APPENDIX H

TRAFFIC STUDY

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December 2, 2004 03009R04

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TRAFFIC STUDY FOR THE A.J. DIANI ASPHALT PROJECT - SAN LUIS OBISPO COUNTY, CALIFORNIA

Associated Transportation Engineers (ATE) is pleased to submit the following traffic study for the A.J. Diani Asphalt Project. The study examines existing and future traffic conditions adjacent to the project site, and identifies improvements where necessary. It is our understanding that the contents of this study will be incorporated into the environmental documents prepared for the project.

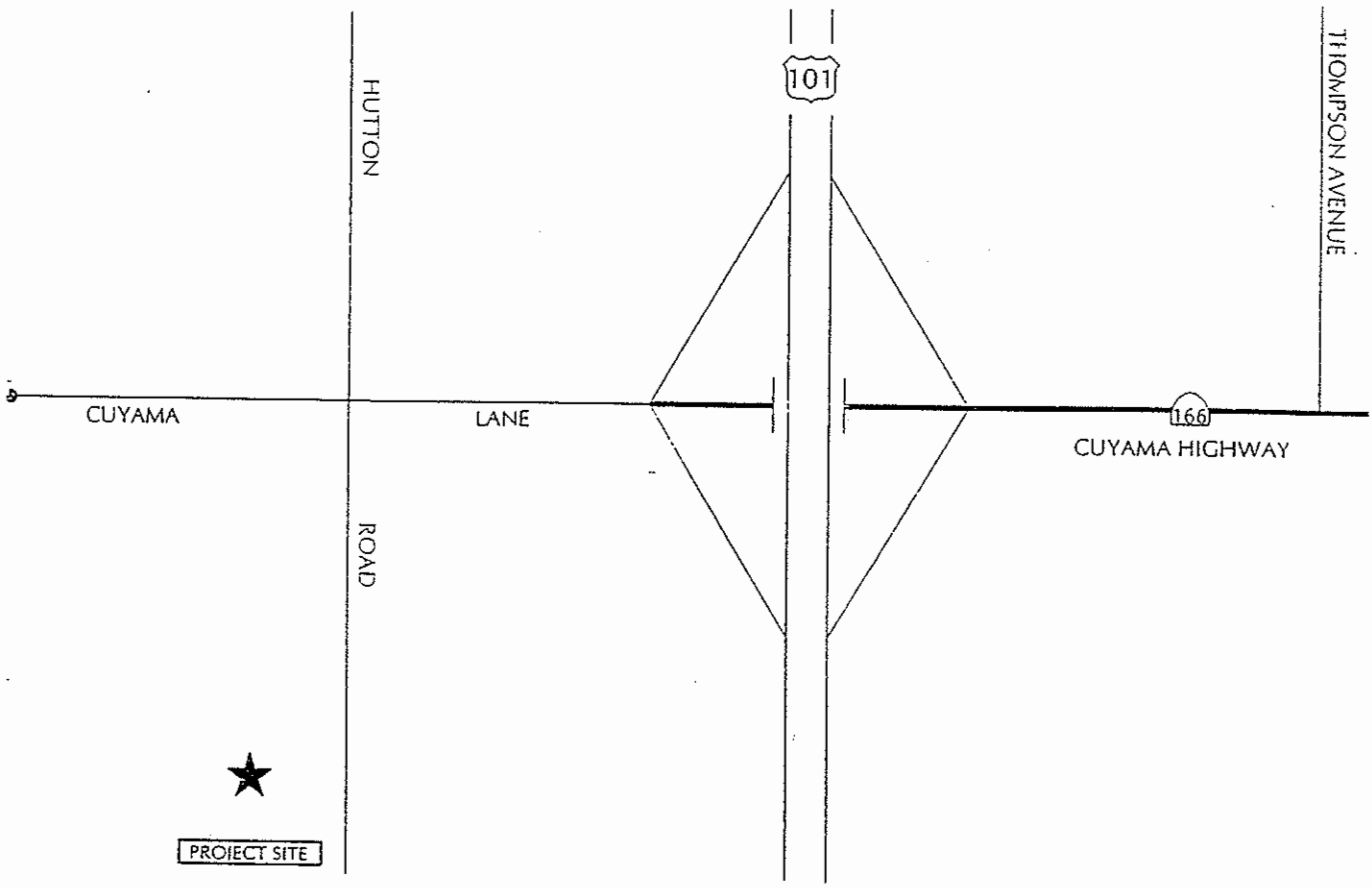
We appreciate the opportunity to assist you with this project.

Associated Transportation Engineers

By: Richard L. Pool, P.E.
President

A.J. DIANI ASPHALT PROJECT
SAN LUIS OBISPO COUNTY, CALIFORNIA

TRAFFIC STUDY



December 2, 2004

ATE Project #03009

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EXECUTIVE SUMMARY

A.J. Diani Construction Co. Inc. is proposing to construct a portable, stand alone asphaltic concrete plant. The asphalt plant is to be located at 2280 Hutton Road on property approximately 1,000 feet south of Cuyama Lane. Regional access is provided by U.S. Highway 101 via the State Route 166 interchange. Direct access will be provided by Hutton Road. Hutton Road presently serves the industrial uses in the immediate vicinity.

The purpose of this study is to address the project impact on the adjacent circulation system with specific evaluations for five study-area roadway segments and three study-area intersections. U.S. Highway 101 south of State Route 166 (Cuyama Highway), U.S. Highway 101 north of State Route 166 (Cuyama Highway), Hutton Road and Cuyama Lane in the study-area currently operate at LOS D or better. The U.S. Highway 101/State Route 166 (Cuyama Highway) interchange and Cuyama Road/Hutton Road intersection currently operate at LOS C or better during the A.M. and P.M. peak hour periods.

The A.J. Diani Asphalt Plant is projected to generate a daily maximum of 240 product delivery truck loads from the asphalt plant, 216 aggregate delivery truck loads and 14 asphaltic oil delivery truck loads. On an average operational day, there could be up to 53 product delivery truck loads from the asphalt plant, in addition to 45 aggregate delivery truck loads and 3 asphaltic oil delivery truck loads to the asphalt plant. The plant operation is generally a 20 hour day with operations occurring in two 10 hour shifts between 6:00 A.M. and 4:00 P.M. and between 7:00 P.M. and 5:00 A.M. Monday through Saturday. Nighttime operations are proposed for a maximum of 80 days per calender year and will be limited to government public works projects, or project that result from a natural emergency, i.e., flood, earthquake or the like. Truck trips will occur in two shifts (7:00 A.M. and 3:00 P.M. and between 8:00 P.M. and 4:00 A.M.) The plant operates with 6 employees per shift. During the typical 7:00 - 9:00 A.M. peak hour commute period the following represents the maximum truck operations that potentially could occur during both the peak operational day and an average operational day:

Product Trucks:	14 out and 14 in
Aggregate Trucks:	12 out and 12 in
Asphaltic Oil Trucks:	1 out and 1 in
Employees:	6 per shift - all in place prior to the 7:00 A.M. peak hour

There are no truck trips scheduled during the 4:00-6:00 P.M. peak hour commute period as this is when the work shift change occurs.

The roadway and intersection analyses show that the existing street system works quite well and reserve capacity is available. The peak operation day at the A.J. Diani Project would results in 964 daily trips, 54 A.M. peak hour trips and 6 P.M. peak hour trips. On an average operation day the production level is 226 daily trips with the same peak hour traffic volumes. The existing streets and intersection have the capacity to accommodate peak operation day traffic, as the project would have only a minor effect on the area roadways and intersections and would not generate significant impacts. Similarly, the minor effect of peak operation day traffic would be accommodated under Short-Term cumulative conditions. San Luis Obispo County has a traffic fee program to address traffic and circulation needs. The project would be required to contribute to the fee program to mitigate its incremental impact.

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INTRODUCTION

The following study contains an analysis of the potential traffic impacts associated with the A.J. Diani Asphalt Project, located at the southern end of Hutton Road, south of the Nipomo area. The study provides information relative to existing, existing + project, cumulative and cumulative + project traffic conditions within the project study-area. The project's peak day and average day operations were evaluated. A review of the site's access is also presented.

PROJECT DESCRIPTION

A.J. Diani Construction Co. Inc. is proposing to construct a portable, stand alone asphaltic concrete plant. The asphalt plant is to be located at 2280 Hutton Road on property approximately 1,000 feet south of Cuyama Lane. The existing street system and project location are shown on Figure 1. Regional access is provided by U.S. Highway 101 via the State Route 166 interchange. Direct access will be provided by Hutton Road. Hutton Road presently serves the commercial and industrial uses in the immediate vicinity.

EXISTING CONDITIONS

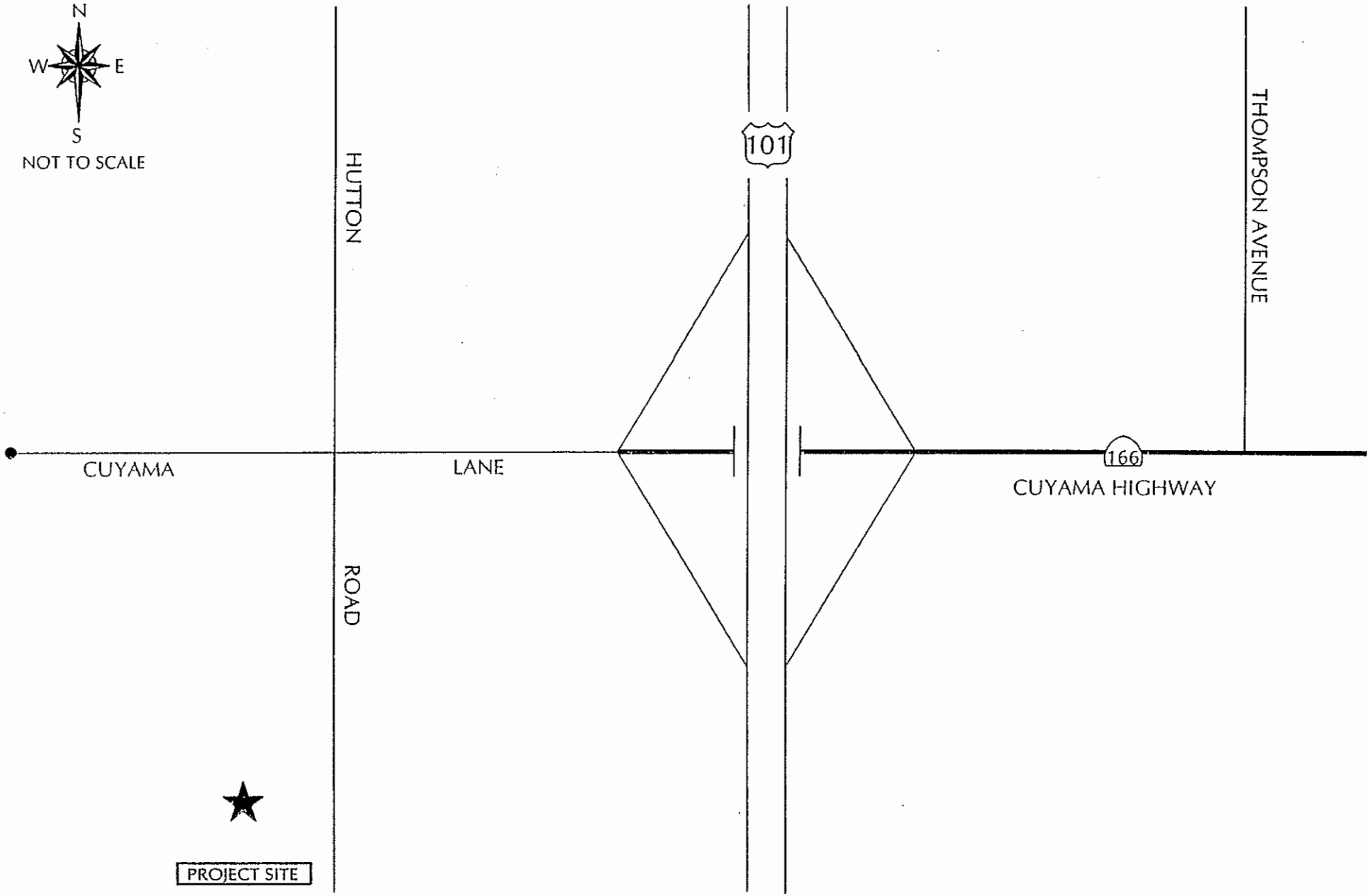
Street Network

The circulation system adjacent to the project site is comprised of U.S. Highway 101, State Route 166 (Cuyama Highway) and Hutton Road which serve as the major arterials for the area, collector and local streets, as illustrated in Figure 1. The following text provides a brief discussion of the primary components of the study-area street network.

U.S. Highway101, located directly east of the project site, is a multi-lane freeway serving the Pacific Coast between Los Angeles and San Francisco. Primary access to U.S. Highway 101 in the vicinity of the project site is provided via the State Route 166 (Cuyama Highway) interchange. The U.S. Highway 101/State Route 166 interchange is unsignalized at the northbound and southbound ramp intersections. A Project Study Report for the widening of the Santa Maria River bridge has been completed. The project site is not contiguous to U.S. Highway 101, thus no dedication of land for right-of-way can be made. There are other parcels between the bridge structure and the project site.

State Route 166 (Cuyama Highway), located north of the project site, is an east-west roadway within the study-area. State Route 166 extends east from U.S. Highway 101 to Kern County. In the study-area the highway is primarily a 2-lane roadway. The U.S. Highway 101/Cuyama Highway interchange was built to Caltrans standards, trucks use was factored into the design of the freeway ramps.

Hutton Road, located directly east of the site, is a 2-lane north-south roadway. Hutton Road extends north to the Nipomo area, where it becomes Joshua Road. Hutton Road will provide direct access to the project site. Hutton Road south of Cuyama Lane has recently been improved to County urban standards.



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PROJECT SITE LOCATION / EXISTING STREET NETWORK

FIGURE 1

Cuyama Lane, located directly north of the site, is a 2-lane east-west roadway. Cuyama Lane extends west from the U.S. Highway 101 southbound ramps terminating in a cul-de-sac.

