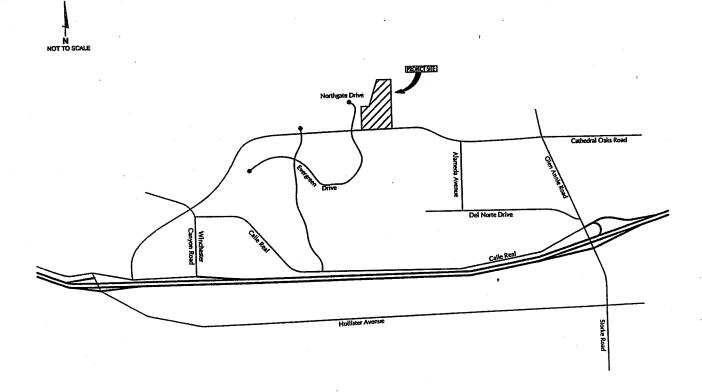
# APPENDIX E TRAFFIC AND CIRCULATION STUDY FOR THE 7400 CATHEDRAL OAKS ROAD PROJECT: CITY OF GOLETA, CA

# 7400 CATHEDRAL OAKS ROAD PROJECT CITY OF GOLETA, CALIFORNIA

#### TRAFFIC AND CIRCULATION STUDY



February 23, 2011

ATE #10086

### Prepared for:

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February 23, 2011

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Brent Daniels L & P Consultants 3 West Carrillo Street, Suite 205 Santa Barbara, CA 93101

# TRAFFIC AND CIRCULATION STUDY FOR THE 7400 CATHEDRAL OAKS ROAD PROJECT - CITY OF GOLETA, CA

Associated Transportation Engineers (ATE) has prepared the following traffic and circulation study for the 7400 Cathedral Oaks Road Project, located in the City of Goleta. The study addresses potential traffic and circulation impacts associated with the project and identifies improvements where appropriate.

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 7400 Cathedral Oaks Road Project. The report provides information regarding existing and future traffic conditions within the project study-area, and recommends improvements where necessary. The report also contains an analysis of the site access and circulation plan. The scope of work included in the study was developed based on input from City staff.

#### **PROJECT DESCRIPTION**

The project is proposing to develop a vacant site, located at 7400 Cathedral Oaks Road, in the western area of the City of Goleta, with 60 single family dwelling units. Figure 1 presents the location of the project site within the City. Access to the project site would be provided via two new roadway connections to Cathedral Oaks Road. A new loop road would be constructed to provide internal circulation throughout the site. Figure 2 presents the project site plan.

#### **EXISTING CONDITIONS**

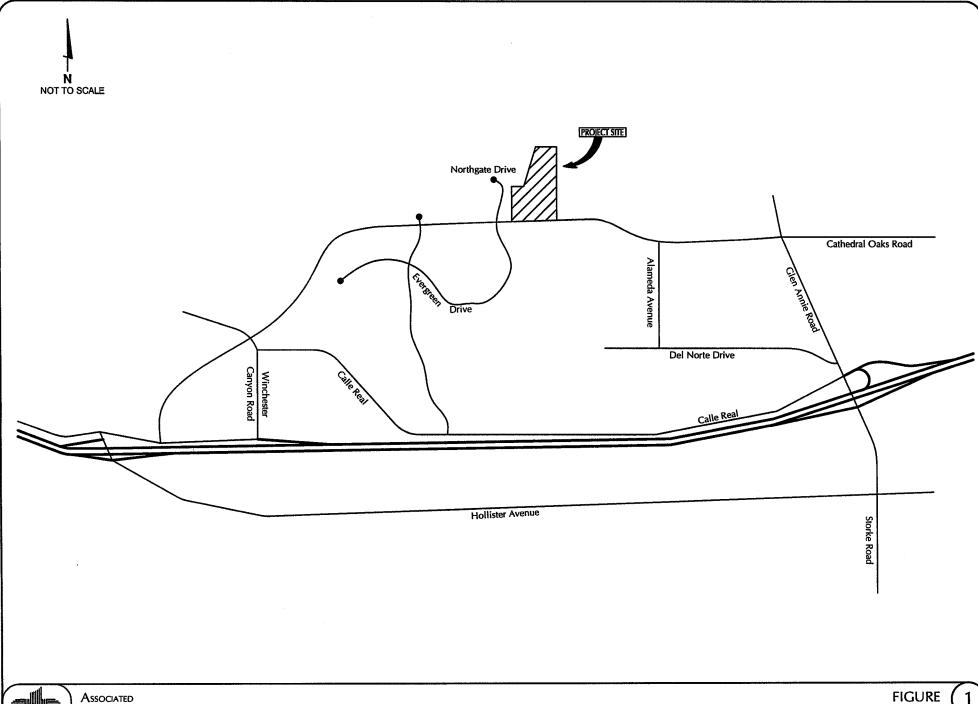
#### Street Network

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 south of the project site, is a multi-lane interstate freeway serving the Pacific Coast between Los Angeles and the state of Washington. U.S. Highway 101 is the principal route between the City of Goleta and the adjacent cities of Santa Barbara, Carpenteria, and Ventura to the south; and the cities of Buellton and Santa Maria to the north. Access from the site to U.S. Highway 101 would be provided via the Glen Annie-Storke Road interchange located east of the project site and the Hollister Avenue interchange located west of the site. It is noted that, at the time this report was published, construction was underway on the U.S. Highway 101/Hollister Avenue interchange project. A detailed discussion of the proposed modifications interchange is provided in the Cumulative Analysis section of this report.

**Cathedral Oaks Road** is a two- and four-lane arterial roadway located along the project's southern frontage. This east-west roadway extends from Goleta to Santa Barbara, providing an alternative travel route to U.S. Highway 101 and Hollister Avenue.

**Storke Road-Glen Annie Road**, located east of the project site, is a 2-4 lane north-south arterial roadway that extends between Cathedral Oaks Road on the north and El Colegio Road on the south. Storke Road provides freeway access to the western portion of the Goleta Valley area via an interchange at U.S. Highway 101. North of the interchange, Storke Road becomes Glen Annie Road and extends as a 2-lane road north of Cathedral Oaks Road.



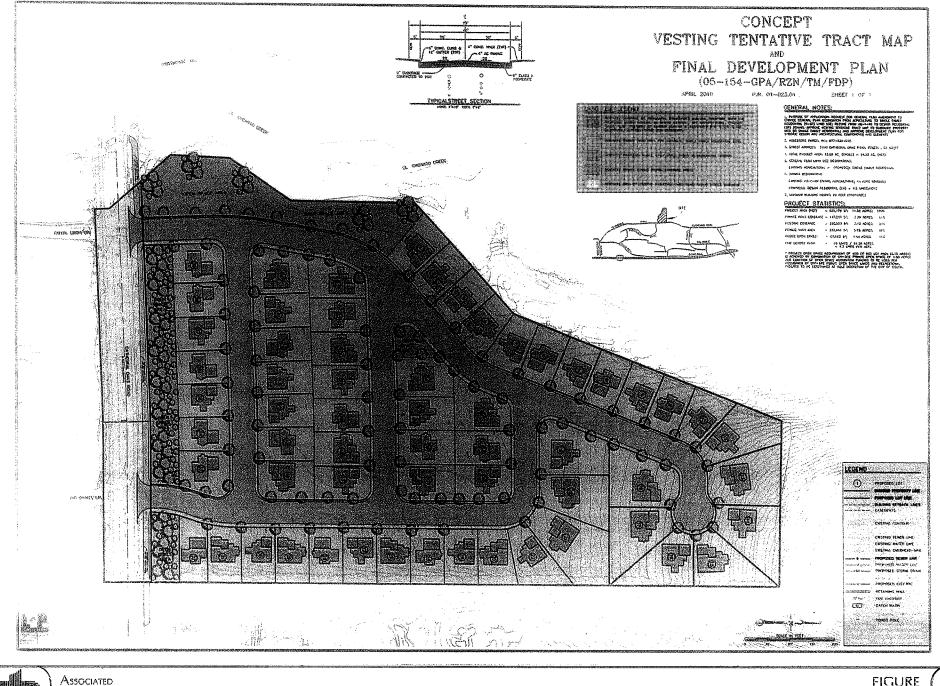


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**EXISTING STREET NETWORK AND PROJECT LOCATION** 

**FIGURE** 

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Hollister Avenue, located south of U.S. Highway 101, is a 2- to 4-lane east-west arterial which extends easterly from its terminus at the U.S. Highway 101/Hollister Avneue interchange through the community of Goleta, connecting with State Street in the City of Santa Barbara. Hollister Avenue serves as the major alternative east-west travel route to U.S. Highway 101 in the Goleta Valley area.

Calle Real, located south of the project site, is an east-west arterial with 2 travel lanes between Winchester Canyon Road and Glen Annie Road. Calle Real provides direct access from U.S. Highway 101 for the western portion of the Goleta Valley with an off-ramp at Winchester Canyon Road.

Winchester Canyon Road, located west of the project site, is a two-lane road that provides access between the U.S. Highway 101 northbound off-ramp and Cathedral Oaks Road.

#### **Roadway Operations**

Figure 3 illustrates the existing average daily traffic (ADT) volumes for the key roadways in the study area. The ADT volumes were obtained from traffic counts conducted in January 2011 for this study as well as counts collected in November 2009. 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 acceptable capacity thresholds for the key roadways in the project study area.

Table 1
Existing Average Daily Roadways Volumes

Roadway Segment	Roadway Classification	Geometry	Acceptable Capacity	Existing ADT
Cathedral Oaks w/o Glen Annie Road	Major Arterial	2-Lane	14,300	9,500
Glen Annie Road n/o U.S. Highway 101	Major Arterial	2-Lane	14,300	9,200
Storke Road s/o U.S. Highway 101	Major Arterial	4-lane	34,000	33,800

The data presented in Table 1 shows that the study-area roadways currently carry volumes within the City's acceptable capacity designations for arterial roadways.

#### **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 considers LOS C as the minimum acceptable operating standard for all intersections, with the exception of the Storke Road/Hollister Avenue intersection, where LOS D is considered acceptable.

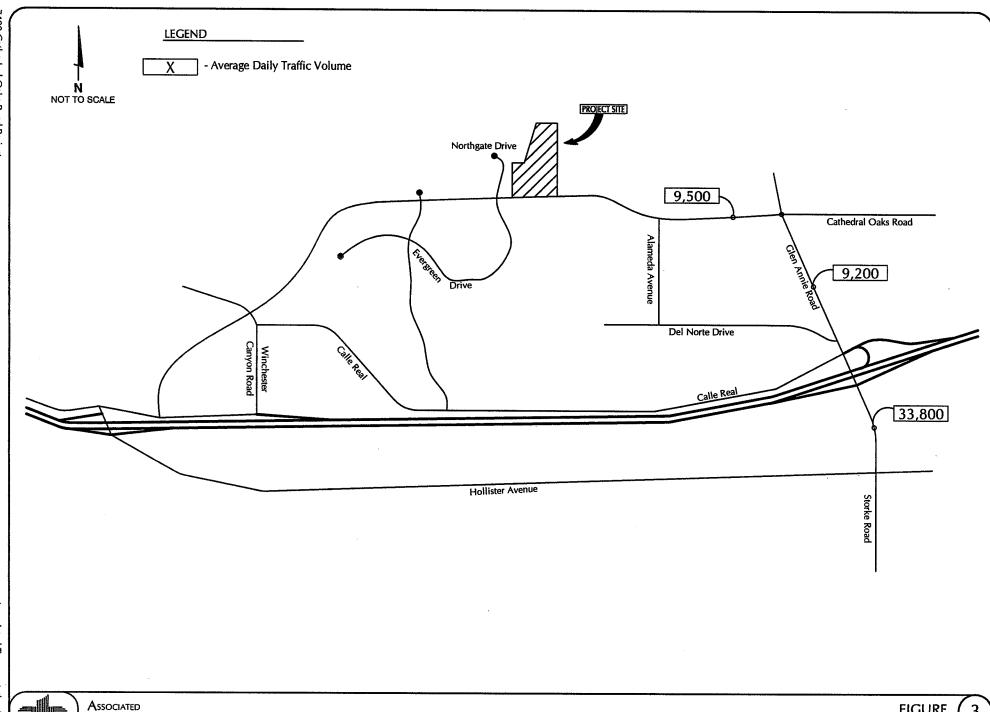


Figure 4 presents the intersections analyzed in this study and illustrates the existing traffic controls and lane geometries. Existing A.M. and P.M. peak hour volumes were collected for the study-area intersections in October of 2009 and in January 2011 for this study (traffic count data is contained in the Technical Appendix for reference). Existing A.M. and P.M. peak hour traffic volumes for the study-area intersections are shown on Figures 4 and 5.

Levels of service were calculated for the signalized study-area intersections using the "Intersection Capacity Utilization" (ICU) methodology. Levels of service for the unsignalized intersections were calculated using the methodology outlined in the Highway Capacity Manual (HCM). Table 2 lists the existing traffic control and levels of service for the study-area intersections (calculation worksheets are contained in the Technical Appendix).

Table 2
Existing Intersection Levels of Service

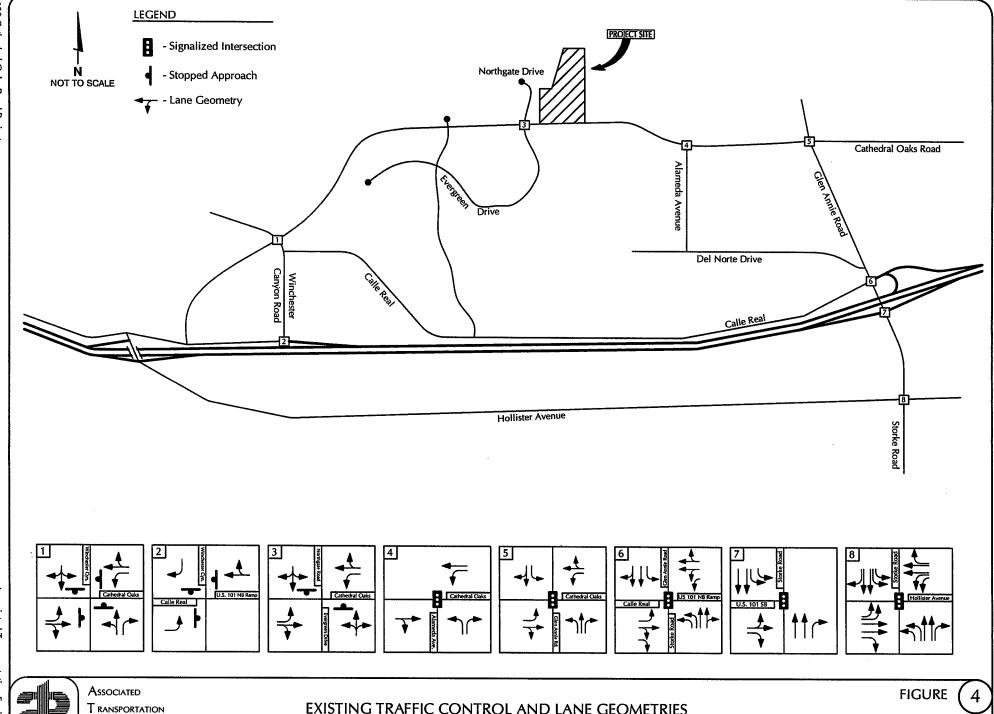
	6	A.M. Peak		P.M. Peak	
Intersection	Control	ICU	LOS	ICU	LOS
Cathedral Oaks Road/Winchester Canyon Road (a)	4-Way Stop	8.9 sec.	Α	8.2 sec.	Α
U.S.101 NB- Calle Real/Winchester Canyon Rd. (a)	2-way Stop	8.0 sec.	Α	8.7 sec.	Α
Cathedral Oaks Road/Northgate DrEvergreen Dr. (a)	2-way Stop	11.4 sec.	В	8.9 sec.	Α
Cathedral Oaks Road/Alameda Avenue	Signal	0.50	Α	0.28	Α
Cathedral Oaks Road/Glen Annie Road	Signal	0.75	С	0.55	Α
U.S. 101 NB Ramps-Calle Real/Storke Road	Signal	0.71	С	0.69	В
U.S. 101 SB Ramps/Storke Road	Signal	0.78	С	0.76	С
Hollister Avenue/Storke Road	Signal	0.61	В	0.74	С

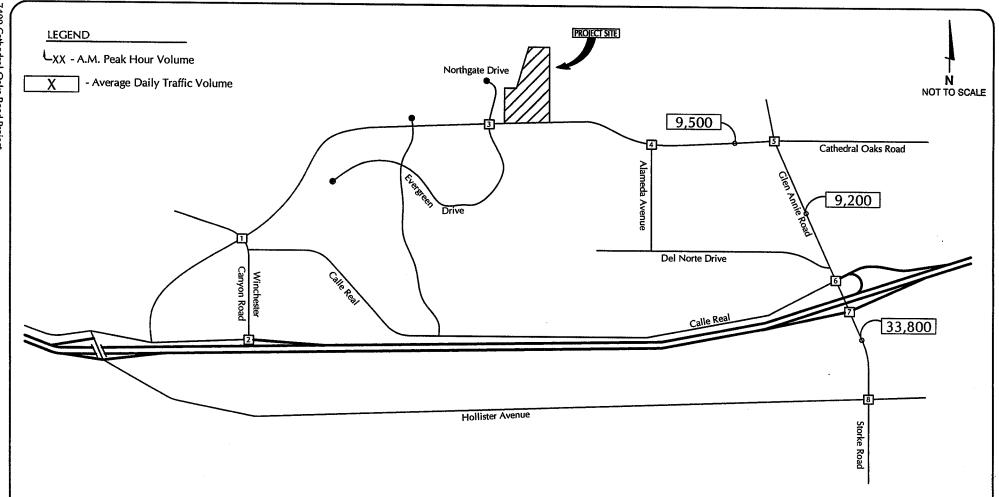
<sup>(</sup>a) Unsignalized Intersection. LOS based on average weighted delay in seconds per vehicle.

The data presented in Table 2 show that all of the study-area intersections operate at LOS C or better during the A.M. and P.M. peak hours. These levels of service are considered acceptable based on the City's LOS C operating standard.

Highway Capacity Manual , Transportation Research Special Report 209, National Research Council, 2000.

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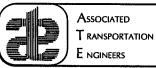
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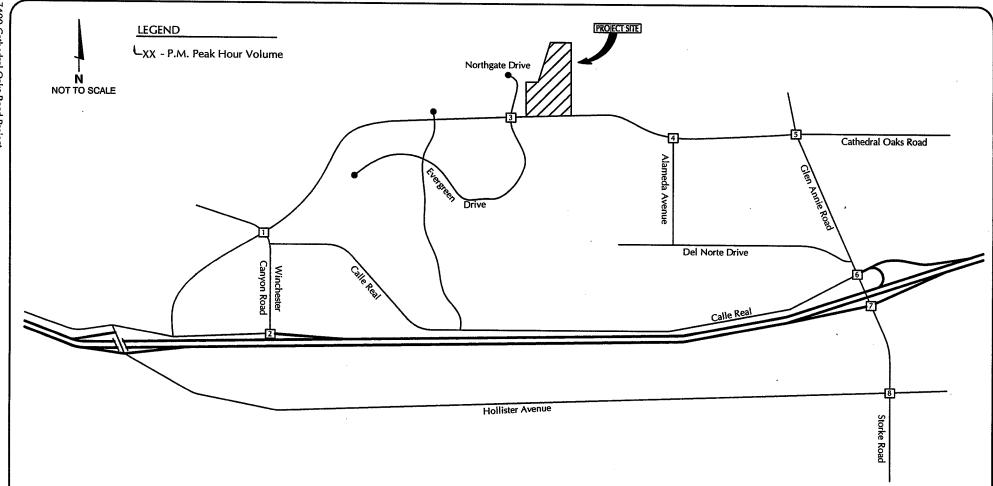
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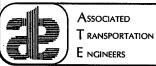
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#### THRESHOLDS OF SIGNIFICANCE

The City of Goleta traffic impact thresholds were used to assess the project's potential impacts. The thresholds are listed below.

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).

In addition to the CEQA impact thesholds, the City of Goleta has developed the administrative policy of defining a significant roadway impact if a project would increase traffic volumes by more than 1.0% (either project-specific or project contribution to cumulative impacts) on roadways that currently exceed the Acceptable Capacity or are forecast to exceed the Acceptable Capacity under cumulative conditions.

#### **PROJECT-SPECIFIC ANALYSIS**

#### **Project Trip Generation**

The project is proposing to develop a traditional style neighborhood with 60 single family homes. Trip generation estimates were calculated for the project based on the rates presented in the Institute of Transportation Engineers (ITE) Trip Generation Manual.<sup>2</sup> The rates for Single Family Detached Housing units (Land Use Code 210) were used to forecast project traffic (trip generation calculations were reviewed and approved by City staff). Table 3 presents trip generation estimates developed for the 7400 Cathedral Oaks Road Project.

Table 3
Project Trip Generation

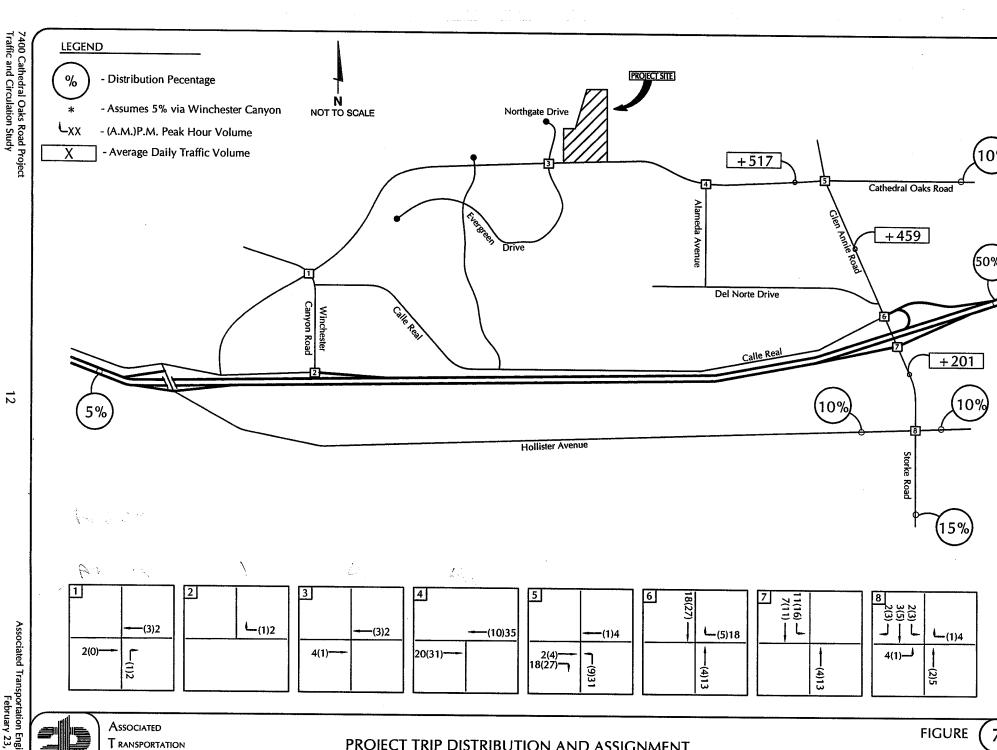
		Average Daily		A.M. Peak Hour		P.M. Peak Hour	
Land Use	Size	Rate	Trips	Rate	Trips (In/Out)	Rate	Trips (In/Out)
Single Family Homes	60 Units	9.57	5 <i>7</i> 4	0.75	45 (11/34)	1.01	61 (39/22)

The data presented in Table 1 indicate that the project would generate 574 average daily trips, 45 A.M. peak hour trips and 61 P.M. peak hour trips.

#### **Trip Distribution**

Trip distribution percentages were developed for the project based on existing traffic flows and consideration of the retail, school and employment centers in the surrounding area (trip distribution parameters were reviewed and approved by City staff). Table 4 and Figure 7 show the trip distribution percentages developed for the project. The project-added traffic volumes are also presented on Figure 7.

<sup>&</sup>lt;sup>2</sup> <u>Trip Generation</u>, Institute of Transportation Engineers, 8th edition, 2008.



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PROJECT TRIP DISTRIBUTION AND ASSIGNMENT

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Table 4
Trip Distribution Percentages

Origin/Destination	Direction	Percentage		
U.S. Highway 101  - Via Hollister Avenue Interchange  - Via Hollister Avenue Interchange  - Via Storke Road Interchange	West East East	5% 5% 45%		
Cathedral Oaks Road	East	10%		
Hollister Avenue	East of Storke Road West of Storke Road	15% 10%		
Storke Road	South of Hollister Ave	10%		
Total		100%		

#### **Existing + Project Roadway Operations**

Table 5 lists the Existing + Project roadway volumes and identifies the potential impacts of the traffic additions based on the City of Goleta's capacity thresholds. Existing + Project ADT volumes are presented on Figure 8.

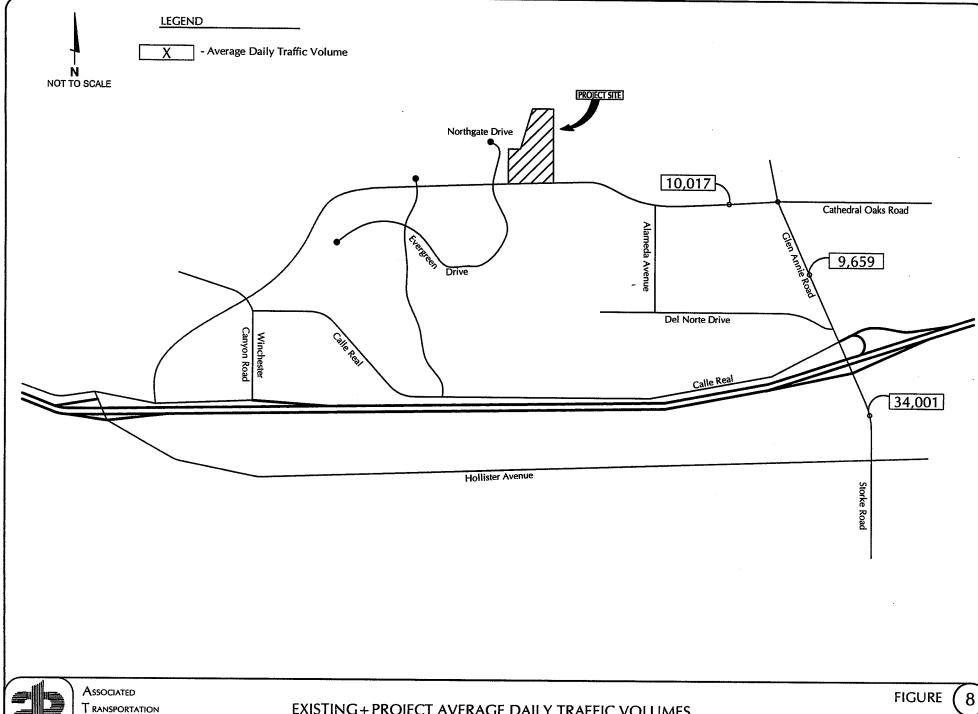
Table 5
Existing + Project Roadway Volumes

Roadway Segment	Acceptable Capacity	Existing ADT	EX + Project ADT	% Change	Impact?
Cathedral Oaks w/o Glen Annie Road	14,300	9,500	10,017	5.4%	No
Glen Annie Road n/o U.S. Highway 101	14,300	9,200	9,659	5.0%	No
Storke Road s/o U.S. Highway 101	34,000	33,800	34,001	0.6%	No

**Bolded** Items Exceed Acceptable Capacity.

The data in Table 5 show that the segments of Cathedral Oaks Road west of Glen Annie Road and Glen Annie Road north of U.S. 101 are forecast to carry volumes within their acceptable capacity designations with Existing + Project volumes. The segment of Storke Road south of U.S. Highway 101 is forecast to carry volumes that will exceed the acceptable capacity under Existing + Project conditions. The project would not impact this segment since project-generated traffic would increase the roadway volume by less than 1%.

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#### **Existing + Project Intersection Operations**

Peak hour levels of service were calculated for the study-area intersections using the Existing + Project traffic volumes presented on Figures 9 and 10. Tables 6 and 7 compare the Existing and Existing + Project levels of service and identify project-specific impacts based on the City's thresholds.

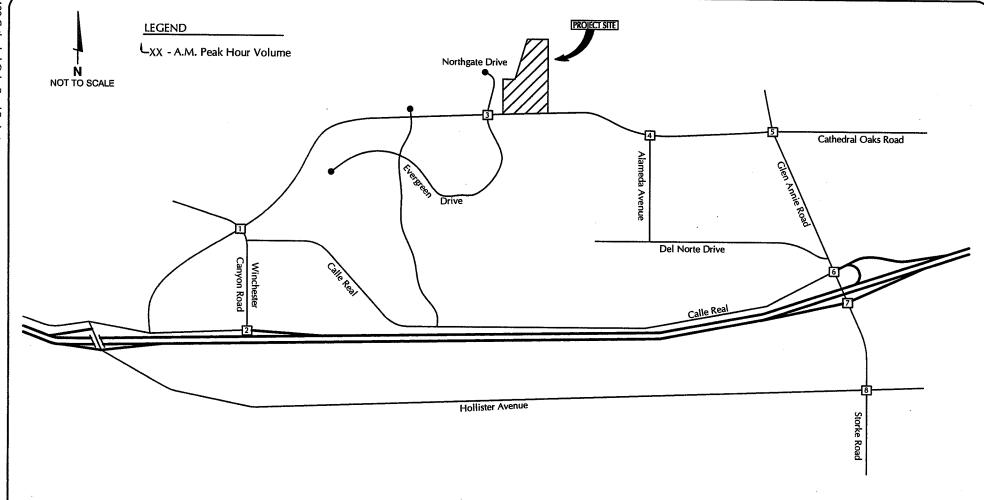
Table 6
Existing + Project A.M. Peak Hour Levels of Service

Intersection	Exist	Existing Existing - Project		_	Project- Added	Change in V/C	Impact?
	ICU LOS		ICU	LOS	Trips		•
Cathedral Oaks Rd./Winchester Cyn. Rd. (a)	8.9 sec.	A	8.9 sec.	Α	4 Trips	0.008(b)	No
U.S.101 NB- Calle Real/Winchester Cyn. Rd. (a)	8.0 sec.	Α	8.0 sec.	Α	1 Trip	0.002(b)	No
Cathedral Oaks Rd./Northgate Drive Evergreen Drive. (a)	11.4 sec.	В	11.4 sec.	В	4 Trips	0.006(b)	No
Cathedral Oaks Road/Alameda Avenue	0.50	Α	0.52	A	41 Trips	0.018	No
Cathedral Oaks Road/Glen Annie Road	0.75	С	0.77	С	41 Trips	0.021	No
U.S. 101 NB Ramps-Calle Real/Storke Road	0. <i>7</i> 1	С	0.72	С	36 Trips	0.009	No
U.S. 101 SB Ramps/Storke Road	0.78	С	0.79	С	31 Trips	0.005	No
Hollister Avenue/Storke Road	0.61	В	0.61	В	15 Trips	0.001	No

<sup>(</sup>a) Unsignalized Intersection. LOS based on average weighted delay in seconds per vehicle.

