently operating at acceptable levels of service, but with cumulative traffic would degrade to or approach LOS D (V/C 0.80) or lower. Substantial is defined as a minimum change of 0.03 for an intersection which would operate from 0.80 to 0.85, a change of 0.02 for an intersection which would operate from 0.86 to 0.90 and a change of 0.01 for an intersection which would operate greater than 0.90 (LOS E or worse).

PROJECT-SPECIFIC ANALYSIS

Project Trip Generation

Trip generation estimates were developed for the Heritage Ridge Project using rates contained in the Institute of Transportation Engineers (ITE) Trip Generation report[2] and traffic counts conducted at the existing Willow Springs I apartment complex, located just south of the project site. For the proposed senior apartments, the trip generation analysis is based on the ITE rates for Senior Adult Housing - Attached (ITE Land Use Code #252). For the proposed apartments, the analysis uses the ITE Apartment rates (ITE Land Use Code #220) to calculate average daily trips.

A.M. and P.M. peak hour trip rates for the apartment units were developed from driveway counts conducted at the existing Willow Springs I apartments (driveway count data contained in the Technical Appendix). These rates better reflect local data and are slightly higher than the ITE average rates for apartment units. Table 3 presents the trip generation estimates for the Heritage Ridge Project.

Table 3
Project Trip Generation

Land Use	Size	ADT		A.M. Peak Hour		P.M. Peak Hour	
		Rate	Trips	Rate	Trips (In/Out)	Rate	Trips(In/Out)
Senior Apartments	132 Units	3.44	454	0.20	26 (9/17)	0.25	33 (18/15)
Apartments (a)	228 Units	6.65	1,516	0.65	148 (25/123)	0.66	150 (105/45)
Project Total:			**1,970**		**174 (34/140)**		**183 (123/60)**

(a) ADT rate based on ITE average rate for Apartments, AM and PM rates based on Willow Springs I study.

The data presented in Table 3 show that the project is forecast to generate 1,970 average daily trips, 174 A.M. peak hour trips, and 183 P.M. peak hour trips.

Project Trip Distribution

Trip distribution percentages were developed for the project based on existing traffic patterns observed at the Willow Springs I apartment complex. The distribution pattern assumes the extension of Camino Vista from Calle Koral to Aero Camino which was recently constructed as part of the Willow Springs II Project and is now open for vehicular access. Table 4 presents

[2] Trip Generation, Institute of Transportation Engineers, 9th Edition, 2012.

the trip distribution percentages developed for the project. Figure 5 illustrates the trip distribution pattern and shows the assignment of project-added traffic.

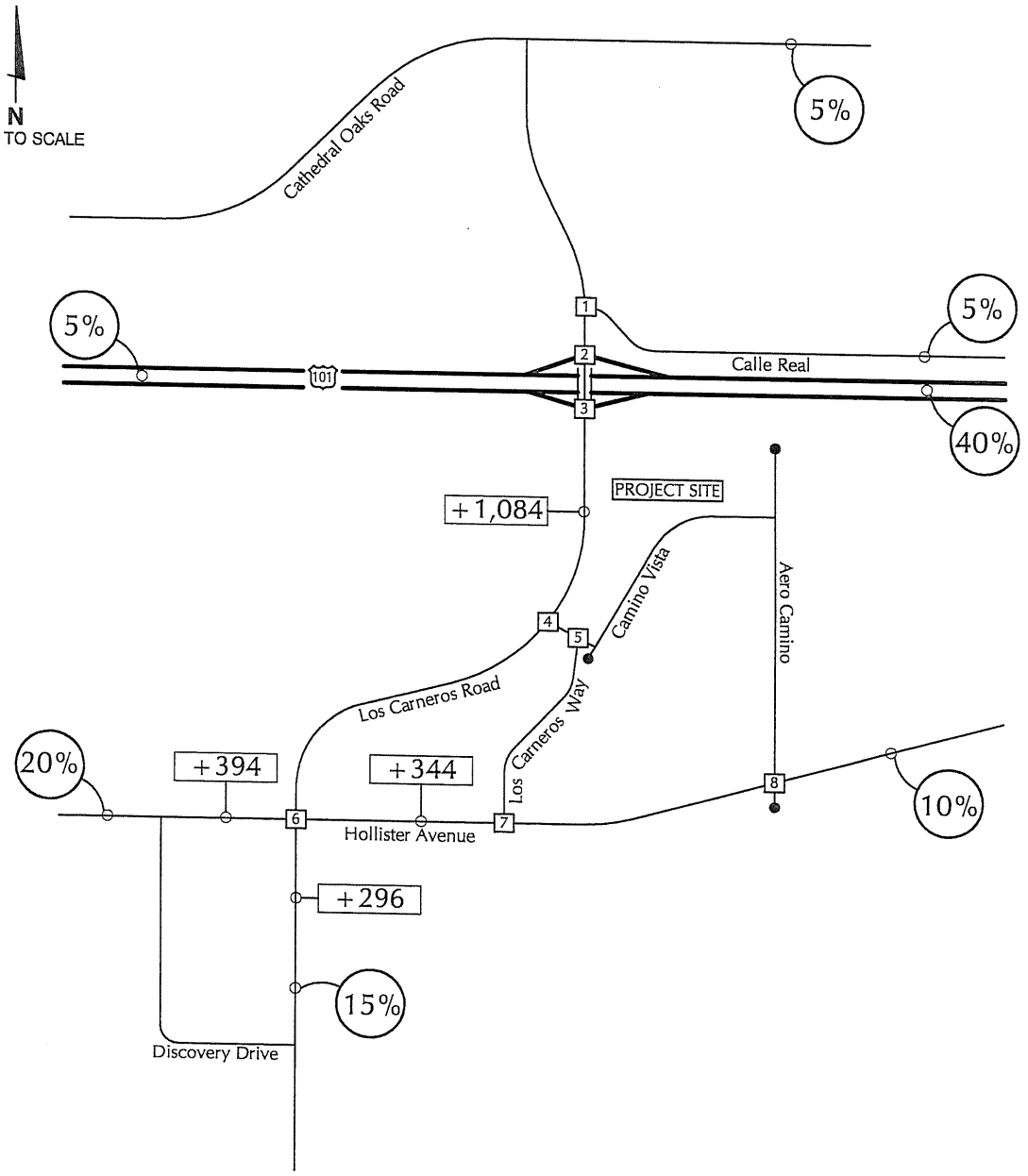
Table 4
Project Trip Distribution

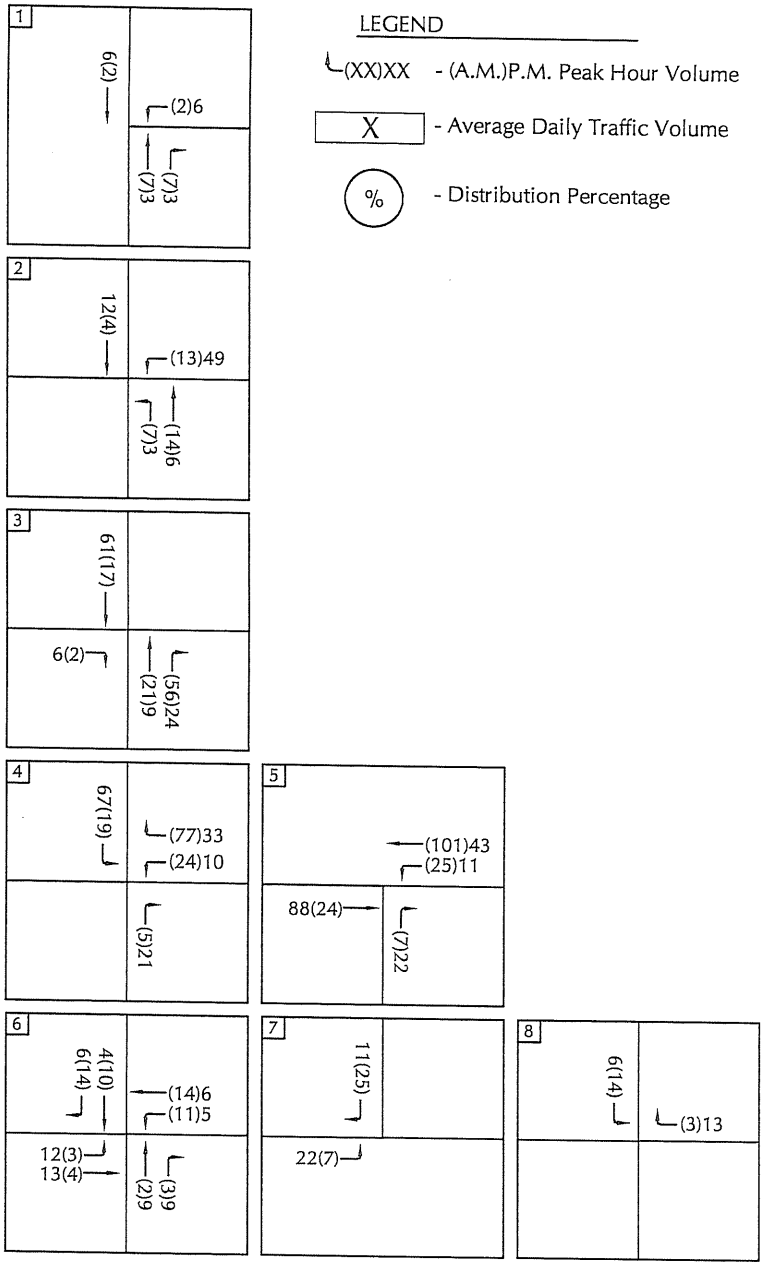
Origin/Destination	Direction	Distribution %
U.S. 101	East West	40% 5%
Hollister Avenue	East (a) West	10% 20%
Los Carneros Road	South of Hollister	15%
Cathedral Oaks Road	East	5%
Calle Real	East	5%
Total:		**100%**

(a) Via Aero Camino

Existing + Project Roadway Operations

Existing + Project ADT volumes for the study-area roadways are shown on Figure 6. Table 5 presents the Existing and Existing + Project roadway volumes and identifies potential impacts based on the City of Goleta's Acceptable Capacity thresholds.





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PROJECT TRIP DISTRIBUTION AND ASSIGNMENT

FIGURE 5

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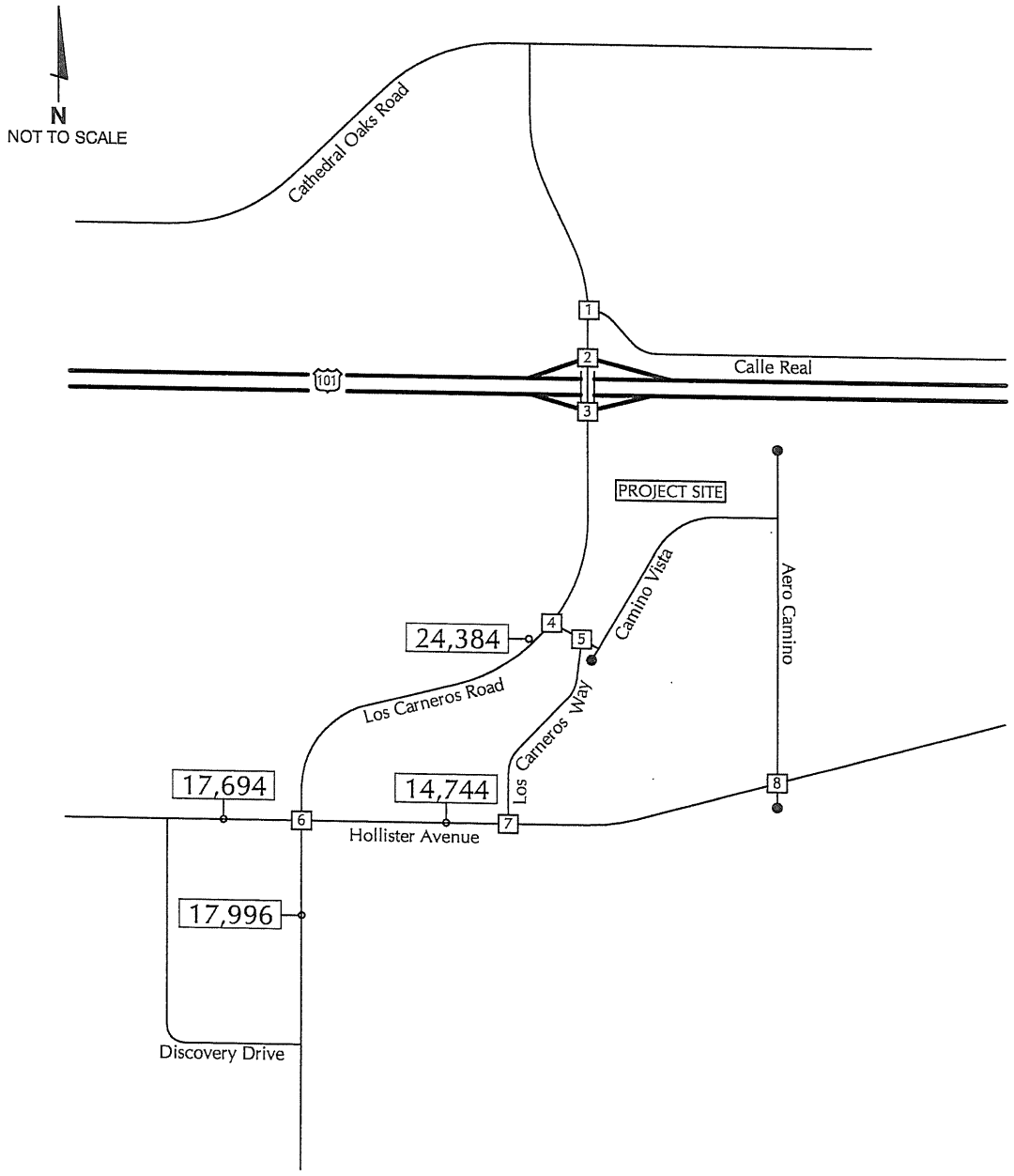

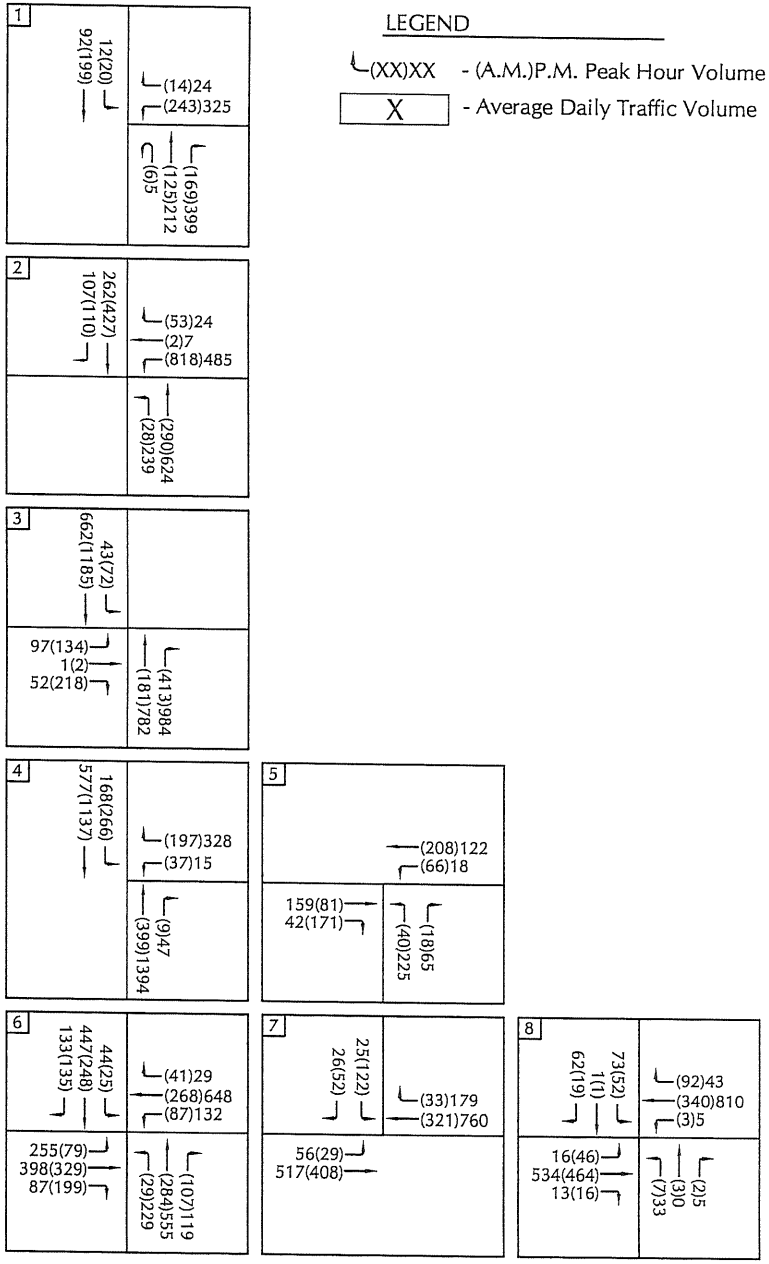

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EXISTING + PROJECT TRAFFIC VOLUMES

FIGURE 6

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Table 5
Existing + Project Roadway Operations

Roadway Segment	Average Daily Trips				% Change	Project Impact?
	Acceptable Capacity	Existing ADT	Project Added ADT	Existing + Project ADT		
Los Carneros Road s/o U.S. 101 SB Ramps	47,000	23,300	1,084	24,384	4.7%	No
Los Carneros Road s/o Hollister Avenue	34,000	17,700	296	17,996	1.7%	No
Hollister Avenue w/o Los Carneros Road	34,000	17,300	394	17,694	2.3%	No
Hollister Avenue e/o Los Carneros Road	34,000	14,400	344	14,744	2.4%	No

The data presented in Table 5 show that the Existing + Project roadway volumes would remain within the City's Acceptable Capacity ratings with the addition of project traffic. The project would therefore not generate project-specific impacts to the study-area roadway segments.

Existing + Project Intersection Operations

Levels of service were calculated for the study-area intersections assuming the Existing + Project traffic volumes presented on Figure 6. As noted previously, the calculations assume completion of the Los Carneros Road Overhead Bridge Replacement Project that was recently completed, and the opening of the Camino Vista extension from Calle Koral to Aero Camino. The Camino Vista extension provides a new connection between Aero Camino and the Los Carneros Road interchange that alters the existing traffic patterns within the study-area. These traffic diversions are accounted for in the analysis. Tables 6 and 7 compare the Existing and Existing + Project levels of service and identify project-specific impacts based on City thresholds.

Table 6
Existing + Project Intersection Operations – A.M. Peak Hour

Intersection	Existing		Existing + Project		Project-Added		Project Impact?
	ICU/ Delay	LOS	ICU/ Delay	LOS	Trips	V/C	
Los Carneros Road/Calle Real	6.4 sec.	A	6.5 sec.	A	18	0.02	No
Los Carneros Rd/U.S. 101 NB Ramps	0.54	A	0.55	A	38	0.011	No
Los Carneros Rd/U.S. 101 SB Ramps (a)	0.55	A	0.56	A	96	0.005	No
Los Carneros Road/Calle Koral	0.46	A	0.46	A	125	0.001	No
Calle Koral/Los Carneros Way (b)	8.1 sec.	A	8.3 sec.	A	157	0.04	No
Calle Koral/Camino Vista (c)	N/A	N/A	N/A	N/A	157	N/A	No
Hollister Avenue/Los Carneros Road	0.39	A	0.40	A	61	0.008	No
Hollister Avenue/Los Carneros Way (b)	0.26	A	0.27	A	32	0.006	No
Hollister Avenue/Aero Camino (b)	0.29	A	0.30	A	17	0.009	No

(a) Assumes completion of the Los Carneros Road Overhead Bridge Replacement Project.
(b) Assumes diverted traffic on Camino Vista extension from Calle Koral to Aero Camino.
(c) Level of Service not applicable, no conflicting movements.

Table 7
Existing + Project Intersection Operations – P.M. Peak Hour

Intersection	Existing		Existing + Project		Project-Added		Project Impact?
	V/C	LOS	V/C	LOS	Trips	V/C	
Los Carneros Road/Calle Real	9.4 sec.	A	9.5 sec.	A	18	0.02	No
Los Carneros Rd/U.S. 101 NB Ramps	0.49	A	0.51	A	70	0.021	No
Los Carneros Rd/U.S. 101 SB Ramps (a)	0.72	C	0.73	C	100	0.013	No
Los Carneros Road/Calle Koral	0.51	B	0.56	C	131	0.052	No
Calle Koral/Los Carneros Way (b)	9.5 sec.	A	10.2 sec.	B	164	0.072	No
Calle Koral/Camino Vista (c)	N/A	N/A	N/A	N/A	164	N/A	No
Hollister Avenue/Los Carneros Road	0.59	A	0.60	A	64	0.008	No
Hollister Avenue/Los Carneros Way (b)	0.42	A	0.43	A	33	0.015	No
Hollister Avenue/Aero Camino (b)	0.44	A	0.44	A	19	0.006	No

(a) Assumes completion of the Los Carneros Road Overhead Bridge Replacement Project.
(b) Assumes diverted traffic on Camino Vista extension from Calle Koral to Aero Camino.
(c) Level of Service not applicable, no conflicting movements.

The data presented in Tables 6 and 7 show that the study-area intersections are forecast to operate at LOS C or better with the addition of project traffic. The project would not generate significant impacts to the study-area intersections based on the City's project-specific traffic impact thresholds.

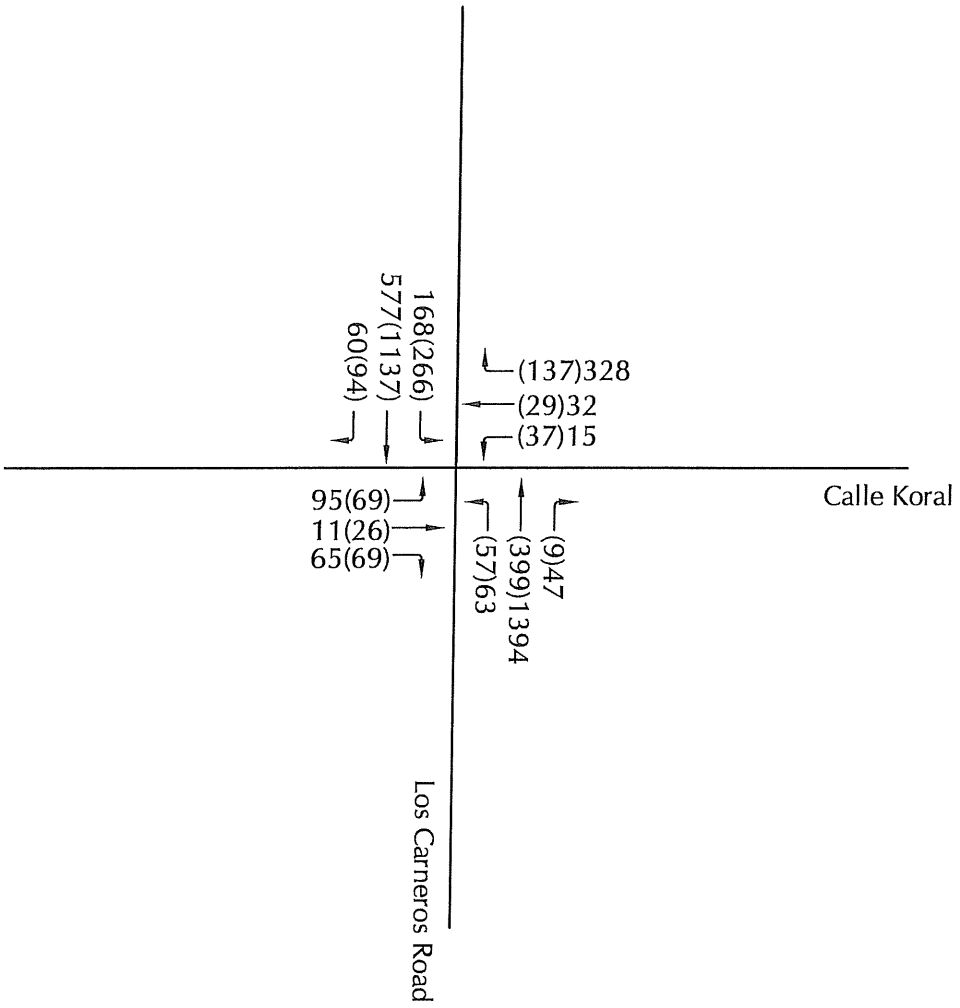
Village at Los Carneros Project Improvements

The Village at Los Carneros Project is programmed to build the western leg of the Los Carneros Road/Calle Koral intersection in order to provide access to the project site. Levels of service were calculated for the Los Carneros Road/Calle Koral intersection assuming completion of the western leg to determine the effects of project traffic on the intersection. Figure 7 presents the Existing + Project Traffic Volumes for the Los Carneros Road/Calle Koral intersection. Table 8 presents the Existing + Project levels of service for the Los Carneros Road/Calle Koral intersection assuming construction of the western leg.

Table 8
Existing + Project Levels of Service
Los Carneros Road/Calle Koral Intersection w/ Western Leg

Intersection	Existing		Existing + Project		Project-Added		Project Impact?
	V/C	LOS	V/C	LOS	Trips	V/C	
Los Carneros Road/Calle Koral – A.M.	0.59	A	0.61	B	125	0.015	No
Los Carneros Road/Calle Koral – P.M	0.57	A	0.62	B	131	0.052	No

The data presented in Table 8 indicate that the Los Carneros Road/Calle Koral Intersection with the western leg is forecast to operate at LOS B during the peak hour periods with Existing + Project traffic volumes. The project would therefore not generate significant impacts to this location.



N
NOT TO SCALE

LEGEND

(XX)XX - (A.M.)P.M. Peak Hour Volume

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EXISTING + PROJECT TRAFFIC VOLUMES
LOS CARNEROS ROAD/CALLE KORAL WITH WESTERN LEG

FIGURE 7

MMF - #12098.01

CUMULATIVE ANALYSIS

Cumulative Traffic Volumes

Cumulative traffic volumes were forecast using the City's traffic model. The cumulative forecasts include traffic generated by the approved and pending projects proposed within the City of Goleta (the most current list of approved and pending projects from September 2015 is contained in the Technical Appendix for reference) as well as development of the UCSB Long Range Development Plan (LRDP), the Santa Barbara Airport Specific Plan and terminal expansion, and regional growth in the Goleta-Santa Barbara area. Cumulative ADT growth was developed by applying a 10% factor to the P.M. peak hour cumulative traffic additions to the study-area intersections. It is noted that the traffic model has been updated since the time this report was first submitted. The current traffic model does not include the Goleta Target Project which was assumed under the initial model run. Cumulative traffic volumes are shown on Figure 8.

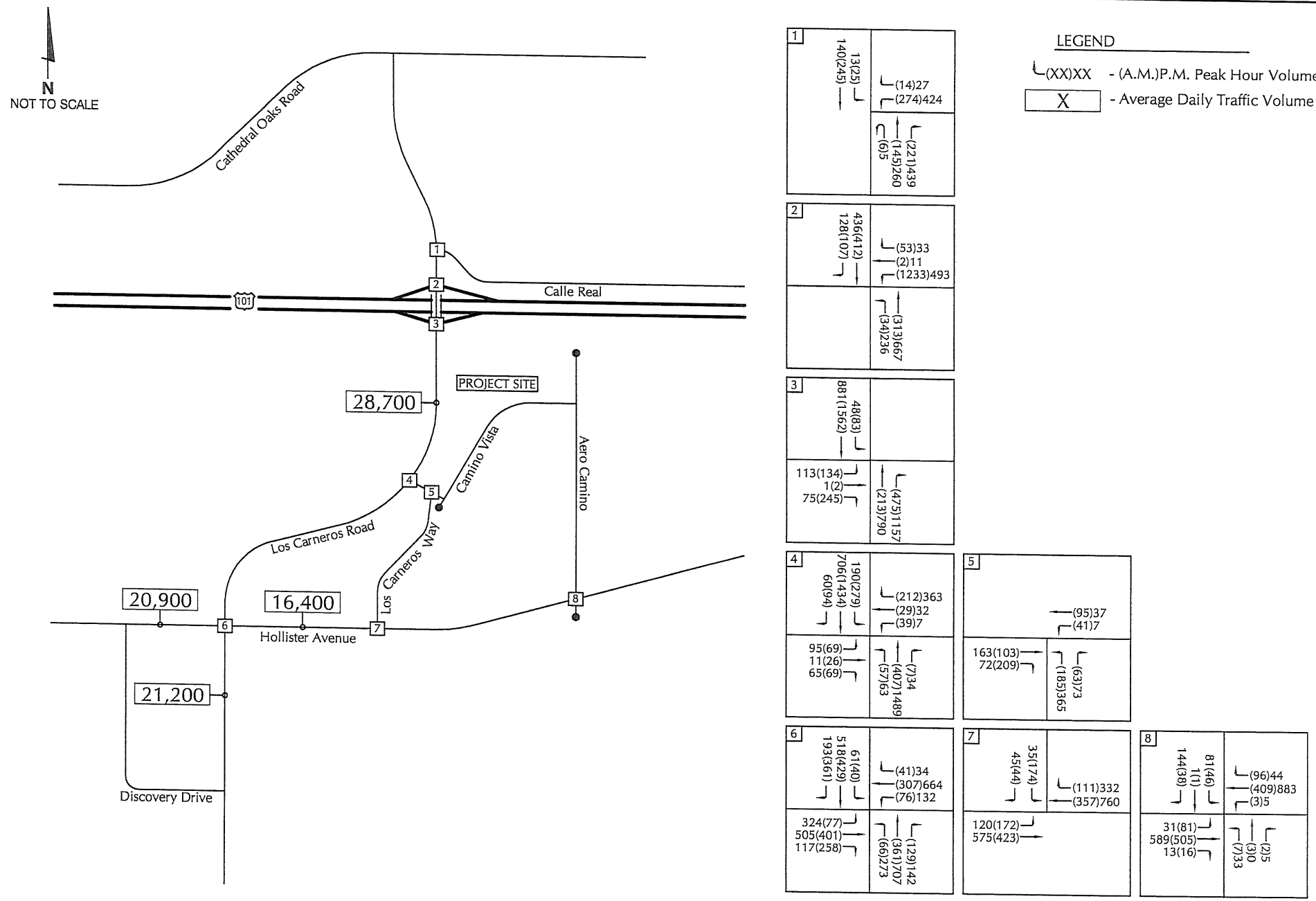
Planned Improvements

The planned improvements that are assumed in the City's traffic model that would affect traffic patterns within the study area are outlined below.

- Construction of the western leg at the Los Carneros Road/Calle Koral intersection to provide access to the Village at Los Carneros Project located west of the intersection.

Cumulative + Project Roadway Operations

Cumulative + Project ADT volumes are shown on Figure 9. Table 9 compares the Cumulative and Cumulative + Project roadway volumes and identifies the impact of project-added traffic based on the City of Goleta's Acceptable Capacity thresholds.



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CUMULATIVE TRAFFIC VOLUMES

FIGURE 8

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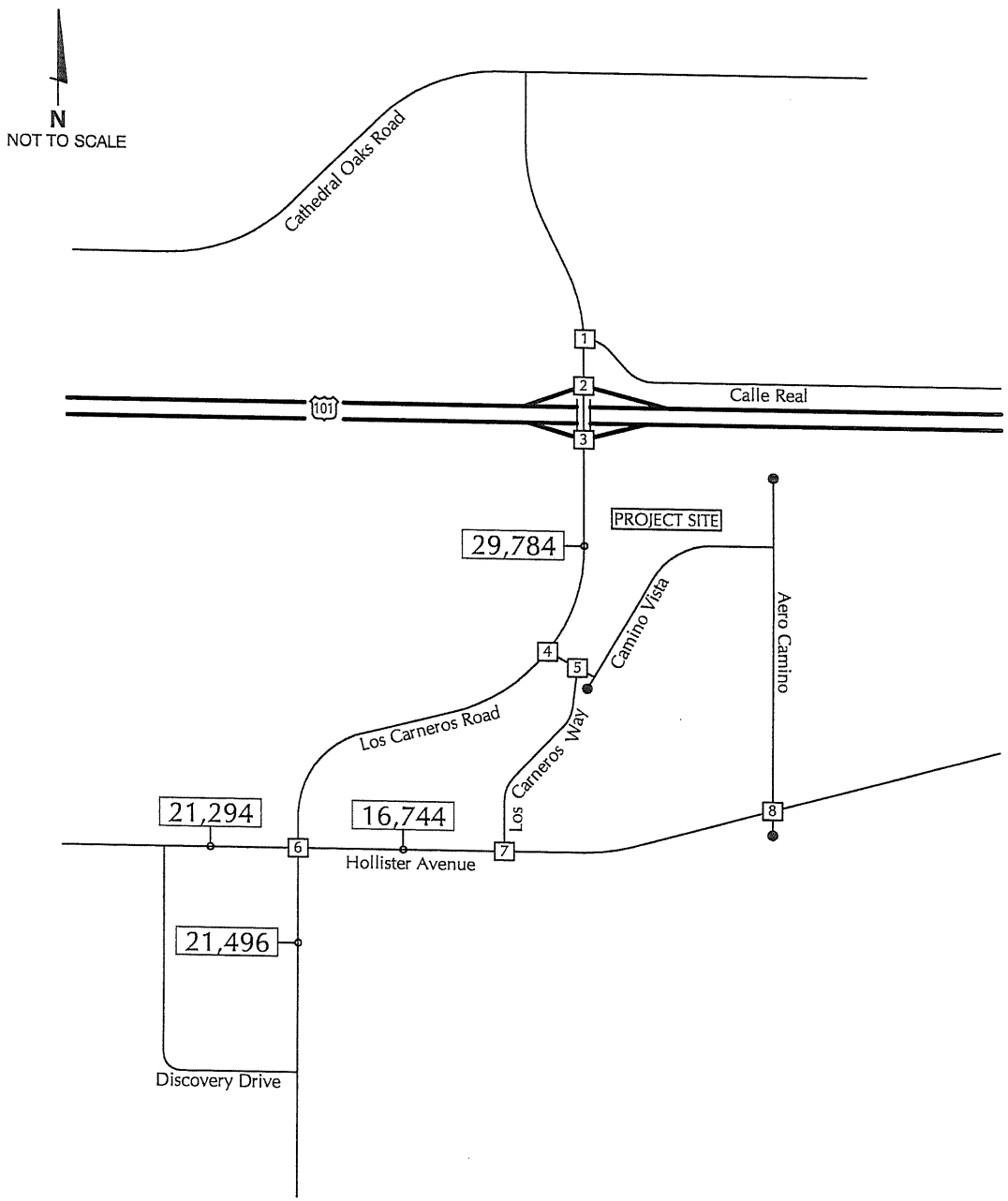

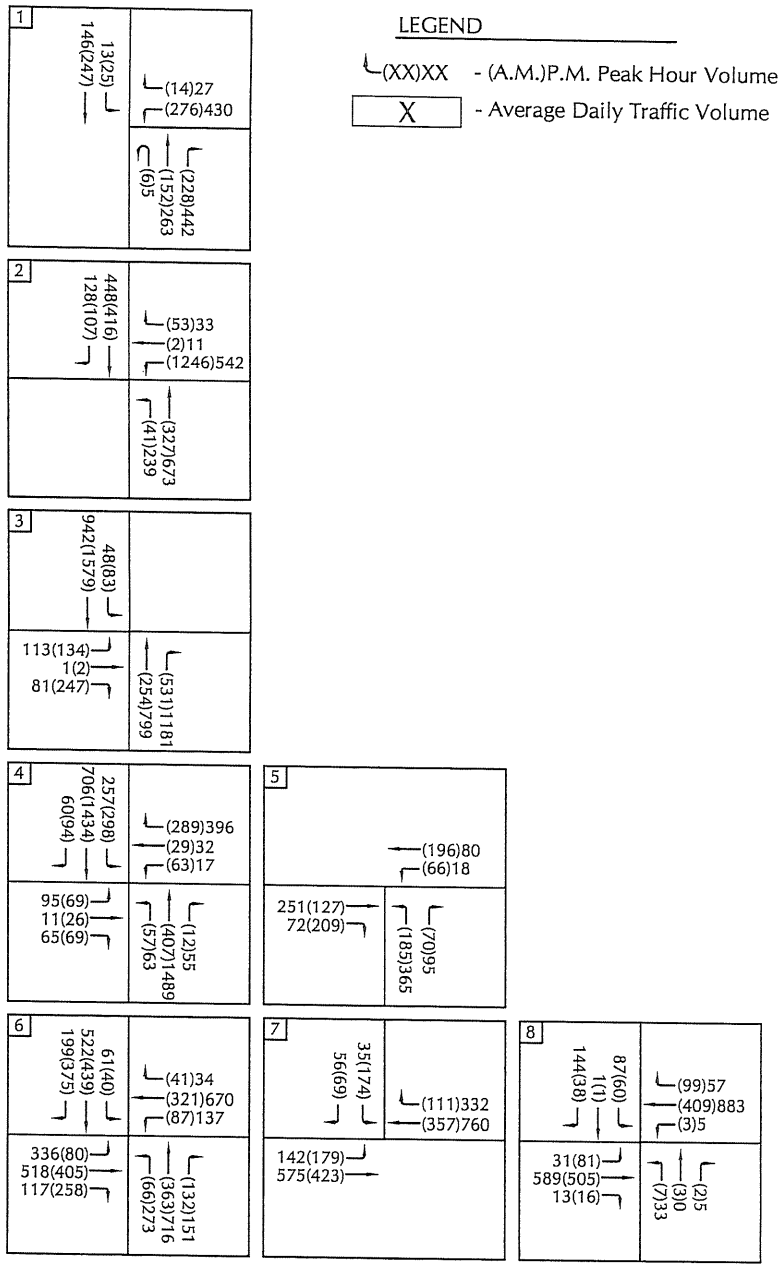

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CUMULATIVE + PROJECT TRAFFIC VOLUMES

FIGURE 9

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Table 9
Cumulative + Project Roadway Operations

Roadway Segment	Average Daily Trips				% Change	Project Impact?
	Acceptable Capacity	Cumulative ADT	Project Added ADT	Cumulative + Project ADT		
Los Carneros Road s/o U.S. 101 SB Ramps	47,000	28,700	1,084	29,784	3.8%	No
Los Carneros Road s/o Hollister Avenue	34,000	21,200	296	23,496	1.4%	No
Hollister Avenue w/o Los Carneros Road	34,000	20,900	394	21,294	1.9%	No
Hollister Avenue e/o Los Carneros Road	34,000	16,400	344	16,744	2.1%	No

The data presented in Table 9 show that the Cumulative + Project roadway volumes would remain within the City's Acceptable Capacity ratings with the addition of project traffic. The project would therefore not generate cumulative impacts to the study-area roadway segments.

Cumulative + Project Intersection Operations

Cumulative and Cumulative + Project levels of service were calculated for the study-area intersections assuming the traffic volumes presented on Figures 8 and 9. Tables 10 and 11 compare the Cumulative and Cumulative + Project levels of service and identify cumulative impacts based on City of Goleta thresholds.

Table 10
Cumulative + Project Intersection Operations – A.M. Peak Hour

Intersection	Cumulative		Cumulative + Project		Project-Added		Impact?
	V/C	LOS	V/C	LOS	Trips	V/C	
Los Carneros Road/Calle Real (a)	7.3 sec.	A	7.5 sec.	A	18	0.03	No
Los Carneros Rd/U.S. 101 NB Ramps	0.68	B	0.69	B	38	0.011	No
Los Carneros Rd/U.S. 101 SB Ramps	0.67	B	0.68	B	96	0.005	No
Los Carneros Road/Calle Koral	0.70	B	0.72	C	125	0.015	No
Calle Koral/Los Carneros Way (a)	9.5 sec.	A	10.2 sec.	B	157	0.039	No
Hollister Avenue/Los Carneros Road	0.56	A	0.58	A	61	0.016	No
Hollister Avenue/Los Carneros Way	0.41	A	0.42	A	32	0.007	No
Hollister Avenue/Aero Camino	0.34	A	0.35	A	17	0.010	No

(a) Unsignalized intersection.

Table 11
Cumulative + Project Intersection Operations – P.M. Peak Hour

Intersection	Cumulative		Cumulative + Project		Project-Added		Impact?
	V/C	LOS	V/C	LOS	Trips	V/C	
Los Carneros Road/Calle Real (a)	11.8 sec.	B	12.1 sec.	B	18	0.02	No
Los Carneros Rd/U.S. 101 NB Ramps	0.57	A	0.59	A	70	0.020	No
Los Carneros Rd/U.S. 101 SB Ramps	**0.84**	**D**	**0.85**	**D**	100	0.013	No
Los Carneros Road/Calle Koral	0.66	B	0.71	C	131	0.052	No
Calle Koral/Camino Vista (a)	12.1 sec.	B	14.8 sec.	B	164	0.072	No
Hollister Avenue/Los Carneros Road	0.62	B	0.63	B	64	0.010	No
Hollister Avenue/Los Carneros Way	0.52	A	0.54	A	33	0.015	No
Hollister Avenue/Aero Camino	0.47	A	0.48	A	19	0.007	No

Bolded values exceed City's LOS C operating standard.
(a) Unsignalized intersection.

The data presented in Tables 10 and 11 indicate that the majority of the study-area intersections are forecast to operate at LOS C or better with Cumulative + Project traffic volumes, with the exception of the Los Carneros Road/U.S. 101 SB Ramps intersection

which is forecast to operate at LOS D during the P.M. peak hour with Cumulative and Cumulative + Project traffic. The project would not generate significant cumulative impacts to this locations as the project's traffic additions (V/C increase of 0.013) would not exceed the City's LOS D impact threshold (V/C increase of 0.03).

Cumulative + Project + Improvements Intersection Operations

As shown in Table 11, the U.S. 101 SB Ramps/Los Carneros Road intersection is forecast to operate below the City's LOS C operating standard with Cumulative + Project traffic volumes. The Goleta Transportation Improvement Plan (GTIP), which is responsible for funding future improvement projects in the City, has a programmed improvement to install a free right-turn lane on the northbound approach of the U.S. 101 SB Ramps/Los Carneros Road intersection. Table 12 presents the P.M. peak hour LOS for the U.S. 101 SB Ramps/Los Carneros Road with the GTIP improvement.

Table 12
Cumulative + Project + Improvements Intersection Operations - P.M. Peak Hour

Intersection	Cumulative		Cumulative + Project		Project -Added Trips	Change in V/C	Impact?
	ICU	LOS	ICU	LOS			
Los Carneros Rd/U.S. 101 SB Ramps	0.45	A	0.45	A	100	0.003	No

The data presented in Table 12 show that the U.S. 101 SB Ramps/Los Carneros Road would operate acceptably at LOS A with the identified improvements.

PARKING ANALYSIS

Parking Supply

The project is proposing to provide 152 parking spaces (112 covered carport spaces and 40 uncovered surface spaces) for the senior apartments, 345 spaces for the apartment units (180 covered carport spaces and 165 uncovered surface spaces), and 13 uncovered parking spaces for the park (all public park parking spaces will be signed). The parking supplies for the individual components of the project would not be shared, thus separate parking analyses were completed for each component of the project.

City of Goleta Zoning Ordinance Parking Requirements

Table 13 presents the City of Goleta's Zoning Ordinance parking requirements for each project component.

Table 13
City of Goleta Zoning Ordinance Parking Requirements

Land-Use	Size	Parking Rate	Zoning Ordinance	Parking Provided
Senior Apartments				
1 Bedroom Apartments	108 Units	1 Space/Unit	108 Spaces	
2 Bedroom Apartments	24 Units	2 Spaces/Unit	48 Spaces	
Visitor Parking	132 Units	1 Space/5 Units	27 Spaces	
Sub-Total:			***183 Spaces***	***152 Spaces***
Apartments				
1 Bedroom Apartments	149 Units	1 Space/Unit	149 Spaces	
2 Bedroom Apartments	55 Units	2 Spaces/Unit	110 Spaces	
3 Bedroom Apartments	24 Units	2.5 Spaces/Unit	60 Spaces	
Visitor Parking	228 Units	1 Space/5 Units	46 Spaces	
Sub-Total:			***365 Spaces***	***345 Spaces***
Public Park	2 Acres	N/A	N/A	***13 Spaces***

The data presented in Table 13 show that the City's parking requirement for the senior apartments is 183 spaces. The proposed parking supply of 152 spaces would not meet the City's Zoning Ordinance parking requirement for this component of the project. The City's parking requirement for the apartment units is 365 spaces. The proposed parking supply of 345 spaces would not meet the City's Zoning Ordinance parking requirement for this component of the project. The project is therefore requesting a parking modification to the Zoning Ordinance requirements based on the findings of the parking demand analysis presented below. The Zoning Ordinance does not contain parking requirements for parks, therefore a parking demand analysis was also completed for this project component.

Parking Demand Analysis

The actual parking demand for any given land use may be different than the Zoning Ordinance parking requirements. In order to evaluate the adequacy of the proposed parking supply, ATE completed a parking demand analysis for each component of the project, as reviewed below.

Parking Demand Rates. Parking demand rates for the senior apartments were developed using parking data collected at three similar senior apartment complexes owned and operated by the Towbes Group in Santa Barbara, Carpinteria, and Ventura. Parking demand

rates for the apartment units were developed using parking data collected at five similar apartment complexes owned and operated by the Towbes Group in the Goleta area (including Willow Springs I which is located adjacent to the proposed project site). The parking survey data collected at the various study sites is contained in the Technical Appendix. Parking demand rates for the proposed park were obtained from the ITE Parking Generation report.[3]

The parking demand rates used for the analysis were developed by correlating the peak demands observed at the survey sites to the number of bedrooms as opposed to the number of units. This approach was taken to account for the fact that the Heritage Ridge Project contains a larger percentage of one-bedroom units than many of the other apartment sites studied (65% of the apartments and 82% of the senior apartments would be one bedroom units). The parking demands associated with 1-bedroom units are typically higher per bedroom than the demands associated with 2 and 3-bedroom units.

The survey data was plotted to show the relationship between the percentage of 1 bedroom units at each of the study sites and the corresponding peak parking demand rate per bedroom (see Technical Appendix for data plots). This approach provides a statistically accurate method of developing parking forecasts based on the number of bedrooms provided in the development, and follows the procedures used in the City of Goleta's Zoning Ordinance which also determines parking requirements based on the number of bedrooms.

Senior Apartments. Table 14 presents the peak parking demands for the senior housing units based on the average and equation rates developed from the parking survey data.

Table 14
Senior Housing Parking Demands

Land-Use	Size	Peak Demand Rate	Peak Parking Demand	Parking Provided	Parking Surplus
Senior Apartments	156 Bedrooms	0.70 spaces/Bedroom (Average)	109 Spaces	152 Spaces	43 spaces
	156 Bedrooms	0.75 spaces/Bedroom (Equation)	117 Spaces	152 Spaces	35 spaces

The data presented in Table 14 show that the peak parking demand forecast for the senior apartments range from 109 to 117 spaces. The proposed parking supply of 152 spaces would adequately accommodate the peak parking demands associated with the senior apartments and provide a reserve supply of 35 to 43 spaces.

[3] Parking Generation, Institute of Transportation Engineers, 4th Edition, 2010.

Apartments. Table 15 presents the peak parking demands for the apartments based on the average and equation rates developed from the parking survey data.

Table 15
Apartment Parking Demands

Land-Use	Size	Peak Demand Rate	Peak Parking Demand	Parking Provided	Parking Surplus
Apartments	331 Bedrooms	0.89 spaces/Bedroom (Average)	295 Spaces	345 Spaces	50 Spaces
	331 Bedrooms	0.98 spaces/Bedroom (Equation)	324 Spaces	345 Spaces	21 Spaces

Table 15 shows that the peak parking demand forecast for the apartment units range from 295 to 324 spaces. The proposed parking supply of 345 spaces would adequately accommodate the peak parking demands associated with the apartment units and provide a reserve supply of 21 to 50 spaces.

Public Park. The ITE Parking Generation report contains data for City Parks (ITE Land-Use #411) that show peak parking demand rates ranging from 5.10 vehicles per acre for active parks and 2.30 vehicles per acre for passive parks. Table 16 shows the parking demands for the park based on this data.

Table 16
Public Park Parking Demands

Land-Use	Size	Peak Demand Rate	Peak Parking Demand	Parking Provided	Parking Surplus
Public Park	2 Acres	5.10/Acre (Active)	10 Spaces	13 Spaces	3 Spaces
	2 Acres	2.30/Acres (Passive)	5 Spaces	13 Spaces	8 Spaces

Table 16 shows that the peak parking demands for the public park range from 5 to 10 spaces. The proposed parking supply of 13 spaces would adequately accommodate the peak parking demands associated with the park and would provide a reserve supply of 3 to 8 spaces.

SITE ACCESS AND CIRCULATION

Access to the project site would be provided via three driveway connections to Camino Vista. The project site plan (Figure 2) shows that the western most driveway that serves the senior apartments would be aligned opposite the driveway that serves the existing Willow Springs I site and that the eastern most driveway that serves the work-force apartments would

be aligned opposite the driveway that serves the Willow Springs II site that was recently constructed. The middle driveway connection would provide access to the public park as well as the work-force apartments. The proposed alignment of the two main driveways opposite the Willow Springs I and II driveways would allow for efficient ingress/egress for vehicles entering and leaving the site. All three project driveways would stop controlled with STOP signs installed at the driveway approaches and Camino Vista would be uncontrolled. The driveway spacing (approximately 350'-500' between driveways) would allow for vehicle ingress and egress into and out from the project site without interfering with through traffic on Camino Vista. It is recommended that red curb be installed on Camino Vista adjacent to the site driveways to provide sufficient sight distance for drivers exiting the site.

Figure 10 shows the Existing + Project traffic volumes at the three driveways. Given the level of traffic on Camino Vista (642 ADT), the project driveways would operate acceptably in the LOS A-B range with stop-sign control on the outbound driveway approaches (LOS calculation worksheets contained in the Technical Appendix for reference). Left-turn lanes at the project driveways would not be warranted due to the relatively low volumes of through traffic on Camino Vista.