Roadway Operations

The following section reviews average daily traffic (ADT) volumes and roadway operations in the study area. The operational characteristics of the study-area roadways are analyzed based on a set of standard surface street roadway design capacities which are summarized in the Technical Appendix. In rating a roadway's operating condition, "Levels of Service" (LOS) A through F are used. LOS A and LOS B represent primarily free-flow operations, LOS C represents stable conditions, LOS D nears unstable operations with restrictions on maneuverability within traffic streams, LOS E represents unstable operations with maneuverability very limited, and LOS F represents breakdown or forced flow conditions. LOS C is the threshold for rural County roadways.

Existing ADT volumes for the street segments in the vicinity of the project site were obtained from data collected by ATE and Caltrans.[1] Table 1 lists the existing ADT for study-area roadways and summarizes their operations. Figure 2 illustrated the existing ADT volumes.

Table 1
Existing Roadway Operations

Roadway	Roadway Type	ADT	LOS
U.S. Highway 101			
- north of Cuyama Highway	4-Lane Freeway	51,000	LOS C
- south of Cuyama Highway	4-Lane Freeway	62,000	LOS D
Hutton Road			
- north of Cuyama Lane	2-Lane Roadway	8,000	LOS A
- south of Cuyama Lane	2-Lane Roadway	1,200	LOS A
Cuyama Lane			
- east of Hutton Road	2-Lane Roadway	12,300	LOS C
- east of U.S. Highway 101	2-Lane Roadway	2,400	LOS A

The data presented in Table 1 indicate that the study-area roadway segments currently operate in the LOS A-C range based on San Luis Obispo County roadway design capacities. The freeway segments currently operate in the LOS C-D range based upon lane capacity as defined in the Highway Capacity Manual.

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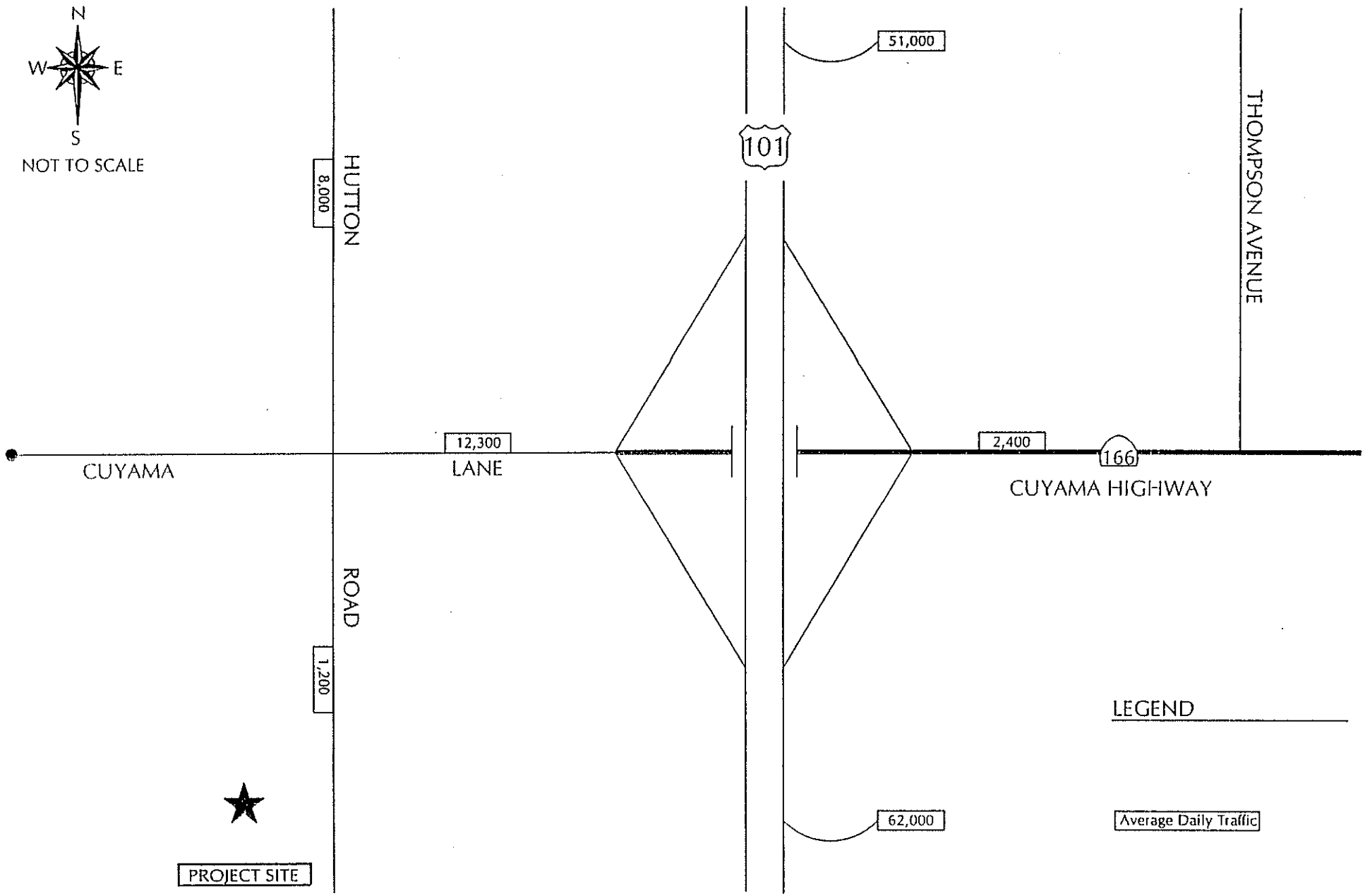
[1] 2001 Traffic Volumes on California State Highways, California Department of Transportation, June 2002.



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EXISTING AVERAGE DAILY TRAFFIC VOLUMES

FIGURE 2

Intersections Operations

Existing levels of service for the study-area intersection were calculated using the Highway Capacity Manual unsignalized methodology. Worksheets illustrating the level of service calculations are contained in the Technical Appendix for reference. Table 1 lists the existing intersection level of service for the three study-area intersections. Figures 3 and 4 illustrate the existing A.M. and P.M. peak hour traffic volumes respectively. The calculations used the default values for truck percentage. The truck percentage at the low volumes on the roadways is not a significant parameter. ATE tested this assumption by changing the percentage to 30% and there was no substantive change in the result.

Table 2
Existing Intersection Operations

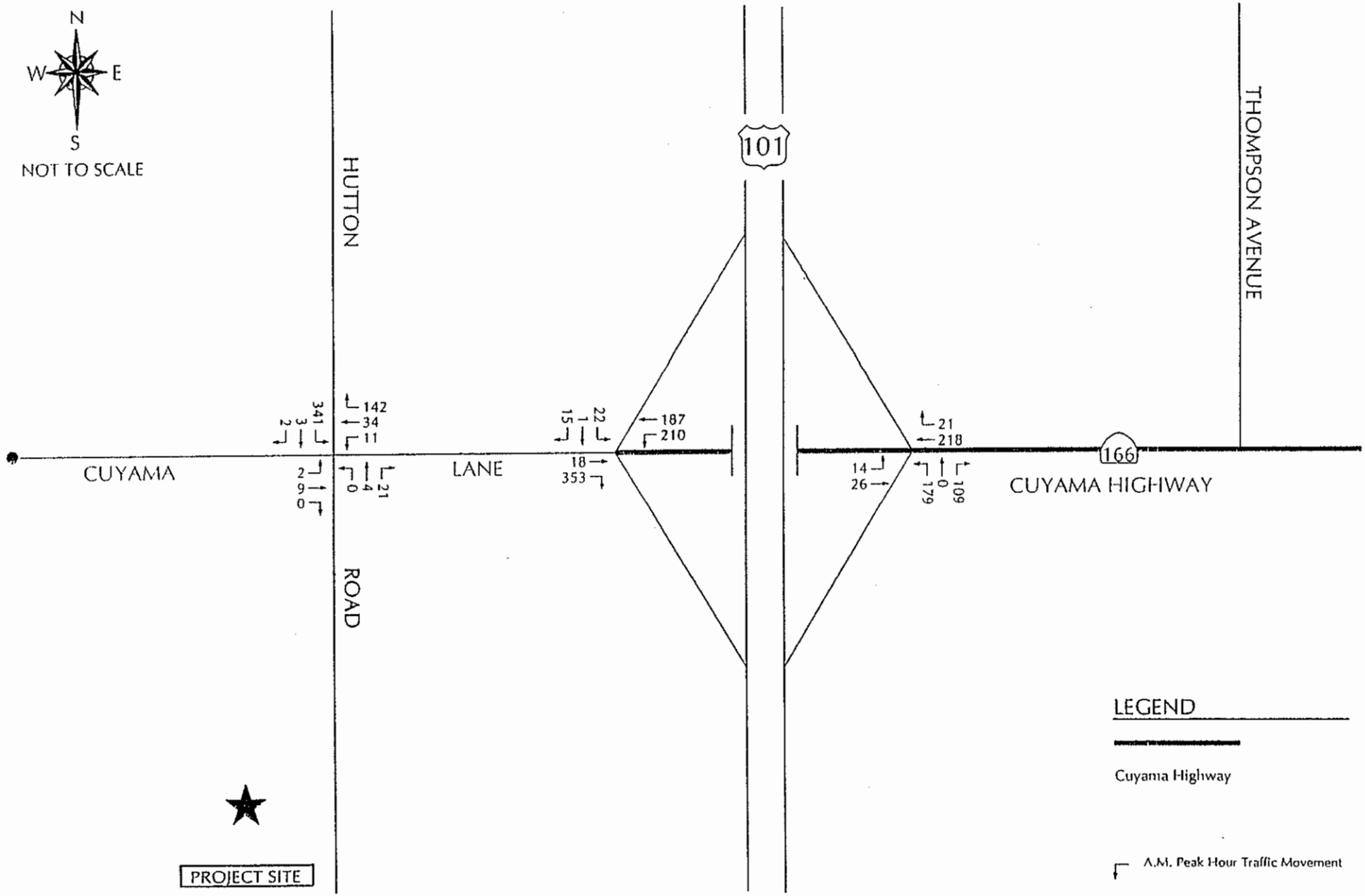
Intersection	Control	A.M. Peak Hour Delay-LOS	P.M. Peak Hour Delay-LOS
U.S. Highway 101 NB Ramps/Cuyama Highway (S.R. 166) eastbound left-through movement: northbound approach:	STOP-sign	 7.8 sec. - LOS A 11.1 sec. - LOS B	 7.7 sec. - LOS A 13.2 sec. - LOS B
U.S. Highway 101 SB Ramps/Cuyama Highway (S.R. 166) westbound left-through movement: southbound approach:	STOP-sign	 8.9 sec. - LOS A 16.5 sec. - LOS C	 8.6 sec. - LOS A 18.6 sec. - LOS C
Hutton Road/Cuyama Lane eastbound left/through/right movement: westbound left/through/right movement: northbound approach: southbound approach:	STOP-sign	 7.6 sec. - LOS A 7.3 sec. - LOS A 8.8 sec. - LOS A 13.9 sec. - LOS B	 8.0 sec. - LOS A 7.3 sec. - LOS A 9.0 sec. - LOS A 15.6 sec. - LOS C

The data presented in Table 2 indicates that the unsignalized study-area intersections currently operate in the LOS A-C range during the A.M. peak hour and P.M. peak hour periods.

SAN LUIS OBISPO COUNTY IMPACT THRESHOLDS

Threshold Criteria

The County of San Luis Obispo impact thresholds were used to assess the significance of the traffic generated by the A.J. Diani Asphalt Project. San Luis Obispo County policy states that the acceptable level of service is LOS C for rural roadways and intersections. Mitigation measures are required for roadway and intersection facilities which operate at less than LOS C. The freeway threshold is based upon the requirements of the Congestion Management Program which is LOS E.



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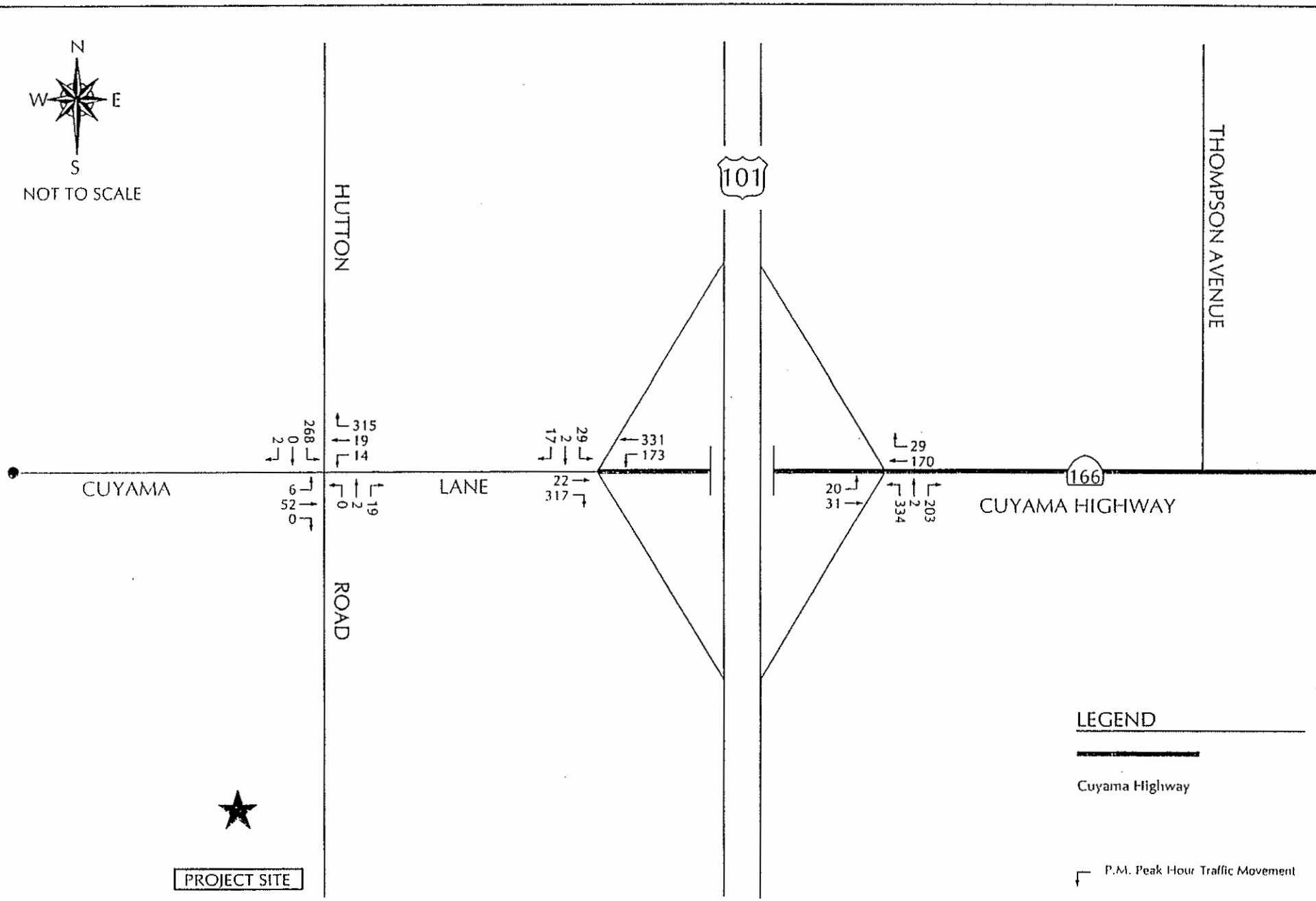
EXISTING A.M. PEAK HOUR TRAFFIC VOLUMES