<sup>(</sup>b) V/C ratio does not apply to unsignalized locations. Value shown correlates to % change in entering traffic volumes.





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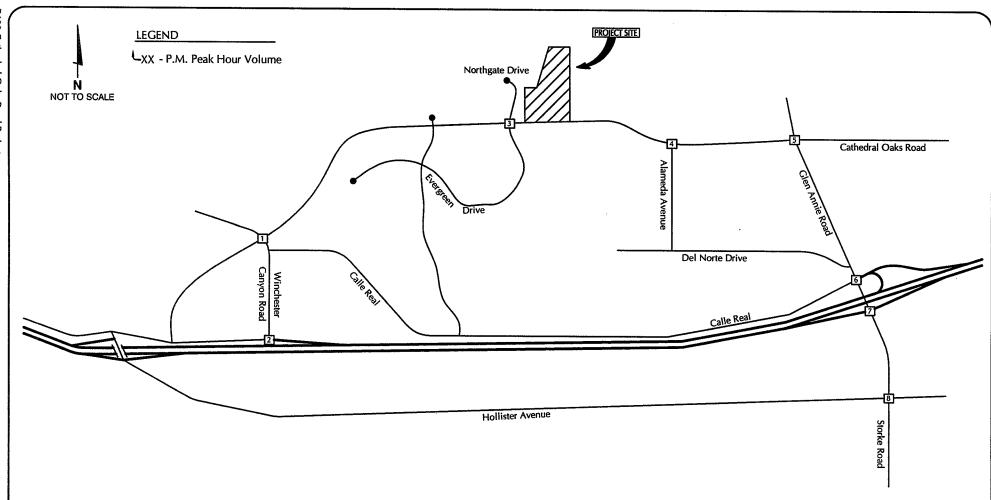
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EXISTING+PROJECT A.M. PEAK HOUR TRAFFIC VOLUMES

**FIGURE** 



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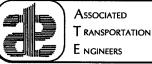
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FIGURE

Table 7
Existing + Project P.M. Peak Hour Levels of Service

Intersection	Existing		Existing + Project		Project- Added	Change	Impact?
	ICU	LOS	ICU	LOS	Trips	In V/C	•
Cathedral Oaks Road/Winchester Canyon Road (a)	8.2 sec.	A	8.2 sec.	A	6 Trips	0.018 (b)	No
U.S.101 NB- Calle Real/Winchester Canyon Rd. (a)	8.3 sec.	Α	8.3 sec.	Α	2 Trips	0.004 (b)	No
Cathedral Oaks Road/Northgate Dr Evergreen Dr. (a)	8.9 sec.	A	8.9 sec.	Α	6 Trips	0.013 (b)	No
Cathedral Oaks Road/Alameda Avenue	0.29	A	0.32	Α	55 Trips	0.022	No
Cathedral Oaks Road/Glen Annie Road	0.55	Α	0.58	Α	55 Trips	0.029	No
U.S. 101 NB Ramps-Calle Real/Storke Road	0.69	В	0.70	В	49 Trips	0.009	No
U.S. 101 SB Ramps/Storke Road	0.76	С	0.76	С	31 Trips	0.004	No
Hollister Avenue/Storke Road	0.74	С	0.74	С	20 Trips	0.006	No

<sup>(</sup>a) Unsignalized Intersection. LOS based on average weighted delay in seconds per vehicle.

The data presented in Tables 6 and 7 indicate that the project would not significantly impact the study-area intersections under the Existing + Project scenario based on the City's project-specific traffic impact thresholds.

#### **CUMULATIVE ANALYSIS**

#### **Cumulative Traffic Volumes**

Cumulative traffic volumes were forecast using the City's traffic model. The cumulative forecasts include traffic generated by approved and pending projects proposed within the Goleta area (the cumulative model volumes and a list summarizing the approved and pending projects is contained in the Technical Appendix for reference) as well as development of the UCSB Long Range Development Plan, the Santa Barbara Airport Specific Plan and terminal expansion, and regional growth in the Goleta-Santa Barbara area. The traffic model also assumes key roadway improvements that are planned in the Goleta area. The two key improvements that would affect traffic in the project study area are discussed below.

<u>U.S. Highway 101 Overcrossing</u>. A new freeway overcrossing is to be built approximately midway between the Storke Road and Hollister Avenue interchanges. The overcrossing would be constructed as a 2-lane roadway that will provide a new connection between Calle Real and

<sup>(</sup>b) V/C ratio does not apply to unsignalized locations. Value shown correlates to % change in entering traffic volumes.

Hollister Avenue. The new freeway overcrossing will result in traffic reductions at the Storke Road and Hollister Avenue interchanges located east and west of the new crossing.

<u>U.S. 101/Hollister Avenue Interchange</u>. Construction is currently underway on modifications to the existing U.S. Highway 101/Hollister Avenue interchange. The modifications consist of relocating the existing U.S. Highway 101 overcrossing to align with Cathedral Oaks Road. The relocated overcrossing will connect to Hollister Avenue south of the U.S. Highway 101, forming a "T" intersection. A new half-diamond interchange will be located at the Cathedral Oaks Road overcrossing, providing access to and from southbound U.S. Highway 101. Access to and from northbound U.S. Highway 101 will be provided via the existing ramps. Traffic signals will control the Cathedral Oaks/Calle Real, U.S. Highway 101 SB Ramps/Cathedral Oaks Road, and Cathedral Oaks, Road/Hollister Avenue intersections. A figure illustrating the proposed traffic controls and lane geometries at the new interchange is contained in the Technical Appendix for reference.

#### **Cumulative Roadway Operations**

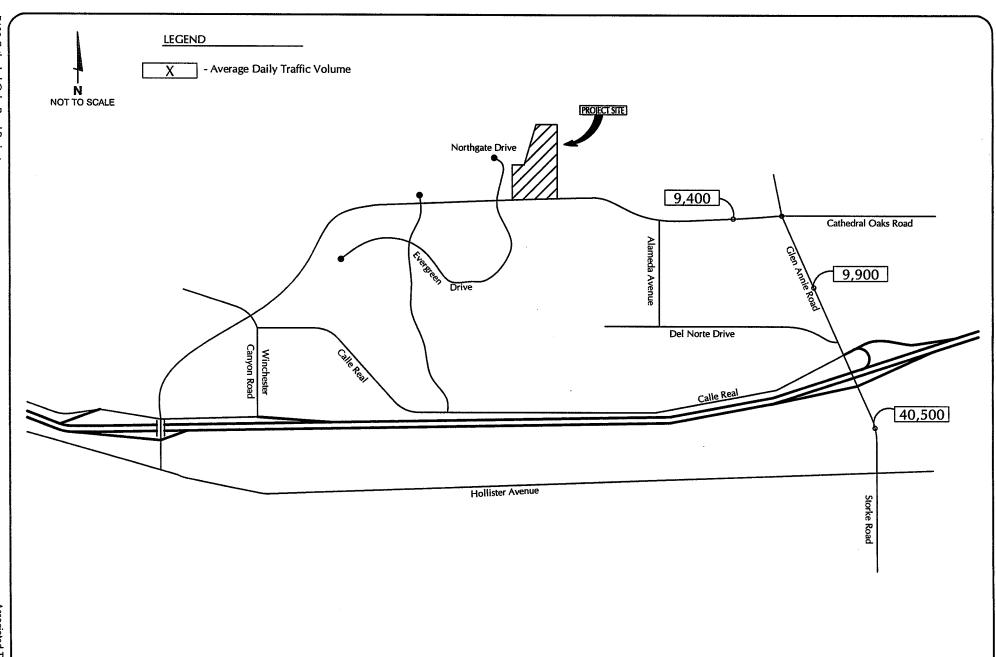
Cumulative ADT volumes were developed based on the change in P.M. peak hour link volumes. The change in peak hour volumes was factored by a peak hour factor and then added to the existing ADT volumes. Table 8 lists the Cumulative and Cumulative + Project roadway volumes and identifies the impacts of the traffic additions based on the City of Goleta's capacity thresholds. Cumulative ADT volumes are shown on Figure 11 and Cumulative + Project ADT volumes are shown on Figure 12.

Table 8
Cumulative and Cumulative + Project Roadway Volumes

Roadway Segment	Acceptable Capacity	Cumulative ADT	CU+Project ADT	% Change	Impact?
Cathedral Oaks w/o Glen Annie Road	14,300	9,400	9,917	5.5%	No
Glen Annie Road n/o U.S. Highway 101	14,300	9,900	10,359	4.6%	No
Storke Road s/o U.S. Highway 101	34,000	40,500	40,701	0.5%	No

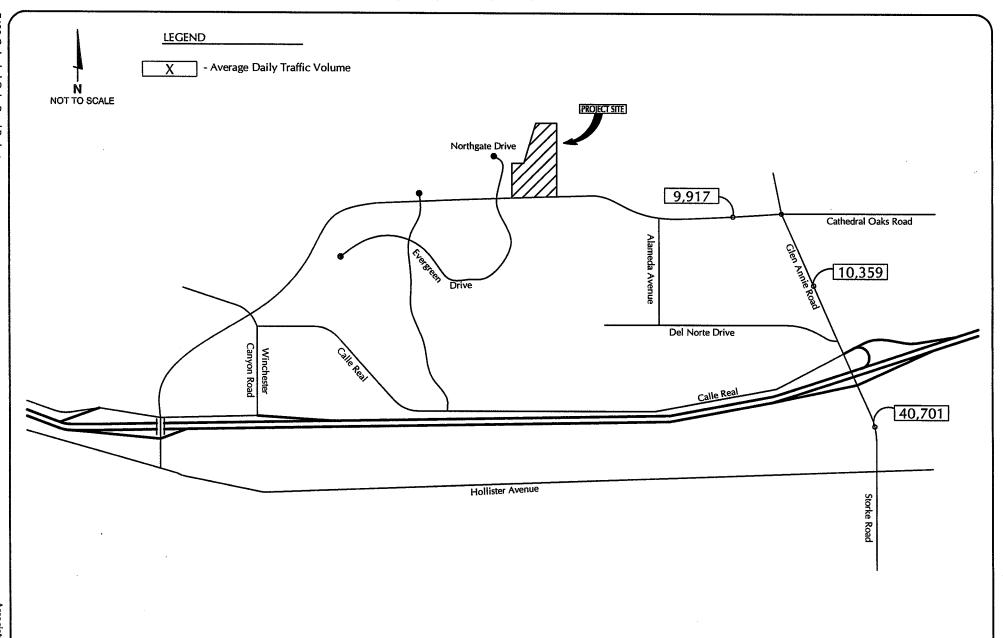
**Bolded** Items Exceed Acceptable Capacity.

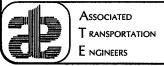
The data in Table 8 show that the segments of Cathedral Oaks Road west of Glen Annie Road and Glen Annie Road north of U.S. Highway 101 are forecast to carry volumes within their acceptable capacity designations with Cumulative and Cumulative+Project volumes. The segment of Storke Road south of U.S. Highway 101 is forecast to carry volumes that will exceed the acceptable capacity under Cumulative and Cumulative+Project conditions. The project would not impact this segment since project-generated traffic would increase the roadway volume by less than 1%.





**FIGURE** 





FIGURE

#### **Cumulative Intersection Operations**

Levels of service were calculated for the study-area intersections using the Cumulative and Cumulative + Project traffic volumes presented on Figures 13 through 16. Tables 9 and 10 compare the Cumulative and the Cumulative + Project levels of service for the study-area intersections and identify cumulative impacts based on City thresholds.

Table 9
Cumulative + Project A.M. Peak Hour
Levels of Service

Intersection	Cumulative		Cumulative + Project		Project V/C	Impact?
	ICU	LOS	ICU	LOS	Change	
Cathedral Oaks Rd./Winchester Cyn Rd. (a)	9.1 sec.	Α	9.1 sec.	A	0.009(b)	No
U.S.101 NB- Calle Real/Winchester Cyn Rd. (a)	9.0 sec.	Α	9.0 sec.	Α	0.002(b)	No
Cathedral Oaks Rd/Northgate DrEvergreen Dr. (a)	11.5 sec.	В	11.5 sec.	В	0.006(b)	No
Cathedral Oaks Road/Alameda Avenue	0.52	Α	0.54	Α	0.19	No
Cathedral Oaks Road/Glen Annie Road	0.77	. C	0.79	С	0.02	No
U.S. 101 NB Ramps-Calle Real/Storke Road	0.74	С	0.75	С	0.01	No
U.S. 101 SB Ramps/Storke Road	0.94	E	0.94	E	0.005	No
Hollister Avenue/Storke Road	0.73	С	0.74	С	0.003	No
Cathedral Oaks Road/Calle Real	0.54	Α	0.55	Α	0.002	No
U.S. 10 1 SB Ramps/Cathedral Oaks Road	0.63	В	0.63	В	0.001	No
Cathedral Oaks Road/Hollister Avenue .	0.5 <i>7</i>	Α	0.57	Α	0.000	No

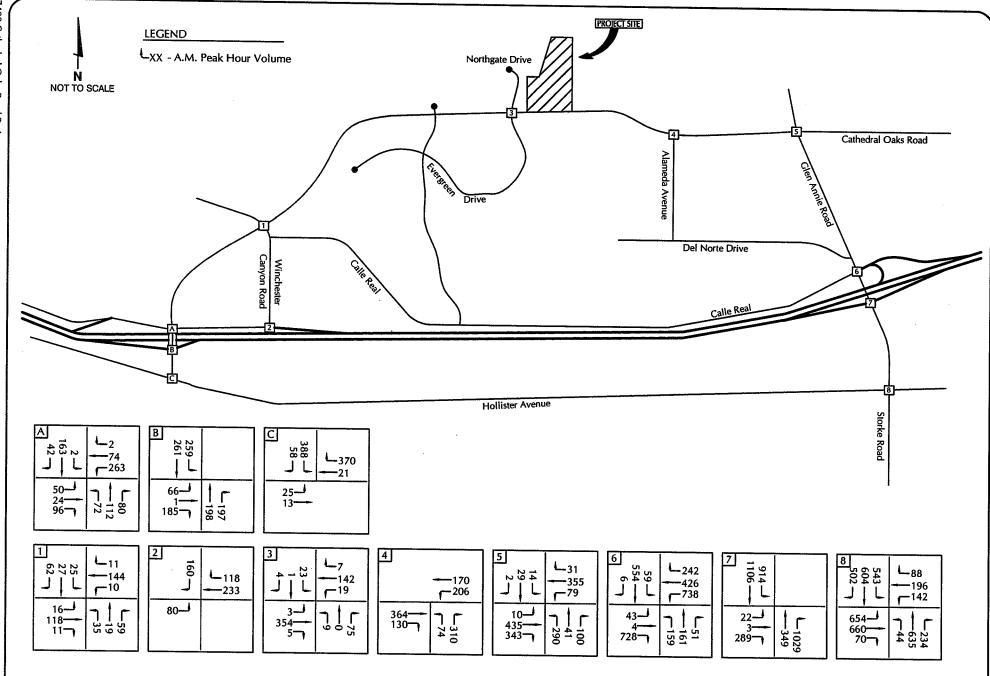
<sup>(</sup>a) Unsignalized Intersection. LOS based on average weighted delay in seconds per vehicle.

<sup>(</sup>b) V/C ratio does not apply to unsignalized locations. Value shown correlates to % change in entering traffic volumes. **Bolded** Items Exceed LOS C Operating Standard.





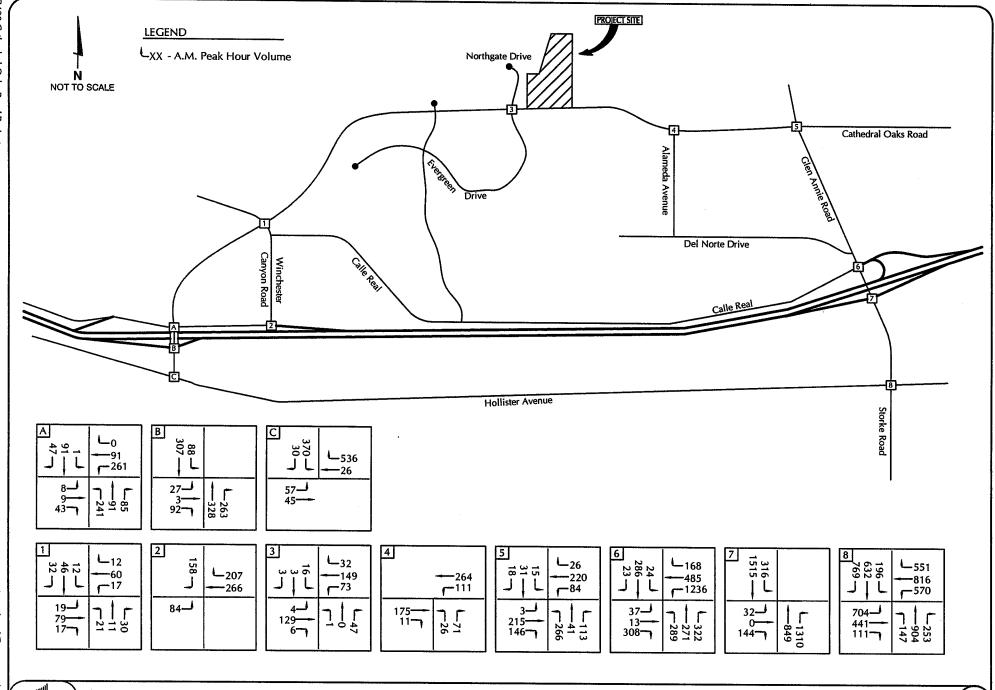




Associated
Transportation
Engineers

**CUMULATIVE A.M. PEAK HOUR TRAFFIC VOLUMES** 

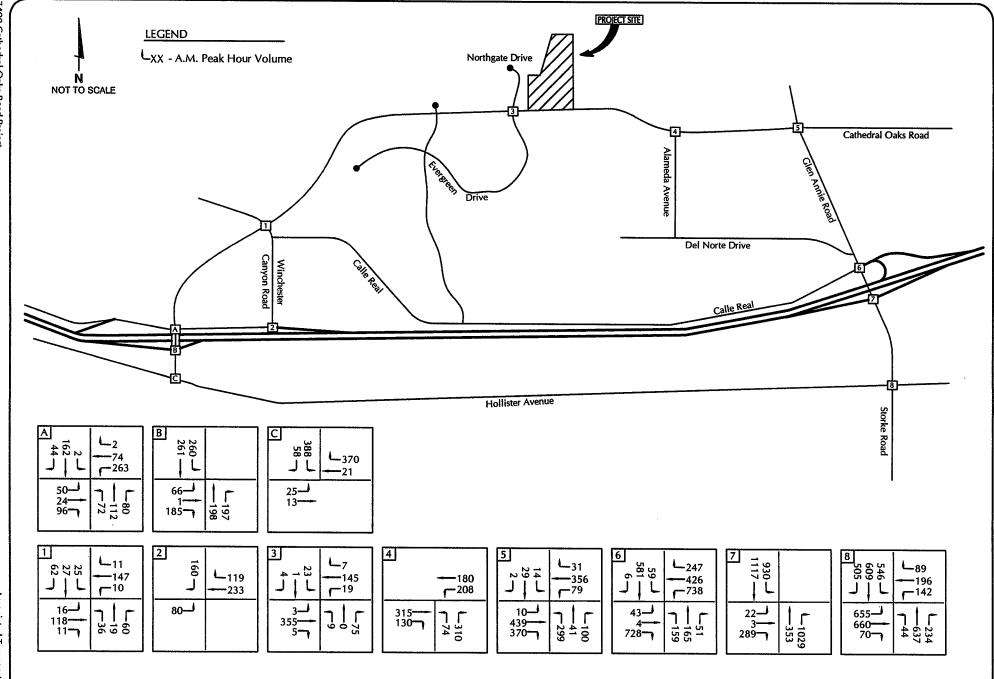
FIGURE



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CUMULATIVE P.M. PEAK HOUR TRAFFIC VOLUMES

**FIGURE** 

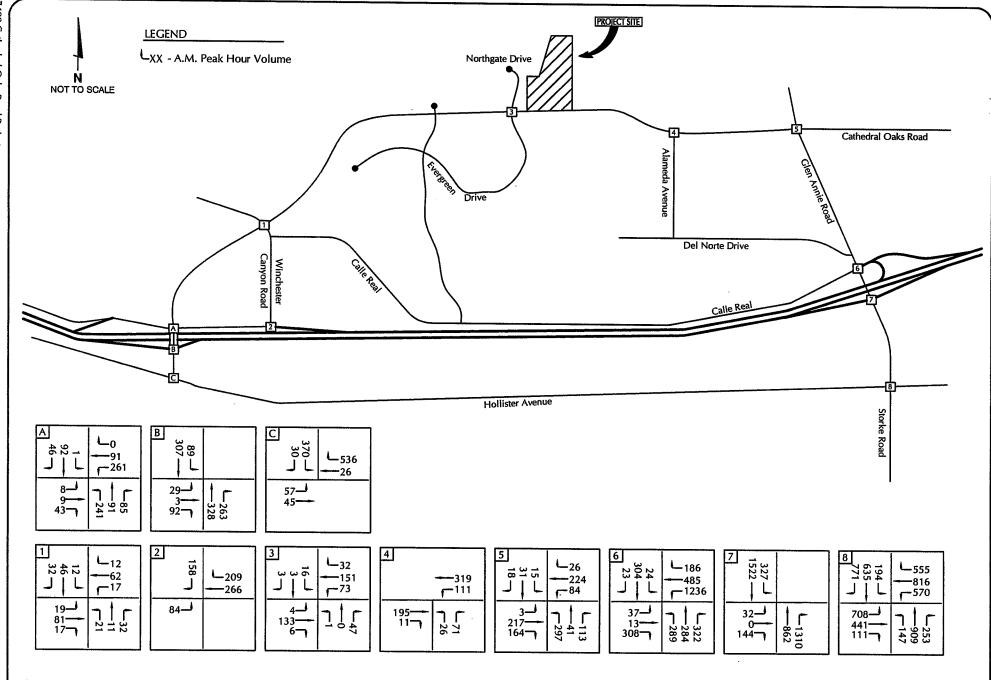


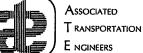
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CUMULATIVE + PROJECT A.M. PEAK HOUR TRAFFIC VOLUMES

FIGURE

MMF - #10086





CUMULATIVE + PROJECT P.M. PEAK HOUR TRAFFIC VOLUMES

**FIGURE** 

MMF - #10086

Table 10
Cumulative and Cumulative + Project P.M. Peak Hour
Levels of Service

Intersection	Cumulative		Cumulative+ Project		Project V/C	Impact?
	ICU	LOS	ICU	LOS	Change	•
Cathedral Oaks Rd./Winchester Cyn. Rd. (a)	8.3 sec.	Α	8.3 sec.	Α	0.017(b)	No
U.S.101 NB- Calle Real/Winchester Cyn. Rd. (a)	9.4 sec.	Α	9.4 sec.	Α	0.003 (b)	No
Cathedral Oaks Rd./Northgate DrEvergreen Dr. (a)	8.9 sec.	Α	8.9 sec.	Α	0.013(b)	No
Cathedral Oaks Road/Alameda Avenue	0.29	Α	0.32	Α	0.21	No
Cathedral Oaks Road/Glen Annie Road	0.54	Α	0.57	Α	0.03	No
U.S. 101 NB Ramps-Calle Real/Storke Road	0.74	С	0.75	С	0.009	No
U.S. 101 SB Ramps/Storke Road	0.89	D	0.89	D	0.003	No
Hollister Avenue/Storke Road	0.92	E	0.92	E	0.003	No
Cathedral Oaks Road/Calle Real	0.54	Α	0.54	Α	0.001	No
U.S. 10 1 SB Ramps/Cathedral Oaks Road	0.58	Α	0.58	Α	0.001	No
Cathedral Oaks Road/Hollister Avenue	0.67	В	0.67	В	0.000	No

<sup>(</sup>a) Unsignalized Intersection. LOS based on average weighted delay in seconds per vehicle.

The data presented in Tables 9 and 10 indicate that the project would not significantly impact the study-area intersections based on the City's cumulative traffic impact thresholds.

#### SITE ACCESS AND CIRCULATION

Access and site circulation would be provided via a looped roadway that would connect to Cathedral Oaks Road at two locations (see Figure 2 - Project Site Plan). The roadway connections would align with the existing residential roadways located on the south side of Cathedral Oaks Road. The new intersections would be controlled by stop signs on the side street approaches.

Operations at the two access road intersections were analyzed assuming the Cumulative+Project traffic volumes. The methodology outlined in the Highway Capacity Manual for two-way stop sign controlled intersections was used for the evaluation. Table 11 presents the peak hour operations for the project roadway intersections under Cumulative+Project conditions. The Cumulative+Project intersection volumes and level of service forecasts are shown on worksheets contained in the Technical Appendix for reference.

<sup>(</sup>b) V/C ratio does not apply to unsignalized locations. Value shown correlates to % change in entering traffic volumes. **Bolded** Items Exceed LOS C Operating Standard.

Table 11
Project Driveway Level of Service

. Intersection	A.M. Delay/LOS	P.M. Delay/LOS
West Roadway/Cathedral Oaks Road Inbound Left Turns Outbound Left & Right Turns	7.5 Sec./LOS A 12.8 Sec./LOS B	7.8 Sec./LOS A 11.4 Sec./LOS B
East Roadway/Cathedral Oaks Road Inbound Left Turns Outbound Left & Right Turns	7.6 Sec./LOS A 13.2 Sec./LOS B	7.8 Sec./LOS A 11.6 Sec./LOS B

As shown, the two roadway connections at forecast to operate at LOS A-B, which is considered acceptable. The proposed roadway connections would operate sufficiently considering the volumes forecast for the project and the adjacent segment of Cathedral Oaks Road.

#### **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 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 following study-area intersections are located within the CMP network:

- Storke Road/U.S. Highway 101 NB Ramps
- Storke Road/U.S. Highway 101 SB Ramps
- Storke Road/Hollister Avenue

Tables 6 and 7 indicate that the CMP intersections would operate at LOS C or better under Existing + Project conditions. The project would not generate significant project-specific impacts to the CMP network based on the CMP impact criteria.

Tables 9 and 10 show that the U.S. Highway 101 SB Ramps/Storke Road intersection is forecast to operate at LOS E during the A.M. peak hour and at LOS D during the P.M. Peak hour, and that the Storke Road/Hollister Avenue intersection is forecast to operate at LOS E during the P.M. peak hour period under Cumulative + Project conditions. The project is forecast to add 20 or more trips to these locations, which would be considered a significant cumulative impact based on CMP criteria.

The CMP requires that deficiency plans be prepared when an intersection reaches LOS E. The City of Goleta has adopted LOS D as the acceptable operating standard for the Storke Road/Hollister Avenue intersection. The GTIP was established to collect funds to implement future identified improvements within the City. The GTIP includes programmed improvements for the Storke Road corridor, which would return service levels to LOS C at the U.S. Highway 101 SB/Storke Road intersection and LOS D at the Storke Road/Hollister Avenue intersection. These improvements would thereby meet City standards and provide consistency with the CMP. The proposed project would be required to contribute traffic fees to the GTIP for implementation of the planned improvements.

#### **Potential Freeway Impacts**

The 2009 CMP report<sup>3</sup> shows that the segment of U.S. Highway 101 between Storke Road and Los Carneros operates at LOS B during the A.M. peak hour and at LOS C during the P.M. peak hour. The proposed project is forecast to add 26 A.M. peak hour trips and 29 P.M. peak hour

<sup>&</sup>lt;sup>3</sup> 2009 Santa Barbara County Congestion Management Program, Santa Barbara County Association of Governments, June 18, 2009.

trips to this segment of U.S. Highway 101. 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. Based on these CMP impact criteria, the project would not generate a significant impact to U.S. Highway 101.

#### REFERENCES AND PERSONS CONTACTED

**Associated Transportation Engineers** 

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

#### References

<u>City of Goleta General Plan/Coastal Land Use Plan Final Traffic Forecast Report,</u> Dowling Associates, 2006.

Highway Capacity Manual, Transportation Research Board, National Research Council, 2000.

<u>Trip Generation</u>, Institute of Transportation Engineers, 8<sup>th</sup> edition, 2008.

#### **Persons Contacted**

Biega, Jim, City of Goleta Damkowitz, Jim, Dowling Associates Hansen, Alan, City of Goleta Miller, Patricia, City of Goleta Shultz, Marti, City of Goleta Wagner, Steve, City of Goleta

#### **TECHNICAL APPENDIX**

**CONTENTS:** 

LEVEL OF SERVICE DEFINITIONS

CITY OF GOLETA ROADWAY DESIGN CAPACITIES

TRAFFIC COUNT DATA

#### INTERSECTION LEVEL OF SERVICE CALCULATION WORKSHEETS

Reference 1 Winchester Canyon Road/Cathedral Oaks Road

Reference 2 U.S. 101 NB Ramps- Calle Real/Winchester Canyon Road

Reference 3 Cathedral Oaks Road/Northgate Drive-Evergreen Drive

Reference 4 Cathedral Oaks Road/Alameda Avenue

Reference 5 Glen Annie Road/Cathedral Oaks Road

Reference 6 U.S. 101 NB Ramps/Glen Annie Road

Reference 7 U.S. 101 SB Ramps/Storke Road

Reference 8 Hollister Avenue/Storke Road

Reference A Cathedral Oaks Road/Calle Real

Reference B U.S. 101 SB Ramps/Cathedral Oaks Road

Reference C Cathedral Oaks Road/Hollister Avenue

DRIVEWAY LEVEL OF SERVICE CALCULATION WORKSHEETS

TRAFFIC CONTROL AND LANE GEOMETRIES - CATHEDRAL OAKS INTERCHANGE

CITY OF GOLETA TRAFFIC MODEL FORECASTS

CITY OF GOLETA CUMULATIVE PROJECT LIST

**LEVEL OF SERVICE DEFINITIONS** 

## **Signalized Intersection Level of Service Definitions**

LOS	Delay	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.
В	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.
С	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.
Е	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.

<sup>&</sup>lt;sup>a</sup> Average control delay per vehicle in seconds.

#### **Unsignalized Intersection Level of Service Definitions**

The HCM¹ 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
Α	< 10.0
В	10.1 - 15.0
С	15.1 - 25.0
D	25.1 - 35.0
E	35.1 - 50.0
F	> 50.0

Highway Capacity Manual, National Research Board, 2000



## **ASSOCIATED TRANSPORTATION ENGINEERS**

100 North Hope Avenue, Suite 4, Santa Barbara, CA 93110-1686 ● (805) 687-4418 ● FAX (805) 682-8509

CITY OF GOLETA ROADWAY DESIGN CAPACITIES

Dowling Associates, Inc.