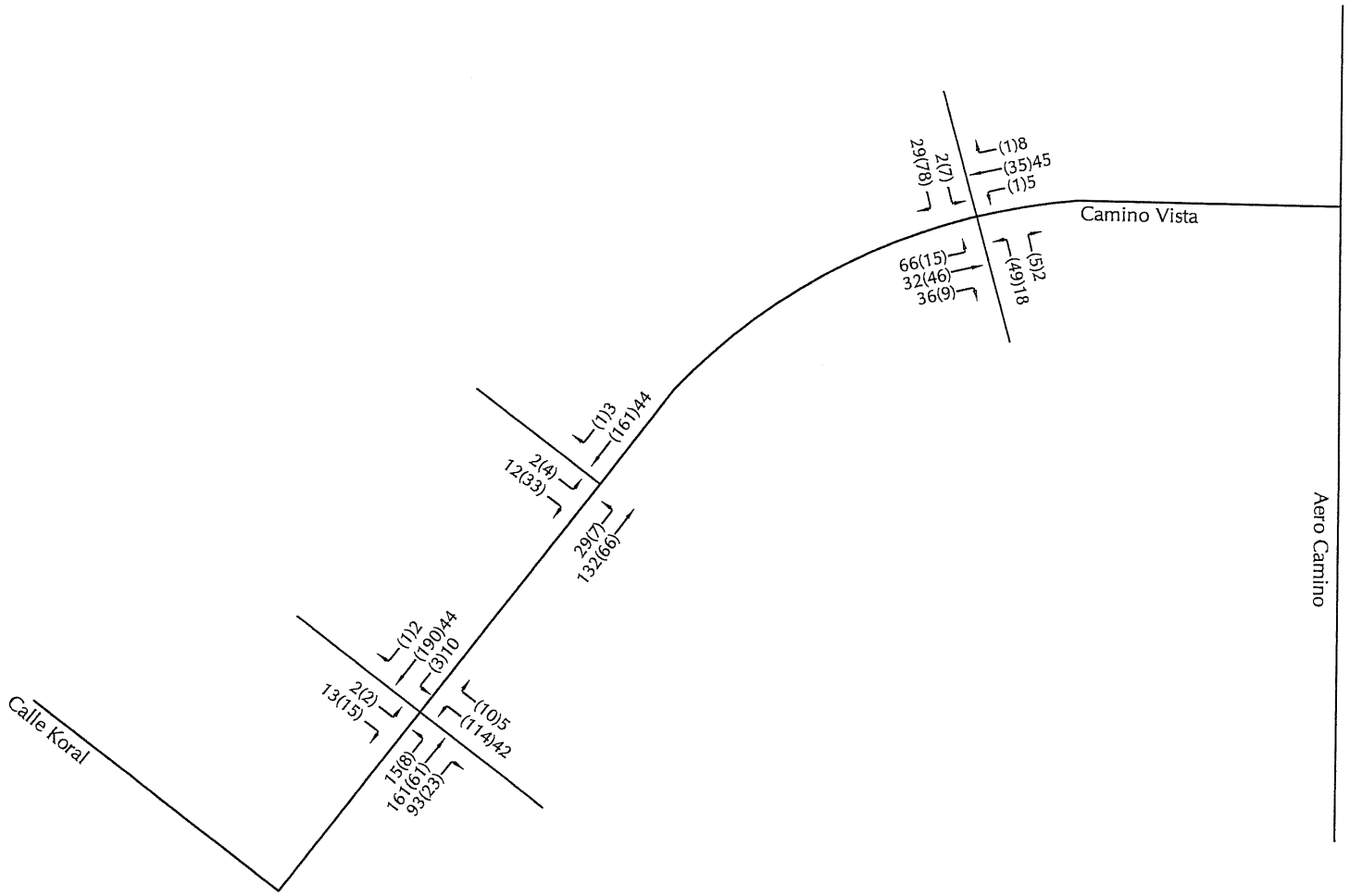
Internal circulation through the site would be provided via 28-foot wide private roadways that would circulate through the senior housing and work-force housing parcels. ATE reviewed the proposed internal circulation plan using AutoTURN software. The proposed design would adequately accommodate the turning maneuvers of large passenger vehicles. It is noted that a vehicle connection between the two parcels would not be provided due to existing archaeological sensitive areas and the Camino Vista street grades.

ALTERNATIVE MODES OF TRANSPORTATION

Pedestrian Facilities

The project is proposing to construct pedestrian sidewalks along the north side of Camino Vista adjacent to the project site. The proposed sidewalks would connect to the existing pedestrian facilities currently provided in the Willow Springs area. Existing pedestrian crosswalks are provided at the proposed senior apartment's driveway and new crosswalks would be installed at the work-force housing driveway. The Project would install a network of pedestrian pathways that would connect the work-force apartment buildings to the public park area.

The project as designed consists of two product types. The southwestern portion of the site is Senior Housing and the remainder of the site is Workforce Housing. Due to archaeological sensitive areas and the existing Camino Vista street grades, the Workforce Housing portion of the project is approximately 10' to 12' higher in elevation than the adjacent Senior Housing neighborhood. This elevation difference, in addition to the



LEGEND

└(XX)XX - (A.M.)P.M. Peak Hour Volume

N
NOT TO SCALE

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EXISTING + PROJECT DRIVEWAY VOLUMES

FIGURE 10

MMF - #12089.01

difference in neighborhood types, preclude an internal connection between the two neighborhoods.

With respect to direct access from the project to Los Carneros Road or Calle Koral, the Tract Map denotes a waiver of abutter's access rights along both public streets. In addition, the grade differential between the finished grades of the portion of the project site adjacent to Los Carneros Road and Calle Koral ranges from 7' to 25', which makes pedestrian/bicycle/vehicle access impractical.

As to an easement dedication adjacent to the railroad property for pedestrian/bicycle access, such an access route would terminate before reaching Los Carneros Road due to the location of the Los Carneros Road embankment relative to the Project property line. Thus, this pedestrian/bicycle path would not serve any properties further to the west. In addition, pedestrian/bicycle access from the northeast corner of the project to the Goleta Train Station is impeded by lack of adjacent property rights and the Los Carneros Creek Channel, which would require a bridge crossing.

The pedestrian system provided in the project study-area would accommodate the new pedestrian traffic generated by the Project. The project-added traffic that would cross the sidewalk on Camino Vista (174 -183 peak hour trips) would not significantly impact pedestrian safety or operations of the surrounding pedestrian facilities.

Bicycle Facilities

Class II bicycle lanes are currently provided along both sides of Camino Vista adjacent to the project site. The Camino Vista bicycle lanes connect to the existing Class II bicycle lanes provided on Calle Koral, Los Carneros Road, and Hollister Avenue. Census data collected in 2010 show that 6% of commuters in the Goleta travel to work on bicycles (census data contained in the Technical Appendix for reference). For a project the size of Heritage Ridge (228 apartment units; senior units do not generate significant amount of commuter traffic) there would be approximately 14 new bicycle riders that would commute during the peak hour periods. The Project would encourage bicycle riding among site residents by providing a bicycle parking area at each residential building and the recreational building with a total of approximately 77 bicycle parking spaces. An additional 8 bicycle parking spaces are provided at the park.

The increase in bicycle ridership generated by the project would not significantly impact the operations of the bicycle facilities in the vicinity of the project site. The project-added traffic that would cross the Class III bicycle lane on Camino Vista (174 -183 peak hour trips) would not significantly impact bicyclist safety or the operations of the surrounding bicycle facilities.

Transit

The Santa Barbara Metropolitan Transit District (MTD) provides local bus service for the region. The nearest bus stops to the project site are located on Hollister Avenue at the Aero Camino intersection (approximately 0.3 miles south of the project site). The existing bus stops are served by MTD Lines 6 and 12x, which provide transit service to/from downtown Santa Barbara to the Old Town Goleta and Camino Real Marketplace areas. Data published on the MTD website indicate that in November 2015, Line 6 carried an average of 33.9 passengers per operating hour, which is slightly below the system wide average of 35.7 passengers per operating hour, and Line 12x carried an average of 36.3 passengers per operating hour, which is slightly higher than the system wide average. The data also shows that both routes experienced 4-10 "at capacity" loads and 3-4 "too full to board" loads during the month of November 2015 (MTD data contained in the Technical Appendix for reference).

Census data collected in 2010 show that 5% of commuters in the Goleta area utilize public transportation (census data contained in the Technical Appendix for reference). For a project the size of Heritage Ridge (228 apartment units; senior units do not generate significant amount of commuter traffic), there would be approximately 11 new transit users that would commute during the peak hour periods (7–9 AM/4-6 PM). There are currently 22 busses that serve the site during the peak hour periods, thus the Project would add less than 1 rider per bus. The new bus riders generated by the project would therefore not measurably impact the operations of the transit routes that serve the site.

CONGESTION MANAGEMENT PROGRAM ANALYSIS

Impact Criteria

The Santa Barbara County Association of Governments (SBCAG) has developed a set of traffic impact thresholds to assess the impacts of land use decisions made by local jurisdictions on regional transportation facilities located within the Congestion Management Program (CMP) roadway system. The following guidelines were developed by SBCAG to determine the significance of project-generated traffic impacts on the regional CMP system.

1. For any roadway or intersection operating at "Level of Service" (LOS) A or B, a decrease of two levels of service resulting from the addition of project-generated traffic.

2. For any roadway or intersection operating at LOS C, project-added traffic that results in LOS D or worse.

3. For intersections within the CMP system with existing congestion, the following table defines significant impacts.

Level of Service	Project-Added Peak Hour Trips
LOS D	20
LOS E	10
LOS F	10

4. For freeway or highway segments with existing congestion, the following table defines significant impacts.

Level of Service	Project-Added Peak Hour Trips
LOS D	100
LOS E	50
LOS F	50

Potential Intersection Impacts

The Los Carneros Road/U.S. 101 NB Ramps, Los Carneros Road/U.S. 101 SB Ramps, and Los Carneros Road/Hollister Avenue intersections are located within the CMP network. As shown on Tables 6 and 7, the CMP intersections are forecast to operate at LOS C or better with Existing+Project traffic volumes. The project would not generate a significant project impact to the CMP network based on CMP impact criteria.

Potential Freeway Impacts

The proposed project is forecast to add 9 P.M. peak hour trips to U.S. 101 north of Los Carneros Road and 73 P.M. peak hour trips to U.S. 101 south of Los Carneros Road. The CMP threshold for freeway impacts is 50 trips for segments operating at LOS E or LOS F and 100 trips for segments operating at LOS D. Data provided by SBCAG indicates that the segment of U.S. 101 between Los Carneros Road and Fairview Avenue currently operates at LOS C[4] (SBCAG Freeway LOS data contained in the Technical Appendix fore reference). Based on these CMP impact criteria, the project would not generate a significant impact to the freeway segment located between Los Carneros Road and Fairview Avenue.

■ ■ ■

[4] Congestion Management Program Biennial Review, SBCAG, May 15, 2014.

REFERENCES AND PERSONS CONTACTED

Associated Transportation Engineers

Scott A. Schell, AICP, PTP Principal Transportation Planner
Dan Dawson, PTP Supervising Transportation Planner
Matthew Farrington, Transportation Planner I

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Persons Contacted

Damkowitch, Jim, Kittelson Associates
Milan, Marti, City of Goleta

TECHNICAL APPENDIX

CONTENTS:

LEVEL OF SERVICE DEFINITIONS

Table 5. Roadway Classification & Level of Service Thresholds*

City of Goleta Functional Street Classification	City of Goleta Purpose and Design Factors	City of Goleta ADT Design Capacity			City of Goleta LOS C ADT Threshold		
		2 Lanes	4 Lanes	4+ Lanes[1]	2 Lanes	4 Lanes	4+ Lanes[1]
Major Arterial (MA)	Continuous roadways that carry through traffic between various neighborhoods and communities, frequently providing access to major traffic generators such as shopping areas, employment centers, and higher density residential areas. Roadways would have a minimum of 12 foot wide lanes with shoulders. Signals are typically spaced at a minimum 0.5-mile intervals.	17,900	42,480	58,750	14,300	34,000	47,000
Minor Arterial (MNA)	Roadways that serve as a secondary type of arterial facility carrying local and through traffic within communities, frequently connecting neighborhood areas within the City, providing access to shopping areas, employment centers, and higher density residential areas. Roadways would have a minimum of 12-foot wide lanes with shoulders. Signal intervals typically range from 0.25 to 0.5 mile.	15,700	37,680	NA	12,500	30,100	NA
Collector Streets (Col)	Roadways designed to collect traffic from local streets and connect to major or minor arterials. Collector Streets provide access to local streets within residential and commercial areas and conect streets of higher calssifications to permit adequate traffic circulation. Generally no more than 2 travel lanes and signalized at intersections with arterial roadways.	11,600	NA	NA	9,280	NA	NA
Local Streets (L)	Roadways designed to provide access to individual properties carrying traffic to and from a collector street. Intended to serve adjacent uses and are not intended for through traffic. Designed with two lanes and close to moderately close driveways.	9,100	NA	NA	7,280	NA	NA
County Functional Street Classification	**County Purpose and Design Factors**	**County ADT Design Capacity**			**County LOS C ADT Threshold**		
		2 Lanes	4 Lanes	4+ Lanes[1]	2 Lanes	4 Lanes	4+ Lanes[1]
Primary 1 (P-1)	Roadways designed to serve primarily non-residential development. Roadways would have a minimum of 12-foot wide lanes with shoulders and few curb cuts. Signals would be spaced at 1 mile or more intervals.	19,900	47,760	NA	15,900	38,200	NA
Primary 2 (P-2)	Roadways designed to serve a high proportion of non-residential development with some residential lots and few or no driveway curb cuts. Roadways would have a minimum of 12-foot wide lanes with few curb cuts. Signals spacing at minimum of 1/2 mile.	17,900	42,480	NA	14,300	34,000	NA
Primary 3 (P-3)	Roadways designed to serve non-residential development and residential development. More frequent driveways are acceptable. Potential signal spacing of ½ to ¼ mile.	15,700	37,680	NA	12,500	30,100	NA
Secondary 1 (S-1)	Roadways designed to serve non-residential development and large lot residential development with well spaced driveways. Roadways would be 2-lanes with infrequent driveways. Signals would generally occur at intersections of primary roadways.	11,600	NA	NA	9,300	NA	NA
Secondary 2 (S-2)	Roadways designed to serve residential and non-residential land uses. Roadways would be 2-lanes with close to moderately spaced driveways.	9,100	NA	NA	7,300	NA	NA
Secondary 3 (S-3)	Roadways designed to primarily serve residential with small to medium size lots. Roadways would be 2-lanes with more frequent driveways.	7,900	NA	NA	6,300	NA	NA

* Source: City of Goleta & County of Santa Barbara Public Works Department

Signalized Intersection Level of Service Definitions

LOS	Delay[a]	V/C Ratio	Definition
A	< 10.0	< 0.60	Progression is extremely favorable. Most vehicles arrive during the green phase. Many vehicles do not stop at all.
B	10.1 - 20.0	0.61 - 0.70	Good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of delay.
C	20.1 - 35.0	0.71 - 0.80	Only fair progression, longer cycle lengths, or both, result in higher cycle lengths. Cycle lengths may fail to serve queued vehicles, and overflow occurs. Number of vehicles stopped is significant, though many still pass through intersection without stopping.
D	35.1 - 55.0	0.81 - 0.90	Congestion becomes more noticeable. Unfavorable progression, long cycle lengths and high v/c ratios result in longer delays. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.
E	55.1 - 80.0	0.91 - 1.00	High delay values indicate poor progression, long cycle lengths and high v/c ratios. Individual cycle failures are frequent
F	> 80.0	> 1.00	Considered unacceptable for most drivers, this level occurs when arrival flow rates exceed the capacity of lane groups, resulting in many individual cycle failures. Poor progression and long cycle lengths may also contribute to high delay levels.

[a] Average control delay per vehicle in seconds.

Unsignalized Intersection Level of Service Definitions

The HCM[1] uses *control delay* to determine the level of service at unsignalized intersections. Control delay is the difference between the travel time actually experienced at the control device and the travel time that would occur in the absence of the traffic control device. Control delay includes deceleration from free flow speed, queue move-up time, stopped delay and acceleration back to free flow speed.

LOS	Control Delay Seconds per Vehicle
A	< 10.0
B	10.1 - 15.0
C	15.1 - 25.0
D	25.1 - 35.0
E	35.1 - 50.0
F	> 50.0

[1] Highway Capacity Manual, National Research Board, 2000

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TRAFFIC COUNT DATA

Prepared by NDS/ATD

VOLUME

Los Carneros Rd S/o US Hwy 101

Day: Thursday
Date: 2/9/2012

City: Goleta
Project #: CA12_8007_001

DAILY TOTALS	NB	SB	EB	WB	Total
	12,352	10,997	0	0	23,349

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	38		27				65		12:00	250		148				398	
00:15	30		23				53		12:15	267		173				440	
00:30	17		34				51		12:30	228		163				391	
00:45	19	104	26	110			45	214	12:45	173	918	281	765			454	1683
01:00	27		27				54		13:00	180		201				381	
01:15	19		22				41		13:15	198		209				407	
01:30	22		28				50		13:30	174		160				334	
01:45	22	90	65	142			87	232	13:45	204	756	172	742			376	1498
02:00	38		38				76		14:00	195		147				342	
02:15	24		16				40		14:15	181		188				369	
02:30	9		10				19		14:30	215		150				365	
02:45	12	83	8	72			20	155	14:45	183	774	147	632			330	1406
03:00	14		3				17		15:00	231		153				384	
03:15	10		2				12		15:15	259		148				407	
03:30	6		8				14		15:30	285		154				439	
03:45	13	43	9	22			22	65	15:45	230	1005	174	629			404	1634
04:00	5		7				12		16:00	300		166				466	
04:15	7		4				11		16:15	292		165				457	
04:30	7		13				20		16:30	412		143				555	
04:45	6	25	17	41			23	66	16:45	331	1335	163	637			494	1972
05:00	13		24				37		17:00	505		165				670	
05:15	12		16				28		17:15	434		142				576	
05:30	34		42				76		17:30	394		182				576	
05:45	17	76	80	162			97	238	17:45	290	1623	157	646			447	2269
06:00	27		75				102		18:00	266		151				417	
06:15	22		109				131		18:15	240		176				416	
06:30	46		114				160		18:30	186		163				349	
06:45	62	157	195	493			257	650	18:45	187	879	147	637			334	1516
07:00	45		183				228		19:00	169		112				281	
07:15	96		198				294		19:15	141		87				228	
07:30	131		197				328		19:30	117		114				231	
07:45	119	391	352	930			471	1321	19:45	102	529	96	409			198	938
08:00	147		402				549		20:00	111		118				229	
08:15	134		272				406		20:15	90		100				190	
08:30	129		263				392		20:30	75		93				168	
08:45	142	552	214	1151			356	1703	20:45	111	387	88	399			199	786
09:00	116		166				282		21:00	78		110				188	
09:15	130		145				275		21:15	89		100				189	
09:30	136		139				275		21:30	70		86				156	
09:45	133	515	145	595			278	1110	21:45	47	284	79	375			126	659
10:00	132		125				257		22:00	56		67				123	
10:15	131		105				236		22:15	74		78				152	
10:30	174		99				273		22:30	82		64				146	
10:45	150	587	117	446			267	1033	22:45	59	271	57	266			116	537
11:00	144		112				256		23:00	48		51				99	
11:15	172		135				307		23:15	39		47				86	
11:30	225		141				366		23:30	56		35				91	
11:45	249	790	147	535			396	1325	23:45	35	178	28	161			63	339
TOTALS		3413		4699				8112	TOTALS		8939		6298				15237
SPLIT %		42.1%		57.9%				34.7%	SPLIT %		58.7%		41.3%				65.3%

DAILY TOTALS	NB	SB	EB	WB	Total
	12,352	10,997	0	0	23,349

AM Peak Hour	11:45	07:45			07:45	PM Peak Hour	16:30	12:30			16:45
AM Pk Volume	994	1289			1818	PM Pk Volume	1682	854			2316
Pk Hr Factor	0.931	0.802			0.828	Pk Hr Factor	0.833	0.760			0.864
7 - 9 Volume	943	2081	0	0	3024	4 - 6 Volume	2958	1283	0	0	4241
7 - 9 Peak Hour	08:00	07:45			07:45	4 - 6 Peak Hour	16:30	16:45			16:45
7 - 9 Pk Volume	552	1289	0	0	1818	4 - 6 Pk Volume	1682	652	0	0	2316
Pk Hr Factor	0.939	0.802	0.000	0.000	0.828	Pk Hr Factor	0.833	0.896	0.000	0.000	0.864

Prepared by NDS/ATD

VOLUME

Los Carneros Rd S/o Hollister Ave

Day: Thursday
Date: 2/9/2012

City: Goleta
Project #: CA12_8007_002

DAILY TOTALS	NB	SB	EB	WB	Total
	8,952	8,731	0	0	17,683

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	36		37				73		12:00	165		118				283	
00:15	27		30				57		12:15	166		141				307	
00:30	19		44				63		12:30	164		124				288	
00:45	22	104	31	142			53	246	12:45	129	624	172	555			301	1179
01:00	29		27				56		13:00	144		159				303	
01:15	15		28				43		13:15	153		141				294	
01:30	25		37				62		13:30	141		117				258	
01:45	34	103	67	159			101	262	13:45	172	610	129	546			301	1156
02:00	44		40				84		14:00	177		111				288	
02:15	26		24				50		14:15	141		137				278	
02:30	13		12				25		14:30	134		149				283	
02:45	10	93	9	85			19	178	14:45	134	586	132	529			266	1115
03:00	13		7				20		15:00	152		124				276	
03:15	9		3				12		15:15	160		149				309	
03:30	4		6				10		15:30	182		135				317	
03:45	12	38	6	22			18	60	15:45	149	643	161	569			310	1212
04:00	5		8				13		16:00	199		139				338	
04:15	8		2				10		16:15	167		149				316	
04:30	7		9				16		16:30	195		131				326	
04:45	6	26	9	28			15	54	16:45	185	746	155	574			340	1320
05:00	9		10				19		17:00	277		183				460	
05:15	11		6				17		17:15	226		139				365	
05:30	26		14				40		17:30	195		177				372	
05:45	21	67	19	49			40	116	17:45	153	851	179	678			332	1529
06:00	24		21				45		18:00	181		178				359	
06:15	19		30				49		18:15	161		176				337	
06:30	29		32				61		18:30	141		185				326	
06:45	45	117	71	154			116	271	18:45	142	625	180	719			322	1344
07:00	35		49				84		19:00	131		127				258	
07:15	59		90				149		19:15	110		102				212	
07:30	108		97				205		19:30	80		130				210	
07:45	94	296	131	367			225	663	19:45	89	410	122	481			211	891
08:00	97		141				238		20:00	92		127				219	
08:15	110		97				207		20:15	92		123				215	
08:30	107		111				218		20:30	86		114				200	
08:45	136	450	124	473			260	923	20:45	103	373	102	466			205	839
09:00	122		101				223		21:00	98		124				222	
09:15	95		110				205		21:15	105		111				216	
09:30	119		112				231		21:30	71		95				166	
09:45	126	462	127	450			253	912	21:45	54	328	87	417			141	745
10:00	100		74				174		22:00	55		89				144	
10:15	107		79				186		22:15	76		71				147	
10:30	150		93				243		22:30	87		60				147	
10:45	121	478	108	354			229	832	22:45	54	272	65	285			119	557
11:00	106		88				194		23:00	64		51				115	
11:15	98		112				210		23:15	40		48				88	
11:30	129		121				250		23:30	44		55				99	
11:45	130	463	117	438			247	901	23:45	39	187	37	191			76	378
TOTALS		2697		2721				5418	TOTALS		6255		6010				12265
SPLIT %		49.8%		50.2%				30.6%	SPLIT %		51.0%		49.0%				69.4%

DAILY TOTALS	NB	SB	EB	WB	Total
	8,952	8,731	0	0	17,683

AM Peak Hour	11:45	11:45			11:45	PM Peak Hour	16:30	18:00			16:45
AM Pk Volume	625	500			1125	PM Pk Volume	883	719			1537
Pk Hr Factor	0.941	0.887			0.916	Pk Hr Factor	0.797	0.972			0.835
7 - 9 Volume	746	840	0	0	1586	4 - 6 Volume	1597	1252	0	0	2849
7 - 9 Peak Hour	08:00	07:45			08:00	4 - 6 Peak Hour	16:30	17:00			16:45
7 - 9 Pk Volume	450	480	0	0	923	4 - 6 Pk Volume	883	678	0	0	1537
Pk Hr Factor	0.827	0.851	0.000	0.000	0.888	Pk Hr Factor	0.797	0.926	0.000	0.000	0.835

Prepared by NDS/ATD

VOLUME

Hollister Ave W/o Los Carneros Rd

Day: Thursday
Date: 2/9/2012

City: Goleta
Project #: CA12_8007_006

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	8,633	8,643	17,276

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			6		12		18		12:00			187		273		460	
00:15			11		14		25		12:15			201		225		426	
00:30			10		10		20		12:30			191		185		376	
00:45			3	30	11	47	14	77	12:45			244	823	188	871	432	1694
01:00			7		4		11		13:00			232		193		425	
01:15			4		4		8		13:15			193		159		352	
01:30			11		6		17		13:30			205		172		377	
01:45			16	38	9	23	25	61	13:45			180	810	163	687	343	1497
02:00			2		15		17		14:00			152		125		277	
02:15			5		6		11		14:15			146		141		287	
02:30			3		6		9		14:30			146		128		274	
02:45			4	14	5	32	9	46	14:45			141	585	130	524	271	1109
03:00			3		5		8		15:00			144		207		351	
03:15			1		1		2		15:15			166		140		306	
03:30			5		4		9		15:30			145		188		333	
03:45			2	11	19	29	21	40	15:45			149	604	146	681	295	1285
04:00			8		6		14		16:00			157		195		352	
04:15			5		6		11		16:15			128		176		304	
04:30			6		7		13		16:30			155		191		346	
04:45			17	36	8	27	25	63	16:45			152	592	202	764	354	1356
05:00			5		9		14		17:00			213		263		476	
05:15			14		6		20		17:15			177		277		454	
05:30			23		17		40		17:30			189		243		432	
05:45			42	84	26	58	68	142	17:45			159	738	185	968	344	1706
06:00			43		21		64		18:00			159		143		302	
06:15			51		31		82		18:15			111		152		263	
06:30			53		35		88		18:30			103		142		245	
06:45			105	252	48	135	153	387	18:45			114	487	114	551	228	1038
07:00			67		55		122		19:00			85		96		181	
07:15			103		75		178		19:15			65		81		146	
07:30			141		68		209		19:30			85		73		158	
07:45			200	511	103	301	303	812	19:45			85	320	66	316	151	636
08:00			169		134		303		20:00			70		76		146	
08:15			127		108		235		20:15			53		57		110	
08:30			141		105		246		20:30			57		74		131	
08:45			124	561	87	434	211	995	20:45			62	242	52	259	114	501
09:00			131		118		249		21:00			30		61		91	
09:15			104		94		198		21:15			54		54		108	
09:30			121		109		230		21:30			40		46		86	
09:45			115	471	95	416	210	887	21:45			31	155	30	191	61	346
10:00			123		113		236		22:00			37		29		66	
10:15			96		107		203		22:15			24		38		62	
10:30			117		105		222		22:30			14		30		44	
10:45			137	473	120	445	257	918	22:45			22	97	20	117	42	214
11:00			164		148		312		23:00			13		29		42	
11:15			141		134		275		23:15			18		16		34	
11:30			162		183		345		23:30			20		21		41	
11:45			174	641	219	684	393	1325	23:45			7	58	17	83	24	141
TOTALS				3122		2631		5753	TOTALS				5511		6012		11523
SPLIT %				54.3%		45.7%		33.3%	SPLIT %				47.8%		52.2%		66.7%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	8,633	8,643	17,276

AM Peak Hour			11:45	11:45	11:45	PM Peak Hour			12:45	16:45	16:45
AM Pk Volume			753	902	1655	PM Pk Volume			874	985	1716
Pk Hr Factor			0.937	0.826	0.899	Pk Hr Factor			0.895	0.889	0.901
7 - 9 Volume	0	0	1072	735	1807	4 - 6 Volume	0	0	1330	1732	3062
7 - 9 Peak Hour			07:30	07:45	07:45	4 - 6 Peak Hour			17:00	16:45	16:45
7 - 9 Pk Volume	0	0	637	450	1087	4 - 6 Pk Volume	0	0	738	985	1716
Pk Hr Factor	0.000	0.000	0.796	0.840	0.897	Pk Hr Factor	0.000	0.000	0.866	0.889	0.901

Prepared by NDS/ATD

VOLUME

Hollister Ave E/o Los Carneros Way

Day: Thursday
Date: 2/9/2012

City: Goleta
Project #: CA12_8007_005

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	6,967	7,475	14,442

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			10		12		22		12:00			165		214		379	
00:15			11		13		24		12:15			150		193		343	
00:30			6		10		16		12:30			167		159		326	
00:45			2	29	10	45	12	74	12:45			217	699	167	733	384	1432
01:00			6		3		9		13:00			191		171		362	
01:15			3		5		8		13:15			170		146		316	
01:30			6		6		12		13:30			175		160		335	
01:45			12	27	11	25	23	52	13:45			145	681	161	638	306	1319
02:00			4		13		17		14:00			142		114		256	
02:15			5		6		11		14:15			117		112		229	
02:30			3		7		10		14:30			119		118		237	
02:45			4	16	5	31	9	47	14:45			139	517	125	469	264	986
03:00			6		6		12		15:00			135		180		315	
03:15			4		3		7		15:15			136		133		269	
03:30			3		4		7		15:30			128		166		294	
03:45			3	16	12	25	15	41	15:45			140	539	134	613	274	1152
04:00			8		7		15		16:00			119		160		279	
04:15			4		3		7		16:15			101		150		251	
04:30			6		7		13		16:30			122		173		295	
04:45			13	31	5	22	18	53	16:45			119	461	170	653	289	1114
05:00			5		9		14		17:00			149		220		369	
05:15			10		6		16		17:15			136		214		350	
05:30			18		14		32		17:30			126		190		316	
05:45			42	75	17	46	59	121	17:45			103	514	153	777	256	1291
06:00			34		17		51		18:00			122		118		240	
06:15			48		22		70		18:15			94		132		226	
06:30			49		34		83		18:30			71		116		187	
06:45			83	214	31	104	114	318	18:45			88	375	109	475	197	850
07:00			55		42		97		19:00			67		76		143	
07:15			74		65		139		19:15			49		70		119	
07:30			86		66		152		19:30			55		71		126	
07:45			143	358	71	244	214	602	19:45			72	243	60	277	132	520
08:00			105		97		202		20:00			53		72		125	
08:15			110		91		201		20:15			44		53		97	
08:30			102		82		184		20:30			43		68		111	
08:45			96	413	80	350	176	763	20:45			46	186	43	236	89	422
09:00			101		104		205		21:00			31		44		75	
09:15			80		76		156		21:15			47		36		83	
09:30			79		86		165		21:30			39		40		79	
09:45			92	352	99	365	191	717	21:45			30	147	31	151	61	298
10:00			112		93		205		22:00			31		38		69	
10:15			82		95		177		22:15			16		28		44	
10:30			99		95		194		22:30			19		25		44	
10:45			126	419	119	402	245	821	22:45			15	81	15	106	30	187
11:00			109		113		222		23:00			17		22		39	
11:15			109		122		231		23:15			21		16		37	
11:30			138		171		309		23:30			22		30		52	
11:45			149	505	199	605	348	1110	23:45			9	69	15	83	24	152
TOTALS				2455		2264		4719	TOTALS				4512		5211		9723
SPLIT %				52.0%		48.0%		32.7%	SPLIT %				46.4%		53.6%		67.3%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	6,967	7,475	14,442

AM Peak Hour			11:45	11:30	11:45	PM Peak Hour	12:45	16:45	12:00
AM Pk Volume			631	777	1396	PM Pk Volume	753	794	1432
Pk Hr Factor			0.945	0.908	0.921	Pk Hr Factor	0.868	0.902	0.932
7 - 9 Volume	0	0	771	594	1365	4 - 6 Volume	0	0	975	1430	2405
7 - 9 Peak Hour			07:45	08:00	07:45	4 - 6 Peak Hour			16:45	16:45	16:45
7 - 9 Pk Volume	0	0	460	350	801	4 - 6 Pk Volume	0	0	530	794	1324
Pk Hr Factor	0.000	0.000	0.804	0.902	0.936	Pk Hr Factor	0.000	0.000	0.889	0.902	0.897

#1 AM

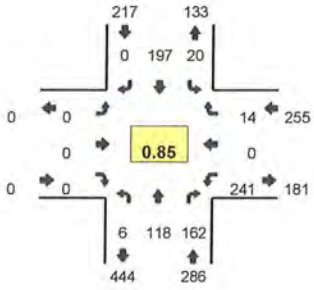
Type of peak hour being reported: Intersection Peak

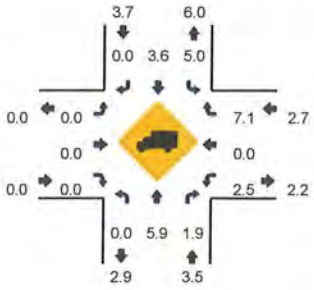
Method for determining peak hour: Total Entering Volume

LOCATION: Los Carneros Rd -- Calle Real
CITY/STATE: Goleta, CA

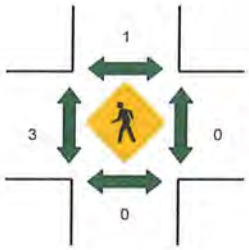
QC JOB #: 10938823
DATE: Thu, Apr 04 2013

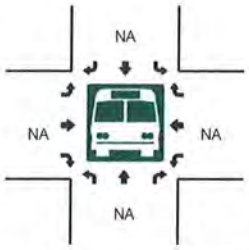
Peak-Hour: 7:50 AM -- 8:50 AM
Peak 15-Min: 7:50 AM -- 8:05 AM





Quality Counts
TRANSPORTATION DATA COLLECTION SERVICES





R* = RTOR

5-Min Count Period Beginning At	Los Carneros Rd (Northbound)					Los Carneros Rd (Southbound)					Calle Real (Eastbound)					Calle Real (Westbound)					Total	Hourly Totals
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*		
7:00 AM	0	6	4	0	0	1	7	0	0	0	0	0	0	0	0	6	0	0	0	0	24	
7:05 AM	0	5	0	0	0	0	10	0	0	0	0	0	0	0	0	12	0	0	0	0	27	
7:10 AM	0	2	5	0	0	0	11	0	0	0	0	0	0	0	0	4	0	0	0	0	22	
7:15 AM	0	5	6	0	0	0	9	0	0	0	0	0	0	0	0	5	0	0	0	0	25	
7:20 AM	0	3	4	0	0	1	10	0	0	0	0	0	0	0	0	17	0	0	0	0	35	
7:25 AM	0	4	5	0	0	2	13	0	0	0	0	0	0	0	0	11	0	0	0	0	35	
7:30 AM	0	8	10	0	0	0	17	0	0	0	0	0	0	0	0	15	0	1	0	0	51	
7:35 AM	0	3	7	1	0	1	12	0	0	0	0	0	0	0	0	9	0	0	0	0	33	
7:40 AM	0	6	6	0	0	0	15	0	0	0	0	0	0	0	0	11	0	0	0	0	38	
7:45 AM	0	2	8	1	0	1	21	0	0	0	0	0	0	0	0	21	0	1	0	0	55	
7:50 AM	0	11	13	1	0	1	18	0	1	0	0	0	0	0	0	29	0	0	0	0	74	
7:55 AM	0	17	16	1	0	0	22	0	0	0	0	0	0	0	0	20	0	2	0	0	78	497
8:00 AM	0	10	16	0	0	1	22	0	0	0	0	0	0	0	0	21	0	1	0	0	71	544
8:05 AM	0	9	13	1	0	2	21	0	0	0	0	0	0	0	0	22	0	0	0	0	68	585
8:10 AM	0	9	11	0	0	0	16	0	0	0	0	0	0	0	0	15	0	0	0	0	51	614
8:15 AM	0	14	14	0	0	3	10	0	0	0	0	0	0	0	0	30	0	2	0	0	73	662
8:20 AM	0	7	16	1	0	1	20	0	0	0	0	0	0	0	0	15	0	1	0	0	61	688
8:25 AM	0	9	8	0	0	0	9	0	0	0	0	0	0	0	0	15	0	0	0	0	41	694
8:30 AM	0	7	16	1	0	2	21	0	0	0	0	0	0	0	0	13	0	3	0	0	63	706
8:35 AM	0	7	13	0	0	3	14	0	0	0	0	0	0	0	0	15	0	1	0	0	53	726
8:40 AM	0	7	11	0	0	3	16	0	0	0	0	0	0	0	0	21	0	0	0	0	58	746
8:45 AM	0	11	15	1	0	3	8	0	0	0	0	0	0	0	0	25	0	4	0	0	67	758
8:50 AM	0	6	14	0	0	3	24	0	0	0	0	0	0	0	0	16	0	2	0	0	65	749
8:55 AM	0	6	23	0	0	0	7	0	0	0	0	0	0	0	0	17	0	0	0	0	53	724

Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	
All Vehicles	0	152	180	8	0	8	248	0	4	0	0	0	0	0	0	280	0	12	0	0	892
Heavy Trucks	0	4	8			0	4	0			0	0	0			0	0	0			16
Pedestrians		0					0					4					0				4
Bicycles	0	0	1			0	0	0			0	0	0			0	0	0			1
Railroad																					
Stopped Buses																					

Comments: N/A

Report generated on 5/16/2013 9:08 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

#1 PM

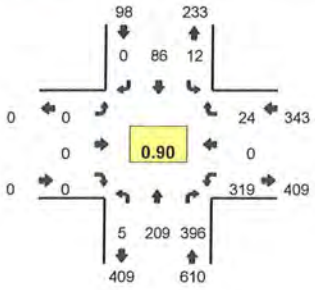
Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

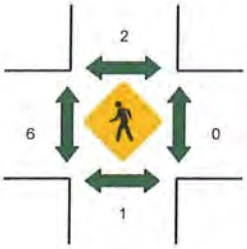
LOCATION: Los Carneros Rd -- Calle Real
CITY/STATE: Goleta, CA

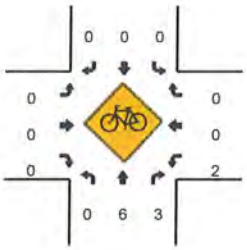
QC JOB #: 10938824
DATE: Thu, Apr 04 2013

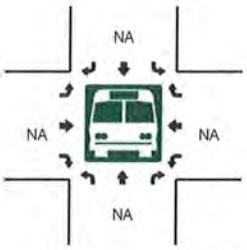
Peak-Hour: 4:55 PM -- 5:55 PM
Peak 15-Min: 5:10 PM -- 5:25 PM



Quality Counts
TRANSPORTATION DATA COLLECTION SERVICES







R* = RTOR

5-Min Count Period Beginning At	Los Carneros Rd (Northbound)					Los Carneros Rd (Southbound)					Calle Real (Eastbound)					Calle Real (Westbound)					Total	Hourly Totals
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*		
4:00 PM	0	15	14	0	0	0	3	0	0	0	0	0	0	0	0	20	0	2	0	0	54	
4:05 PM	0	11	21	2	0	3	17	0	0	0	0	0	0	0	0	49	0	7	0	0	110	
4:10 PM	0	14	25	1	0	1	8	0	0	0	0	0	0	0	0	30	0	1	0	0	80	
4:15 PM	0	13	21	0	0	1	8	0	0	0	0	0	0	0	0	19	0	1	0	0	63	
4:20 PM	0	12	19	0	0	0	8	0	0	0	0	0	0	0	0	23	0	1	0	0	63	
4:25 PM	0	9	14	0	0	1	10	0	0	0	0	0	0	0	0	20	0	1	0	0	55	
4:30 PM	0	7	33	2	0	0	6	0	0	0	0	0	0	0	0	22	0	2	0	0	72	
4:35 PM	0	13	28	0	0	1	3	0	0	0	0	0	0	0	0	20	0	3	0	0	68	
4:40 PM	0	17	32	2	0	1	2	0	0	0	0	0	0	0	0	18	0	1	0	0	73	
4:45 PM	0	10	25	0	0	2	3	0	0	0	0	0	0	0	0	24	0	1	0	0	65	
4:50 PM	0	10	30	0	0	0	12	0	0	0	0	0	0	0	0	26	0	1	0	0	79	
4:55 PM	0	23	29	0	0	3	9	0	0	0	0	0	0	0	0	15	0	3	0	0	82	864
5:00 PM	0	11	31	1	0	2	7	0	0	0	0	0	0	0	0	29	0	2	0	0	83	893
5:05 PM	0	17	32	1	0	1	9	0	0	0	0	0	0	0	0	18	0	4	0	0	82	865
5:10 PM	0	22	33	0	0	0	9	0	0	0	0	0	0	0	0	30	0	0	0	0	94	879
5:15 PM	0	27	39	0	0	1	15	0	0	0	0	0	0	0	0	28	0	2	0	0	112	928
5:20 PM	0	19	35	0	0	1	2	0	0	0	0	0	0	0	0	26	0	4	0	0	87	952
5:25 PM	0	19	33	0	0	0	3	0	0	0	0	0	0	0	0	32	0	0	0	0	87	984
5:30 PM	0	15	38	1	0	1	5	0	0	0	0	0	0	0	0	22	0	2	1	0	85	997
5:35 PM	0	21	26	1	0	0	4	0	0	0	0	0	0	0	0	33	0	1	0	0	86	1015
5:40 PM	0	13	38	0	0	0	15	0	0	0	0	0	0	0	0	29	0	1	0	0	96	1038
5:45 PM	0	7	32	0	0	1	7	0	0	0	0	0	0	0	0	26	0	2	0	0	75	1048
5:50 PM	0	15	30	1	0	2	1	0	0	0	0	0	0	0	0	30	0	3	0	0	82	1051
5:55 PM	0	9	36	1	0	2	6	0	0	0	0	0	0	0	0	19	0	3	0	0	76	1045

Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	
All Vehicles	0	272	428	0	0	8	104	0	0	0	0	0	0	0	0	336	0	24	0	0	1172
Heavy Trucks	0	0	0			0	0	0			0	0	0			0	0	0			0
Pedestrians		0					8					12					0				20
Bicycles	0	1	1			0	0	0			0	0	0			0	0	0			2
Railroad																					
Stopped Buses																					

Comments: N/A

Report generated on 5/16/2013 9:08 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

#2 AM

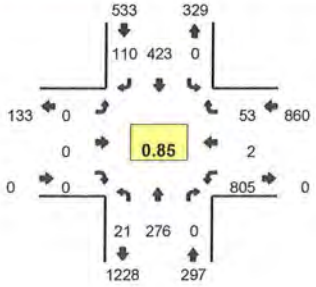
Type of peak hour being reported: Intersection Peak

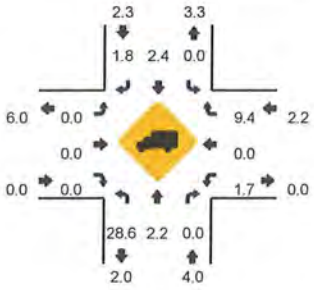
Method for determining peak hour: Total Entering Volume

LOCATION: Los Carneros Rd -- US 101 NB Ramps
CITY/STATE: Goleta, CA

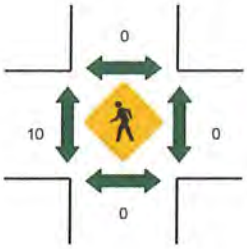
QC JOB #: 10938619
DATE: Wed, May 22 2013

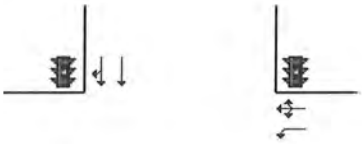
Peak-Hour: 7:35 AM -- 8:35 AM
Peak 15-Min: 7:55 AM -- 8:10 AM

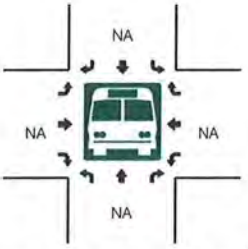




Quality Counts
TRANSPORTATION DATA COLLECTION SERVICES







R* = RTOR

5-Min Count Period Beginning At	Los Carneros Rd (Northbound)					Los Carneros Rd (Southbound)					US 101 NB Ramps (Eastbound)					US 101 NB Ramps (Westbound)					Total	Hourly Totals
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*		
7:00 AM	0	8	0	0	0	0	14	2	0	0	0	0	0	0	0	48	0	2	0	0	74	
7:05 AM	3	13	0	0	0	0	12	2	0	0	0	0	0	0	0	44	0	1	0	1	76	
7:10 AM	3	5	0	0	0	0	16	4	0	1	0	0	0	0	0	42	0	1	0	1	73	
7:15 AM	3	10	0	0	0	0	26	5	0	0	0	0	0	0	0	38	0	1	0	2	85	
7:20 AM	5	16	0	0	0	0	12	2	0	5	0	0	0	0	0	39	0	3	0	1	83	
7:25 AM	1	13	0	0	0	0	27	5	0	1	0	0	0	0	0	39	0	1	0	0	87	
7:30 AM	2	8	0	0	0	0	23	3	0	2	0	0	0	0	0	37	0	5	0	0	80	
7:35 AM	3	12	0	0	0	0	32	7	0	0	0	0	0	0	0	49	0	4	0	2	109	
7:40 AM	1	16	0	0	0	0	36	10	0	0	0	0	0	0	0	50	0	2	0	3	118	
7:45 AM	3	13	0	0	0	0	34	13	0	0	0	0	0	0	0	45	0	1	0	1	110	
7:50 AM	1	26	0	0	0	0	28	8	0	1	0	0	0	0	0	83	1	3	0	1	152	
7:55 AM	2	25	0	0	0	0	51	13	0	0	0	0	0	0	0	78	0	5	0	0	174	1221
8:00 AM	2	30	0	0	0	0	40	5	0	0	0	0	0	0	0	71	0	3	0	1	152	1299
8:05 AM	2	22	0	0	0	0	31	10	0	0	0	0	0	0	0	96	0	9	0	1	171	1394
8:10 AM	1	32	0	0	0	0	32	12	0	0	0	0	0	0	0	73	0	2	0	2	154	1475
8:15 AM	1	29	0	0	0	0	33	10	0	0	0	0	0	0	0	76	0	3	0	0	152	1542
8:20 AM	1	31	0	0	0	0	38	6	0	2	0	0	0	0	0	43	0	1	0	0	122	1581
8:25 AM	0	18	0	0	0	0	35	6	0	0	0	0	0	0	0	90	1	4	0	2	156	1650
8:30 AM	4	22	0	0	0	0	33	6	0	1	0	0	0	0	0	51	0	3	0	0	120	1690
8:35 AM	1	8	0	0	0	0	21	6	0	1	0	0	0	0	0	64	3	2	0	0	106	1687
8:40 AM	5	11	0	0	0	0	24	4	0	0	0	0	0	0	0	52	1	1	0	0	98	1667
8:45 AM	5	13	0	0	0	0	26	4	0	0	0	0	0	0	0	55	0	2	0	0	105	1662
8:50 AM	2	14	0	0	0	0	18	3	0	0	0	0	0	0	0	41	0	1	0	1	80	1590
8:55 AM	4	17	0	0	0	0	22	3	0	0	0	0	0	0	0	46	0	0	0	1	93	1509

Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	
All Vehicles	24	308	0	0	0	0	488	112	0	0	0	0	0	0	0	980	0	68	0	8	1988
Heavy Trucks	4	0	0			0	16	4			0	0	0			12	0	0			36
Pedestrians		0					0					20					0				20
Bicycles	0	0	0			0	3	0			0	0	0			0	0	0			3
Railroad																					
Stopped Buses																					

Comments: N/A

Report generated on 6/26/2013 11:59 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

#2 PM

ITM Peak Hour Summary

Prepared by:

NDS

National Data & Surveying Services

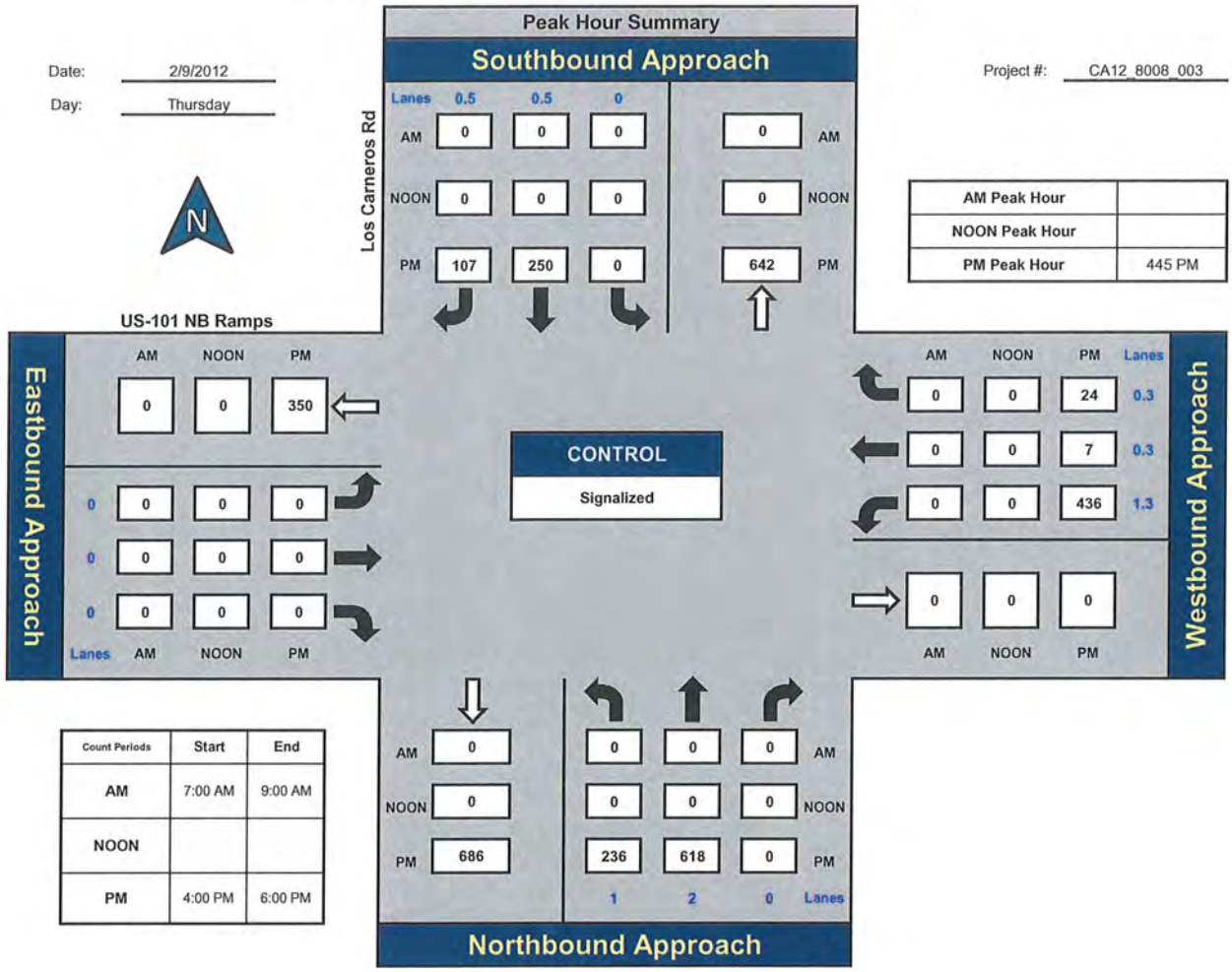
Los Carneros Rd and US-101 NB Ramps , City of Goleta

Peak Hour Summary

Date: 2/9/2012

Day: Thursday

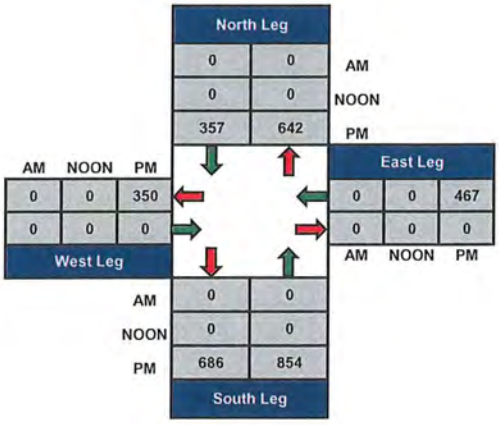
Project #: CA12_8008_003



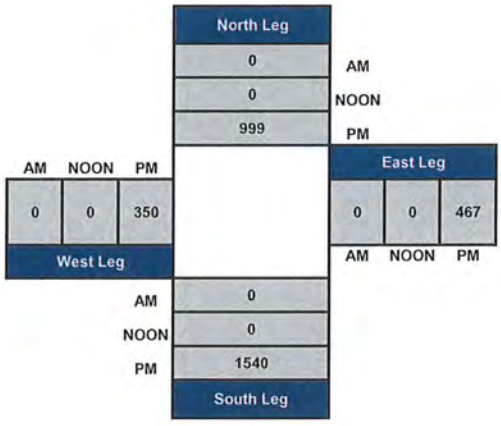
AM Peak Hour	
NOON Peak Hour	
PM Peak Hour	445 PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