FIGURE 3



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EXISTING P.M. PEAK HOUR TRAFFIC VOLUMES

FIGURE 4

PROJECT-GENERATED TRAFFIC

Project Trip Generation

For the purpose of estimating the number of trips which would be generated by the "project", ATE used operational data supplied by the applicant. The plant operation is generally a 20 hour day with operations occurring in two 10 hour shifts between 6:00 A.M. and 4:00 P.M. and between 7:00 P.M. and 5:00 A.M. Monday through Saturday. Nighttime operations are proposed for a maximum of 80 days per calender year and will be limited to government public works projects, or project that result from a natural emergency, i.e., flood, earthquake or the like. Truck trips will occur in two shifts (7:00 A.M. and 3:00 P.M. and between 8:00 P.M. and 4:00 A.M.) The plant operates with 6 employees per shift. The operation level assumed for this "project" is based upon the following criteria. On a peak operational day, there could be a maximum of up to 240 product delivery truck loads from the asphalt plant, in addition to 216 aggregate delivery truck loads and 14 asphaltic oil delivery truck loads to the asphalt plant. On an average operational day, there could be up to 53 product delivery truck loads from the asphalt plant and 45 aggregate delivery truck loads and 3 asphaltic oil delivery truck loads to the asphalt plant. The hourly operation is constrained by the plant capacity and does not change on the peak operation day. During the typical 7:00 - 9:00 A.M. peak hour commute period the following represents the maximum truck operations that potentially could occur on either the peak operation day or the average operation day:

Product Trucks:	14 out and 14 in
Aggregate Trucks:	12 out and 12 in
Asphaltic Oil Trucks:	1 out and 1 in
Employees:	6 per shift - all in place prior to the 7:00 A.M. peak hour

There are no truck trips scheduled during the 4:00 - 6:00 P.M. peak hour period. The plant is down during this time which allows for shift changes to be completed. The project's peak day and average day trip generation is presented in Table 3. The peak operation day is attained by higher production during the non-peak hours of the adjacent street system. The data shows that the ADT is the only difference between the average operation and the peak operation.

Table 3
Project Trip Generation

Project	ADT	A.M. Peak Hour			P.M. Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
Asphalt Plant (Peak Day)	964	27	27	54	0	6*	6*
Asphalt Plant (Average Day)	226	27	27	54	0	6*	6*

Note : * denotes employee trips

There will be minor miscellaneous (2-3) trips associated with the operation, however, these trips

will not be on an every day basis and will generally occur during the non-peak hours. These miscellaneous trips would have no impact to the study-area roadway and intersections.

Project Trip Distribution and Assignment

Trip distribution for the project was developed for the project based on the peak hour operational data provided by the applicant. The project will make and receive deliveries to the north and south via the U.S. Highway 101/State Route 166 interchange. Project-generated traffic was assigned to the study-area street system based upon the project description. In addition to the asphaltic concrete deliveries shown in the project description there are aggregate and asphalt oil deliveries to be accounted for. These change the overall distribution percentages slightly from those shown for the asphaltic concrete delivery percentages contained in the project description. Figure 5 illustrates the project-generated peak operation day ADT volumes. Figures 6 and 7 illustrate the assignment of project-generated peak operation day A.M. and P.M. peak hour traffic volumes. Figures 8 illustrates the project-generated average operation day ADT volumes. Figures 9 and 10 illustrate the assignment of the project-generated average operation day A.M. and P.M. peak hour traffic volumes. Figures 11 illustrates the existing + project ADT volumes. Figures 12 and 13 illustrate the existing + project A.M. and P.M. peak hour traffic volumes.

POTENTIAL TRAFFIC IMPACTS

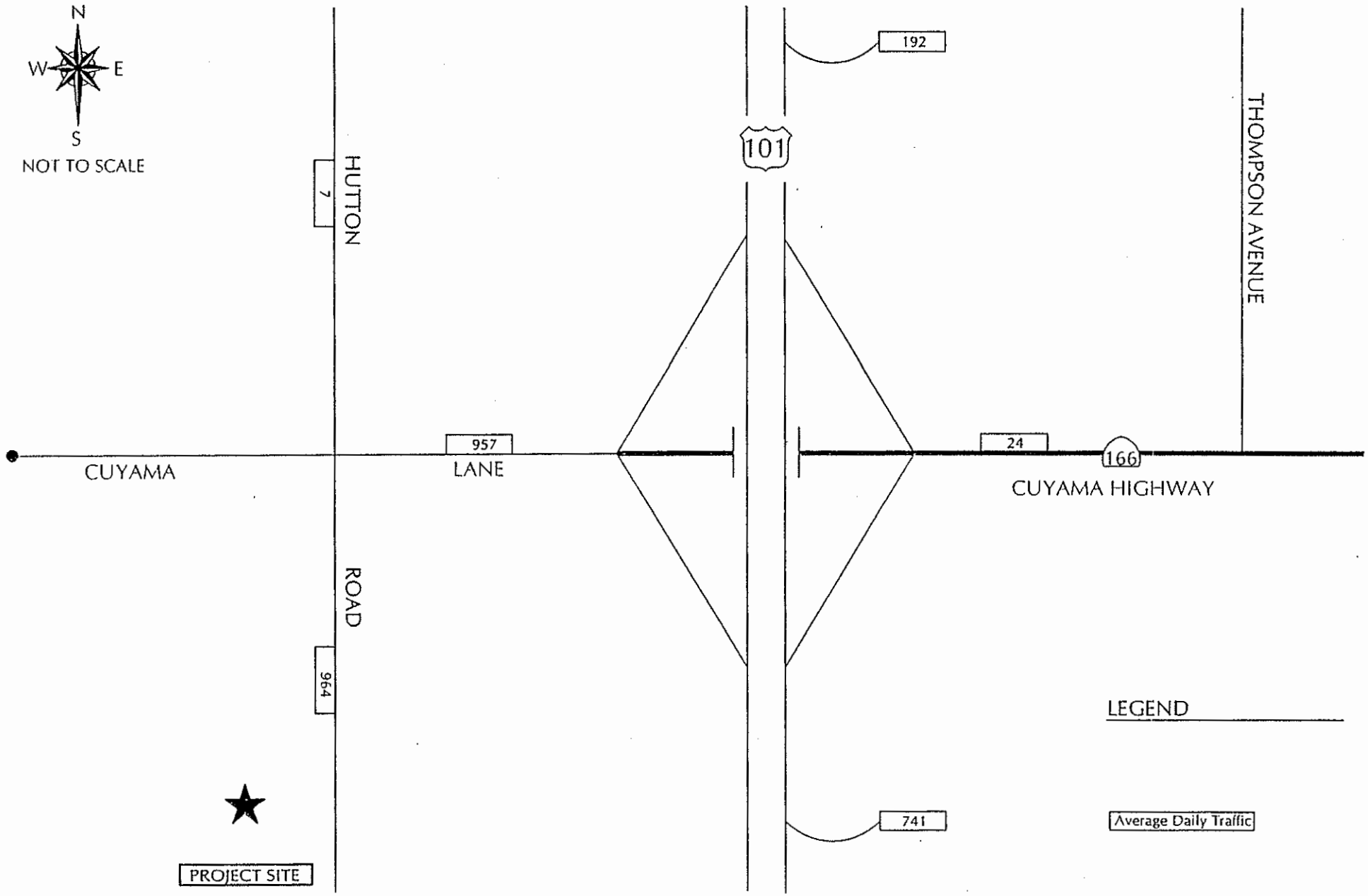
Project-Specific Impacts

Roadway. Roadway volumes for the existing and existing + project peak day scenarios are listed in Table 4 and illustrated in Figure 11.

Table 4
Existing + Project Peak Day Roadway Operations

Roadway Segment	Roadway Type	ADT			
		Existing	Existing+ Project	LOS	Impact
U.S. Highway 101					
- north of Cuyama Highway	4-Lane Freeway	51,000	51,192	LOS C	No
- south of Cuyama Highway	4-Lane Freeway	62,000	62,741	LOS D	No
Hutton Road					
- north of Cuyama Lane	2-Lane Roadway	8,000	8,007	LOS A	No
- south of Cuyama Lane	2-Lane Roadway	1,200	2,164	LOS A	No
Cuyama Lane					
- east of Hutton Road	2- Lane Roadway	12,300	13,257	LOS C	No
- east of U.S. Highway 101	2- Lane Roadway	2,400	2,424	LOS A	No

The data in Table 4 show that the addition of project traffic to U.S. Highway 101 would not significantly change the existing LOS noted in Table 1 and, therefore would not impact the study-area freeway and roadway segments based on San Luis Obispo County impact criteria.



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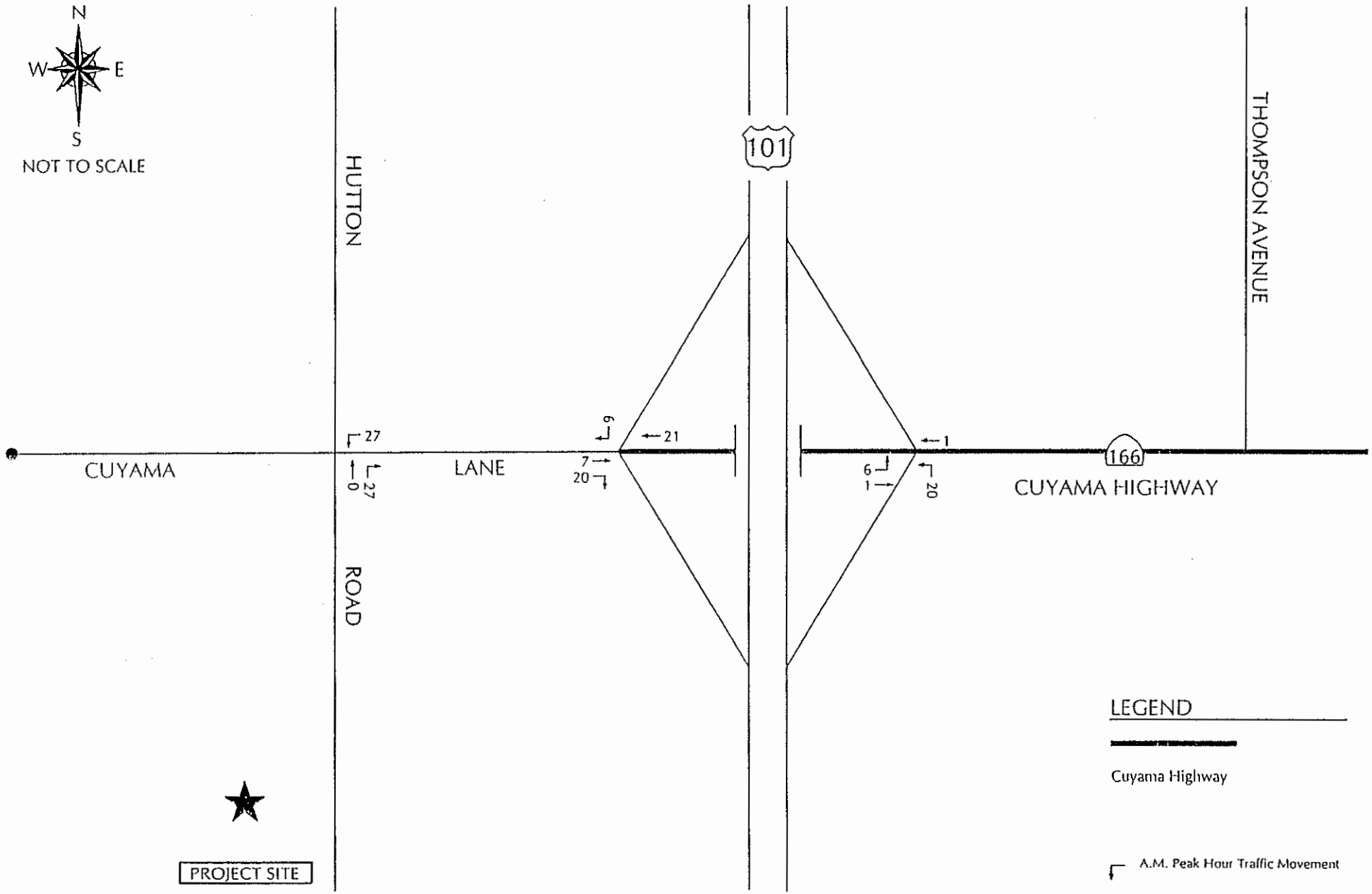
PROJECT PEAK DAY
AVERAGE DAILY TRAFFIC VOLUMES