Transportation Engineering • Planning • Research • Education

Table 5. Road	way Classification & Level of Servi	ce Th					
City of Goleta		. AD	City of Go T Design C			City of Go C ADT Th	
Functional Street Classification	City of Goleia Purpose and Design Factors	i Lan	s 4 Lane	4+ Lanes	2 Lane	4 Lanes	Lanes
Major Arterial (MA)	Continuous roadways that carry through traffic between various neighborhoods and communities, trequently providing access to major traffic generators such as shopping areas, employment centers, and higher densit residential areas. Roadways would have a minimum of floot wide taxes with shoulders. Signats are typically spaced at a minimum 0.5-mile intervals.	y 17,90	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. Signat Intervals typically range from 0.25 to 0.5 mile.	15,700	37,680	NA	12,500	30,100	ŅĄ
Collector Streets (Cot)	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	NА	9,280	NA	NΑ
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	NА	7,280	NA	NA
County Functional Street	County	ADT	County Design Cap	acity 4+	LOSC	County ADT Thre	shold 4+
Classification	Purpose and Design Factors	2 Lanes	4 Lanes	Lanes <sup>1</sup>	2 Lanes	4 Lanes	Lanes'
Primary 1 (P-1)	Roadways designed to serve primarily non-residential development. Roadways would have a minimum of 12-fool 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 Parameter
Primery 2 (P-2)	Roadways designed to serve a high proportion of non- residentiat development with some residential fols and few or no driveway curb culs. Roadways would have a minimum of 12-foot wide fanes with few curb culs. Signals spacing at minimum of 1/2 mile.	17,900	42,480	NA	14,300	34,000	HA.
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 Mile.	15,700	37,680	NA	12,500	30,100	NA.
Secondary 1 (S-1)	Roadways designed to serve non-residential development and large tot residential development with well spaced driveways. Roadways would be 2-lanes with nifrequent driveways. Signals would generally occur at intersections of primary roadways.	11,600	NΑ	АИ	9,300	NA	NA
Secondary 2 (S-2)	Roadways designed to serve residential and non- esidential land uses. Roadways would be 2-lanes with lose to moderately spaced driveways.	9,100	NA	NA	7,300	NA.	НA
Secondary 3 (S-3) s	toadways designed to primarily serve residential with mell to medium size lots. Roadways would be 2-lanes with more frequent driveways.	7,900	ΝA	NA	6,300	NA	NA

<sup>\*</sup> Source: City of Goleta & County of Santa Barbara Public Works Department

TRAFFIC COUNT DATA

Phone: (626) 564-1944 Fax: (626) 564-0969

## INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: PROJECT: DATE:

DOWLING ASSOCIATES, INC. GOLETA TRAFFIC COUNTS THURSDAY FEBRUARY 7, 2008

PERIODS:

7:00 AM TO 9:00 AM AND

4:00 PM TO 6:00 PM

INTERSECTION:

N/S CATHEDRAL OAKS E/W WINCHESTER CANYON

CITY:

GOLETA

15 MIN COUNTS				THE REAL PROPERTY.		7:00 AM T	0 9:00 AM											<del></del>		
	1	2	3	- 4	5		7	8		10	m	12								
PERIOD	SBRT	SBTH		WBRT	WBTH	WBLT	NBAT	NBTH	NBLT		EBTH		TOTAL	AM PEAK	HOUR	7				
700-715	1	11	3	12	3	6	6	11	1	8	4	7	73	715-6	315	1			<u></u>	
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730-745 745-800	0	19	2	13	9	4	0	44	3	15	5	11	125		10	97	15		<del>&lt;</del> 27	
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730-830	10	88	16	45	30	22	10	133	10	54 53	19 17	33 33	493			•	l		CATHEDRAL	OAKS
745-845	10	82	16	46	22	23	13	95	8	46	17	23	467							
800-900	11	58	9	35	22	21	9	48	7	44	17	15	401 296							
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15 MINICOUNTS PERIOD 400-415 A15-430 430-445 445-500 500-515 515-630 630-545	\$BRT   4   2   5   3   4   5   2	2   SBTH   21   21   14   22   19   17   17   12	3	4	### ### ### ### ### ### #### #### ######	WBLT 3 3 6 2 2 3 1 1 4 4 5 7 7	2 2 2 2 2 2 6 1	9 6 14 13 14 10 8 8	0 2 2 5 8 3 3	7 8 10 6 6 3 8 6	4 2 3 3 3 4 4	12 EBUT 2 6 4 7 3 1 1 2 4	70 82 79 86 87 79 75	1		76 ↓	18	•	↑ 31 ← 46 ↓ 12	- <b>*</b>
15 MINICOUNTS  PERIOD  400-415  415-430  430-445  445-500  500-515  515-630  530-545-6  545-600  HOUR TOTALS	\$BRT   4   2   5   3   4   5   2   4   4   4   4   4   4   4   4   4	2   SBTH   21   21   14   22   19   17   17   12   2   2   2   2   2   2   2   2	3 4 4 4 4 7 7 3 3 5 7 7 4 4	**************************************	### 11	WBLT 3 6 2 3 1 4 5 7	7 NBRT 2 2 2 2 2 6 1 1 4 2 2 7	8 NBTH 9 6 14 13 14 10 8 8	0 2 2 5 8 3 3 1	7 8 10 6 6 3 8 6	4 2 3 3 3 4 4 2 5	12 FB 1	701AL 70 82 79 86 87 79 75 68	1	14	76 ↓ 	18	17	↑ 31	- <b>*</b>
15 MIN COUNTS  PERIOD  400-415  A15-430  430-445  445-500  500-515  515-630  530-545  545-600  HOUR TOTALS	\$BRT 4 2 5 3 4 5 5 2 4 4 \$BRT	2 SBTH 21 21 14 22 19 17 17 17 12	3 4 4 4 4 7 3 3 5 7 4 4 3 3 SBLT	4   WBRT   3   8   8   9   6   7   6   7   6   7   4   WBRT	### 11	3 6 2 3 1 4 5 7	7 NBRT 7 NBRT 7 NBRT 7 NBRT 7	9 6 14 13 14 10 8 8 NBTH	0 2 2 5 8 3 3 1	7 8 10 6 6 3 8 6	4 2 3 3 3 4 4	12   EBLT   2   6   4   7   3   1   2   4   4   4   4   4   4   4   4   4	701AL 70 82 79 86 87 79 75 68	415-5	14	76 ↓ 	18	17	↑ 31	*
15 MINICOUNTS  PERIOD  400-415  415-430  430-445  445-500  500-515  515-530  530-545-5  545-600  HOUR TOTALS  TIME  400-500	SBRT 4 2 5 9 4 4 5 2 4 4 5 2 4 1 SBRT 14	2 SBTH 21 21 14 22 19 17 17 12 28 SBTH 78	3 4 4 4 4 7 3 5 5 7 4 4 3 5 8 8 E T 19	4   WBRT   3   8   8   9   6   7   6   7   4   WBRT   28	### ### ### ### ######################	### WBLT	2 2 2 2 6 1 1 4 2 2 NBRT NBRT NBRT 8	8 NBTH 9 6 14 13 14 10 8 8 NBTH 4 42	0 2 2 5 8 3 3 1	7 8 10 6 6 3 8 6 2 10 2 3 1	4 2 3 3 3 4 2 5 5	12 M EBLT 2 6 6 4 7 3 1 1 2 4 4 12 3 12 4	70 AL 71 AL	415-5	14	76 ↓	18	17	↑ 31	- <b>1</b>
15 MIN COUNTS  PERIOD  400-415  415-430  430-448  446-800  500-516  515-530  530-5456  546-600  HOUR TOTALS  TIME  400-500  415-515	SBRT 4 2 2 5 3 4 4 5 5 2 4 4 SBRT 1 14 14	2 SBTH	3 BBLT 4 4 4 4 7 3 5 7 4 4 3 8BLT 19 18	4   WBRT   3   8   8   9   6   7   6   7   4   WBRT   28   31	## 10	WBLT  3 6 2 3 1 4 5 7  WBLT  14 12	### A PRIT   ### A	8 NBTH 9 6 14 13 14 10 8 8 NBTH 4 42 47	0 2 2 5 8 3 3 1 1 NBAT 9 17	7 8 10 6 6 6 3 8 6 6 10 3 1 3 1 3 3 0	4 2 3 3 3 3 4 2 5 5 11 EB314 12	12 M EBLT 2 6 6 4 7 3 1 1 2 4 4 12 4 12 3 18 11 19 20	70 AL	415-5	14	76 →	18		12	
15 MINICOUNTS  PERIOD  400-415 415-430 430-445 446-800 500-815 515-530 530-545 545-600 HOUR-TOTALS  11ME  400-500 415-515	SBRT 4 2 2 5 3 4 4 5 5 2 4 4 5 1 SBRT 1 1 4 1 4 1 7 1 7	2 SBTH 21 21 14 22 19 17 17 17 12 SBTH 78 76	3 BBLT 4 4 4 4 7 3 5 5 7 4 4 5 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	4   WBRT   3   8   8   9   6   7   7   6   7   7     4   WBRT   28   31   30   30	5 WBTH 11 15 11 6 11 11 8 8 WBTH 43 46 50	WBLT  3 6 2 3 1 4 5 7  WBLT  14 12 10	7 NBRT 8 12 11	8 NBTH 9 6 14 13 14 10 8 8 8 2 NBTH 42 47 51	0 2 2 2 5 8 8 3 3 1 1 V 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	7 8 10 6 6 6 3 8 6 6 10 3 3 1 3 3 0 2 5	4 2 3 3 3 3 4 2 5 5 11 12 11 13	12 EBLT 2 6 4 7 7 3 1 1 2 2 4 4 2 EBLT 19 20 15	707AL 70 82 79 86 87 79 75 68 707AL 317 334	415-5	14		18			
15'MIN'COUNTS  PERIOD  400-415  415-420  430-445  446-500  500-515  515-530  530-6456  546-600  HOUR'FOTALS  TIME  400-500  415-515	SBRT 4 2 2 5 3 4 4 5 5 2 4 4 SBRT 1 14 14	2 SBTH	3 BBLT 4 4 4 4 7 3 5 7 4 4 3 8BLT 19 18	4   WBRT   3   8   8   9   6   7   6   7   4   WBRT   28   31	## 10	WBLT  3 6 2 3 1 4 5 7  WBLT  14 12	### A PRIT   ### A	8 NBTH 9 6 14 13 14 10 8 8 NBTH 4 42 47	0 2 2 5 8 3 3 1 1 NBAT 9 17	7 8 10 6 6 6 3 8 6 6 10 3 1 3 1 3 3 0	4 2 3 3 3 3 4 2 5 5 11 EB314 12	12 M EBLT 2 6 6 4 7 3 1 1 2 4 4 12 4 12 3 18 11 19 20	70 AL	415-5	14		18			

## **WILTEC**

## INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT:

CITY OF GOLETA

PROJECT: DATE:

**GOLETA TRAFFIC COUNTS WEDNESDAY FEBRUARY 13, 2008** 

PERIODS:

7:00 AM TO 9:00 AM AND

4:00 PM TO 6:00 PM

Phone: (626) 564-1944 Fax: (626) 564-0969

INTERSECTION:

WINCHESTER CANYON ROAD N/S CALLE REAL/ US 101 NB RAMPS E/W

CITY:

GOLETA

15 MIN COUNTS				-32	Marin and	7:00 AM T	0 9:00 AM											
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PERIOD 700-715	SBRT 21	881H	SBLT	and the second		WBLT		S. H. J. J. Hart 1987 20-50	307.3474.3811 AMMONTO	BAT MEBTH	THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAM		AM PEAK HOU	1			<b>A</b>	
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730-745	30					0	0	<u> </u>	0	0 0		77				1		
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845-900/	30	0	0	21	29	0	0	0	0	0 0	***************************************	84		55	Ĺ	<b>—</b>	A	- J
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		2 SBTH 0	3	A WBRT	, 5 WBTH	4:00 PM TC 6 WBLT	0 6:00 PM 7 NBRT		O NBLTI E	10 ú Bri <b>Eb</b> ih			PM PEAK HOUI				<b>^</b>	
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# **ASSOCIATED TRANSPORTATION ENGINEERS**

INTERSECTION TURNING MOVEMENT SUMMARY

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# **ASSOCIATED TRANSPORTATION ENGINEERS**

INTERSECTION TURNING MOVEMENT SUMMARY

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## **ASSOCIATED TRANSPORTATION ENGINEERS**

INTERSECTION TURNING MOVEMENT SUMMARY

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# ASSOCIATED TRANSPORTATION ENGINEERS INTERSECTION TURNING MOVEMENT SUMMARY

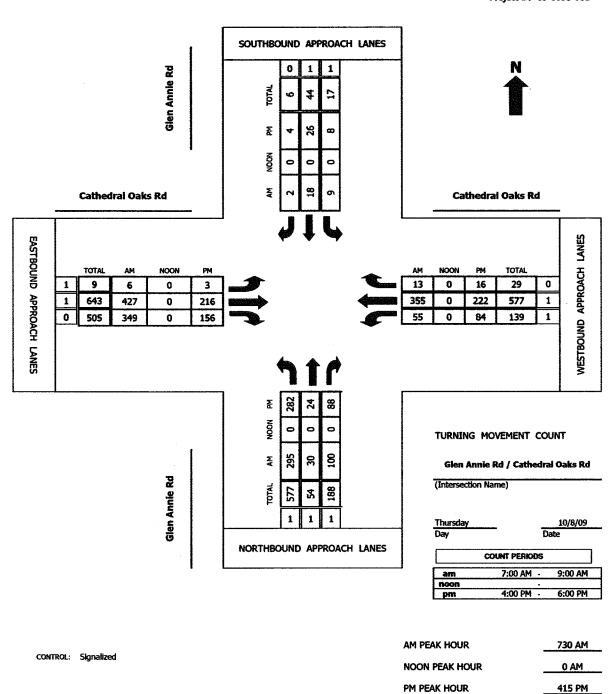
PROJECT: 74 N-S Approach:		ATHEDRAL ALAMEDA		•	PROJEC	CT #: 10	086	COUNT DA		11-11 04:00 PM	то	FILE NAME: 6:00		04PM	
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4:30 PM -	-	04:45 PM	13	10	33				151	9	0	60	160		4
4:45 PM -	-	05:00 PM	19	21	48				192	11	0	89	217		5
5:00 PM -		05:15 PM	28	27	61				225	13	0	108	283		7
5:15 PM - 5:30 PM -		05:30 PM 05:45 PM	36 39	28 32	69 72				<ul><li>275</li><li>316</li></ul>	15 16	0 0	122 137	379 467		10
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		06:00 PM	2	0	4	0	0	0	41	5	0	14	61	0	1
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**National Data & Surveying Services** 

#### TMC Summary of Glen Annie Rd/Cathedral Oaks Rd

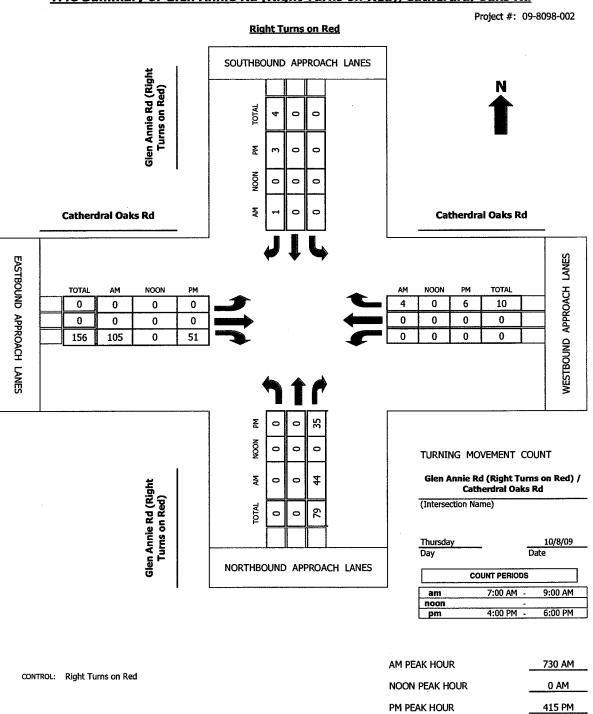
Project #: 09-8098-001





#### **National Data & Surveying Services**

#### TMC Summary of Glen Annie Rd (Right Turns on Red)/Catherdral Oaks Rd

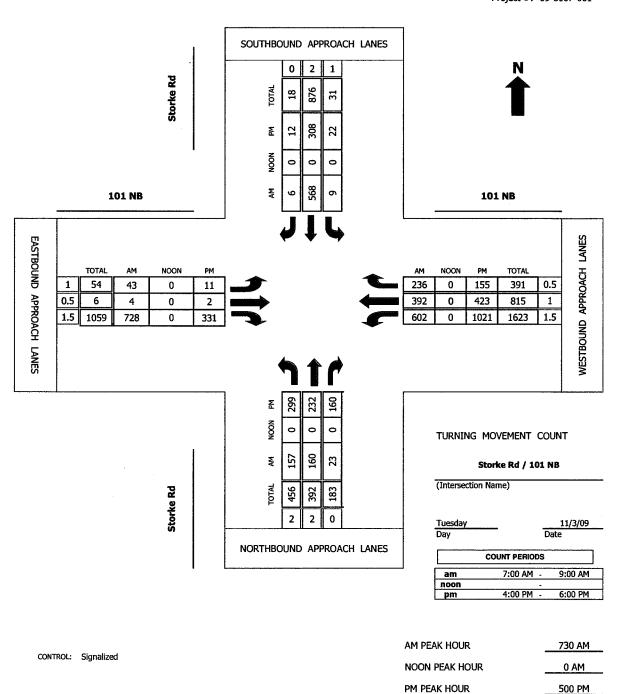




**National Data & Surveying Services** 

#### TMC Summary of Storke Rd/101 NB

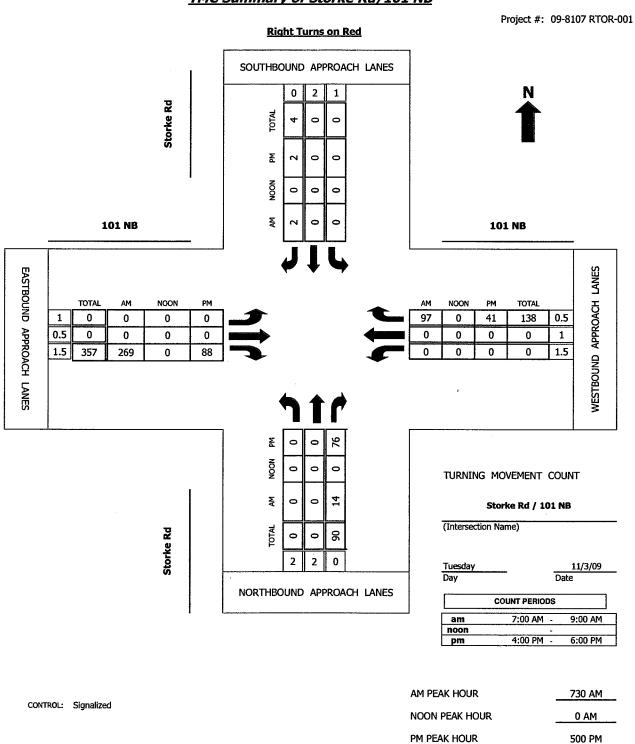
Project #: 09-8107-001





#### National Data & Surveying Services

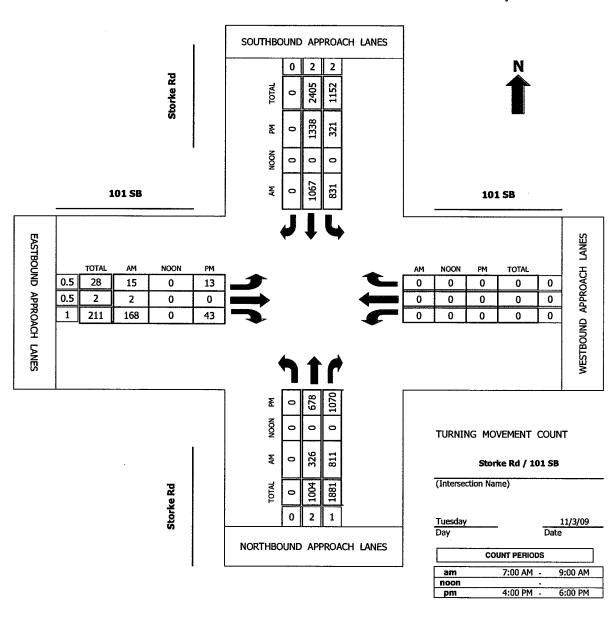
#### TMC Summary of Storke Rd/101 NB



National Data & Surveying Services

#### TMC Summary of Storke Rd/101 SB

Project #: 09-8107-002



CONTROL: Signalized

 AM PEAK HOUR
 730 AM

 NOON PEAK HOUR
 0 AM

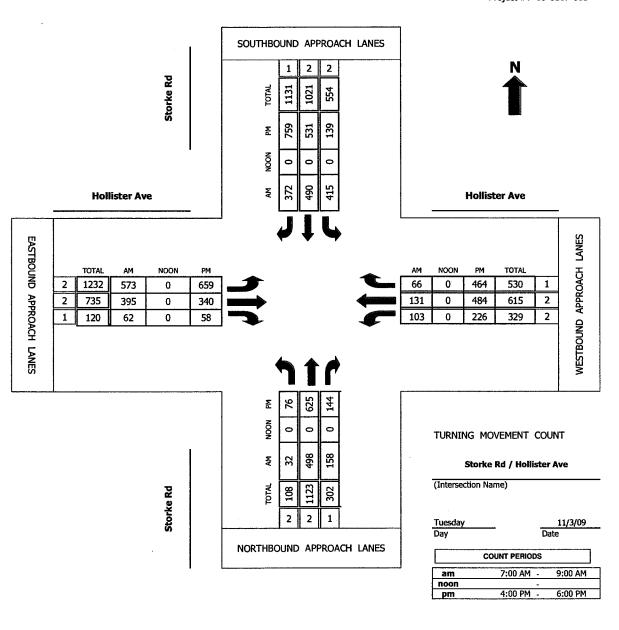
 PM PEAK HOUR
 500 PM



National Data & Surveying Services

#### TMC Summary of Storke Rd/Hollister Ave

Project #: 09-8107-005



CONTROL: Signalized

 AM PEAK HOUR
 730 AM

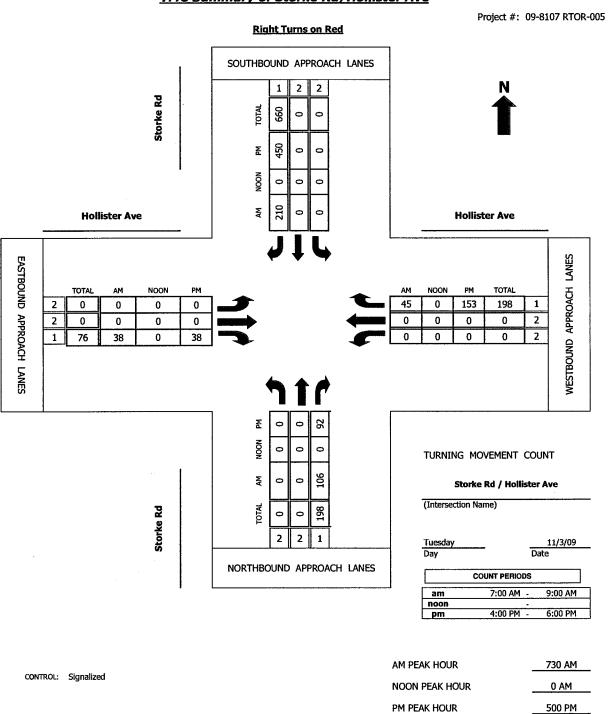
 NOON PEAK HOUR
 0 AM

 PM PEAK HOUR
 500 PM



**National Data & Surveying Services** 

#### TMC Summary of Storke Rd/Hollister Ave



Prepared by NDS/ATD

ocation: S	Stor			y, Novembe	er 04, 2009	City:	Gole	ta	NB		SB	<b>a</b> :	3	WB	Total
AM Period 00:00		ke N	l/n H	allistor											
AM Period 00:00			.,	omster		Project:	09-8108	3-001	16,704		17,055	0		0	33,759
00:00	NB		SB	EB	WB		PM Period	NB		SB		EB	WB		
00.45	44		24				12:00	340		295					
	28		19				12:15	278		314					
	17		17				12:30	281		332	1051				2462
	15	104	9	69		173	12:45	309	1208	313	1254				2462
	19		13				13:00	274		265 288					
	12 14		6 11				13:15 13:30	297 298		240					
01:30	4	49	11	41		90	13:45	301	1170	252	1045				2215
02:00	9		12				14:00	295		279					
02:15	9		6				14:15	283		276					
02:30	11		19				14:30	334		310					
02:45	7	36	6	43		79	14:45	325	1237	304	1169	·			2406
03:00	5		5				15:00	340		314					
03:15	6		10				15:15	326		402					
03:30	7		17		r		15:30	371	1004	369	4.460				2706
03:45	9	27	34	66		93	15:45	297	1334	377	1462				2796
	10		17				16:00	369		357					
	12		9				16:15 16:30	364 382		330 329					
	16 16	54	21 42	89		143	16:45	370	1485	330	1346				2831
	36	J-1	15			113	17:00	433	1103	324	2010				
	28		32				17:15	444		346					
	33		53				17:30	395		354					
	57	154	64	164		318	17:45	365	1637	333	1357				2994
06:00	49		111				18:00	338		319					
06:15	81		133				18:15	270		242					
06:30	146		158				18:30	273		221					
06:45	163	439	171	573		1012	18:45	243	1124	219	1001				2125
	138		216				19:00	225		188					
	223		244				19:15	167		205					
	256	004	267	1040		1043	19:30	213	763	129 179	701				1464
	277	894	321	1048		1942	19:45	158	703		701				1707
	234 233		307 294				20:00 20:15	149 142		145 142					
	233 273		279				20:30	140		125					
		1031		1195		2226	20:45	118	549	130	542				1091
	199		251				21:00	117		129					
	180		220				21:15	108		119					
09:30	194		226				21:30	112		97					
09:45	173	746	233	930		1676	21:45	91	428	118	463				891
10:00	173		243				22:00	71		79					
	181		237				22:15	62		70					
	223		249	1001		1001	22:30	61	220	65	257				407
	223	800	275	1004		1804	22:45	36	230	43	257	** ***		<u> </u>	487
	247		272				23:00	53		46 42					
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75:100) 75:100)				Children of the Control of the Contr				.,		*******					
		. 132.7 108.00 1021		11.75 1201					16:45 1642						

Site: Date: 10086 1/12/2011 Wednesday

#### 24 Hour Volume (2 Channel/pg., 60 Min.)

Interval			
Begin	SOUTH	NORTH	Combined
L2:00 AM	11	24	35
1:00 AM	6	17	23
2:00 AM	3	16	19
3100 AM	3	4	27
4:00 AM	10	9	19
5:00 AM	44	36	80
6:00 AM	110	135	245
7:00 AM	359	625	984
8:00 AM	302	403	705
9:00 AM l0:00 AM	2072 182	200 206	407 388
10:00 AM	238	206 250	488 488
12:00 PM	<u>230</u> 287	<u>250</u> 364	651
1.00 PM	2448	268	512
2:00 PM	285	462	747
3,00 PM	452	528	990
4:00 PM	277	415	692
5:00 PM	7.(9,9)	5314	- <b>813</b>
6:00 PM	157	345	502
7:00 PM	1087	198	3,0/6
8:00 PM	80	142	222
9) 00 PM	77.	159	236
0:00 PM		73	103
1:00 PM	24.5	42	66
otals	3795	5445	9240
	41.1 %	58.9 %	
eak Hours	7.00.444	7 00 111	7.00
.M	7:00 AM	7:00 AM	7:00 AM
olume	359	625	984
M	3:00 PM	3:00 PM	3:00 PM
olume	452	<b>5</b> 38	990

Site: Date: 10086 1/12/2011 Wednesday

### 24 Hour Volume (2 Channel/pg., 60 Min.)

Interval	WESTBOU	EASTBOU	
Begin	ND	ND	Combined
12:00 AM	21	11	32
1:00 AM	16	14 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	23
2:00 AM		1	12
3:00 AM	3		4
4:00 AM		8	11
5:00 AM	23	56	7/9
6:00 AM	119	143	262
7:00 AM	598	669	1267
8:00 AM	257	493	750
9100 AM	<u>143</u> 2	2/3(0)	37S
10:00 AM	134	202	336
iii 400 AM	174	1/9(6)	370
12:00 PM	<b>338</b>	323	661
1500 PM	2167	264	480
2:00 PM	<b>456</b>	367	823
3:00 PM	450	677	1127
4:00 PM	344	309	653
5:00 PM	445	329	7/7/4
6:00 PM	297	163	460
7:00 PM 8:00 PM	185	129	314
9.00 PM	150	94	244
10:00 PM	1486	9 <u>3</u>	241
11E00 PM	61 - 38	33 23	94 51
otals	4630	4821	9451
	49.0 %	51.0 %	3.01
Nagla III aasaa			
<u>Peak Hours</u> M	7:00 44	7.00.444	<b>7</b> 00 414
	7:00 AM	7:00 AM	7:00 AM
'olume	598	669	1267
M	2:00 PM	3:00 PM	3:00 PM
'olume	456	677	1127