#3AM

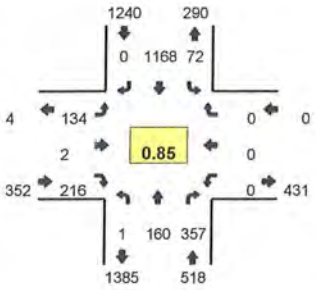
Type of peak hour being reported: Intersection Peak

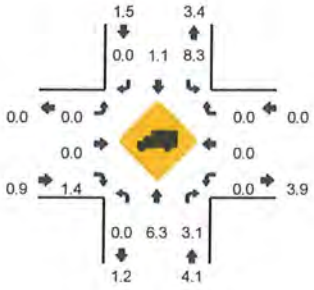
Method for determining peak hour: Total Entering Volume

LOCATION: Los Carneros Rd -- US 101 SB Ramps
CITY/STATE: Goleta, CA

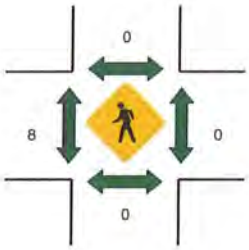
QC JOB #: 10938621
DATE: Wed, May 22 2013

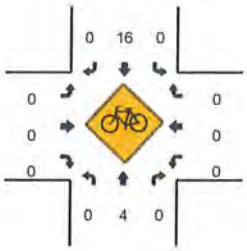
Peak-Hour: 7:40 AM -- 8:40 AM
Peak 15-Min: 7:50 AM -- 8:05 AM

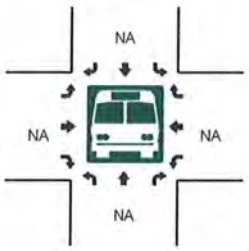




Quality Counts
TRANSPORTATION DATA COLLECTION SERVICES







R* = RTOR

5-Min Count Period Beginning At	Los Carneros Rd (Northbound)					Los Carneros Rd (Southbound)					US 101 SB Ramps (Eastbound)					US 101 SB Ramps (Westbound)					Total	Hourly Totals
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*		
7:00 AM	0	8	22	1	5	5	63	0	0	0	3	0	2	0	16	0	0	0	0	0	125	
7:05 AM	0	8	13	1	2	1	55	0	0	0	4	0	8	0	13	0	0	0	0	0	105	
7:10 AM	0	7	20	0	2	2	52	0	0	0	2	1	0	0	9	0	0	0	0	0	95	
7:15 AM	0	12	15	0	13	4	60	0	0	0	6	0	4	0	11	0	0	0	0	0	125	
7:20 AM	0	11	21	0	5	2	56	0	0	0	7	0	8	0	18	0	0	0	0	0	128	
7:25 AM	0	2	28	0	3	6	53	0	0	0	7	0	6	0	16	0	0	0	0	0	121	
7:30 AM	0	10	34	0	6	9	60	0	0	0	7	0	0	0	14	0	0	0	0	0	140	
7:35 AM	0	8	24	0	5	8	73	0	0	0	3	0	5	0	10	0	0	0	0	0	136	
7:40 AM	0	12	32	0	14	13	83	0	0	0	8	0	6	1	15	0	0	0	0	0	184	
7:45 AM	0	9	28	0	11	8	78	0	0	0	7	1	7	0	21	0	0	0	0	0	170	
7:50 AM	0	17	22	0	8	7	97	0	0	0	15	0	14	0	10	0	0	0	0	0	190	
7:55 AM	0	14	17	1	11	11	134	0	0	0	14	0	15	1	13	0	0	0	0	0	231	1750
8:00 AM	0	12	6	0	22	7	103	0	0	0	20	0	10	1	15	0	0	0	0	0	196	1821
8:05 AM	0	12	13	0	7	6	86	0	0	0	10	0	3	0	8	0	0	0	0	0	145	1861
8:10 AM	0	22	37	0	6	3	114	0	0	0	14	0	4	0	10	0	0	0	0	0	210	1976
8:15 AM	0	16	18	0	12	4	101	0	0	0	10	0	10	0	7	0	0	0	0	0	178	2029
8:20 AM	0	13	14	0	0	3	86	0	0	0	14	0	7	0	7	0	0	0	0	0	144	2045
8:25 AM	0	16	21	0	6	3	111	0	0	0	8	1	2	0	8	0	0	0	0	0	176	2100
8:30 AM	0	11	21	0	2	3	87	0	0	0	5	0	2	0	7	0	0	0	0	0	138	2098
8:35 AM	0	6	27	0	2	4	88	0	0	0	5	0	7	1	8	0	0	0	0	0	148	2110
8:40 AM	0	11	26	0	4	5	64	0	0	0	3	0	1	1	12	0	0	0	0	0	127	2053
8:45 AM	0	16	39	0	1	2	71	0	0	0	4	0	0	0	7	0	0	0	0	0	140	2023
8:50 AM	0	16	32	0	1	5	54	0	0	0	3	0	1	0	5	0	0	0	0	0	117	1950
8:55 AM	0	10	11	0	4	3	73	0	0	0	8	0	2	2	13	0	0	0	0	0	126	1845

Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	
All Vehicles	0	172	180	4	164	100	1336	0	0	0	196	0	156	8	152	0	0	0	0	0	2468
Heavy Trucks	0	12	4			12	12	0			0	0	4			0	0	0			44
Pedestrians		0					0					24					0				24
Bicycles	0	1	0			0	4	0			0	0	0			0	0	0			5
Railroad																					
Stopped Buses																					

Comments: N/A

Report generated on 6/26/2013 11:59 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

ASSOCIATED TRANSPORTATION ENGINEERS

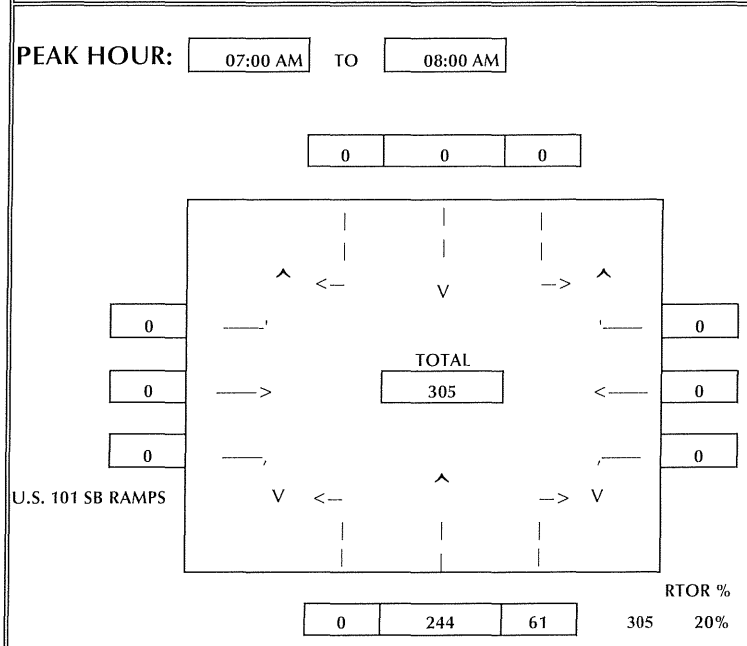
INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: HERITAGE RIDGE | PROJECT #: 12089.01 | COUNT DATE: 07-17-15 | FILE NAME: #3 AM_RTOR

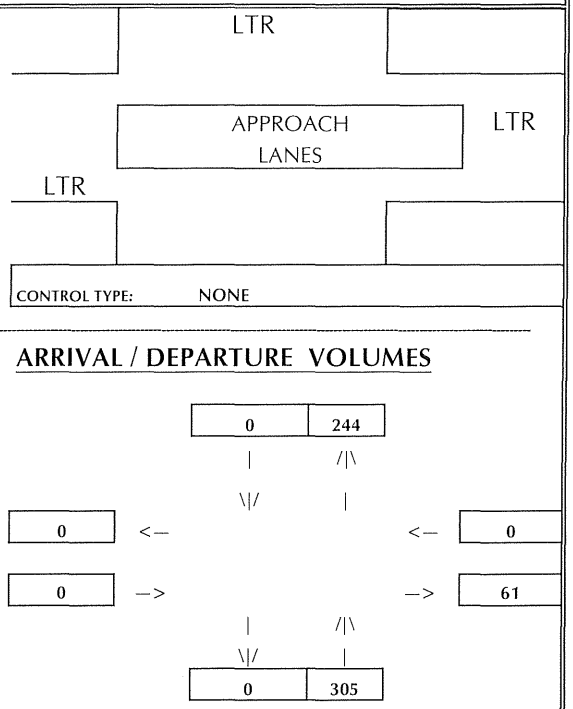
N-S Approach: LOS CARNEROS ROAD | COUNT TIME: 07:30 AM TO 8:30

E-W Approach: U.S. 101 SB RAMPS | CITY: GOLETA | WEATHER: SUNNY

PEAK HOUR: 07:00 AM TO 08:00 AM



RTOR %



TIME PERIOD From	---	To	NORTHBOUND RIGHT	RTOR	SOUTHBOUND Left	Thru	Right	EASTBOUND Left	Thru	Right	WESTBOUND Left	Thru	Right	TOTAL VOLUMES
COUNT DATA														
07:30 AM	---	07:45 AM	59	23										82
07:45 AM	---	08:00 AM	123	45										168
08:00 AM	---	08:15 AM	188	51										239
08:15 AM	---	08:30 AM	244	61										305
08:30 AM	---	08:45 AM												0
08:45 AM	---	09:00 AM												0
09:00 AM	---	09:15 AM												0
09:15 AM	---	09:30 AM												0
TOTAL BY PERIOD														
07:30 AM	---	07:45 AM	0	59	23	0	0	0	0	0	0	0	0	0	82
07:45 AM	---	08:00 AM	0	64	22	0	0	0	0	0	0	0	0	0	86
08:00 AM	---	08:15 AM	0	65	6	0	0	0	0	0	0	0	0	0	71
08:15 AM	---	08:30 AM	0	56	10	0	0	0	0	0	0	0	0	0	66
HOURLY TOTALS														
07:00 AM	---	08:00 AM	0	244	61	0	0	0	0	0	0	0	0	0	305

#3PM

ITM Peak Hour Summary

Prepared by:

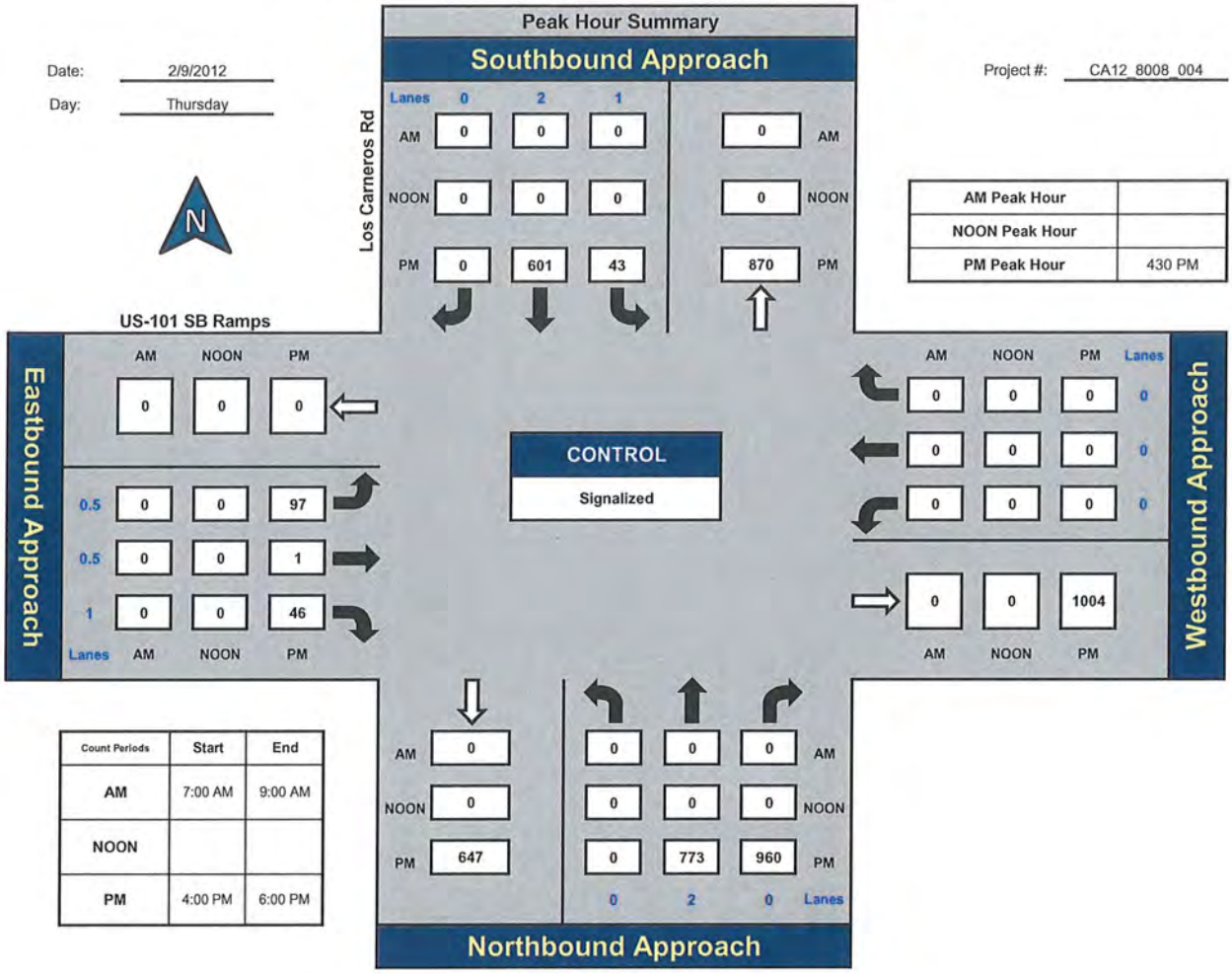
National Data & Surveying Services

Los Carneros Rd and US-101 SB Ramps , City of Goleta

Date: 2/9/2012

Day: Thursday

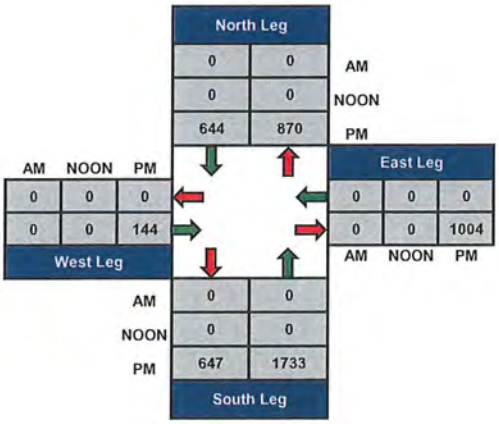
Project #: CA12_8008_004



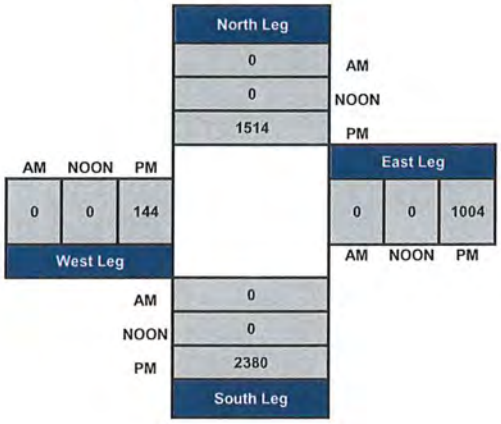
Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

AM Peak Hour	
NOON Peak Hour	
PM Peak Hour	430 PM

Total Ins & Outs



Total Volume Per Leg



ASSOCIATED TRANSPORTATION ENGINEERS

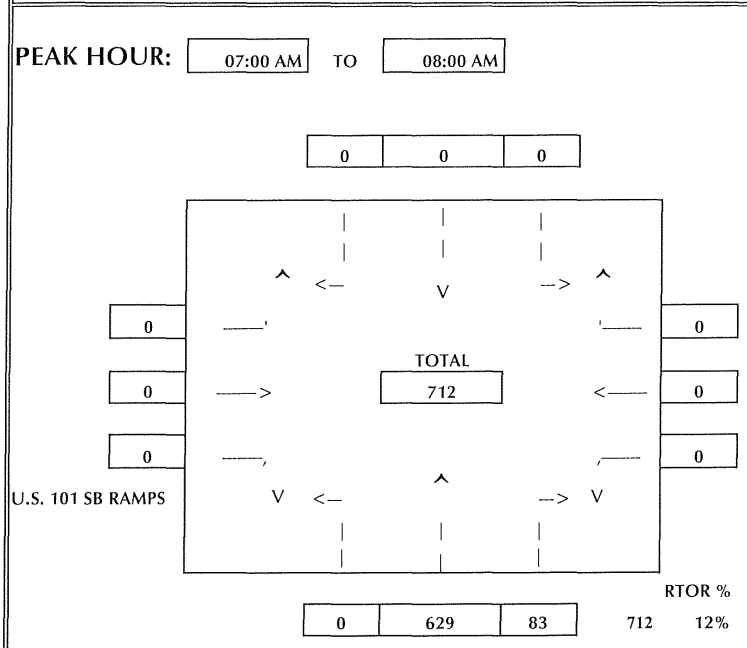
INTERSECTION TURNING MOVEMENT SUMMARY

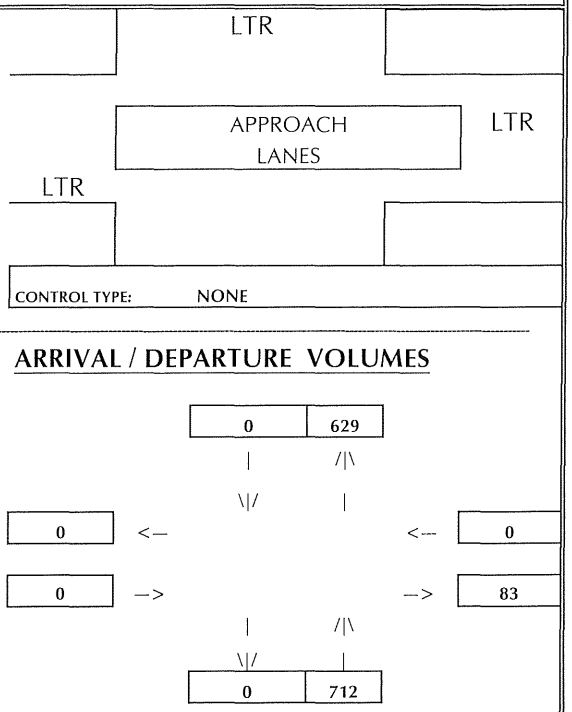
PROJECT: HERITAGE RIDGE | PROJECT #: 12089.01 | COUNT DATE: 07-16-15 | FILE NAME: #3 PM_RTOR

N-S Approach: LOS CARNEROS ROAD | COUNT TIME: 07:30 AM TO 8:30

E-W Approach: U.S. 101 SB RAMPS | CITY: GOLETA | WEATHER: SUNNY

PEAK HOUR: 07:00 AM TO 08:00 AM





TIME PERIOD From	---	To	NORTHBOUND RIGHT	RTOR	SOUTHBOUND Left	Thru	Right	EASTBOUND Left	Thru	Right	WESTBOUND Left	Thru	Right	TOTAL VOLUMES
COUNT DATA														
04:30 PM	---	04:45 PM	139	12										151
04:45 PM	---	05:00 PM	323	42										365
05:00 PM	---	05:15 PM	478	65										543
05:15 PM	---	05:30 PM	629	83										712
05:30 PM	---	05:45 PM												0
05:45 PM	---	06:00 PM												0
														0
														0
TOTAL BY PERIOD														
04:30 PM	---	04:45 PM	0	139	12	0	0	0	0	0	0	0	0	0	151
04:45 PM	---	05:00 PM	0	184	30	0	0	0	0	0	0	0	0	0	214
05:00 PM	---	05:15 PM	0	155	23	0	0	0	0	0	0	0	0	0	178
05:15 PM	---	05:30 PM	0	151	18	0	0	0	0	0	0	0	0	0	169
HOURLY TOTALS														
07:00 AM	---	08:00 AM	0	629	83	0	0	0	0	0	0	0	0	0	712

ASSOCIATED TRANSPORTATION ENGINEERS

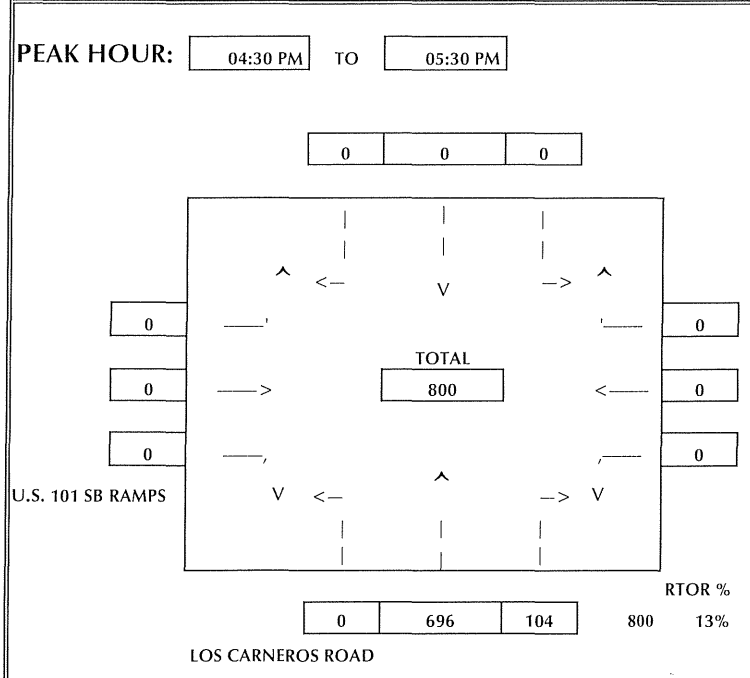
INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: HERITAGE RIDGE | PROJECT #: 12089.01 | COUNT DATE: 10-29-15 | FILE NAME: PM_RTOR

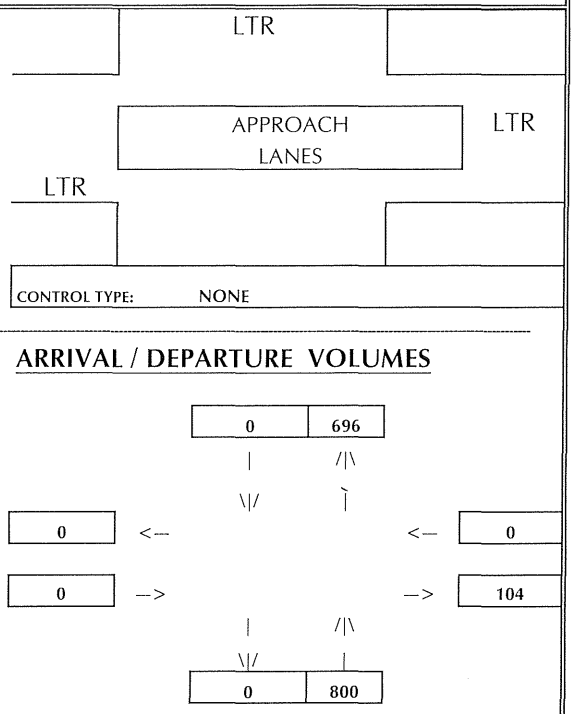
N-S Approach: LOS CARNEROS ROAD | COUNT TIME: 04:30 AM TO 8:30

E-W Approach: U.S. 101 SB RAMPS | CITY: GOLETA | WEATHER: SUNNY

PEAK HOUR: 04:30 PM TO 05:30 PM



RTOR %



ARRIVAL / DEPARTURE VOLUMES

TIME PERIOD From	---	To	NORTHBOUND RIGHT	RTOR	SOUTHBOUND Left	Thru	Right	EASTBOUND Left	Thru	Right	WESTBOUND Left	Thru	Right	TOTAL VOLUMES
COUNT DATA														
04:30 PM	---	04:45 PM	162	19										181
04:45 PM	---	05:00 PM	300	38										338
05:00 PM	---	05:15 PM	505	65										570
05:15 PM	---	05:30 PM	696	104										800
05:30 PM	---	05:45 PM												0
05:45 PM	---	06:00 PM												0
														0
														0
TOTAL BY PERIOD														
04:30 PM	---	04:45 PM	0	162	19	0	0	0	0	0	0	0	0	0	181
04:45 PM	---	05:00 PM	0	138	19	0	0	0	0	0	0	0	0	0	157
05:00 PM	---	05:15 PM	0	205	27	0	0	0	0	0	0	0	0	0	232
05:15 PM	---	05:30 PM	0	191	39	0	0	0	0	0	0	0	0	0	230
HOURLY TOTALS														
04:30 PM	---	05:30 PM	0	696	104	0	0	0	0	0	0	0	0	0	800

16a

#4 AM

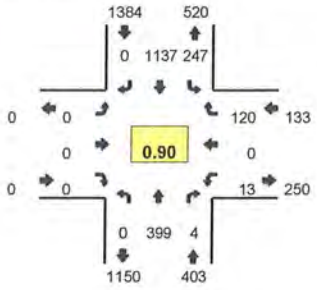
Type of peak hour being reported: Intersection Peak

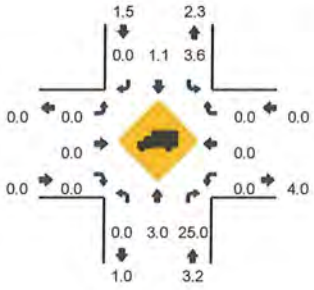
Method for determining peak hour: Total Entering Volume

LOCATION: Los Carneros Rd -- Calle Koral
CITY/STATE: Goleta, CA

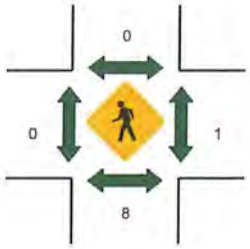
QC JOB #: 10938623
DATE: Wed, May 22 2013

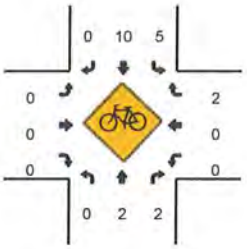
Peak-Hour: 7:40 AM -- 8:40 AM
Peak 15-Min: 7:50 AM -- 8:05 AM

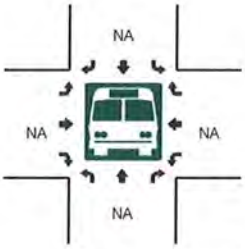




Quality Counts
TRANSPORTATION DATA COLLECTION SERVICES







R* = RTOR

5-Min Count Period Beginning At	Los Carneros Rd (Northbound)					Los Carneros Rd (Southbound)					Calle Koral (Eastbound)					Calle Koral (Westbound)					Total	Hourly Totals
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*		
7:00 AM	0	31	0	0	0	20	70	0	0	0	0	0	0	0	0	1	0	1	0	6	129	
7:05 AM	0	17	0	0	0	12	57	0	0	0	0	0	0	0	0	0	0	2	0	2	90	
7:10 AM	0	22	0	0	0	11	57	0	0	0	0	0	0	0	0	0	0	0	0	8	98	
7:15 AM	0	31	0	0	0	11	65	0	0	0	0	0	0	0	0	1	0	1	0	7	116	
7:20 AM	0	24	0	0	0	12	60	0	0	0	0	0	0	0	0	0	0	0	0	12	108	
7:25 AM	0	27	2	0	0	16	69	0	0	0	0	0	0	0	0	0	0	2	0	6	122	
7:30 AM	0	43	0	0	0	15	53	0	0	0	0	0	0	0	0	0	0	0	0	7	118	
7:35 AM	0	31	0	0	0	15	71	0	0	0	0	0	0	0	0	0	0	0	0	4	121	
7:40 AM	0	44	1	0	0	26	68	0	0	0	0	0	0	0	0	1	0	1	0	15	156	
7:45 AM	0	40	0	0	0	29	81	0	0	0	0	0	0	0	0	1	0	0	0	14	165	
7:50 AM	0	30	0	0	0	16	112	0	0	0	0	0	0	0	0	3	0	0	0	14	175	
7:55 AM	0	30	0	0	0	26	106	0	1	0	0	0	0	0	0	1	0	1	0	7	172	1570
8:00 AM	0	35	1	0	0	22	119	0	0	0	0	0	0	0	0	1	0	0	0	10	188	1629
8:05 AM	0	21	1	0	0	18	96	0	0	0	0	0	0	0	0	2	0	0	0	8	146	1685
8:10 AM	0	50	0	0	0	22	100	0	0	0	0	0	0	0	0	1	0	1	0	12	186	1773
8:15 AM	0	36	0	0	0	12	105	0	0	0	0	0	0	0	0	0	0	1	0	9	163	1820
8:20 AM	0	19	0	0	0	23	72	0	0	0	0	0	0	0	0	2	0	0	0	9	125	1837
8:25 AM	0	37	0	0	0	17	119	0	0	0	0	0	0	0	0	1	0	0	0	4	178	1893
8:30 AM	0	26	1	0	0	16	76	0	0	0	0	0	0	0	0	0	0	0	0	9	128	1903
8:35 AM	0	31	0	0	0	19	83	0	0	0	0	0	0	0	0	0	0	0	0	5	138	1920
8:40 AM	0	34	0	0	0	21	54	0	0	0	0	0	0	0	0	0	0	0	0	9	118	1882
8:45 AM	0	33	0	0	0	15	71	0	0	0	0	0	0	0	0	2	0	3	0	12	136	1853
8:50 AM	0	47	0	0	1	5	56	0	0	0	0	0	0	0	0	2	0	1	0	6	118	1796
8:55 AM	0	19	0	0	0	18	59	0	0	0	0	0	0	0	0	0	0	0	0	4	100	1724

Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	
All Vehicles	0	380	4	0	0	256	1348	0	4	0	0	0	0	0	0	20	0	4	0	124	2140
Heavy Trucks	0	8	0			16	12	0			0	0	0			0	0	0			36
Pedestrians		28					0					0					4				32
Bicycles	0	0	0			3	3	0			0	0	0			0	0	1			7
Railroad																					
Stopped Buses																					

Comments: N/A

Report generated on 6/26/2013 11:59 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

#4 PM

ITM Peak Hour Summary

Prepared by:

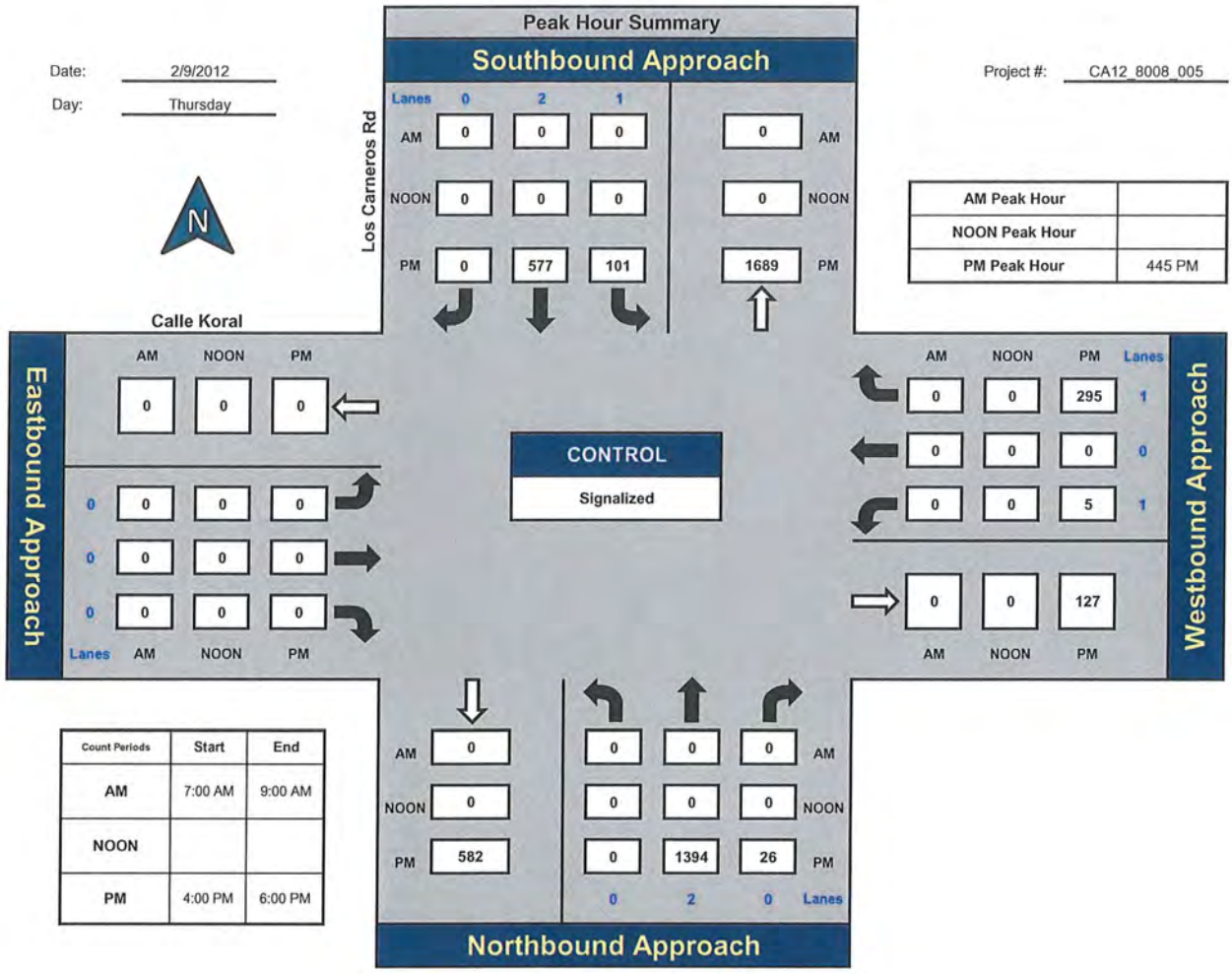
National Data & Surveying Services

Los Carneros Rd and Calle Koral , City of Goleta

Date: 2/9/2012

Day: Thursday

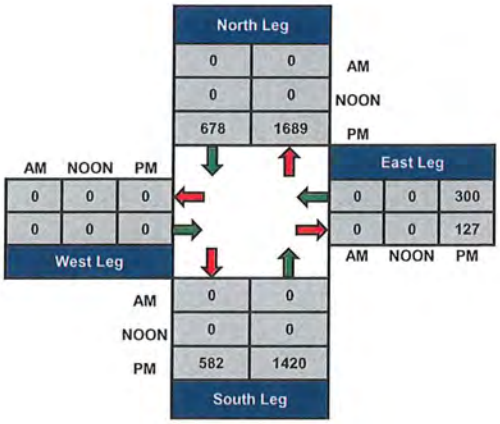
Project #: CA12_8008_005



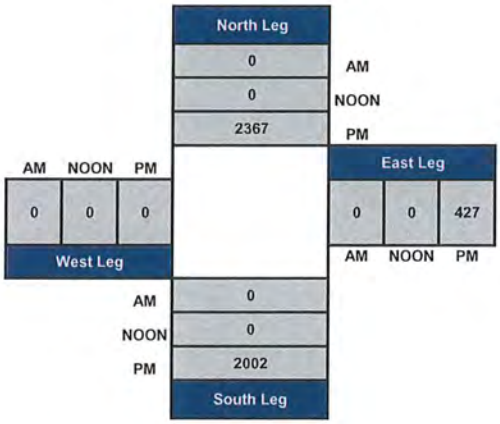
AM Peak Hour	
NOON Peak Hour	
PM Peak Hour	445 PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



ASSOCIATED TRANSPORTATION ENGINEERS

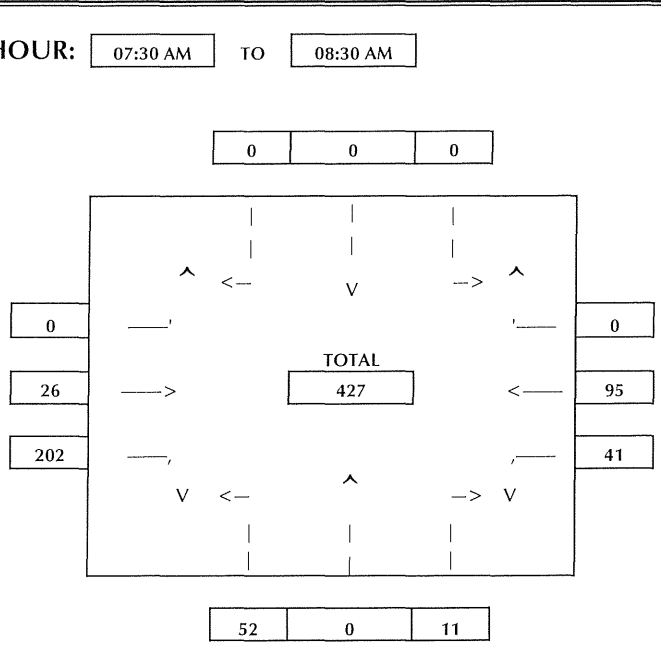
INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: WILLOW SPRINGS NORTH | PROJECT #: 12089.01 | COUNT DATE: 02-13-2014 | FILE NAME: 05_AM

N-S Approach: LOS CARNEROS WAY | COUNT TIME: 07:00 AM TO 9:00

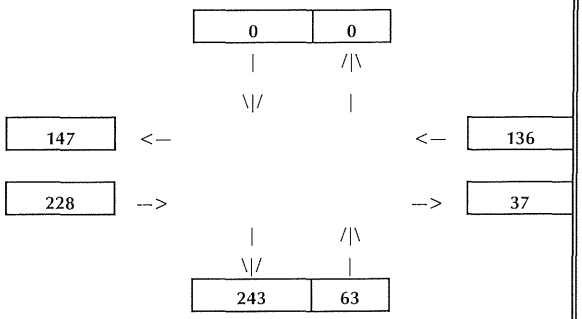
E-W Approach: CALLE KORAL | CITY: GOLETA | WEATHER: SUNNY

PEAK HOUR: 07:30 AM TO 08:30 AM



CONTROL TYPE: NONE

ARRIVAL / DEPARTURE VOLUMES



TIME PERIOD From	—	To	NORTHBOUND Left	Thru	Right	SOUTHBOUND Left	Thru	Right	EASTBOUND Left	Thru	Right	WESTBOUND Left	Thru	Right	TOTAL VOLUMES
COUNT DATA															
07:00 AM	---	07:15 AM	12	0	0	0	0	0	0	2	42	8	7	0	71
07:15 AM	---	07:30 AM	28	0	0	0	0	0	0	4	75	15	20	0	142
07:30 AM	---	07:45 AM	45	0	0	0	0	0	0	7	120	21	44	0	237
07:45 AM	---	08:00 AM	62	0	2	0	0	0	0	13	185	31	68	0	361
08:00 AM	---	08:15 AM	77	0	3	0	0	0	0	20	243	47	89	0	479
08:15 AM	---	08:30 AM	80	0	11	0	0	0	0	30	277	56	115	0	569
08:30 AM	---	08:45 AM	91	0	13	0	0	0	0	36	315	61	124	0	640
08:45 AM	---	09:00 AM	96	0	14	0	0	0	0	38	347	67	149	0	711
TOTAL BY PERIOD															
07:00 AM	---	07:15 AM	12	0	0	0	0	0	0	2	42	8	7	0	71
07:15 AM	---	07:30 AM	16	0	0	0	0	0	0	2	33	7	13	0	71
07:30 AM	---	07:45 AM	17	0	0	0	0	0	0	3	45	6	24	0	95
07:45 AM	---	08:00 AM	17	0	2	0	0	0	0	6	65	10	24	0	124
08:00 AM	---	08:15 AM	15	0	1	0	0	0	0	7	58	16	21	0	118
08:15 AM	---	08:30 AM	3	0	8	0	0	0	0	10	34	9	26	0	90
08:30 AM	---	08:45 AM	11	0	2	0	0	0	0	6	38	5	9	0	71
08:45 AM	---	09:00 AM	5	0	1	0	0	0	0	2	32	6	25	0	71
HOURLY TOTALS															
07:00 AM	---	08:00 AM	62	0	2	0	0	0	0	13	185	31	68	0	361
07:15 AM	---	08:15 AM	65	0	3	0	0	0	0	18	201	39	82	0	408
07:30 AM	---	08:30 AM	52	0	11	0	0	0	0	26	202	41	95	0	427
07:45 AM	---	08:45 AM	46	0	13	0	0	0	0	29	195	40	80	0	403
08:00 AM	---	09:00 AM	34	0	12	0	0	0	0	25	162	36	81	0	350

ASSOCIATED TRANSPORTATION ENGINEERS

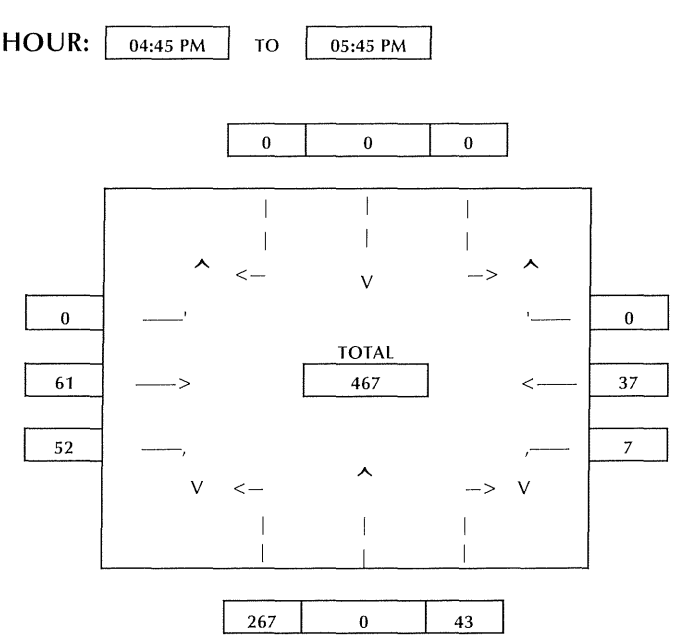
INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: WILLOW SPRINGS NORTH | PROJECT #: 12089.01 | COUNT DATE: 02-13-2014 | FILE NAME: 05_PM

N-S Approach: LOS CARNEROS WAY | COUNT TIME: 04:00 PM TO 6:00

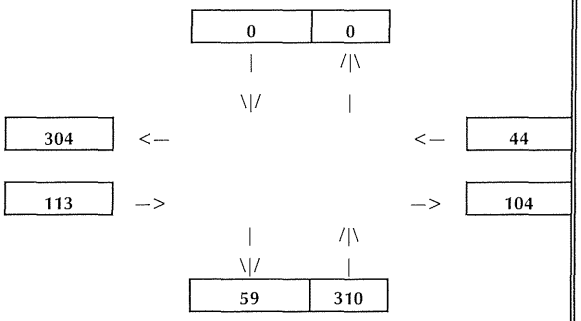
E-W Approach: CALLE KORAL | CITY: GOLETA | WEATHER: SUNNY

PEAK HOUR: 04:45 PM TO 05:45 PM



CONTROL TYPE: NONE

ARRIVAL / DEPARTURE VOLUMES



TIME PERIOD From	—	To	NORTHBOUND Left	Thru	Right	SOUTHBOUND Left	Thru	Right	EASTBOUND Left	Thru	Right	WESTBOUND Left	Thru	Right	TOTAL VOLUMES
COUNT DATA															
04:00 PM	—	04:15 PM	43	0	5	0	0	0	0	11	11	3	9	0	82
04:15 PM	—	04:30 PM	93	0	12	0	0	0	0	18	35	7	11	0	176
04:30 PM	—	04:45 PM	156	0	14	0	0	0	0	26	44	7	16	0	263
04:45 PM	—	05:00 PM	220	0	21	0	0	0	0	42	55	8	28	0	374
05:00 PM	—	05:15 PM	293	0	31	0	0	0	0	51	73	10	34	0	492
05:15 PM	—	05:30 PM	360	0	48	0	0	0	0	71	83	12	40	0	614
05:30 PM	—	05:45 PM	423	0	57	0	0	0	0	87	96	14	53	0	730
05:45 PM	—	06:00 PM	462	0	68	0	0	0	0	101	107	18	62	0	818
TOTAL BY PERIOD															
04:00 PM	—	04:15 PM	43	0	5	0	0	0	0	11	11	3	9	0	82
04:15 PM	—	04:30 PM	50	0	7	0	0	0	0	7	24	4	2	0	94
04:30 PM	—	04:45 PM	63	0	2	0	0	0	0	8	9	0	5	0	87
04:45 PM	—	05:00 PM	64	0	7	0	0	0	0	16	11	1	12	0	111
05:00 PM	—	05:15 PM	73	0	10	0	0	0	0	9	18	2	6	0	118
05:15 PM	—	05:30 PM	67	0	17	0	0	0	0	20	10	2	6	0	122
05:30 PM	—	05:45 PM	63	0	9	0	0	0	0	16	13	2	13	0	116
05:45 PM	—	06:00 PM	39	0	11	0	0	0	0	14	11	4	9	0	88
HOURLY TOTALS															
04:00 PM	—	05:00 PM	220	0	21	0	0	0	0	42	55	8	28	0	374
04:15 PM	—	05:15 PM	250	0	26	0	0	0	0	40	62	7	25	0	410
04:30 PM	—	05:30 PM	267	0	36	0	0	0	0	53	48	5	29	0	438
04:45 PM	—	05:45 PM	267	0	43	0	0	0	0	61	52	7	37	0	467
05:00 PM	—	06:00 PM	242	0	47	0	0	0	0	59	52	10	34	0	444

#6 AM

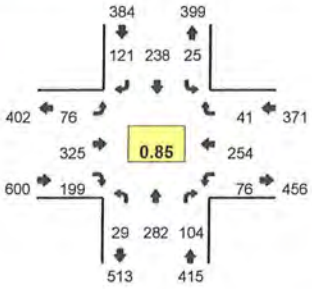
Type of peak hour being reported: Intersection Peak

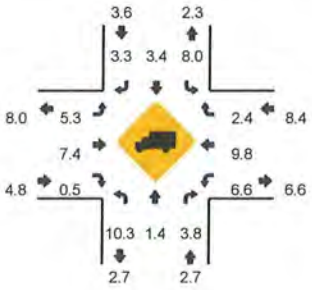
Method for determining peak hour: Total Entering Volume

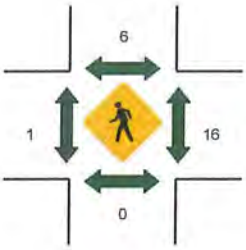
LOCATION: Los Carneros Rd -- Hollister Ave
CITY/STATE: Goleta, CA

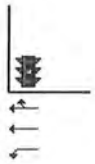
QC JOB #: 10938617
DATE: Wed, May 22 2013

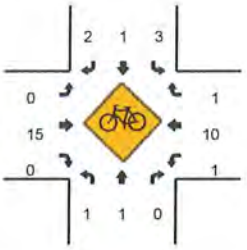
Peak-Hour: 7:50 AM -- 8:50 AM
Peak 15-Min: 7:50 AM -- 8:05 AM

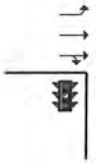


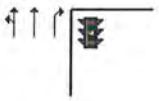


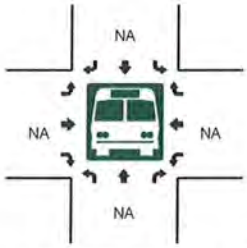












R* = RTOR

5-Min Count Period Beginning At	Los Carneros Rd (Northbound)					Los Carneros Rd (Southbound)					Hollister Ave (Eastbound)					Hollister Ave (Westbound)					Total	Hourly Totals
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*		
7:00 AM	1	13	0	0	2	0	18	6	0	0	5	19	0	0	6	3	15	3	0	0	91	
7:05 AM	1	18	1	0	0	2	10	10	0	0	4	21	4	0	5	2	18	0	0	2	98	
7:10 AM	2	18	1	0	2	0	12	3	0	0	1	21	5	0	3	1	21	1	0	0	91	
7:15 AM	3	20	3	0	2	1	27	4	0	0	3	18	10	0	2	2	5	3	0	2	105	
7:20 AM	3	16	2	0	1	0	16	7	0	2	6	17	4	0	7	2	23	3	0	1	110	
7:25 AM	3	33	3	0	0	1	15	4	0	1	4	30	4	0	8	6	14	1	0	1	128	
7:30 AM	1	32	2	0	0	0	18	9	0	1	3	28	5	0	5	5	9	0	0	1	119	
7:35 AM	1	29	2	0	1	3	14	10	0	0	4	25	2	0	7	3	18	2	0	0	121	
7:40 AM	0	27	6	0	0	1	9	7	0	0	8	28	8	0	2	9	18	3	0	0	126	
7:45 AM	2	28	1	0	3	3	19	7	0	0	5	25	20	0	7	5	14	4	0	0	143	
7:50 AM	3	24	9	0	1	0	14	8	0	0	12	34	18	0	2	9	25	1	0	1	161	
7:55 AM	7	19	3	0	3	5	32	10	0	0	10	41	20	0	8	11	25	4	1	1	200	1493
8:00 AM	3	26	13	0	2	2	24	15	0	0	6	21	10	0	11	3	17	4	0	0	157	1559
8:05 AM	3	20	6	0	5	0	13	9	0	1	10	32	17	0	2	6	24	5	0	1	154	1615
8:10 AM	1	29	10	1	0	3	17	5	0	3	5	23	1	0	4	9	21	2	1	1	136	1660
8:15 AM	2	19	5	0	6	0	27	20	0	0	7	35	14	0	2	5	15	0	0	1	158	1713
8:20 AM	1	23	2	0	7	1	7	7	0	0	4	32	7	0	8	3	19	2	0	3	126	1729
8:25 AM	1	24	4	0	2	2	31	11	0	0	3	20	4	0	8	4	21	1	0	0	136	1737
8:30 AM	0	19	3	1	3	4	17	9	0	2	6	29	8	0	7	6	27	2	0	3	146	1764
8:35 AM	3	28	8	0	0	2	23	5	0	0	4	16	10	0	3	4	16	1	0	0	123	1766
8:40 AM	3	16	1	0	4	2	17	7	0	1	1	23	10	0	6	5	26	4	0	0	126	1766
8:45 AM	0	35	7	0	0	4	16	8	0	0	8	19	11	0	8	9	18	4	0	0	147	1770
8:50 AM	4	28	8	0	0	3	23	16	0	0	4	23	7	0	6	4	21	4	0	2	153	1762
8:55 AM	5	18	5	0	2	0	18	14	0	0	3	19	7	0	8	7	18	0	0	1	125	1687

Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	
All Vehicles	52	276	100	0	24	28	280	132	0	0	112	384	192	0	84	92	268	36	4	8	2072
Heavy Trucks	8	4	8			4	8	4			4	20	4			8	20	4			96
Pedestrians		0					8					4					16				28
Bicycles	1	0	0			0	1	0			0	7	0			0	6	1			16
Railroad Stopped Buses																					

Comments: N/A

Report generated on 6/26/2013 11:59 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

#6 PM

ITM Peak Hour Summary

Prepared by:

NDS

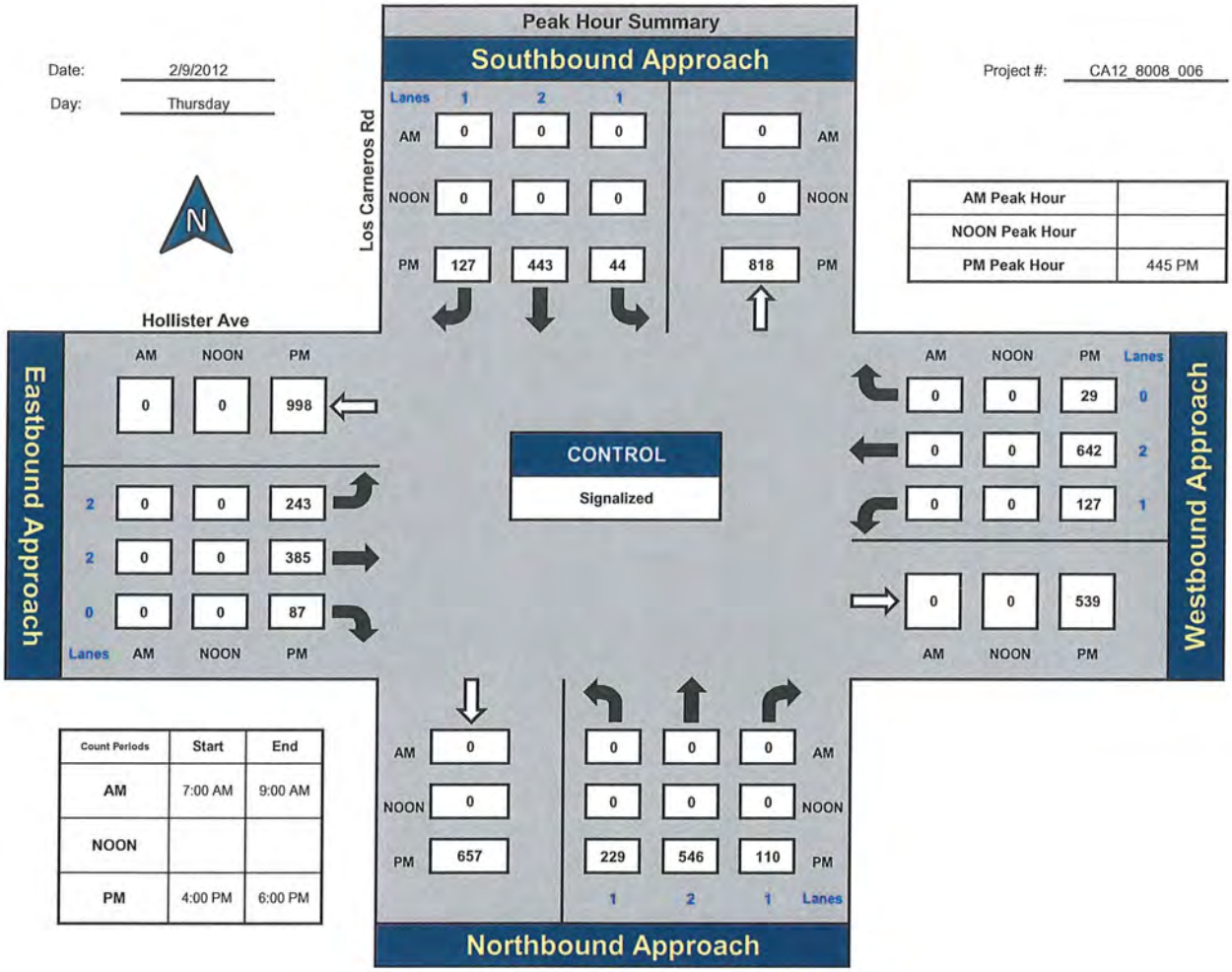
National Data & Surveying Services

Los Carneros Rd and Hollister Ave , City of Goleta

Date: 2/9/2012

Day: Thursday

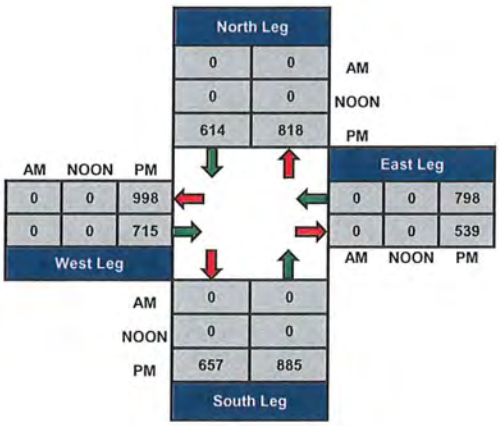
Project #: CA12_8008_006



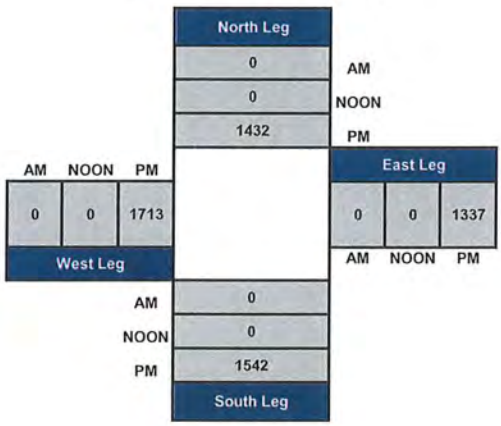
AM Peak Hour	
NOON Peak Hour	
PM Peak Hour	445 PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg

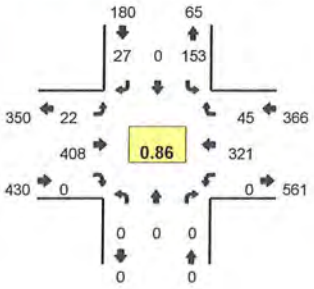


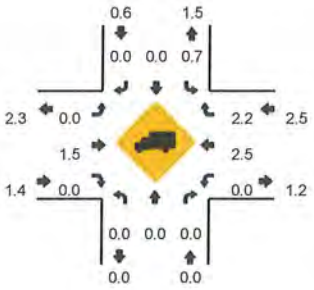
#7AM

Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

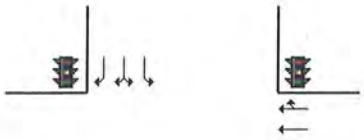
LOCATION: Los Carneros Way -- Hollister Ave | **QC JOB #:** 10938819
CITY/STATE: Goleta, CA | **DATE:** Wed, Apr 03 2013

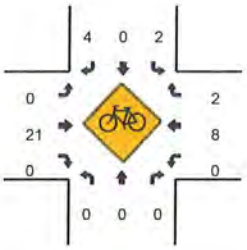
Peak-Hour: 7:40 AM -- 8:40 AM
Peak 15-Min: 7:50 AM -- 8:05 AM

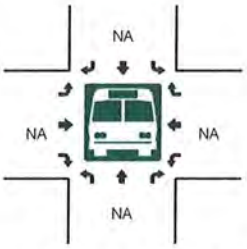




Quality Counts
TRANSPORTATION DATA COLLECTION SERVICES







R* = RTOR

5-Min Count Period Beginning At	Los Carneros Way (Northbound)					Los Carneros Way (Southbound)					Hollister Ave (Eastbound)					Hollister Ave (Westbound)					Total	Hourly Totals
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*		
7:00 AM	0	0	0	0	0	10	0	0	0	1	0	33	0	0	0	0	18	3	0	0	65	
7:05 AM	0	0	0	0	0	4	0	0	0	1	1	21	0	0	0	0	20	3	0	0	50	
7:10 AM	0	0	0	0	0	10	0	1	0	1	1	19	0	0	0	0	18	1	0	2	53	
7:15 AM	0	0	0	0	0	12	0	1	0	0	0	27	0	1	0	0	22	2	0	0	65	
7:20 AM	0	0	0	0	0	16	0	0	0	0	0	22	0	0	0	0	23	3	0	1	65	
7:25 AM	0	0	0	0	0	13	0	0	0	2	1	19	0	0	0	0	23	4	0	0	62	
7:30 AM	0	0	0	0	0	8	0	2	0	2	1	30	0	0	0	0	16	1	0	0	60	
7:35 AM	0	0	0	0	0	12	0	0	0	0	1	25	0	0	0	0	27	5	0	0	70	
7:40 AM	0	0	0	0	0	10	0	1	0	2	0	28	0	0	0	0	28	3	0	1	73	
7:45 AM	0	0	0	0	0	12	0	1	0	2	1	24	0	0	0	0	23	2	0	0	65	
7:50 AM	0	0	0	0	0	10	0	2	0	1	0	50	0	0	0	0	35	4	0	1	103	
7:55 AM	0	0	0	0	0	22	0	0	0	2	3	41	0	1	0	0	24	3	0	2	98	829
8:00 AM	0	0	0	0	0	8	0	2	0	4	4	41	0	0	0	0	21	2	0	0	82	846
8:05 AM	0	0	0	0	0	9	0	1	0	3	2	39	0	0	0	0	32	3	0	0	89	885
8:10 AM	0	0	0	0	0	14	0	1	0	0	1	33	0	1	0	0	32	5	0	0	87	919
8:15 AM	0	0	0	0	0	15	0	0	0	0	2	24	0	0	0	0	27	3	0	1	72	926
8:20 AM	0	0	0	0	0	12	0	1	0	2	1	33	0	0	0	0	23	4	0	1	77	938
8:25 AM	0	0	0	0	0	14	0	0	0	0	3	39	0	0	0	0	24	2	0	0	82	958
8:30 AM	0	0	0	0	0	18	0	0	0	0	0	29	0	0	0	0	22	3	0	1	73	971
8:35 AM	0	0	0	0	0	9	0	0	0	2	3	27	0	0	0	0	30	4	0	0	75	976
8:40 AM	0	0	0	0	0	6	0	0	0	1	0	23	0	0	0	0	24	5	0	0	59	962
8:45 AM	0	0	0	0	0	11	0	1	0	1	0	37	0	0	0	0	23	4	0	0	77	974
8:50 AM	0	0	0	0	0	6	0	0	0	3	2	26	0	0	0	0	35	9	0	1	82	953
8:55 AM	0	0	0	0	0	5	0	0	0	0	0	24	0	0	0	0	26	3	0	0	58	913

Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	
All Vehicles	0	0	0	0	0	160	0	16	0	28	28	528	0	4	0	0	320	36	0	12	1132
Heavy Trucks	0	0	0			0	0	0			0	8	0			0	12	4			24
Pedestrians		0					4					0					0				4
Bicycles	0	0	0			0	0	3			0	6	0			0	4	0			13
Railroad Stopped Buses																					

Comments: N/A

Report generated on 5/16/2013 9:08 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

#7PM

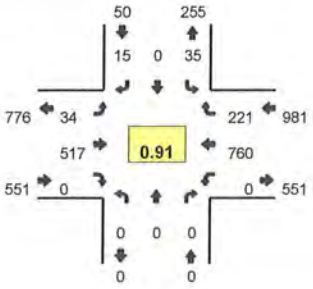
Type of peak hour being reported: Intersection Peak

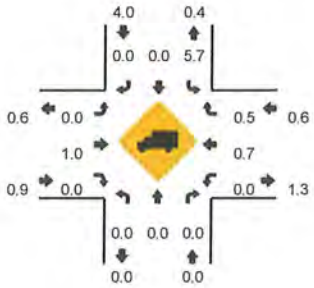
Method for determining peak hour: Total Entering Volume

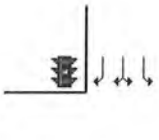
LOCATION: Los Carneros Way -- Hollister Ave
CITY/STATE: Goleta, CA

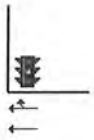
QC JOB #: 10938820
DATE: Wed, Apr 03 2013

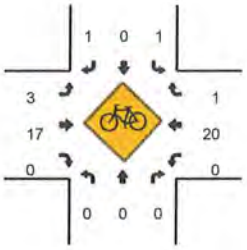
Peak-Hour: 4:35 PM -- 5:35 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

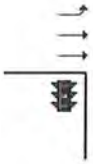


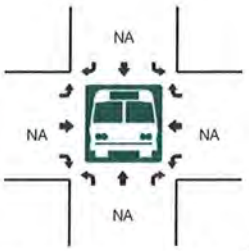












R* = RTOR

5-Min Count Period Beginning At	Los Carneros Way (Northbound)					Los Carneros Way (Southbound)					Hollister Ave (Eastbound)					Hollister Ave (Westbound)					Total	Hourly Totals
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*		
4:00 PM	0	0	0	0	0	5	0	1	0	0	1	28	0	0	0	0	47	8	0	0	90	
4:05 PM	0	0	0	0	0	2	0	0	0	1	3	45	0	0	0	0	56	18	0	0	125	
4:10 PM	0	0	0	0	0	5	0	0	0	2	3	35	0	0	0	0	43	5	0	4	97	
4:15 PM	0	0	0	0	0	3	0	1	0	2	0	35	0	0	0	0	48	12	0	3	104	
4:20 PM	0	0	0	0	0	2	0	0	0	0	2	36	0	0	0	0	45	11	0	1	97	
4:25 PM	0	0	0	0	0	2	0	0	0	0	2	30	0	0	0	0	35	12	0	2	83	
4:30 PM	0	0	0	0	0	5	0	0	0	1	2	51	0	0	0	0	38	16	0	1	114	
4:35 PM	0	0	0	0	0	3	0	1	0	1	3	38	0	0	0	0	71	22	0	3	142	
4:40 PM	0	0	0	0	0	3	0	1	0	3	1	46	0	0	0	0	61	17	0	2	134	
4:45 PM	0	0	0	0	0	2	0	0	0	0	2	52	0	0	0	0	59	12	0	1	128	
4:50 PM	0	0	0	0	0	0	0	0	0	2	2	29	0	0	0	0	64	13	0	0	110	
4:55 PM	0	0	0	0	0	2	0	0	0	1	1	31	0	0	0	0	68	18	0	1	122	1346
5:00 PM	0	0	0	0	0	5	0	0	0	0	5	42	0	0	0	0	66	20	0	1	139	1395
5:05 PM	0	0	0	0	0	4	0	0	0	0	3	66	0	0	0	0	67	17	0	4	161	1431
5:10 PM	0	0	0	0	0	3	0	0	0	1	2	37	0	1	0	0	73	14	0	3	134	1468
5:15 PM	0	0	0	0	0	6	0	2	0	0	1	45	0	0	0	0	65	7	0	2	128	1492
5:20 PM	0	0	0	0	0	3	0	0	0	1	2	52	0	0	0	0	55	22	0	2	137	1532
5:25 PM	0	0	0	0	0	1	0	0	0	1	4	44	0	0	0	0	52	13	0	2	117	1566
5:30 PM	0	0	0	0	0	2	0	0	1	1	7	35	0	0	0	0	59	24	0	1	130	1582
5:35 PM	0	0	0	0	0	3	0	0	0	4	3	50	0	0	0	0	32	7	0	2	101	1541
5:40 PM	0	0	0	0	0	3	0	0	0	1	2	37	0	0	0	0	49	12	0	3	107	1514
5:45 PM	0	0	0	0	0	2	0	0	0	0	3	47	0	0	0	0	44	12	0	2	110	1496
5:50 PM	0	0	0	0	0	1	0	0	0	3	1	23	0	0	0	0	50	14	0	0	92	1478
5:55 PM	0	0	0	0	0	5	0	1	0	0	1	37	0	0	0	0	48	6	0	3	101	1457

Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	
All Vehicles	0	0	0	0	0	48	0	0	0	4	40	580	0	4	0	0	824	204	0	32	1736
Heavy Trucks	0	0	0			0	0	0			0	0	0			0	4	4			8
Pedestrians		4					12					4					0				20
Bicycles	0	0	0			0	0	0			2	4	0			0	2	0			8
Railroad Stopped Buses																					

Comments: N/A

Report generated on 5/16/2013 9:08 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

ITM Peak Hour Summary

Prepared by:

NDS

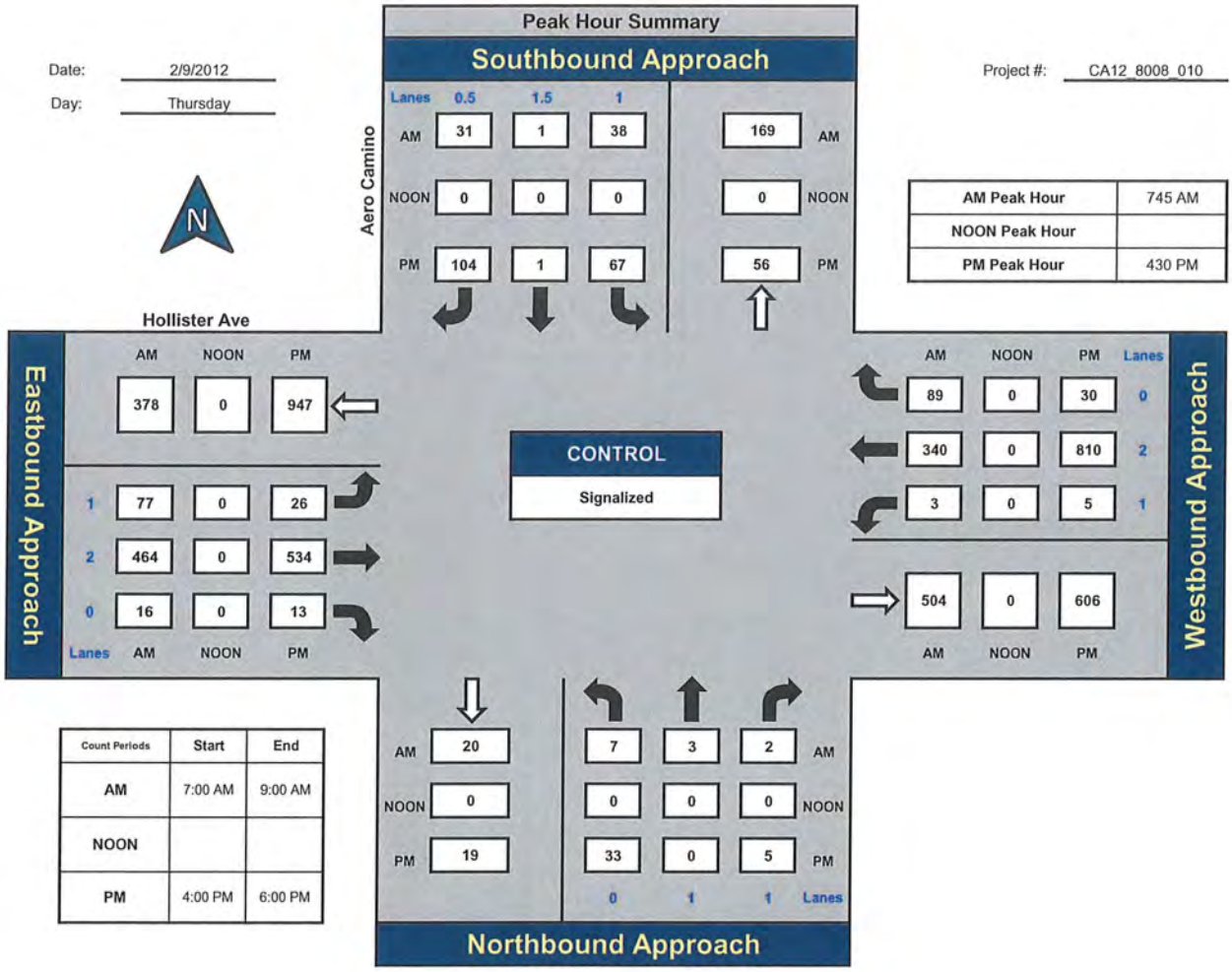
National Data & Surveying Services

Aero Camino and Hollister Ave , City of Goleta

Date: 2/9/2012

Day: Thursday

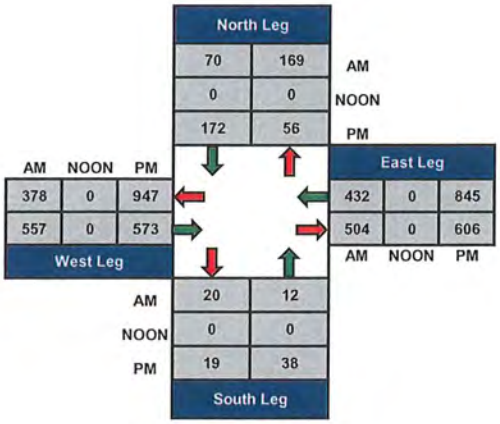
Project #: CA12_8008_010



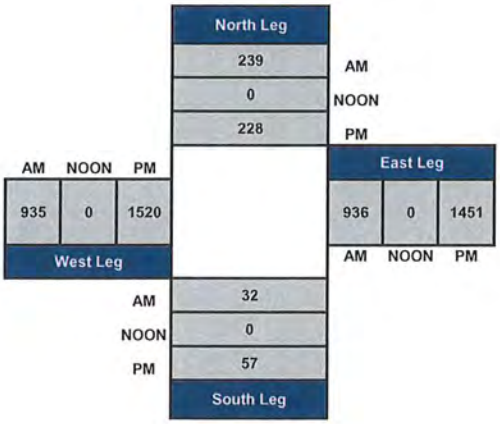
AM Peak Hour	745 AM
NOON Peak Hour	
PM Peak Hour	430 PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



#8_RTOR

ITM Peak Hour Summary

Prepared by:

NDS

National Data & Surveying Services

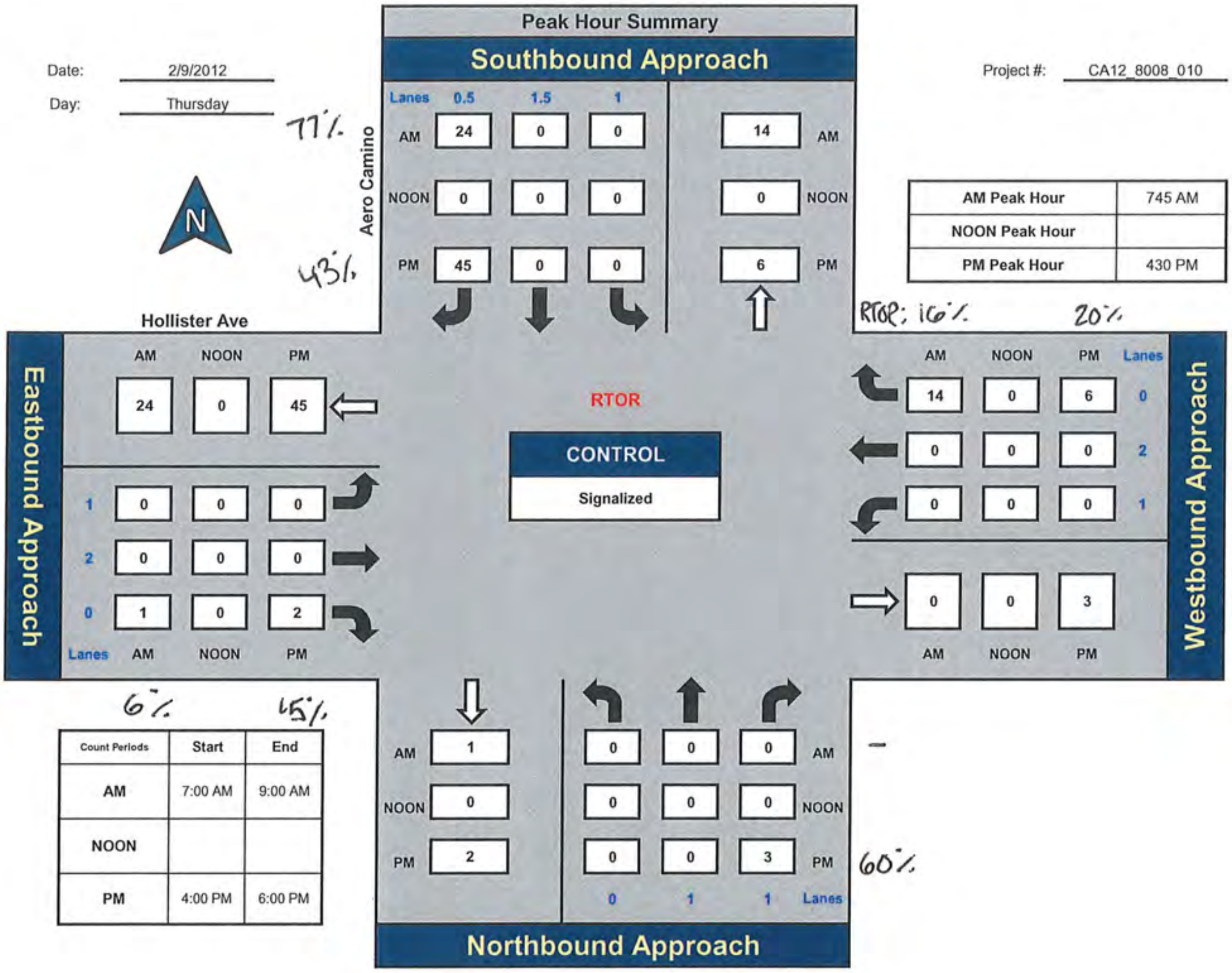
Aero Camino and Hollister Ave , City of Goleta

Date: 2/9/2012

Day: Thursday

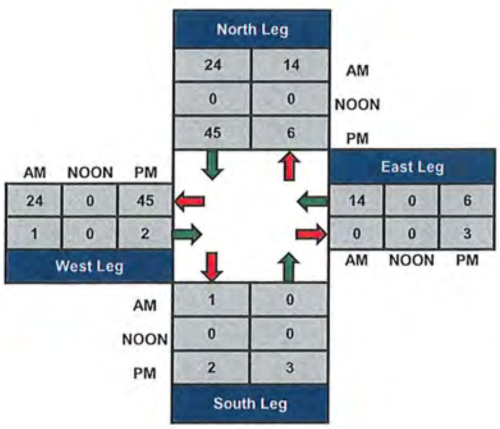
Project #: CA12_8008_010

AM Peak Hour	745 AM
NOON Peak Hour	
PM Peak Hour	430 PM

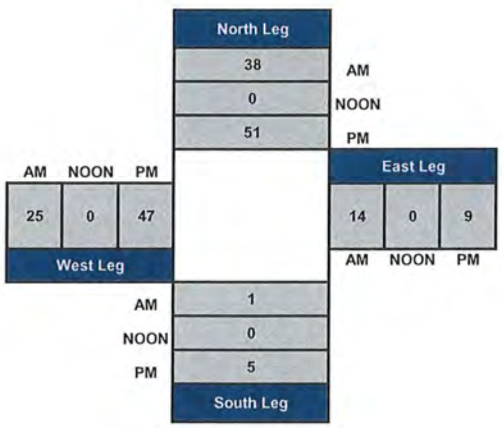


Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



INTERSECTION LEVEL OF SERVICE CALCULATION WORKSHEETS

Reference 1 Los Carneros Road/Calle Real
Reference 2 U.S. 101 NB Ramps/Los Carneros Road
Reference 3 U.S. 101 SB Ramps/Los Carneros Road
Reference 4 Los Carneros Road/Calle Koral
Reference 5 Calle Koral/Los Carneros Way
Reference 6 Hollister Avenue/Los Carneros Road
Reference 7 Hollister Avenue/Los Carneros Way
Reference 8 Hollister Avenue/Aero Camino

ROUNDABOUT REPORT

General Information		Site Information	
Analyst	MMF	Intersection	01_EX_AM
Agency or Co.	ATE	E/W Street Name	CALLE REAL
Date Performed	04/04/2013	N/S Street Name	
Time Period	AM PEAK	Analysis Year	EXISTING
Peak Hour Factor	1.00	Project ID	#12089.01 HERITAGE RIDGE PROJECT

Project Description:

Volume Adjustment and Site Characteristics

	EB				WB				NB				SB			
	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	U
Number of Lanes (N)	0	0	0		0	0	0		0	1	0		0	1	0	
Lane Assignment							LR				TR				LT	
Right-Turn Bypass	None				None				None				None			
Conflicting Lanes	1				1				1				1			
Volume (V), veh/h	0	0	0	0	241	0	14	0	0	118	162	0	20	197	0	0
Heavy Veh. Adj. (f_{HV}), %	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Pedestrians Crossing	0				0				0				0			

Critical and Follow-Up Headway Adjustment

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway (sec)	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929
Follow-Up Headway (sec)	3.1858	3.1858		3.1858	3.1858		3.1858	3.1858		3.1858	3.1858	

Flow Computations

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Circulating Flow (V_c), pc/h	477			123			21			251		
Exiting Flow (V_{ex}), pc/h	189			0			137			456		
Entry Flow (V_e), pc/h		217			265			291			226	
Entry Volume veh/h					255			280			217	

Capacity and v/c Ratios

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Capacity (c_{PCE}), pc/h		0			1000			1107			879	
Capacity (c), veh/h		0			961			1064			846	
v/c Ratio (X)					0.27			0.26			0.26	

Delay and Level of Service

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh					6.4			5.9			7.0	
Lane LOS		F			A			A			A	
Lane 95% Queue					1.1			1.1			1.0	
Approach Delay, s/veh				6.42			5.90			7.00		
Approach LOS, s/veh				A			A			A		
Intersection Delay, s/veh	6.39											
Intersection LOS	A											

ROUNDABOUT REPORT

General Information		Site Information	
Analyst	*MMF*	Intersection	*01_EX+PR_AM*
Agency or Co.	*ATE*	E/W Street Name	*CALLE REAL*
Date Performed	*04/04/2013*	N/S Street Name	
Time Period	*AM PEAK*	Analysis Year	*EXISTING+PROJECT*
Peak Hour Factor	*1.00*	Project ID	*#12089.01 HERITAGE RIDGE PROJECT*

Project Description:

Volume Adjustment and Site Characteristics

	EB				WB				NB				SB			
	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	U
Number of Lanes (N)	*0*	*0*	*0*		*0*	*0*	*0*		*0*	*1*	*0*		*0*	*1*	*0*	
Lane Assignment							*LR*				*TR*				*LT*	
Right-Turn Bypass	*None*				None				None				None			
Conflicting Lanes	*1*				1				1				1			
Volume (V), veh/h	*0*	*0*	*0*	*0*	*243*	*0*	*14*	*0*	*0*	*125*	*169*	*0*	*20*	*199*	*0*	*0*
Heavy Veh. Adj. (f_{HV}), %	*4*	*4*	*4*	*4*	*4*	*4*	*4*	*4*	*4*	*4*	*4*	*4*	*4*	*4*	*4*	*4*
Pedestrians Crossing	*0*				0				0				0			

Critical and Follow-Up Headway Adjustment

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway (sec)	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*
Follow-Up Headway (sec)	*3.1858*	*3.1858*		*3.1858*	*3.1858*		*3.1858*	*3.1858*		*3.1858*	*3.1858*	

Flow Computations

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Circulating Flow (V_c), pc/h	*481*			*130*			*21*			*253*		
Exiting Flow (V_{ex}), pc/h	*197*			*0*			*145*			*460*		
Entry Flow (V_e), pc/h		*219*			*267*			*306*			*228*	
Entry Volume veh/h					*257*			*294*			*219*	

Capacity and v/c Ratios

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Capacity (c_{PCE}), pc/h		*0*			*992*			*1107*			*878*	
Capacity (c), veh/h		*0*			*954*			*1064*			*844*	
v/c Ratio (X)					*0.27*			*0.28*			*0.26*	

Delay and Level of Service

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh					*6.5*			*6.1*			*7.1*	
Lane LOS		*F*			*A*			*A*			*A*	
Lane 95% Queue					*1.1*			*1.1*			*1.0*	
Approach Delay, s/veh				*6.50*			*6.05*			*7.05*		
Approach LOS, s/veh				*A*			*A*			*A*		
Intersection Delay, s/veh	*6.49*											
Intersection LOS	*A*											

ROUNDABOUT REPORT

General Information		Site Information	
Analyst	*MMF*	Intersection	*01_EX_PM*
Agency or Co.	*ATE*	E/W Street Name	*CALLE REAL*
Date Performed	*04/04/2013*	N/S Street Name	
Time Period	*PM PEAK*	Analysis Year	*EXISTING*
Peak Hour Factor	*1.00*	Project ID	*#12089.01 HERITAGE RIDGE PROJECT*

Project Description:

Volume Adjustment and Site Characteristics

	EB				WB				NB				SB			
	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	U
Number of Lanes (N)	*0*	*0*	*0*		*0*	*0*	*0*		*0*	*1*	*0*		*0*	*1*	*0*	
Lane Assignment							*LR*				*TR*				*LT*	
Right-Turn Bypass	*None*				None				None				None			
Conflicting Lanes	*1*				1				1				1			
Volume (V), veh/h	*0*	*0*	*0*	*0*	*319*	*0*	*24*	*0*	*0*	*209*	*396*	*0*	*12*	*86*	*0*	*0*
Heavy Veh. Adj. (f_{HV}), %	*4*	*4*	*4*	*4*	*4*	*4*	*4*	*4*	*4*	*4*	*4*	*4*	*4*	*4*	*4*	*4*
Pedestrians Crossing	*0*				0				0				0			

Critical and Follow-Up Headway Adjustment

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway (sec)	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*
Follow-Up Headway (sec)	*3.1858*	*3.1858*		*3.1858*	*3.1858*		*3.1858*	*3.1858*		*3.1858*	*3.1858*	

Flow Computations

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Circulating Flow (V_c), pc/h	*433*			*217*			*12*			*332*		
Exiting Flow (V_{ex}), pc/h	*424*			*0*			*242*			*421*		
Entry Flow (V_e), pc/h		*98*			*357*			*629*			*102*	
Entry Volume veh/h					*343*			*605*			*98*	

Capacity and v/c Ratios

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Capacity (c_{PCE}), pc/h		*0*			*909*			*1116*			*811*	
Capacity (c), veh/h		*0*			*874*			*1073*			*780*	
v/c Ratio (X)					*0.39*			*0.56*			*0.13*	

Delay and Level of Service

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh					*8.7*			*10.4*			*5.9*	
Lane LOS		*F*			*A*			*B*			*A*	
Lane 95% Queue					*1.9*			*3.6*			*0.4*	
Approach Delay, s/veh				*8.72*			*10.42*			*5.91*		
Approach LOS, s/veh				*A*			*B*			*A*		
Intersection Delay, s/veh	*9.44*											
Intersection LOS	*A*											

ROUNDABOUT REPORT

General Information		Site Information	
Analyst	MMF	Intersection	01_EX+PR_PM
Agency or Co.	ATE	E/W Street Name	CALLE REAL
Date Performed	04/04/2013	N/S Street Name	
Time Period	PM PEAK	Analysis Year	EXISTING+PROJECT
Peak Hour Factor	1.00	Project ID	#12089.01 HERITAGE RIDGE PROJECT

Project Description:

Volume Adjustment and Site Characteristics

	EB				WB				NB				SB			
	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	U
Number of Lanes (N)	0	0	0		0	0	0		0	1	0		0	1	0	
Lane Assignment							LR				TR				LT	
Right-Turn Bypass	None				None				None				None			
Conflicting Lanes	1				1				1				1			
Volume (V), veh/h	0	0	0	0	325	0	24	0	0	212	399	0	12	92	0	0
Heavy Veh. Adj. (f_{HV}), %	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Pedestrians Crossing	0				0				0				0			

Critical and Follow-Up Headway Adjustment

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway (sec)	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929
Follow-Up Headway (sec)	3.1858	3.1858		3.1858	3.1858		3.1858	3.1858		3.1858	3.1858	

Flow Computations

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Circulating Flow (V_c), pc/h	446			220			12			338		
Exiting Flow (V_{ex}), pc/h	427			0			245			434		
Entry Flow (V_e), pc/h		104			363			635			108	
Entry Volume veh/h					349			611			104	

Capacity and v/c Ratios

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Capacity (c_{PCE}), pc/h		0			906			1116			806	
Capacity (c), veh/h		0			872			1073			775	
v/c Ratio (X)					0.40			0.57			0.13	

Delay and Level of Service

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh					8.9			10.5			6.0	
Lane LOS		F			A			B			A	
Lane 95% Queue					1.9			3.7			0.5	
Approach Delay, s/veh				8.86			10.53			6.03		
Approach LOS, s/veh				A			B			A		
Intersection Delay, s/veh	9.54											
Intersection LOS	A											

ROUNDABOUT REPORT

General Information		Site Information	
Analyst	*MMF*	Intersection	*01_CU_AM*
Agency or Co.	*ATE*	E/W Street Name	*CALLE REAL*
Date Performed	*04/04/2013*	N/S Street Name	*LOS CARNEROS*
Time Period	*AM PEAK*	Analysis Year	*CUMULATIVE*
Peak Hour Factor	*1.00*	Project ID	*#12089.01 HERITAGE RIDGE PROJECT*

Project Description:

Volume Adjustment and Site Characteristics

	EB				WB				NB				SB			
	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	U
Number of Lanes (N)	*0*	*0*	*0*		*0*	*0*	*0*		*0*	*1*	*0*		*0*	*1*	*0*	
Lane Assignment							*LR*				*TR*				*LT*	
Right-Turn Bypass	*None*				None				None				None			
Conflicting Lanes	*1*				1				1				1			
Volume (V), veh/h	*0*	*0*	*0*	*0*	*274*	*0*	*14*	*0*	*0*	*143*	*217*	*0*	*25*	*245*	*0*	*0*
Heavy Veh. Adj. (f_{HV}), %	*4*	*4*	*4*	*4*	*4*	*4*	*4*	*4*	*4*	*4*	*4*	*4*	*4*	*4*	*4*	*4*
Pedestrians Crossing	*0*				0				0				0			

Critical and Follow-Up Headway Adjustment

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway (sec)	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*
Follow-Up Headway (sec)	*3.1858*	*3.1858*		*3.1858*	*3.1858*		*3.1858*	*3.1858*		*3.1858*	*3.1858*	

Flow Computations

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Circulating Flow (V_c), pc/h	*566*			*149*			*26*			*285*		
Exiting Flow (V_{ex}), pc/h	*252*			*0*			*163*			*540*		
Entry Flow (V_e), pc/h		*270*			*300*			*374*			*281*	
Entry Volume veh/h					*288*			*360*			*270*	

Capacity and v/c Ratios

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Capacity (c_{PCE}), pc/h		*0*			*974*			*1101*			*850*	
Capacity (*c*), veh/h		*0*			*936*			*1059*			*817*	
v/c Ratio (X)					*0.31*			*0.34*			*0.33*	

Delay and Level of Service

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh					*7.1*			*6.8*			*8.2*	
Lane LOS		*F*			*A*			*A*			*A*	
Lane 95% Queue					*1.3*			*1.5*			*1.5*	
Approach Delay, s/veh				*7.09*			*6.84*			*8.22*		
Approach LOS, s/veh				*A*			*A*			*A*		
Intersection Delay, s/veh	*7.32*											
Intersection LOS	*A*											

ROUNDABOUT REPORT

General Information		Site Information	
Analyst	*MMF*	Intersection	*01_CU+PR_AM*
Agency or Co.	*ATE*	E/W Street Name	*CALLE REAL*
Date Performed	*04/04/2013*	N/S Street Name	
Time Period	*AM PEAK*	Analysis Year	*CUMULATIVE+PROJECT*
Peak Hour Factor	*1.00*	Project ID	*#12089.01 HERITAGE RIDGE PROJECT*

Project Description:

Volume Adjustment and Site Characteristics

	EB				WB				NB				SB			
	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	U
Number of Lanes (N)	*0*	*0*	*0*		*0*	*0*	*0*		*0*	*1*	*0*		*0*	*1*	*0*	
Lane Assignment							*LR*				*TR*				*LT*	
Right-Turn Bypass	*None*				None				None				None			
Conflicting Lanes	*1*				1				1				1			
Volume (V), veh/h	*0*	*0*	*0*	*0*	*276*	*0*	*14*	*0*	*0*	*152*	*228*	*0*	*25*	*247*	*0*	*0*
Heavy Veh. Adj. (f_{HV}), %	*4*	*4*	*4*	*4*	*4*	*4*	*4*	*4*	*4*	*4*	*4*	*4*	*4*	*4*	*4*	*4*
Pedestrians Crossing	*0*				0				0				0			

Critical and Follow-Up Headway Adjustment

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway (sec)	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*
Follow-Up Headway (sec)	*3.1858*	*3.1858*		*3.1858*	*3.1858*		*3.1858*	*3.1858*		*3.1858*	*3.1858*	

Flow Computations

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Circulating Flow (V_c), pc/h	*570*			*158*			*26*			*287*		
Exiting Flow (V_{ex}), pc/h	*263*			*0*			*173*			*544*		
Entry Flow (V_e), pc/h		*272*			*302*			*395*			*283*	
Entry Volume veh/h					*290*			*380*			*272*	

Capacity and v/c Ratios

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Capacity (c_{PCE}), pc/h		*0*			*965*			*1101*			*848*	
Capacity (*c*), veh/h		*0*			*928*			*1059*			*815*	
v/c Ratio (X)					*0.31*			*0.36*			*0.33*	

Delay and Level of Service

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh					*7.2*			*7.1*			*8.3*	
Lane LOS		*F*			*A*			*A*			*A*	
Lane 95% Queue					*1.3*			*1.6*			*1.5*	
Approach Delay, s/veh				*7.20*			*7.08*			*8.28*		
Approach LOS, s/veh				*A*			*A*			*A*		
Intersection Delay, s/veh	*7.47*											
Intersection LOS	*A*											

ROUNDABOUT REPORT

General Information		Site Information	
Analyst	*MMF*	Intersection	*01_CU_PM*
Agency or Co.	*ATE*	E/W Street Name	*CALLE REAL*
Date Performed	*04/04/2013*	N/S Street Name	*LOS CARNEROS*
Time Period	*PM PEAK*	Analysis Year	*CUMULATIVE*
Peak Hour Factor	*1.00*	Project ID	*#12089.01 HERITAGE RIDGE PROJECT*

Project Description:

Volume Adjustment and Site Characteristics

	EB				WB				NB				SB			
	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	U
Number of Lanes (N)	*0*	*0*	*0*		*0*	*0*	*0*		*0*	*1*	*0*		*0*	*1*	*0*	
Lane Assignment							*LR*				*TR*				*LT*	
Right-Turn Bypass	*None*				None				None				None			
Conflicting Lanes	*1*				1				1				1			
Volume (V), veh/h	*0*	*0*	*0*	*0*	*424*	*0*	*27*	*0*	*0*	*260*	*435*	*0*	*13*	*140*	*0*	*0*
Heavy Veh. Adj. (f_{HV}), %	*4*	*4*	*4*	*4*	*4*	*4*	*4*	*4*	*4*	*4*	*4*	*4*	*4*	*4*	*4*	*4*
Pedestrians Crossing	*0*				0				0				0			

Critical and Follow-Up Headway Adjustment

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway (sec)	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*
Follow-Up Headway (sec)	*3.1858*	*3.1858*		*3.1858*	*3.1858*		*3.1858*	*3.1858*		*3.1858*	*3.1858*	

Flow Computations

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Circulating Flow (V_c), pc/h	*601*			*270*			*14*			*441*		
Exiting Flow (V_{ex}), pc/h	*466*			*0*			*298*			*587*		
Entry Flow (V_e), pc/h		*144*			*469*			*723*			*159*	
Entry Volume veh/h					*451*			*695*			*153*	

Capacity and v/c Ratios

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Capacity (c_{PCE}), pc/h		*0*			*862*			*1115*			*727*	
Capacity (c), veh/h		*0*			*829*			*1072*			*699*	
v/c Ratio (X)					*0.54*			*0.65*			*0.22*	

Delay and Level of Service

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh					*12.1*			*12.6*			*7.7*	
Lane LOS		*F*			*B*			*B*			*A*	
Lane 95% Queue					*3.3*			*5.0*			*0.8*	
Approach Delay, s/veh				*12.12*			*12.57*			*7.68*		
Approach LOS, s/veh				*B*			*B*			*A*		
Intersection Delay, s/veh	*11.84*											
Intersection LOS	*B*											

ROUNDABOUT REPORT

General Information		Site Information	
Analyst	MMF	Intersection	01_CU+PR_PM
Agency or Co.	ATE	E/W Street Name	CALLE REAL
Date Performed	04/04/2013	N/S Street Name	LOS CARNEROS
Time Period	PM PEAK	Analysis Year	CUMULATIVE+PROJECT
Peak Hour Factor	1.00	Project ID	#12089.01 HERITAGE RIDGE PROJECT

Project Description:

Volume Adjustment and Site Characteristics

	EB				WB				NB				SB			
	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	U
Number of Lanes (N)	0	0	0		0	0	0		0	1	0		0	1	0	
Lane Assignment							LR				TR				LT	
Right-Turn Bypass	None				None				None				None			
Conflicting Lanes	1				1				1				1			
Volume (V), veh/h	0	0	0	0	430	0	27	0	0	263	442	0	13	146	0	0
Heavy Veh. Adj. (f_{HV}), %	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Pedestrians Crossing	0				0				0				0			

Critical and Follow-Up Headway Adjustment

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway (sec)	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929
Follow-Up Headway (sec)	3.1858	3.1858		3.1858	3.1858		3.1858	3.1858		3.1858	3.1858	

Flow Computations

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Circulating Flow (V_c), pc/h	613			274			14			447		
Exiting Flow (V_{ex}), pc/h	473			0			302			599		
Entry Flow (V_e), pc/h		153			475			733			165	
Entry Volume veh/h					457			705			159	

Capacity and v/c Ratios

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Capacity (c_{PCE}), pc/h		0			860			1115			723	
Capacity (c), veh/h		0			827			1072			695	
v/c Ratio (X)					0.55			0.66			0.23	

Delay and Level of Service

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh					12.3			12.8			7.8	
Lane LOS		F			B			B			A	
Lane 95% Queue					3.4			5.2			0.9	
Approach Delay, s/veh				12.35			12.84			7.85		
Approach LOS, s/veh				B			B			A		
Intersection Delay, s/veh	12.07											
Intersection LOS	B											

#12089.01 HERITAGE RIDGE PROJECT **REF:** 02 AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: *05/22/2013*

TIME PERIOD: *A.M. PEAK HOUR*

N/S STREET: *LOS CARNEROS ROAD*

E/W STREET: *U.S. 101 NB RAMPS*

CONTROL TYPE: *SIGNAL*

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	21	276	0	0	423	110	0	0	0	805	2	53
(B) PROJECT-ADDED:	7	14	0	0	4	0	0	0	0	13	0	0
(C) CUMULATIVE:	34	313	0	0	412	107	0	0	0	1233	2	53

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	L TT	T TR		L LTR

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)
SCENARIO 2 = EXISTING + PROJECT VOLUMES (A+B)
SCENARIO 3 = CUMULATIVE (C)
SCENARIO 4 = CUMULATIVE + PROJECT VOLUMES (B+C)

LEVEL OF SERVICE CALCULATIONS

MOVEMENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4
NBL	1	1600	21	28	34	41	0.013 *	0.018 *	0.021 *	0.026 *
NBT	2	3200	276	290	313	327	0.086	0.091	0.098	0.102
NBR *(a)*	0	0	0	0	0	0	-	-	-	-
SBL	0	0	0	0	0	0	-	-	-	-
SBT	2	3200	423	427	412	416	0.165 *	0.167 *	0.161 *	0.162 *
SBR *(b)*	0	0	106	106	103	103	-	-	-	-
EBL	0	0	0	0	0	0	-	-	-	-
EBT	0	0	0	0	0	0	-	-	-	-
EBR *(c)*	0	0	0	0	0	0	-	-	-	-
WBL	0	0	805	818	1233	1246	-	-	-	-
WBT	2	3200	2	2	2	2	0.265 *	0.269 *	0.398 *	0.403 *
WBR *(d)*	0	0	40	40	40	40	-	-	-	-
			LOST TIME:				0.100 *	0.100 *	0.100 *	0.100 *
			TOTAL INTERSECTION CAPACITY UTILIZATION:				**0.543**	**0.554**	**0.680**	**0.691**
			SCENARIO LEVEL OF SERVICE:				**A**	**A**	**B**	**B**

NOTES:

RTOR: *(a) 0%*
(b) 4%
(c) 0%
(d) 25%

Printed: 10/12/15

#12089.01 HERITAGE RIDGE PROJECT REF: 02 PM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***02/09/2012***

TIME PERIOD: ***P.M. PEAK HOUR***

N/S STREET: ***LOS CARNEROS ROAD***

E/W STREET: ***U.S. 101 NB RAMPS***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	T	R	SOUTH BOUND L	T	R	EAST BOUND L	T	R	WEST BOUND L	T	R
(A) EXISTING:	236	618	0	0	250	107	0	0	0	436	7	24
(B) PROJECT-ADDED:	3	6	0	0	12	0	0	0	0	49	0	0
(C) CUMULATIVE:	236	667	0	0	436	128	0	0	0	493	11	33

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	L TT	T TR		L LTR

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)
SCENARIO 2 = EXISTING + PROJECT VOLUMES (A+B)
SCENARIO 3 = CUMULATIVE (C)
SCENARIO 4 = CUMULATIVE + PROJECT VOLUMES (B+C)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4
NBL	1	1600	236	239	236	239	0.148 *	0.149 *	0.148 *	0.149 *
NBT	2	3200	618	624	667	673	0.193	0.195	0.208	0.210
NBR *(a)*	0	0	0	0	0	0	-	-	-	-
SBL	0	0	0	0	0	0	-	-	-	-
SBT	2	3200	250	262	436	448	0.100 *	0.104 *	0.163 *	0.166 *
SBR *(b)*	0	0	71	71	84	84	-	-	-	-
EBL	0	0	0	0	0	0	-	-	-	-
EBT	0	0	0	0	0	0	-	-	-	-
EBR *(c)*	0	0	0	0	0	0	-	-	-	-
WBL	0	0	436	485	493	542	-	-	-	-
WBT	2	3200	7	7	11	11	0.141 *	0.157 *	0.161 *	0.177 *
WBR *(d)*	0	0	9	9	12	12	-	-	-	-
					LOST TIME:		0.100 *	0.100 *	0.100 *	0.100 *
					TOTAL INTERSECTION CAPACITY UTILIZATION:		**0.489**	**0.510**	**0.572**	**0.592**
					SCENARIO LEVEL OF SERVICE:		A	A	A	A

NOTES:

RTOR: *(a)*
(b) 34%
(c)
(d) 63%

Printed: 10/12/15

#12089.01 HERITAGE RIDGE PROJECT REF: 03AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: *05/22/2013*

TIME PERIOD: *A.M. PEAK HOUR*

N/S STREET: *LOS CARNEROS ROAD* *ASSUMES COMPLETION OF LOS CARNEROS BRIDGE PROJECT*

E/W STREET: *U.S. 101 SB RAMPS*

CONTROL TYPE: *SIGNAL*

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	T	R	SOUTH BOUND L	T	R	EAST BOUND L	T	R	WEST BOUND L	T	R
(A) EXISTING:	0	160	357	72	1168	0	134	2	216	0	0	0
(B) PROJECT-ADDED:	0	21	56	0	17	0	0	0	2	0	0	0
(C) CUMULATIVE:	0	213	475	83	1562	0	134	2	245	0	0	0

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	TT R	L TT	LT R	

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)
SCENARIO 2 = EXISTING + PROJECT VOLUMES (A+B)
SCENARIO 3 = CUMULATIVE (C)
SCENARIO 4 = CUMULATIVE + PROJECT VOLUMES (B+C)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4
NBL	0	0	0	0	0	0	-	-	-	-
NBT	2	3200	160	181	213	234	0.050	0.057	0.067	0.073
NBR *(a)*	1	1600	286	330	380	425	0.179	0.206	0.238	0.266
SBL	1	1600	72	72	83	83	0.045	0.045	0.052	0.052
SBT	2	3200	1168	1185	1562	1579	0.365 *	0.370 *	0.488 *	0.493 *
SBR *(b)*	0	0	0	0	0	0	-	-	-	-
EBL	0	0	134	134	134	134	-	-	-	-
EBT	1	1600	2	2	2	2	0.085 *	0.085 *	0.085 *	0.085 *
EBR *(c)*	1	1600	50	50	56	57	0.031	0.031	0.035	0.036
WBL	0	0	0	0	0	0	-	-	-	-
WBT	0	0	0	0	0	0	-	-	-	-
WBR *(d)*	0	0	0	0	0	0	-	-	-	-
			LOST TIME:				0.100 *	0.100 *	0.100 *	0.100 *
			TOTAL INTERSECTION CAPACITY UTILIZATION:				**0.550**	**0.555**	**0.673**	**0.678**
			SCENARIO LEVEL OF SERVICE:				**A**	**A**	**B**	**B**