FIGURE 5



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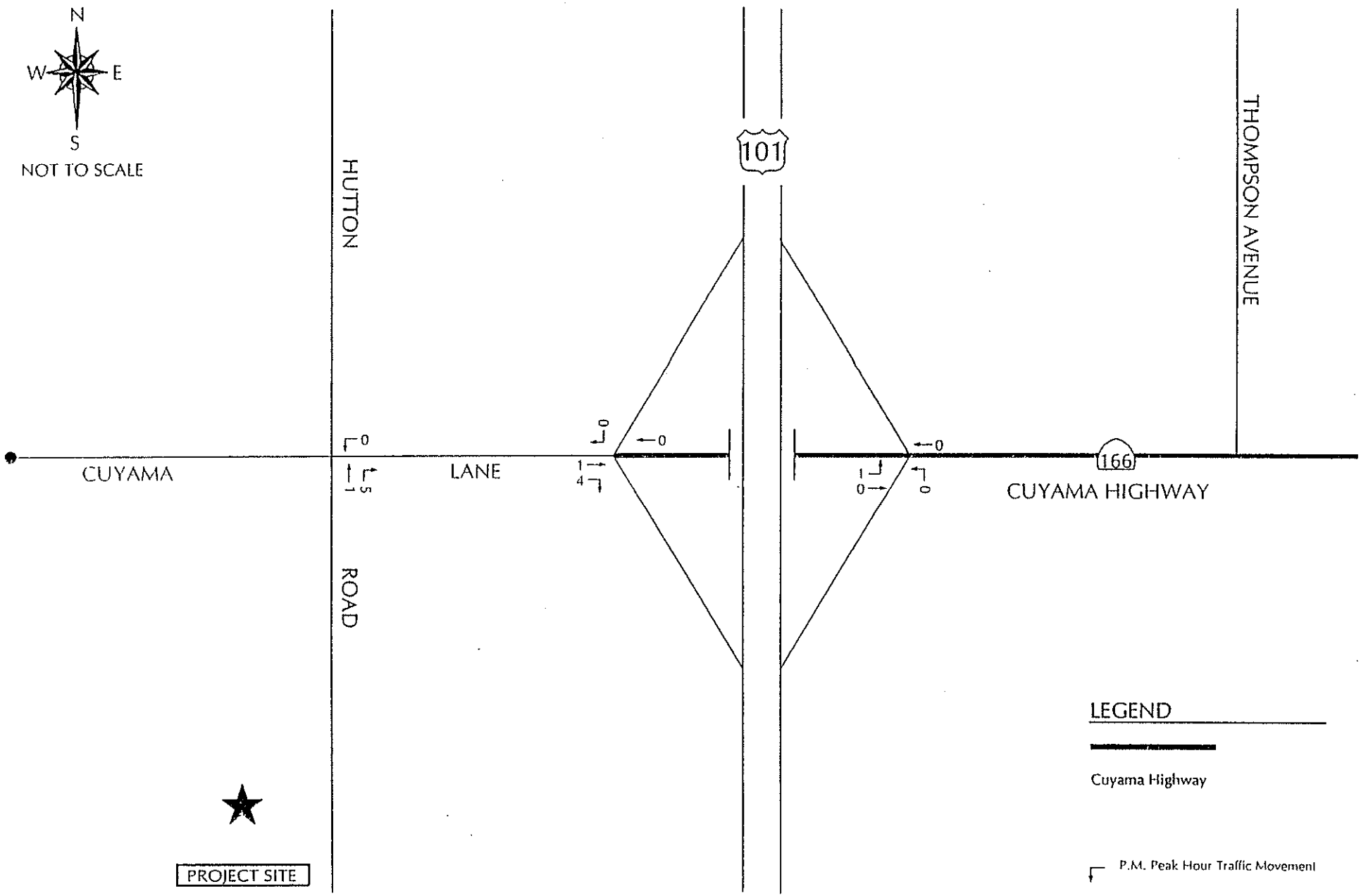
PROJECT PEAK DAY A.M. PEAK HOUR TRAFFIC VOLUMES

FIGURE 6



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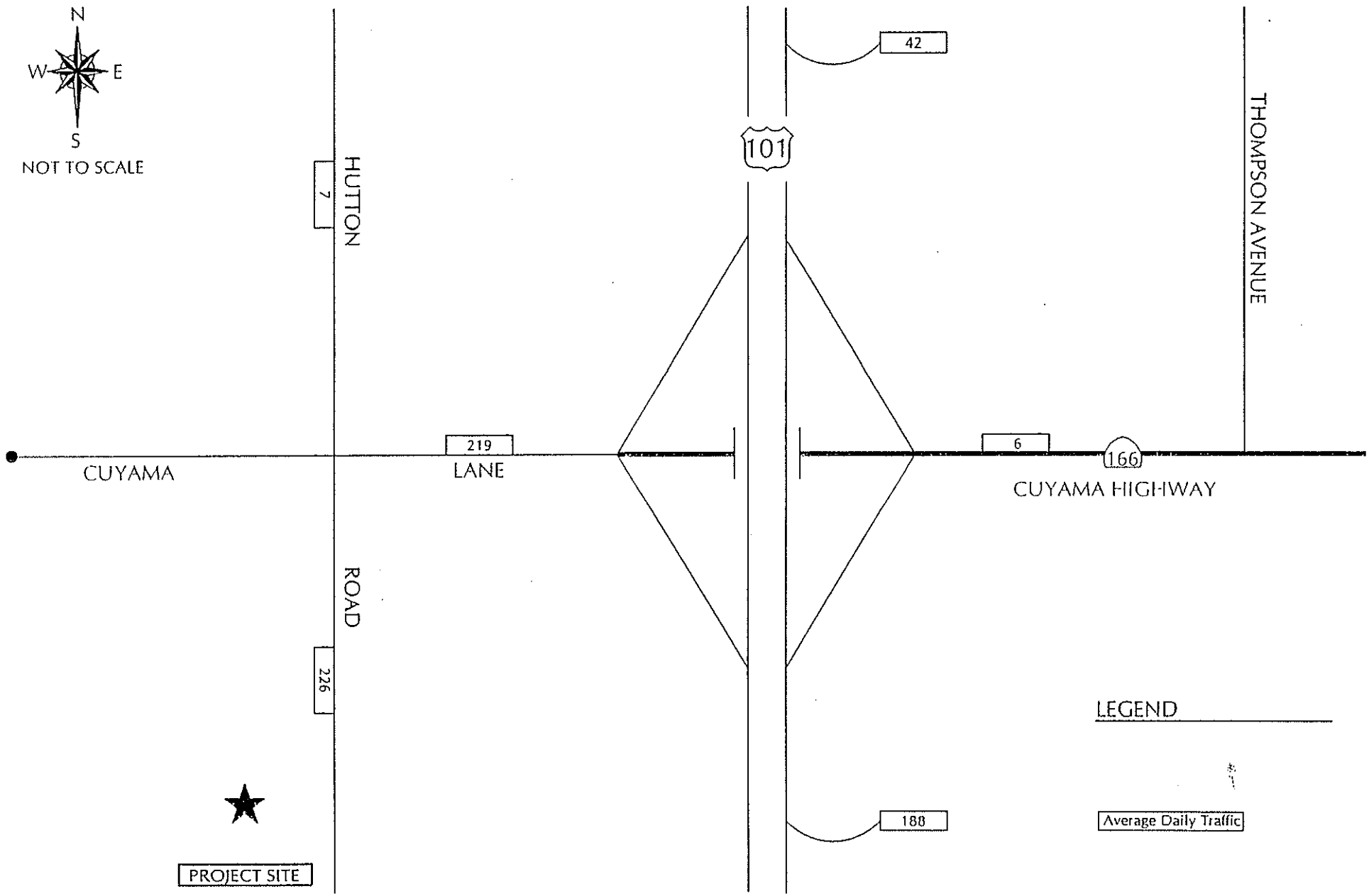
PROJECT PEAK DAY P.M. PEAK HOUR TRAFFIC VOLUMES

FIGURE 7



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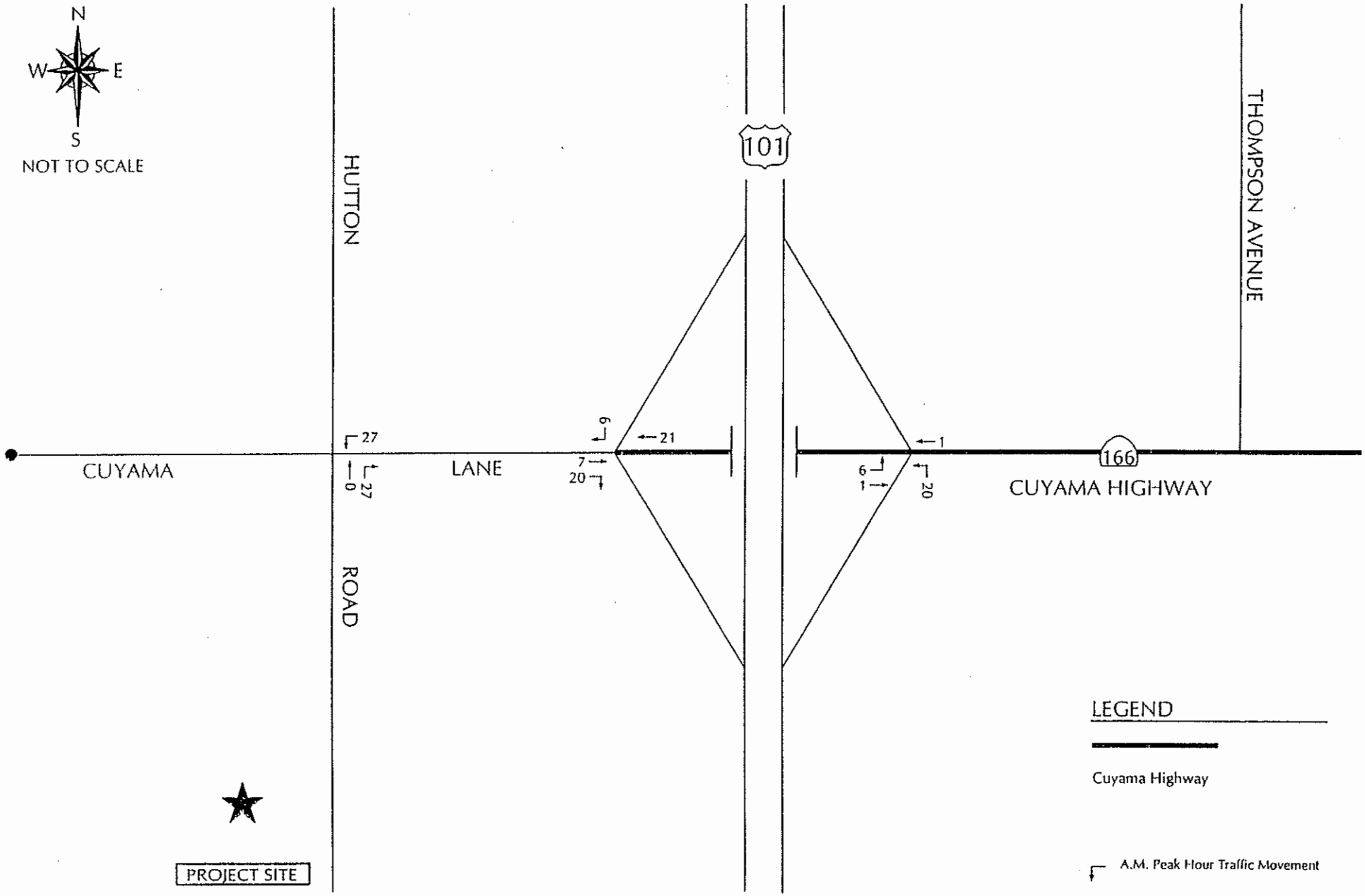
PROJECT AVERAGE DAY
AVERAGE DAILY TRAFFIC VOLUMES

FIGURE 8



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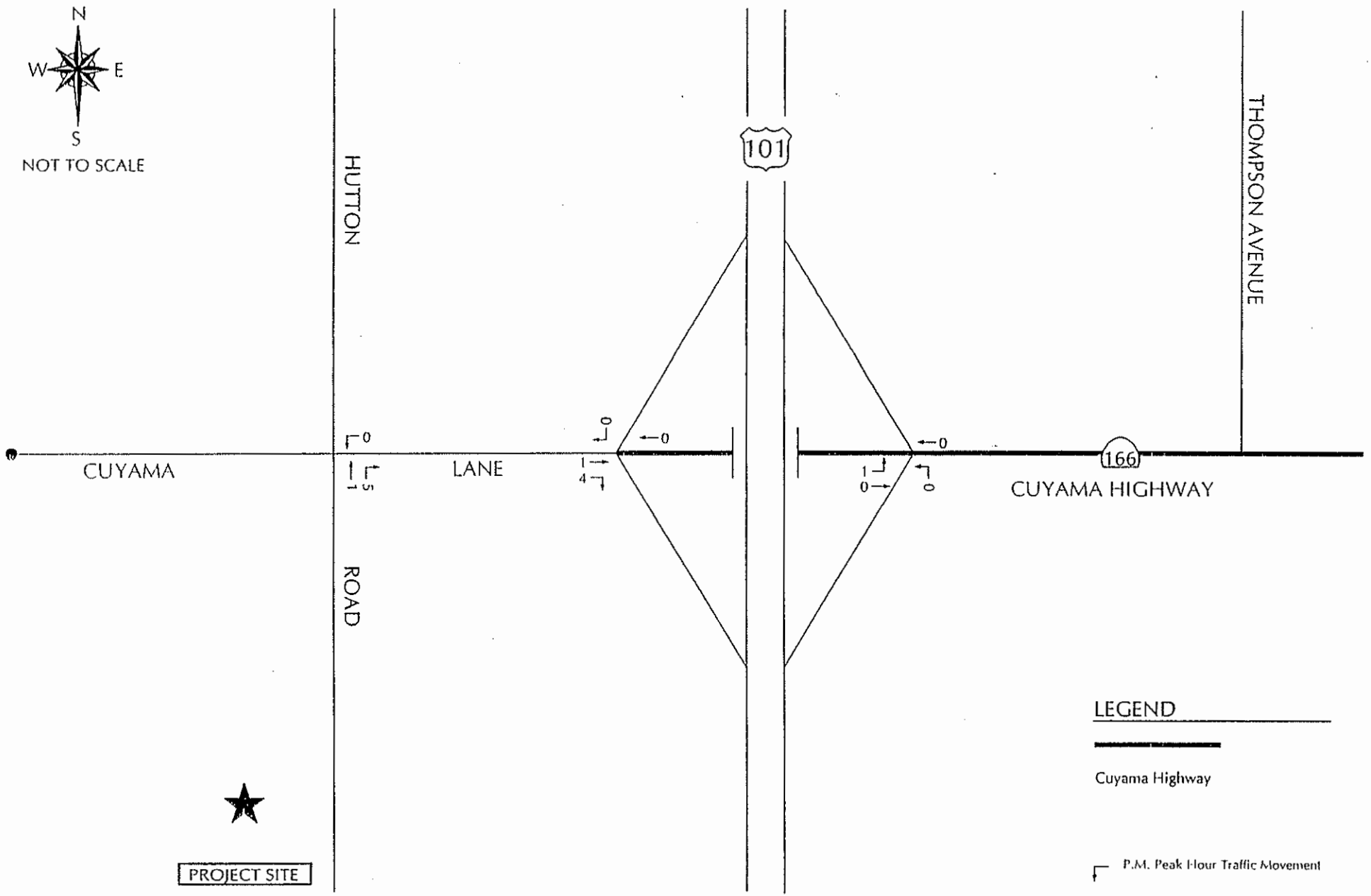
PROJECT AVERAGE DAY A.M. PEAK HOUR TRAFFIC VOLUMES