#### INTERSECTION LEVEL OF SERVICE CALCULATION WORKSHEETS

Reference 1 Winchester Canyon Road/Cathedral Oaks Road

Reference 2 U.S. 101 NB Ramps- Calle Real/Winchester Canyon Road

Reference 3 Cathedral Oaks Road/Northgate Drive-Evergreen Drive

Reference 4 Cathedral Oaks Road/Alameda Avenue

Reference 5 Glen Annie Road/Cathedral Oaks Road

Reference 6 U.S. 101 NB Ramps/Glen Annie Road

Reference 7 U.S. 101 SB Ramps/Storke Road

Reference 8 Hollister Avenue/Storke Road

Reference A Cathedral Oaks Road/Calle Real

Reference B U.S. 101 SB Ramps/Cathedral Oaks Road

Reference C Cathedral Oaks Road/Hollister Avenue

		ALL-WA	Y STOP C	ONTROL A	NALYSIS			
General Information				Sielnome				
Analyst	MMF			Intersection		01_EX		
Agency/Co.	ATE			Jurisdiction		GOLE		
Date Performed	1/13/20			Analysis Year		EXIST	ING '	
Analysis Time Period	A.M. P.	EAK HOUR						
Project ID #10086 - 7400 CATH		DJECT		1				
East/West Street: CATHEDRA	···	MINISTRAL PROPERTY OF THE PROP		North/South Stre	et: WINCHEST	ER CANYON RO	AD	
Volume Adjustments a	nd Site Chara							
Approach Movement	L		astbound T	R	E	We	stbound T	R
Volume (veh/h)	15		97	10	10		136	11
%Thrus Left Lane			3,	70	10		730	
Approach		J	orthbound			Sou	ithbound	
Movement	L	<u></u>	T I	R	L	1	T I	R
Volume (veh/h)	33	}	19	54	23		27	58
%Thrus Left Lane								
	East	bound	We	stbound	North	bound	Sout	hbound
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	L	TR	L	TR	LT	R	LTR	
PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flow Rate (veh/h)	15	107	10	147	52	54	108	
% Heavy Vehicles	4	4	4	4	4	4	4	
No. Lanes	2	2		2	- 2	2		1
Geometry Group	5	5		5	ŧ	5	4	lb
Duration, T				0.2	25			
Saturation Readway Ad	justment Wo	rksheet						
Prop. Left-Turns	1.0	0.0	1.0	0.0	0.6	0.0	0.2	
Prop. Right-Turns	0.0	0.1	0.0	0.1	0.0	1.0	0.5	
Prop. Heavy Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
nLT-adj	0.5	0.5	0.5	0.5	0.5	0.5	0.2	0.2
hRT-adj	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.6	-0.6
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
nadj, computed	0.6	0.0	0.6	0.0	0.4	-0.6	-0.2	
Departure Headway and			7.576.55.5			<u>'</u>		1
hd, initial value (s)	3.20	3.20	3.20	3.20	3.20	3.20	3.20	
(, initial	0.01	0.10	0.01	0.13	0.05	0.05	0.10	
nd, final value (s)	5.80	5.23	5.76	5.21	5.72	4.70	5.14	
x, final value	0.02	0.16	0.02	0.21	0.08	0.07	0.15	
Move-up time, m (s)	2.		<del></del>	2.3	2.	<b>'</b>		.3
Service Time, t <sub>s</sub> (s)	3.5	2.9	3.5	2.9	3.4	2.4	2.8	
Capacity and Level of S			1				1	1
The second secon	Eastb	ound	Wes	stbound	North	bound	Sout	nbound
1	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	265	357	260	397	302	304	358	
Delay (s/veh)	8.64	8.89	8.56	9.31	8.94	7.76	8.77	
Los	A	Α	Α	A	A	Α	Α	
Approach: Delay (s/veh)	<del> </del>	.86	1	.26	8.3		<del></del>	77
LOS		A		A	A. A.		<u> </u>	4
Intersection Delay (s/veh)			<u> </u>	8.8		· · · · · · · · · · · · · · · · · · ·		•
Intersection LOS								
NOISCOUOTI LOS	L	· · · · · · · · · · · · · · · · · · ·		A				

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#### **ALL-WAY STOP CONTROL ANALYSIS** General Information Steinformation 01 EX+PR AM Intersection **Analyst GOLETA** Jurisdiction Agency/Co. ATE EXISTING+PROJECT Analysis Year **Date Performed** 1/13/2011 A.M. PEAK HOUR Analysis Time Period Project ID #10086 - 7400 CATHEDRAL OAKS PROJECT North/South Street: WINCHESTER CANYON ROAD East/West Street: CATHEDRAL OAKS ROAD Volume Adjustments and Site Characteristics Approach Eastbound Westbound R R Т т Movement 11 10 139 Volume (veh/h) 15 97 10 %Thrus Left Lane Southbound Northbound \pproach L T R R Movement 23 27 58 33 19 55 <sup>|</sup>//olume (veh/h) %Thrus Left Lane Eastbound Westbound Northbound Southbound L2 L1 L2 L2 L2 L1 L1 L1 R LTR L TR L TR LT Configuration 1.00 1.00 1.00 1.00 1.00 1.00 1.00 PHF 108 10 150 52 55 15 107 low Rate (veh/h) 4 4 6 Heavy Vehicles 4 4 4 4 2 2 2 No. Lanes 4b 5 5 5 Geometry Group Juration, T 0.25 Saturation Headway Adjustment Worksneet 0.0 0.2 1.0 Prop. Left-Turns 0.0 1.0 0.0 0.6 0.5 1.0 0.0 0.1 0.0 0.1 0.0 'rop. Right-Turns 0.0 Prop. Heavy Vehicle 0.0 0.0 0.0 0.0 0.0 0.0 0.2 0.5 0.2 0.5 0.5 0.5 0.5 0.5 LT-adj -0.7 -0.7 -0.7 -0.6 -0.6 -0.7 -0.7 -0.7 RT-adi 1.7 1.7 1.7 1.7 1.7 1.7 1.7 1.7 hHV-adi -0.2 0.6 0.0 0.6 0.0 0.4 -0.6adj, computed Departure Headway and Service Time 3.20 3.20 3.20 3.20 3.20 3.20 3.20 hd, initial value (s) 0.05 0.10 initial 0.01 0.10 0.01 0.130.05 5.80 5.24 5.77 5.21 5.73 4.71 5.15 d, final value (s) 0.07 0.15 0.02 0.16 0.02 0.22 0.08 x, final value 2.3 2.3 2.3 2.3 love-up time, m (s) 2.4 2.8 2.9 3.5 2.9 3.4 ervice Time, t<sub>s</sub> (s) 3.5 Capacity and Level of Service Northbound Southbound Westbound Eastbound L1 L2 L1 L2 L1 L2 L1 L2 358 265 357 400 302 305 Capacity (veh/h) 260 8.65 8.90 8.56 9.35 8.95 7.78 8.79 elay (s/veh) Α Α LOS Α Α Α A Α 8.79 8.35 9.30 ^pproach: Delay (s/veh) 8.87 Α A LOS Α Α 8.88 Intersection Delay (s/veh) itersection LOS

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		ALL-WA	Y STOP C	ONTROL	ANALYS	IS		
General Information				Site Inform				
Analyst Agency/Co. Date Performed Analysis Time Period	MMF ATE 2/23/2 A.M. F	2011 PEAK HOUR	4 (damp) (1994) (1995) (1994) (1994) (1994)	Intersection 01_ Jurisdiction GO			K_AM ETA ULATIVE	
Project ID #10086 - 7400 CAT								
East/West Street: CATHEDF				North/South S	treet: WINCHE	ESTER CANYO	N ROAD	
Volume Adjustments	and Site C	haracterist	ics					
Approach		E	astbound			We	stbound	
Movement Volume (veh/h)	10	<u> </u>	118	R 11	10		T 144	<u>R</u> 11
%Thrus Left Lane	<del></del>	·	110		10		144	11
Approach			orthbound			<u> </u>	thbound	
Movement	L		T	R	L	300	T	R
Volume (veh/h)	30	6	19	59	25		27	62
%Thrus Left Lane								
The second secon	East	bound	Wes	stbound	Nort	hbound	Sout	hbound
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	L	TR	L	TR	LT	R	LTR	<u> </u>
PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flow Rate (veh/h)	16	129	10	155	55	59	114	
% Heavy Vehicles	4	4	4	4	4	4	4	
No. Lanes		2		2		2		i
Geometry Group		5		5		5	4	b
Duration, T				0.2				
Saturation Headway A	djustment	Worksheet						
Prop. Left-Turns	1.0	0.0	1.0	0.0	0.7	0.0	0.2	
Prop. Right-Turns	0.0	0.1	0.0	0.1	0.0	1.0	0.5	
Prop. Heavy Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
ht.T-adj	0.5	0.5	0.5	0.5	0.5	0.5	0.2	0.2
hRT-adj	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.6	-0.6
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	0.6	0.0	0.6	0.0	0.4	-0.6	-0.2	1.7
Departure Headway a			1 0.0	0.0	0.4	1 -0.0		<u> </u>
hd, initial value (s)	3.20	3.20	3.20	3.20	3.20	3.20	7	Ī
x, initial	0.01	0.11	0.01	0.14	0.05	0.05	3.20 0.10	
hd, final value (s)	5.86	5.30	5.84	5.29	5.83	4.80	5.24	
x, final value	0.03	0.19	0.02	0.23	0.09	0.08	0.17	
Move-up time, m (s)	2.		<del></del>	.3	2.	·	2.	.3
Service Time, t <sub>s</sub> (s)	3.6	3.0	3.5	3.0	3.5	2.5	2.9	Ĭ
Capacity and Level of	Service		1	1		J.	1	<u> </u>
		ound	T	bound		bound	T	bound
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	266	379	260	405	305	309	364	
Delay (s/veh)	8.72	9.23	8.64	9.54				
OS					9.10	7.91	8.98	
	A	A	A	A	A	A	Α	
Approach: Delay (s/veh)	***	.18	9.4		8.4		8.9	
LOS		<u> </u>	<i>A</i>		A	<u> </u>	F	\
ntersection Delay (s/veh)	<del></del>			9.0				
ntersection LOS				A				

		ALL-WAY	STOP C	ONTROL	ANALYSI	S			
General Information				Site Inforn	nation				
Analyst Agency/Co. Date Performed Analysis Time Period					Intersection 01_EX_AM Jurisdiction GOLETA Analysis Year CUMULATIVE+PROJECT				
Project ID #10086 - 7400 CAT	THEDRAL OAKS	PROJECT							
East/West Street: CATHEDF				North/South St	reet: WINCHE	STER CANYO	N ROAD		
Volume Adjustments	and Site Cl	naracteristi	CS				1 6		
Approach		E	astbound			We	stbound		
Movement Volume (veh/h)	L	2	118	R 11	10		T 147	R 11	
%Thrus Left Lane	100	,	110	1.1	10		147	11	
Approach		l No	orthbound			Sour	thbound	<del></del>	
Movement	L		T	, R	L	300	T	R	
Volume (veh/h)	36	3	19	60	25		27	62	
%Thrus Left Lane									
	East	bound	Wes	stbound	North	bound	Sout	hbound	
	L1	L2	L1	L2	L1	L2	L1	L2	
Configuration	L	TR	ī	TR	LT	R	LTR	<del>-</del>	
PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Flow Rate (veh/h)	16	129	10	158	55	60	114		
% Heavy Vehicles	4	4	4	4	4	4	4		
No. Lanes	2	2		2	2	2		1	
Geometry Group		5		5		5	4	lb .	
Duration, T				0.2	25				
Saturation Headway /	Adjustment	Worksheet							
Prop. Left-Turns	1.0	0.0	1.0	0.0	0.7	0.0	0.2		
Prop. Right-Turns	0.0	0.1	0.0	0.1	0.0	1.0	0.5		
Prop. Heavy Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
hLT-adj	0.5	0.5	0.5	0.5	0.5	0.5	0.2	0.2	
hRT-adj	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.6	-0.6	
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	
hadj, computed	0.6	0.0	0.6	0.0	0.4	-0.6	-0.2	<del>                                     </del>	
Departure Headway a				1 0.0		1 3.0			
hd, initial value (s)	3.20	3.20	3.20	3.20	3.20	3.20	3.20	<u> </u>	
x, initial	0.01	0.11	0.01	0.14	0.05	0.05	0.10		
hd, final value (s)	5.87	5.30	5.84	5.29	5.84	4.81	5.25		
x, final value	0.03	0.19	0.02	0.23	0.09	0.08	0.17		
Move-up time, m (s)	2.			.3	2.			.3	
Service Time, t <sub>s</sub> (s)	3.6	3.0	3.5	3.0	3.5	2.5	2.9		
Capacity and Level of	<u> </u>	I	<u> </u>	<u> </u>			4		
and the second s	1	oound	Wes	lbound	North	bound	1	hbound	
	L1	L2	L1	L2	L1	L2	L1	L2	
Capacity (veh/h)	266	379	260	408	305	310	364		
Delay (s/veh)	8.72	9.24		<del>-}</del>			<del> </del>		
			8.64	9.58	9.11	7.93	8.99	<u> </u>	
.OS	Α	Α	Α	A	Α	. A	A		
Approach: Delay (s/veh)	<del> </del>	.19		53	8.50		<u> </u>	99	
LOS		Α		4	Α		/	4	
ntersection Delay (s/veh)				9.1					
ntersection LOS				Α					

1	F 1/10 -	ALL-WA	Y STOP C	ONTROL A	NALYSIS	***************************************		······································	
Ceneral Information				Site Informa	tion -				
Analyst	MMF			Intersection		01_EX			
Agency/Co.	ATE			Jurisdiction		GOLET			
Date Performed	1/13/20			Analysis Year	Analysis Year EXISTING				
Analysis Time Period		AK HOUR							
Project ID #10086 - 7400 CATHE		DJECT		h		TD 0411/01/D0			
East/West Street: CATHEDRAL				North/South Stre			AU		
Volume Adjustments an	id Site Chara					ATTACABLE SAND SAND SAND SAND SAND SAND SAND SAND	stbound	and the second second	
Approach [Movement	L		astbound T	R	-	vve	T	R	
Volume (veh/h)	18		76	14	17		47	12	
%Thrus Left Lane								· · · · · · · · · · · · · · · · · · ·	
Approach		No	orthbound			Sou	thbound		
Movement	L		T	Ŕ	L		T	R	
Volume (veh/h)	20	1	11	30	12		46	31	
%Thrus Left Lane					<u> </u>				
	East	bound	Wes	stbound	North	nbound	South	hbound	
	L1	L2	L1	L2	L1	L2	L1	L2	
Configuration		TR	L	TR	LT	R	LTR		
PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Flow Rate (veh/h)	18	90	17	59	31	30	89		
% Heavy Vehicles	4	4	4	4	4	4	4		
No. Lanes	2	2		2		2		1	
Geometry Group	5			5		5	4	b	
Duration, T				0.2	25				
Saturation Headway Ad	ustment Wo	rksheet							
Prop. Left-Turns	1.0	0.0	1.0	0.0	0.6	0.0	0.1		
Prop. Right-Turns	0.0	0.2	0.0	0.2	0.0	1.0	0.3		
Prop. Heavy Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
nLT-adj	0.5	0.5	0.5	0.5	0.5	0.5	0.2	0.2	
nRT-adj	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.6	-0.6	
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	
hadj, computed	0.6	-0.0	0.6	-0.1	0.4	-0.6	-0.1	1	
Departure Headway and	1	<u> </u>						<u> </u>	
	<del></del>	7	T	7				T	
hd, initial value (s)	3.20	3.20	3.20	3.20	3.20	3.20	3.20	<del> </del>	
c, initial	0.02	0.08	0.02	0.05	0.03	0.03	0.08	}	
nd, final value (s)	5.52 0.03	4.91 0.12	5.55 0.03	4.91 0.08	5.43 0.05	4.40 0.04	4.91 0.12		
x, final value	2.		<del></del>	2.3	2.	1	<del></del>	.3	
Move-up time, m (s)							<del></del>	<u>.                                     </u>	
Service Time, t <sub>s</sub> (s)	3.2	2.6	3.2	2.6	3.1	2.1	2.6		
Capacity and Level of S	ervice						1		
	Eastl	oound	Wes	tbound	North	bound	South	nbound	
	L1	L2	L1	L2	L1	L2	L1	L2	
Capacity (veh/h)	268	340	267	309	281	280	339		
Delay (s/veh)	8.38	8.30	8.40	8.03	8.39	7.27	8.29		
Los	A	A	A A	A A	A	A	A		
Approach: Delay (s/veh)	<del> </del>	.31	<del></del>	12		8 <b>4</b>		<u> </u>	
							<del></del>		
LOS		<u>A</u>		<u>A</u>	<i>P</i>	1		4	
Intersection Delay (s/veh)			<del></del>	8.1				<u> </u>	
ntersection LOS	l			A					

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#### ALL-WAY STOP CONTROL ANALYSIS General Information Signiomation 01 EX+PR PM Intersection Analyst **MMF** Jurisdiction **GOLETA** ATE Agency/Co. Analysis Year EXISTING+PROJECT Date Performed 1/13/2011 Analysis Time Period P.M. PEAK HOUR Project ID #10086 - 7400 CATHEDRAL OAKS PROJECT East/West Street: CATHEDRAL OAKS ROAD North/South Street: WINCHESTER CANYON ROAD Volume Adjustments and Site Characteristics Westbound Approach Eastbound R R Movement 17 49 12 18 14 78 Volume (veh/h) %Thrus Left Lane Approach Northbound Southbound Movement R R 20 11 32 12 46 31 Volume (veh/h) %Thrus Left Lane Eastbound Westbound Northbound Southbound L2 L2 L1 L2 L1 L1 L2 L1 L TR L TR LT R LTR Configuration 1.00 1.00 1.00 1.00 1.00 1.00 PHF 1.00 89 Flow Rate (veh/h) 18 92 17 61 31 32 4 4 4 4 4 4 % Heavy Vehicles No. Lanes 2 2 2 5 4b Geometry Group 5 5 **Duration**, T 0.25 Saturation#Headway Adjustment Worksheet Prop. Left-Turns 1.0 0.0 1.0 0.0 0.0 0.1 0.6 0.2 1.0 0.3 0.0 0.2 0.0 0.0 Prop. Right-Turns 0.0 0.0 0.0 0.0 0.0 Prop. Heavy Vehicle 0.0 0.0 0.2 ıLT-adj 0.5 0.5 0.5 0.5 0.5 0.5 0.2 RT-adi -0.7 -0.7 -0.7 -0.7 -0.7 -0.7 -0.6-0.6 1.7 1.7 1.7 1.7 1.7 1.7 1.7 1.7 hHV-adj -0.1 adj, computed 0.6 -0.0 0.6 -0.1 0.4 -0.6 Departure Headway and Service Time hd, initial value (s) 3.20 3.20 3.20 3.20 3.20 3.20 3.20 0.02 0.05 0.03 0.08 . initial 0.02 0.08 0.03 d, final value (s) 5.53 4.92 5.56 4.92 5.44 4.42 4.92 0.13 0.03 0.08 0.05 0.04 0.12 x, final value 0.03 2.3 love-up time, m (s) 2.3 2.3 2.3 3.2 2.6 3.3 2.6 3.1 2.1 2.6 ervice Time, t<sub>e</sub> (s) Capacity and Level of Service Eastbound Westbound Northbound Southbound L1 L2 L1 L2 L1 L2 L1 268 282 339 Capacity (veh/h) 342 267 311 281 elay (s/veh) 8.39 8.33 8.41 8.06 8.41 7.30 8.31 LOS Α Α Α Α Α Α Α 8.31 7.84 \*pproach: Delay (s/veh) 8.34 8.14 LOS Α Α A Α Intersection Delay (s/veh) 8.19 I'ntersection LOS

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		ALL-WAY	STOP C	ONTROL	ANALYSI	S		
General Information				Site Inform	nation			
Analyst	MMF	A CONTRACT CONTRACT CONTRACT CONTRACT		Intersection 01_EX_PM				
Agency/Co.	ATE			Jurisdiction GOLETA				
Date Performed	2/23/20			Analysis Year		CUML	ILATIVE	
Analysis Time Period	P.M. P	EAK HOUR						
Project ID #10086 - 7400 CA7			·····					<del></del>
East/West Street: CATHEDR				North/South St	reet: WINCHE	STER CANYO	V ROAD	
Volume Adjustments	and Site Ch	and the state of t						
Approach Movement	Eas L		astbound T	R	L	We:	stbound T	R
Volume (veh/h)	19	, · · · · · · · · · · · · · · · · · · ·	79	17	17		60	12
%Thrus Left Lane	- 19		75	• • • • • • • • • • • • • • • • • • • •				
Approach		l No	rthbound		<u> </u>	Sou	thbound	
Movement	L		T	R	L		T	R
Volume (veh/h)	21	!	11	30	12		46	32
%Thrus Left Lane								13 3710
	East	bound	Wes	tbound	North	bound	South	nbound
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	L	TR	L	TR	LT	R	LTR	
PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flow Rate (veh/h)	19	96	17	72	32	30	90	
% Heavy Vehicles	4	4	4	4	4	4	4	
No. Lanes	2	?		2	2	<u> </u>		i
Geometry Group	5			5	5	5	4	b
Duration, T				0.2	25			
Saturation Headway A	Adiustment	Worksheet						
Prop. Left-Turns	1.0	0.0	1.0	0.0	0.7	0.0	0.1	
Prop. Right-Turns	0.0	0.2	0.0	0.2	0.0	1.0	0.4	
Prop. Heavy Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
hLT-adj	0.5	0.5	0.5	0.5	0.5	0.5	0.2	0.2
hRT-adj	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.6	-0.6
	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hHV-adj			<u> </u>					1.7
hadj, computed	0.6	-0.1	0.6	-0.0	0.4	-0.6	-0.1	
Departure Headway a			T				1	T
hd, initial value (s)	3.20	3.20	3.20	3.20	3.20	3.20	3.20	ļ
x, initial	0.02	0.09	0.02	0.06	0.03	0.03	0.08	<u> </u>
hd, final value (s)	5.54	4.92	5.57	4.95	5.49	4.46	4.96	
x, final value	0.03	0.13	0.03	0.10	0.05	0.04	0.12	
Move-up time, m (s)	2.		1	.3	2.	r	<del> </del>	.3
Service Time, t <sub>s</sub> (s)	3.2	2.6	3.3	2.6	3.2	2.2	2.7	
Capacity and Level of	Service							
	Eastb	ound	Wes	tbound	North	bound	South	bound
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	269	346	267	322	282	280	340	
Delay (s/veh)	8.41	8.36	8.42	8.19	8.47	7.33	8.36	
LOS	Α	Α	Α	Α	Α	Α	A	
Approach: Delay (s/veh)	8	.37		23	7.9	92	8	36
LOS	<del> </del>	A	,	4	A		1	4
Intersection Delay (s/veh)			I	8.2	<del>'                                    </del>		.1.	***
Intersection LOS				A				
	<u> </u>			··· TM		· · · · · · · · · · · · · · · · · · ·		

		ALL-WAY	STOP C	ONTROL	ANALYSI	 S	<del>,</del>	
General Information					nation			
Analyst Agency/Co. Date Performed Analysis Time Period	MMF ATE 2/23/2	011 PEAK HOUR		Intersection 01_EX_PM Jurisdiction GOLETA Analysis Year CUMULATIVE+PROJECT				ECT
Project ID #10086 - 7400 CA								
East/West Street: CATHEDI			· · · · · · · · · · · · · · · · · · ·	North/South St	reet: WINCHE	STER CANYON	I BOAD	
Volume Adjustments				jivorai/occar oc	reet. Wilveria	OTEN CANTON	VICAB	
Approach		Constitution St. Ac. of the Constitution	astbound	*	T	Wes	stbound	
Movement	L		T	R	L		T	R
Volume (veh/h)	19	)	81	17	17		62	12
%Thrus Left Lane								
Approach		No	rthbound			Sout	thbound	
Movement Volume (veh/h)	L	,	T 11	R 32	12		46	R 32
%Thrus Left Lane		<u> </u>		32	12		40	32
78 Thrus Left Lane	1		1		1			
		bound		stbound		bound		hbound
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	L	TR	L	TR	LT	R	LTR	
PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flow Rate (veh/h)	19	98	17	74	32	32	90	
% Heavy Vehicles No. Lanes			4	4	4	4	4	<u> </u> 1
Geometry Group		<u>2</u> 5		<u>2</u> 5	2			! !b
Duration, T		)	ļ	0.2		)	4	·U
Saturation Headway	Adinguacae	Maskabase		0.2	20			
	7		7	T 00	0.7			T
Prop. Left-Turns Prop. Right-Turns	0.0	0.0	0.0	0.0	0.7	0.0 1.0	0.1	<u></u>
	0.0	0.2			0.0		0.4	
Prop. Heavy Vehicle	- <del> </del>		0.0	0.0	0.0	0.0	0.0	
hLT-adj	0.5	0.5	0.5	0.5	0.5	0.5	0.2	0.2
hRT-adj	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.6	-0.6
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	0.6	-0.1	0.6	-0.0	0.4	-0.6	-0.1	SECURIOR DESCRIPTION AND SECURIOR DESCRIPTION OF THE PROPERTY
Departure Headway a							1	-1
hd, initial value (s)	3.20	3.20	3.20	3.20	3.20	3.20	3.20	
x, initial	0.02	0.09	0.02	0.07	0.03	0.03	0.08	
hd, final value (s)	5.55	4.93	5.57	4.96	5.50	4.47	4.97	
x, final value	0.03	0.13	0.03	0.10	0.05	0.04	0.12	2
Move-up time, m (s)	2.	· · · · · · · · · · · · · · · · · · ·		2.3	2.		<del></del>	.3
Service Time, t <sub>s</sub> (s)	3.3	2.6	3.3	2.7	3.2	2.2	2.7	
Capacity and Level of	Service						1	
	Eastt	oound	Wes	tbound	North	bound	South	bound
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	269	348	267	324	282	282	340	
Delay (s/veh)	8.42	8.39	8.42	8.22	8.48	7.35	8.38	
LOS	A	Α	Α	Α	Α	Α	Α	
Approach: Delay (s/veh)		.39		26	7.9			38
Los		A		4	A		J	
ntersection Delay (s/veh)		/1		8.2			<u> </u>	•
ntersection LOS								
	-J		<del></del>					

<b>1</b>		ALL-WA	AY STOP C	ONTROL A	NALYSIS			
General Information		4		Site informa	tion -			
Analyst	MMF			Intersection 02_EX AM Jurisdiction GOLETA Analysis Year EXISTING				
Agency/Co. Date Performed	ATE 1/13/20	010						
Analysis Time Period		EAK HOUR						
Project ID #10086 - 7400 CATH	IEDRAL OAKS RPI	ROJECT						
East/West Street: CALLE REA				North/South Stre	et: WINCHEST	ER CANYON	AND THE PROPERTY OF STREET	Productive Commission
Volume Adjustments a	ind Site Chara				a comment			
Approach Movement	L		Eastbound T	R	L	We	stbound T	R
Volume (veh/h)	55	5	o	O	0		118	90
%Thrus Left Lane								
Approach			lorthbound			Sou	thbound	
Movement	L		<u> </u>	R	<u> </u>		<u>T</u>	<u>R</u> 164
/olume (veh/h)	0		0	0	0		0	104
%Thrus Left Lane					<u> </u>	<u> </u>		
	Eas	tbound		stbound		bound		nbound
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	L		<u> </u>	R			R	<u> </u>
PHF	1.00		1.00	1.00			1.00	
low Rate (veh/h)	55		118	90			164	
% Heavy Vehicles	4	4	4	4		)		<u>1</u> 1
No. Lanes	-	<u>1</u> Ba		<u>2</u> 5		<u>,                                     </u>	1	
Geometry Group Duration, T		oa		1.0	20			·
saturation∄₌eadway/A\	diusiment We	irkeheet						
Prop. Left-Turns	1.0	I I I I I I I I I I I I I I I I I I I	0.0	0.0			0.0	
Prop. Right-Turns	0.0	1	0.0	1.0			1.0	<u> </u>
Prop. Heavy Vehicle	0.0	<u> </u>	0.0	0.0	<u></u>		0.0	
LT-adj	0.0	0.2	0.5	0.5			0.2	0.2
RT-adj	-0.6	-0.6	-0.7	-0.7			-0.6	-0.6
HV-adi	1.7	1.7	1.7	1.7			1.7	1.7
adj, computed	0.3	1	0.1	-0.6			-0.5	
Departure Headway an					<u> </u>	<u> </u>		
	3.20	10	3.20	3.20	i i i i i i i i i i i i i i i i i i i	I	3.20	
d, initial value (s)	0.05		0.10	0.08	<u> </u>		0.15	
d, final value (s)	4.85		4.97	4.27			3.97	1
, final value	0.07	<u> </u>	0.16	0.11			0.18	
flove-up time, m (s)		.0	w={	2.3			2	.0
service Time, t <sub>s</sub> (s)	2.9		2.7	2.0			2.0	
Capacity and Level of	<u></u>	1		1				
		bound	Wes	stbound	North	bound	1	hbound
	L1	L2	L1	L2	L1	L2	L1	L2
apacity (veh/h)	305		368	340			414	
pelay (s/veh)	8.24		8.64	7.48			7.84	
OS	A A		A A	A A			A	
pproach: Delay (s/veh)		1 3.24		.14		I		84
	<del>                                     </del>					<u></u>		4
LOS		Α		<u>A</u>	<u> </u>			
ntersection Delay (s/veh)				8.0 A				
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	· · · · · · · · · · · · · · · · · · ·	ALL-WA	Y STOP C	ONTROL A	NALYSIS			
General Information				Site Informa	tion .			
Analyst	MMF			Intersection			+PR_AM	
Agency/Co.	ATE			Jurisdiction		GOLET		
Date Performed	1/13/20			Analysis Year		EXIST	ING+PROJECT	
Analysis Time Period		EAK HOUR						
Project ID #10086 - 7400 CATH								
East/West Street: CALLE REA			TOO WINDS THOU ALONG MICHOLY TO STRONG TO STRO	North/South Stre		ER CANYON		
Volume Adjustments a	nd Site Chara					W-		
Approach Movement	L		astbound T	R	L	vve	stbound T	R
Volume (veh/h)	55		0	Ö	0		118	91
%Thrus Left Lane								
Approach		N	orthbound			Sou	ıthbound	
Movement	L		Т	R	L		Т	R
Volume (veh/h)	0		0	0	0		0	164
%Thrus Left Lane								
	East	bound	We	stbound	North	bound	South	nbound
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	L		T	R			R	
PHF	1.00		1.00	1.00			1.00	
Flow Rate (veh/h)	55		118	91			164	
% Heavy Vehicles	4		4	4			4	
No. Lanes				2	(	)	•	1
Geometry Group	3	a		5				1
Duration, T				1.0	00			
Saturation Headway A	djustment Wo	rksheet						
Prop. Left-Turns	1.0		0.0	0.0			0.0	
Prop. Right-Turns	0.0		0.0	1.0			1.0	
Prop. Heavy Vehicle	0.0		0.0	0.0			0.0	
hLT-adj	0.2	0.2	0.5	0.5			0.2	0.2
hRT-adj	-0.6	-0.6	-0.7	-0.7			-0.6	-0.6
hHV-adj	1.7	1.7	1.7	1.7			1.7	1.7
hadj, computed	0.3		0.1	-0.6			-0.5	
Departure Headway an		è			<u> </u>			1
hd, initial value (s)	3.20		3.20	3.20			3.20	
x, initial	0.05		0.10	0.08			0.15	
nd, final value (s)	4.85		4.97	4.27			3.97	
x, final value	0.07		0.16	0.11			0.18	
Move-up time, m (s)	2.	0		2.3				.0
Service Time, t <sub>s</sub> (s)	2.9		2.7	2.0			2.0	
Capacity and Level of S		l San Harris	<u> </u>	1 2.0		<u> </u>	<u> </u>	<u>l</u>
Capacity and Level Or		oound	T was	stbound	North	bound	South	nbound
				1		L2	L1	L2
	L1	L2	L1	L2	L1	L L L L	414	L-2
Capacity (veh/h)	305		368	341				
Delay (s/veh)	8.24	**************************************	8.64	7.49			7.84	
Los	A		A	A		<u></u>	A	<u> </u>
Approach: Delay (s/veh)	8	.24	8	.14				84
LOS		Α		A				4
ntersection Delay (s/veh)				8.0	04			
ntersection LOS				A				