NOTES:

RTOR: *(a) 20%*
(b)
(c) 77%
(d)

Printed: 10/12/15

#12089.01 HERITAGE RIDGE PROJECT **REF:** 03PM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***02/09/2012***

TIME PERIOD: ***P.M. PEAK HOUR***

N/S STREET: ***LOS CARNEROS ROAD*** ***ASSUMES COMPLETION OF LOS CARNEROS BRIDGE PROJECT***

E/W STREET: ***U.S. 101 SB RAMPS***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

	NORTH BOUND			SOUTH BOUND			EAST BOUND			WEST BOUND		
VOLUMES	L	T	R	L	T	R	L	T	R	L	T	R
(A) EXISTING:	0	773	960	43	601	0	97	1	46	0	0	0
(B) PROJECT-ADDED:	0	9	24	0	61	0	0	0	6	0	0	0
(C) CUMULATIVE:	0	790	1157	48	881	0	113	1	75	0	0	0

GEOMETRICS

	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
LANE GEOMETRICS	TT R	L TT	LT R	

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)
SCENARIO 2 = EXISTING + PROJECT VOLUMES (A+B)
SCENARIO 3 = CUMULATIVE (C)
SCENARIO 4 = CUMULATIVE + PROJECT VOLUMES (B+C)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4
NBL	0	0	0	0	0	0	-	-	-	-
NBT	2	3200	773	782	790	799	0.242	0.244	0.247	0.250
NBR *(a)*	1	1600	845	866	1018	1039	0.528 *	0.541 *	0.636 *	0.649 *
SBL	1	1600	43	43	48	48	0.027 *	0.027 *	0.030 *	0.030 *
SBT	2	3200	601	662	881	942	0.188	0.207	0.275	0.294
SBR *(b)*	0	0	0	0	0	0	-	-	-	-
EBL	0	0	97	97	113	113	-	-	-	-
EBT	1	1600	1	1	1	1	0.061 *	0.061 *	0.071 *	0.071 *
EBR *(c)*	1	1600	9	10	15	16	0.006	0.006	0.009	0.010
WBL	0	0	0	0	0	0	-	-	-	-
WBT	0	0	0	0	0	0	-	-	-	-
WBR *(d)*	0	0	0	0	0	0	-	-	-	-
			LOST TIME:				0.100 *	0.100 *	0.100 *	0.100 *
			TOTAL INTERSECTION CAPACITY UTILIZATION:				**0.716**	**0.729**	**0.837**	**0.850**
			SCENARIO LEVEL OF SERVICE:				C	C	D	D

NOTES:

RTOR: *(a) 12%*
(b)
(c) 80%
(d)

Printed: 10/12/15

#12089.01 HERITAGE RIDGE PROJECT REF: 03PM_MIT

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: *02/09/2012*

TIME PERIOD: *P.M. PEAK HOUR*

N/S STREET: *LOS CARNEROS ROAD* *ASSUMES FREE NB RIGHT-TURN LANE*

E/W STREET: *U.S. 101 SB RAMPS*

CONTROL TYPE: *SIGNAL*

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	T	R	SOUTH BOUND L	T	R	EAST BOUND L	T	R	WEST BOUND L	T	R
(A) EXISTING:	0	773	960	43	601	0	97	1	46	0	0	0
(B) PROJECT-ADDED:	0	9	24	0	61	0	0	0	6	0	0	0
(C) CUMULATIVE:	0	790	1157	48	881	0	113	1	75	0	0	0

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	TT R	L TT	LT R	

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)
SCENARIO 2 = EXISTING + PROJECT VOLUMES (A+B)
SCENARIO 3 = CUMULATIVE (C)
SCENARIO 4 = CUMULATIVE + PROJECT VOLUMES (B+C)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4
NBL	0	0	0	0	0	0	-	-	-	-
NBT	2	3200	773	782	790	799	0.242 *	0.244 *	0.247 *	0.250 *
NBR *(a)*	1	1600	0	0	0	0	0.000	0.000	0.000	0.000
SBL	1	1600	43	43	48	48	0.027 *	0.027 *	0.030 *	0.030 *
SBT	2	3200	601	662	881	942	0.188	0.207	0.275	0.294
SBR *(b)*	0	0	0	0	0	0	-	-	-	-
EBL	0	0	97	97	113	113	-	-	-	-
EBT	1	1600	1	1	1	1	0.061 *	0.061 *	0.071 *	0.071 *
EBR *(c)*	1	1600	9	10	15	16	0.006	0.006	0.009	0.010
WBL	0	0	0	0	0	0	-	-	-	-
WBT	0	0	0	0	0	0	-	-	-	-
WBR *(d)*	0	0	0	0	0	0	-	-	-	-
			LOST TIME:				0.100 *	0.100 *	0.100 *	0.100 *
			TOTAL INTERSECTION CAPACITY UTILIZATION:				**0.430**	**0.432**	**0.448**	**0.451**
			SCENARIO LEVEL OF SERVICE:				A	A	A	A

NOTES:

RTOR: *(a) FREE RIGHT-TURN LANE*
(b)
(c) 80%
(d)

Printed: 10/12/15

#12089.01 HERITAGE RIDGE PROJECT REF: 04AM_EX

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***05/22/2013***

TIME PERIOD: ***A.M. PEAK HOUR***

N/S STREET: ***LOS CARNEROS ROAD***

E/W STREET: ***CALLE KORAL***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

	NORTH BOUND			SOUTH BOUND			EAST BOUND			WEST BOUND		
VOLUMES	L	T	R	L	T	R	L	T	R	L	T	R
(A) EXISTING:	0	399	4	247	1137	0	0	0	0	13	0	120
(B) PROJECT-ADDED:	0	0	5	19	0	0	0	0	0	24	0	77

GEOMETRICS

	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
LANE GEOMETRICS	TT TR	L TT		L R

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)

SCENARIO 2 = EXISTING + PROJECT VOLUMES (A+B)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4
NBL	0	0	0	0	0	0	-	-		
NBT	3	4800	399	399	0	0	0.084	0.085		
NBR *(a)*	0	0	4	9	0	5	-	-		
SBL	1	1600	247	266	0	19	0.154	0.166		
SBT	2	3200	1137	1137	0	0	0.355 *	0.355 *		
SBR *(b)*	0	0	0	0	0	0	-	-		
EBL	0	0	0	0	0	0	-	-		
EBT	0	0	0	0	0	0	-	-		
EBR *(c)*	0	0	0	0	0	0	-	-		
WBL	1	1600	13	37	0	24	0.008	0.023		
WBT	0	0	0	0	0	0	-	-		
WBR *(d)*	1	1600	4	6	0	2	0.003 *	0.004 *		
					LOST TIME:		0.100 *	0.100 *		
					TOTAL INTERSECTION CAPACITY UTILIZATION:		**0.458**	**0.459**		
					SCENARIO LEVEL OF SERVICE:		A	A		

NOTES:

RTOR: *(a)*

(b) 0%

(c)

(d) 97%

Printed: 10/12/15

#12089.01 HERITAGE RIDGE PROJECT REF: 04AM_EX+PR

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: *05/22/2013*

TIME PERIOD: *A.M. PEAK HOUR* *EX+PR LOS WITH WESTERN LEG*

N/S STREET: *LOS CARNEROS ROAD*

E/W STREET: *CALLE KORAL*

CONTROL TYPE: *SIGNAL*

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	T	R	SOUTH BOUND L	T	R	EAST BOUND L	T	R	WEST BOUND L	T	R
(A) EXISTING:	57	399	4	247	1137	94	69	26	69	13	29	120
(B) PROJECT-ADDED:	0	0	5	19	0	0	0	0	0	24	0	77

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	L TT TR	L T TR	L TR	LT R

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)

SCENARIO 2 = EXISTING + PROJECT VOLUMES (A+B)

LEVEL OF SERVICE CALCULATIONS

MOVEMENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4
NBL	1	1600	57	57	0	0	0.036 *	0.036 *		
NBT	3	4800	399	399	0	0	0.084	0.085		
NBR *(a)*	0	0	4	9	0	5	-	-		
SBL	1	1600	247	266	0	19	0.154	0.166		
SBT	2	3200	1137	1137	0	0	0.385 *	0.385 *		
SBR *(b)*	0	0	94	94	0	0	-	-		
EBL	1	1600	69	69	0	0	0.043 *	0.043 *		
EBT	1	1600	26	26	0	0	0.059	0.059		
EBR *(c)*	0	0	69	69	0	0	-	-		
WBL	0	0	13	37	0	24	-	-		
WBT	1	1600	29	29	0	0	0.026 *	0.041 *		
WBR *(d)*	1	1600	4	6	0	2	0.003	0.004		
						LOST TIME:	0.100 *	0.100 *		
						TOTAL INTERSECTION CAPACITY UTILIZATION:	**0.590**	**0.605**		
						SCENARIO LEVEL OF SERVICE:	**A**	**B**		

NOTES:

RTOR: *(a)*

(b) 0%

(c)

(d) 97%

Printed: 10/12/15

#12089.01 HERITAGE RIDGE PROJECT REF: 04AM_CU

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: *05/22/2013*

TIME PERIOD: *A.M. PEAK HOUR*

N/S STREET: *LOS CARNEROS ROAD*

E/W STREET: *CALLE KORAL*

CONTROL TYPE: *SIGNAL*

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	T	R	SOUTH BOUND L	T	R	EAST BOUND L	T	R	WEST BOUND L	T	R
(A) CUMULATIVE:	57	407	7	279	1434	94	69	26	69	39	29	212
(B) PROJECT-ADDED:	0	0	5	19	0	0	0	0	0	24	0	77

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	L TT TR	L T TR	L TR	LT R

TRAFFIC SCENARIOS

SCENARIO 1 = CUMULATIVE VOLUMES (A)

SCENARIO 2 = CUMULATIVE + PROJECT VOLUMES (A + B)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4
NBL	1	1600	57	57	0	0	0.036 *	0.036 *		
NBT	3	4800	407	407	0	0	0.086	0.087		
NBR *(a)*	0	0	7	12	0	5	-	-		
SBL	1	1600	279	298	0	19	0.174	0.186		
SBT	2	3200	1434	1434	0	0	0.478 *	0.478 *		
SBR *(b)*	0	0	94	94	0	0	-	-		
EBL	1	1600	69	69	0	0	0.043 *	0.043 *		
EBT	1	1600	26	26	0	0	0.059	0.059		
EBR *(c)*	0	0	69	69	0	0	-	-		
WBL	0	0	39	63	0	24	-	-		
WBT	1	1600	29	29	0	0	0.043 *	0.058 *		
WBR *(d)*	1	1600	6	9	0	2	0.004	0.006		
						LOST TIME:	0.100 *	0.100 *		
						TOTAL INTERSECTION CAPACITY UTILIZATION:	**0.700**	**0.715**		
						SCENARIO LEVEL OF SERVICE:	**B**	**C**		

NOTES:

RTOR: *(a)*

(b) 0%

(c)

(d) 97%

Printed: 10/12/15

#12089.01 HERITAGE RIDGE PROJECT REF: 04PM_EX

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***02/09/2012***

TIME PERIOD: ***P.M. PEAK HOUR***

N/S STREET: ***LOS CARNEROS ROAD***

E/W STREET: ***CALLE KORAL***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	T	R	SOUTH BOUND L	T	R	EAST BOUND L	T	R	WEST BOUND L	T	R
(A) EXISTING:	0	1394	26	101	577	0	0	0	0	5	0	295
(B) PROJECT-ADDED:	0	0	21	67	0	0	0	0	0	10	0	33

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	TT TR	L TT		L R

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)

SCENARIO 2 = EXISTING + PROJECT VOLUMES (A+B)

LEVEL OF SERVICE CALCULATIONS

MOVEMENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4
NBL	0	0	0	0	0	0	-	-		
NBT	3	4800	1394	1394	0	0	0.296 *	0.300 *		
NBR *(a)*	0	0	26	47	0	21	-	-		
SBL	1	1600	101	168	0	67	0.063 *	0.105 *		
SBT	2	3200	577	577	0	0	0.180	0.180		
SBR *(b)*	0	0	0	0	0	0	-	-		
EBL	0	0	0	0	0	0	-	-		
EBT	0	0	0	0	0	0	-	-		
EBR *(c)*	0	0	0	0	0	0	-	-		
WBL	1	1600	5	15	0	10	0.003	0.009		
WBT	0	0	0	0	0	0	-	-		
WBR *(d)* U	1	1600	83	92	0	9	0.052 *	0.058 *		
					LOST TIME:		0.100 *	0.100 *		
					TOTAL INTERSECTION CAPACITY UTILIZATION:		**0.511**	**0.563**		
					SCENARIO LEVEL OF SERVICE:		A	A		

NOTES:

RTOR: *(a)*

(b) 4%

(c)

(d) 72%

Printed: 10/12/15

#12089.01 HERITAGE RIDGE PROJECT REF: 04PM_EX+PR

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: *02/09/2012*

TIME PERIOD: *P.M. PEAK HOUR* *EX+PR LOS WITH WESTERN LEG*

N/S STREET: *LOS CARNEROS ROAD*

E/W STREET: *CALLE KORAL*

CONTROL TYPE: *SIGNAL*

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	T	R	SOUTH BOUND L	T	R	EAST BOUND L	T	R	WEST BOUND L	T	R
(A) EXISTING:	63	1394	26	101	577	60	95	11	65	5	32	295
(B) PROJECT-ADDED:	0	0	21	67	0	0	0	0	0	10	0	33

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	L TT TR	L T TR	L TR	LT R

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)

SCENARIO 2 = EXISTING + PROJECT VOLUMES (A+B)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4
NBL	1	1600	63	63	0	0	0.039	0.039		
NBT	3	4800	1394	1394	0	0	0.296 *	0.300 *		
NBR *(a)*	0	0	26	47	0	21	-	-		
SBL	1	1600	101	168	0	67	0.063 *	0.105 *		
SBT	2	3200	577	577	0	0	0.198	0.198		
SBR *(b)*	0	0	58	58	0	0	-	-		
EBL	1	1600	95	95	0	0	0.059 *	0.059 *		
EBT	1	1600	11	11	0	0	0.048	0.048		
EBR *(c)*	0	0	65	65	0	0	-	-		
WBL	0	0	5	15	0	10	-	-		
WBT	1	1600	32	32	0	0	0.023	0.029		
WBR *(d)*	1	1600	83	92	0	9	0.052 *	0.058 *		
						LOST TIME:	0.100 *	0.100 *		
						TOTAL INTERSECTION CAPACITY UTILIZATION:	**0.570**	**0.622**		
						SCENARIO LEVEL OF SERVICE:	**A**	**B**		

NOTES:

RTOR: *(a)*

(b) 4%

(c)

(d) 72%

Printed: 10/12/15

#12089.01 HERITAGE RIDGE PROJECT REF: 04PM_CU

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: *02/09/2012*

TIME PERIOD: *P.M. PEAK HOUR*

N/S STREET: *LOS CARNEROS ROAD*

E/W STREET: *CALLE KORAL*

CONTROL TYPE: *SIGNAL*

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	T	R	SOUTH BOUND L	T	R	EAST BOUND L	T	R	WEST BOUND L	T	R
(A) CUMULATIVE:	63	1489	34	190	706	60	95	11	65	7	32	363
(B) PROJECT-ADDED:	0	0	21	67	0	0	0	0	0	10	0	33

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	L TT TR	L T TR	L TR	LT R

TRAFFIC SCENARIOS

SCENARIO 1 = CUMULATIVE VOLUMES (A)

SCENARIO 2 = CUMULATIVE + PROJECT VOLUMES (A+B)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4
NBL	1	1600	63	63	0	0	0.039	0.039		
NBT	3	4800	1489	1489	0	0	0.317 *	0.322 *		
NBR *(a)*	0	0	34	55	0	21	-	-		
SBL	1	1600	190	257	0	67	0.119 *	0.161 *		
SBT	2	3200	706	706	0	0	0.239	0.239		
SBR *(b)*	0	0	58	58	0	0	-	-		
EBL	1	1600	95	95	0	0	0.059 *	0.059 *		
EBT	1	1600	11	11	0	0	0.048	0.048		
EBR *(c)*	0	0	65	65	0	0	-	-		
WBL	0	0	7	17	0	10	-	-		
WBT	1	1600	32	32	0	0	0.024	0.031		
WBR *(d)*	1	1600	102	111	0	9	0.064 *	0.069 *		
						LOST TIME:	0.100 *	0.100 *		
						TOTAL INTERSECTION CAPACITY UTILIZATION:	**0.659**	**0.711**		
						SCENARIO LEVEL OF SERVICE:	**B**	**C**		

NOTES:

RTOR: *(a)*

(b) 4%

(c)

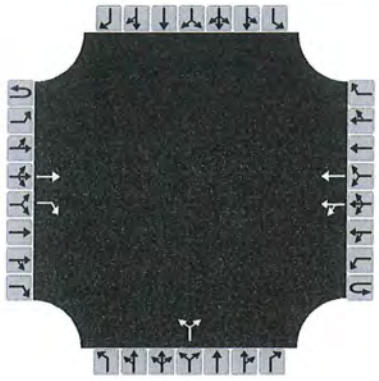
(d) 72%

Printed: 10/12/15

HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	MMF	Intersection	05AM_EX
Agency/Co.	ATE	Jurisdiction	CITY OF GOLETA
Date Performed	10/12/2015	East/West Street	CALLE KORAL
Analysis Year	2015	North/South Street	LOS CARNEROS WAY
Time Analyzed	A.M. PEAK HOUR	Peak Hour Factor	1.00
Intersection Orientation	East-West	Analysis Time Period (hrs)	1.00
Project Description	HERITAGE RIDGE PROJECT (#12089.01)		

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	2	0		0	0	0		0	0	0
Configuration			T	R		LT	T				LR					
Volume (veh/h)			26	202		41	95			52		11				
Percent Heavy Vehicles						3				3		3				
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

Delay, Queue Length, and Level of Service

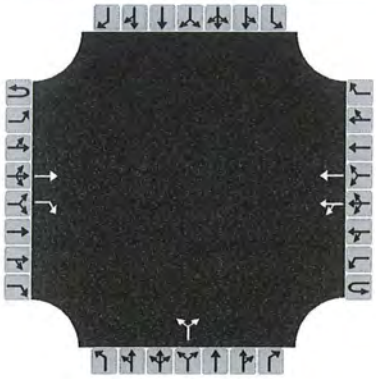
Flow Rate (veh/h)						89					63					
Capacity						1330					959					
v/c Ratio						0.07					0.07					
95% Queue Length						0.1					0.2					
Control Delay (s/veh)						7.8					9.0					
Level of Service (LOS)						A					A					
Approach Delay (s/veh)					2.4				9.0							
Approach LOS					A				A							

AWD = 8.3 sec. / LOS A

HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	MMF	Intersection	05AM_EX w/ DIVERSION
Agency/Co.	ATE	Jurisdiction	CITY OF GOLETA
Date Performed	10/12/2015	East/West Street	CALLE KORAL
Analysis Year	2015	North/South Street	LOS CARNEROS WAY
Time Analyzed	A.M. PEAK HOUR	Peak Hour Factor	1.00
Intersection Orientation	East-West	Analysis Time Period (hrs)	1.00
Project Description	HERITAGE RIDGE PROJECT (#12089.01)		

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	2	0		0	0	0		0	0	0
Configuration			T	R		LT	T				LR					
Volume (veh/h)			36	171		41	107			40		11				
Percent Heavy Vehicles						3				3		3				
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

Delay, Queue Length, and Level of Service

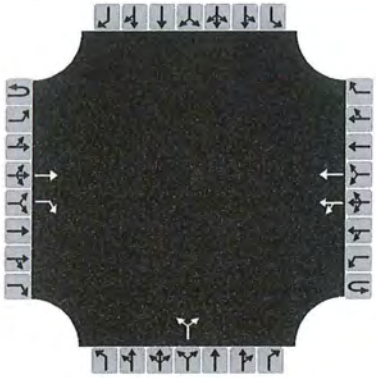
Flow Rate (veh/h)						95					51					
Capacity						1354					987					
v/c Ratio						0.07					0.05					
95% Queue Length						0.1					0.2					
Control Delay (s/veh)						7.7					8.8					
Level of Service (LOS)						A					A					
Approach Delay (s/veh)					2.2				8.8							
Approach LOS					A				A							

AWD = 8.1 sec. / LOS A

HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	MMF	Intersection	05AM_EX+PR
Agency/Co.	ATE	Jurisdiction	CITY OF GOLETA
Date Performed	10/12/2015	East/West Street	CALLE KORAL
Analysis Year	2015	North/South Street	LOS CARNEROS WAY
Time Analyzed	A.M. PEAK HOUR	Peak Hour Factor	1.00
Intersection Orientation	East-West	Analysis Time Period (hrs)	1.00
Project Description	HERITAGE RIDGE PROJECT (#12089.01)		

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	2	0		0	0	0		0	0	0
Configuration			T	R		LT	T				LR					
Volume (veh/h)			81	171		66	208			40		18				
Percent Heavy Vehicles						3				3		3				
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

Delay, Queue Length, and Level of Service

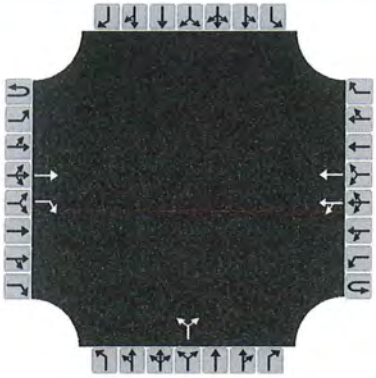
Flow Rate (veh/h)						170					58					
Capacity						1303					893					
v/c Ratio						0.13					0.06					
95% Queue Length						0.2					0.2					
Control Delay (s/veh)						7.9					9.3					
Level of Service (LOS)						A					A					
Approach Delay (s/veh)					2.0				9.3							
Approach LOS					A				A							

AWD = 8.3 sec. / LOS A

HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	MMF	Intersection	05PM_EX
Agency/Co.	ATE	Jurisdiction	CITY OF GOLETA
Date Performed	10/12/2015	East/West Street	CALLE KORAL
Analysis Year	2015	North/South Street	LOS CARNEROS WAY
Time Analyzed	P.M. PEAK HOUR	Peak Hour Factor	1.00
Intersection Orientation	East-West	Analysis Time Period (hrs)	1.00
Project Description	HERITAGE RIDGE PROJECT (#12089.01)		

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	2	0		0	0	0		0	0	0
Configuration			T	R		LT	T				LR					
Volume (veh/h)			61	52		7	37			267		43				
Percent Heavy Vehicles						3				3		3				
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

Delay, Queue Length, and Level of Service

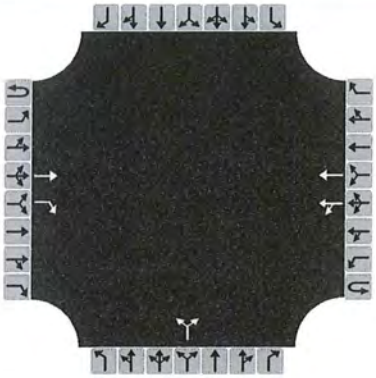
Flow Rate (veh/h)						26					310					
Capacity						1467					1031					
v/c Ratio						0.02					0.30					
95% Queue Length						0.0					1.3					
Control Delay (s/veh)						7.5					10.0					
Level of Service (LOS)						A					A					
Approach Delay (s/veh)					1.2				10.0							
Approach LOS					A				A							

AWD = 9.8 sec. / LOS A

HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	MMF	Intersection	05PM_EX w/ DIVERSION
Agency/Co.	ATE	Jurisdiction	CITY OF GOLETA
Date Performed	10/12/2015	East/West Street	CALLE KORAL
Analysis Year	2015	North/South Street	LOS CARNEROS WAY
Time Analyzed	P.M. PEAK HOUR	Peak Hour Factor	1.00
Intersection Orientation	East-West	Analysis Time Period (hrs)	1.00
Project Description	HERITAGE RIDGE PROJECT (#12089.01)		

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	2	0		0	0	0		0	0	0
Configuration			T	R		LT	T				LR					
Volume (veh/h)			71	42		7	79			225		43				
Percent Heavy Vehicles						3				3		3				
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

Delay, Queue Length, and Level of Service

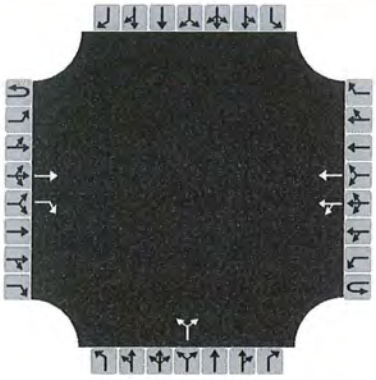
Flow Rate (veh/h)						47					268					
Capacity						1467					1014					
v/c Ratio						0.03					0.26					
95% Queue Length						0.0					1.1					
Control Delay (s/veh)						7.5					9.8					
Level of Service (LOS)						A					A					
Approach Delay (s/veh)					0.6				9.8							
Approach LOS					A				A							

AWD = 9.5 sec. / LOS A

HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	MMF	Intersection	05PM_EX+PR
Agency/Co.	ATE	Jurisdiction	CITY OF GOLETA
Date Performed	10/12/2015	East/West Street	CALLE KORAL
Analysis Year	2015	North/South Street	LOS CARNEROS WAY
Time Analyzed	P.M. PEAK HOUR	Peak Hour Factor	1.00
Intersection Orientation	East-West	Analysis Time Period (hrs)	1.00
Project Description	HERITAGE RIDGE PROJECT (#12089.01)		

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	2	0		0	0	0		0	0	0
Configuration			T	R		LT	T				LR					
Volume (veh/h)			159	42		18	122			225		65				
Percent Heavy Vehicles						3				3		3				
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

Delay, Queue Length, and Level of Service

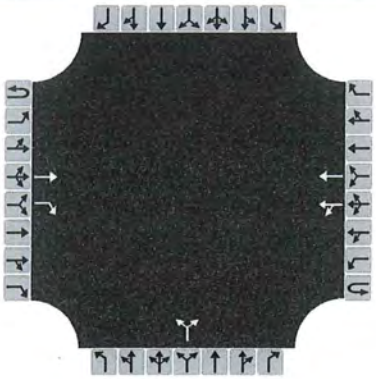
Flow Rate (veh/h)						79					290					
Capacity						1361					901					
v/c Ratio						0.06					0.32					
95% Queue Length						0.0					1.4					
Control Delay (s/veh)						7.7					10.9					
Level of Service (LOS)						A					B					
Approach Delay (s/veh)					1.0				10.9							
Approach LOS					A				B							

ΔWD = 10.2 sec. / LOS B

HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	MMF	Intersection	05AM_CU
Agency/Co.	ATE	Jurisdiction	CITY OF GOLETA
Date Performed	10/12/2015	East/West Street	CALLE KORAL
Analysis Year	2015	North/South Street	LOS CARNEROS WAY
Time Analyzed		Peak Hour Factor	1.00
Intersection Orientation	East-West	Analysis Time Period (hrs)	1.00
Project Description	HERITAGE RIDGE PROJECT (#12089.01)		

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	2	0		0	0	0		0	0	0
Configuration			T	R		LT	T				LR					
Volume (veh/h)			103	209		41	95			185		63				
Percent Heavy Vehicles						3				3		3				
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

Delay, Queue Length, and Level of Service

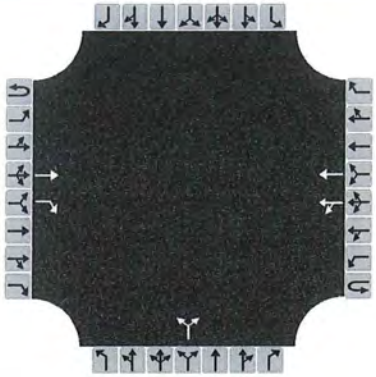
Flow Rate (veh/h)						89					248					
Capacity						1238					950					
v/c Ratio						0.07					0.26					
95% Queue Length						0.1					1.1					
Control Delay (s/veh)						8.0					10.1					
Level of Service (LOS)						A					B					
Approach Delay (s/veh)					2.5				10.1							
Approach LOS					A				B							

AWD = 9.5 sec. / LOS A

HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	MMF	Intersection	05AM_CU+PR
Agency/Co.	ATE	Jurisdiction	CITY OF GOLETA
Date Performed	10/12/2015	East/West Street	CALLE KORAL
Analysis Year	2015	North/South Street	LOS CARNEROS WAY
Time Analyzed		Peak Hour Factor	1.00
Intersection Orientation	East-West	Analysis Time Period (hrs)	1.00
Project Description	HERITAGE RIDGE PROJECT (#12089.01)		

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	2	0		0	0	0		0	0	0
Configuration			T	R		LT	T				LR					
Volume (veh/h)			127	209		66	196			185		70				
Percent Heavy Vehicles						3				3		3				
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

Delay, Queue Length, and Level of Service

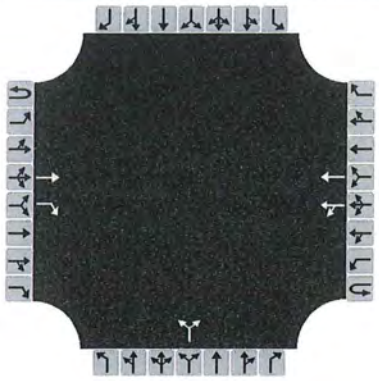
Flow Rate (veh/h)						164					255					
Capacity						1213					798					
v/c Ratio						0.14					0.32					
95% Queue Length						0.2					1.4					
Control Delay (s/veh)						8.1					11.6					
Level of Service (LOS)						A					B					
Approach Delay (s/veh)					2.2				11.6							
Approach LOS					A				B							

AWD = 10.2 sec. / LOS B

HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	MMF	Intersection	05PM_CU
Agency/Co.	ATE	Jurisdiction	CITY OF GOLETA
Date Performed	10/12/2015	East/West Street	CALLE KORAL
Analysis Year	2015	North/South Street	LOS CARNEROS WAY
Time Analyzed		Peak Hour Factor	1.00
Intersection Orientation	East-West	Analysis Time Period (hrs)	1.00
Project Description	HERITAGE RIDGE PROJECT (#12089.01)		

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	2	0		0	0	0		0	0	0
Configuration			T	R		LT	T				LR					
Volume (veh/h)			163	72		7	37			365		73				
Percent Heavy Vehicles						3				3		3				
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

Delay, Queue Length, and Level of Service

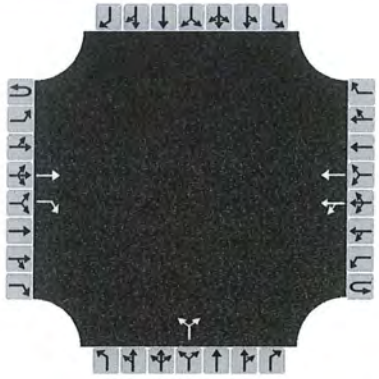
Flow Rate (veh/h)						26					438					
Capacity						1322					921					
v/c Ratio						0.02					0.48					
95% Queue Length						0.0					2.7					
Control Delay (s/veh)						7.7					12.4					
Level of Service (LOS)						A					B					
Approach Delay (s/veh)					1.2				12.4							
Approach LOS					A				B							

AWD = 12.1 sec. / LOS B

HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	MMF	Intersection	05PM_CU+PR
Agency/Co.	ATE	Jurisdiction	CITY OF GOLETA
Date Performed	10/12/2015	East/West Street	CALLE KORAL
Analysis Year	2015	North/South Street	LOS CARNEROS WAY
Time Analyzed		Peak Hour Factor	1.00
Intersection Orientation	East-West	Analysis Time Period (hrs)	1.00
Project Description	HERITAGE RIDGE PROJECT (#12089.01)		

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	2	0		0	0	0		0	0	0
Configuration			T	R		LT	T				LR					
Volume (veh/h)			251	72		18	80			365		95				
Percent Heavy Vehicles						3				3		3				
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)						58					460					
Capacity						1227					794					
v/c Ratio						0.05					0.58					
95% Queue Length						0.0					4.0					
Control Delay (s/veh)						8.0					15.7					
Level of Service (LOS)						A					C					
Approach Delay (s/veh)					1.5				15.7							
Approach LOS					A				C							

AWD = 14.8 sec. / LOS B

#12089.01 HERITAGE RIDGE PROJECT REF: 06AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: *05/22/2013*

TIME PERIOD: *A.M. PEAK HOUR*

N/S STREET: *LOS CARNEROS ROAD*

E/W STREET: *HOLLISTER AVENUE*

CONTROL TYPE: *SIGNAL*

TRAFFIC VOLUME SUMMARY

	NORTH BOUND			SOUTH BOUND			EAST BOUND			WEST BOUND		
VOLUMES	L	T	R	L	T	R	L	T	R	L	T	R
(A) EXISTING:	29	282	104	25	238	121	76	325	199	76	254	41
(B) PROJECT-ADDED:	0	2	3	0	10	14	3	4	0	11	14	0
(C) CUMULATIVE:	66	361	129	40	429	361	77	401	258	76	307	41

GEOMETRICS

	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
LANE GEOMETRICS	LL TT R	L TT R	LL T TR	L T TR

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)
SCENARIO 2 = EXISTING + PROJECT VOLUMES (A+B)
SCENARIO 3 = CUMULATIVE (C)
SCENARIO 4 = CUMULATIVE + PROJECT VOLUMES (B+C)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4
NBL	2	3200	29	29	66	66	0.009	0.009	0.021 *	0.021 *
NBT	2	3200	282	284	361	363	0.088 *	0.089 *	0.113	0.113
NBR *(a)*	1	1600	71	73	88	90	0.044	0.046	0.055	0.056
SBL	1	1600	25	25	40	40	0.016 *	0.016 *	0.025	0.025
SBT	2	3200	238	248	429	439	0.074	0.078	0.134	0.137
SBR *(b)*	1	1600	114	127	339	353	0.071	0.079	0.212 *	0.221 *
EBL	2	3200	76	79	77	80	0.024	0.025	0.024	0.025
EBT	2	3200	325	329	401	405	0.142 *	0.143 *	0.178 *	0.179 *
EBR *(c)*	0	0	129	129	168	168	-	-	-	-
WBL	1	1600	76	87	76	87	0.048 *	0.054 *	0.048 *	0.054 *
WBT	2	3200	254	268	307	321	0.089	0.093	0.105	0.110
WBR *(d)*	0	0	30	30	30	30	-	-	-	-
					LOST TIME:		0.100 *	0.100 *	0.100 *	0.100 *
					TOTAL INTERSECTION CAPACITY UTILIZATION:		0.394	0.402	0.559	0.575
					SCENARIO LEVEL OF SERVICE:		A	A	A	A

NOTES:

RTOR: *(a) 32%*
(b) 6%
(c) 35%
(d) 27%

Printed: 10/12/15

#12089.01 HERITAGE RIDGE PROJECT REF: 06PM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: *02/09/2012*

TIME PERIOD: *P.M. PEAK HOUR*

N/S STREET: *LOS CARNEROS ROAD*

E/W STREET: *HOLLISTER AVENUE*

CONTROL TYPE: *SIGNAL*

TRAFFIC VOLUME SUMMARY

	NORTH BOUND			SOUTH BOUND			EAST BOUND			WEST BOUND		
VOLUMES	L	T	R	L	T	R	L	T	R	L	T	R
(A) EXISTING:	229	546	110	44	443	127	243	385	87	127	642	29
(B) PROJECT-ADDED:	0	9	9	0	4	6	12	13	0	5	6	0
(C) CUMULATIVE:	273	707	142	61	518	193	324	505	117	132	664	34

GEOMETRICS

	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
LANE GEOMETRICS	LL TT R	L TT R	LL T TR	L T TR

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)
SCENARIO 2 = EXISTING + PROJECT VOLUMES (A+B)
SCENARIO 3 = CUMULATIVE (C)
SCENARIO 4 = CUMULATIVE + PROJECT VOLUMES (B+C)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4
NBL	2	3200	229	229	273	273	0.072 *	0.072 *	0.085	0.085
NBT	2	3200	546	555	707	716	0.171	0.173	0.221 *	0.224 *
NBR *(a)*	1	1600	50	54	64	68	0.031	0.034	0.040	0.043
SBL	1	1600	44	44	61	61	0.028	0.028	0.038 *	0.038 *
SBT	2	3200	443	447	518	522	0.138 *	0.140 *	0.162	0.163
SBR *(b)*	1	1600	64	67	97	100	0.040	0.042	0.061	0.063
EBL	2	3200	243	255	324	336	0.076 *	0.080 *	0.101	0.105
EBT	2	3200	385	398	505	518	0.134	0.138	0.177 *	0.181 *
EBR *(c)*	0	0	44	44	60	60	-	-	-	-
WBL	1	1600	127	132	132	137	0.079	0.083	0.083 *	0.086 *
WBT	2	3200	642	648	664	670	0.207 *	0.209 *	0.215	0.217
WBR *(d)*	0	0	21	21	24	24	-	-	-	-
					LOST TIME:		0.100 *	0.100 *	0.100 *	0.100 *
					TOTAL INTERSECTION CAPACITY UTILIZATION:		**0.593**	**0.601**	**0.619**	**0.629**
					SCENARIO LEVEL OF SERVICE:		A	A	B	B

NOTES:

RTOR: *(a) 55%*
(b) 50%
(c) 49%
(d) 28%

Printed: 10/12/15

#12089.01 HERITAGE RIDGE PROJECT **REF:** 07AM_EX

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***04/03/2013***

TIME PERIOD: ***A.M. PEAK HOUR***

N/S STREET: ***LOS CARNEROS WAY***

E/W STREET: ***HOLLISTER AVENUE***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	T	R	SOUTH BOUND L	T	R	EAST BOUND L	T	R	WEST BOUND L	T	R
(A) EXISTING:	0	0	0	153	0	27	22	408	0	0	321	45

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND L LR R	EAST BOUND L TT	WEST BOUND T TR

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4
NBL	0	0	0				-			
NBT	0	0	0				-			
NBR *(a)*	0	0	0				-			
SBL	0	0	153				-			
SBT	2	3200	0				0.051 *			
SBR *(b)*	0	0	9				-			
EBL	1	1600	22				0.014 *			
EBT	2	3200	408				0.128			
EBR *(c)*	0	0	0				-			
WBL	0	0	0				-			
WBT	2	3200	321				0.112 *			
WBR *(d)*	0	0	38				-			
					LOST TIME:		0.100 *			
					TOTAL INTERSECTION CAPACITY UTILIZATION:		**0.277**			
					SCENARIO LEVEL OF SERVICE:		**A**			

NOTES:

RTOR: *(a)*
(b) 67%
(c)
(d) 16%

Printed: 10/13/15

#12089.01 HERITAGE RIDGE PROJECT **REF:** 07AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***04/03/2013***

TIME PERIOD: ***A.M. PEAK HOUR***

N/S STREET: ***LOS CARNEROS WAY***

E/W STREET: ***HOLLISTER AVENUE***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	0	0	0	122	0	27	22	408	0	0	321	33
(B) PROJECT-ADDED:	0	0	0	0	0	25	7	0	0	0	0	0
(C) CUMULATIVE:	0	0	0	174	0	44	172	423	0	0	357	111

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
		L LR R	L TT	T TR

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)
SCENARIO 2 = EXISTING + PROJECT VOLUMES (A+B)
SCENARIO 3 = CUMULATIVE (C)
SCENARIO 4 = CUMULATIVE + PROJECT VOLUMES (B+C)

LEVEL OF SERVICE CALCULATIONS

MOVEMENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4
NBL	0	0	0	0	0	0	-	-	-	-
NBT	0	0	0	0	0	0	-	-	-	-
NBR *(a)*	0	0	0	0	0	0	-	-	-	-
SBL	0	0	122	122	174	174	-	-	-	-
SBT	2	3200	0	0	0	0	0.041 *	0.043 *	0.059 *	0.062 *
SBR *(b)*	0	0	9	17	15	23	-	-	-	-
EBL	1	1600	22	29	172	179	0.014 *	0.018 *	0.108 *	0.112 *
EBT	2	3200	408	408	423	423	0.128	0.128	0.132	0.132
EBR *(c)*	0	0	0	0	0	0	-	-	-	-
WBL	0	0	0	0	0	0	-	-	-	-
WBT	2	3200	321	321	357	357	0.109 *	0.109 *	0.141 *	0.141 *
WBR *(d)*	0	0	28	28	93	93	-	-	-	-
					LOST TIME:		0.100 *	0.100 *	0.100 *	0.100 *
					TOTAL INTERSECTION CAPACITY UTILIZATION:		**0.264**	**0.270**	**0.408**	**0.415**
					SCENARIO LEVEL OF SERVICE:		A	A	A	A

NOTES:

RTOR: *(a)*
(b) 67%
(c)
(d) 16%

Printed: 10/12/15

#12089.01 HERITAGE RIDGE PROJECT REF: 07PM_EX

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: *04/03/2013*

TIME PERIOD: *P.M. PEAK HOUR*

N/S STREET: *LOS CARNEROS WAY*

E/W STREET: *HOLLISTER AVENUE*

CONTROL TYPE: *SIGNAL*

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	T	R	SOUTH BOUND L	T	R	EAST BOUND L	T	R	WEST BOUND L	T	R
(A) EXISTING:	0	0	0	35	0	15	34	517	0	0	760	221

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
		L LR R	L TT	T TR

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4
NBL	0	0	0				-			
NBT	0	0	0				-			
NBR *(a)*	0	0	0				-			
SBL	0	0	35				-			
SBT	2	3200	0				0.012 *			
SBR *(b)*	0	0	4				-			
EBL	1	1600	34				0.021 *			
EBT	2	3200	517				0.162			
EBR *(c)*	0	0	0				-			
WBL	0	0	0				-			
WBT	2	3200	760				0.300 *			
WBR *(d)*	0	0	199				-			
						LOST TIME:	0.100 *			
						TOTAL INTERSECTION CAPACITY UTILIZATION:	0.433			
						SCENARIO LEVEL OF SERVICE:	A			

NOTES:

RTOR: *(a)*

(b) 73%

(c)

(d) 10%

Printed: 10/13/15

#12089.01 HERITAGE RIDGE PROJECT REF: 07PM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: *04/03/2013*

TIME PERIOD: *P.M. PEAK HOUR*

N/S STREET: *LOS CARNEROS WAY*

E/W STREET: *HOLLISTER AVENUE*

CONTROL TYPE: *SIGNAL*

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	0	0	0	25	0	15	34	517	0	0	760	179
(B) PROJECT-ADDED:	0	0	0	0	0	11	22	0	0	0	0	0
(C) CUMULATIVE:	0	0	0	35	0	45	120	575	0	0	760	332

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
		L LR R	L TT	T TR

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)
SCENARIO 2 = EXISTING + PROJECT VOLUMES (A+B)
SCENARIO 3 = CUMULATIVE (C)
SCENARIO 4 = CUMULATIVE + PROJECT VOLUMES (B+C)

LEVEL OF SERVICE CALCULATIONS

MOVEMENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4
NBL	0	0	0	0	0	0	-	-	-	-
NBT	0	0	0	0	0	0	-	-	-	-
NBR *(a)*	0	0	0	0	0	0	-	-	-	-
SBL	0	0	25	25	35	35	-	-	-	-
SBT	2	3200	0	0	0	0	0.009 *	0.010 *	0.015 *	0.016 *
SBR *(b)*	0	0	4	7	12	15	-	-	-	-
EBL	1	1600	34	56	120	142	0.021 *	0.035 *	0.075 *	0.089 *
EBT	2	3200	517	517	575	575	0.162	0.162	0.180	0.180
EBR *(c)*	0	0	0	0	0	0	-	-	-	-
WBL	0	0	0	0	0	0	-	-	-	-
WBT	2	3200	760	760	760	760	0.288 *	0.288 *	0.331 *	0.331 *
WBR *(d)*	0	0	161	161	299	299	-	-	-	-
			LOST TIME:				0.100 *	0.100 *	0.100 *	0.100 *
			TOTAL INTERSECTION CAPACITY UTILIZATION:				**0.418**	**0.433**	**0.521**	**0.536**
			SCENARIO LEVEL OF SERVICE:				A	A	A	A

NOTES:

RTOR: *(a)*
(b) 73%
(c)
(d) 10%

Printed: 10/12/15

#12089.01 HERITAGE RIDGE PROJECT **REF:** 08AM_EX

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: *02/09/2012*

TIME PERIOD: *A.M. PEAK HOUR*

N/S STREET: *AERO CAMINO*

E/W STREET: *HOLLISTER AVENUE*

CONTROL TYPE: *SIGNAL*

TRAFFIC VOLUME SUMMARY

	NORTH BOUND			SOUTH BOUND			EAST BOUND			WEST BOUND		
VOLUMES	L	T	R	L	T	R	L	T	R	L	T	R
(A) EXISTING:	7	3	2	38	1	31	77	464	16	3	340	89

GEOMETRICS

	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
LANE GEOMETRICS	LTR	LT R	L T TR	L T TR

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4
NBL	0	0	7				-			
NBT	1	1600	3				0.008 *			
NBR *(a)*	0	0	2				-			
SBL	0	0	38				-			
SBT	1	1600	1				0.024 *			
SBR *(b)*	1	1600	7				0.004			
EBL	1	1600	77				0.048 *			
EBT	2	3200	464				0.150			
EBR *(c)*	0	0	15				-			
WBL	1	1600	3				0.002			
WBT	2	3200	340				0.130 *			
WBR *(d)*	0	0	75				-			
						LOST TIME:	0.100 *			
						TOTAL INTERSECTION CAPACITY UTILIZATION:	**0.310**			
						SCENARIO LEVEL OF SERVICE:	A			

NOTES:

RTOR: *(a) 0%*
(b) 77%
(c) 6%
(d) 16%

Printed: 10/13/15

#12089.01 HERITAGE RIDGE PROJECT **REF:** 08AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***02/09/2012***

TIME PERIOD: ***A.M. PEAK HOUR***

N/S STREET: ***AERO CAMINO***

E/W STREET: ***HOLLISTER AVENUE***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

	NORTH BOUND			SOUTH BOUND			EAST BOUND			WEST BOUND		
VOLUMES	L	T	R	L	T	R	L	T	R	L	T	R
(A) EXISTING:	7	3	2	38	1	19	46	464	16	3	340	89
(B) PROJECT-ADDED:	0	0	0	14	0	0	0	0	0	0	0	3
(C) CUMULATIVE:	7	3	2	46	1	38	81	505	16	3	409	96

GEOMETRICS

	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
LANE GEOMETRICS	LTR	LT R	L T TR	L T TR

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)
SCENARIO 2 = EXISTING + PROJECT VOLUMES (A+B)
SCENARIO 3 = CUMULATIVE (C)
SCENARIO 4 = CUMULATIVE + PROJECT VOLUMES (B+C)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4
NBL	0	0	7	7	7	7	-	-	-	-
NBT	1	1600	3	3	3	3	0.008 *	0.008 *	0.008 *	0.008 *
NBR *(a)*	0	0	2	2	2	2	-	-	-	-
SBL	0	0	38	52	46	60	-	-	-	-
SBT	1	1600	1	1	1	1	0.024 *	0.033 *	0.029 *	0.038 *
SBR *(b)*	1	1600	4	4	9	9	0.003	0.003	0.006	0.006
EBL	1	1600	46	46	81	81	0.029 *	0.029 *	0.051 *	0.051 *
EBT	2	3200	464	464	505	505	0.150	0.150	0.163	0.163
EBR *(c)*	0	0	15	15	15	15	-	-	-	-
WBL	1	1600	3	3	3	3	0.002	0.002	0.002	0.002
WBT	2	3200	340	340	409	409	0.130 *	0.130 *	0.153 *	0.154 *
WBR *(d)*	0	0	75	77	81	83	-	-	-	-
					LOST TIME:		0.100 *	0.100 *	0.100 *	0.100 *
					TOTAL INTERSECTION CAPACITY UTILIZATION:		**0.291**	**0.300**	**0.341**	**0.351**
					SCENARIO LEVEL OF SERVICE:		A	A	A	A

NOTES:

RTOR: *(a) 0%*
(b) 77%
(c) 6%
(d) 16%

Printed: 10/12/15

#12089.01 HERITAGE RIDGE PROJECT **REF:** 08PM_EX

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***02/09/2012***

TIME PERIOD: ***P.M. PEAK HOUR***

N/S STREET: ***AERO CAMINO***

E/W STREET: ***HOLLISTER AVENUE***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	T	R	SOUTH BOUND L	T	R	EAST BOUND L	T	R	WEST BOUND L	T	R
(A) EXISTING:	**33**	**0**	**5**	**67**	**1**	**104**	**26**	**534**	**13**	**5**	**810**	**30**

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND LTR	SOUTH BOUND LT R	EAST BOUND L T TR	WEST BOUND L T TR

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4
NBL	0	0	33	33	0	0	-			
NBT	1	1600	0	0	0	0	0.022 *			
NBR *(a)*	0	0	2	2	0	0	-			
SBL	0	0	67	67	0	0	-			
SBT	1	1600	1	1	0	0	0.043 *			
SBR *(b)*	1	1600	59	59	0	0	0.037			
EBL	1	1600	26	26	0	0	0.016 *			
EBT	2	3200	534	534	0	0	0.170			
EBR *(c)*	0	0	11	11	0	0	-			
WBL	1	1600	5	5	0	0	0.003			
WBT	2	3200	810	810	0	0	0.261 *			
WBR *(d)*	0	0	24	24	0	0	-			
					LOST TIME:		0.100 *			
					TOTAL INTERSECTION CAPACITY UTILIZATION:		**0.442**			
					SCENARIO LEVEL OF SERVICE:		**A**			

NOTES:

RTOR: *(a) 60%*
(b) 43%
(c) 15%
(d) 20%

Printed: 10/30/15

#12089.01 HERITAGE RIDGE PROJECT REF: 08PM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: *02/09/2012*

TIME PERIOD: *P.M. PEAK HOUR*

N/S STREET: *AERO CAMINO*

E/W STREET: *HOLLISTER AVENUE*

CONTROL TYPE: *SIGNAL*

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	T	R	SOUTH BOUND L	T	R	EAST BOUND L	T	R	WEST BOUND L	T	R
(A) EXISTING:	33	0	5	67	1	62	16	534	13	5	810	30
(B) PROJECT-ADDED:	0	0	0	6	0	0	0	0	0	0	0	13
(C) CUMULATIVE:	33	0	5	81	1	144	31	589	13	5	863	44

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	LTR	LT R	L T TR	L T TR

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)
SCENARIO 2 = EXISTING + PROJECT VOLUMES (A+B)
SCENARIO 3 = CUMULATIVE (C)
SCENARIO 4 = CUMULATIVE + PROJECT VOLUMES (B+C)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4
NBL	0	0	33	33	33	33	-	-	-	-
NBT	1	1600	0	0	0	0	0.022 *	0.022 *	0.022 *	0.022 *
NBR *(a)*	0	0	2	2	2	2	-	-	-	-
SBL	0	0	67	73	81	87	-	-	-	-
SBT	1	1600	1	1	1	1	0.043 *	0.046 *	0.051 *	0.055 *
SBR *(b)*	1	1600	35	35	82	82	0.022	0.022	0.051	0.051
EBL	1	1600	16	16	31	31	0.010 *	0.010 *	0.019 *	0.019 *
EBT	2	3200	534	534	589	589	0.170	0.170	0.188	0.188
EBR *(c)*	0	0	11	11	11	11	-	-	-	-
WBL	1	1600	5	5	5	5	0.003	0.003	0.003	0.003
WBT	2	3200	810	810	863	863	0.261 *	0.264 *	0.281 *	0.284 *
WBR *(d)*	0	0	24	34	35	46	-	-	-	-
			LOST TIME:				0.100 *	0.100 *	0.100 *	0.100 *
			TOTAL INTERSECTION CAPACITY UTILIZATION:				**0.436**	**0.442**	**0.473**	**0.480**
			SCENARIO LEVEL OF SERVICE:				A	A	A	A