FIGURE 9



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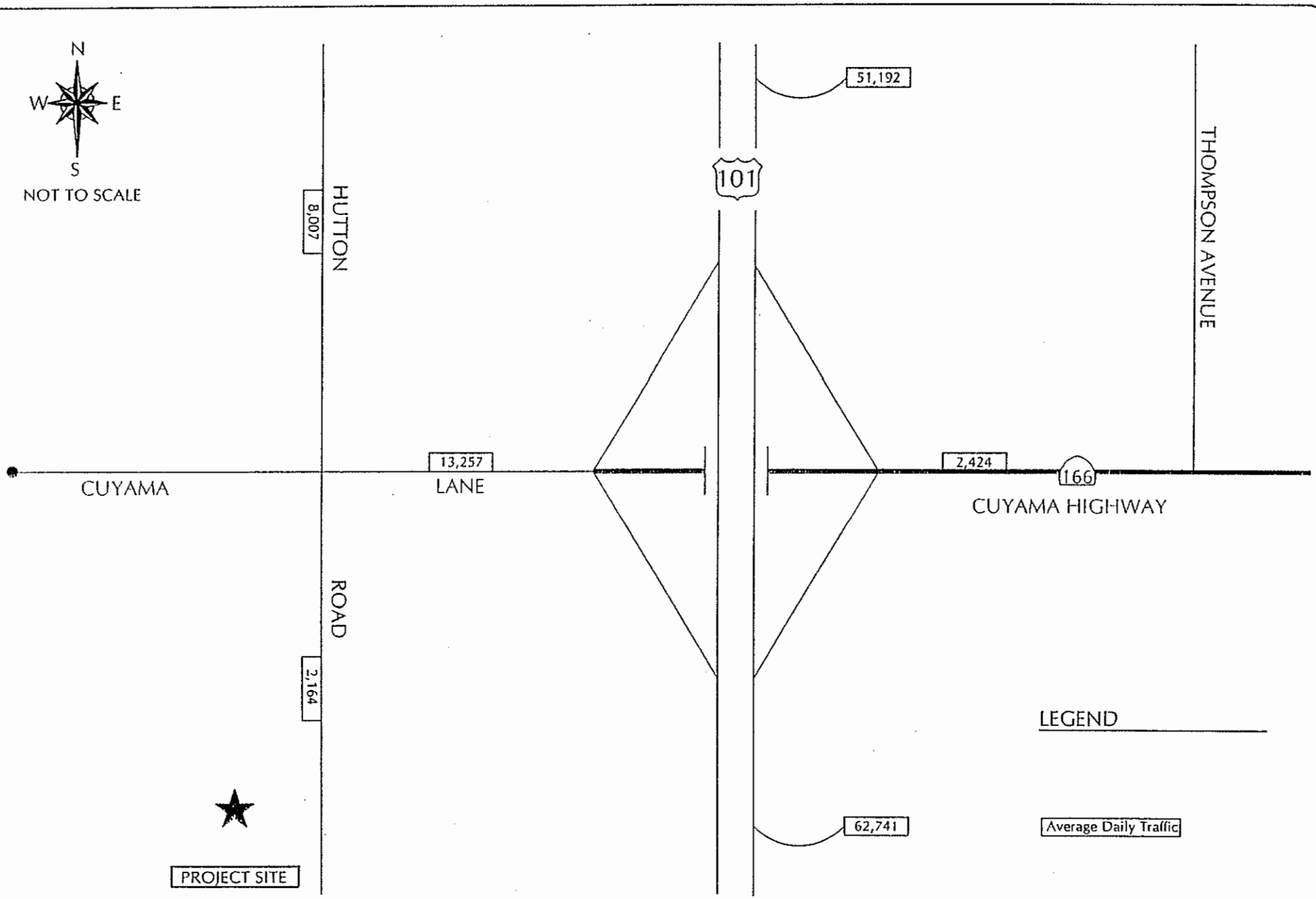
PROJECT AVERAGE DAY P.M. PEAK HOUR TRAFFIC VOLUMES

FIGURE 10



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EXISTING + PROJECT
AVERAGE DAILY TRAFFIC VOLUMES

FIGURE 11

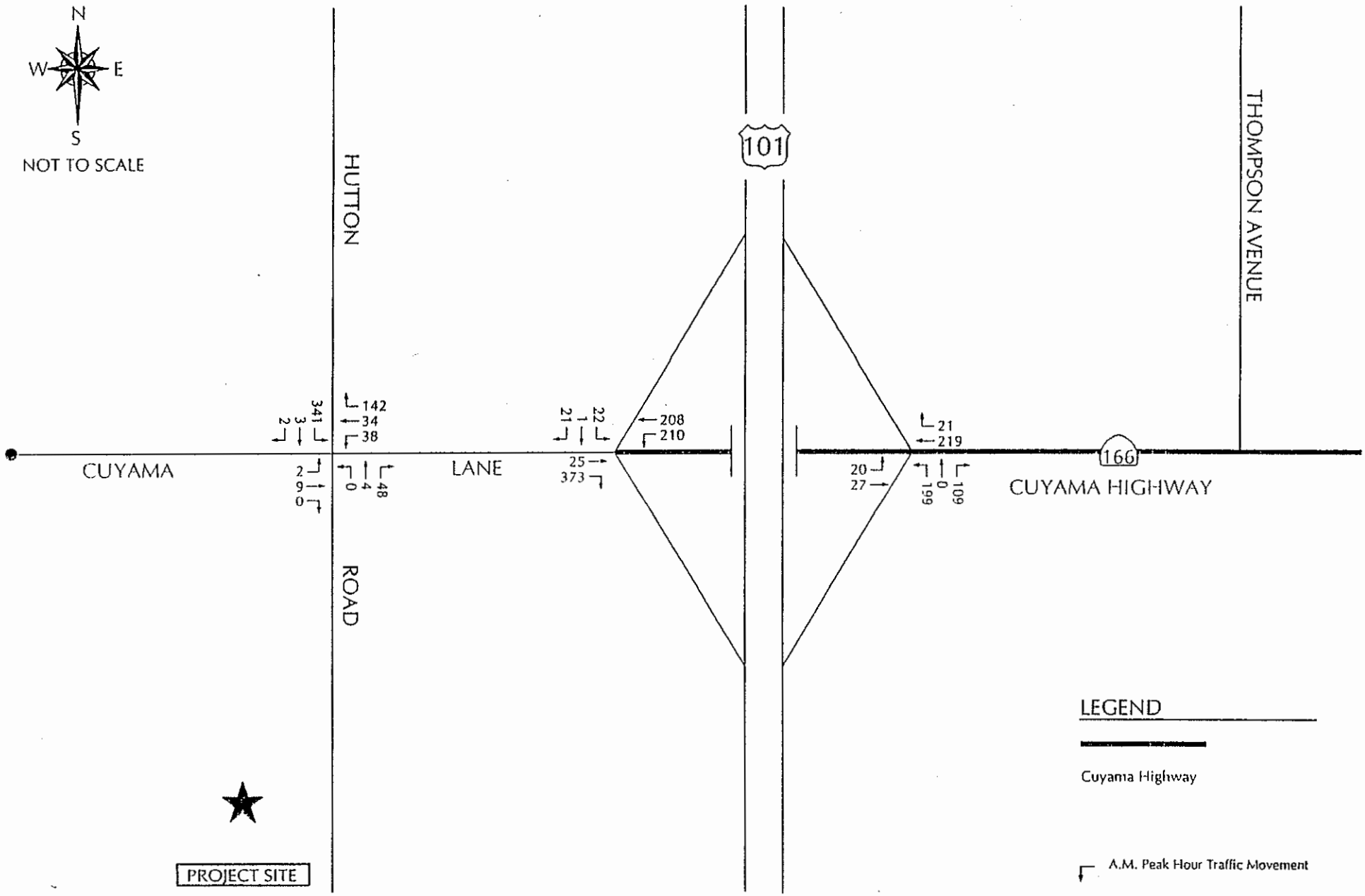
Intersection. Intersection volumes for the existing + project peak day scenario is listed in Tables 5 and 6. Existing + project peak day traffic volumes are illustrated in Figures 12 and 13.

Table 5
Existing + Project Peak Day A.M. Peak Hour Intersection Operations

Intersection	A.M. Peak Hour		Impact
	Existing	Existing + Project	
	Delay-LOS	Delay-LOS	
U.S. Highway 101 NB Ramps/Cuyama Highway (S.R. 166) eastbound left/through movement: northbound approach:	 7.8 sec. - LOS A 11.1 sec. - LOS B	 7.8 sec. - LOS A 11.6 sec. - LOS B	No
U.S. Highway 101 SB Ramps/Cuyama Highway (S.R. 166) westbound left/through movement: southbound approach:	 8.9 sec. - LOS A 16.5 sec. - LOS C	 9.0 sec. - LOS A 16.5 sec. - LOS C	No
Hutton Road/Cuyama Lane eastbound left/through/right movement: westbound left/through/right movement: northbound approach: southbound approach:	 7.6 sec. - LOS A 7.3 sec. - LOS A 8.8 sec. - LOS A 13.9 sec. - LOS C	 7.6 sec. - LOS A 7.3 sec. - LOS A 8.8 sec. - LOS A 17.3 sec. - LOS C	No

Table 6
Existing + Project Peak Day P.M. Peak Hour Intersection Operations

Intersection	P.M. Peak Hour		Impact
	Existing	Existing + Project	
	Delay-LOS	Delay-LOS	
U.S. Highway 101 NB Ramps/Cuyama Highway (S.R. 166) eastbound left/through movement: northbound approach:	 7.7 sec. - LOS A 13.2 sec. - LOS B	 7.7 sec. - LOS A 13.3 sec. - LOS B	No
U.S. Highway 101 SB Ramps/Cuyama Highway (S.R. 166) westbound left/through movement: southbound approach:	 8.6 sec. - LOS A 18.6 sec. - LOS C	 8.6 sec. - LOS A 18.7 sec. - LOS C	No
Hutton Road/Cuyama Lane eastbound left/through/right movement: westbound left/through/right movement: northbound approach: southbound approach:	 8.0 sec. - LOS A 7.3 sec. - LOS A 9.0 sec. - LOS A 15.6 sec. - LOS C	 8.0 sec. - LOS A 7.3 sec. - LOS A 9.1 sec. - LOS A 15.8 sec. - LOS C	No



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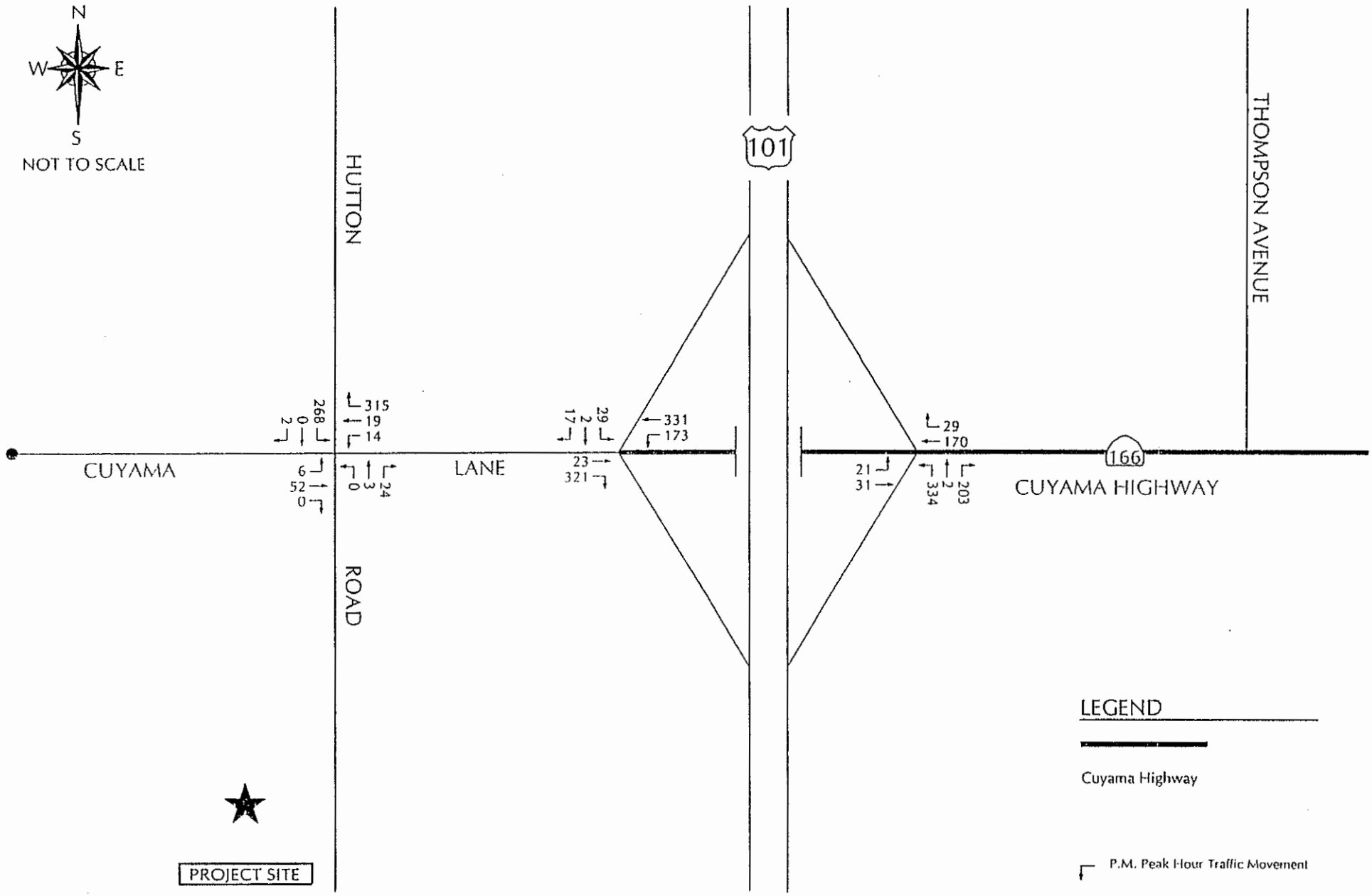
EXISTING + PROJECT A.M. PEAK HOUR TRAFFIC VOLUMES

FIGURE 12



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EXISTING + PROJECT P.M. PEAK HOUR TRAFFIC VOLUMES

FIGURE 13

The data in Tables 5 and 6 show that the addition of new traffic to the local street network adjacent to the project would not significantly impact the unsignalized study-area intersections, as they would continue to operate in the LOS A-C range. The U.S. Highway 101/Cuyama Highway interchange is currently used by large trucks similar to those used by the project. The current configuration of the interchange ramps will not pose a problem for the type of trucks serving the project.