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#### ALL-WAY STOP CONTROL ANALYSIS Site Information General Information 02 EX PM Intersection Analyst GOLETA Jurisdiction Agency/Co. ATE **EXISTING** Analysis Year **Date Performed** 1/13/2010 Analysis Time Period P.M. PEAK HOUR Project ID #10086 - 7400 CATHEDRAL OAKS PROJECT East/West Street: CALLE REAL/US 101 NB OFF RAMP North/South Street: WINCHESTER CANYON Volume Adjustments and Site Characteristics Approach Eastbound Westbound Movement R R 144 201 Volume (veh/h) 53 0 0 0 %Thrus Left Lane Northbound Southbound Approach R Movement t R Т 0 0 125 Volume (veh/h) 0 0 0 %Thrus Left Lane Eastbound Westbound Northbound Southbound L1 L2 L2 L2 L1 L2 L1 L1 R Configuration L T R 1.00 1.00 1.00 1.00 PHF 144 201 125 Flow Rate (veh/h) 53 % Heavy Vehicles 4 4 4 4 0 1 No. Lanes Geometry Group За 5 Duration, T 1.00 Saturation Headway Adjustment Worksheet Prop. Left-Turns 0.0 1.0 0.0 0.0 1.0 rop. Right-Turns 0.0 0.0 1.0 Prop. Heavy Vehicle 0.0 0.0 0.0 0.0 hLT-adi 0.2 0.2 0.2 0.5 0.5 0.2 -0.6 -0.7 -0.7 -0.6 -0.6 RT-adj -0.6 1.7 1.7 1.7 hHV-adj 1.7 1.7 1.7 Ihadi, computed 0.3 0.1 -0.6 -0.5 Departure Headway and Service Time hd, initial value (s) 3.20 3.20 3.20 3.20 initial 0.05 0.13 0.18 0.11 4.20 d, final value (s) 4.89 4.90 4.20 x, final value 0.07 0.20 0.23 0.15 Move-up time, m (s) 2.0 2.3 2.0 ervice Time, t<sub>s</sub> (s) 2.9 2.6 1.9 2.2 Capacity and Level of Service Eastbound Northbound Southbound Westbound L2 L1 L2 L1 L2 L1 L2 L1 Capacity (veh/h) 303 394 451 375 8.27 7.92 8.80 elay (s/veh) 8.19 LOS Α Α Α Α 8.44 7.92 Approach: Delay (s/veh) 8.27 LOS Α Α Α Intersection Delay (s/veh) 8.30 Intersection LOS

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#### **ALL-WAY STOP CONTROL ANALYSIS** Ceneral/Information Site Information 02\_EX+PR\_PM Intersection MMF Analyst **GOLETA Jurisdiction** ATE Agency/Co. **EXISTING+PROJECT** Analysis Year 1/13/2010 **Date Performed** Analysis Time Period P.M. PEAK HOUR Project ID #10086 - 7400 CATHEDRAL OAKS PROJECT North/South Street: WINCHESTER CANYON East/West Street: CALLE REAL/US 101 NB OFF RAMP Volume Adjustments and Site Characteristics Westbound Eastbound Approach R R Movement 144 203 53 0 0 0 Volume (veh/h) %Thrus Left Lane Southbound Northbound Approach R R L Movement 125 0 0 0 0 0 <sup>|</sup>//olume (veh/h) %Thrus Left Lane Southbound Northbound Westbound Eastbound L2 L2 L1 L2 L1 L2 L1 L1 R R T L Configuration 1.00 1.00 1.00 1.00 PHF 125 203 53 144 Flow Rate (veh/h) 4 4 4 4 % Heavy Vehicles 1 0 No. Lanes 1 За 5 Geometry Group 1.00 Juration, T Saturation Headway Adjustment Worksheet 0.0 0.0 0.0 1.0 Prop. Left-Tums 1.0 0.0 1.0 0.0 Prop. Right-Turns 0.0 0.0 0.0 0.0 Prop. Heavy Vehicle 0.2 0.2 0.5 0.5 0.2 0.2 ıLT-adj -0.6 -0.6 -0.7 -0.7 -0.6 -0.6 iRT-adj 1.7 1.7 1.7 1.7 1.7 1.7 hHV-adj -0.5 0.1 -0.60.3 radj, computed Departure Headway and Service Time 3.20 3.20 3.20 3.20 hd, initial value (s) 0.11 0.18 0.13 0.05 t, initial 4.21 4.20 4.90 ıd, final value (s) 4.89 0.15 0.20 0.24 x, final value 0.07 2.0 2.3 2.0 Move-up time, m (s) 2.2 1.9 2.6 2.9 Service Time, t<sub>e</sub> (s) Capacity and Level of Service Southbound Northbound Westbound Eastbound L1 L2 L1 L2 L1 L2 L2 L1 375 394 453 303 Capacity (veh/h) 7.93 8.20 8.27 8.80 Delay (s/veh) Α Α Α Α LOS 7.93 8.45 8.27 Approach: Delay (s/veh) A Α Α LOS 8.31 Intersection Delay (s/veh) Α 'ntersection LOS 10:36 AM Generated: 1/14/2011

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		ALL-V	WAY STOP	CONTROL A	NALYSIS	···		
General information				Site Inform				
Analyst	MMF			Intersection		02_C		
Agericy/Co.	ATE			Jurisdiction		GOLE		
Date Performed Analysis Time Period	1/13/2 Δ M J	010 PEAK HOUR		Analysis Year		COMC	ILATIVE	
Project ID #10086 - 7400 CATH						· · · · · · · · · · · · · · · · · · ·		
East/West Street: CALLE REAL				North/South Str	et: WINCHES	TER CANYON	******	
Volume Adjustments a	nd Site Char	acteristics						
Approach			Eastbound	<u> </u>		We	estbound	
Movement Volume (veh/h)	8	0	0	R 0	<u>L</u>		T 233	118
%Thrus Left Lane					<del>            </del>		233	110
Approach			Northbound			Sor	i uthbound	
Movement	L		Т	R	L		T	R
Volume (veh/h)	(	)	0	0	0		0	160
%Thrus Left Lane								
	Eas	tbound	We	estbound	Nor	thbound	Sou	thbou <b>n</b> d
XII	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	L	<u> </u>	T	R			R	
PHF	1.00		1.00	1.00			1.00	
Flow Rate (veh/h)	80		233	118			160	
% Heavy Vehicles	4	<u> </u>	4	4		<u></u>	4	
No. Lanes	<del>                                     </del>	<u>1</u>		2		0		1
Geometry Group  Ouration, T	<del> </del>	3a		5				1
Saturation Headway Ad	<u> </u>			1.0	<i>J</i> U			
		rksneet		T	I	1	1	
Prop. Left-Turns	1.0	<u> </u>	0.0	0.0			0.0	
Prop. Right-Turns	0.0		0.0	1.0			1.0	
Prop. Heavy Vehicle	0.0		0.0	0.0			0.0	
LT-adj	0.2	0.2	0.5	0.5			0.2	0.2
iRT-adj	-0.6	-0.6	-0.7	-0.7			-0.6	-0.6
nHV-adj	1.7	1.7	1.7	1.7			1.7	1.7
adj, computed	0.3		0.1	-0.6			-0.5	
Departure Headway and	Service Tin	ie						
nd, initial value (s)	3.20		3.20	3.20			3.20	
, initial	0.07	<u> </u>	0.21	0.10			0.14	
d, final value (s)	5.03	ļ	5.02	4.32			4.33	
r, final value	0.11	<u></u>	0.33	0.14		<u> </u>	0.19	
Nove-up time, m (s)		. <u>0</u>		2.3		1	<del>                                     </del>	2.0
Service Time, t <sub>s</sub> (s)	3.0		2.7	2.0			2.3	
Capacity and Level of S	T						T	
		bound 1		stbound	<del></del>	nbound		hbound
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	330		483	368			410	
elay (s/veh)	8.66		10.14	7.73			8.37	
os	Α		В	A			A	
pproach: Delay (s/veh)		3.66	9	.33			8.	37
LOS		Α		A				A
ntersection Delay (s/veh)				8.9	18		<del></del>	
· · · · · · · · · · · · · · · · · · ·								

#### ALL-WAY STOP CONTROL ANALYSIS Site Information General Information Intersection 02 CU+PR AM MMF Analyst Jurisdiction **GOLETA** Agency/Co. ATE **CUMULATIVE+PROJECT** Analysis Year Date Performed 1/13/2010 A.M. PEAK HOUR Analysis Time Period Project ID #10086 - 7400 CATHEDRAL OAKS RPROJECT North/South Street: WINCHESTER CANYON East/West Street: CALLE REAL/US 101 NB OFF RAMP Volume Adjustments and Site Characteristics Approach Eastbound Westbound R R T Movement 119 233 Volume (veh/h) 80 0 0 0 %Thrus Left Lane Southbound Northbound Approach R R Movement т 160 0 0 0 0 Volume (veh/h) 0 %Thrus Left Lane Westbound Northbound Southbound **Fastbound** L2 L2 L1 L2 L1 L1 L2 L1 R T R L Configuration 1.00 1.00 1.00 PHF 1.00 233 160 80 119 Flow Rate (veh/h) 4 % Heavy Vehicles 4 4 4 0 1 2 1 No. Lanes 3a 5 **Geometry Group** 1.00 Duration, T Saturation Headway Adjustment Worksheet 0.0 Prop. Left-Turns 1.0 0.0 0.0 1.0 0.0 1.0 Prop. Right-Turns 0.0 0.0 0.0 0.0 0.0 Prop. Heavy Vehicle 0.2 0.2 0.2 0.2 0.5 0.5 LT-adj -0.7 -0.6 -0.6 -0.6 -0.6 -0.7 RT-adj 1.7 1.7 1.7 1.7 1.7 1.7 hHV-adi 0.1 -0.6 -0.50.3 nadj, computed Departure Headway and Service Time 3.20 3.20 3.20 3.20 hd, initial value (s) 0.14 i, initial 0.07 0.21 0.11 5.02 4.32 4.34 5.03 id, final value (s) 0.19 0.33 0.14 x, final value 0.11 2.0 2.3 2.0 Nove-up time, m (s) 2.3 3.0 2.7 2.0 Service Time, t<sub>e</sub> (s) Capacity and Level of Service Northbound Southbound Eastbound Westbound L1 L2 L2 L1 L2 L1 L2 L1 410 330 483 369 Capacity (veh/h) 8.66 10.14 7.74 8.37 Delay (s/veh) LOS Α В Α Α 8.37 9.33 Approach: Delay (s/veh) 8.66 Α Α Α LOS 8.98 Intersection Delay (s/veh) Α ntersection LOS

1		ALL-W	AY STOP C	ONTROL AI	NALYSIS			
General Information				Site Informa	lion			
Analyst	MMF			Intersection		02_CU		
Agency/Co.	ATE			Jurisdiction Analysis Year		GOLET CUMUI	IA LATIVE	
Date Performed Analysis Time Period	1/13/20 P.M. Pi	110 EAK HOUR		Analysis real		00,,,0		
Project ID #10086 - 7400 CA								
East/West Street: CALLE R				North/South Stree	t: WINCHESTE	R CANYON		
Volume Adjustments								
Approach			Eastbound			We	stbound	
Movement	84	,	<u>T</u>	R 	<u> </u>		<u>т</u> 266	207
Volume (veh/h)	84		0	U	1 0		200	207
%Thrus Left Lane			Northbound		1	Sou	thbound	
Approach Movement	L		T	R	L		T	R
Volume (veh/h)	0		0	0	0		0	158
%Thrus Left Lane								
	East	bound	We	stbound	North	bound	Sout	hbound
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	L		T	R			R	
PHF	1.00		1.00	1.00			1.00	
Flow Rate (veh/h)	84		266	207			158	
% Heavy Vehicles	4		4	4			4	
No. Lanes		1		2	(	)		1
Geometry Group	3	а		5				1
Ouration, T				1.0	0			
Saturation Headway	Adjustment Wo	rksheet						
Prop. Left-Turns	1.0		0.0	0.0			0.0	
Prop. Right-Turns	0.0		0.0	1.0			1.0	
Prop. Heavy Vehicle	0.0		0.0	0.0			0.0	
nLT-adj	0.2	0.2	0.5	0.5			0.2	0.2
nRT-adj	-0.6´	-0.6	-0.7	-0.7			-0.6	-0.6
hHV-adj	1.7	1.7	1.7	1.7			1.7	1.7
nadj, computed	0.3		0.1	-0.6			-0.5	
Departure Headway a	and Service Tim	ie.						
hd, initial value (s)	3.20		3.20	3.20			3.20	
c, initial	0.07		0.24	0.18			0.14	
nd, final value (s)	5.14		5.04	4.34			4.54	
x, final value	0.12		0.37	0.25			0.20	
Nove-up time, m (s)	2.	.0		2.3			2	2.0
Service Time, t <sub>s</sub> (s)	3.1		2.7	2.0			2.5	
Capacity and Level o	f Service							
	East	bound	We	stbound	North	bound	Sout	hbound
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	334		516	457			408	
Delay (s/veh)	8.84		10.73	8.48			8.67	
LOS	A	<u> </u>	В	A			Α	
Approach: Delay (s/veh)		3.84		0.75		<u> </u>		.67
LOS		A		A				A
				9.4	0		1	
Intersection Delay (s/veh)				9.4 A				
ntersection LOS				TM				6/2011 11:19 A

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		ALL-W	AY STOP C	ONTROL A	NALYSIS			
General Information				Site Inform	ation			
Analyst	MMF			Intersection		02_CE GOLE	J+PR_PM	
Agency/Co.	ATE			Jurisdiction Analysis Year			ILATIVE+PROJEC	eτ
Date Performed Analysis Time Period	1/13/20 P.M. Pi	110 EAK HOUR		, aldiyolo rodi				
Project ID #10086 - 7400 CATH								· · · · · · · · · · · · · · · · · · ·
East/West Street: CALLE REA				North/South Str	eet: WINCHEST	ER CANYON		
Volume Adjustments a							- N J	
Approach Movement		1	Eastbound T	R			estbound T	R
Volume (veh/h)	84	1	o	0	0		266	209
%Thrus Left Lane				1, =11, 11				
Approach			Northbound			So	uthbound	
Movement	L		Т	R	L		Т	R
/olume (veh/h)	0		0	0	0		0	158
%Thrus Left Lane								
	East	bound	We	stbound	Norti	nbound	Sout	hbound
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	L		T	R			R	
PHF	1.00		1.00	1.00			1.00	
Flow Rate (veh/h)	84		266	209			158	
% Heavy Vehicles	4		4	4			4	
No. Lanes		1		2		0		1
Geometry Group	3	la		5				1
Ouration, T				1.	00			
Saturation Headway A	djustment Wo	rksheet						
Prop. Left-Turns	1.0		0.0	0.0			0.0	
Prop. Right-Turns	0.0		0.0	1.0			1.0	
Prop. Heavy Vehicle	0.0		0.0	0.0			0.0	
nLT-adj	0.2	0.2	0.5	0.5			0.2	0.2
nRT-adj	-0.6	-0.6	-0.7	-0.7			-0.6	-0.6
nHV-adj	1.7	1.7	1.7	1.7			1.7	1.7
nadj, computed	0.3	1	0.1	-0.6		1	-0.5	
Departure Headway an		<u> </u>  A	311		1	1		
d, initial value (s)	3.20		3.20	3.20	1		3.20	1
r, initial	0.07		0.24	0.19		1	0.14	1
id, final value (s)	5.14		5.04	4.34			4.54	1
, final value	0.12	<u> </u>	0.37	0.25			0.20	
Nove-up time, m (s)		.0		2.3				2.0
Service Time, t <sub>s</sub> (s)	3.1		2.7	2.0			2.5	
Capacity and Level of		<u> </u>		1	1	<u> </u>		1
		bound		stbound ·		nbound	Sout	hbound
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	334		516	459			408	
elay (s/veh)	8.84		10.73	8.50			8.68	
os	A		В	A			Α	
pproach: Delay (s/veh)	····	3.84		).75			8.	.68
LOS		Α		A ·				Α
				0	41			
ntersection Delay (s/veh)				<u>9.</u>	41			

·	TV	VO-WAY STOP	CONTR	OL SUN	MARY			
Ceneral Information				nformat				
Analyst	MMF		Interse			03_EX_A	M	
Agency/Co.	ATE		Jurisdi			GOLETA		
Date Performed	1/13/2011			is Year		EXISTING	}	
Analysis Time Period	A.M. PEA	K HOUR						
Project Description #100	086 - 7400 CATH	IEDRAL OAKS PR	OJECT					
East/West Street: CATHE				South Stre	et: NORTHG	ATE-EVER	GREEN	
Intersection Orientation:	East-West		Study F	Period (hr	s): 0.25			
Vehicle Volumes and	l Adijistment	S						
Major Street		Eastbound				Westbou	nd	NAME OF STREET
Movement	1	2	3		4	5		6
	L	Т	R		L	Т		R
Volume (veh/h)	3	345	5		19	142		7
Peak-Hour Factor, PHF	1.00	1.00	1.00	)	1.00	1.00		1.00
Hourly Flow Rate, HFR  (veh/h)	3	345	5		19	142		7
Percent Heavy Vehicles	4				4			
ıMedian Type				Undivid	led			
RT Channelized			0	l				0
anes	1	1	0		1	1		0
Configuration	L		TR		L			TR
Upstream Signal		0				0		
Vinor Street		Northbound	<del></del>			Southbou	ınd	
Movement	7	8	9		10	11		12
	L	Т	R		L	T		R
/olume (veh/h)	9	0	75		23	1		4
Peak-Hour Factor, PHF	1.00	1.00	1.00		1.00	1.00		1.00
Hourly Flow Rate, HFR veh/h)	9	0	75		23	1		4
ercent Heavy Vehicles	4	4	4		4	4		4
Percent Grade (%)		0				0		
Tared Approach		N				N		
Storage		0				0		
RT Channelized			0					0
anes	0	1	0		0	1		0
Configuration		LTR				LTR		
)elay, Queue Length, and	Level of Servi							
pproach	Eastbound	Westbound		Northbou	nd		Southbound	
Movement	1	4	7	8	9	10	11	12
ane Configuration	L	L		LTR			LTR	· · · · ·
v (veh/h)	3	19		84			28	
	1420	1198		651			411	
C (m) (veh/h) /c	0.00	0.02		0.13	-		0.07	
				ļ				
95% queue length	0.01	0.05		0.44			0.22	
Control Delay (s/veh)	7.5	8.1		11.3			14.4	
os	Α	A	<u>.</u>	В			В.	
Approach Delay (s/veh)				11.3			14.4	
pproach LOS				В			В	

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	T\	WO-WAY STOR	CONTR	OL SUMN	//ARY			
Ceneral Information				n(oumatic				
Analyst	MMF		Interse			03_EX+P	R AM	
Agency/Co.	ATE		Jurisdi			GOLETA	-	
Date Performed	1/13/2011		Analys	sis Year		EXISTING	+PROJEC	Τ
Analysis Time Period	A.M. PEA	K HOUR						
Project Description #10	086 - 7400 CATH	HEDRAL OAKS PR	ROJECT			•		
East/West Street: CATH				South Street	t: NORTHG	ATE-EVER	GREEN	
Intersection Orientation:	East-West		Study F	Period (hrs)	0.25			
Vehicle Volumes and	d Adjustment	S						
Major Street	The state of the s	Eastbound	THE PARTY OF THE P	TO SECURITION OF THE SECURITIO	CONTRACTOR ACCOUNTS OF THE STATE OF THE STAT	Westbou	nd	
Movement	1	2	3		4	5		6
	L	Т	R		L	T		R
Volume (veh/h)	3	346	5		19	145		7
Peak-Hour Factor, PHF	1.00	1.00	1.00	)	1.00	1.00		1.00
Hourly Flow Rate, HFR  (veh/h)	3	346	5		19	145		7
Percent Heavy Vehicles	4				4	-		
Median Type				Undivide	<u>d</u>			
RT Channelized			0					0
Lanes	1	1	0		1	1		0
Configuration	L		TR		L	ļ		TR
Upstream Signal		0				0		
Minor Street		Northbound				Southbou	ınd	
Movement	7	8	9		10	11		12
	L	Τ	R		L	Т		R
Volume (veh/h)	9	0	75		23	1		4
Peak-Hour Factor, PHF	1.00	1.00	1.00		1.00	1.00		1.00
Hourly Flow Rate, HFR (veh/h)	9	0	75		23	1		4
Percent Heavy Vehicles	4	4	4		4	4		4
Percent Grade (%)		0				0		-
Flared Approach		N				N		
Storage		0				0		
RT Channelized			0					0
Lanes	0	1	0		0	1		0
Configuration		LTR				LTR		
Delay, Queue Length, an	d Level of Servi	ce						
Approach	Eastbound	Westbound		Northbound	1	5	Southbound	LDT AN ALL MANAGEMENT CONTRACTOR
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L		LTR			LTR	
v (veh/h)	3	19		84			28	
C (m) (veh/h)	1417	1197		651	<u> </u>		409	
v/c	0.00	0.02		0.13		ļ	0.07	
	0.01	0.05		0.44			0.22	
95% queue length						<u></u>		
Control Delay (s/veh)	7.5	8.1	•	11.3			14.4	
_OS	A	Α		В	<u> </u>		В	L
Approach Delay (s/veh)				11.3			14.4	
Approach LOS				В			В	

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						. M.		
	TW	O-WAY STOP	CONTR	OL SUI	MMARY			
General Information	en e		Site	Informa	tion			
Analyst	MMF		Inters	ection		03_EX_A	\M	
Agency/Co.	ATE		Jurisd			GOLETA		
Date Performed	2/23/201		Analy	sis Year		CUMULA	TIVE	
Analysis Time Period		AK HOUR						
Project Description #								
East/West Street: CA		S ROAD			eet: NORT	HGATE-EV	ERGRE	EN
Intersection Orientation			Study	Perioa (n	rs): 0.25			
Vehicle Volumes a	ind Adjustm							
Major Street		Eastbound				Westbou	<u>nd</u>	
Movement	11	2 	3 R		4	5 T		6 R
Volume (veh/h)	L	354	5		L 19	142		7
Peak-Hour Factor, PHF		1.00	1.00	,	1.00	1.00		1.00
Hourly Flow Rate, HFR					<del></del>			
(veh/h)	3	354	5		19	142		7
Percent Heavy Vehicles	s 4				4			
Median Type				Undivid	ed			
RT Channelized			0					0
Lanes	1	1	0		1	1		0
Configuration	L		TR		L			TR
Upstream Signal		0						
Minor Street		Northbound				Southbou	ınd	
Movement	7	8	9		10	11		12
	L	Т	R		L	T		R
Volume (veh/h)	9	0	75		23	1		4
Peak-Hour Factor, PHF		1.00	1.00	)	1.00	1.00		1.00
Hourly Flow Rate, HFR (veh/h)	9	0	75		23	1		4
Percent Heavy Vehicles	3 4	4	4		4	4		4
Percent Grade (%)		0				0		
Flared Approach		N			•	N		
Storage		0				0		
RT Channelized			0					0
Lanes	0	1	0		0	1		0
Configuration		LTR				LTR		
Delay, Queue Length,	and Level of S	ervice		- 10				
Approach	Eastbound	Westbound	·	Vorthbour	nd	S	outhbou	ınd
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L		LTR			LTR	
v (veh/h)	3	19	<u> </u>	84			28	
C (m) (veh/h)	1420	1189		644			405	
v/c	0.00	0.02		0.13			0.07	
95% queue length	0.01	0.05		0.45			0.22	
Control Delay (s/veh)	7.5	8.1		11.4			14.5	
	7.5 A			11.4 B		<u> </u>	14.5 B	
LOS Approach Delay	A	Α		1				
(s/veh)				11.4			14.5	
Approach LOS			l	<i>B</i>			В	

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	TW	O-WAY STOP	CONTR	OL S	UM	MARY				
General Information	on 🤼		Site	nform	nati	on -				
Analyst	MMF		Inters	ection			03_EX_A			
Agency/Co.	ATE		Jurisd	iction			GOLETA	١		
Date Performed	2/23/201	1	Analy	sis Yea	r		CUMULA	ATIVE	+PRO	JECT
Analysis Time Period		AK HOUR				- Marie				
Project Description #										
East/West Street: CA		S ROAD					HGATE-EV	/ERG	REEN	
Intersection Orientation			Study	Period	(hrs	): 0.25	72.000 Management (1.000 Manag	Silan Maria Constant	ni manifestrati i katin	STATE OF THE PROPERTY OF THE PARTY OF THE PA
Vehicle Volumes a	<u>ind Adjustin</u>									
Major Street		Eastbound					Westbou	ınd ,		
Movement	1 .	2	3			4	5			<u>6</u>
\(\frac{1}{2}\)	L	T 255	R 5			<u>L</u> 19	145			<u>R</u> 7
Volume (veh/h) Peak-Hour Factor, PHF		355 1.00	1.00	,		1.00	1.00			00
Hourly Flow Rate, HFR					··· -					
(veh/h)	3	355	5			19	145		7	7
Percent Heavy Vehicles	s 4					4	-			-
Median Type				Undiv	ridec	1				
RT Channelized			0						(	)
Lanes	1	1	0			1	1		·	)
Configuration	L		TR			L			T	R
Upstream Signal		0					0			
Minor Street		Northbound					Southbou	ınd		
Movement	7	8	9			10	11			12
	L	T	R			L	<u>_</u>			R
Volume (veh/h)	9	0	75			23	1			4
Peak-Hour Factor, PHF		1.00	1.00			1.00	1.00		1.0	00
Hourly Flow Rate, HFR (veh/h)	9	0	75			23	1		4	4
Percent Heavy Vehicles	s 4	4	4			4	4			4
Percent Grade (%)		0	•				0			
Flared Approach		N					N			
Storage		0					0			
RT Channelized			0						(	)
Lanes	0	1	0			0	1		(	)
Configuration		LTR					LTR			
Delay, Queue Length,	and Level of S	ervice								
Approach	Eastbound	Westbound	ł	Vorthbo	ound		S	outhb	ound	
Movement	1	4	7	8		9	10	1	1	12
Lane Configuration	L	L		LTR	?			LT	R	
v (veh/h)	3	19		84				28	8	
C (m) (veh/h)	1417	1188		642				40	)3	
v/c	0.00	0.02		0.13				0.0	07	
95% queue length	0.01	0.05		0.45				0.2		
Control Delay (s/veh)	7.5	8.1		11.4				14		
LOS	A.	A		В				E		
Approach Delay (s/veh)		<u> </u>		11.4	l	A		14.		
Approach LOS				В				В		

		NO MAY STOP	CONTR		1484	ADV			
 ©eneral#information		NO-WAY STOF		orma iforma					
			Interse		u.c.		03 EX PI	1	
Analyst	MMF		Jurisdi				GOLETA	VI	
Agency/Co. Date Performed	ATE 1/13/2011	,		is Year			EXISTING	•	
Analysis Time Period	P.M. PEA		Allalys	is i cai			LXISTING	•	
Project Description #10			POJECT		·		w		
East/West Street: CATH				Couth Str	reet:	NORTHG	ATE-EVER	REEN	
ntersection Orientation:		OAD		Period (h			AIL-LVLIN	JINEEIV	
Vehicle Volumes an		ŝ	Joseph Company						
Major Street	The state of the s	Eastbound			orazione de la se	Total Service	Westbou	nd	
Movement	1	2	3			4	5		6
	L	Т	R			L	T		R
'Volume (veh/h)	4	129	6			73	146		32
Peak-Hour Factor, PHF	1.00	1.00	1.00	)		1.00	1.00		1.00
Hourly Flow Rate, HFR	4	129	6	1		73	146	l	32
(veh/h)									
Percent Heavy Vehicles	4			l leadis d	ided	4		<u> </u>	
Median Type			T	Undivi	iaea		<u> </u>		0
RT Channelized			0						
anes	1	1	0			1	1		<u>0</u>
Configuration	L		TR	·		L	0		TR
Upstream Signal		0							
Vinor Street		Northbound				40	Southbou	nd I	40
Movement	7	8	9			<u>10</u>	11		12
	L L	T	R			<u>L</u>	T		R
/olume (veh/h)	1	0	47			16	3		1 00
Peak-Hour Factor, PHF	1.00	1.00	1.00			1.00	1.00		1.00
Hourly Flow Rate, HFR veh/h)	1	0	47			16	3		1
Percent Heavy Vehicles	4	4	4			4	4		4
Percent Grade (%)		0					0		
Flared Approach		N					N		
Storage		0					0		
RT Channelized			0						0
anes	0	1	0			0	1		0
Configuration		LTR			***		LTR		
Delay, Queue Length, an	d Level of Servi	íćé							
\pproach	Eastbound	Westbound		Northbo	und		5	outhboun	d
Movement	1	4	7	8		9	10	11	12
ane Configuration	L	L		LTR				LTR	
ıv (veh/h)	4	73		48				20	
C (m) (veh/h)	1386	1437		896	$\neg \uparrow$			468	
/c	0.00	0.05		0.05				0.04	
95% queue length	0.01	0.16		0.17	$\neg \uparrow$			0.13	
Control Delay (s/veh)	7.6	7.6		9.2				13.0	
.OS	A	A		A				В	
Approach Delay (s/veh)				9.2		<u></u>		13.0	J
\pproach LOS				A				В	

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1	Т	WO-WAY STOR	CONTR	OL SU	MM	IARY			
General Information			Site li	nome	itio	n			
Analyst	MMF		Interse	ection			03_EX+P	R_PM	
Agency/Co.	ATE		Jurisdi	ction			GOLETA		
Date Performed	1/13/2011	1	Analys	is Year			EXISTING	9+PROJE	CT
Analysis Time Period	P.M. PEA								
Project Description #10									
East/West Street: CATH		<u>OAD</u>					ATE-EVER	GREEN	
Intersection Orientation:			Study F	Period (h	ırs):	0.25	A NEW YORK OF THE PROPERTY OF	NA DATE OF THE STREET AND A STR	
Vehicle Volumes an	d Adjustment								
Major Street		Eastbound					Westbou	nd	
Movement	1	2	3			4	5		6
Volume (veh/h)	L	133	R 6			<u>L</u>	T 148		32
Peak-Hour Factor, PHF	1.00	1.00	1.00			1.00	1.00		1.00
Hourly Flow Rate, HFR	1								
(veh/h)	4	133	6			73	148		32
Percent Heavy Vehicles	4	-				4			
Median Type				Undiv	ided		·		
RT Channelized			0	·					0
_anes	1	1	0			1	1		0
Configuration	<u> </u>		TR			<u>L</u>			TR
Upstream Signal		0	<u> </u>				0		
Minor Street		Northbound					Southbou	nd	
Movement	7	8	9			10	11		12
, I	L	Т	R			L	Т		R
/olume (veh/h)	1	0	47			16	3		1
Peak-Hour Factor, PHF	1.00	1.00	1.00	'		1.00	1.00		1.00
Hourly Flow Rate, HFR veh/h)	1	0	47			16	3		1
ercent Heavy Vehicles	4	4	4			4	4		4
Percent Grade (%)		0					0		
Flared Approach		N					N		
Storage		0					0		
RT Channelized			0						0
.anes	0	1	0			0	1		0
Configuration		LTR					LTR	<u> </u>	
Delay, Queue Length, an	d Level of Serv	ce							
\pproach	Eastbound	Westbound		Northbo	und			outhboun	d
Movement	1	4	7	8		9	10	11	12
.ane Configuration	L	L		LTR				LTR	
√ (veh/h)	4	73		48				20	
C (m) (veh/h)	1384	1432		891				463	
/c	0.00	0.05		0.05				0.04	
195% queue length	0.01	0.16		0.17				0.14	
Control Delay (s/veh)	7.6	7.6	<del></del>	9.3				13.1	
.os	A	Α		A				В	
Approach Delay (s/veh)				9.3				13.1	
pproach LOS			· · · · · · · · · · · · · · · · · · ·	A				В	