NOTES:

RTOR: *(a) 60%*
(b) 43%
(c) 15%
(d) 20%

Printed: 10/13/15

WILLOWSPRINGS DRIVEWAY COUNT DATA

ASSOCIATED TRANSPORTATION ENGINEERS

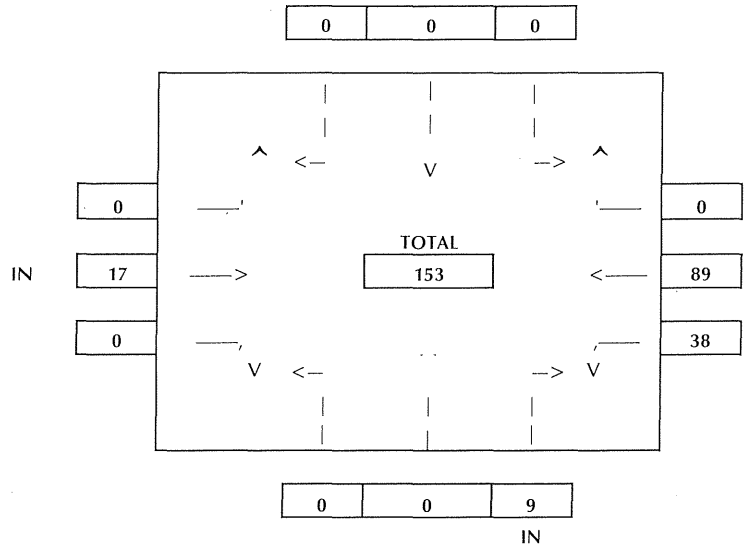
INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: WILLOW SPRINGS II | PROJECT #: 08098 | COUNT DATE: 9-24-08 | FILE NAME: AM_TGEN

N-S Approach: IN/OUT | COUNT TIME: 07:00 AM TO 9:00

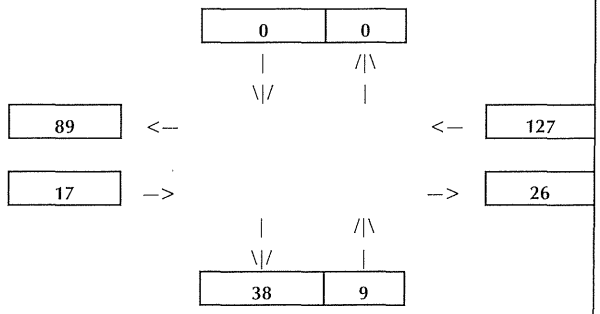
E-W Approach: | CITY: GOLETA | WEATHER: SUNNY

PEAK HOUR: 07:30 AM TO 08:30 AM



CONTROL TYPE: NONE

ARRIVAL / DEPARTURE VOLUMES



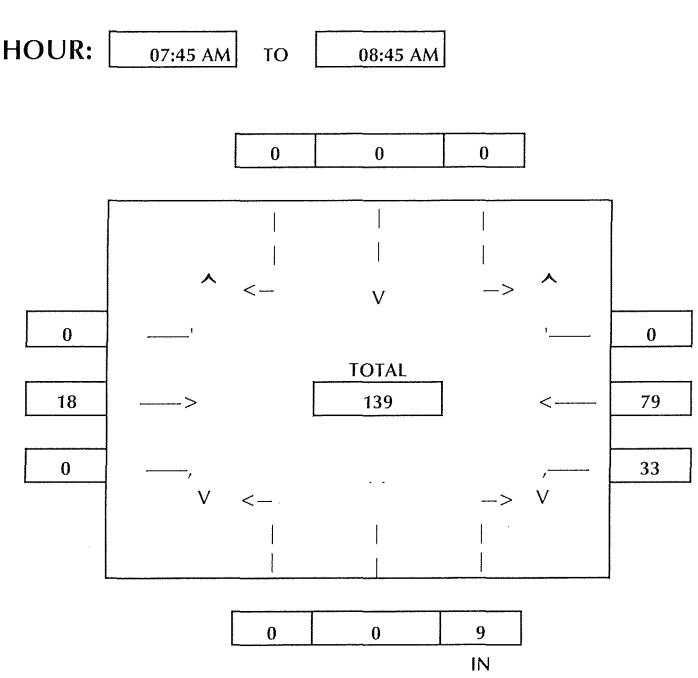
TIME PERIOD From	—	To	NORTHBOUND Left	Thru	Right	SOUTHBOUND Left	Thru	Right	EASTBOUND Left	Thru	Right	WESTBOUND Left	Thru	Right	TOTAL VOLUMES
COUNT DATA															
07:00 AM	—	07:15 AM	0	0	2	0	0	0	0	3	0	2	13	0	20
07:15 AM	—	07:30 AM	0	0	3	0	0	0	0	8	0	7	33	0	51
07:30 AM	—	07:45 AM	0	0	5	0	0	0	0	12	0	10	58	0	85
07:45 AM	—	08:00 AM	0	0	6	0	0	0	0	14	0	24	82	0	126
08:00 AM	—	08:15 AM	0	0	9	0	0	0	0	18	0	38	104	0	169
08:15 AM	—	08:30 AM	0	0	12	0	0	0	0	25	0	45	122	0	204
08:30 AM	—	08:45 AM	0	0	16	0	0	0	0	35	0	49	134	0	234
08:45 AM	—	09:00 AM	0	0	19	0	0	0	0	37	0	55	148	0	259
TOTAL BY PERIOD															
07:00 AM	—	07:15 AM	0	0	2	0	0	0	0	3	0	2	13	0	20
07:15 AM	—	07:30 AM	0	0	1	0	0	0	0	5	0	5	20	0	31
07:30 AM	—	07:45 AM	0	0	2	0	0	0	0	4	0	3	25	0	34
07:45 AM	—	08:00 AM	0	0	1	0	0	0	0	2	0	14	24	0	41
08:00 AM	—	08:15 AM	0	0	3	0	0	0	0	4	0	14	22	0	43
08:15 AM	—	08:30 AM	0	0	3	0	0	0	0	7	0	7	18	0	35
08:30 AM	—	08:45 AM	0	0	4	0	0	0	0	10	0	4	12	0	30
08:45 AM	—	09:00 AM	0	0	3	0	0	0	0	2	0	6	14	0	25
HOURLY TOTALS															
07:00 AM	—	08:00 AM	0	0	6	0	0	0	0	14	0	24	82	0	126
07:15 AM	—	08:15 AM	0	0	7	0	0	0	0	15	0	36	91	0	149
07:30 AM	—	08:30 AM	0	0	9	0	0	0	0	17	0	38	89	0	153
07:45 AM	—	08:45 AM	0	0	11	0	0	0	0	23	0	39	76	0	149
08:00 AM	—	09:00 AM	0	0	13	0	0	0	0	23	0	31	66	0	133

ASSOCIATED TRANSPORTATION ENGINEERS

INTERSECTION TURNING MOVEMENT SUMMARY

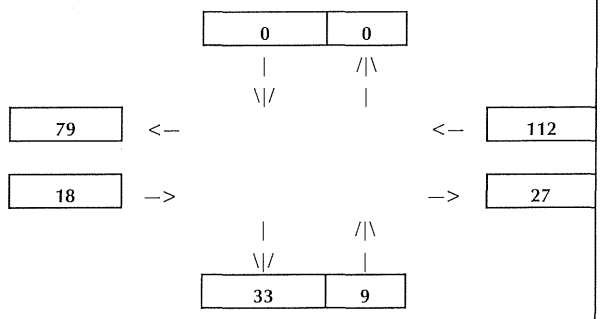
PROJECT: WILLOW SPRINGS II	PROJECT #: 08098	COUNT DATE: 10-09-08		FILE NAME:	AM_TGEN
N-S Approach: IN/OUT		COUNT TIME:	07:00 AM TO 9:00		
E-W Approach:		CITY: GOLETA		WEATHER:	SUNNY

PEAK HOUR: 07:45 AM TO 08:45 AM



CONTROL TYPE: NONE

ARRIVAL / DEPARTURE VOLUMES



TIME PERIOD From	—	To	NORTHBOUND Left	Thru	Right	SOUTHBOUND Left	Thru	Right	EASTBOUND Left	Thru	Right	WESTBOUND Left	Thru	Right	TOTAL VOLUMES
COUNT DATA															
07:00 AM	---	07:15 AM	0	0	1	0	0	0	0	2	0	2	6	0	11
07:15 AM	---	07:30 AM	0	0	1	0	0	0	0	5	0	5	21	0	32
07:30 AM	---	07:45 AM	0	0	2	0	0	0	0	10	0	7	43	0	62
07:45 AM	---	08:00 AM	0	0	4	0	0	0	0	13	0	14	62	0	93
08:00 AM	---	08:15 AM	0	0	6	0	0	0	0	18	0	25	90	0	139
08:15 AM	---	08:30 AM	0	0	9	0	0	0	0	23	0	33	105	0	170
08:30 AM	---	08:45 AM	0	0	11	0	0	0	0	28	0	40	122	0	201
08:45 AM	---	09:00 AM	0	0	12	0	0	0	0	31	0	45	137	0	225
TOTAL BY PERIOD															
07:00 AM	---	07:15 AM	0	0	1	0	0	0	0	2	0	2	6	0	11
07:15 AM	---	07:30 AM	0	0	0	0	0	0	0	3	0	3	15	0	21
07:30 AM	---	07:45 AM	0	0	1	0	0	0	0	5	0	2	22	0	30
07:45 AM	---	08:00 AM	0	0	2	0	0	0	0	3	0	7	19	0	31
08:00 AM	---	08:15 AM	0	0	2	0	0	0	0	5	0	11	28	0	46
08:15 AM	---	08:30 AM	0	0	3	0	0	0	0	5	0	8	15	0	31
08:30 AM	---	08:45 AM	0	0	2	0	0	0	0	5	0	7	17	0	31
08:45 AM	---	09:00 AM	0	0	1	0	0	0	0	3	0	5	15	0	24
HOURLY TOTALS															
07:00 AM	---	08:00 AM	0	0	4	0	0	0	0	13	0	14	62	0	93
07:15 AM	---	08:15 AM	0	0	5	0	0	0	0	16	0	23	84	0	128
07:30 AM	---	08:30 AM	0	0	8	0	0	0	0	18	0	28	84	0	138
07:45 AM	---	08:45 AM	0	0	9	0	0	0	0	18	0	33	79	0	139
08:00 AM	---	09:00 AM	0	0	8	0	0	0	0	18	0	31	75	0	132

ASSOCIATED TRANSPORTATION ENGINEERS

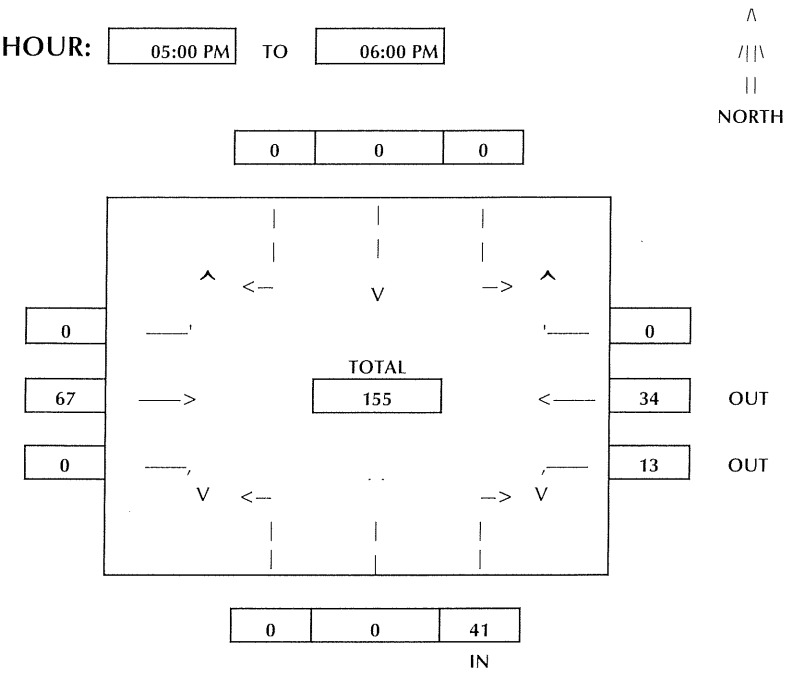
INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: WILLOW SPRINGS II | PROJECT #: 08098 | COUNT DATE: 9-23-08 | FILE NAME: PM_TGEN

N-S Approach: IN/OUT | COUNT TIME: 04:00 PM TO 6:00

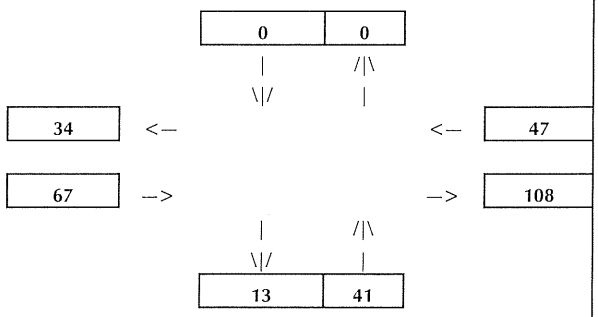
E-W Approach: | CITY: GOLETA | WEATHER: SUNNY

PEAK HOUR: 05:00 PM TO 06:00 PM



CONTROL TYPE: NONE

ARRIVAL / DEPARTURE VOLUMES



TIME PERIOD From	—	To	NORTHBOUND Left	Thru	Right	SOUTHBOUND Left	Thru	Right	EASTBOUND Left	Thru	Right	WESTBOUND Left	Thru	Right	TOTAL VOLUMES
COUNT DATA															
04:00 PM	—	04:15 PM	0	0	3	0	0	0	0	5	0	1	7	0	16
04:15 PM	—	04:30 PM	0	0	6	0	0	0	0	23	0	4	10	0	43
04:30 PM	—	04:45 PM	0	0	11	0	0	0	0	32	0	6	19	0	68
04:45 PM	—	05:00 PM	0	0	14	0	0	0	0	50	0	8	30	0	102
05:00 PM	—	05:15 PM	0	0	24	0	0	0	0	65	0	12	36	0	137
05:15 PM	—	05:30 PM	0	0	35	0	0	0	0	78	0	19	47	0	179
05:30 PM	—	05:45 PM	0	0	43	0	0	0	0	103	0	20	52	0	218
05:45 PM	—	06:00 PM	0	0	55	0	0	0	0	117	0	21	64	0	257
TOTAL BY PERIOD															
04:00 PM	—	04:15 PM	0	0	3	0	0	0	0	5	0	1	7	0	16
04:15 PM	—	04:30 PM	0	0	3	0	0	0	0	18	0	3	3	0	27
04:30 PM	—	04:45 PM	0	0	5	0	0	0	0	9	0	2	9	0	25
04:45 PM	—	05:00 PM	0	0	3	0	0	0	0	18	0	2	11	0	34
05:00 PM	—	05:15 PM	0	0	10	0	0	0	0	15	0	4	6	0	35
05:15 PM	—	05:30 PM	0	0	11	0	0	0	0	13	0	7	11	0	42
05:30 PM	—	05:45 PM	0	0	8	0	0	0	0	25	0	1	5	0	39
05:45 PM	—	06:00 PM	0	0	12	0	0	0	0	14	0	1	12	0	39
HOURLY TOTALS															
04:00 PM	—	05:00 PM	0	0	14	0	0	0	0	50	0	8	30	0	102
04:15 PM	—	05:15 PM	0	0	21	0	0	0	0	60	0	11	29	0	121
04:30 PM	—	05:30 PM	0	0	29	0	0	0	0	55	0	15	37	0	136
04:45 PM	—	05:45 PM	0	0	32	0	0	0	0	71	0	14	33	0	150
05:00 PM	—	06:00 PM	0	0	41	0	0	0	0	67	0	13	34	0	155

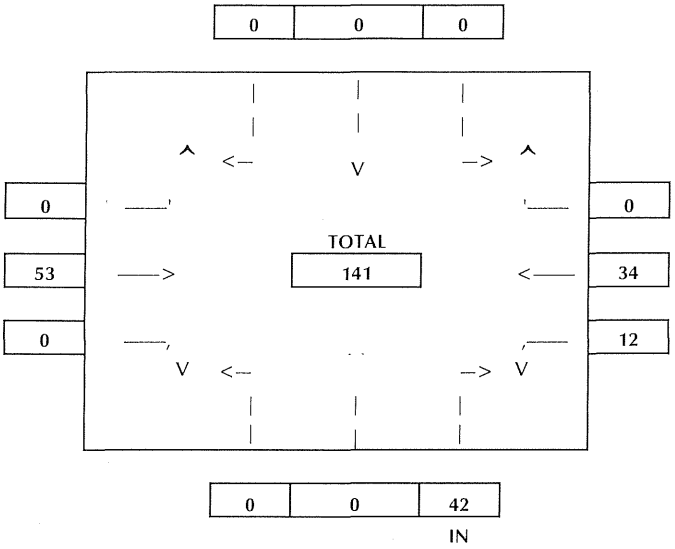
ASSOCIATED TRANSPORTATION ENGINEERS

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: WILLOW SPRINGS II	PROJECT #: 08098	COUNT DATE: 10-08-08		FILE NAME:	PM_TGEN
N-S Approach: IN/OUT		COUNT TIME:	04:00 PM TO 6:00		
E-W Approach:		CITY: GOLETA		WEATHER:	SUNNY

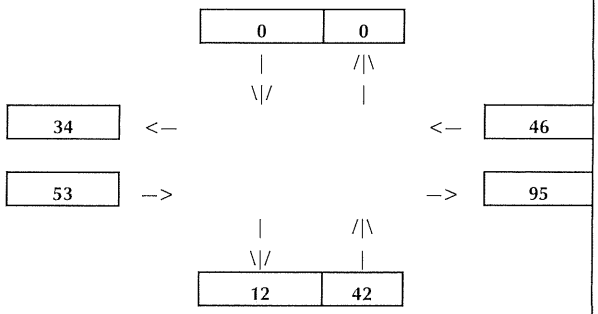
PEAK HOUR: 05:00 PM TO 06:00 PM

NORTH



CONTROL TYPE: NONE

ARRIVAL / DEPARTURE VOLUMES



TIME PERIOD From	—	To	NORTHBOUND Left	Thru	Right	SOUTHBOUND Left	Thru	Right	EASTBOUND Left	Thru	Right	WESTBOUND Left	Thru	Right	TOTAL VOLUMES
COUNT DATA															
04:00 PM	—	04:15 PM	0	0	1	0	0	0	0	10	0	3	2	0	16
04:15 PM	—	04:30 PM	0	0	3	0	0	0	0	20	0	7	11	0	41
04:30 PM	—	04:45 PM	0	0	5	0	0	0	0	28	0	9	16	0	58
04:45 PM	—	05:00 PM	0	0	9	0	0	0	0	42	0	16	25	0	92
05:00 PM	—	05:15 PM	0	0	16	0	0	0	0	51	0	19	33	0	119
05:15 PM	—	05:30 PM	0	0	31	0	0	0	0	72	0	23	39	0	165
05:30 PM	—	05:45 PM	0	0	41	0	0	0	0	82	0	25	49	0	197
05:45 PM	—	06:00 PM	0	0	51	0	0	0	0	95	0	28	59	0	233
TOTAL BY PERIOD															
04:00 PM	—	04:15 PM	0	0	1	0	0	0	0	10	0	3	2	0	16
04:15 PM	—	04:30 PM	0	0	2	0	0	0	0	10	0	4	9	0	25
04:30 PM	—	04:45 PM	0	0	2	0	0	0	0	8	0	2	5	0	17
04:45 PM	—	05:00 PM	0	0	4	0	0	0	0	14	0	7	9	0	34
05:00 PM	—	05:15 PM	0	0	7	0	0	0	0	9	0	3	8	0	27
05:15 PM	—	05:30 PM	0	0	15	0	0	0	0	21	0	4	6	0	46
05:30 PM	—	05:45 PM	0	0	10	0	0	0	0	10	0	2	10	0	32
05:45 PM	—	06:00 PM	0	0	10	0	0	0	0	13	0	3	10	0	36
HOURLY TOTALS															
04:00 PM	—	05:00 PM	0	0	9	0	0	0	0	42	0	16	25	0	92
04:15 PM	—	05:15 PM	0	0	15	0	0	0	0	41	0	16	31	0	103
04:30 PM	—	05:30 PM	0	0	28	0	0	0	0	52	0	16	28	0	124
04:45 PM	—	05:45 PM	0	0	36	0	0	0	0	54	0	16	33	0	139
05:00 PM	—	06:00 PM	0	0	42	0	0	0	0	53	0	12	34	0	141

Willowsprings Trip Generation Calculation Sheet

Count Date	Units	A.M. Volume	A.M. Rate	P.M. Volume	P.M. Rate
September 2008	235	153	**0.65**	155	**0.66**
October 2008	235	139	0.59	141	0.6

*September 2008 rates used for traffic study.

UNSIGNALIZED INTERSECTION V/C INCREASE CALCULATIONS

HERITAGE RIDGE PROJECT (#12089.01)
% IN ENTERING VOLUME CALCULATIONS

INTERSECTION: CALLE REAL/LOS CARNEROS ROAD

A.M. PEAK HOUR	EX	EX+PR	% INCREASE
WB-L	241	243	
WB-R	14	14	
NB-T	118	125	
NB-R	162	169	
SB-L	20	20	
SB-T	197	199	
TOTAL:	**752**	**770**	**2%**

P.M. PEAK HOUR	EX	EX+PR	% INCREASE
WB-L	319	325	
WB-R	24	24	
NB-T	209	212	
NB-R	396	399	
SB-L	12	12	
SB-T	86	92	
TOTAL:	**1046**	**1064**	**2%**

A.M. PEAK HOUR	CU	CU+PR	% INCREASE
WB-L	274	276	
WB-R	14	14	
NB-T	143	152	
NB-R	217	228	
SB-L	25	25	
SB-T	245	247	
TOTAL:	**918**	**942**	**3%**

P.M. PEAK HOUR	CU	CU+PR	% INCREASE
WB-L	424	430	
WB-R	27	27	
NB-T	260	263	
NB-R	435	442	
SB-L	13	13	
SB-T	140	146	
TOTAL:	**1299**	**1321**	**2%**

INTERSECTION: CALLE KORAL/LOS CARNEROS WAY

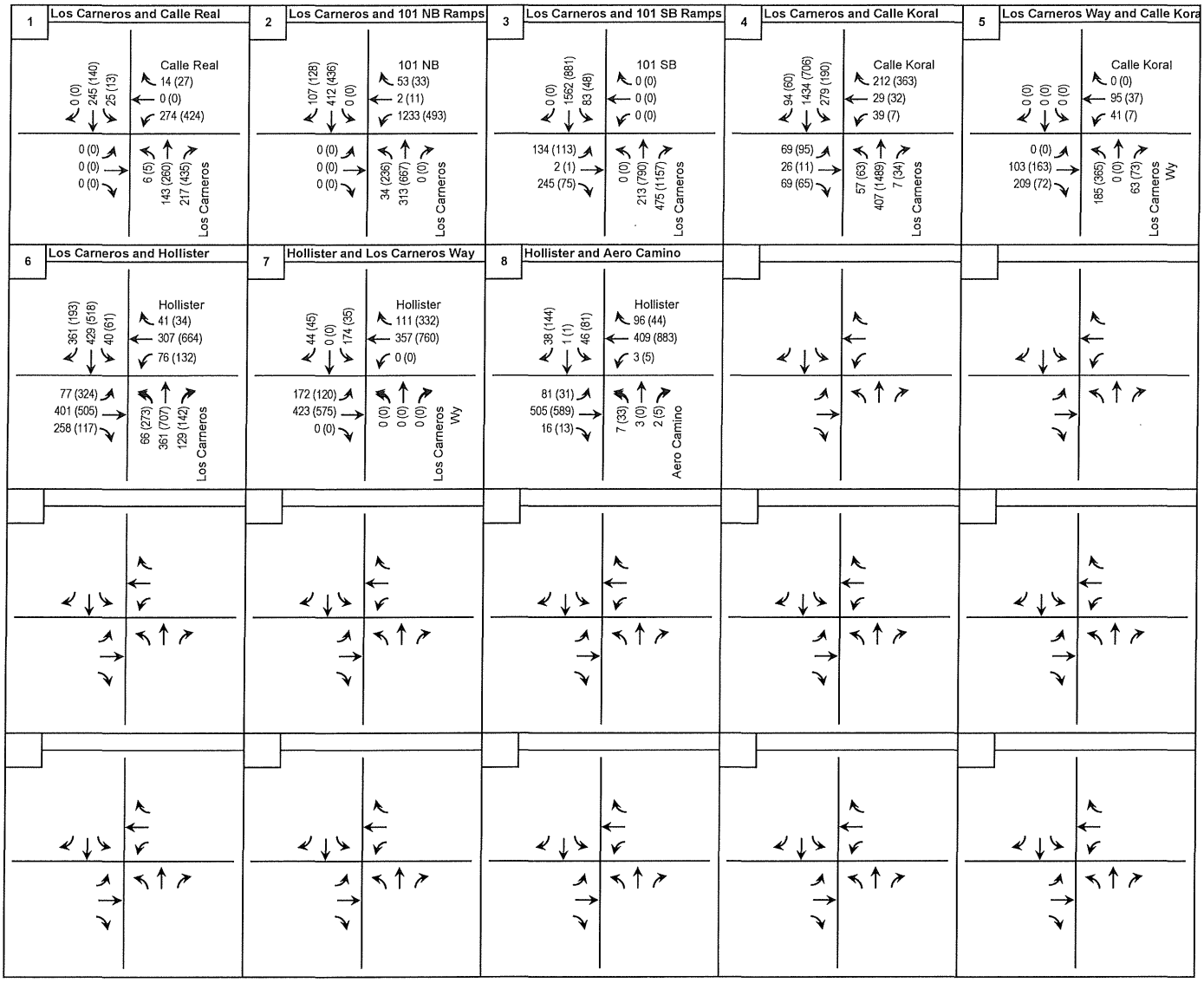
A.M. PEAK HOUR	EX	EX+PR	% INCREASE
EB-T	36	81	
EB-R	171	171	
WB-L	41	66	
WB-T	107	208	
NB-L	40	40	
NB-R	11	18	
TOTAL:	**406**	**584**	**44%**

P.M. PEAK HOUR	EX	EX+PR	% INCREASE
EB-T	71	159	
EB-R	42	42	
WB-L	7	18	
WB-T	79	122	
NB-L	225	225	
NB-R	43	65	
TOTAL:	**467**	**631**	**35%**

A.M. PEAK HOUR	CU	CU+PR	% INCREASE
EB-T	103	127	
EB-R	209	209	
WB-L	41	66	
WB-T	95	196	
NB-L	185	185	
NB-R	63	70	
TOTAL:	**696**	**853**	**23%**

P.M. PEAK HOUR	CU	CU+PR	% INCREASE
EB-T	163	251	
EB-R	72	72	
WB-L	7	18	
WB-T	37	80	
NB-L	365	365	
NB-R	73	95	
TOTAL:	**717**	**881**	**23%**

CITY OF GOLETA TRAFFIC MODEL DATA/CUMULATIVE PROJECT LIST



Key

31 (27) = AM(PM)

✓ = Movement Volume

File Information

CBS

Excel File = volmap8.xls

Turns (AM) = am.csv

Turns (PM) = pm.csv

10/9/2015 16:10

Kittelson & Associates
Willow Springs III, Goleta

Intersections 1 - 8
2035 Cumulative No Project

AM Peak Hour

Intersection	ID	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
Los Carneros and Calle Real	1	6	143	217	25	245	0	0	0	0	274	0	14
Los Carneros and 101 NB Ramps	2	34	313	0	0	412	107	0	0	0	1233	2	53
Los Carneros and 101 SB Ramps	3	0	213	475	83	1562	0	134	2	245	0	0	0
Los Carneros and Calle Koral	4	57	407	7	279	1434	94	69	26	69	39	29	212
Calle Koral and Los Carneros Way	5	185	0	63	0	0	0	0	103	209	41	95	0
Los Carneros and Hollister	6	66	361	129	40	429	361	77	401	258	76	307	41
Hollister and Los Carneros Way	7	0	0	0	174	0	44	172	423	0	0	357	111
Hollister and Aero Camino	8	7	3	2	46	1	38	81	505	16	3	409	96

PM Peak Hour

Intersection	ID	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
Los Carneros and Calle Real	1	5	260	435	13	140	0	0	0	0	424	0	27
Los Carneros and 101 NB Ramps	2	236	667	0	0	436	128	0	0	0	493	11	33
Los Carneros and 101 SB Ramps	3	0	790	1157	48	881	0	113	1	75	0	0	0
Los Carneros and Calle Koral	4	63	1489	34	190	706	60	95	11	65	7	32	363
Calle Koral and Los Carneros Way	5	365	0	73	0	0	0	0	163	72	7	37	0
Los Carneros and Hollister	6	273	707	142	61	518	193	324	505	117	132	664	34
Hollister and Los Carneros Way	7	0	0	0	35	0	45	120	575	0	0	760	332
Hollister and Aero Camino	8	33	0	5	81	1	144	31	589	13	5	883	44

City of Goleta

Cumulative Project List

Updated 9/1/15

Project	Address	APN	Land Use	Acreage	Project Description	Status
PROJECTS UNDER CONSTRUCTION						
Haskell's Landing (The Hideaway)	Hollister Avenue & Las Armas Road	079-210-049	Residential	14.23	101 residential units	Under construction
Goleta Valley Cottage Hospital	351 S. Patterson at Hollister Avenue	065-090-022; -028	Commercial	18.38	Hospital 93,090 sf Existing; 152,658 sf Approved; 59,568 sf Net New	Under construction
Cabrillo Business Park	6767 Hollister Avenue	073-450-005	Commercial	91.4	Business Park - New structures total 693,100 sf (R&D, self storage, service uses); 241,682 sf existing Pre-Development Plan; 934,800 sf total; *Under Approved Projects (Projects Under Construction), also see Discovery Self-Storage Case No.14-009-PCR, -LM and Pacific Beverage Case No. 14-070-PCR, -LLA, -OSP	Under construction
Westar (Hollister Village)	7000 Hollister Avenue (N/E corner of Glen Annie Road and Hollister)	073-030-020; -021	Residential and Commercial	23.55	266 residential units; Approx. 86,000 sf of commercial	Under construction
GVCH Medical Office Building Reconstruction	5333 Hollister Avenue	065-090-023	Commercial	2.17	Medical Office Building Demo Existing 41,224 sf; 52,000 sf Approved; 10,776 sf Net New	Under construction
Ice in Paradise	Santa Felicia Drive	073-440-022	Commercial	4.8	46,479 sf ice skating rink	Under construction
Village at Los Carneros	Adjacent to 71 South Los Carneros Road	073-330-024, -026, -027, -028, -029	Residential	43.14	465 units on 43.14 acres	Under construction
Rincon Palms Hotel (Hilton Garden Inn)	6868/6878 Hollister Avenue	073-140-004	Commercial	3.05	95,678 sf hotel; 138 rooms with meeting space	Under construction
Investec (Discovery Self-Storage) at Cabrillo Business Park	350 Coromar Drive and 6640 Discovery Drive	073-610-015, -016	Commercial	6.02	111,100 sf self-storage facility (Note: Square footage is already included within the overall Cabrillo Business Park Scope)	Under construction
Pacific Beverage at Cabrillo Business Park	SW Corner of Coromar Drive and Discovery Road	073-610-022, -023, -027, -029	Industrial	7.6	Includes a Lot Line Adjustment among 4 lots. On newly adjusted Lot 19, 2 new buildings will be constructed: a 93,780 sf office/warehouse building and a 3,200 sf truck maintenance/storage building.	Under construction

City of Goleta

Cumulative Project List

Updated 9/1/15

Project	Address	APN	Land Use	Acreage	Project Description	Status
APPROVED PROJECTS (NOT CONSTRUCTED)						
Islamic Society of SB	N/E Corner of Los Carneros and Calle Real	077-160-035	Commercial	0.59	6,183 sf building with prayer room, meeting area and 1 caretaker unit	Approved
Citrus Village	7388 Calle Real	077-490-043	Residential	1.02	10 residential units	Approved
Mariposa at Ellwood Shores	7760 Hollister Avenue	079-210-057	Commercial	2.95	62,481 sf assisted living (90 residents)	Approved
Schwann Self Storage	10 S. Kellogg Avenue	071-090-082	Industrial	2.06	111,730 sf self-storage facility	Approved
Marriott Residence Inn	6300 Hollister Avenue	073-050-020	Commercial	10.57	80,989 sf hotel (118 rooms)	Approved
Cortona Apartments	6830 Cortona Drive	073-140-016	Residential	8.82	176 residential units	Approved
Harvest Hill Ranch	880 Cambridge Drive	069-620-044	Residential	4.73	7 lot subdivision with net of 6 homes	Approved
Somera Medical Office Building	454 S. Patterson Avenue	065-090-013	Commercial	8	20,000 sf net new medical/dental office building	Approved

City of Goleta

Cumulative Project List

Updated 9/1/15

Project	Address	APN	Land Use	Acreage	Project Description	Status
PENDING PROJECTS						
Shelby	7400 Cathedral Oaks Road	077-530-019	Residential	14.38	60 residential units	Pending
Sturgeon Building	S/E Corner of Los Carneros and Calle Real	077-160-040	Commercial	0.53	6,046 sf retail/medical office	Pending (On Hold)
Kenwood Village	Calle Real w/o Calaveras Avenue	077-130-066, -019; 077-141-049	Residential	10	60 residential units	Pending
Saint George Mixed Use Project	5392 & 5400 Hollister Avenue	071-101-002; -015	Residential and Commercial	0.95	New 3-story mixed-use residential building; 4 new residential buildings with 2 units each.	Pending
Fairview Gardens	598 North Fairview Avenue	069-090-052	Agriculture	11.65	Farm Labor Camp Revision; Special Events Permit; and Sale of Ag related products grown offsite	Pending
Fuel Depot with Car Washes	370 Storke Road	073-100-008	Commercial	1	1,667 sf new drive-in carwash, self-serve car wash, gas fueling dispensers and manager's residence; Zizzo's Coffee building to remain	Pending
Old Town Industrial Center	891 S. Kellogg Avenue	071-170-074, -080, -083	Industrial	14.76	186,770 sf new Light Industrial with outdoor storage and 5,100 sf office building	Pending
Old Town Village	South Kellogg Avenue	071-130-023	Residential and Commercial	12.31	Mixed Use of 175 townhomes with shopkeeper and livework units	Pending
Heritage Ridge	North of Calle Koral and West of Los Carneros	073-060-031 thru -043	Residential	16.2	228 residential apartments and 132 senior apartments	Pending

PARKING SURVEY DATA AND DEMAND RATE CALCULATIONS

THE TOWBES GROUP					
RPMD Parking Space Analysis - Occupied Spaces Equation Spreadsheet - 7/25/12					
Property	Total Spaces	Dates Observed	Vacant Visitor Spaces	Vacant Reserved But Unassigned	Occupied Spaces
Cypress Meadows	111	7/14/2012	27	0	84
		7/15/2012	34	0	77
Rancho Franciscan	112	7/16/2012	6	0	106
		7/17/2012	7	0	105
Shepard Place	154	7/16/2012	10	3	141
		7/17/2012	3	3	148

THE TOWBES GROUP

RPMD PARKING SPACE ANALYSIS - 7/3/12

Property	Total Apartments	Carport/Reserved Spaces	Open Spaces	Handicap Spaces	Total Spaces	Dates Observed	Vacant Visitor Spaces	Occupancy	Bedrooms	Number of Apartments	Parking Spaces Required Per Current City of Goleta Zoning Code	Notes
Cypress Point	268	268	165	11	444	6/4/2012	5	96%	1 bedroom	104	104	
						6/5/2012	7		2 bedrooms	164	328	
									Visitor		54	
											486	
Ralston Courtyards	108	108	41	5	154	6/4/2012	10	94%	1 bedroom	84	84	
						6/5/2012	14		2 bedrooms	24	48	
									Visitor		22	
											154	
Encina Meadows	168	168	90	2	260	6/4/2012	38	95%	1 bedroom	103	103	
						6/5/2012	35		2 bedrooms	65	130	
									Visitor		34	
											267	
Pacific Oaks	183	189	43	3	235	6/6/2012	3	98%	1 bedroom	112	112	6 carport spaces are for rent
						6/7/2012	1		2 bedrooms	71	142	
									Visitor		37	
											291	
Patterson Place	168	169	42	1	212	6/6/2012	0	96%	1 bedroom	135	135	
						6/7/2012	0		2 bedrooms	33	66	
									Visitor		34	
											235	
Sumida Gardens	200	200	156	8	364	6/4/2012	37	98%	1 bedroom	60	60	
						6/5/2012	29		2 bedrooms	124	248	
									3 bedrooms	16	40	
									Visitor		40	
											388	
Willow Springs	235	236	248	10	494	5/2/2012	93	96%	1 bedroom	32	32	
						5/3/2012	93		2 bedrooms	147	294	
									3 bedrooms	56	140	
									Visitor		47	
											513	
Knollwood Meadows	128	182	30	8	220	6/5/2012	6	99%	1 bedroom	65	65	
						6/6/2012	3		2 bedrooms	63	126	
									Visitor		26	
											217	
Oceanwood Apartments	133	133	88	7	228	6/5/2012	30	92%	1 bedroom	80	80	
						6/6/2012	41		2 bedrooms	53	106	
									Visitor		27	
											213	

WILLOWSPRINGS PARKING SURVEY

DATE	TIME	AVAILABLE SPACES	VEHICLES			% OCCUPIED
			ON-SITE	ON-STREET	TOTAL	
12/8/2008	12:00 A.M.	449	375	7	382	85%
1/13/2009	6:00 A.M.	449	300	9	309	69%

ASSOCIATED TRANSPORTATION ENGINEERS
100 N. Hope Avenue, Suite 4, Santa Barbara, CA 93110 • (805) 687-4418 • (805) 682-8509-F

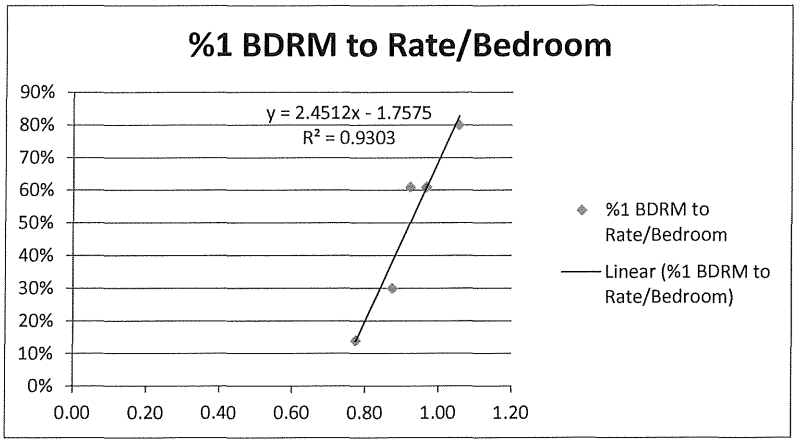
#07119 - LA SUMIDA GARDENS APARTMENTS
2010 PARKING SURVEYS

DATE	TIME	OCCUPIED SPACES	AVAILABLE SPACES	TOTAL SPACES	% OCCUPIED	VEHICLES ON-STREET
3/6/2013	12:00 AM	300	68	368	82%	7
3/7/2013	12:00 AM	301	67	368	82%	6
9/12/2012	**12:00 A.M.**	**303**	**65**	**368**	**82%**	**8**
9/13/2012	12:00 A.M.	298	70	368	81%	9
3/13/2012	12:00 AM	298	70	368	81%	8
3/14/2012	12:00 AM	301	67	368	82%	7
9/6/2011	11:00 P.M.	292	76	368	79%	6
9/7/2011	11:00 P.M.	287	81	368	78%	8
3/9/2011	11:00 P.M.	301	67	368	82%	6
3/10/2011	11:00 P.M.	286	82	368	78%	3
9/7/2010	10:30 PM	281	87	368	76%	7
9/8/2010	10:30 PM	293	75	368	80%	8

#12089.01 WILLOW SPRINGS NORTH PROJECT

GOLETA APARTMENT PARKING DEMAND RATES PER BEDROOM

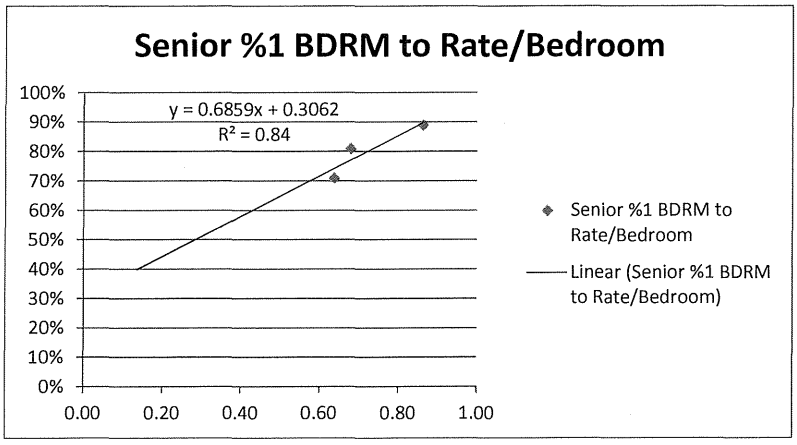
SITE	TOTAL UNITS	% 1 BDRM	BEDROOMS	PEAK DEMAND	RATE PER BEDROOM
WILLOW SPRINGS I	235	14%	494	382	0.77
SUMIDA GARDENS	200	30%	356	311	0.87
ENCINA MEADOWS	168	61%	233	225	0.97
PACIFIC OAKS	183	61%	254	234	0.92
PATTERSON PLACE	168	80%	201	212	1.05
AVERAGE RATE:			***1538***	***1364***	***0.89***



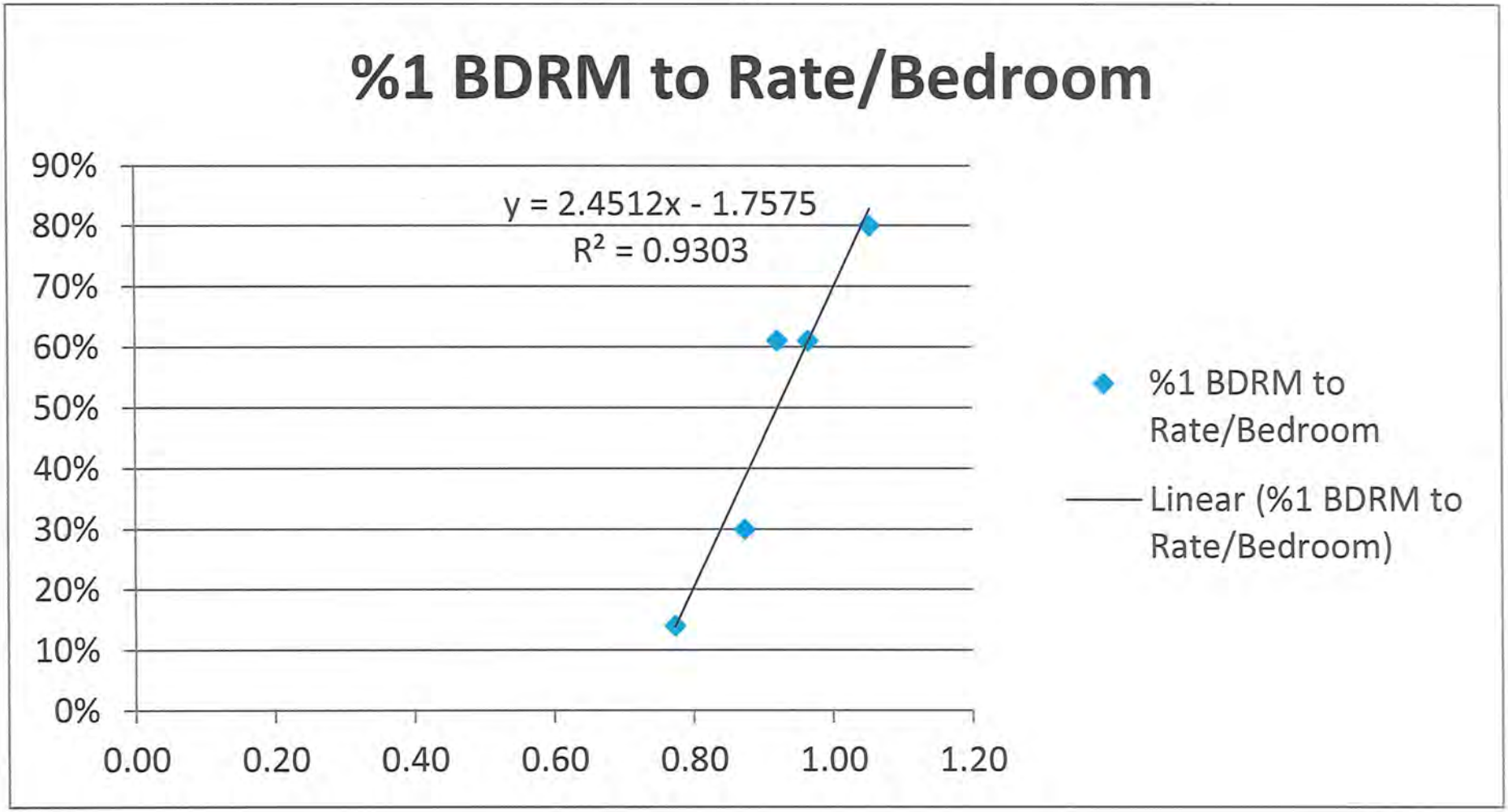
y = 2.4512x - 1.7575 y = 0.65 or 65%
0.65 = 2.4512x - 1.7575
0.65 + 1.7575 = 2.4512x
2.4075 = 2.4512x
x = 2.4075/2.4512 x = 0.98

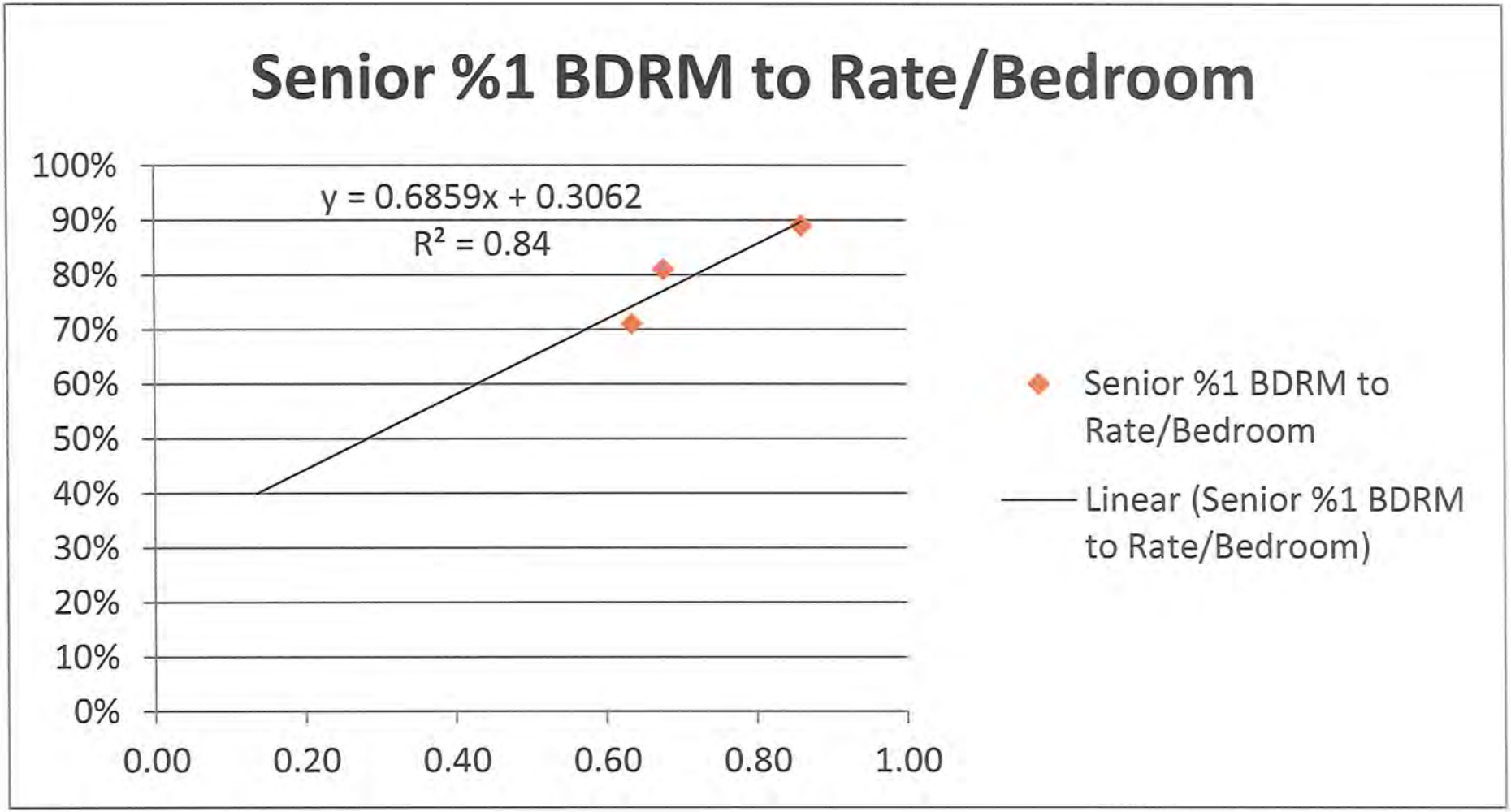
VENTURA SENIOR APARTMENT PARKING DEMAND RATES PER BEDROOM

SITE	TOTAL UNITS	% 1 BDRM	BEDROOMS	PEAK DEMAND	RATE PER BEDROOM
SHEPARD PLACE	169	71%	233	148	0.64
CYPRESS MEADOWS	104	81%	124	84	0.68
RANCHO FRANCISCAN	111	89%	123	106	0.86
AVERAGE RATE:			***480***	***338***	***0.70***



y = 0.6859x + 0.03062 y = 0.82 or 82%
0.82 = 0.6859x + 0.3062
0.82 - 0.3062 = 0.6859x
0.5138 = 0.6859x
x = 0.5138/0.6859 x = 0.75


%1 BDRM to Rate/Bedroom
y = 2.4512x - 1.7575
R² = 0.9303
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
0.00
0.20
0.40
0.60
0.80
1.00
1.20
%1 BDRM to Rate/Bedroom
Linear (%1 BDRM to Rate/Bedroom)


Senior %1 BDRM to Rate/Bedroom
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
y = 0.6859x + 0.3062
R² = 0.84
0.00
0.20
0.40
0.60
0.80
1.00
Senior %1 BDRM to Rate/Bedroom
Linear (Senior %1 BDRM to Rate/Bedroom)