CUMULATIVE ANALYSIS

The following section discusses the cumulative (Near-Term) scenario which includes the traffic generated by the background development. ATE assumed a 5 percent growth factor for growth on the adjacent surface streets. Historically, Caltrans traffic data for U.S. Highway 101 indicates that the adjacent freeway section has experienced an annual growth of less than 2 percent over a five year period.

Cumulative Impacts

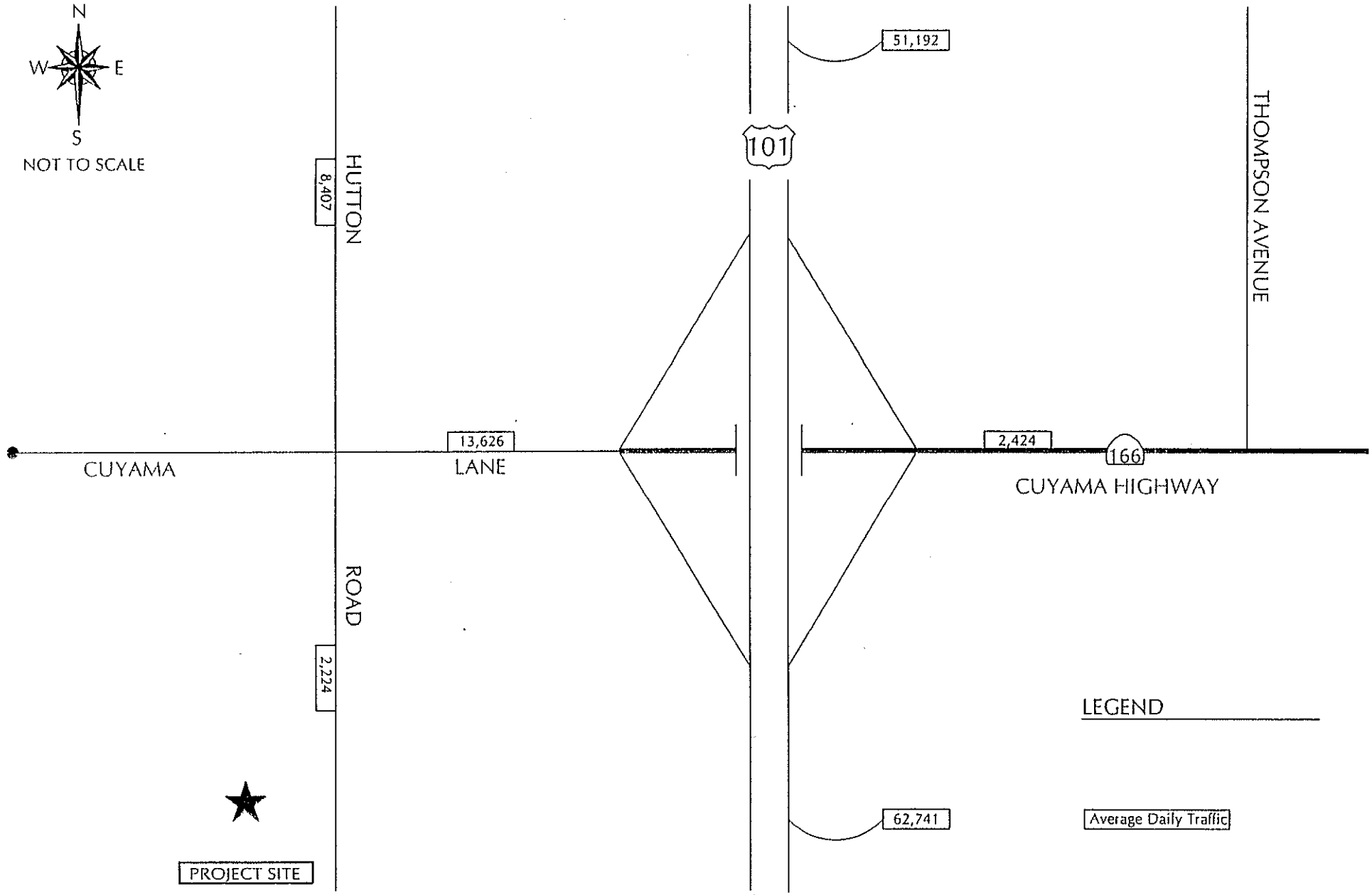
Levels of service were calculated for the study-area roadway and intersection and discussed in the following text. Intersection LOS worksheets are contained in the Technical Appendix.

Roadways. Roadway volumes for the cumulative + project peak day scenario are listed in Table 7 and illustrated in Figure 14.

Table 7
Cumulative + Project Peak Day Roadway Operations

Roadway Segment	Roadway Type	ADT		LOS	Impact
		Cumulative	Cumulative + Project		
U.S. Highway 101					
- north of Cuyama Highway	4-Lane Freeway	51,000	51,192	LOS C	No
- south of Cuyama Highway	4-Lane Freeway	62,000	62,741	LOS D	No
Hutton Road					
- north of Cuyama Lane	2-Lane Roadway	8,400	8,407	LOS A	No
- south of Cuyama Lane	2-Lane Roadway	1,260	2,224	LOS A	No
Cuyama Lane					
- east of Hutton Road	2-Lane Roadway	12,670	13,627	LOS C	No
- east of U.S. Highway 101	2-Lane Roadway	2,400	2,424	LOS A	No

The data in Table 7 show that the addition of project traffic to the local street network would not change the existing LOS noted in Table 1 and, therefore would not would not significantly impact the study-area freeway and roadway segments based on San Luis Obispo County impact criteria.



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CUMULATIVE + PROJECT
AVERAGE DAILY TRAFFIC VOLUMES

FIGURE 14

Intersections. Intersection volumes for the cumulative + project scenario is listed in Tables 8 and 9. Cumulative + project peak day traffic volumes are illustrated in Figures 15 and 16.

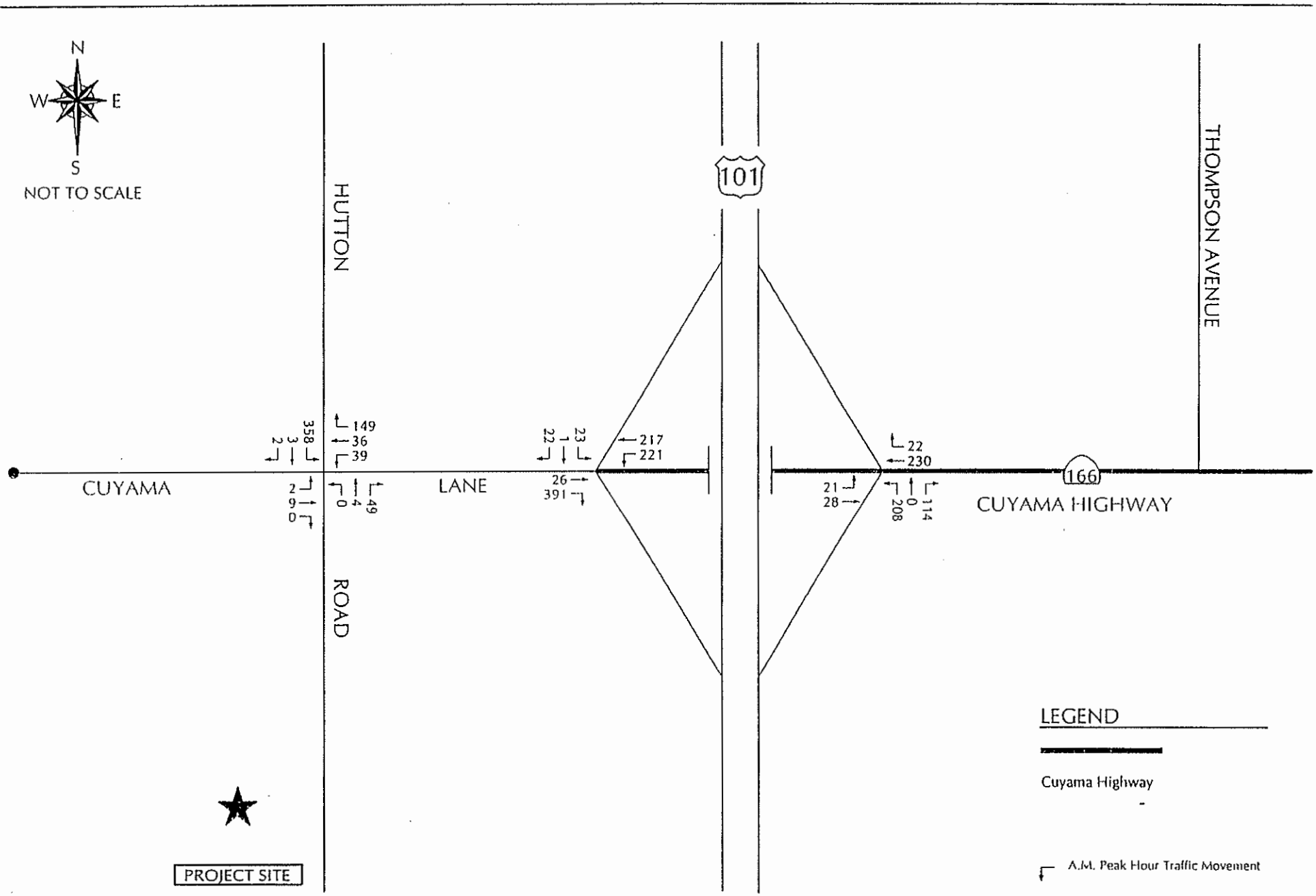
Table 8
Cumulative + Project Peak Day A.M. Peak Hour Intersection Operations

Intersection	A.M. Peak Hour		Impact
	Cumulative	Cumulative + Project	
	Delay-LOS	Delay-LOS	
U.S. Highway 101 NB Ramps/Cuyama Highway (S.R. 166) eastbound left/through movement: northbound approach:	 7.8 sec. - LOS A 11.3 sec. - LOS B	 7.8 sec. - LOS A 11.9 sec. - LOS B	No
U.S. Highway 101 SB Ramps/Cuyama Highway (S.R. 166) westbound left/through movement: southbound approach:	 9.0 sec. - LOS A 17.5 sec. - LOS C	 9.1 sec. - LOS A 17.5 sec. - LOS C	No
Hutton Road/Cuyama Lane eastbound left/through/right movement: westbound left/through/right movement: northbound approach: southbound approach:	 7.6 sec. - LOS A 7.3 sec. - LOS A 8.8 sec. - LOS A 14.6 sec. - LOS B	 7.6 sec. - LOS A 7.3 sec. - LOS A 8.8 sec. - LOS A 18.4 sec. - LOS C	No

Table 9
Cumulative + Project Peak Day P.M. Peak Hour Intersection Operations

Intersection	P.M. Peak Hour		Impact
	Cumulative	Cumulative + Project	
	Delay-LOS	Delay-LOS	
U.S. Highway 101 NB Ramps/Cuyama Highway (S.R. 166) eastbound left/through movement: northbound approach:	 7.7 sec. - LOS A 13.9 sec. - LOS B	 7.7 sec. - LOS A 13.9 sec. - LOS B	No
U.S. Highway 101 SB Ramps/Cuyama Highway (S.R. 166) westbound left/through movement: southbound approach:	 8.7 sec. - LOS A 19.8 sec. - LOS C	 8.7 sec. - LOS A 20.0 sec. - LOS C	No
Hutton Road/Cuyama Lane eastbound left/through/right movement: westbound left/through/right movement: northbound approach: southbound approach:	 8.1 sec. - LOS A 7.4 sec. - LOS A 9.0 sec. - LOS A 16.5 sec. - LOS C	 8.1 sec. - LOS A 7.4 sec. - LOS A 9.1 sec. - LOS A 16.8 sec. - LOS C	No