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	7700							
1	TW	O-WAY STO	CONTR	ROL SUI	MMARY			
General Informati	<u>on</u>		Site	linforma	tion			
Analyst	MMF		Inters	ection		03_CU_	PM	
Agency/Co.	ATE		Juriso	diction		GÖLETA		
Date Performed	2/23/201	11	Analy	sis Year		CUMUL	ATIVE	
Analysis Time Period		AK HOUR	-					
Project Description	#10086 <b>- 74</b> 00 (	CATHEDRAL OA	KS PROJE	ECT				
East/West Street: CA					eet: NOR1	HGATE-E	VERGREE	N
Intersection Orientation	n: <i>East-West</i>		Study	Period (h	rs): 0.25			
Vehicle Volumes	and Adjustm	nents						
Major Street		Eastbound	VVI spanja ma			Westbou	und	VIII.
Movement	1	2	3		4	5		6
	L	Т	R		L	Т		R
Volume (veh/h)	4	129	6		73	149		32
Peak-Hour Factor, PHI		1.00	1.00	2	1.00	1.00		1.00
Hourly Flow Rate, HFR (veh/h)	4	129	. 6		73	149		32
Percent Heavy Vehicle	s 4				4			
Median Type				Undivide	ed			
RT Channelized			0					0
Lanes	1	1	0		1	1		0
Configuration	L		<u>TR</u>		<u>L</u>			TR
Upstream Signal						0		
Minor Street		Northbound				Southbo	und	
Movement	7	8	9		10	11		12
	L	Т	R		L	Т		R
Volume (veh/h)	1	0	47		16	3		3
Peak-Hour Factor, PHF		1.00	1.00	)	1.00	1.00		1.00
Hourly Flow Rate, HFR (veh/h)		0	47		16	3		3
Percent Heavy Vehicles	s 4	4	4		4	4		4
Percent Grade (%)		0				0		
Flared Approach		N				N		
Storage		0				0		
RT Channelized			0					0
Lanes	0	1	0		0	1		0
Configuration		LTR				LTR		
Delay, Queue Length,	and Level of S	ervice						
Approach	Eastbound	Westbound	1	Vorthboun	d	s	outhbound	t
Movement	<u>,</u> 1	4	7	8	9	10	11	12
Lane Configuration	L	L		LTR			LTR	
v (veh/h)	4	73		48			22	
C (m) (veh/h)	1382	1437		896			487	
v/c	0.00	0.05		0.05			0.05	
95% queue length	0.01	0.16		0.17	1		0.14	
Control Delay (s/veh)	7.6	7.6		9.2			12.7	
LOS	A	A		A			B	
Approach Delay				9.2			12.7	
(s/veh) Approach LOS			: <del>/ 1/                                  </del>	A			В	
						1	-	

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	TW	O-WAY STO	CONTR	ROL SU	MMARY			
General Informati	on		Site	linforma	ation			
Analyst	MMF		Inters	ection		03_CU+	PR PM	
Agency/Co.	ATE		Juriso	diction		GÖLETA		
Date Performed	2/23/201	11	Analy	sis Year		CUMUL	ATIVE+PF	ROJECT
Analysis Time Period	P.M. PE	AK HOUR						
		CATHEDRAL OA	KS PROJE	ECT				
East/West Street: CA		(S ROAD	North/	South St	reet: NOR7	HGATE-E	/ERGRE	EN
Intersection Orientation	: East-West		Study	Period (h	nrs): 0.25			
Vehicle Volumes:	and Adjustm	ient <b>s</b>		***				
Major Street		Eastbound				Westbou	ınd	
Movement	11	2	3		4	5		6
	L	Т	R		L	T		R
Volume (veh/h)	4	133	6		73	151		32
Peak-Hour Factor, PHF		1.00	1.00	2	1.00	1.00	4810	1.00
Hourly Flow Rate, HFR (veh/h)	4	133	6		73	151		32
Percent Heavy Vehicle	s 4				4			
Median Type				Undivid	led			
RT Channelized			. 0					0
Lanes	1	1	0		1	1		0
Configuration	L		TR		L			TR
Upstream Signal		0				0		
Minor Street		Northbound				Southbo	und	
Movement	7	8	9		10	11		12
	L	Т	R		L	Т		R
Volume (veh/h)	1	0	47		16	3		3
Peak-Hour Factor, PHF		1.00	1.00	)	1.00	1.00		1.00
Hourly Flow Rate, HFR (veh/h)	1	0	47		16	3		3
Percent Heavy Vehicles	s <b>4</b>	4	4		4	4		4
Percent Grade (%)		0				0		
Flared Approach		N				N		
Storage		0				0		
RT Channelized			0					0
Lanes	0	1	0		0	1		0
Configuration		LTR				LTR		
Delay, Queue Length,	and Level of S	ervice					70 N. S. S. S.	
Approach	Eastbound	Westbound		Vorthbou	nd	S	outhboun	d
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L		LTR			LTR	
v (veh/h)	4	73		48			22	
C (m) (veh/h)	1380	1432		891			482	
v/c	0.00	0.05		0.05			0.05	
95% queue length	0.01	0.16		0.17			0.14	
Control Delay (s/veh)	7.6	7.6		9.3			12.8	
LOS	Α	A		A			В	
Approach Delay (s/veh)				9.3			12.8	
Approach LOS				Α			В	
					·····			

Generated: 2/23/2011 11:31 AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE:

JAN. 11, 2011

TIME PERIOD:

A.M. PEAK HOUR

N/S STREET: E/W STREET: ALAMEDA AVENUE

**CATHEDRAL OAKS ROAD** 

CONTROL TYPE:

SIGNAL

					T	RAFFIC	VOLU	ME SU	MMARY	•			
		NOR	TH BC	DUND	SOL	ЈТН ВО	UND	EAS	T BOU	ND	WE	ST BOUNI	)
VO	LUMES	L	T	R	L	T	R	L	T	R	L	T	R
(A)	EXISTING:	64	0	243	0	0	0	0	384	122	196	170	0
(B)	PROJECT-ADDED	. 0	0	0	0	0	0	0	31	0	0	10	0
(C)	CUMULATIVE	74	0	310	0	0	0	0	384	130	208	170	0

# **GEOMETRICS**

LANE GEOMETRICS

NORTH BOUND L R

SOUTH BOUND

**EAST BOUND** 

**WEST BOUND** 

T R

LT

REF: 04AM

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)

				LEVE	L OF SE	RVICE CALCULATION	NS .					
MOVE-	# OF			SCE	NARIO V	/OLUMES	_		SCENARIO '	V/C RATIOS		
MENTS	LANES	CAPACITY	1 1	2	3	4	11	2	3	4		
NBL	1 1	1600	64	64	74	74	0.040 *	0.040 *	0.046 *	0.046 *	ļ	
NBT	0	0	0	0	0	0	-	-	-	-		
NBR (a)	1	1600	185	185	236	236	0.116	0.116	0.148	0.148		
SBL	0	0	0	0	0	0	-	-	_	_		
SBT	0	0	0	0	0	0	-	-	-	-		1
SBR	0	0	0	0	0	0	-	•	-	-		
EBL	0	0	0	0	0	0	-	-	-	-		
EBT	1 1	1600	384	415	384	415	0.240 *	0.259 *	0.240 *	0.259 *		
EBR (b)	1	1600	82	82	87	87	0.051	0.051	0.054	0.054		
WBL	1	1600	196	196	208	208	0.123 *	0.123 *	0.130 *	0.130 *		
WBT	1	1600	170	180	1 <i>7</i> 0	180	0.106	0.113	0.106	0.113		
WBR	0	0	0	0	0	0	-	-	-	_		
						LOST TIME:	0.100 *	0.100 *	0.100 *	0.100 *		
		то				CITY UTILIZATION:	0.503 A	0.522 A	0.516 A	0.535 A		

**NOTES:** 

RTOR: (a) 24% - RT NOT CRITICAL DUE TO RIGHT-TURN OVERLAP

(b) 33%

Printed: 02/23/11

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE:

JAN. 11, 2011

TIME PERIOD:

P.M. PEAK HOUR

N/S STREET:

ALAMEDA AVENUE

E/W STREET:

CATHEDRAL OAKS ROAD

CONTROL TYPE:

SIGNAL

				T	RAFFIC	VOLU!	ME SU	MMARY				
	NOR	TH BO	UND	SOL	JTH BO	UND	EAS	T BOUN	۸D	W	ST BOUNE	)
VOLUMES	L	T	R	L	T	R	L	T	R	L	T	R
(A) EXISTING:	26	0	68	0	0	0	0	175	10	86	283	0
(B) PROJECT-ADDED	0	0	0	0	0	0	0	20	0	0	35	0
(C) CUMULATIVE	26	0	71	0	0	0	0	175	11	111	284	0

# **GEOMETRICS**

LANE GEOMETRICS

NORTH BOUND

**SOUTH BOUND** 

**EAST BOUND** 

**WEST BOUND** 

L R

TR

LT

REF: 04PM

# 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)

				LEVE	L OF SE	RVICE CALCUL	ATION	NS .				
MOVE-	#OF			SCE	NARIO '	VOLUMES		_		SCENARIO '	V/C RATIOS	
MENTS	LANES	CAPACITY	1	2	3	4		1	2	3	4	
NBL	1	1600	26	26	26	26		0.016 *	0.016 *	0.016 *	0.016 *	
NBT	0	0	0	0	0	0		-	-	-	-	
NBR (a)	1	1600	20	20	21	21		0.013	0.013	0.013	0.013	
SBL		0	0	0	0	0		_	_			
SBT		0	ő	0	0	0		_	[	_	_	
SBR	0	0	ő	ō	0	ō		-	-	-	-	
EBL	0	0	0	0	0	0		-	-	-	-	
EBT	1	1600	175	195	1 <i>7</i> 5	195		0.109	0.122	0.109	0.122	
EBR (b)	1 1	1600	10	10	11	11		0.006	0.006	0.007	0.007	
WBL	1	1600	86	86	111	111		0.054	0.054	0.069	0.069	
WBT	1	1600	283	318	284	319		0.177 *	0.199 *	0.178 *	0.199 *	
WBR	0	0	0	0	0	0		-	-	-	-	
						LOST TIME:		0.100 *	0.100 *	0.100 *	0.100 *	
		то1				CITY UTILIZATION	N:	0.293 A	0.315 A	0.294 A	0.315 A	
NOTES:	The Control of the Co		na nyaéta diritahana	***************************************			i kiriwa kwa marana a	The state of the s	Manager Manager Company	1975 C. C. C. C. C. C. C. C. C. C. C. C. C.		construction of the

RTOR: (a) 71%

(b) 0%

Printed: 02/23/11

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE:

OCT. 10, 2009

TIME PERIOD:

A.M. PEAK HOUR

N/S STREET: E/W STREET: **GLEN ANNIE ROAD CATHEDRAL OAKS ROAD** 

CONTROL TYPE:

SIGNAL

	TRAFFIC VOLUME SUMMARY											
NORTH BOUND SOUTH BOUND EAST BOUND WEST BOUND												
VOLUMES	L	Т	R	L	T	R	L L	Ţ	R	L	T	R
(A) EXISTING:	295	30	100	9	18	2	6	427	349	55	355	13
(B) PROJECT-ADDED	9	0	0	0	0	0	0	4	27	0	1	0
(C) CUMULATIVE	290	41	100	14	29	2	10	435	343	<b>79</b>	355	31

**GEOMETRICS** 

LANE GEOMETRICS

NORTH BOUND L TR

SOUTH BOUND L TR

**EAST BOUND** L TR

**WEST BOUND** L TR

REF: 05AM

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)

				LEVE	OF SE	RVICE CALCULATIO	ONS				
MOVE-	# OF			SCE	NARIO \	/OLUMES			SCENARIO Y	V/C RATIOS	
MENTS	LANES	CAPACITY	1	2	3	4	1	2	3	4	
NBL	1 1	1600	295	304	290	299	0.184 *	0.190 *	0.181 *	0.187 *	
NBT	1 1	1600	30	30	41	41	0.054	0.054	0.061	0.061	
NBR (a)	0	0	56	56	56	56	-	-	-	-	
SBL	1	1600	9	9	14	14	0.006	0.006	0.009	0.009	
SBT	1	1600	18	18	29	29	0.012 *	0.012 *	0.019 *	0.019 *	
SBR (b)	0	0	1	1	1	1	-	-	-	-	
EBL.	1 1	1600	6	6	10	10	0.004	0.004	0.006	0.006	
EBT	1 1	1600	427	431	435	439	0.419 *	0.434 *	0.422 *	0.436 *	
EBR (c)	0	0	244	263	240	259	-	-	-	-	
WBL	1	1600	55	55	79	79	0.034 *	0.034 *	0.049 *	0.049 *	
WBT	1 1	1600	355	356	355	356	0.228	0.228	0.235	0.236	
WBR (d)	0	0 -	9	9	21	21	-	-	-	-	
						LOST TIME:	0.100 *	0.100 *	0.100 *	0.100 *	
		T				CITY UTILIZATION:	0.749 C	0.770 C	<b>0</b> .771 C	<b>0.791</b> C	
NOTES:	one services of the second services	- no seem of the control of the state of the seems of the			TAXABLE PARTER OF	attended to the second of the	A A Service and an Arisban				1.W.2004 15.71

NOTES:

RTOR: (a) 44%

(b) 50%

(c) 30%

(d) 31%

Printed: 02/16/11

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE:

OCT. 10, 2009

TIME PERIOD:

P.M. PEAK HOUR

N/S STREET:

**GLEN ANNIE ROAD** 

E/W STREET:

CATHEDRAL OAK\$ ROAD

CONTROL TYPE:

SIGNAL

	TRAFFIC VOLUME SUMMARY												
	NOR	TH BO	UND	SOU	ТН ВО	UND	EAS	T BOU	ND	WI	ST BOUN	)	
VOLUMES	L	T	R	L	T	R	L	T	R	L	T	R	
(A) EXISTING:	282	24	88	8	26	4	3	216	156	84	222	16	
(B) PROJECT-ADDED	31	0	1	0	0	0	0	2	18	3	4	0	
(C) CUMULATIVE	266	41	113	15	31	18	3	215	146	84	220	26	

**GEOMETRICS EAST BOUND** SOUTH BOUND WEST BOUND

LANE GEOMETRICS

NORTH BOUND L TR

L TR

L TR

REF: 05PM

L 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)

MOVE-	# OF			SCE	NARIO V	OLUMES	_		SCENARIO Y	V/C RATIOS	
MENTS	LANES	CAPACITY	11	2	3	4	1	2	3	4	
NBL	1	1600	282	313	266	297	0.176 *	0.196 *	0.166 *	0.186 *	
NBT	1 1	1600	24	24	41	41	0.048	0.048	0.068	0.068	
NBR (a)	0	0	53	53	68	68	-	-	-	-	
SBL	1	1600	8	8	15	15	0.005	0.005	0.009	0.009	
SBT	1	1600	26	26	31	31	0.017 *	0.017 *	0.023 *	0.023 *	
SBR (b)	0	0	1	1	5	5 .	-	-	-	-	
EBL	1	1600	3	3	3	3	0.002	0.002	0.002	0.002	
EBT	1	1600	216	218	215	217	0.201 *	0.209 *	0.196 *	0.204 *	
EBR (c)	0	0	105	11 <i>7</i>	98	110	-	-	-	-	
WBL	1	1600	84	87	84	87	0.053 *	0.054 *	0.053 *	0.054 *	
WBT	1	1600	222	226	220	224	0.145	0.148	0.148	0.150	1
WBR (d)	0	0	10	10	16	16	-	-	-	-	
						LOST TIME:	0.100 *	0.100 *	0.100 *	0.100 *	
			TOTAL INTER	SECTION	N CAPAC	TITY UTILIZATION:	0.547	0.576	0.538	0.567	
				SCENAR	IO LEVEI	. OF SERVICE:	A	Α	Α	A	

**NOTES:** 

RTOR: (a) 40%

(b) 75%

(c) 33%

(d) 38%

02/16/11 Printed:

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE:

**NOVEMBER 3, 2009** 

TIME PERIOD:

A.M. PEAK HOUR

N/S STREET:

GLEN ANNIE ROAD

U.S. 101 NB RAMPS-CALLE REAL

E/W STREET: CONTROL TYPE:

SIGNAL

				Ţ	RAFFIC	VOLU	ME SU!	MARY	Y				_
	NOR	ND	WE	ST BOUN	D	_							
VOLUMES	L	T	R	L	T	R	L	T	R	L	Т	R	
(A) EXISTING:	15 <i>7</i>	160	23	9	568	6	43	4	728	602	392	236	
(B) PROJECT-ADDED	0	4	0	0	27	0	0	0	0	0	0	5	
(C) CUMULATIVE	159	161	51	59	554	6	43	4	728	738	426	242	

SPLIT PHASED

GEOMETRICS

NORTH BOUND SOUTH BOUND EAST BOUND WEST BOUND

LANE GEOMETRICS LL T TR L TR L LT 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)

				LEVE	L OF SE	RVICE CALCULATIO	NS				
MOVE-	# OF		_	SCE	NARIO V	/OLUMES			SCENARIO 1	V/C RATIOS	
MENTS	LANES	CAPACITY	1	2	3	4	1	2	3	4	
NBL	2	3200	157	157	159	159	0.049 *	0.049 *	0.050 *	0.050 *	
NBT	2	3200	160	164	161	165	0.053	0.054	0.057	0.058	
NBR (a)	0	0	9	9	20	20	-	-	-	-	
SBL	1 1	1600	9	9	59	59	0.006	0.006	0.037	0.037	
SBT	2	3200	568	595	554	581	0.179 *	0.187 *	0.174 *	0.183 *	
SBR (b)	0	0	4	4	4	4	-	-	-	-	
EBL.	1	1600	43	43	43	43	0.027	0.027	0.027	0.027	
EBT	2	3200	4	4	4	4	0.145 *	0.145 *	0.145 *	0.145 *	
EBR (c)	0	0	459	459	459	459	•	-		-	
WBL	0	0	602	602	738	738	-	-	-	-	
WBT	3	4800	392	392	426	426	0.236 *	0.237 *	0.272 *	0.273 *	
WBR (d)	0	0	139	142	143	146	-	-	-	-	
						LOST TIME:	0.100 *	0.100 *	0.100 *	0.100 *	
		тот				ITY UTILIZATION: OF SERVICE:	0.709 C	<b>0.</b> 718 C	0.741 C	<b>0.751</b> C	
NOTES:	and the state of t		• *** • ***	as for a long govern		1,5 (10.1 )	on the other continues of the continues		it was a sed combinately seen as a series		The second secon

RTOR: (a) 61%

(b) 33% (c) 37%

(d) 41%

Printed: 02/16/11

REF: 06AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE:

**NOVEMBER 3, 2009** 

TIME PERIOD:

P.M. PEAK HOUR

N/S STREET:

GLEN ANNIE ROAD

E/W STREET:

U.S. 101 NB RAMPS-CALLE REAL

CONTROL TYPE: SIGNAL

**SPLIT PHASED** 

					TR	AFFIC V	OLUM	E SUM	MARY				
		NOF	RTH BO	UND	SOL	JTH BO	UND	EAS	T BOU	ND	WE	ST BOUN	D
VOL	JMES	L	T	R	L	Т	R	L	T	R	L	Т	R
(A)	EXISTING:	299	232	160	22	308	12	11	2	331	1021	423	155
(B)	PROJECT-ADDED	0	13	0	0	18	0	0	0	Ó	0	0	18
(C)	CUMULATIVE	289	271	322	24	286	23	37	13	308	1236	485	168
	•												

	GEOMETRICS													
LANE GEOMETRICS	NORTH BOUND LL T TR	SOUTH BOUND L T TR	EAST BOUND L TR R	WEST BOUND L LT 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 SER	RVICE CALCULAT	IONS				
MOVE-	# OF			<u>sc</u>	ENARIÓ	VOLUMES			SCENARIO	V/C RATIOS	
MENTS	LANES	CAPACITY	1	2	3	4	11	2	3	4	
NBL	2	3200	299	299	289	289	0.093 *	0.093 *	0.090 *	0.090 *	
NBT	2	3200	232	245	271	284	0.098	0.103	0.137	0.141	
NBR (a)	0	0	83	83	167	167	-	-	-	-	
SBL.	1	1600	22	22	24	24	0.014	0.014	0.015	0.015	
SBT	2	3200	308	326	286	304	0.099 *	0.105 *	0.095 *	0.101 *	
SBR (b)	0	0	10	10	19	19	-	-	-	-	
EBL.	1	1600	11	11	37	37	0.007	0.007	0.023	0.023	
EBT	2	3200	2	2	13	13	0.076 *	0.076 *	0.074 *	0.074 *	
EBR (c)	0	0	242	242	225	225	-	-	-	-	
WBL	0	0	1021	1021	1236	1236	-	-		-	
WBT	3	4800	423	423	485	485	0.325 *	0.328 *	0.384 *	0.387 *	
WBR (d)	0	0	115	128	124	138	-	-	-	-	
						LOST TIME:	0.100 *	0.100 *	0.100 *	0.100 *	
		1				CITY UTILIZATION:	0.693 B	0.702 B	0.743 C	0.752 C	

RTOR: (a) 48%

(b) 17%

(c) 27%

(d) 26% Printed: 02/16/11

REF: 06PM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE:

**NOVEMBER 3, 2009** 

TIME PERIOD:

A.M. PEAK HOUR

U.S. SB 101 RAMPS

N/S STREET:

STORKE ROAD

E/W STREET: CONTROL TYPE:

SIGNAL

					Т	RAFFIC	VOLU	ME SU	MARY	1				
NORTH BOUND SOUTH BOUND EAST BOUND WEST BOUND														
VO	LUMES	L	Т	R	L	T	R	L	T	R	L	T	R	
(A)	EXISTING:	0	326	811	831	1067	0	15	2	168	0	0	0	
(B)	PROJECT-ADDED	Q.	4	0	16	11	0	0	0	0	0	0	0	
(C)	CUMULATIVE	0	349	1029	914	1106	0	22	3	289	0	0	0	

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

# 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)

				LEVE	L OF SE	RVICE CALCULATIO	NS				
MOVE-	# OF			SCE	NARIO	VOLUMES	_		SCENARIO '	V/C RATIOS	
MENTS	LANES	CAPACITY	1	2	3	4	1	2	3	4	
NBL	0	0	0	0	0	0		_	_	_	
NBT	2	3200	326	330	349	353	0.102	0.103	0.109	0.110	
NBR (a)	1	1600	633	633	803	803	0.396 *	0.396 *	0.502 *	0.502 *	
SBL	2	3200	831	847	914	930	0.260 *	0.265 *	0.286 *	0.291 *	
SBT	2	3200	1067	1078	1106	1117	0.333	0.337	0.346	0.349	
SBR	0	0	0	0	0	0	-	-	-	-	
EBL	0	0	15	15	22	22	_	-	_	-	_
EBT	1	1600	2	2	3	3	0.011	0.011	0.016	0.016	·
EBR (b)	1	1600	44	44	<i>7</i> 5	75	0.028 *	0.028 *	0.047 *	0.047 *	
WBL	0	0	0	0	0	0		-	-	-	
WBT	0	0	0	0	0	0	-	-	-	-	
WBR	0	0	0	0	0	0	-	-	-	-	
						LOST TIME:	0.100 *	0.100 *	0.100 *	0.100 *	
		тот				CITY UTILIZATION: L OF SERVICE:	0.784	0.789 C	0.935	0.940 E	
NOTES:			Park See some see see see see see see see see see s	JUENAK	IO LEVE	L OF SERVICE:	С	<u></u>	E	E	

RTOR: (a) 22%

(b) 74%

Printed: 02/16/11

REF: 07AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE:

**NOVEMBER 3, 2009** 

TIME PERIOD:

P.M. PEAK HOUR

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

CONTROL TYPE:

SIGNAL

				Т	RAFFIC	VOLU	ME SU	MMAR	<b>Y</b>				
	NO	RTH BO	UND	SOL	JTH BOL	JND	EAS	T BOU	ND	W	ST BOUN	D	
VOLUMES	<u>          L                          </u>	T	R	L	T	R	L	T	R	L	T	R	
(A) EXISTING:	0	678	1070	321	1338	0	13	0	43	0	0	0	
(B) PROJECT-ADDED	0	13	0	11	7	0	0	0	0	0	0	0	
(C) CUMULATIVE	0	849	1310	316	1515	0	32	0	144	0	0	0	

**GEOMETRICS** 

LANE GEOMETRICS

**NORTH BOUND** 

**SOUTH BOUND** 

**EAST BOUND** 

**WEST BOUND** 

REF: 07PM

TT R

LL 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-	# OF			SC	NARIO	VOLUMES			SCENARIO '	V/C RATIOS				
MENTS	LANES	CAPACITY	1	2	3	4	1	2	3	4				
NBL		0	0	0	0	0	-	_	_	_				
NBT	2	3200	678	6 <del>9</del> 1	849	862	0.212	0.216	0.265	0.269	! !	ĺ		
NBR (a)	1 1	1600	877	877	1074	1074	0.548 *	0.548 *	0.671 *	0.671 *				
SBL	2	3200	321	332	316	327	0.100 *	0.104 *	0.099 *	0.102 *				
SBT	2	3200	1338	1345	1515	1522	0.418	0.420	0.473	0.476				
SBR	0	0	0	0	0	0	-	-	-	-		l I		
EBL	0	0	13	13	32	32	-	_	_	_				
EBT	1	1600	0	0	0	0	0.008 *	0.008 *	0.020 *	0.020 *				
EBR (b)	1	1600	10	10	33	33	0.006	0.006	0.021	0.021				
WBL	0	0	0	0	0	0	_	-	-	-				
WBT	0	0	0	0	0	0	-	-	-					
WBR	0	0	0	0	0	0	-	-	-	-				
						LOST TIME:	0.100 *	0.100 *	0.100 *	0.100 *				
		тот				CITY UTILIZATION: L OF SERVICE:	0.756	0.760	0.890	0.893				
NOTES:	er andreas er freihe en andere en en		and a service of the second of	JUENAK	IO LEVE	L OF SERVICE:	С	С	D	D	and and the state of state of the state of the state of			

NOTES:

RTOR: (a) 18%

(b) 77%

Printed: 02/24/11

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE:

**NOVEMBER 3, 2009** 

TIME PERIOD:

A.M. PEAK HOUR

N/S STREET:

STORKE ROAD HOLLISTER AVENUE

E/W STREET: CONTROL TYPE:

SIGNAL

				TI	RAFFIC	VOLU	ME SU	MMARY	,	,			
NORTH BOUND SOUTH BOUND EAST BOUND WEST BOUND													
VOLUMES	L	T	R	<u> </u>	T	R	L	T	R	L	T	R	
(A) EXISTING:	32	498	158	415	490	372	573	395	62	103	131	66	
(B) PROJECT-ADDED	0	2	0	3	5	3	1	0	0	0	0	1	
(C) CUMULATIVE	44	635	234	543	604	502	654	660	70	142	196	88	

#### GEOMETRICS

LANE GEOMETRICS

NORTH BOUND LL TT R SOUTH BOUND LL TT R EAST BOUND LL TT R

WEST BOUND

LL TT R

REF: 08AM

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 SE	RVICE CALCULATIO	)NS					
MOVE-	# OF		_	SCE	NARIO V	VOLUMES			SCENARIO '	V/C RATIOS		
MENTS	LANES	CAPACITY	1	2	3	4	1	2	3	4		
NBL	2	3200	32	32	44	44	0.010	0.010	0.014	0.014		
NBT	2	3200	498	500	635	637	0.156 *	0.156 *	0.198 *	0.199 *		
NBR (a)	1	1600	52	52	77	77	0.033	0.033	0.048	0.048		
SBL	2	3200	415	418	543	54 <b>6</b>	0.130 *	0.131 *	0.170 *	0.171 *		8
SBT	2	3200	490	495	604	609	0.153	0.155	0.189	0.190		
SBR (b)	1	1600	164	165	221	222	0.103	0.103	0.138	0.139		
EBL	2	3200	573	574	654	655	0.179 *	0.179 *	0.204 *	0.205 *		
EBT	2	3200	3 <del>9</del> 5	395	660	660	0.123	0.123	0.206	0.206		
EBR (c)	1	1600	24	24	27	27	0.015	0.015	0.017	0.017		
WBL.	2	3200	103	103	142	142	0.032	0.032	0.044	0.044		
WBT	2	3200	131	131	196	196	0.041 *	0.041 *	0.061 *	0.061 *		
WBR (d)	1	1600	21	21	28	28	0.013	0.013	0.018	0.018		
						LOST TIME:	0.100 *	0.100 *	0.100 *	0.100 *		
		тот				ITY UTILIZATION: OF SERVICE:	0.606 B	0.607 B	0.733 C	<b>0.736</b> C	i	
NOTES	وقوم معورون ما العامر		Esercición de la lación de	a di na di na mana di Nasa di Nasa di Nasa di Nasa di Nasa di Nasa di Nasa di Nasa di Nasa di Nasa di Nasa di N	***************	e a la companya de la companya de la companya de la companya de la companya de la companya de la companya de l	Construction as 1000m.	April 1910 mark the second	na na mana ang Kitika na Palana.	Annual Communication of the Co	and o'dented by a second of the	and the second s

**NOTES:** 

RTOR: (a) 67%

(b) 56% (c) 61%

(d) 68%

Printed: 02/16/11

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE:

**NOVEMBER 3, 2009** 

TIME PERIOD:

P.M. PEAK HOUR

N/S STREET:

STORKE ROAD

E/W STREET: CONTROL TYPE: **HOLLISTER AVENUE** SIGNAL

					T	RAFFIC	VOLU	ME SU	MARY	•			
NORTH BOUND SOUTH BOUND EAST BOUND WEST BOUND													
VO	LUMES	L	T	R	L	T	R	L	T	R	L	T	R
(A)	EXISTING:	76	625	144	139	531	75 <b>9</b>	659	340	58	226	484	464
(B)	PROJECT-ADDED	0	5	0	2	3	2	4	0	0	0	0	4
(C)	CUMULATIVE	147	904	253	196	632	769	704	441	111	570	816	551

		GEOME	FRICS		
	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND	
LANE GEOMETRICS	LL TT R	LL TT R	LL TT R	LL TT 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 SE	RVICE CALCULATIO	NS				 
MOVE-	# OF			SCE	NARIO V	OLUMES			SCENARIO Y	V/C RATIOS	
MENTS	LANES	CAPACITY	1	2	3	4	1	2	3	4	 
NBL	2	3200	76	76	147	147	0.024	0.024	0.046	0.046	
NBT	2	3200	625	630	904	909	0.195 *	0.197 *	0.283 *	0.284 *	
NBR (a)	1	1600	52	52	91	91	0.033	0.033	0.057	0.057	
SBL	2	3200	139	141	196	198	0.043 *	0.044 *	0.061 *	0.062 *	
SBT	2	3200	531	534	632	635	0.166	0.167	0.198	0.198	
SBR (b)	1	1600	311	312	315	316	0.194	0.195	0.197	0.198	
EBL.	2	3200	659	663	704	708	0.206 *	0.207 *	0.220 *	0.221 *	
EBT	2	3200	340	340	441	441	0.106	0.106	0.138	0.138	
EBR (c)	1	1600	20	20	38	38	0.013	0.013	0.024	0.024	
WBL.	2	3200	226	226	570	570	0.071	0.071	0.178	0.178	
WBT	2	3200	484	484	816	816	0.151	0.151	0.255 *	0.255 *	
WBR (d)	1	1600	311	314	369	372	0.194 *	0.196 *	0.231	0.233	
	,					LOST TIME:	0.100 *	0.100 *	0.100 *	0.100 *	
		то				CITY UTILIZATION:	0.738 C	0.744 C	0.919 E	0.922 E	

RTOR: (a) 64%

(b) 59%

(c) 66%

(d) 33%

Printed: 02/16/11

REF: 08PM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE:

TIME PERIOD:

A.M. PEAK HOUR

N/S STREET: E/W STREET: CATHEDRAL OAKS

CALLE REAL

CONTROL TYPE:

SIGNAL

With Modified Cathedral	Oaks-Hollister Avenue Interchange

REF: A\_AM

	TRAFFIC VOLUME SUMMARY													
NORTH BOUND SOUTH BOUND EAST BOUND WEST BOUND														
VOLUMES	L	T	R	<u>     L                               </u>	. T	R	L	Т	R	L	Т	R		
(A) CUMULATIVE:	72	112	80	2	163	42	50	24	96	263	74	2		
(B) PROJECT-ADDEI	0	0	0	0	1	2	0	0	0	0	0	0		

		GEOME	TRICS		
LANE GEOMETRICS	NORTH BOUND L TR	SOUTH BOUND LTR	EAST BOUND LTR	WEST BOUND L TR	

#### TRAFFIC SCENARIOS

SCENARIO 1 = CUMULATIVE VOLUMES (A)

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

				LEVEL	OF SERV	ICE CALCULATION	ONS					
MOVE-	# OF			SCEN	ARIO VO	LUMES			SCENARIO	V/C RATIOS		
MENTS	LANES	CAPACITY	1	2	3	4	1	2	3	4	•	
NBL	1 1	1600	72	72			0.045 *	0.045 *				
NBT	1 1	1600	112	112			0.120	0.120				
NBR (a)	0	0	80	80			-	-				
SBL	0	0	2	2			_	_				
SBT	] 1	1600	163	164			0.129 *	0.131 *				
SBR (b)	0	0	42	44			-	-				
EBL	0	.0	50	50				_				
EBT	1 1	1600	24	24			0.106 *	0.106 *				
EBR (c)	0	0	96	96			-	-				
WBL	1 1	1600	263	263			0.164 *	0.164 *			ļ	
WBT	1 1	1600	74	74			0.048	0.048				
WBR (d)	0	0	2	2			-	-				
						LOST TIME:	0.100 *	0.100 *				
	Y UTILIZATION: F SERVICE:	0.544 A	0.546 A									
NOTES.	and the London Constitutions	And the transfer of the second of the second of the second of the second of the second of the second of the second of	gerlandski kannen er en	Carrier and Control of the Control	THE PERSON NAMED IN COLUMN	en en en en en en en en en en en en en e	t to the control of t	The second reaction and the second second	Parameter and the control of the con	EX THE CASE OF THE PARTY OF THE	Not the second s	TOTAL PROPERTY.