SBCAG FREEWAY LOS DATA

U.S. 101

SEGMENT	AVG. DAILY TRIPS	A.M. PEAK HOUR				P.M. PEAK HOUR				# OF LANES (ONE DIRECTION)	PHF	TERRAIN	HEAVY VEHICLES			BASE FFS	LANE WIDTH	SHOULDER CLEARANCE	INT. DENSITY
		PEAK HOUR TRIPS		DENSITY/LOS		PEAK HOUR TRIPS		DENSITY/LOS					% TRUCK	% BUS	% RV				
		NB	SB	NB	SB	NB	SB	NB	SB										
South Coast																			
Bates-150	65,000	3,170	910	15.6 / B	6.4 / A	1,670	2,860	8.2 / A	14.0 / B	3	0.95	Flat	0.07	0.01	0.01	70 mph	12'	6'	0.67
150-Bailard	64,000	3,120	1,040	24.8 / C	5.1 / A	1,710	2,900	12.6 / B	14.2 / B	2 NB / 3 SB	0.95	Flat	0.07	0.01	0.01	70 mph	12'	6'	0.67
Bailard-Casitas Pass	65,800	3,210	1,070	25.8 / C	7.9 / A	1,900	2,840	14.0 / B	21.9 / C	2	0.95	Flat	0.07	0.01	0.01	70 mph	12'	6'	0.67
Casitas Pass-Linden	60,000	3,150	1,050	25.2 / C	7.7 / A	1,860	2,580	13.7 / B	19.5 / C	2	0.95	Flat	0.07	0.01	0.01	70 mph	12'	6'	0.83
Linden-Santa Monica	64,800	3,410	1,130	28.3 / D	8.3 / A	2,020	2,780	14.9 / B	21.3 / C	2	0.95	Flat	0.07	0.01	0.01	70 mph	12'	6'	0.83
Santa Monica-Padaro (North)	61,400	3,330	1,150	27.3 / D	8.5 / A	2,100	2,570	15.5 / B	19.4 / C	2	0.95	Flat	0.07	0.01	0.01	70 mph	12'	6'	0.67
Padaro (North)-Padaro (South)	63,800	3,130	1,340	24.9 / C	9.8 / A	2,040	2,810	15.0 / B	21.6 / C	2	0.95	Flat	0.07	0.01	0.01	70 mph	12'	6'	0.5
Padaro (South)-Evans	64,700	3,170	1,360	25.4 / C	10.0 / A	2,070	2,850	15.3 / B	22.0 / C	2	0.95	Flat	0.07	0.01	0.01	70 mph	12'	6'	0.67
Evans-Sheffield	66,500	3,260	1,400	15.3 / B	10.3 / A	2,120	2,930	10.4 / A	22.8 / C	3 NB / 2 SB	0.95	Rolling	0.07	0.01	0.01	70 mph	12'	6'	0.67
Sheffield-San Ysidro	68,100	3,220	1,550	29.1 / D	12.3 / B	2,180	3,000	17.5 / B	26.2 / D	2	0.95	Rolling	0.07	0.01	0.01	70 mph	12'	6'	0.67
San Ysidro-Olive Mill	72,400	3,280	1,720	26.5 / D	12.6 / B	2,350	3,150	17.4 / B	25.0 / C	2	0.95	Flat	0.07	0.01	0.01	70 mph	12'	6'	0.67
Olive Mill-Cabrillo	67,300	2,590	2,120	19.2 / C	15.4 / B	2,120	2,930	15.4 / B	22.4 / C	2	0.95	Flat	0.06	0.01	0.01	70 mph	12'	6'	0.83
Cabrillo-Milpas	66,500	2,450	2,270	12.7 / B	11.7 / B	1,980	2,940	10.2 / A	15.2 / B	3	0.95	Flat	0.05	0.01	0.01	70 mph	12'	6'	1.17
Milpas-Garden	85,700	3,210	2,960	17.0 / B	15.7 / B	3,540	2,890	18.8 / C	15.3 / B	3	0.92	Flat	0.03	0.01	0.01	70 mph	12'	6'	1
Garden-Castillo	95,200	4,010	2,840	21.5 / C	15.0 / B	4,020	3,120	21.6 / C	16.5 / B	3	0.92	Flat	0.03	0.01	0.01	70 mph	12'	6'	1
Castillo-Carrillo	104,000	3,760	3,620	20.0 / C	19.2 / C	3,900	3,900	20.8 / C	20.8 / C	3	0.92	Flat	0.03	0.01	0.01	70 mph	12'	6'	1
Carrillo-Mission	119,000	4,380	4,550	23.9 / C	25.0 / C	4,760	4,760	26.6 / D	26.6 / D	3	0.92	Flat	0.03	0.01	0.01	70 mph	12'	6'	1.17
Mission-Las Positas	136,000	5,020	5,310	28.6 / D	31.1 / D	5,490	5,600	32.8 / D	33.9 / D	3	0.92	Flat	0.02	0.01	0.01	70 mph	12'	6'	1.3
Las Positas-La Cumbre	130,000	5,330	5,330	31.1 / D	31.1 / D	5,530	5,520	32.9 / D	32.8 / D	3	0.92	Flat	0.02	0.01	0.01	70 mph	12'	6'	1.17
La Cumbre-154	127,000	5,300	5,080	20.2 / C	19.2 / C	5,660	5,510	21.9 / C	21.2 / C	4	0.92	Flat	0.02	0.01	0.01	70 mph	12'	6'	0.83
154-El Sueno	119,000	4,880	4,880	26.5 / D	26.5 / D	5,060	5,060	27.9 / D	27.9 / D	3	0.92	Flat	0.02	0.01	0.01	70 mph	12'	6'	0.83
El Sueno-Turnpike	116,000	4,550	4,730	24.0 / C	25.3 / C	4,440	5,420	23.2 / C	31.2 / D	3	0.92	Flat	0.02	0.01	0.01	70 mph	12'	6'	0.83
Turnpike-Rte 217	112,000	4,140	4,480	21.2 / C	23.5 / C	3,720	5,580	18.7 / C	32.8 / D	3	0.92	Flat	0.02	0.01	0.01	70 mph	12'	6'	0.83
Rte 217-Fairview	79,200	3,030	3,150	15.0 / B	15.6 / B	3,030	3,460	15.0 / B	17.3 / B	3	0.92	Flat	0.03	0.01	0.01	70 mph	12'	6'	0.83
Fairview-Los Carneros	71,100	2,510	2,820	19.2 / C	22.2 / C	2,920	2,910	23.2 / C	23.1 / C	2	0.92	Flat	0.05	0.01	0.01	70 mph	12'	6'	0.83
Los Carneros-Storke	63,000	1,640	2,700	12.4 / B	13.6 / B	2,920	2,210	23.5 / C	11.1 / B	2 NB / 3 SB	0.92	Flat	0.07	0.01	0.01	70 mph	12'	6'	0.83
Storke-Hollister	34,700	730	1,350	5.5 / A	10.2 / A	1,670	1,110	12.6 / B	8.4 / A	2	0.92	Flat	0.08	0.01	0.01	75 mph	12'	6'	0.5
Hollister-El Capitan	31,000					1,570	850	13.8 / B	7.5 / A	2	0.88	Rolling	0.09	0.01	0.01	75 mph	12'	6'	0.29
El Capitan-Rte. 1	29,700					1,520	730	13.2 / B	6.3 / A	2	0.88	Rolling	0.09	0.01	0.01	75 mph	12'	6'	0.13
North County																			
Rte. 1-La Lata Pl.	22,200					1,010	670	7.2 / A	7.2 / A	3 NB / 2 SB	0.88	Mountainous	0.11	0.01	0.01	75 mph	12'	6'	0.29
La Lata Pl.-Santa Rosa	22,200					1,010	670	11.1 / B	4.9 / A	2 NB / 3 SB	0.88	Mountainous	0.12	0.01	0.01	75 mph	12'	6'	0.29
Santa Rosa-Rte. 246	20,300					930	620	8.4 / A	5.6 / A	2	0.88	Rolling	0.12	0.01	0.01	75 mph	12'	6'	0.5
Rte 246-N. Buellton I/C	22,900					820	540	7.4 / A	4.9 / A	2	0.88	Rolling	0.12	0.01	0.01	75 mph	12'	6'	0.5
N. Buellton I/C-Rte. 154	27,900					870	670	7.8 / A	6.0 / A	2	0.88	Rolling	0.12	0.01	0.01	75 mph	12'	6'	0.2
Rte. 154-Rte. 135	26,400					1,050	850	9.2 / A	7.5 / A	2	0.88	Rolling	0.1	0.01	0.01	75 mph	12'	6'	0.24
Rte. 135-Clark	36,500					1,000	820	8.9 / A	7.3 / A	2	0.88	Rolling	0.11	0.01	0.01	75 mph	12'	6'	0.185
Clark-Santa Maria Way	43,000					1,380	1,180	11.1 / B	9.5 / A	2	0.92	Rolling	0.07	0.01	0.01	75 mph	12'	6'	0.33
Santa Maria Way-Betteravia	54,100					1,650	1,400	8.9 / A	7.5 / A	3	0.92	Rolling	0.07	0.01	0.01	70 mph	12'	6'	0.5
Betteravia-Stowell	59,300					2,070	1,830	10.3 / A	9.1 / A	3	0.92	Flat	0.05	0.01	0.01	70 mph	12'	6'	0.83
Stowell-Rte. 166	57,400					2,290	2,040	11.4 / B	10.1 / A	3	0.92	Flat	0.05	0.01	0.01	70 mph	12'	6'	0.83
Rte. 166-Donovan	54,300					2,210	2,040	11.0 / A	10.1 / A	3	0.92	Flat	0.05	0.01	0.01	70 mph	12'	6'	0.83
Donovan-Rte. 135	61,300					2,120	1,950	10.5 / A	9.7 / A	3	0.92	Flat	0.05	0.01	0.01	70 mph	12'	6'	0.83
Rte. 135-SB/SLO County Line	65,000					2,350	2,250	17.7 / B	16.9 / B	2	0.92	Flat	0.05	0.01	0.01	70 mph	12'	6'	0.67

MEMORANDUM

To:	Chris Bersbach Rincon Consultants, Inc.	Date:	November 30, 2015
From:	Clare Look-Jaeger, P.E. CL-Jaeger Alfred Ying, P.E., PTP ACY. LLG, Engineers	LLG Ref:	1-15-4119-1
Subject:	Pre-Construction Soil Removal Phase Traffic Impact Analysis – Heritage Ridge Project, Goleta, California		

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This memorandum has been prepared by Linscott, Law & Greenspan, Engineers (LLG) to summarize the truck traffic analysis during the pre-construction soil removal phase of the proposed Heritage Ridge project. The proposed project site is located on the northwest side of Camino Vista north of Calle Koral in the City of Goleta, California. The proposed project consists of the development of 132 senior apartment units, 228 apartment units, and a two-acre park. The project site is currently vacant. Vehicular access to the proposed project site is planned to be provided via three driveways on Camino Vista. A total of 510 parking spaces would be provided by the project. This would include 152 parking spaces for the senior apartments, 345 parking spaces for the apartments, and 13 parking spaces for the park. The Updated Traffic, Circulation and Parking Study, prepared by Associated Transportation Engineers (ATE), dated October 30, 2015, has been submitted to the City of Goleta.

The following sections summarize a review of potential traffic impacts during the proposed project's pre-construction soil removal phase. Based on information provided in the project applicant's grading plan, the amount of stockpiled dirt on-site totals 293,100 cubic yards (cy). Of the 293,100 cy, a total of 115,000 cy of soil is expected to be exported off-site prior to the construction of the proposed project.

Project Trip Generation

Traffic generation is expressed in vehicle trip ends, defined as one-way vehicular movements, either entering or exiting the generating land use. Trip generation equations and/or rates provided in the ITE *Trip Generation Manual* publication[1] were not utilized to forecast traffic generation during the soil removal phase, as the ITE document does not contain trip rates for specifically this type of expected short term hauling operation. Therefore, the project trip generation forecast was derived based on the development of employee and truck forecasts given the expected hauling capacities as well as the application of passenger car equivalency (PCE) factors, as described more fully below.

Traffic volumes expected to be generated by the haul trucks during the pre-construction soil removal phase were based on coordination with City of Goleta staff. The forecast of employee vehicle trips was provided and accounts for the employees that will be on-site during the soil removal phase. Three inbound trips during the AM

[1] *Trip Generation Manual*, Institute of Transportation Engineers, 9th Edition, 2012.

peak hour and three outbound trips during the PM peak hour are anticipated for the employees.

In developing the forecast of truck trip generation, several factors were taken into consideration:

- Hours of Hauling Operation (8:00 AM to 5:00 PM on weekdays)
- Capacity of Haul Trucks (9 or 20 cubic yards per truck)
- Application of PCE Factors (2.0 or 3.0)
- Amount of Anticipated Export (115,000 cy)

Based on information provided by the City, a total of 12 inbound and 12 outbound truck trips per hour are expected using trucks with a hauling capacity of 9 cubic yards while a total of six inbound and six outbound truck trips per hour are expected using trucks with a 20 cubic yard hauling capacity. In order to account for the affect that trucks have on overall intersection operations, Passenger Car Equivalency (PCE) factors were accounted for in the analysis of potential short-term traffic impacts. Based on a review of the size of haul trucks expected to be utilized, a PCE factor of 2.0 or 3.0 was incorporated into the traffic analysis (i.e., it is assumed that a single 9 cubic yard haul truck has the same overall affect on traffic operations as two passenger cars and that a single 20 cubic yard haul truck has the same overall affect on traffic operations as three passenger cars). This assumption is conservative and accounts for the heavy vehicle type and slower speeds when fully loaded. The traffic generation forecast for the proposed project is summarized in ***Table 1***.

As presented in *Table 1*, using haul trucks with a capacity of 9 cubic yards, the proposed short-term soil removal phase is expected to generate 51 PCE-adjusted vehicle trips (27 inbound trips and 24 outbound trips) during the weekday AM peak hour, 51 PCE-adjusted vehicle trips (24 inbound trips and 27 outbound trips) during the weekday PM peak hour, and 390 PCE-adjusted daily trip ends during a typical weekday (195 inbound trips and 195 outbound trips). As presented in *Table 1*, using haul trucks with a capacity of 20 cubic yards, the proposed short-term soil removal phase is expected to generate 39 PCE-adjusted vehicle trips (21 inbound trips and 18 outbound trips) during the weekday AM peak hour, 39 PCE-adjusted vehicle trips (18 inbound trips and 21 outbound trips) during the weekday PM peak hour, and 294 PCE-adjusted daily trip ends during a typical weekday (147 inbound trips and 147 outbound trips). By comparison, using haul trucks with a capacity of 9 cubic yards will provide a slightly higher and more conservative assessment of potential project trip generation.

Project Trip Distribution and Assignment

Haul trucks are anticipated to utilize the US 101 Freeway to access the project site via the Los Carneros Road interchange onto Calle Koral and Camino Vista. Based on information provided by the City, 50% of the haul trucks will access the US 101

Table 1
PROJECT TRIP GENERATION DURING PRE-CONSTRUCTION SOIL REMOVAL PHASE [1]

LAND USE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]		
		IN	OUT	TOTAL	IN	OUT	TOTAL
[A] Employees	6	3	0	3	0	3	3
[B] 9-cy Truck Trips (unadjusted) [3]	192	12	12	24	12	12	24
[C] 20-cy Truck Trips (unadjusted) [4]	96	6	6	12	6	6	12
[D] PCE Adjusted 9-cy Truck Trips [5]	384	24	24	48	24	24	48
[E] PCE Adjusted 20-cy Truck Trips [6]	288	18	18	36	18	18	36
Net Increase with 9-CY Trucks ([A]+[D])	**390**	**27**	**24**	**51**	**24**	**27**	**51**
Net Increase with 20-CY Trucks ([A]+[E])	**294**	**21**	**18**	**39**	**18**	**21**	**39**

[1] Source: Based on coordination with City of Goleta and Rincon Consultants, Inc. (a total of 115,000 cubic yard [cy] of soil to be exported).

[2] Trips are one-way traffic movements, entering or leaving.

[3] Peak hour and daily truck trips were derived based on the following, using 9-cy capacity per haul truck:
12 trucks inbound / 12 trucks outbound per hour between 8:00 am and 5:00 pm on weekdays.
Daily Truck Trips = 24 Peak Hour Truck Trips x 8 hours = 192 total truck trips per day (i.e., 96 inbound trips + 96 outbound trips).

[4] Peak hour and daily truck trips were derived based on the following, using 20-cy capacity per haul truck:
6 trucks inbound / 6 trucks outbound per hour between 8:00 am and 5:00 pm on weekdays.
Daily Truck Trips = 12 Peak Hour Truck Trips x 8 hours = 96 total truck trips per day (i.e., 48 inbound trips + 48 outbound trips).

[5] A passenger car equivalency (PCE) factor of 2.0 was employed for analysis purposes. This accounts for the assumption that a single 9 cubic yard capacity haul truck has the same overall affect on intersection traffic operations as 2.0 passenger cars.

[6] A passenger car equivalency (PCE) factor of 3.0 was employed for analysis purposes. This accounts for the assumption that a single 20 cubic yard capacity haul truck has the same overall affect on intersection traffic operations as 3.0 passenger cars.

Freeway to/from the south while the remaining 50% of the haul trucks will access the US 101 Freeway to/from the north. The following study intersections have been identified for evaluation (note: the intersection numbers/references coincide with the ATE study):

2. Los Carneros Road/US 101 Northbound Ramps
3. Los Carneros Road/US 101 Southbound Ramps
4. Los Carneros Road/Calle Koral
5. Los Carneros Way/Calle Koral

Based on a review of the existing traffic count data included in the ATE study, the highest one-hour total of overall traffic volumes traversing through the above study intersections generally occurs between 7:45 AM and 8:45 AM during the morning commute peak period and between 4:45 PM and 5:45 PM during the afternoon commute peak period. As stated previously, the anticipated hours of truck hauling operations during the pre-construction soil removal phase will begin at 8:00 AM and end at 5:00 PM on weekdays. Therefore, this traffic analysis provides a conservative assessment of potential impacts since only a portion of the truck hauling activities will overlap with the actual 7:45-8:45 AM and 4:45-5:45 PM commute peak hours.

Traffic Analysis

The traffic impact analyses were prepared for the study intersections using the Intersection Capacity Utilization (ICU) and the Highway Capacity Manual (HCM) methodologies as well as the City of Goleta's significant traffic impact criteria, consistent with the ATE study. Additionally, the existing and cumulative without project AM and PM peak hour traffic volumes were obtained from the ATE study. ***Tables 2*** and ***3*** summarize the traffic analysis assuming utilization of haul trucks with a capacity of 9 cubic yards for the existing and cumulative analysis conditions, respectively. ***Tables 4*** and ***5*** summarize the traffic analysis assuming utilization of haul trucks with a capacity of 20 cubic yards for the existing and cumulative analysis conditions, respectively. The corresponding weekday AM and PM peak hour level of service data worksheets are contained in ***Attachment A***.

Existing With Project Conditions

As shown in column [2] of *Table 2* (which assumes utilization of 9-cy haul trucks) and column [2] of *Table 4* (which assumes utilization of 20-cy haul trucks), application of the City of Goleta's threshold criteria to the respective "Existing With Project" scenarios indicates that the pre-construction soil removal phase is not expected to create any short-term/temporary significant traffic impacts at the four study intersections. Incremental but less than significant impacts are noted at the intersections.

Table 2
SUMMARY OF VOLUME TO CAPACITY RATIOS AND LEVELS OF SERVICE
AM AND PM PEAK HOURS
Pre-Construction Soil Removal Phase Using 9 Cubic-Yard Haul Trucks

			[1]		[2]				
NO.	INTERSECTION	PEAK HOUR	EXISTING V/C or Delay	LOS	EXISTING W/ PROJECT V/C or Delay	LOS	CHANGE IN V/C [(2)-(1)]	ADDED PROJECT TRIPS	PROJECT IMPACT
2	Los Carneros Road/ US-101 NB Ramps	AM	0.54	A	0.56	A	0.012	26	NO
		PM	0.49	A	0.50	A	0.013	26	NO
3	Los Carneros Road/ US-101 SB Ramps	AM	0.55	A	0.55	A	0.004	51	NO
		PM	0.72	C	0.73	C	0.009	51	NO
4	Los Carneros Road/ Calle Koral	AM	0.46	A	0.47	A	0.010	51	NO
		PM	0.51	A	0.54	A	0.032	51	NO
5	Los Carneros Way/ Calle Koral [a]	AM	8.4	A	8.5	A	0.000	51	NO
		PM	10.5	B	10.7	B	0.015	51	NO
		AM	0.25		0.25				
		PM	0.31		0.33				

[a] Two-Way Stop Control intersection.

Table 3
SUMMARY OF VOLUME TO CAPACITY RATIOS AND LEVELS OF SERVICE
AM AND PM PEAK HOURS
Pre-Construction Soil Removal Phase Using 9 Cubic-Yard Haul Trucks

NO.	INTERSECTION	PEAK HOUR	[1] CUMULATIVE W/O PROJECT V/C or Delay	[1] LOS	[2] CUMULATIVE WITH PROJECT V/C or Delay	[2] LOS	CHANGE IN V/C [(2)-(1)]	CUMUL. IMPACT
2	Los Carneros Road/ US-101 NB Ramps	AM	0.68	B	0.69	B	0.012	NO
		PM	0.57	A	0.58	A	0.013	NO
3	Los Carneros Road/ US-101 SB Ramps	AM	0.67	B	0.68	B	0.005	NO
		PM	0.84	D	0.85	D	0.008	NO
4	Los Carneros Road/ Calle Koral	AM	0.70	B	0.70	B	0.000	NO
		PM	0.66	B	0.69	B	0.032	NO
5	Los Carneros Way/ Calle Koral [a]	AM	11.0	B	11.3	B	0.000	NO
		PM	14.8	B	15.8	C	0.015	NO
		AM	0.40		0.40			
		PM	0.48		0.49			

[a] Two-Way Stop Control intersection.

Table 4
SUMMARY OF VOLUME TO CAPACITY RATIOS AND LEVELS OF SERVICE
AM AND PM PEAK HOURS
Pre-Construction Soil Removal Phase Using 20 Cubic-Yard Haul Trucks

NO.	INTERSECTION	PEAK HOUR	[1] EXISTING V/C or Delay	LOS	[2] EXISTING W/ PROJECT V/C or Delay	LOS	CHANGE IN V/C [(2)-(1)]	ADDED PROJECT TRIPS	PROJECT IMPACT
2	Los Carneros Road/	AM	0.54	A	0.55	A	0.009	20	NO
	US-101 NB Ramps	PM	0.49	A	0.50	A	0.010	20	NO
3	Los Carneros Road/	AM	0.55	A	0.55	A	0.003	39	NO
	US-101 SB Ramps	PM	0.72	C	0.72	C	0.007	39	NO
4	Los Carneros Road/	AM	0.46	A	0.47	A	0.006	39	NO
	Calle Koral	PM	0.51	A	0.54	A	0.024	39	NO
5	Los Carneros Way/	AM	8.4	A	8.5	A	0.000	39	NO
	Calle Koral [a]	PM	10.5	B	10.6	B	0.011	39	NO
		AM	0.25		0.25				
		PM	0.31		0.33				

[a] Two-Way Stop Control intersection.

Table 5
SUMMARY OF VOLUME TO CAPACITY RATIOS AND LEVELS OF SERVICE
AM AND PM PEAK HOURS
Pre-Construction Soil Removal Phase Using 20 Cubic-Yard Haul Trucks

NO.	INTERSECTION	PEAK HOUR	[1] CUMULATIVE W/O PROJECT V/C or Delay	[1] LOS	[2] CUMULATIVE WITH PROJECT V/C or Delay	[2] LOS	CHANGE IN V/C [(2)-(1)]	CUMUL. IMPACT
2	Los Carneros Road/ US-101 NB Ramps	AM	0.68	B	0.69	B	0.009	NO
		PM	0.57	A	0.58	A	0.010	NO
3	Los Carneros Road/ US-101 SB Ramps	AM	0.67	B	0.68	B	0.004	NO
		PM	0.84	D	0.84	D	0.006	NO
4	Los Carneros Road/ Calle Koral	AM	0.70	B	0.70	B	0.000	NO
		PM	0.66	B	0.68	B	0.024	NO
5	Los Carneros Way/ Calle Koral [a]	AM	11.0	B	11.3	B	0.000	NO
		PM	14.8	B	15.5	C	0.011	NO
		AM	0.40		0.40			
		PM	0.48		0.49			

[a] Two-Way Stop Control intersection.

For informational purposes, a supplemental analysis was also prepared to evaluate the Los Carneros Road/Calle Koral intersection by incorporating the traffic associated with the Village at Los Carneros project and the construction of the west leg of this intersection. ***Table 6*** summarizes the corresponding traffic analyses for the existing and existing with project conditions. The corresponding weekday AM and PM peak hour level of service data worksheets are also contained in *Attachment A.* As shown in column [2] of *Table 6* (which assumes utilization of 9-cy haul trucks) and column [3] of *Table 6* (which assumes utilization of 20-cy haul trucks), application of the City of Goleta's threshold criteria to the respective "Existing With Project" scenarios indicates that the pre-construction soil removal phase is not expected to create any short-term/temporary significant traffic impacts at the Los Carneros Road/Calle Koral intersection. Incremental but less than significant impacts are noted at the intersection.

Cumulative With Project Conditions

As shown in column [2] of *Table 3* (which assumes utilization of 9-cy haul trucks) and column [2] of *Table 5* (which assumes utilization of 20-cy haul trucks), application of the City of Goleta's threshold criteria to the respective "Cumulative With Project" scenarios indicates that the pre-construction soil removal phase is not expected to create any short-term/temporary significant contribution to cumulative impacts at the four study intersections. Incremental but less than significant impacts are noted at the study intersections under the respective cumulative with project conditions.

Potential Use of Aero Camino During the Pre-Construction Soil Removal Phase

Based on the recommended traffic distribution pattern provided previously by the City as well as LLG's review of the surrounding roadway system, haul trucks associated with the pre-construction soil removal operation have been distributed and assigned to utilize Camino Vista, Calle Koral, and Los Carneros Road for access to and from the US 101 Freeway. As these roadways offer the most direct path of travel between the project site and the US 101 Freeway, use of Aero Camino east of the project site for haul truck access is not expected. Nonetheless, it is recommended that the truck operators be notified such that all haul trucks associated with the pre-construction soil removal phase be restricted from using Aero Camino for access.

Please feel free to contact us at 626.796.2322, with any questions or comments regarding the pre-construction soil removal phase traffic impact analyses prepared and summarized in this memorandum.

c: File

Table 6
SUMMARY OF VOLUME TO CAPACITY RATIOS AND LEVELS OF SERVICE - AM AND PM PEAK HOURS
ANALYSIS OF LOS CARNEROS ROAD/CALLE KORAL INTERSECTION INCLUDING THE WEST LEG
Pre-Construction Soil Removal Phase

			[1]		[2]					[3]				
NO.	INTERSECTION	PEAK HOUR	EXISTING V/C	LOS	EXISTING W/ PROJECT (Utilizing 9-CY Capacity Trucks) V/C	LOS	CHANGE IN V/C [(2)-(1)]	ADDED PROJECT TRIPS	PROJECT IMPACT	EXISTING W/ PROJECT (Utilizing 20-CY Capacity Trucks) V/C	LOS	CHANGE IN V/C [(3)-(1)]	ADDED PROJECT TRIPS	PROJECT IMPACT
4	Los Carneros Road/ Calle Koral [a]	AM	0.59	A	0.59	A	0.000	51	NO	0.59	A	0.000	39	NO
		PM	0.57	A	0.60	A	0.032	51	NO	0.59	A	0.024	39	NO

[a] Based on input provided by the City, for informational purposes the Existing and Existing With Project analysis conditions also include traffic associated with the completion/occupancy of the Village at Los Carneros Project and the construction of the west leg of this intersection.

ATTACHMENT A

ICU DATA WORKSHEETS
WEEKDAY AM AND PM PEAK HOURS

HCS DATA WORKSHEETS
WEEKDAY AM AND PM PEAK HOURS

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INTERSECTION CAPACITY UTILIZATION

Los Carneros Road @ US-101 NB Ramps

N-S St: Los Carneros Road
E-W St: US-101 NB Ramps
Project: Heritage Ridge Residential Project/1-15-4119-1
File: ICU2

Peak hr: AM

Date: 11/25/2015
Date of Count: 2014

Utilizing trucks with 9-cubic yard capacity

	EXIST. TRAFFIC			EXIST. WITH PROJECT				EXIST. W/PROJECT + MITIGATION				CUMULATIVE W/O PROJECT				CUMULATIVE W/ PROJECT			
	1	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	21	1600	0.013 *	12	33	1600	0.021 *	0	33	1600	0.021 *	13	34	1600	0.021 *	12	46	1600	0.029 *
Nb Thru	276	3200	0.086	0	276	3200	0.086	0	276	3200	0.086	37	313	3200	0.098	0	313	3200	0.098
Nb Right	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Sb Left	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Sb Thru	423	3200	0.165 *	0	423	3200	0.165 *	0	423	3200	0.165 *	-11	412	3200	0.161 *	0	412	3200	0.161 *
Sb Right [3]	106	0	-	0	106	0	-	0	106	0	-	-3	103	0	-	0	103	0	-
Eb Left	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Eb Thru	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Eb Right	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Wb Left	805	0	0.252	14	819	0	0.256	0	819	0	0.256	428	1233	0	0.385	14	1247	0	0.390
Wb Thru	2	3200	0.265 *	0	2	3200	0.269 *	0	2	3200	0.269 *	0	2	3200	0.398 *	0	2	3200	0.403 *
Wb Right [4	40	0	-	0	40	0	-	0	40	0	-	0	40	0	-	0	40	0	-
Yellow Allowance:			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.543				0.555				0.555				0.681				0.693
LOS			A				A				A				B				B

02:18 PM

** Key conflicting movement as a part of ICU*

1 Counts conducted by Quality Counts. Existing and cumulative without project traffic volumes obtained from the Heritage Ridge Project Updated Traffic Circulation and Parking Study (prepared by ATE, 10-30-15).

2 Capacity expressed in veh/hour of green

3 4% of southbound right-turns were made as Right-Turn-On-Red and have therefore been excluded from the movement volume and corresponding capacity calculations.

4 25% of westbound right-turns were made as Right-Turn-On-Red and have therefore been excluded from the movement volume and corresponding capacity calculations.

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INTERSECTION CAPACITY UTILIZATION

Los Carneros Road @ US-101 NB Ramps
Peak hr: PM

N-S St: Los Carneros Road
E-W St: US-101 NB Ramps
Project: Heritage Ridge Residential Project/1-15-4119-1
File: ICU2

Date: 11/25/2015
Date of Count: 2014

Utilizing trucks with 9-cubic yard capacity

	EXIST. TRAFFIC			EXIST. WITH PROJECT				EXIST. W/PROJECT + MITIGATION				CUMULATIVE W/O PROJECT				CUMULATIVE W/ PROJECT			
	1	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	236	1600	0.148 *	14	250	1600	0.156 *	0	250	1600	0.156 *	0	236	1600	0.148 *	14	250	1600	0.156 *
Nb Thru	618	3200	0.193	0	618	3200	0.193	0	618	3200	0.193	49	667	3200	0.208	0	667	3200	0.208
Nb Right	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Sb Left	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Sb Thru	250	3200	0.100 *	0	250	3200	0.100 *	0	250	3200	0.100 *	186	436	3200	0.163 *	0	436	3200	0.163 *
Sb Right [3]	71	0	-	0	71	0	-	0	71	0	-	13	84	0	-	0	84	0	-
Eb Left	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Eb Thru	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Eb Right	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Wb Left	436	0	0.136	12	448	0	0.140	0	448	0	0.140	57	493	0	0.154	12	505	0	0.158
Wb Thru	7	3200	0.141 *	0	7	3200	0.145 *	0	7	3200	0.145 *	4	11	3200	0.161 *	0	11	3200	0.165 *
Wb Right [4	9	0	-	0	9	0	-	0	9	0	-	3	12	0	-	0	12	0	-
Yellow Allowance:			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.489				0.502				0.502				0.571				0.584
LOS			A				A				A				A				A

02:18 PM

** Key conflicting movement as a part of ICU*
1 Counts conducted by National Data & Surveying Services. Existing and cumulative w/o project volumes obtained from Heritage Ridge Project Updated Traffic Circulation and Parking Study (by ATE, 10-30-15).
2 Capacity expressed in veh/hour of green
3 34% of southbound right-turns were made as Right-Turn-On-Red and have therefore been excluded from the movement volume and corresponding capacity calculations.
4 63% of westbound right-turns were made as Right-Turn-On-Red and have therefore been excluded from the movement volume and corresponding capacity calculations.

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INTERSECTION CAPACITY UTILIZATION

Los Carneros Road @ US-101 SB Ramps

N-S St: Los Carneros Road
E-W St: US-101 SB Ramps
Project: Heritage Ridge Residential Project/1-15-4119-1
File: ICU3

Peak hr: AM

Date: 11/25/2015
Date of Count: 2014

Utilizing trucks with 9-cubic yard capacity

	EXIST. TRAFFIC			EXIST. WITH PROJECT				EXIST. W/PROJECT + MITIGATION				CUMULATIVE W/O PROJECT				CUMULATIVE W/ PROJECT			
	1	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Nb Thru	160	3200	0.050	12	172	3200	0.054	0	172	3200	0.054	53	213	3200	0.067	12	225	3200	0.070
Nb Right [3]	286	1600	0.179	12	298	1600	0.186	0	298	1600	0.186	94	380	1600	0.238	12	392	1600	0.245
Sb Left	72	1600	0.045	0	72	1600	0.045	0	72	1600	0.045	11	83	1600	0.052	0	83	1600	0.052
Sb Thru	1168	3200	0.365 *	14	1182	3200	0.369 *	0	1182	3200	0.369 *	394	1562	3200	0.488 *	14	1576	3200	0.493 *
Sb Right	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Eb Left	134	0	0.084	0	134	0	0.084	0	134	0	0.084	0	134	0	0.084	0	134	0	0.084
Eb Thru	2	1600	0.085 *	0	2	1600	0.085 *	0	2	1600	0.085 *	0	2	1600	0.085 *	0	2	1600	0.085 *
Eb Right [3]	50	1600	0.031	14	64	1600	0.040	0	64	1600	0.040	6	56	1600	0.035	14	70	1600	0.044
Wb Left	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Wb Thru	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Right	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Yellow Allowance:			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.550				0.554				0.554				0.673				0.678
LOS			A				A				A				B				B

02:18 PM

** Key conflicting movement as a part of ICU*

1 Counts conducted by Quality Counts. Existing and cumulative without project traffic volumes obtained from the Heritage Ridge Project Updated Traffic Circulation and Parking Study (prepared by ATE, 10-30-15).

2 Capacity expressed in veh/hour of green

3 20% of northbound right-turns were made as Right-Turn-On-Red and have therefore been excluded from the movement volume and corresponding capacity calculations.

4 77% of eastbound right-turns were made as Right-Turn-On-Red and have therefore been excluded from the movement volume and corresponding capacity calculations.

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INTERSECTION CAPACITY UTILIZATION

Los Carneros Road @ US-101 SB Ramps

N-S St: Los Carneros Road
E-W St: US-101 SB Ramps
Project: Heritage Ridge Residential Project/1-15-4119-1
File: ICU3

Peak hr: PM

Date: 11/25/2015
Date of Count: 2014

Utilizing trucks with 9-cubic yard capacity

	EXIST. TRAFFIC			EXIST. WITH PROJECT				EXIST. W/PROJECT + MITIGATION				CUMULATIVE W/O PROJECT				CUMULATIVE W/ PROJECT			
	1	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Thru	773	3200	0.242	14	787	3200	0.246	0	787	3200	0.246	17	790	3200	0.247	14	804	3200	0.251
Nb Right [3]	845	1600	0.528 *	14	859	1600	0.537 *	0	859	1600	0.537 *	173	1018	1600	0.636 *	14	1032	1600	0.645 *
Sb Left	43	1600	0.027 *	0	43	1600	0.027 *	0	43	1600	0.027 *	5	48	1600	0.030 *	0	48	1600	0.030 *
Sb Thru	601	3200	0.188	12	613	3200	0.192	0	613	3200	0.192	280	881	3200	0.275	12	893	3200	0.279
Sb Right	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Eb Left	97	0	0.061	0	97	0	0.061	0	97	0	0.061	16	113	0	0.071	0	113	0	0.071
Eb Thru	1	1600	0.061 *	0	1	1600	0.061 *	0	1	1600	0.061 *	0	1	1600	0.071 *	0	1	1600	0.071 *
Eb Right [3]	0	1600	0.000	12	12	1600	0.008	0	12	1600	0.008	15	15	1600	0.009	12	27	1600	0.017
Wb Left	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Wb Thru	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Right	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Yellow Allowance:			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.716				0.725				0.725				0.838				0.846
LOS			C				C				C				D				D

02:18 PM

** Key conflicting movement as a part of ICU*
1 Counts conducted by National Data & Surveying Services. Existing and cumulative w/o project volumes obtained from Heritage Ridge Project Updated Traffic Circulation and Parking Study (by ATE, 10-30-15).
2 Capacity expressed in veh/hour of green
3 12% of northbound right-turns were made as Right-Turn-On-Red and have therefore been excluded from the movement volume and corresponding capacity calculations.
4 80% of eastbound right-turns were made as Right-Turn-On-Red and have therefore been excluded from the movement volume and corresponding capacity calculations.

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INTERSECTION CAPACITY UTILIZATION

Los Carneros Road @ Calle Koral

N-S St: Los Carneros Road
E-W St: Calle Koral
Project: Heritage Ridge Residential Project/1-15-4119-1
File: ICU4

Peak hr: AM

Date: 11/25/2015
Date of Count: 2014

Utilizing trucks with 9-cubic yard capacity

	EXIST. TRAFFIC			EXIST. WITH PROJECT				EXIST. W/PROJECT + MITIGATION				CUMULATIVE W/O PROJECT				CUMULATIVE W/ PROJECT			
	1	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	57	57	1600	0.036 *	0	57	1600	0.036 *
Nb Thru	399	4800	0.084	0	399	4800	0.084	0	399	4800	0.084	8	407	4800	0.086	0	407	4800	0.086
Nb Right	4	0	-	0	4	0	-	0	4	0	-	3	7	0	-	0	7	0	-
Sb Left	247	1600	0.154	27	274	1600	0.171	0	274	1600	0.171	32	279	1600	0.174	27	306	1600	0.191
Sb Thru	1137	3200	0.355 *	0	1137	3200	0.355 *	0	1137	3200	0.355 *	297	1434	3200	0.478 *	0	1434	3200	0.478 *
Sb Right	0	0	-	0	0	0	-	0	0	0	-	94	94	0	-	0	94	0	-
Eb Left	0	0	0.000	0	0	0	0.000 *	0	0	0	0.000 *	69	69	1600	0.043 *	0	69	1600	0.043 *
Eb Thru	0	0	0.000	0	0	0	0.000	0	0	0	0.000	26	26	1600	0.059	0	26	1600	0.059
Eb Right	0	0	-	0	0	0	-	0	0	0	-	69	69	0	-	0	69	0	-
Wb Left	13	1600	0.008	0	13	1600	0.008	0	13	1600	0.008	26	39	0	0.024	0	39	0	0.024
Wb Thru	0	0	0.000	0	0	0	0.000	0	0	0	0.000	29	29	1600	0.043 *	0	29	1600	0.043 *
Wb Right [3	4	1600	0.003	24	28	1600	0.018 *	0	28	1600	0.018 *	2	6	1600	0.004	24	30	1600	0.019
Yellow Allowance:			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.463				0.473				0.473				0.699				0.699
LOS			A				A				A				B				B

02:18 PM

** Key conflicting movement as a part of ICU*

1 Counts conducted by Quality Counts. Existing and cumulative without project traffic volumes obtained from the Heritage Ridge Project Updated Traffic Circulation and Parking Study (prepared by ATE, 10-30-15).

2 Capacity expressed in veh/hour of green

3 97% of westbound right-turns were made as Right-Turn-On-Red and have therefore been excluded from the movement volume and corresponding capacity calculations.

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INTERSECTION CAPACITY UTILIZATION

Los Carneros Road @ Calle Koral
Peak hr: PM

Utilizing trucks with 9-cubic yard capacity

N-S St: Los Carneros Road
E-W St: Calle Koral
Project: Heritage Ridge Residential Project/1-15-4119-1
File: ICU4

Date: 11/25/2015
Date of Count: 2014

	EXIST. TRAFFIC			EXIST. WITH PROJECT				EXIST. W/PROJECT + MITIGATION				CUMULATIVE W/O PROJECT				CUMULATIVE W/ PROJECT			
	1	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	0	0	0.000	0	0	0	0.000	0	0	0	0.000	63	63	1600	0.039	0	63	1600	0.039
Nb Thru	1394	4800	0.296 *	0	1394	4800	0.296 *	0	1394	4800	0.296 *	95	1489	4800	0.317 *	0	1489	4800	0.317 *
NB Right [3	25	0	-	0	25	0	-	0	25	0	-	8	33	0	-	0	33	0	-
Sb Left	101	1600	0.063 *	24	125	1600	0.078 *	0	125	1600	0.078 *	89	190	1600	0.119 *	24	214	1600	0.134 *
Sb Thru	577	3200	0.180	0	577	3200	0.180	0	577	3200	0.180	129	706	3200	0.239	0	706	3200	0.239
Sb Right	0	0	-	0	0	0	-	0	0	0	-	60	60	0	-	0	60	0	-
Eb Left	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	95	95	1600	0.059 *	0	95	1600	0.059 *
Eb Thru	0	0	0.000	0	0	0	0.000	0	0	0	0.000	11	11	1600	0.048	0	11	1600	0.048
Eb Right	0	0	-	0	0	0	-	0	0	0	-	65	65	0	-	0	65	0	-
Wb Left	5	1600	0.003	0	5	1600	0.003	0	5	1600	0.003	2	7	0	0.004	0	7	0	0.004
Wb Thru	0	0	0.000	0	0	0	0.000	0	0	0	0.000	32	32	1600	0.024	0	32	1600	0.024
Wb Right [4	83	1600	0.052 *	27	110	1600	0.069 *	0	110	1600	0.069 *	19	102	1600	0.064 *	27	129	1600	0.081 *
Yellow Allowance:			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.511				0.543				0.543				0.659				0.691
LOS			A				A				A				B				B

02:18 PM

** Key conflicting movement as a part of ICU*
1 Counts conducted by National Data & Surveying Services. Existing and cumulative w/o project volumes obtained from Heritage Ridge Project Updated Traffic Circulation and Parking Study (by ATE, 10-30-15).
2 Capacity expressed in veh/hour of green
3 4% of northbound right-turns were made as Right-Turn-On-Red and have therefore been excluded from the movement volume and corresponding capacity calculations.
4 72% of westbound right-turns were made as Right-Turn-On-Red and have therefore been excluded from the movement volume and corresponding capacity calculations.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Ste 500, Pasadena 91106
(626) 796.2322 Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

N-S St: Los Carneros Road
E-W St: Calle Koral
Project: Heritage Ridge Residential Project/1-15-4119-1
File: ICU4A

Los Carneros Road @ Calle Koral
Peak hr: AM

Utilizing trucks with 9-cubic yard capacity

Date: 11/25/2015
Date of Count: 2014

	EXIST. TRAFFIC [4]				EXIST. WITH PROJECT [4]				EXIST. W/PROJECT + MITIGATION					
	1	2	V/C		Added	Total	2	V/C	Added	Total	2	V/C		
Movement	Volume	Capacity	Ratio		Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio		
Nb Left	57	1600	0.036	*	0	57	1600	0.036 *	0	57	1600	0.036	*	
Nb Thru	399	4800	0.084		0	399	4800	0.084	0	399	4800	0.084		
Nb Right	4	0	-		0	4	0	-	0	4	0	-		
Sb Left	247	1600	0.154		27	274	1600	0.171	0	274	1600	0.171		
Sb Thru	1137	3200	0.385	*	0	1137	3200	0.385 *	0	1137	3200	0.385	*	
Sb Right	94	0	-		0	94	0	-	0	94	0	-		
Eb Left	69	1600	0.043	*	0	69	1600	0.043 *	0	69	1600	0.043	*	
Eb Thru	26	1600	0.059		0	26	1600	0.059	0	26	1600	0.059		
Eb Right	69	0	-		0	69	0	-	0	69	0	-		
Wb Left	13	0	0.008		0	13	0	0.008	0	13	0	0.008		
Wb Thru	29	1600	0.026	*	0	29	1600	0.026 *	0	29	1600	0.026	*	
Wb Right [3	4	1600	0.003		24	28	1600	0.018	0	28	1600	0.018		
Yellow Allowance:			0.100	*				0.100 *				0.100	*	
ICU			0.590					0.590				0.590		
LOS			A					A				A		

11:59 AM

** Key conflicting movement as a part of ICU*

1 Counts conducted by Quality Counts. Existing and cumulative without project traffic volumes obtained from the Heritage Ridge Project Updated Traffic Circulation and Parking Study (prepared by ATE, 10-30-15).

2 Capacity expressed in veh/hour of green

3 97% of westbound right-turns were made as Right-Turn-On-Red and have therefore been excluded from the movement volume and corresponding capacity calculations.