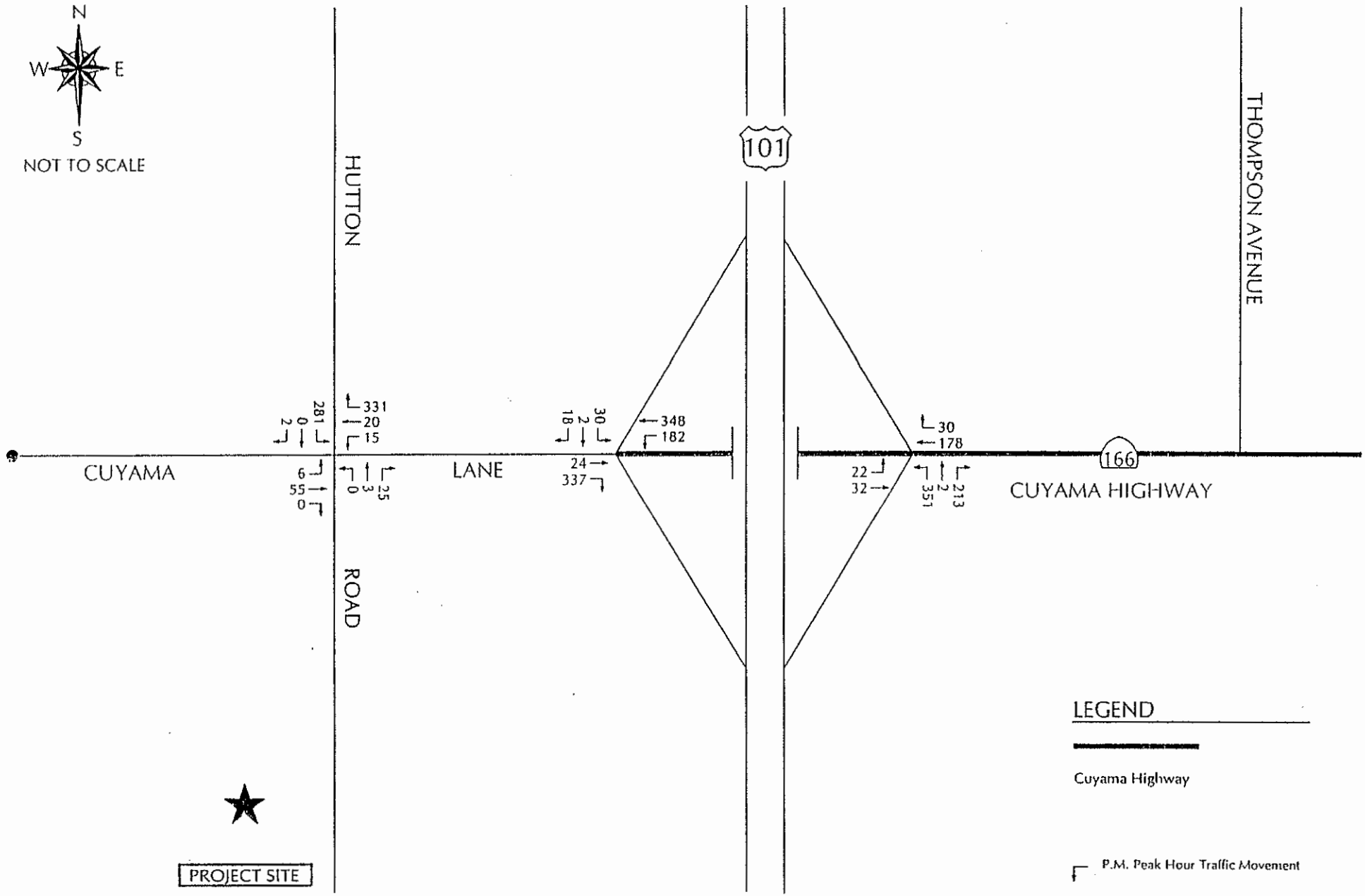
The data in Tables 8 and 9 shows that the addition of new traffic to the local street network adjacent to the project would not significantly impact the unsignalized study-area intersections, as they would continue to operate in the LOS A-C range.



ASSOCIATED TRANSPORTATION ENGINEERS

CUMULATIVE + PROJECT A.M. PEAK HOUR TRAFFIC VOLUMES

FIGURE 1



Associated Transportation Engineers

CUMULATIVE + PROJECT P.M. PEAK HOUR TRAFFIC VOLUMES

FIGURE 16

GENERAL PLAN BUILDOUT

The subject property is currently designated for Commercial Service. The project would result in a re-designation to Industrial. Commercial Service would allow for land uses such as service-stations and fast-food restaurants which would generate significantly more traffic during the peak hour periods than the proposed project land use. Therefore, there is no need to complete a General Plan Buildout traffic analysis.

SITE ACCESS ROUTE

Access to the asphalt plant is provided by the U.S. Highway 101/State Route 166 (Cuyama Highway) interchange with direct access via Hutton Road. These facilities currently serve large trucks similar to the type used to deliver asphalt and aggregate. The project's traffic pattern is such that inbound and outbound traffic must use the Cuyama Lane/Hutton Road intersection. The segment of Hutton Road adjacent to the site access is relatively straight, level and in fair condition. Approximately 99% of all site traffic will enter and exit via the U.S. Highway 101/State Route 166 (Cuyama Highway) interchange. As stated earlier in the traffic study, the U.S. Highway 101/Cuyama Highway interchange is currently used by large trucks similar to those used by the project. The current configuration of the interchange ramps will not pose a problem for the type of trucks serving the project. The South County Circulation Study recommends that the U.S. Highway 101/Cuyama Highway interchange ramps and Cuyama Highway/Hutton Road intersection be monitored to determine if warrants are met for the installation of traffic signals.

ATE reviewed Hutton Road to determine if the addition project trucks would impact the structural section. The structural section of Hutton Road has a TI of 6.0. The existing ADT of 464 on Hutton Road equates to an Equivalent Single Axel Load (ESAL) of 3,196,960. Assuming all project trucks are 5-axle, with the addition of project average daily traffic, the ESAL equates to 4,754,100. A TI of 4.5 is adequate for the plus project ESAL. Based on Table 603.4a in the Caltrans Design Manual, 5th Edition, project truck traffic will not have a significant impact on structural section of Hutton Road.

CONCLUSION AND RECOMMENDATIONS

The proposed A.J. Diani Project is a portable, stand alone asphaltic concrete plant. Access is provided by U.S. Highway 101 via the State Route 166 (Cuyama Highway) interchange. Direct access will be provided via Hutton Road. Hutton Road presently serves the industrial uses in the vicinity of the project site.

Review of existing traffic conditions in the study-area revealed that U.S. Highway 101 south of State Route 166 (Cuyama Highway) currently operates in the LOS D range, north of State Route 166 (Cuyama Highway) U.S. Highway 101 operates in the LOS C range and Hutton Road operates at LOS A. The three study-area intersections currently operate in the LOS A-C range during the A.M. and P.M. peak hour periods.

According to the project description provided to ATE by the applicant, the majority of traffic generated by the project during the A.M. peak hour period would be routed to and from U.S. Highway 101 via State Route 166. During the 7:00 - 9:00 A.M. peak hour period, product deliveries will occur. During the 4:00 - 6:00 P.M. peak hour period, only employee shift change trips would occur.

The roadway and intersection analyses show that the existing street system works quite well and reserve capacity is available. The peak operation day production level of the A.J. Diani project would produce 964 daily trips, 56 A.M. peak hour trips and 6 P.M. peak hour trips. On an average operation day the production would be 226 average daily trips. The existing surface streets, interchange ramps and intersection have the capacity to accommodate peak operation day traffic and the project would have only a minor effect on the area roadways, interchange ramps and intersections and would not generate significant impacts. Similarly, the minor affect of project traffic could be accommodated under Short-Term cumulative conditions. San Luis Obispo County has a traffic fee program to address traffic and circulation needs. The project would be required to contribute to the fee program to mitigate its incremental impact.

■ ■ ■

STUDY PARTICIPANTS AND REFERENCES

Associated Transportation Engineers

Richard L. Pool, Principal Engineer
Darryl F. Nelson, Senior Transportation Planner
Brian T. Hiefield, Traffic Technician I
Leo Huerta, Traffic Technician I

References

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1999 Traffic Volumes on California State Highways, California Department of Transportation, June 2000.

1998 Traffic Volumes on California State Highways, California Department of Transportation, June 1999.

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Persons Contacted

Richard Marshall, San Luis Obispo County Public Works Department
Louis Merzario, West Coast Environmental

TECHNICAL APPENDIX

CONTENTS:

LEVEL OF SERVICE DEFINITIONS

Signalized Intersection Level of Service Definitions

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

[a] Average control delay per vehicle in seconds.

Unsignalized Intersection Level of Service Definitions

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

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

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

ENGINEERING ROADWAY DESIGN CAPACITIES

STANDARD ENGINEERING ROADWAY DESIGN CAPACITIES

Roadway Type	# of Lanes	LOS A		LOS B		LOS C		LOS D		LOS E	
		Low	High	Low	High	Low	High	Low	High	Low	High
Arterial	2 Lanes	8,100	12,000	9,400	14,000	10,800	16,000	12,100	18,000	13,500	20,000
Arterial	4 Lanes	16,100	23,900	18,900	27,900	21,600	31,900	24,300	35,900	27,000	39,900
Major	2 Lanes	6,500	9,600	7,500	11,200	8,600	12,800	9,700	14,400	10,800	16,000
Major	4 Lanes	12,900	19,200	15,100	22,300	17,200	25,500	19,400	28,700	21,600	31,900
Collector	2 Lanes	4,600	7,100	5,400	8,200	6,200	9,400	6,900	10,600	7,700	11,800

The roadway capacities listed above are "rule of thumb." Some factors which affect these capacities are intersections (numbers and configuration), degrees of access control, roadway grades, design geometries (horizontal and vertical alignment standards), sight distance, level of truck and bus traffic and level of pedestrian and bicycle traffic.

LEVEL OF SERVICE CALCULATION WORKSHEETS

Reference 1 - U.S. Highway 101 Northbound Ramps/State Route 166
Reference 2 - U.S. Highway 101 Southbound Ramps/State Route 166
Reference 3 - Cuyama Road/Hutton Road

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*Darryl Nelson*	Intersection	*U.S. 101 NB Ramps/S.R. 166*
Agency/Co.	*ATE*	Jurisdiction	*SLO*
Date Performed	*02/06/2003*	Analysis Year	*Existing Conditions*
Analysis Time Period	*A.M. Peak Hour*	Project ID	*A.J. Diani*

East/West Street: *State Route 166*	North/South Street: *U.S. Highway 101 NB Ramps*
Intersection Orientation: *East-West*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	*14*	*26*	*0*	*0*	*218*	*21*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*15*	*28*	*0*	*0*	*236*	*22*
Percent Heavy Vehicles	*2*	–	–	*2*	–	–
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*179*	*0*	*109*	*0*	*0*	*0*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*194*	*0*	*118*	*0*	*0*	*0*
Percent Heavy Vehicles	*2*	*2*	*2*	*2*	*2*	*2*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*1*	*0*	*0*	*0*
Configuration	*LT*		*R*			

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*		*LT*		*R*			
v (vph)	*15*		*194*		*118*			
C (m) (vph)	*1307*		*679*		*1047*			
v/c	*0.01*		*0.29*		*0.11*			
95% queue length	*0.03*		*1.18*		*0.38*			
Control Delay	*7.8*		*12.4*		*8.9*			
LOS	*A*		*B*		*A*			
Approach Delay	–	–	*11.1*					
Approach LOS	–	–	*B*					

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	Darryl Nelson	Intersection	U.S. 101 NB Ramps/S.R. 166
Agency/Co.	ATE	Jurisdiction	SLO
Date Performed	02/06/2003	Analysis Year	Existing Conditions
Analysis Time Period	P.M. Peak Hour	Project ID	A.J. Diani

East/West Street: State Route 166 | North/South Street: U.S. Highway 101 NB Ramps

Intersection Orientation: East-West | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	20	31	0	0	170	29
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Hourly Flow Rate, HFR	21	33	0	0	184	31
Percent Heavy Vehicles	2	–	–	2	–	–
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	334	2	203	0	0	0
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Hourly Flow Rate, HFR	363	2	220	0	0	0
Percent Heavy Vehicles	2	2	2	2	2	2
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	1	1	0	0	0
Configuration	LT		R			

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT		LT		R			
v (vph)	21		365		220			
C (m) (vph)	1355		703		1041			
v/c	0.02		0.52		0.21			
95% queue length	0.05		3.02		0.80			
Control Delay	7.7		15.5		9.4			
LOS	A		C		A			
Approach Delay	–	–	13.2					
Approach LOS	–	–	B					

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Darryl Nelson*
Agency/Co.	*ATE*
Date Performed	*02/06/2003*
Analysis Time Period	*A.M. Peak Hour*

Site Information

Intersection	*U.S. 101 NB Ramps/S.R. 166*
Jurisdiction	*SLO*
Analysis Year	*Existing + Project Conditions*
Project ID	*A.J. Diani*

East/West Street: *State Route 166* | North/South Street: *U.S. Highway 101 NB Ramps*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	*20*	*27*	*0*	*0*	*219*	*21*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*21*	*29*	*0*	*0*	*238*	*22*
Percent Heavy Vehicles	*2*	–	–	*2*	–	–
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*199*	*0*	*109*	*0*	*0*	*0*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*216*	*0*	*118*	*0*	*0*	*0*
Percent Heavy Vehicles	*2*	*2*	*2*	*2*	*2*	*2*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*1*	*0*	*0*	*0*
Configuration	*LT*		*R*			

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*		*LT*		*R*			
v (vph)	*21*		*216*		*118*			
C (m) (vph)	*1304*		*662*		*1046*			
v/c	*0.02*		*0.33*		*0.11*			
95% queue length	*0.05*		*1.42*		*0.38*			
Control Delay	*7.8*		*13.0*		*8.9*			
LOS	*A*		*B*		*A*			
Approach Delay	–	–	*11.6*					
Approach LOS	–	–	*B*					

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	Darryl Nelson	Intersection	U.S. 101 NB Ramps/S.R. 166
Agency/Co.	ATE	Jurisdiction	SLO
Date Performed	02/06/2003	Analysis Year	Existing + Project Conditions
Analysis Time Period	P.M. Peak Hour	Project ID	A.J. Diani

East/West Street: State Route 166	North/South Street: U.S. Highway 101 NB Ramps
Intersection Orientation: East-West	Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	21	31	0	0	170	29
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Hourly Flow Rate, HFR	22	33	0	0	184	31
Percent Heavy Vehicles	2	–	–	2	–	–
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	334	2	203	0	0	0
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Hourly Flow Rate, HFR	363	2	220	0	0	0
Percent Heavy Vehicles	2	2	2	2	2	2
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	1	1	0	0	0
Configuration	LT		R			

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT		LT		R			
v (vph)	22		365		220			
C (m) (vph)	1355		700		1041			
v/c	0.02		0.52		0.21			
95% queue length	0.05		3.05		0.80			
Control Delay	7.7		15.6		9.4			
LOS	A		C		A			
Approach Delay	–	–	13.3					
Approach LOS	–	–	B					

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	Darryl Nelson	Intersection	U.S. 101 NB Ramps/S. R. 166
Agency/Co.	ATE	Jurisdiction	SLO
Date Performed	02/06/2003	Analysis Year	Cumulative Conditions
Analysis Time Period	A.M. Peak Hour	Project ID	A.J. Diani