NOTES:

Printed: 02/16/11

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE:

TIME PERIOD:

P.M. PEAK HOUR

N/S STREET:

CATHEDRAL OAKS

E/W STREET:

CALLE REAL

With Modified Cathedral Oaks-Hollister Avenue Interchange

CONTROL TYPE:

SIGNAL

				T	RAFFIC	VOL	UME	SUM	MARY				
	NOR	TH BO	UND	SOU1	TH BO	JND	EAST	BOL	IND	W	EST BOUN	ID	
VOLUMES	L	T	R	L	T	R	L	T	R	L	Т	R	 
(A) CUMULATIVE:	241	91	85	1	91	47	8	9	43	261	91	0	
(B) PROJECT-ADDED	0	2	0	0	1	1	0	0	0	0	0	0	

		GEON	METRICS		
LANE GEOMETRICS	NORTH BOUND L TR	SOUTH BOUND LTR	EAST BOUND LTR	WEST BOUND L TR	

TRAFFIC SCENARIOS

SCENARIO 1 ~ CUMULATIVE VOLUMES (A)

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

	<del></del>			LEVEL	OF SERVICE CALCU	JLATIONS					
MOVE-	# OF			SCENAR	IO VOLUMES			SCENARI	O V/C RATIOS		
MENTS	LANES	CAPACITY	1	2	3 4	1	2	3	4		
NBL.	1	1600	241	241		0.151 *	0.151 *				
NBT	1	1600	91	93		0.110	0.111			1	
NBR (a)	0	0	85	85		-	-				
SBL	0	0	1	1		-	_				
SBT	1	1600	91	92		0.087 *	0.088 *				
SBR (b)	0	0	47	48		-	-				
EBL	0	0	8	8			-		ļ		
EBT	1 1	1600	9	9		0.038 *	0.038 *				
EBR (c)	0	0	43	43		-	-			ĺ	
WBL	1	1600	261	261		0.163 *	0.163 *				
WBT	1	1600	91	91		0.057	0.057				
WBR (d)	0	0	0	0		-	-				
					LOST TIME:	0.100 *	0.100 *				
		TOTAL	LINTERSEC	TION CAI	PACITY UTILIZATION:	0.539	0.540				
			SCEI	NARIO LE	VEL OF SERVICE:	A	A				
NOTES:	and remainded to the second of	The second secon	e manual transportation and the street	teritoria de la como de la como de la como de la como de la como de la como de la como de la como de la como d		i and the second of the second		elektris i territoria engres transcer.	The second secon	i Si i di denti can a consumo e con	eg so e-conserv

NOTES:

Printed: 02/16/11

REF: A\_PM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE:

TIME PERIOD: N/S STREET: A.M. PEAK HOUR

CATHEDRAL OAKS

E/W STREET:

U.S. 101 SB RAMPS

CONTROL TYPE:

SIGNAL

					TR/	AFFIC V	/OLUM	E SUM	MARY					
	NORTH BOUND SOUTH BOUND EAST BOUND									4D	WF	EST BOUNI	D	
VOL	VOLUMES		T.	R	L	T	R	L	T	R	L	T	R	 
(A) (B)	CUMULATIVE: PROJECT-ADDED	0	198 0	197 0	259 1	261 0	0	66 0	1 0	185 0	0	0	0 0	

With Modified Cathedral Oaks-Hollister Avenue Interchange

		GEOMETR	RICS		
	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND	
LANE GEOMETRICS	TR	LT	L TR		

# TRAFFIC SCENARIOS

SCENARIO 1 = CUMULATIVE VOLUMES (A)

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

				LEVEL C	F SERVI	CE CALCULATION	NS					
MOVE-	# OF		_	SCEN	IARIO VO	DLUMES	ě		SCENARIO	V/C RATIOS		
MENTS	LANES	CAPACITY	11	2	3	4	11	2	3	4		
NBL	0	0	0	0								
NBT	1	1600	198	198			0.247 *	0.247 *				
NBR (a)	0	0	197	19 <b>7</b>			-	-		ļ		
SBL	1	1600	259	260			0.162 *	0.163 *				
SBT	1	1600	261	261			0.163	0.163				
SBR (b)	0	0	0	0			-	-				
EBL	1	1600	66	66			0.041	0.041				
EBT	1	1600	1	1			0.116 *	0.116 *		İ		
EBR (c)	0	0	185	185			-	•				
WBL	0	0	0	o			-	-				
WBT	0	0	0	0			-	-				
WBR (d)	0	0	0	0			-	-				
						LOST TIME:	0.100 *	0.100 *				
	TOTAL INTERSECTION CAPACITY UTILIZATION SCENARIO LEVEL OF SERVICE:											

NOTES:

Printed: 02/16/11

REF: B\_AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE:

TIME PERIOD:

P.M. PEAK HOUR

N/S STREET:

**CATHEDRAL OAKS U.S. 101 SB RAMPS** 

E/W STREET: CONTROL TYPE:

SIGNAL

With Modified Cathedral Oaks-Hollister Avenue Interchange

					TR	AFFIC V	OLUM	E SUM	MARY					
		NO	RTH BO	UND	SOL	JTH BO	UND	EAS	T BOU	ND	WEST BOUND			
VOL	JMES	L	<u>T</u>	R	L		R	L	Ţ	R	L	Ţ	R	
(A)	CUMULATIVE:	0	328	263	88	307	0	27	3	92	0	0	0	
(B)	PROJECT-ADDED	0	0	0	1	0	0	2	0	0	0	0	0	

GEOMETRICS **NORTH BOUND** SOUTH BOUND **EAST BOUND WEST BOUND** LANE GEOMETRICS TR LT L TR

TRAFFIC SCENARIOS

SCENARIO 1 - CUMULATIVE VOLUMES (A)

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

					LEVEL O	F SERVI	CE CALCULATION	NS					
MOVE-		# OF			SCEN	ARIO VO	LUMES			SCENARIO	V/C RATIOS		
MENTS		LANES	CAPACITY	11_	2	3	4	1	2	3	4		
NBL		0	0	0	0			_	-		1		
NBT		1	1600	328	328			0.369 *	0.369 *				
NBR	(a)	0	0	263	263			-	-				
SBL SBT		1 1	1600	88	89			0.055 *	0.056 *				
SBR	(b)	0	1600 0	307 0	307 0			0.192	0.192 -				
EBL		1	1600	27	29			0.017	0.018				
EBT		1	1600	3	. 3			0.059 *	0.059 *				
EBR	(c)	0	0	92	92			-	-				
WBL		0	0	0	0			-	-				
WBT		0	0	0	0			-	-				
WBR	(d)	0	0	0	0			-	-				
							LOST TIME:	0.100 *	0.100 *				
			тот	Y UTILIZATION: OF SERVICE:	0.583 A	0.584 A							
NOTES:	Paris de la company	the experience of the second distributions		Die sesso ossernas	an particular de la companya de la c	×10.000.000	and the second of the second o	· How control of the section of the	COLUMN TO THE PARTY OF THE PART	Myselfican's mass-mark	Miles of the Control	a product also also are a library.	Eleganisti maga mengenan

Printed: 02/16/11

REF: B\_PM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

**COUNT DATE:** 

TIME PERIOD:

A.M. PEAK HOUR

HOLLISTER AVENUE

N/S STREET: CATHEDRAL OAKS

E/W STREET: CONTROL TYPE:

SIGNAL

With Modified Cathedral Oaks-Hollister Avenue Interchange

				TR/	AFFIC Y	VOLUM	E SUM	MARY					
	NC	RTH BC	UND	SOU	тн во	UND	EAS	T BOU	ND	WE	ST BOUN	D	
VOLUMES	L	T	R	L	T	R	L	T	R	L	T	R	
(A) CUMULATIVE:	0	0	. 0	388	0	44	19	11	0	0	17	370	
(B) PROJECT-ADDE	0	0	0	0	0	0	0	0	0	0	0	0	

GEOMETRICS

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

TRAFFIC SCENARIOS

SCENARIO 1 = CUMULATIVE VOLUMES (A)

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

					LEVEL C	)F SERVI	CE CALCULATION	IS				
MOVE-		# OF		_	SCEN	ARIO VO	DLUMES	_		SCENARIO '	V/C RATIOS	
MENTS		LANES	CAPACITY	1	2	3	4	1	2	3	4	 
NBL		0	0	0	0			-				
NBT		0	0	0	0			-		ĺ		
NBR	(a)	0	0	0	0			-	-			
SBL		1	1600	388	388			0.243 *	0.243 *			
SBT		0	0	0	0			-	-			
SBR	(b)	1	1600	44	44			0.028	0.028			
EBL		0	0	19	19			-	-			
EBT		1	1600	11	11			0.019	0.019			
EBR	(c)	0	0	0	0			-	-			
WBL		0	0	0	0			-	-			
WBT		1 1	1600	17	17			0.011	0.011			
WBR	(d)	1	1600	370	370			0.231 *	0.231 *			
							LOST TIME:	0.100 *	0.100 *			
			тот				TY UTILIZATION: OF SERVICE:	0.574 A	0.574 A			

NOTES:

Printed: 02/18/11

REF: C\_AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE:

TIME PERIOD:

P.M. PEAK HOUR

With Modified Cathedral Oaks-Hollister Avenue Interchange

N/S STREET:

CATHEDRAL OAKS

E/W STREET:

HOLLISTER AVENUE

CONTROL TYPE:

SIGNAL

				TE	RAFFIC	VOLU	ME SU	MARY	,				_
	NOR	TH BO	UND	SOU	TH BO	UND	EAS	T BOU	۷D	W	ST BOUN	D	
VOLUMES	L	T	R	L	T	R	L	T	R	L	Т	R	
(A) CUMULATIVE:	0	0	0	370	0	16	40	39	0	0	22	536	
(B) PROJECT-ADDED	0	0	0	0	0	0	0	0	0	0	0	0	

		GEOMET	RICS		
LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND L R	EAST BOUND LT	WEST BOUND T R	

#### TRAFFIC SCENARIOS

SCENARIO 1 = CUMULATIVE VOLUMES (A)

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

	7			LEVEL	OF SERV	ICE CALCULATION	ONS					
MOVE-	# OF			SCEN	ARIO VO	LUMES		-	SCENARIO '	V/C RATIOS	}	
MENTS	LANES	CAPACITY	1	2	3	4	1	2	3	4	•	•
NBL	0	0	o	0								
NBT	0	0	0	0			1.	١.				
NBR (a)	0	0	0	0			-	-			İ	
SBL	1 1	1600	3 <i>7</i> 0	370			0.231 *	0.231 *				
SBT	0	0	0	0			-	-				
SBR (b)	1	1600	16	16			0.010	0.010				
EBL	0	o	40	40			_	_				
EBT	1 1	1600	39	39			0.049	0.049			l	
EBR (c)	0	0	0	0			-	-				
WBL	0	0	0	0			_	_			ļ	
WBT	1	1600	22	22			0.014	0.014				
WBR (d)	1	1600	536	536			0.335 *	0.335 *				
						LOST TIME:	0.100 *	0.100 *				
		тота				/ UTILIZATION: F SERVICE:	0.666 B	0.666 B				
NOTES:	Talkantan jaga sadi Villanga		A STATE OF THE STA	er es de esta <u>a p</u> e	e en en en en en en en en en en en en en	Madaman and a sure and a substitution of the sure		Sententina (200 dilikinski mari	nakking dalam siya menjaran kanasaksa s	a to design the second second	an Collection and an except and	nasting plant only

NOTES:

Printed: 02/18/11

REF: C\_PM

**DRIVEWAY LEVEL OF SERVICE CALCULATION WORKSHEETS** 

	TV	O-WAY STO	P CONTR	OL SU	MMARY			
General Informati				nforma				
Analyst	DLD		Inters			CATHE	DRAL OAI	KS/EAST
Agency/Co.	ATE		l			DRIVEV		
Date Performed	2/23/201	11	Jurisd			GOLETA		
Analysis Time Period	AM PEA		Analys	sis Year		CUMUL	ATIVE+PF	ROJECT
Project Description								
East/West Street: CA		S		**********	reet: EAST	DRIVEWA	Υ	
Intersection Orientation			Study	Period (h	rs): 0.25			
Vehicle Volumes a	and Adjustm	ents						
Major Street		Eastbound				Westbo	und	
Movement	111	2	3		4	5		6
	LL	Т	R		L	Т		R
Volume (veh/h)	0	467				172		5
Peak-Hour Factor, PHF		1.00	1.00		1.00	1.00		1.00
Hourly Flow Rate, HFR (veh/h)	0	467	0		0	172		5
Percent Heavy Vehicles	3 0				0			
Median Type				Undivid	led			
RT Channelized			0					0
Lanes	1	1	0		0	1		0
Configuration	L	T				† <u>-</u>		TR
Upstream Signal		0				0		
Minor Street		Northbound				Southbo	ınd	
Movement	7	8	9		10	11	ana	12
	L	Т	R		Ĺ	T		R
Volume (veh/h)		<u> </u>			16	<u> </u>		1
Peak-Hour Factor, PHF	1.00	1.00	1.00		1.00	1.00		1.00
Hourly Flow Rate, HFR (veh/h)	0	0	0		16	0		1
Percent Heavy Vehicles	0	0	0		0	0		0
Percent Grade (%)		0	<u> </u>			0		<u> </u>
Flared Approach		N	1		····	l v		
Storage		0				0		
RT Channelized			0					0
Lanes	0	0	0		0	0		0
Configuration						LR		
Delay, Queue Length, a	and Level of Se	rvice						
Approach	Eastbound	Westbound	N	lorthbour	nd	l s	outhboun	d
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L						LR	
v (veh/h)	0	-					17	
C (m) (veh/h)	1411						455	
v/c	0.00						0.04	-
95% queue length	0.00						0.04	<del> </del>
Control Delay (s/veh)	7.6				<del> </del>			
LOS							13.2	
	<u> </u>						В	
Approach Delay (s/veh)							13.2	
Approach LOS		<u></u>					В	

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	71/	10 144 V 070						
General Informati		NO-WAY STO	at arte year him. Elympan and a second					
			) Site	Inform	lation	OATUE	2044 04	**************************************
Analyst	DLD		Inters	ection		DRIVEV		KS/EAST
Agency/Co.	ATE		Juriso	diction		GOLETA		
Date Performed	2/23/20		1	sis Year	r			ROJECT
Analysis Time Period	PM PEA	4 <i>K</i>						
Project Description	TUEDDAL OAK	<u> </u>	151 11	- " 0				
East/West Street: CA Intersection Orientation		S			treet: EAST	DRIVEWA	Υ	
			Study	Periou (	(hrs): 0.25	************		
Vehicle Volumes a	and Adjustm			1				
Major Street  Movement	1	Eastbound	1 2			Westbo	und	
Movement	L	2 	3 R		4 L	<u>5</u>   T		<u>6</u>
Volume (veh/h)	2	202	<u> </u>		L	271		R 18
Peak-Hour Factor, PHF		1.00	1.00	, +	1.00	1.00		1.00
Hourly Flow Rate, HFR				<del>'</del>	· · · · · · · · · · · · · · · · · · ·			
(veh/h)		202	0		0	271		18
Percent Heavy Vehicles	s 0				0			
Median Type				Undivi	ided			
RT Channelized			0					0
Lanes	1	1	0		0	1		0
Configuration	L	Τ						TR
Upstream Signal		0				0		
Minor Street		Northbound				Southbo	und	
Movement	7	8	9		10	11		12
	L	T	R		L	Т		R
Volume (veh/h)					10			1
Peak-Hour Factor, PHF		1.00	1.00	<u>'</u>	1.00	1.00		1.00
Hourly Flow Rate, HFR (veh/h)	0	O	0		10	0		1
Percent Heavy Vehicles	0	0	0		0	0		0
Percent Grade (%)		0				0		
Flared Approach		N	1			l v	1	
Storage		0				0		
RT Channelized			0					0
Lanes	0	0	0		0	0		0
Configuration			-		U	LR		
Delay, Queue Length,	and Lavel of S	anvice				<u> </u>		
Approach	Eastbound	Westbound	<u> </u>	Northbou	ınd		- د د ها مالاد د	<u> </u>
Movement	1	4	7	8		<del></del>	outhboun	
Lane Configuration	L	7		- 0	9	10	11	12
v (veh/h)	2						LR	·
C (m) (veh/h)	1284						11	
v/c	0.00	<u> </u>					558	
<del></del>							0.02	
95% queue length	0.00						0.06	
Control Delay (s/veh)	7.8						11.6	_
LOS	Α						В	
Approach Delay (s/veh)		. <del></del>					11.6	
Approach LOS							В	

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	TV	O-WAY STOR	CONTR	OL S	UM	MARY				
General Informatio			Site							
Analyst Agency/Co. Date Performed Analysis Time Period	DLD ATE 2/23/201 AM PEA		Inters Jurisd	ection			CATHED DRIVEW GOLETA CUMULA	AY I		
Project Description										
East/West Street: CA? Intersection Orientation		S				et: WEST	DRIVEWA	Υ		
		•	Study	Penoa	(nrs	s): 0.25				
Vehicle Volumes a Major Street	<u>                                     </u>	ents Eastbound			l		Westbou	ınd		
Movement	1	2	3		<del> </del>	4	5	ii iu		6
	<u> </u>	T	Ř			L	Ť			R
Volume (veh/h)	1	452					168			5
Peak-Hour Factor, PHF		1.00	1.00	)		1.00	1.00		1	.00
Hourly Flow Rate, HFR (veh/h)	1	452	0			0	168			5
Percent Heavy Vehicles	5 0					0				
Median Type		<b>1</b>		Undi	vide	d d				
RT Channelized			T 0							0
Lanes	1	1	0			0	1	$\neg \neg$		1
Configuration	L	T					T	<u> </u>		R
Upstream Signal		0					0			
Minor Street		Northbound					Southbou	und		
Movement	7	8	9			10	11			12
	L	Т	R			L	Т			R
Volume (veh/h)						15				2
Peak-Hour Factor, PHF	1.00	1.00	1.00			1.00	1.00		1	.00
Hourly Flow Rate, HFR (veh/h)	О	0	0			15	0			2
Percent Heavy Vehicles	0	0	0			0	0			0
Percent Grade (%)		0					0			
Flared Approach		N					N			
Storage		0					0			
RT Channelized		-	0							0
Lanes	0	0	0			0	0			0
Configuration							LR			
Delay, Queue Length,	and Level of So	ervice								
Approach	Eastbound	Westbound	l	Vorthb	ound		S	outhb	ound	
Movement	1	4	7	8		9	10	1		12
Lane Configuration	L							LF		7
v (veh/h)	1							17	,	
C (m) (veh/h)	1416							48		
v/c	0.00							0.0		
95% queue length	0.00							0.1		
Control Delay (s/veh)	7.5							12.		
LOS	7.5 A							12. B		
Approach Delay (s/veh)			<u></u>					12.8		
			<del></del>				·· · · · · · · · · · · · · · · · · · ·		,	
Approach LOS								В		

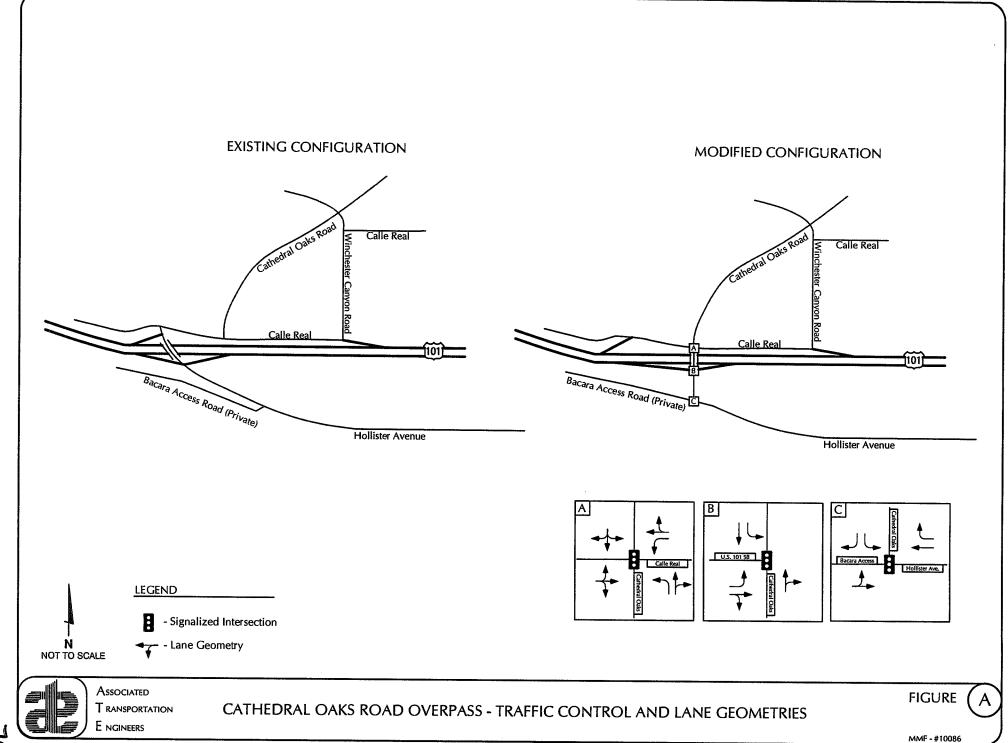
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	VO MAY OTO	200175	201.0				· · · · · · · · · · · · · · · · · · ·
	VO-WAY STOR	Transition would destroy the state of the st			Y		
			2-3-0-10-10-10-10-10-10-10-10-10-10-10-10-1	renem	CATHE	DRAL OA	KSANEST
		Inters	ection				NO/WES I
	4.4	Juriso	diction				
		Analy	sis Yea	ar			ROJECT
PIVI PEA	i^						
ELEDDAL GAL		10.1					
	<u>S</u>					IY .	**********
		Joiddy	renou	(1118). 0.2	3		
					Westho	und	
1		3		4		unu	6
	T						R
2	194			<del>-</del>			17
1.00	1.00	1.00	)	1.00			1.00
2	194	0		0	255		17
0				0			
			Undi	/ided			
		0				ŀ	0
1	1	0		0	1		0
L	Τ						TR
	0				. 0		
	Northbound				Southbo	und	
7	8	9		10	11		12
<u> </u>	Т	R		L	Т		R
				10			1
1.00	1.00	1.00	)	1.00	1.00		1.00
0	0	0		10	0		1
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		0					0
0	0	0		0	0		0
					LR		
ind Level of Se	ervice						
Eastbound	Westbound	1	Vorthbo	ound	8	outhboun	d
1	4	7	8	9	10	11	12
L						LR	
2						11	
1303						576	
0.00						0.02	
0.00						0.06	
7.8						<u> </u>	1
Α						В	
						11.4	
	DLD ATE 2/23/207 PM PEA  THEDRAL OAK East-West  Ind Adjustm  1 L 2 1.00 2 10 11 L 7 L 1.00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	DLD ATE 2/23/2011 PM PEAK  THEDRAL OAKS East-West    Comparison	DLD	DLD	DLD	DLD	DLD

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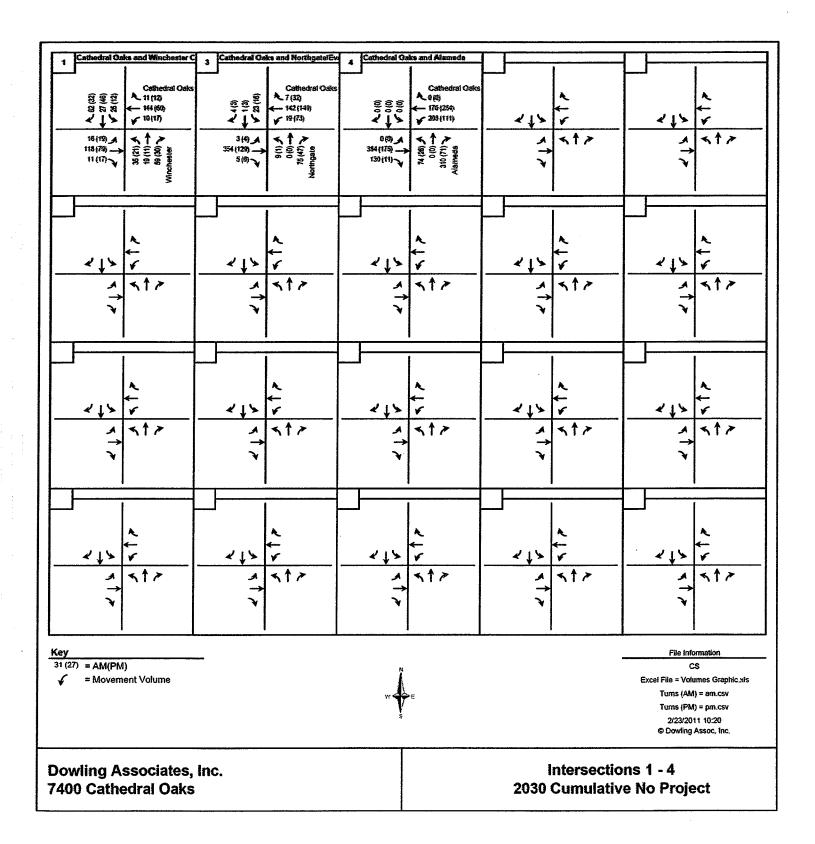
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TDAFFIC						
IKAFFIC	CONTROL	AND LAN	E GEOMETR	IES - CATHE	DRAL OAKS I	NTERCHANGE
TRAFFIC	CONTROL	AND LANI	E GEOMETR	IES - CATHE	DRAL OAKS I	NTERCHANGE
IKAFFIC	CONTROL	AND LANI	E GEOMETR	SIES - CATHE	DRAL OAKS I	NTERCHANGE
IKAFFIC	CONTROL	AND LANI	E GEOMETR	RIES - CATHE	DRAL OAKS I	NTERCHANGE
IKAFFIC	CONTROL	AND LANI	E GEOMETR	RIES - CATHE	DRAL OAKS I	NTERCHANGE
IKAFFIC	CONTROL	AND LANI	E GEOMETR	RIES - CATHE	DRAL OAKS I	NTERCHANGE
IKAFFIC	CONTROL	AND LANI	E GEOMETR	SIES - CATHE	DRAL OAKS I	NTERCHANGE
IKAFFIC	CONTROL				DRAL OAKS I	NTERCHANGE
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IKAFFIC	CONTROL				DRAL OAKS I	NTERCHANGE
IKAFFIC					DRAL OAKS I	NTERCHANGE
					DRAL OAKS I	NTERCHANGE