4 Based on input provided by the City, for informational purposes the Existing and Existing with Project analysis conditions also include traffic associated with the completion/occupancy of the Village at Los Carneros Project and the construction of the west leg of this intersection.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Ste 500, Pasadena 91106
(626) 796.2322 Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

Los Carneros Road @ Calle Koral
Peak hr: PM

N-S St: Los Carneros Road
E-W St: Calle Koral
Project: Heritage Ridge Residential Project/1-15-4119-1
File: ICU4A

Date: 11/25/2015
Date of Count: 2014

Utilizing trucks with 9-cubic yard capacity

	EXIST. TRAFFIC [5]				EXIST. WITH PROJECT [5]				EXIST. W/PROJECT + MITIGATION					
	1	2	V/C		Added	Total	2	V/C	Added	Total	2	V/C		
Movement	Volume	Capacity	Ratio		Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio		
Nb Left	63	1600	0.039		0	63	1600	0.039	0	63	1600	0.039		
Nb Thru	1394	4800	0.296	*	0	1394	4800	0.296	* 0	1394	4800	0.296	*	
NB Right [3	25	0	-		0	25	0	-	0	25	0	-		
Sb Left	101	1600	0.063	*	24	125	1600	0.078	* 0	125	1600	0.078	*	
Sb Thru	577	3200	0.199		0	577	3200	0.199	0	577	3200	0.199		
Sb Right	60	0	-		0	60	0	-	0	60	0	-		
Eb Left	95	1600	0.059	*	0	95	1600	0.059	* 0	95	1600	0.059	*	
Eb Thru	11	1600	0.048		0	11	1600	0.048	0	11	1600	0.048		
Eb Right	65	0	-		0	65	0	-	0	65	0	-		
Wb Left	5	0	0.003		0	5	0	0.003	0	5	0	0.003		
Wb Thru	32	1600	0.023		0	32	1600	0.023	0	32	1600	0.023		
Wb Right [4	83	1600	0.052	*	27	110	1600	0.069	* 0	110	1600	0.069	*	
Yellow Allowance:			0.100	*				0.100	*			0.100	*	
ICU			0.570					0.602				0.602		
LOS			A					B				B		

11:59 AM

** Key conflicting movement as a part of ICU*

1 *Counts conducted by National Data & Surveying Services. Existing and cumulative w/o project volumes obtained from Heritage Ridge Project Updated Traffic Circulation and Parking Study (by ATE, 10-30-15).*

2 *Capacity expressed in veh/hour of green*

3 *4% of northbound right-turns were made as Right-Turn-On-Red and have therefore been excluded from the movement volume and corresponding capacity calculations.*

4 *72% of westbound right-turns were made as Right-Turn-On-Red and have therefore been excluded from the movement volume and corresponding capacity calculations.*

5 *Based on input provided by the City, for informational purposes the Existing and Existing with Project analysis conditions also include traffic associated with the completion/occupancy of the Village at Los Carneros Project and the construction of the west leg of this intersection.*

HCS 2010 Two-Way Stop Control Summary Report

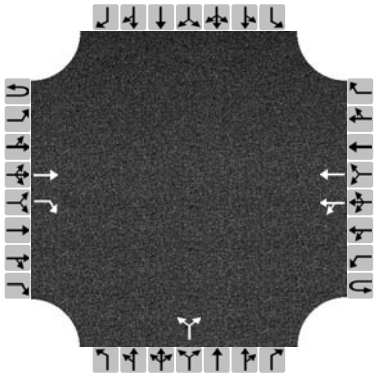
General Information

Analyst	ACY
Agency/Co.	LLG Engineers
Date Performed	11/23/2015
Analysis Year	2015
Time Analyzed	AM Peak Hour
Intersection Orientation	East-West
Project Description	Heritage Ridge Residential Project/1-15-4119-1

Site Information

Intersection	5 - EXISTING
Jurisdiction	City of Goleta
East/West Street	Calle Koral
North/South Street	Los Carneros Way
Peak Hour Factor	1.00
Analysis Time Period (hrs)	0.25

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	2	0		0	0	0		0	0	0
Configuration			T	R		LT	T				LR					
Volume (veh/h)			36	171		41	107			40		11				
Percent Heavy Vehicles						3				3		3				
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)						95					51					
Capacity						1354					819					
v/c Ratio						0.07					0.06					
95% Queue Length						0.1					0.2					
Control Delay (s/veh)						7.7					9.7					
Level of Service (LOS)						A					A					
Approach Delay (s/veh)					2.2				9.7							
Approach LOS					A				A							

HCS 2010 Two-Way Stop Control Summary Report

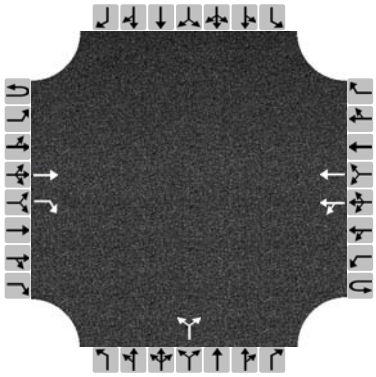
General Information

Analyst	ACY
Agency/Co.	LLG Engineers
Date Performed	11/23/2015
Analysis Year	2015
Time Analyzed	PM Peak Hour
Intersection Orientation	East-West
Project Description	Heritage Ridge Residential Project/1-15-4119-1

Site Information

Intersection	5 - EXISTING
Jurisdiction	City of Goleta
East/West Street	Calle Koral
North/South Street	Los Carneros Way
Peak Hour Factor	1.00
Analysis Time Period (hrs)	0.25

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	2	0		0	0	0		0	0	0
Configuration			T	R		LT	T				LR					
Volume (veh/h)			71	42		7	79			225		43				
Percent Heavy Vehicles						3				3		3				
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)						47					268					
Capacity						1467					870					
v/c Ratio						0.03					0.31					
95% Queue Length						0.0					1.3					
Control Delay (s/veh)						7.5					11.0					
Level of Service (LOS)						A					B					
Approach Delay (s/veh)					0.6				11.0							
Approach LOS					A				B							

HCS 2010 Two-Way Stop Control Summary Report

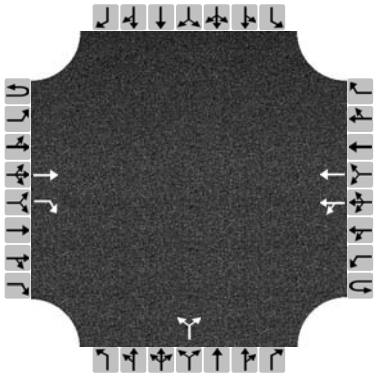
General Information

Analyst	ACY
Agency/Co.	LLG Engineers
Date Performed	11/23/2015
Analysis Year	2015
Time Analyzed	AM Peak Hour
Intersection Orientation	East-West
Project Description	Heritage Ridge Residential Project/1-15-4119-1

Site Information

Intersection	5- EXISTING w/ PROJ 9-CY
Jurisdiction	City of Goleta
East/West Street	Calle Koral
North/South Street	Los Carneros Way
Peak Hour Factor	1.00
Analysis Time Period (hrs)	0.25

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	2	0		0	0	0		0	0	0
Configuration			T	R		LT	T				LR					
Volume (veh/h)			63	171		41	131			40		11				
Percent Heavy Vehicles						3				3		3				
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)						107					51					
Capacity						1323					777					
v/c Ratio						0.08					0.07					
95% Queue Length						0.1					0.2					
Control Delay (s/veh)						7.8					10.0					
Level of Service (LOS)						A					A					
Approach Delay (s/veh)					1.9				10.0							
Approach LOS					A				A							

HCS 2010 Two-Way Stop Control Summary Report

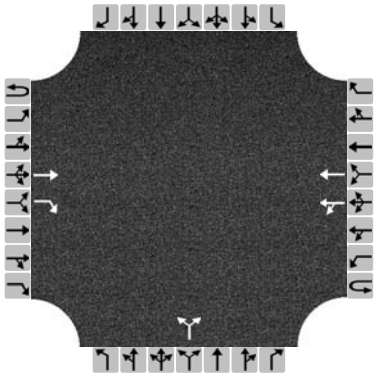
General Information

Analyst	ACY
Agency/Co.	LLG Engineers
Date Performed	11/23/2015
Analysis Year	2015
Time Analyzed	PM Peak Hour
Intersection Orientation	East-West
Project Description	Heritage Ridge Residential Project/1-15-4119-1

Site Information

Intersection	5- EXISTING w/ PROJ 9-CY
Jurisdiction	City of Goleta
East/West Street	Calle Koral
North/South Street	Los Carneros Way
Peak Hour Factor	1.00
Analysis Time Period (hrs)	0.25

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	2	0		0	0	0		0	0	0
Configuration			T	R		LT	T				LR					
Volume (veh/h)			95	42		7	106			225		43				
Percent Heavy Vehicles						3				3		3				
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)						60					268					
Capacity						1437					827					
v/c Ratio						0.04					0.32					
95% Queue Length						0.0					1.4					
Control Delay (s/veh)						7.5					11.4					
Level of Service (LOS)						A					B					
Approach Delay (s/veh)					0.5				11.4							
Approach LOS					A				B							

HCS 2010 Two-Way Stop Control Summary Report

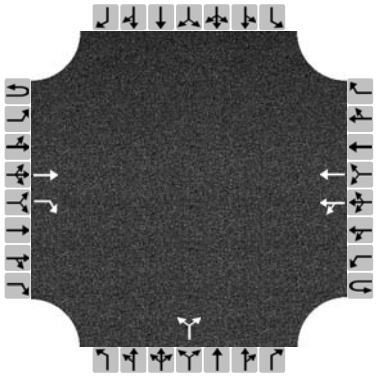
General Information

Analyst	ACY
Agency/Co.	LLG Engineers
Date Performed	11/23/2015
Analysis Year	2025
Time Analyzed	AM Peak Hour
Intersection Orientation	East-West
Project Description	Heritage Ridge Residential Project/1-15-4119-1

Site Information

Intersection	5 - CUM w/o PROJ
Jurisdiction	City of Goleta
East/West Street	Calle Koral
North/South Street	Los Carneros Way
Peak Hour Factor	1.00
Analysis Time Period (hrs)	0.25

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	2	0		0	0	0		0	0	0
Configuration			T	R		LT	T				LR					
Volume (veh/h)			103	209		41	95			185		63				
Percent Heavy Vehicles						3				3		3				
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)						89					248					
Capacity						1238					757					
v/c Ratio						0.07					0.33					
95% Queue Length						0.1					1.4					
Control Delay (s/veh)						8.0					12.1					
Level of Service (LOS)						A					B					
Approach Delay (s/veh)					2.5				12.1							
Approach LOS					A				B							

HCS 2010 Two-Way Stop Control Summary Report

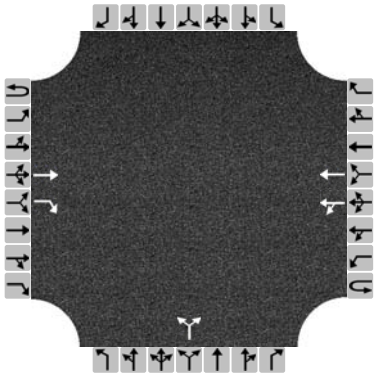
General Information

Analyst	ACY
Agency/Co.	LLG Engineers
Date Performed	11/23/2015
Analysis Year	2025
Time Analyzed	PM Peak Hour
Intersection Orientation	East-West
Project Description	Heritage Ridge Residential Project/1-15-4119-1

Site Information

Intersection	5 - CUM w/o PROJ
Jurisdiction	City of Goleta
East/West Street	Calle Koral
North/South Street	Los Carneros Way
Peak Hour Factor	1.00
Analysis Time Period (hrs)	0.25

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	2	0		0	0	0		0	0	0
Configuration			T	R		LT	T				LR					
Volume (veh/h)			163	72		7	37			365		73				
Percent Heavy Vehicles						3				3		3				
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)						26					438					
Capacity						1322					784					
v/c Ratio						0.02					0.56					
95% Queue Length						0.0					3.5					
Control Delay (s/veh)						7.7					15.2					
Level of Service (LOS)						A					C					
Approach Delay (s/veh)					1.2				15.2							
Approach LOS					A				C							

HCS 2010 Two-Way Stop Control Summary Report

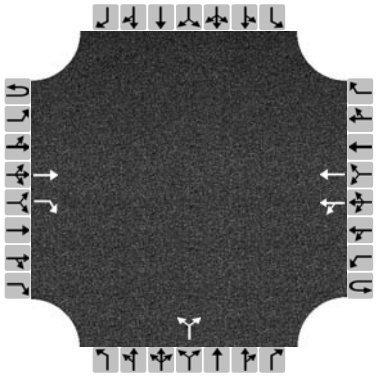
General Information

Analyst	ACY
Agency/Co.	LLG Engineers
Date Performed	11/23/2015
Analysis Year	2025
Time Analyzed	AM Peak Hour
Intersection Orientation	East-West
Project Description	Heritage Ridge Residential Project/1-15-4119-1

Site Information

Intersection	5- CUM with PROJ 9-CY
Jurisdiction	City of Goleta
East/West Street	Calle Koral
North/South Street	Los Carneros Way
Peak Hour Factor	1.00
Analysis Time Period (hrs)	0.25

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	2	0		0	0	0		0	0	0
Configuration			T	R		LT	T				LR					
Volume (veh/h)			130	209		41	119			185		63				
Percent Heavy Vehicles						3				3		3				
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)						101					248					
Capacity						1210					718					
v/c Ratio						0.08					0.35					
95% Queue Length						0.1					1.5					
Control Delay (s/veh)						8.1					12.6					
Level of Service (LOS)						A					B					
Approach Delay (s/veh)					2.1				12.6							
Approach LOS					A				B							

HCS 2010 Two-Way Stop Control Summary Report

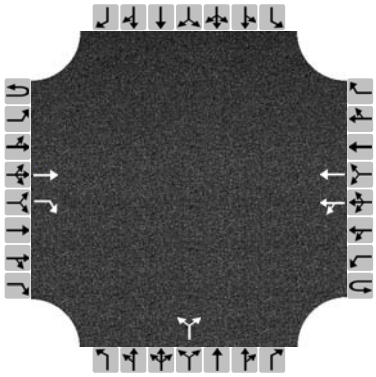
General Information

Analyst	ACY
Agency/Co.	LLG Engineers
Date Performed	11/23/2015
Analysis Year	2025
Time Analyzed	PM Peak Hour
Intersection Orientation	East-West
Project Description	Heritage Ridge Residential Project/1-15-4119-1

Site Information

Intersection	5- CUM with PROJ 9-CY
Jurisdiction	City of Goleta
East/West Street	Calle Koral
North/South Street	Los Carneros Way
Peak Hour Factor	1.00
Analysis Time Period (hrs)	0.25

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	2	0		0	0	0		0	0	0
Configuration			T	R		LT	T				LR					
Volume (veh/h)			187	72		7	64			365		73				
Percent Heavy Vehicles						3				3		3				
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)						39					438					
Capacity						1296					746					
v/c Ratio						0.03					0.59					
95% Queue Length						0.0					3.9					
Control Delay (s/veh)						7.8					16.5					
Level of Service (LOS)						A					C					
Approach Delay (s/veh)					0.8				16.5							
Approach LOS					A				C							

Intersection No.: 5
N-S Street: Los Carneros Way
E-W Street: Calle Koral

	EXISTING TRAFFIC			EXISTING WITH PROJECT (USING 9-CY TRUCKS)			CUMULATIVE WITHOUT PROJECT			CUMULATIVE WITH PROJECT (USING 9-CY TRUCKS)		
	Volume (veh/hr)	Delay (sec/veh)	LOS	Volume (veh/hr)	Delay (sec/veh)	LOS	Volume (veh/hr)	Delay (sec/veh)	LOS	Volume (veh/hr)	Delay (sec/veh)	LOS
AM Peak Hour												
Westbound Thru/Left:	95	7.7	A	107	7.8	A	89	8.0	A	101	8.1	A
Northbound Left/Right:	51	9.7	A	51	10.0	A	248	12.1	B	248	12.6	B
Average Weighted Delay (sec/veh)		8.4	A		8.5	A		11.0	B		11.3	B
PM Peak Hour												
Westbound Thru/Left:	47	7.5	A	60	7.5	A	26	7.7	A	39	7.8	A
Northbound Left/Right:	268	11.0	B	268	11.4	B	438	15.2	C	438	16.5	C
Average Weighted Delay (sec/veh)		10.5	B		10.7	B		14.8	B		15.8	C

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INTERSECTION CAPACITY UTILIZATION

Los Carneros Way @ Calle Koral
Peak hr: AM

Utilizing trucks with 9-cubic yard capacity

N-S St: Los Carneros Way
E-W St: Calle Koral
Project: Heritage Ridge Residential Project/1-15-4119-1
File: ICU5

Date: 11/25/2015
Date of Count: 2014

	EXIST. TRAFFIC				EXIST. WITH PROJECT				EXIST. W/PROJECT + MITIGATION				CUMULATIVE W/O PROJECT				CUMULATIVE W/ PROJECT			
	1	2	V/C		Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio		Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	40	0	0.025		0	40	0	0.025	0	40	0	0.025	145	185	0	0.116	0	185	0	0.116
Nb Thru	0	1600	0.032	*	0	0	1600	0.032	* 0	0	1600	0.032	* 0	0	1600	0.155	* 0	0	1600	0.155 *
Nb Right	11	0	-		0	11	0	-	0	11	0	-	52	63	0	-	0	63	0	-
Sb Left	0	0	0.000	*	0	0	0	0.000	* 0	0	0	0.000	* 0	0	0	0.000	* 0	0	0	0.000 *
Sb Thru	0	0	0.000		0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Sb Right	0	0	-		0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Eb Left	0	0	0.000		0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Eb Thru	36	1600	0.023		27	63	1600	0.039	0	63	1600	0.039	67	103	1600	0.064	27	130	1600	0.081
Eb Right	171	1600	0.107	*	0	171	1600	0.107	* 0	171	1600	0.107	* 38	209	1600	0.131	* 0	209	1600	0.131 *
Wb Left	41	0	0.013	*	0	41	0	0.013	* 0	41	0	0.013	* 0	41	0	0.013	* 0	41	0	0.013 *
Wb Thru	107	3200	0.046		24	131	3200	0.054	0	131	3200	0.054	-12	95	3200	0.043	24	119	3200	0.050
Wb Right	0	0	-		0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Yellow Allowance:			0.100	*				0.100	*			0.100	*			0.100	*			0.100 *
ICU			0.252					0.252				0.252				0.398				0.398
LOS			A					A				A				A				A

02:18 PM

** Key conflicting movement as a part of ICU*
1 Counts conducted by Quality Counts. Existing and cumulative without project traffic volumes obtained from the Heritage Ridge Project Updated Traffic Circulation and Parking Study (prepared by ATE, 10-30-15).
2 Capacity expressed in veh/hour of green

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INTERSECTION CAPACITY UTILIZATION

N-S St: Los Carneros Way
E-W St: Calle Koral
Project: Heritage Ridge Residential Project/1-15-4119-1
File: ICU5

Los Carneros Way @ Calle Koral
Peak hr: PM

Date: 11/25/2015
Date of Count: 2014

Utilizing trucks with 9-cubic yard capacity

	EXIST. TRAFFIC			EXIST. WITH PROJECT				EXIST. W/PROJECT + MITIGATION				CUMULATIVE W/O PROJECT				CUMULATIVE W/ PROJECT			
	1	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	225	0	0.141	0	225	0	0.141	0	225	0	0.141	140	365	0	0.228	0	365	0	0.228
Nb Thru	0	1600	0.168 *	0	0	1600	0.168 *	0	0	1600	0.168 *	0	0	1600	0.274 *	0	0	1600	0.274 *
Nb Right	43	0	-	0	43	0	-	0	43	0	-	30	73	0	-	0	73	0	-
Sb Left	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Sb Thru	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Sb Right	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Eb Left	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Eb Thru	71	1600	0.044 *	24	95	1600	0.059 *	0	95	1600	0.059 *	92	163	1600	0.102 *	24	187	1600	0.117 *
Eb Right	42	1600	0.026	0	42	1600	0.026	0	42	1600	0.026	30	72	1600	0.045	0	72	1600	0.045
Wb Left	7	0	0.002 *	0	7	0	0.002 *	0	7	0	0.002 *	0	7	0	0.002 *	0	7	0	0.002 *
Wb Thru	79	3200	0.027	27	106	3200	0.035	0	106	3200	0.035	-42	37	3200	0.014	27	64	3200	0.022
Wb Right	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Yellow Allowance:			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.314				0.329				0.329				0.478				0.493
LOS			A				A				A				A				A

02:18 PM

** Key conflicting movement as a part of ICU*
1 Counts conducted by National Data & Surveying Services. Existing and cumulative w/o project volumes obtained from Heritage Ridge Project Updated Traffic Circulation and Parking Study (by ATE, 10-30-15).
2 Capacity expressed in veh/hour of green

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INTERSECTION CAPACITY UTILIZATION

Los Carneros Road @ US-101 NB Ramps

N-S St: Los Carneros Road
E-W St: US-101 NB Ramps
Project: Heritage Ridge Residential Project/1-15-4119-1
File: ICU2

Peak hr: AM

Date: 11/25/2015
Date of Count: 2014

Utilizing trucks with 20-cubic yard capacity

	EXIST. TRAFFIC			EXIST. WITH PROJECT				EXIST. W/PROJECT + MITIGATION				CUMULATIVE W/O PROJECT				CUMULATIVE W/ PROJECT			
	1	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	21	1600	0.013 *	9	30	1600	0.019 *	0	30	1600	0.019 *	13	34	1600	0.021 *	9	43	1600	0.027 *
Nb Thru	276	3200	0.086	0	276	3200	0.086	0	276	3200	0.086	37	313	3200	0.098	0	313	3200	0.098
Nb Right	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Sb Left	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Sb Thru	423	3200	0.165 *	0	423	3200	0.165 *	0	423	3200	0.165 *	-11	412	3200	0.161 *	0	412	3200	0.161 *
Sb Right [3]	106	0	-	0	106	0	-	0	106	0	-	-3	103	0	-	0	103	0	-
Eb Left	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Eb Thru	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Eb Right	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Wb Left	805	0	0.252	11	816	0	0.255	0	816	0	0.255	428	1233	0	0.385	11	1244	0	0.389
Wb Thru	2	3200	0.265 *	0	2	3200	0.268 *	0	2	3200	0.268 *	0	2	3200	0.398 *	0	2	3200	0.402 *
Wb Right [4	40	0	-	0	40	0	-	0	40	0	-	0	40	0	-	0	40	0	-
Yellow Allowance:			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.543				0.552				0.552				0.681				0.690
LOS			A				A				A				B				B

02:24 PM

** Key conflicting movement as a part of ICU*

1 Counts conducted by Quality Counts. Existing and cumulative without project traffic volumes obtained from the Heritage Ridge Project Updated Traffic Circulation and Parking Study (prepared by ATE, 10-30-15).

2 Capacity expressed in veh/hour of green

3 4% of southbound right-turns were made as Right-Turn-On-Red and have therefore been excluded from the movement volume and corresponding capacity calculations.

4 25% of westbound right-turns were made as Right-Turn-On-Red and have therefore been excluded from the movement volume and corresponding capacity calculations.

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INTERSECTION CAPACITY UTILIZATION

Los Carneros Road @ US-101 NB Ramps
Peak hr: PM

Utilizing trucks with 20-cubic yard capacity

N-S St: Los Carneros Road
E-W St: US-101 NB Ramps
Project: Heritage Ridge Residential Project/1-15-4119-1
File: ICU2

Date: 11/25/2015
Date of Count: 2014

	EXIST. TRAFFIC			EXIST. WITH PROJECT				EXIST. W/PROJECT + MITIGATION				CUMULATIVE W/O PROJECT				CUMULATIVE W/ PROJECT			
	1	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	236	1600	0.148 *	11	247	1600	0.154 *	0	247	1600	0.154 *	0	236	1600	0.148 *	11	247	1600	0.154 *
Nb Thru	618	3200	0.193	0	618	3200	0.193	0	618	3200	0.193	49	667	3200	0.208	0	667	3200	0.208
Nb Right	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Sb Left	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Sb Thru	250	3200	0.100 *	0	250	3200	0.100 *	0	250	3200	0.100 *	186	436	3200	0.163 *	0	436	3200	0.163 *
Sb Right [3]	71	0	-	0	71	0	-	0	71	0	-	13	84	0	-	0	84	0	-
Eb Left	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Eb Thru	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Eb Right	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Wb Left	436	0	0.136	9	445	0	0.139	0	445	0	0.139	57	493	0	0.154	9	502	0	0.157
Wb Thru	7	3200	0.141 *	0	7	3200	0.144 *	0	7	3200	0.144 *	4	11	3200	0.161 *	0	11	3200	0.164 *
Wb Right [4	9	0	-	0	9	0	-	0	9	0	-	3	12	0	-	0	12	0	-
Yellow Allowance:			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.489				0.499				0.499				0.571				0.581
LOS			A				A				A				A				A

02:24 PM

** Key conflicting movement as a part of ICU*
1 Counts conducted by National Data & Surveying Services. Existing and cumulative w/o project volumes obtained from Heritage Ridge Project Updated Traffic Circulation and Parking Study (by ATE, 10-30-15).
2 Capacity expressed in veh/hour of green
3 34% of southbound right-turns were made as Right-Turn-On-Red and have therefore been excluded from the movement volume and corresponding capacity calculations.
4 63% of westbound right-turns were made as Right-Turn-On-Red and have therefore been excluded from the movement volume and corresponding capacity calculations.

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INTERSECTION CAPACITY UTILIZATION

Los Carneros Road @ US-101 SB Ramps
Peak hr: AM

Utilizing trucks with 20-cubic yard capacity

N-S St: Los Carneros Road
E-W St: US-101 SB Ramps
Project: Heritage Ridge Residential Project/1-15-4119-1
File: ICU3

Date: 11/25/2015
Date of Count: 2014

	EXIST. TRAFFIC			EXIST. WITH PROJECT				EXIST. W/PROJECT + MITIGATION				CUMULATIVE W/O PROJECT				CUMULATIVE W/ PROJECT			
	1	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Nb Thru	160	3200	0.050	9	169	3200	0.053	0	169	3200	0.053	53	213	3200	0.067	9	222	3200	0.069
Nb Right [3]	286	1600	0.179	9	295	1600	0.184	0	295	1600	0.184	94	380	1600	0.238	9	389	1600	0.243
Sb Left	72	1600	0.045	0	72	1600	0.045	0	72	1600	0.045	11	83	1600	0.052	0	83	1600	0.052
Sb Thru	1168	3200	0.365 *	11	1179	3200	0.368 *	0	1179	3200	0.368 *	394	1562	3200	0.488 *	11	1573	3200	0.492 *
Sb Right	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Eb Left	134	0	0.084	0	134	0	0.084	0	134	0	0.084	0	134	0	0.084	0	134	0	0.084
Eb Thru	2	1600	0.085 *	0	2	1600	0.085 *	0	2	1600	0.085 *	0	2	1600	0.085 *	0	2	1600	0.085 *
Eb Right [3]	50	1600	0.031	11	61	1600	0.038	0	61	1600	0.038	6	56	1600	0.035	11	67	1600	0.042
Wb Left	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Wb Thru	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Right	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Yellow Allowance:			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.550				0.553				0.553				0.673				0.677
LOS			A				A				A				B				B

02:24 PM

** Key conflicting movement as a part of ICU*
1 Counts conducted by Quality Counts. Existing and cumulative without project traffic volumes obtained from the Heritage Ridge Project Updated Traffic Circulation and Parking Study (prepared by ATE, 10-30-15).
2 Capacity expressed in veh/hour of green
3 20% of northbound right-turns were made as Right-Turn-On-Red and have therefore been excluded from the movement volume and corresponding capacity calculations.
4 77% of eastbound right-turns were made as Right-Turn-On-Red and have therefore been excluded from the movement volume and corresponding capacity calculations.

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INTERSECTION CAPACITY UTILIZATION

Los Carneros Road @ US-101 SB Ramps
Peak hr: PM

Utilizing trucks with 20-cubic yard capacity

N-S St: Los Carneros Road
E-W St: US-101 SB Ramps
Project: Heritage Ridge Residential Project/1-15-4119-1
File: ICU3

Date: 11/25/2015
Date of Count: 2014

	EXIST. TRAFFIC			EXIST. WITH PROJECT				EXIST. W/PROJECT + MITIGATION				CUMULATIVE W/O PROJECT				CUMULATIVE W/ PROJECT			
	1	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Thru	773	3200	0.242	11	784	3200	0.245	0	784	3200	0.245	17	790	3200	0.247	11	801	3200	0.250
Nb Right [3]	845	1600	0.528 *	11	856	1600	0.535 *	0	856	1600	0.535 *	173	1018	1600	0.636 *	11	1029	1600	0.643 *
Sb Left	43	1600	0.027 *	0	43	1600	0.027 *	0	43	1600	0.027 *	5	48	1600	0.030 *	0	48	1600	0.030 *
Sb Thru	601	3200	0.188	9	610	3200	0.191	0	610	3200	0.191	280	881	3200	0.275	9	890	3200	0.278
Sb Right	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Eb Left	97	0	0.061	0	97	0	0.061	0	97	0	0.061	16	113	0	0.071	0	113	0	0.071
Eb Thru	1	1600	0.061 *	0	1	1600	0.061 *	0	1	1600	0.061 *	0	1	1600	0.071 *	0	1	1600	0.071 *
Eb Right [3]	0	1600	0.000	9	9	1600	0.006	0	9	1600	0.006	15	15	1600	0.009	9	24	1600	0.015
Wb Left	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Wb Thru	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Right	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Yellow Allowance:			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.716				0.723				0.723				0.838				0.844
LOS			C				C				C				D				D

02:24 PM

** Key conflicting movement as a part of ICU*
1 Counts conducted by National Data & Surveying Services. Existing and cumulative w/o project volumes obtained from Heritage Ridge Project Updated Traffic Circulation and Parking Study (by ATE, 10-30-15).
2 Capacity expressed in veh/hour of green
3 12% of northbound right-turns were made as Right-Turn-On-Red and have therefore been excluded from the movement volume and corresponding capacity calculations.
4 80% of eastbound right-turns were made as Right-Turn-On-Red and have therefore been excluded from the movement volume and corresponding capacity calculations.

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INTERSECTION CAPACITY UTILIZATION

Los Carneros Road @ Calle Koral
Peak hr: AM

Utilizing trucks with 20-cubic yard capacity

N-S St: Los Carneros Road
E-W St: Calle Koral
Project: Heritage Ridge Residential Project/1-15-4119-1
File: ICU4

Date: 11/25/2015
Date of Count: 2014

	EXIST. TRAFFIC			EXIST. WITH PROJECT				EXIST. W/PROJECT + MITIGATION				CUMULATIVE W/O PROJECT				CUMULATIVE W/ PROJECT			
	1	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	57	57	1600	0.036 *	0	57	1600	0.036 *
Nb Thru	399	4800	0.084	0	399	4800	0.084	0	399	4800	0.084	8	407	4800	0.086	0	407	4800	0.086
Nb Right	4	0	-	0	4	0	-	0	4	0	-	3	7	0	-	0	7	0	-
Sb Left	247	1600	0.154	21	268	1600	0.168	0	268	1600	0.168	32	279	1600	0.174	21	300	1600	0.188
Sb Thru	1137	3200	0.355 *	0	1137	3200	0.355 *	0	1137	3200	0.355 *	297	1434	3200	0.478 *	0	1434	3200	0.478 *
Sb Right	0	0	-	0	0	0	-	0	0	0	-	94	94	0	-	0	94	0	-
Eb Left	0	0	0.000	0	0	0	0.000 *	0	0	0	0.000 *	69	69	1600	0.043 *	0	69	1600	0.043 *
Eb Thru	0	0	0.000	0	0	0	0.000	0	0	0	0.000	26	26	1600	0.059	0	26	1600	0.059
Eb Right	0	0	-	0	0	0	-	0	0	0	-	69	69	0	-	0	69	0	-
Wb Left	13	1600	0.008	0	13	1600	0.008	0	13	1600	0.008	26	39	0	0.024	0	39	0	0.024
Wb Thru	0	0	0.000	0	0	0	0.000	0	0	0	0.000	29	29	1600	0.043 *	0	29	1600	0.043 *
Wb Right [3	4	1600	0.003	18	22	1600	0.014 *	0	22	1600	0.014 *	2	6	1600	0.004	18	24	1600	0.015
Yellow Allowance:			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.463				0.469				0.469				0.699				0.699
LOS			A				A				A				B				B

02:24 PM

** Key conflicting movement as a part of ICU*

1 Counts conducted by Quality Counts. Existing and cumulative without project traffic volumes obtained from the Heritage Ridge Project Updated Traffic Circulation and Parking Study (prepared by ATE, 10-30-15).

2 Capacity expressed in veh/hour of green

3 97% of westbound right-turns were made as Right-Turn-On-Red and have therefore been excluded from the movement volume and corresponding capacity calculations.

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600 S. Lake Avenue, Ste 500, Pasadena 91106
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INTERSECTION CAPACITY UTILIZATION

Los Carneros Road @ Calle Koral
Peak hr: PM

Utilizing trucks with 20-cubic yard capacity

N-S St: Los Carneros Road
E-W St: Calle Koral
Project: Heritage Ridge Residential Project/1-15-4119-1
File: ICU4

Date: 11/25/2015
Date of Count: 2014

	EXIST. TRAFFIC			EXIST. WITH PROJECT				EXIST. W/PROJECT + MITIGATION				CUMULATIVE W/O PROJECT				CUMULATIVE W/ PROJECT			
	1	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	0	0	0.000	0	0	0	0.000	0	0	0	0.000	63	63	1600	0.039	0	63	1600	0.039
Nb Thru	1394	4800	0.296 *	0	1394	4800	0.296 *	0	1394	4800	0.296 *	95	1489	4800	0.317 *	0	1489	4800	0.317 *
NB Right [3	25	0	-	0	25	0	-	0	25	0	-	8	33	0	-	0	33	0	-
Sb Left	101	1600	0.063 *	18	119	1600	0.074 *	0	119	1600	0.074 *	89	190	1600	0.119 *	18	208	1600	0.130 *
Sb Thru	577	3200	0.180	0	577	3200	0.180	0	577	3200	0.180	129	706	3200	0.239	0	706	3200	0.239
Sb Right	0	0	-	0	0	0	-	0	0	0	-	60	60	0	-	0	60	0	-
Eb Left	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	95	95	1600	0.059 *	0	95	1600	0.059 *
Eb Thru	0	0	0.000	0	0	0	0.000	0	0	0	0.000	11	11	1600	0.048	0	11	1600	0.048
Eb Right	0	0	-	0	0	0	-	0	0	0	-	65	65	0	-	0	65	0	-
Wb Left	5	1600	0.003	0	5	1600	0.003	0	5	1600	0.003	2	7	0	0.004	0	7	0	0.004
Wb Thru	0	0	0.000	0	0	0	0.000	0	0	0	0.000	32	32	1600	0.024	0	32	1600	0.024
Wb Right [4	83	1600	0.052 *	21	104	1600	0.065 *	0	104	1600	0.065 *	19	102	1600	0.064 *	21	123	1600	0.077 *
Yellow Allowance:			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.511				0.535				0.535				0.659				0.683
LOS			A				A				A				B				B

02:24 PM

** Key conflicting movement as a part of ICU*
1 Counts conducted by National Data & Surveying Services. Existing and cumulative w/o project volumes obtained from Heritage Ridge Project Updated Traffic Circulation and Parking Study (by ATE, 10-30-15).
2 Capacity expressed in veh/hour of green
3 4% of northbound right-turns were made as Right-Turn-On-Red and have therefore been excluded from the movement volume and corresponding capacity calculations.
4 72% of westbound right-turns were made as Right-Turn-On-Red and have therefore been excluded from the movement volume and corresponding capacity calculations.

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INTERSECTION CAPACITY UTILIZATION

Los Carneros Road @ Calle Koral

N-S St: Los Carneros Road
E-W St: Calle Koral
Project: Heritage Ridge Residential Project/1-15-4119-1
File: ICU4A

Peak hr: AM

Date: 11/25/2015
Date of Count: 2014

Utilizing trucks with 20-cubic yard capacity

	EXIST. TRAFFIC [4]				EXIST. WITH PROJECT [4]				EXIST. W/PROJECT + MITIGATION					
	1	2	V/C		Added	Total	2	V/C	Added	Total	2	V/C		
Movement	Volume	Capacity	Ratio		Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio		
Nb Left	57	1600	0.036	*	0	57	1600	0.036 *	0	57	1600	0.036	*	
Nb Thru	399	4800	0.084		0	399	4800	0.084	0	399	4800	0.084		
Nb Right	4	0	-		0	4	0	-	0	4	0	-		
Sb Left	247	1600	0.154		21	268	1600	0.168	0	268	1600	0.168		
Sb Thru	1137	3200	0.385	*	0	1137	3200	0.385 *	0	1137	3200	0.385	*	
Sb Right	94	0	-		0	94	0	-	0	94	0	-		
Eb Left	69	1600	0.043	*	0	69	1600	0.043 *	0	69	1600	0.043	*	
Eb Thru	26	1600	0.059		0	26	1600	0.059	0	26	1600	0.059		
Eb Right	69	0	-		0	69	0	-	0	69	0	-		
Wb Left	13	0	0.008		0	13	0	0.008	0	13	0	0.008		
Wb Thru	29	1600	0.026	*	0	29	1600	0.026 *	0	29	1600	0.026	*	
Wb Right [3	4	1600	0.003		18	22	1600	0.014	0	22	1600	0.014		
Yellow Allowance:			0.100	*				0.100 *				0.100	*	
ICU			0.590					0.590				0.590		
LOS			A					A				A		

12:04 PM

** Key conflicting movement as a part of ICU*

1 Counts conducted by Quality Counts. Existing and cumulative without project traffic volumes obtained from the Heritage Ridge Project Updated Traffic Circulation and Parking Study (prepared by ATE, 10-30-15).

2 Capacity expressed in veh/hour of green

3 97% of westbound right-turns were made as Right-Turn-On-Red and have therefore been excluded from the movement volume and corresponding capacity calculations.

4 Based on input provided by the City, for informational purposes the Existing and Existing with Project analysis conditions also include traffic associated with the completion/occupancy of the Village at Los Carneros Project and the construction of the west leg of this intersection.

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INTERSECTION CAPACITY UTILIZATION

Los Carneros Road @ Calle Koral
Peak hr: PM

Utilizing trucks with 20-cubic yard capacity

N-S St: Los Carneros Road
E-W St: Calle Koral
Project: Heritage Ridge Residential Project/1-15-4119-1
File: ICU4A

Date: 11/25/2015
Date of Count: 2014

	EXIST. TRAFFIC [5]				EXIST. WITH PROJECT [5]				EXIST. W/PROJECT + MITIGATION					
	1	2	V/C		Added	Total	2	V/C	Added	Total	2	V/C		
Movement	Volume	Capacity	Ratio		Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio		
Nb Left	63	1600	0.039		0	63	1600	0.039	0	63	1600	0.039		
Nb Thru	1394	4800	0.296	*	0	1394	4800	0.296	* 0	1394	4800	0.296	*	
NB Right [3	25	0	-		0	25	0	-	0	25	0	-		
Sb Left	101	1600	0.063	*	18	119	1600	0.074	* 0	119	1600	0.074	*	
Sb Thru	577	3200	0.199		0	577	3200	0.199	0	577	3200	0.199		
Sb Right	60	0	-		0	60	0	-	0	60	0	-		
Eb Left	95	1600	0.059	*	0	95	1600	0.059	* 0	95	1600	0.059	*	
Eb Thru	11	1600	0.048		0	11	1600	0.048	0	11	1600	0.048		
Eb Right	65	0	-		0	65	0	-	0	65	0	-		
Wb Left	5	0	0.003		0	5	0	0.003	0	5	0	0.003		
Wb Thru	32	1600	0.023		0	32	1600	0.023	0	32	1600	0.023		
Wb Right [4	83	1600	0.052	*	21	104	1600	0.065	* 0	104	1600	0.065	*	
Yellow Allowance:			0.100	*				0.100	*			0.100	*	
ICU			0.570					0.594				0.594		
LOS			A					A				A		

12:04 PM

** Key conflicting movement as a part of ICU*

1 *Counts conducted by National Data & Surveying Services. Existing and cumulative w/o project volumes obtained from Heritage Ridge Project Updated Traffic Circulation and Parking Study (by ATE, 10-30-15).*

2 *Capacity expressed in veh/hour of green*

3 *4% of northbound right-turns were made as Right-Turn-On-Red and have therefore been excluded from the movement volume and corresponding capacity calculations.*

4 *72% of westbound right-turns were made as Right-Turn-On-Red and have therefore been excluded from the movement volume and corresponding capacity calculations.*

5 *Based on input provided by the City, for informational purposes the Existing and Existing with Project analysis conditions also include traffic associated with the completion/occupancy of the Village at Los Carneros Project and the construction of the west leg of this intersection.*

HCS 2010 Two-Way Stop Control Summary Report

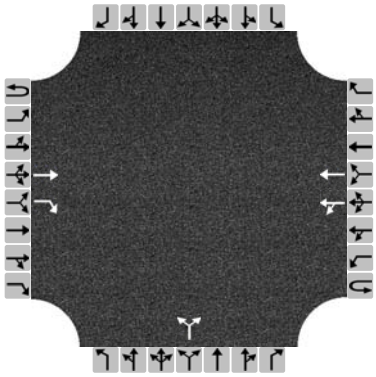
General Information

Analyst	ACY
Agency/Co.	LLG Engineers
Date Performed	11/23/2015
Analysis Year	2015
Time Analyzed	AM Peak Hour
Intersection Orientation	East-West
Project Description	Heritage Ridge Residential Project/1-15-4119-1

Site Information

Intersection	5 - EXISTING
Jurisdiction	City of Goleta
East/West Street	Calle Koral
North/South Street	Los Carneros Way
Peak Hour Factor	1.00
Analysis Time Period (hrs)	0.25

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	2	0		0	0	0		0	0	0
Configuration			T	R		LT	T				LR					
Volume (veh/h)			36	171		41	107			40		11				
Percent Heavy Vehicles						3				3		3				
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)						95					51					
Capacity						1354					819					
v/c Ratio						0.07					0.06					
95% Queue Length						0.1					0.2					
Control Delay (s/veh)						7.7					9.7					
Level of Service (LOS)						A					A					
Approach Delay (s/veh)					2.2				9.7							
Approach LOS					A				A							

HCS 2010 Two-Way Stop Control Summary Report

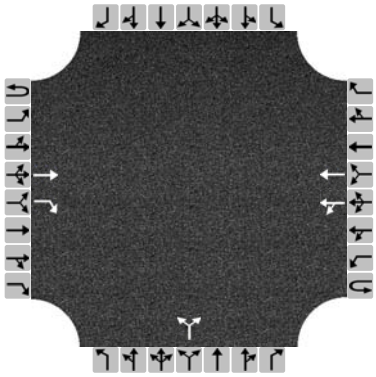
General Information

Analyst	ACY
Agency/Co.	LLG Engineers
Date Performed	11/23/2015
Analysis Year	2015
Time Analyzed	PM Peak Hour
Intersection Orientation	East-West
Project Description	Heritage Ridge Residential Project/1-15-4119-1

Site Information

Intersection	5 - EXISTING
Jurisdiction	City of Goleta
East/West Street	Calle Koral
North/South Street	Los Carneros Way
Peak Hour Factor	1.00
Analysis Time Period (hrs)	0.25

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	2	0		0	0	0		0	0	0
Configuration			T	R		LT	T				LR					
Volume (veh/h)			71	42		7	79			225		43				
Percent Heavy Vehicles						3				3		3				
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)						47					268					
Capacity						1467					870					
v/c Ratio						0.03					0.31					
95% Queue Length						0.0					1.3					
Control Delay (s/veh)						7.5					11.0					
Level of Service (LOS)						A					B					
Approach Delay (s/veh)					0.6				11.0							
Approach LOS					A				B							

HCS 2010 Two-Way Stop Control Summary Report

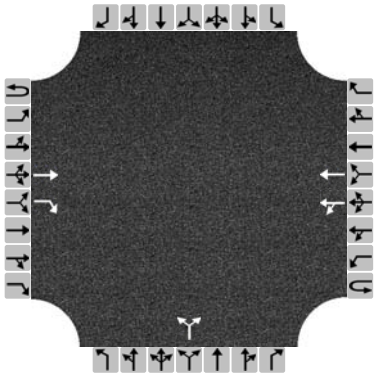
General Information

Analyst	ACY
Agency/Co.	LLG Engineers
Date Performed	11/23/2015
Analysis Year	2015
Time Analyzed	AM Peak Hour
Intersection Orientation	East-West
Project Description	Heritage Ridge Residential Project/1-15-4119-1

Site Information

Intersection	5- EXISTING w/ PROJ 20-CY
Jurisdiction	City of Goleta
East/West Street	Calle Koral
North/South Street	Los Carneros Way
Peak Hour Factor	1.00
Analysis Time Period (hrs)	0.25

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	2	0		0	0	0		0	0	0
Configuration			T	R		LT	T				LR					
Volume (veh/h)			57	171		41	125			40		11				
Percent Heavy Vehicles						3				3		3				
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)						104					51					
Capacity						1330					786					
v/c Ratio						0.08					0.06					
95% Queue Length						0.1					0.2					
Control Delay (s/veh)						7.8					9.9					
Level of Service (LOS)						A					A					
Approach Delay (s/veh)					2.0				9.9							
Approach LOS					A				A							

HCS 2010 Two-Way Stop Control Summary Report

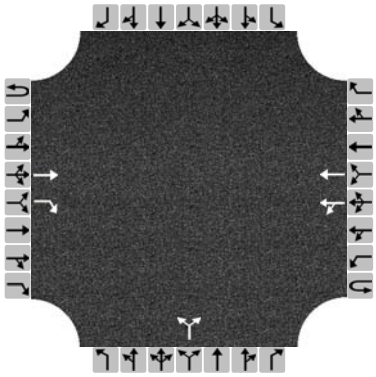
General Information

Analyst	ACY
Agency/Co.	LLG Engineers
Date Performed	11/23/2015
Analysis Year	2015
Time Analyzed	PM Peak Hour
Intersection Orientation	East-West
Project Description	Heritage Ridge Residential Project/1-15-4119-1

Site Information

Intersection	5- EXISTING w/ PROJ 20-CY
Jurisdiction	City of Goleta
East/West Street	Calle Koral
North/South Street	Los Carneros Way
Peak Hour Factor	1.00
Analysis Time Period (hrs)	0.25

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	2	0		0	0	0		0	0	0
Configuration			T	R		LT	T				LR					
Volume (veh/h)			89	42		7	100			225		43				
Percent Heavy Vehicles						3				3		3				
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)						57					268					
Capacity						1445					837					
v/c Ratio						0.04					0.32					
95% Queue Length						0.0					1.4					
Control Delay (s/veh)						7.5					11.3					
Level of Service (LOS)						A					B					
Approach Delay (s/veh)					0.5				11.3							
Approach LOS					A				B							

HCS 2010 Two-Way Stop Control Summary Report

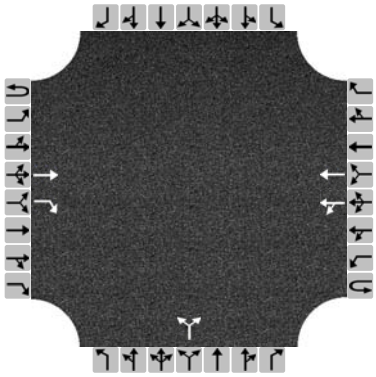
General Information

Analyst	ACY
Agency/Co.	LLG Engineers
Date Performed	11/23/2015
Analysis Year	2025
Time Analyzed	AM Peak Hour
Intersection Orientation	East-West
Project Description	Heritage Ridge Residential Project/1-15-4119-1

Site Information

Intersection	5 - CUM w/o PROJ
Jurisdiction	City of Goleta
East/West Street	Calle Koral
North/South Street	Los Carneros Way
Peak Hour Factor	1.00
Analysis Time Period (hrs)	0.25

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	2	0		0	0	0		0	0	0
Configuration			T	R		LT	T				LR					
Volume (veh/h)			103	209		41	95			185		63				
Percent Heavy Vehicles						3				3		3				
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)						89					248					
Capacity						1238					757					
v/c Ratio						0.07					0.33					
95% Queue Length						0.1					1.4					
Control Delay (s/veh)						8.0					12.1					
Level of Service (LOS)						A					B					
Approach Delay (s/veh)					2.5				12.1							
Approach LOS					A				B							

HCS 2010 Two-Way Stop Control Summary Report

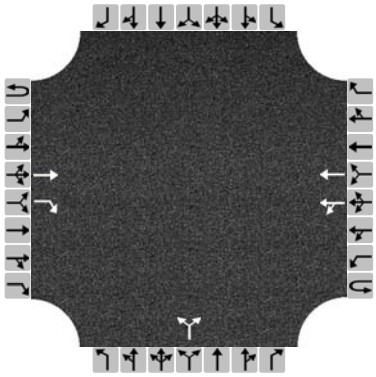
General Information

Analyst	ACY
Agency/Co.	LLG Engineers
Date Performed	11/23/2015
Analysis Year	2025
Time Analyzed	PM Peak Hour
Intersection Orientation	East-West
Project Description	Heritage Ridge Residential Project/1-15-4119-1

Site Information

Intersection	5 - CUM w/o PROJ
Jurisdiction	City of Goleta
East/West Street	Calle Koral
North/South Street	Los Carneros Way
Peak Hour Factor	1.00
Analysis Time Period (hrs)	0.25

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	2	0		0	0	0		0	0	0
Configuration			T	R		LT	T				LR					
Volume (veh/h)			163	72		7	37			365		73				
Percent Heavy Vehicles						3				3		3				
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)						26					438					
Capacity						1322					784					
v/c Ratio						0.02					0.56					
95% Queue Length						0.0					3.5					
Control Delay (s/veh)						7.7					15.2					
Level of Service (LOS)						A					C					
Approach Delay (s/veh)					1.2				15.2							
Approach LOS					A				C							

HCS 2010 Two-Way Stop Control Summary Report

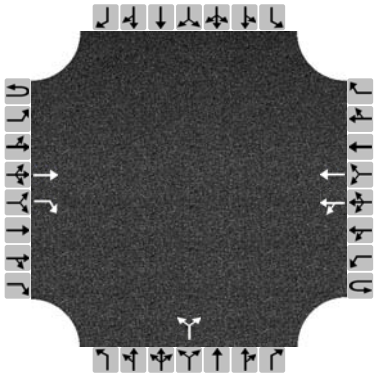
General Information

Analyst	ACY
Agency/Co.	LLG Engineers
Date Performed	11/23/2015
Analysis Year	2025
Time Analyzed	AM Peak Hour
Intersection Orientation	East-West
Project Description	Heritage Ridge Residential Project/1-15-4119-1

Site Information

Intersection	5- CUM with PROJ 20-CY
Jurisdiction	City of Goleta
East/West Street	Calle Koral
North/South Street	Los Carneros Way
Peak Hour Factor	1.00
Analysis Time Period (hrs)	0.25

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	2	0		0	0	0		0	0	0
Configuration			T	R		LT	T				LR					
Volume (veh/h)			124	209		41	113			185		63				
Percent Heavy Vehicles						3				3		3				
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)						98					248					
Capacity						1216					727					
v/c Ratio						0.08					0.34					
95% Queue Length						0.1					1.5					
Control Delay (s/veh)						8.1					12.5					
Level of Service (LOS)						A					B					
Approach Delay (s/veh)					2.2				12.5							
Approach LOS					A				B							

HCS 2010 Two-Way Stop Control Summary Report

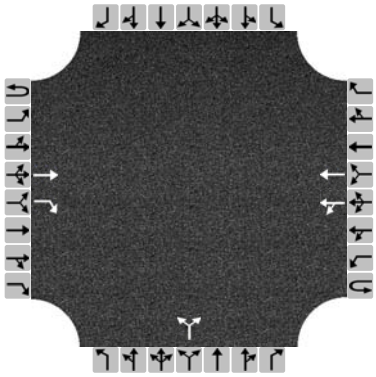
General Information

Analyst	ACY
Agency/Co.	LLG Engineers
Date Performed	11/23/2015
Analysis Year	2025
Time Analyzed	PM Peak Hour
Intersection Orientation	East-West
Project Description	Heritage Ridge Residential Project/1-15-4119-1

Site Information

Intersection	5- CUM with PROJ 20-CY
Jurisdiction	City of Goleta
East/West Street	Calle Koral
North/South Street	Los Carneros Way
Peak Hour Factor	1.00
Analysis Time Period (hrs)	0.25

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	2	0		0	0	0		0	0	0
Configuration			T	R		LT	T				LR					
Volume (veh/h)			181	72		7	58			365		73				
Percent Heavy Vehicles						3				3		3				
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)						36					438					
Capacity						1302					755					
v/c Ratio						0.03					0.58					
95% Queue Length						0.0					3.8					
Control Delay (s/veh)						7.8					16.1					
Level of Service (LOS)						A					C					
Approach Delay (s/veh)					0.9				16.1							
Approach LOS					A				C							

Intersection No.: 5
N-S Street: Los Carneros Way
E-W Street: Calle Koral

	EXISTING TRAFFIC			EXISTING WITH PROJECT (USING 20-CY TRUCKS)			CUMULATIVE WITHOUT PROJECT			CUMULATIVE WITH PROJECT (USING 20-CY TRUCKS)		
	Volume (veh/hr)	Delay (sec/veh)	LOS	Volume (veh/hr)	Delay (sec/veh)	LOS	Volume (veh/hr)	Delay (sec/veh)	LOS	Volume (veh/hr)	Delay (sec/veh)	LOS
AM Peak Hour												
Westbound Thru/Left:	95	7.7	A	104	7.8	A	89	8.0	A	98	8.1	A
Northbound Left/Right:	51	9.7	A	51	9.9	A	248	12.1	B	248	12.5	B
Average Weighted Delay (sec/veh)		8.4	A		8.5	A		11.0	B		11.3	B
PM Peak Hour												
Westbound Thru/Left:	47	7.5	A	57	7.5	A	26	7.7	A	36	7.8	A
Northbound Left/Right:	268	11.0	B	268	11.3	B	438	15.2	C	438	16.1	C
Average Weighted Delay (sec/veh)		10.5	B		10.6	B		14.8	B		15.5	C

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INTERSECTION CAPACITY UTILIZATION

Los Carneros Way @ Calle Koral
Peak hr: AM

Utilizing trucks with 20-cubic yard capacity

N-S St: Los Carneros Way
E-W St: Calle Koral
Project: Heritage Ridge Residential Project/1-15-4119-1
File: ICU5

Date: 11/25/2015
Date of Count: 2014

	EXIST. TRAFFIC			EXIST. WITH PROJECT				EXIST. W/PROJECT + MITIGATION				CUMULATIVE W/O PROJECT				CUMULATIVE W/ PROJECT			
	1	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	40	0	0.025	0	40	0	0.025	0	40	0	0.025	145	185	0	0.116	0	185	0	0.116
Nb Thru	0	1600	0.032 *	0	0	1600	0.032 *	0	0	1600	0.032 *	0	0	1600	0.155 *	0	0	1600	0.155 *
Nb Right	11	0	-	0	11	0	-	0	11	0	-	52	63	0	-	0	63	0	-
Sb Left	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Sb Thru	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Sb Right	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Eb Left	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Eb Thru	36	1600	0.023	21	57	1600	0.036	0	57	1600	0.036	67	103	1600	0.064	21	124	1600	0.078
Eb Right	171	1600	0.107 *	0	171	1600	0.107 *	0	171	1600	0.107 *	38	209	1600	0.131 *	0	209	1600	0.131 *
Wb Left	41	0	0.013 *	0	41	0	0.013 *	0	41	0	0.013 *	0	41	0	0.013 *	0	41	0	0.013 *
Wb Thru	107	3200	0.046	18	125	3200	0.052	0	125	3200	0.052	-12	95	3200	0.043	18	113	3200	0.048
Wb Right	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Yellow Allowance:			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.252				0.252				0.252				0.398				0.398
LOS			A				A				A				A				A

02:24 PM

** Key conflicting movement as a part of ICU*
1 Counts conducted by Quality Counts. Existing and cumulative without project traffic volumes obtained from the Heritage Ridge Project Updated Traffic Circulation and Parking Study (prepared by ATE, 10-30-15).
2 Capacity expressed in veh/hour of green

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INTERSECTION CAPACITY UTILIZATION

N-S St: Los Carneros Way
E-W St: Calle Koral
Project: Heritage Ridge Residential Project/1-15-4119-1
File: ICU5

Los Carneros Way @ Calle Koral
Peak hr: PM

Date: 11/25/2015
Date of Count: 2014

Utilizing trucks with 20-cubic yard capacity

	EXIST. TRAFFIC			EXIST. WITH PROJECT				EXIST. W/PROJECT + MITIGATION				CUMULATIVE W/O PROJECT				CUMULATIVE W/ PROJECT			
	1	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	225	0	0.141	0	225	0	0.141	0	225	0	0.141	140	365	0	0.228	0	365	0	0.228
Nb Thru	0	1600	0.168 *	0	0	1600	0.168 *	0	0	1600	0.168 *	0	0	1600	0.274 *	0	0	1600	0.274 *
Nb Right	43	0	-	0	43	0	-	0	43	0	-	30	73	0	-	0	73	0	-
Sb Left	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Sb Thru	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Sb Right	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Eb Left	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Eb Thru	71	1600	0.044 *	18	89	1600	0.056 *	0	89	1600	0.056 *	92	163	1600	0.102 *	18	181	1600	0.113 *
Eb Right	42	1600	0.026	0	42	1600	0.026	0	42	1600	0.026	30	72	1600	0.045	0	72	1600	0.045
Wb Left	7	0	0.002 *	0	7	0	0.002 *	0	7	0	0.002 *	0	7	0	0.002 *	0	7	0	0.002 *
Wb Thru	79	3200	0.027	21	100	3200	0.033	0	100	3200	0.033	-42	37	3200	0.014	21	58	3200	0.020
Wb Right	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Yellow Allowance:			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.314				0.325				0.325				0.478				0.489
LOS			A				A				A				A				A

02:24 PM

** Key conflicting movement as a part of ICU*
1 Counts conducted by National Data & Surveying Services. Existing and cumulative w/o project volumes obtained from Heritage Ridge Project Updated Traffic Circulation and Parking Study (by ATE, 10-30-15).
2 Capacity expressed in veh/hour of green