**CITY OF GOLETA TRAFFIC MODEL FORECASTS** 

Γ				<del></del>			<del></del>	·		
1	Winchester	Canyonius 101 KB (	2 Cathedral C	eks/Calle Real	, US 101 NS	on-rampiCalle Real	4 US 181 HB	M-remp	5 Cathedral O	eksfilS 101 SB Ramp
1 -		1		1	1://	1	1.	1	₩	ı
	=	US 181 NB of	<b>3</b>	Calle Rezi	Ì	Calle Real		1 0	-	US 101 SB Remps
	4 1 % (20) (20) (20) (20)	A 119 (200)	7 to (5)	£2(0)	888		7 1:8 (174) V 0 (9) V 0 (9)	3 b	7 7 7 7 7 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2	A_9(0)
	525	233 (265)	3 4 2	74(91)	200	<b>←</b> 53 (221)	112	<b>←</b> - 0 (0)	5 8 8	4
11_	<u> </u>		- 4 >		1 2 1 2	¥ 108 (155)	1 4 1 3	F 0 (0)	417	
11	60 (64) A		50 (B) A	72 (241) A 112 (30) 4 80 (88) V Calhedral	A 100 0	**************************************	A (0)0	<b>★↑</b> ≯	55 (28) 3	0 (0) \$
11	6 (6) -A	a (t) a (t) a (t) Whichester inyon Rosu	24 (5)	72 (241) 7 112 (30) 112 86 (88) 12 Uhedral		\$ 55 5 5 E	( 901	<b>★↑</b> <b>\$88\$</b>	165 (92)	0 (0) A 196 (320) — 197 (233) — Catheoral Caste
	a son A	5 5	To Start A	15 E B E O	10 (12)	N S	2(6)-8	Z z	icofact.	3 7 4 5
		a (4) a (4) b (5) Whichester	1	6	1	2		0(0) 0(0) 0 (0) 0 (0) 0 (0) 0 (0) 0 (0)		Ū
	**************************************		<u> </u>	1	1	1 5	1		7	
1	Tronster Ave	Bacere Access/Cath	7 Hollister Ave	#Storke	8 Glen Anniel	Cathedraf Oaks	9 Glen Annian	IS 101 NO Remps/Co	10 Stonesus 11	H SS Ramps
	3	1		1	<b>-</b>		<b> </b>	US 101 HB		US 101 SB
	~ §	Hollister Ave	ខ្នួន	Hollister Ave	1	Cathedral Osio	<b>8</b> _	Ramps	↑ 0(9) ↑ 1112 (1810) ↑ 823 (322)	Ramps
	\	< 21 (25)	√ T % 65 (83) (85) (83)	<b>♣</b> 86 (553) ←— 195 (815)	7 7 2 (18) X X X X X X X X X X X X X X X X X X X	1 (26) 4 — 355 (222)	(52) 6(23) V e(23)	₹ 245 (179) ←— 426 (465)	525	~ 0 (0) ← - 0 (0)
	215	€ 6603	715	€ 146 (966)	715	£ 73 (84)	ے آٹر ا	€ 737 (1235)	218	¥ 0(0)
-				<del> </del>	<del>-</del>	1		, .	<del></del>	
1	25 (57) 🖈	1517	85S (708) A	312	10 (3) _A	1577	43 (37) _A	1417	22(32) 🖈	1517
	13 (45)) 0 (8) -√	A P E S S S S S S S S S S S S S S S S S S	581 (441)> 70 (111)	28 (28) × 1 × 1 × 1 × 1 × 1 × 1 × 1 × 1 × 1 ×	437 (216)) 359 (156)	285 (284) A 41 (41)	4 (13)> 728 (305)>	158 (259) \$-1 163 (279) \$-1 10 Amele 7.0	3(0)> 209 (144) ->	0 (0) A 361 (856) + 1026 (1309) A Storike Rd
	-13 4	<b>1</b>	1041113	<b>₹88</b> ₹		8 + 8 K	120001.2	8825	min. A	# 8 #
Ì		"	1		I	ð	•	159 (289) A 163 (277) — 51 (222) A Gen Annie Rd		¥ &
$\vdash$	Calle Realist	Iwood Station	Los Carnema	RJS 101 NB Ramps	I os Cornero	US 101 SB Ramps	Hegitistas A	Marketplace Dr	Hollister Ave	Codona Dr
11		1	12 LUS CALINATOR	f	13 205 CM MATE	i	14 HOLISTER AVE	WIED KENDINGS DI	15 HOUSEN AVE	CONTONIO
Г				US 101 NB		US 161 SB				] [
	e 2	Calle Resi 44 (125)	£ 8	Ramps 4_62 (58)	2 3	Ramps < 0 (0)	S = \$	Hollister Ave	8	Hollister Ave 19 (34)
	\$ 5 5 E	← 12J (258)	E 2 2 2	< 5(1)	28 E	← 6 (0)	252	< 433 (887)	(E) (E) (E) (E) (E) (E) (E) (E) (E) (E)	← 355 (1629)
1	↑ 45(35) ↑ 0(3) ✔ 181(71)		↑ in (in) ↑ in (in) ↑ o(i)	962 (540)	↑000 1337 (259) √111 (59)	P 0 (0)	\ \ 3 (123) ( 17 (24) √ 20 (185)	74 (298)	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	¥ 0(0)
	<u>Y</u>	Station Rd		- A -						4
	49 (46) 📣 341 (196)>	25520	0 (O) 0 ←— (O) 0	86 (222) ★ 390 (616) ↓ 0 (6) ↓ Samoros Rd	235 (129)	212	113 (37) _A	S(80) S 17(80) ↓ 17(80) ↓ 17(80) ↓ 18(80) ↓	284 (80) _A 1137 (582)>	
1	241 [190]	22286	0 (0) -84	25 5 5 5 E	6 (0)> 321 (44) ->	2 8 5 8 g m	983 (677) →> 53 (54) →	20 (2) (2) (3) (4) (4) (4) (4) (4) (4) (4) (4) (4) (4	1131 (005)	2225
	4	E 漢	4			211 (80.6) → 211 (80.6) → 5.37 (13.5) √ Cameroe Rd	-,-4	20 (80) 17 (39) 62 (427) Marketplace	• • •	Corons Dr
1		"		5		5		₹		9
<del> </del>	Los Carneros	Calle Koral	Los Carneros		ILos Cameros	Hollister Ave	1. Storke/Market	nisce Dr		
16			17 Lus Carrieros		18 Cos Carrieros		19 Stortenmarke			
	€_	Calle Korai	_	Castillen Dr		Uniform Aven				1
1	.90 (74) 1222 (714) 345 (154)	A 178 (444)	22	₹ 8(8)	↑ 228 (140) ← 322 (576) ▼ 28 (84)	Hollister Ave	8 6 6	Marketplace \$ (70)		N.
1	8 2 8	< 10 (42)	8 8 2	<b>← 0 (0)</b>	888	<b>← 346 (593)</b>	882	< 7 (43)		<b>←</b>
	گ <sub>ا</sub> بھ	¥° 41 (15)	A 622 (76) ★ 63 (636) ★ 13 (6)	¥ 8 (40)	412	¥ 68 (12Z)	↑ 228 (380) ↑ 658 (975) ↑ 19 (53)	¥ 11 (75)	4 1 's	8
1	74 (90)	× 1 2	53 (541) 🔥	× 1 2	180 (330) 🙏	< f >	215 (222)	<b>«</b> † »		417
l	42 (181	38938	6 (0)	86858	305 (503)	22222	200	金金安里	A 	1.17
1	50 (48)	49 (1632) 1 19 (1632) 1 19 (1632) 1 19 (173)	64 (131)	114 (100) A 477 (937) — 38 (60) A Los Cannaros Rd	342 (129)	56 (376) → 362 (722) → 51 (99) → Cemeros Rd	43 (84)	40 (1881) A 500 (087) 4 1653) 4 Storks Rd		1
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ON 7400 CATHEDRAL DAILS ROAD SITE





# ASSOCIATED TRANSPORTATION ENGINEERS

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

Richard L. Pool, P.E. Scott A. Schell, AICP, PTP

February 15, 2011

#### **MEMORANDUM**

To:

Steve Wagner, Jim Biega, Marti Schultz

City of Goleta

From:

Matthew Farrington

Associated Transportation Engineers

Subject:

7400 Cathedral Oaks Road Project - Adjusted Cumulative Volumes

The following memo reviews the methodologies that will be used to adjust the cumulative volumes for the traffic study being prepared for the 7400 Cathedral Oaks Road Project. The adjusted volumes reflect the changes in the project descriptions between the cumulative project list prepared in September 2010 and the current list developed in February 2011 for the Village at Los Carneros Project, the Goleta Marriott Inn Project, and the Camino Real Hotel Project. The change in trip generation and the distribution model for each project is outlined below.

## **Village at Los Carneros Project**

The February 2011 cumulative list shows the project to include 465 total residential units, which is an increase of 37 units when compared to the list prepared in September 2010. Based on the current project description, provided by Alan Hanson at the City of Goleta, the change in units is based on an increase in the number of condominium units. Table 1 presents the change in trip generation for the Village at Los Carneros Project.

Table 1
Trip Generation Comparison - Village at Los Carneros Project

_	<b></b>	A	<b>.DT</b>	A.M. Pe	ak Hour	P.M. Pe	ak Hour
Scenario	Size	Rate	Trips	Rate	Trips	Rate	Trips
September 2010	228 Units (a)	5.81	1,325	0.44	100	0.52	119
February 2011	265 Units (a)	5.81	1,540	0.44	117	0.52	138

<sup>(</sup>a) Unit change in Condominium/Town home component of Project.

The data presented in Table 1 indicate that the project is forecast to generate a net increase in 215 average daily trips, 17 A.M. peak hour trips, and 19 P.M. peak hour trips. The net trips will be assigned to the study street network based on the distribution pattern previously developed for the project EIR<sup>1</sup>, which is shown on Figure 1 (attached).

#### **Goleta Marriott Project**

The February 2011 cumulative list shows the project to include 118 hotel rooms, which is a decrease of 15 rooms when compared to the list prepared in September 2010. Table 2 presents the change in trip generation for the Goleta Marriott Project.

Table 2
Trip Generation Comparison - Goleta Marriott Project

		ADT		A.M. Peak Hour		P.M. Peak Hour	
Scenario	Size	Rate	Trips	Rate	Trips	Rate	Trips
September 2010	133 Rooms	8.17	1,08 <i>7</i>	0.56	74	0.59	<i>7</i> 8
February 2011	118 Rooms	8.17	964	0.56	66	0.59	70
Net Change	-15 Rooms		-123		-8		-8

The data presented in Table 2 indicate that the project is forecast to generate a net decrease of 123 average daily trips, 8 A.M. peak hour trips, and 8 P.M. peak hour trips. The net decrease in trips will be assigned to the study street network based on the distribution pattern developed for the project MND <sup>2</sup>, which is shown on Figure 2 (attached).

<sup>&</sup>lt;sup>1</sup> The Village at Los Carneros - Proposed Final EIR, Envicom Corporation, November 2007.

<sup>&</sup>lt;sup>2</sup> Marriott Residence Inn and Hollister Business Center - Final MND, City of Goleta, 2008.

## **Camino Real Hotel Project**

The February 2011 cumulative list shows the project to include 106 hotel rooms, which is an increase of 7 rooms when compared to the list prepared in September 2010. Table 3 presents the change in trip generation for the Goleta Marriott Project.

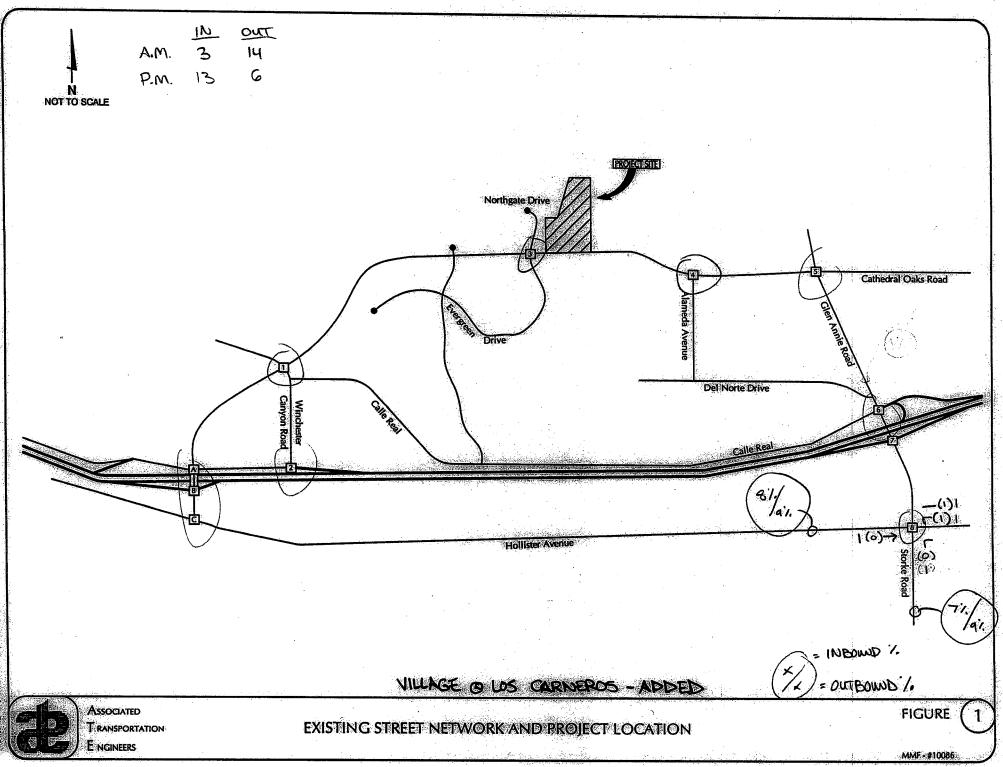
Table 3
Trip Generation Comparison - Camino Real Hotel Project

Scenario	Size	A	DΤ	A.M. Pe	ak Hour	P.M. P	eak Hour
Scenario	SIZE	Rate	Trips	Rate	Trips	Rate	Trips
September 2010	99 Rooms	8.17	809	0.56	55	0.59	58
February 2011	106 Rooms	<b>8.</b> 1 <i>7</i>	866	0.56	59	0.59	63
Net Change	+7 Rooms		+57	and a section of the	+4		+5

The data presented in Table 3 indicate that the project is forecast to generate a net increase of 57 average daily trips, 4 A.M. peak hour trips, and 5 P.M. peak hour trips. The net new trips will be assigned to the study street network based on the distribution pattern contained in the traffic study prepared for the project<sup>3</sup>, as shown on Figure 3 (attached).

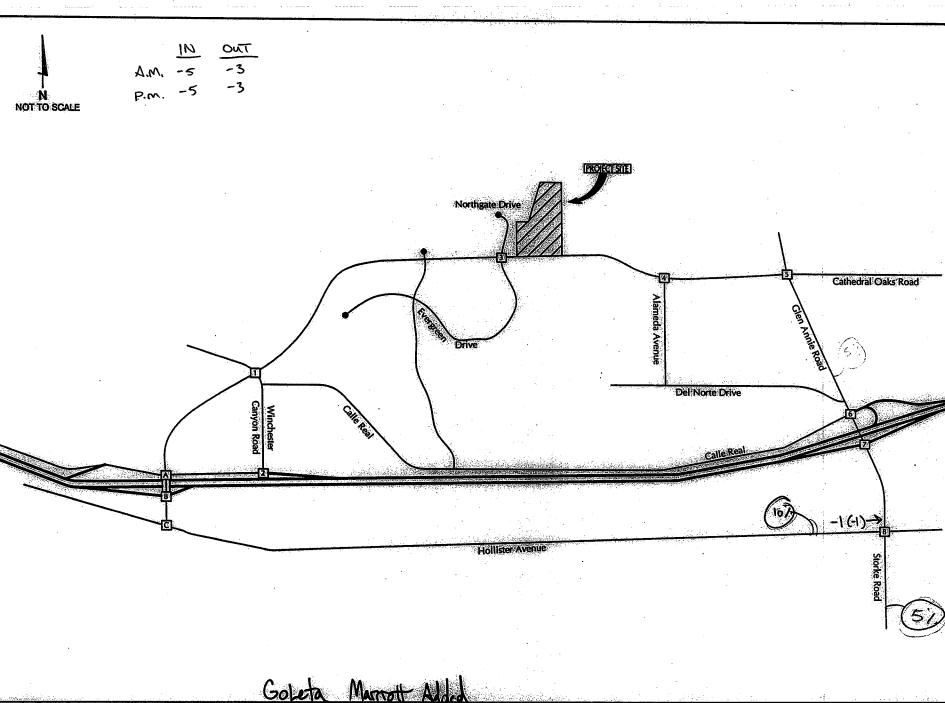
<sup>&</sup>lt;sup>3</sup> Camino Real Hotel Project - Revised Traffic, Circulation, and Parking Study, ATE, January 31, 2008.





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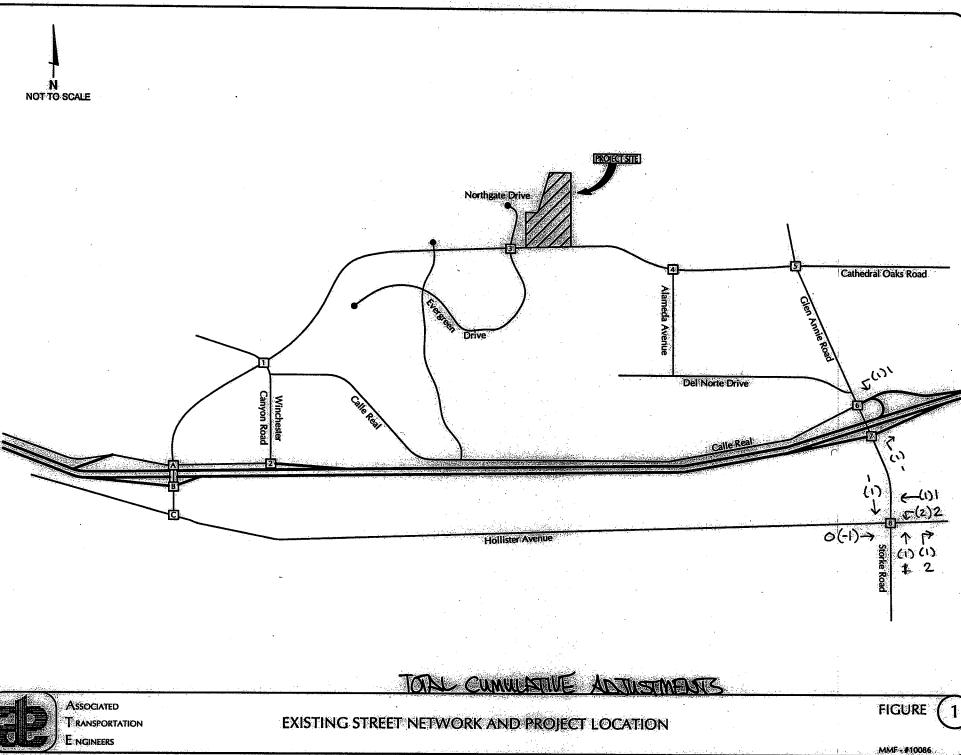
Associated
Transportation
Engineers

EXISTING STREET NETWORK AND PROJECT LOCATION

FIGURE (

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CITY OF GOLETA CUMULATIVE PROJECT LIST

# CITY OF GOLETA PLANNING AND ENVIRONMENTAL SERVICES CUMULATIVE DEVELOPMENT PROJECTS LIST

(MAJOR PROJECTS) FEBRUARY 2011

PLANNER	PROJECT	LOCATION	APN	DESCRIPTION	STATUS
		; Pi		OJECTS	
Hanson (OT)	Fairview Commercial Center; 01-SB-DP; CUP	151 S. Fairview Avenue	073-080-019	16,885 SF mixed use building (9,250 SF retail space, 6,110 SF office space) 2 units	Pending
Kolwitz	Islamic Society of Santa Barbara 03-051-DP; CUP	NEC Los Carneros and Calle Real	077-160-035	6,183 SF building for Islamic Center 1 caretaker unit	Pending
Hanson (OT)	Meyer-Thrifty 64-SB-DP	5971 Placencia Street	071-182-007	1,682 SF car rental agency office	Pending
Kolwitz	Taylor Parcel Map 03-053-PM	590 N. Kellogg Avenue	069-100-003	3 new parcels	Pending
Dudek	Bacara Completion Phase 05-034-GP, -DP, - TM	8301 Hollister Avenue	079-200-013	189,217 SF (55 suites)	Pending
Hanson	Rancho Mobile Home Park Subdivision (Guggenheim) 05-140-TM	7465 Hollister Avenue	079-210-058	Subdivision of a 17.84 acre rental mobile home park property (150 existing mobile homes).	Pending - California Coastal Commission

PLANNER	PROJECT	LOCATION	APN	DESCRIPTION	STATUS
Kolwitz	Sturgeon Building 06-180-DP	SEC Los Carneros and Calle Real	077-160-040	6,046 SF retail/medical office	Pending
Hanson	Mariposa at Ellwood Shores 07-217-DP et al	7760 Hollister Avenue	079-210-057	70,510 SF assisted living facility (99 residents)	Pending
Vik (OT)	Schwan Self Storage 07-229-DP	10 S. Kellogg Avenue	071-090-082	111,730 SF self-storage facility	Pending
Hanson	Shelby Trust 05-154-GP, -RZ et al	7400 Cathedral Oaks Road	077-530-019	60 residential units	Pending
Hanson (OT – East Wing)	Jordano's Master Plan 08-109-GPA, RZN, OA, LLA, FDP	5305 and 5324 Ekwill/550 S Patterson	065-090-029, -034, -036	Existing Jordano's facility, plus:  52,080 SF warehouse net new 4,640 SF office net new 1,600 SF new truck wash area	Pending
Campbell	Willow Springs II 08-128-GPA, -SPA, -VTM, -DP, -CUP, -Lot Merger, -DRB	Camino Vista e/o Los Carneros Road	073-060-044, -045, -046, -047, -048	100 residential units	Pending
Hanson	Village at Los Carneros I and II 10-044-GPA,-VTM, -DP, -DRB; 10-043	Adj. to 71 South Los Carneros Road	073-330-024, -026, -027, -028, -029	465 residential units	Pending
Kolwitz Ling	Westar 08-143-GPA et al	Hollister Avenue n/w of Glen Annie Road	073-030-020 073-030-021	279 residential units 90,054 SF retail	Pending
Ling Saley	Montecito Bank and Trust 08-196-GPA, -RZ, - LLA, -DP	6900 Hollister Avenue	073-140-006	3,713 SF bank w/drive-up window 2,176 SF office	Pending

PLANNER	PROJECT	LOCATION	APN	DESCRIPTION	STATUS
Campbell (OT – West Wing)	Marriott Residence Inn 09-075-TPM, -DP; 09-079-DP AM	6300 Hollister Avenue	073-050-020	80,989 SF hotel (118 rooms)	Pending
Ling	Rincon Palms Hotel and Restaurant 09-106-DP RV	6868/6878 Hollister Avenue	073-140-004	75,580 SF hotel (102 rooms) 6,000 SF restaurant	Pending
Hanson	Cortona Apts 09-140-DP	6830 Cortona Drive	073-140-016	171 residential units	Pending
VIk	Kenwood Village 08-205-GPA	Calle Real w/o Calaveras Avenue	077-130-006, 077-130-019, 077-141-049	60 residential units	Pending
Hanson (OT)	Concrete Recycling Facility 09-133-DP	903 South Kellogg Avenue	071-190-034	18,400 SF operations 30,500 SF storage	Pending
Hanson	McDonalds, USA 10-085-CUP, DPAM	6900 Marketplace Drive	073-440-024	add drive-thru window	Pending
Kolwitz	Camino Real Hotel 11-005-SPA, -DP RV	401 Storke Road	073-440-019	73,828 SF hotel (106 rooms)	Pending
		AP	RIKOVED ISI	(૦)માં વધાઉ	
Kolwitz	Camino Real Marketplace – Skating Facilities 95-DP-026	Santa Felicia Drive	073-440-022	46,000 SF ice rink 17,000 SF roller rink	Approved
Kolwitz	Robinson LLA- related lots	Baker, Violet and Daffodil Lanes	077-141-053, 077-141-070 et al	13 residential units (4 approved and 9 under construction)	Approved

PLANNER	PROJECT	LOCATION	APN	DESCRIPTION	STATUS
Moore	Cabrillo Business Park 37-SB-DP et al	6767 Hollister Avenue	073-450-005	Business Park with new structures totaling 707,100 SF (R&D, self storage, onsite service related uses)	Approved
Hanson	Village at Los Carneros 03-050-TM, -DP, et al	S. Los Carneros Road Cortona/Castilian Drives	073-330-024, 073-330-027	275 residential units	Approved (on hold; substitute application; see 10- 044-DP)
Miller	Rincon Palms Hotel and Restaurant 07-020-RZ, -DP	6868/6878 Hollister Avenue	073-140-004	59,600 SF hotel (112 rooms) 6,000 SF restaurant	Approved (on hold; revised application pending)
Kolwitz	Camino Real Hotel 07-208-DP et al	401 Storke Road	073-440-019	73,828 SF hotel (99 rooms)	Approved (on hold; revised application pending)
VIk	Renco Encoders 07-103-DP	26 Coromar Drive	073-150-013	Existing M-RP Bldg (33,600 SF) add 8800 SF manu.space add 10,400 SF office	Approved
Moore	Citrus Village 04-226-DP; TM	7388 Calle Real	077-490-043	10 residential units	Approved
Moore	Haskell's Landing 07-102-GP, -TM, -DP	Hollister Avenue w/o Las Armas Road	079-210-049	101 residential units	Approved
Hanson	AMR Deployment Center 10-106-CUP	7200 Hollister Avenue	073-020-018	occupy 8300 SF in an existing M-RP building; no new square footage	Approved
Ling (OT)	Dawson Contractor Storage 09-171-LUP	5750 Dawson Avenue	071-121-006	1440 SF office; contractor storage	Approved
Moore (OT – East Wing)	GVCH Medical Office Building Reconstruction 08-185-DP	5333 Hollister Ave	065-090-023	Medical Office Building 41,224 SF existing (demo) 52,000 SF proposed	Approved
				10,776 SF net new	

PLANNER	PROJECT	LOCATION	APN	DESCRIPTION	STATUS
VIk	Winchester Commons HOA 08-029-TPM, -DP RV	7960 Winchester Circle	079-730-039	1 SFD (conversion of day care center)	Approved
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Hanson	Quixote Fund 00-DP-030	275 Mathilda Drive	079-554-009	2 residential units	Under Construction
Kolwitz	Robinson LLA- related lots	Baker, Violet and Daffodil Lanes	077-141-053, 077-141-070 and others	13 residential units (SFDs; 4 approved and 9 under construction)	Occupied
Hanson	Comstock Homes 67-SB-TM	7800 block of Hollister Avenue	079-210-067	62 residential units (SFDs)	Under Construction/Occ upied
Kolwitz (OT)	Fairview Corporate Center 74-SB-DP	420 S. Fairview Avenue	071-130-057, -061, -062	73,203 SF M-RP building	Occupied
Moore (OT)	Sumida Gardens 07-052-DP et al 08-065-LUP	5501 Overpass Road	071-330-012	200 residential units	Occupied
Moore (OT)	Stokes Industrial Building 02-084-DP	East side of Technology Drive	071-170-085	5,000 SF industrial building	Occupied
Moore (OT – East Wing)	Goleta Valley Cottage Hospital 07-171-OA, -DP, - DRB	351 S. Patterson SE Corner of Patterson/Hollister	065-090-022 065-090-028	Hospital: 93,090 SF existing 152,658 SF proposed 59,568 SF net new	Under Construction
Kolwitz	Camino Real Marketplace Best Buy Expansion 08-075-DP AM	7090 Marketplace Drive	073-440-013	7,770 SF retail expansion	Occupied

PLANNER	PROJECT	LOCATION	APN	DESCRIPTION	STATUS
Kolwitz	Fairview Gardens 08-111-CUP	598 N. Fairview Avenue	069-090-052	5 units for farm-worker housing; 2 accessory yurts	Occupied
Kolwitz (OT)	Towbes/ATK 08-157-OA, -DP RV	600 Pine Avenue	071-130-040	23,276 SF addition to an existing research park building	Occupied
Moore (OT)	Housing Authority Braddock House 05-059-PM; DP AM02	5575 Armitos Avenue	071-090-084	Division of 2.43 acres into two parcels of 2.19 and 0.24 acres; addition of 1 new assisted living unit (4 rooms; Braddock House 2,755 SF); Miller Community Center 1,536 SF	Under Construction

	Residential Units	Commercial/Industrial SF
Pending	1,041	840,213
Approved	391	940,944
Under Construction/Occupied	279	170,353
TOTAL	1,711	1,951,510

### NOTE:

- 1.
- OT = Old Town Wireless and Energy projects are not included in this table. 2.



# **ASSOCIATED TRANSPORTATION ENGINEERS**

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Richard L. Pool, P.E. Scott A. Schell, AICP, PTP

#### **MEMORANDUM**

August 13, 2013 10086M02.WP

To:

Mark Lloyd, Land Consultants

From:

Scott A. Schell, AICP, PTP

Associated Transportation Engineers

Subject:

7400 Cathedral Oaks Road Project - Construction Impacts

Pursuant to your request, ATE is providing the following information related to potential construction impacts that would be generated by the 7400 Cathedral Oaks Road Project. The project is proposing to develop a vacant site, located at 7400 Cathedral Oaks Road, with 60 single family dwelling units. Access to the project site would be provided via two new roadway connections to Cathedral Oaks Road. A new loop road would be constructed to provide internal circulation throughout the site.

The construction period is estimated at 12-14 months. The site would be cleared in the first phase (demolition, excavation and grading) and then building construction would commence. During the peak period of construction activities, a workforce of 55 workers would be required. It is assumed that workers would begin at 7 A.M. and end by 4:00 P.M. Construction workers are anticipated to work in 1 overall shift.

The number of construction worker vehicles was estimated based on an occupancy of 1.25 persons per vehicle. Thus, it is estimated that up to 44 inbound trips would occur during the A.M. peak period and 44 outbound trips would occur during the P.M. peak hour on a daily basis during the peak construction period. The traffic study prepared for the project estimated that the proposed project would generate 45 A.M. peak hour trips and 61 P.M. peak hour trips, which is slightly more peak hour trips than the construction phase. The traffic study prepared for the project found that all of the study-area roadways and intersections would operate at LOS C or better during the A.M. and P.M. peak hours with existing + project traffic, which meet the City's LOS C operating standard. It can therefore be concluded that the additional traffic generated by construction traffic would not significantly impact the area roadways and intersections.

Truck trips would be required for the first phase (demolition, excavation and grading) as well as for delivery of construction equipment and material during the course of the construction phase. The site access and circulation system has been designed to accommodate truck traffic. Equipment staging and storage would occur on the site. Also, construction worker parking would be accommodated on the site. Therefore, construction related vehicles would not affect parking and traffic operations on the streets in the immediate vicinity of the site.

While the construction phase of the project would not generate significant impacts, the following measures are recommended to minimize traffic and parking impacts during the construction phase.

- ▶ Work with City of Goleta to develop a truck routing plan.
- Schedule truck trips during non-peak travel periods to the extent possible.
- ▶ Designate on-site areas for storage of construction equipment and materials.
- Designate on-site parking areas for construction worker vehicles.
- Develop traffic control plans for work that disrupts traffic on Cathedral Oaks Road.
- Designate an on-site construction manager and post information (telephone number, email, web site, etc.) for the public to contact the construction manager to address any construction issues.