East/West Street: State Route 166	North/South Street: U.S. Highway 101 NB Ramps
Intersection Orientation: East-West	Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	15	27	0	0	229	22
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Hourly Flow Rate, HFR	16	29	0	0	248	23
Percent Heavy Vehicles	2	–	–	2	–	–
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	188	0	114	0	0	0
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Hourly Flow Rate, HFR	204	0	123	0	0	0
Percent Heavy Vehicles	2	2	2	2	2	2
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	1	1	0	0	0
Configuration	LT		R			

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT		LT		R			
v (vph)	16		204		123			
C (m) (vph)	1292		665		1046			
v/c	0.01		0.31		0.12			
95% queue length	0.04		1.30		0.40			
Control Delay	7.8		12.8		8.9			
LOS	A		B		A			
Approach Delay	–	–	11.3					
Approach LOS	–	–	B					

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*Darryl Nelson*	Intersection	*U.S. 101 NB Ramps/S.R. 166*
Agency/Co.	*ATE*	Jurisdiction	*SLO*
Date Performed	*02/06/2003*	Analysis Year	*Cumulative Conditions*
Analysis Time Period	*P.M. Peak Hour*	Project ID	*A.J. Diani*

East/West Street: *State Route 166*	North/South Street: *U.S. Highway 101 NB Ramps*
Intersection Orientation: *East-West*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	*21*	*32*	*0*	*0*	*178*	*30*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*22*	*34*	*0*	*0*	*193*	*32*
Percent Heavy Vehicles	*2*	–	–	*2*	–	–
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*351*	*2*	*213*	*0*	*0*	*0*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*381*	*2*	*231*	*0*	*0*	*0*
Percent Heavy Vehicles	*2*	*2*	*2*	*2*	*2*	*2*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*1*	*0*	*0*	*0*
Configuration	*LT*		*R*			

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*		*LT*		*R*			
v (vph)	*22*		*383*		*231*			
C (m) (vph)	*1344*		*690*		*1039*			
v/c	*0.02*		*0.56*		*0.22*			
95% queue length	*0.05*		*3.44*		*0.85*			
Control Delay	*7.7*		*16.5*		*9.5*			
LOS	*A*		*C*		*A*			
Approach Delay	–	–	*13.9*					
Approach LOS	–	–	*B*					

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	Darryl Nelson	Intersection	U.S. 101 NB Ramps/S. R. 166
Agency/Co.	ATE	Jurisdiction	SLO
Date Performed	02/06/2003	Analysis Year	Cumulative + Project Condition
Analysis Time Period	A.M. Peak Hour	Project ID	A.J. Diani

East/West Street: State Route 166	North/South Street: U.S. Highway 101 NB Ramps
Intersection Orientation: East-West	Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	21	28	0	0	230	22
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Hourly Flow Rate, HFR	22	30	0	0	249	23
Percent Heavy Vehicles	2	–	–	2	–	–
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	208	0	114	0	0	0
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Hourly Flow Rate, HFR	226	0	123	0	0	0
Percent Heavy Vehicles	2	2	2	2	2	2
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	1	1	0	0	0
Configuration	LT		R			

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT		LT		R			
v (vph)	22		226		123			
C (m) (vph)	1291		650		1044			
v/c	0.02		0.35		0.12			
95% queue length	0.05		1.55		0.40			
Control Delay	7.8		13.5		8.9			
LOS	A		B		A			
Approach Delay	–	–	11.9					
Approach LOS	–	–	B					

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	Darryl Nelson	Intersection	U.S. 101 NB Ramps/S. R 166
Agency/Co.	ATE	Jurisdiction	SLO
Date Performed	02/06/2003	Analysis Year	Cumulative + Project Condition
Analysis Time Period	P.M. Peak Hour	Project ID	A.J. Diani

East/West Street: State Route 166	North/South Street: U.S. Highway 101 NB Ramps
Intersection Orientation: East-West	Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	21	32	0	0	178	30
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Hourly Flow Rate, HFR	22	34	0	0	193	32
Percent Heavy Vehicles	2	–	–	2	–	–
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	351	2	213	0	0	0
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Hourly Flow Rate, HFR	381	2	231	0	0	0
Percent Heavy Vehicles	2	2	2	2	2	2
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	1	1	0	0	0
Configuration	LT		R			

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT		LT		R			
v (vph)	22		383		231			
C (m) (vph)	1344		690		1039			
v/c	0.02		0.56		0.22			
95% queus length	0.05		3.44		0.85			
Control Delay	7.7		16.5		9.5			
LOS	A		C		A			
Approach Delay	–	–	13.9					
Approach LOS	–	–	B					

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	Darryl Nelson	Intersection	U.S. 101 SB Ramps/Cuyama Lane
Agency/Co.	ATE	Jurisdiction	SLO
Date Performed	02/06/2003	Analysis Year	Existing Conditions
Analysis Time Period	A.M. Peak Hour	Project ID	A.J. Diani

East/West Street: Cuyama Lane	North/South Street:
Intersection Orientation: East-West	Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	0	18	353	210	187	0
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Hourly Flow Rate, HFR	0	19	383	228	203	0
Percent Heavy Vehicles	2	--	--	2	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration			TR	LT		
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	0	22	1	15
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Hourly Flow Rate, HFR	0	0	0	23	1	16
Percent Heavy Vehicles	2	2	2	2	2	2
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	1	0
Configuration					LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		LT					LTR	
v (vph)		228					40	
C (m) (vph)		1157					352	
v/c		0.20					0.11	
95% queue length		0.73					0.38	
Control Delay		8.9					16.5	
LOS		A					C	
Approach Delay	--	--				16.5		
Approach LOS	--	--				C		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	Darryl Nelson	Intersection	U.S. 101 SB Ramps/Cuyama Lane
Agency/Co.	ATE	Jurisdiction	SLO
Date Performed	02/06/2003	Analysis Year	Existing Conditions
Analysis Time Period	P.M. Peak Hour	Project ID	A.J. Diani

East/West Street: Cuyama Lane | North/South Street: U.S. Highway 101 SB Ramps

Intersection Orientation: East-West | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	0	22	317	173	331	0
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Hourly Flow Rate, HFR	0	23	344	188	359	0
Percent Heavy Vehicles	2	–	–	2	–	–
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration			TR	LT		
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	0	29	2	17
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Hourly Flow Rate, HFR	0	0	0	31	2	18
Percent Heavy Vehicles	2	2	2	2	2	2
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	1	0
Configuration					LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		LT					LTR	
v (vph)		188					51	
C (m) (vph)		1192					315	
v/c		0.16					0.16	
95% queue length		0.56					0.57	
Control Delay		8.6					18.6	
LOS		A					C	
Approach Delay	–	–				18.6		
Approach LOS	–	–				C		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	Darryl Nelson	Intersection	U.S. 101 SB Ramps/Cuyama Lane
Agency/Co.	ATE	Jurisdiction	SLO
Date Performed	02/06/2003	Analysis Year	Existing + Project Conditions
Analysis Time Period	A.M. Peak Hour	Project ID	A.J. Diani

East/West Street: Cuyama Lane | North/South Street: U.S. Highway 101 SB Ramps

Intersection Orientation: East-West | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	0	25	373	210	208	0
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Hourly Flow Rate, HFR	0	27	405	228	226	0
Percent Heavy Vehicles	2	--	--	2	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration			TR	LT		
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	0	22	1	21
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Hourly Flow Rate, HFR	0	0	0	23	1	22
Percent Heavy Vehicles	2	2	2	2	2	2
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	1	0
Configuration					LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		LT					LTR	
v (vph)		228					46	
C (m) (vph)		1128					359	
v/c		0.20					0.13	
95% queue length		0.75					0.44	
Control Delay		9.0					16.5	
LOS		A					C	
Approach Delay	--	--				16.5		
Approach LOS	--	--				C		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	Darryl Nelson	Intersection	U.S. 101 SB Ramps/Cuyama Lane
Agency/Co.	ATE	Jurisdiction	SLO
Date Performed	02/06/2003	Analysis Year	Existing + Project Conditions
Analysis Time Period	P.M. Peak Hour	Project ID	A.J. Diani

East/West Street: Cuyama Lane	North/South Street: U.S. Highway 101 SB Ramps
Intersection Orientation: East-West	Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	0	23	321	173	331	0
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Hourly Flow Rate, HFR	0	24	348	188	359	0
Percent Heavy Vehicles	2	–	–	2	–	–
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration			TR	LT		
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	0	29	2	17
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Hourly Flow Rate, HFR	0	0	0	31	2	18
Percent Heavy Vehicles	2	2	2	2	2	2
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	1	0
Configuration					LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		LT					LTR	
v (vph)		188					51	
C (m) (vph)		1186					313	
v/c		0.16					0.16	
95% queue length		0.56					0.57	
Control Delay		8.6					18.7	
LOS		A					C	
Approach Delay	–	–					18.7	
Approach LOS	–	–					C	

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	Darryl Nelson	Intersection	U.S. 101 SB Ramps/Cuyama Lane
Agency/Co.	ATE	Jurisdiction	SLO
Date Performed	02/06/2003	Analysis Year	Cumulative Conditions
Analysis Time Period	A.M. Peak Hour	Project ID	A.J. Diani

East/West Street: Cuyama Lane	North/South Street: U.S. Highway 101 SB Ramps
Intersection Orientation: East-West	Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	0	19	371	221	196	0
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Hourly Flow Rate, HFR	0	20	403	240	213	0
Percent Heavy Vehicles	2	–	–	2	–	–
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration			TR	LT		
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	0	23	1	16
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Hourly Flow Rate, HFR	0	0	0	24	1	17
Percent Heavy Vehicles	2	2	2	2	2	2
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	1	0
Configuration					LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		LT					LTR	
v (vph)		240					42	
C (m) (vph)		1136					330	
v/c		0.21					0.13	
95% queue length		0.80					0.43	
Control Delay		9.0					17.5	
LOS		A					C	
Approach Delay	–	–					17.5	
Approach LOS	–	–					C	

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	Darryl Nelson	Intersection	U.S. 101 SB Ramps/Cuyama Lane
Agency/Co.	ATE	Jurisdiction	SLO
Date Performed	02/06/2003	Analysis Year	Cumulative Conditions
Analysis Time Period	P.M. Peak Hour	Project ID	A.J. Diani

East/West Street: Cuyama Lane | North/South Street: U.S. Highway 101 SB Ramps

Intersection Orientation: East-West | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	0	23	333	182	348	0
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Hourly Flow Rate, HFR	0	24	361	197	378	0
Percent Heavy Vehicles	2	–	–	2	–	–
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration			TR	LT		
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	0	30	2	18
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Hourly Flow Rate, HFR	0	0	0	32	2	19
Percent Heavy Vehicles	2	2	2	2	2	2
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	1	0
Configuration					LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		LT					LTR	
v (vph)		197					53	
C (m) (vph)		1173					296	
v/c		0.17					0.18	
95% queue length		0.60					0.64	
Control Delay		8.7					19.8	
LOS		A					C	
Approach Delay	–	–					19.8	
Approach LOS	–	–					C	

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*Darryl Nelson*	Intersection	*U.S. 101 SB Ramps/Cuyama Lane*
Agency/Co.	*ATE*	Jurisdiction	*SLO*
Date Performed	*02/06/2003*	Analysis Year	*Cumulative + Project Condition*
Analysis Time Period	*A.M. Peak Hour*	Project ID	*A.J. Diani*

East/West Street: *Cuyama Lane*	North/South Street: *U.S. Highway 101 SB Ramps*
Intersection Orientation: *East-West*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	*0*	*26*	*391*	*221*	*217*	*0*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*0*	*28*	*424*	*240*	*235*	*0*
Percent Heavy Vehicles	*2*	–	–	*2*	–	–
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*0*	*0*	*0*	*23*	*1*	*22*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*0*	*0*	*0*	*24*	*1*	*23*
Percent Heavy Vehicles	*2*	*2*	*2*	*2*	*2*	*2*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*1*	*0*
Configuration					*LTR*	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*					*LTR*	
v (vph)		*240*					*48*	
C (m) (vph)		*1109*					*338*	
v/c		*0.22*					*0.14*	
95% queue length		*0.82*					*0.49*	
Control Delay		*9.1*					*17.4*	
LOS		*A*					*C*	
Approach Delay	–	–					*17.4*	
Approach LOS	–	–					*C*	

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	Darryl Nelson	Intersection	U.S. 101 SB Ramps/Cuyama Lane
Agency/Co.	ATE	Jurisdiction	SLO
Date Performed	02/06/2003	Analysis Year	Cumulative + Project Condition
Analysis Time Period	P.M. Peak Hour	Project ID	A.J. Diani

East/West Street: Cuyama Lane | North/South Street: U.S. Highway 101 SB Ramps

Intersection Orientation: East-West | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	0	24	337	182	348	0
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Hourly Flow Rate, HFR	0	26	366	197	378	0
Percent Heavy Vehicles	2	–	–	2	–	–
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration			TR	LT		
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	0	30	2	18
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Hourly Flow Rate, HFR	0	0	0	32	2	19
Percent Heavy Vehicles	2	2	2	2	2	2
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	1	0
Configuration					LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		LT					LTR	
v (vph)		197					53	
C (m) (vph)		1167					293	
v/c		0.17					0.18	
95% queue length		0.61					0.65	
Control Delay		8.7					20.0	
LOS		A					C	
Approach Delay	–	–					20.0	
Approach LOS	–	–					C	

TWO-WAY STOP CONTROL SUMMARY

General Information / Site Information

Analyst	Darryl Nelson	Intersection	Cuyama Lane/Hutton Road
Agency/Co.	ATE	Jurisdiction	SLO
Date Performed	02/06/2003	Analysis Year	Existing Conditions
Analysis Time Period	A.M Peak Hour	Project ID	A.J. Diani

East/West Street: Cuyama Lane	North/South Street: Hutton Road
Intersection Orientation: East-West	Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	2	9	0	11	34	142
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Hourly Flow Rate, HFR	2	9	0	11	36	154
Percent Heavy Vehicles	2	–	–	2	–	–
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LTR			LTR		
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	4	21	341	3	2
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Hourly Flow Rate, HFR	0	4	22	370	3	2
Percent Heavy Vehicles	2	2	2	2	2	2
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 Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LTR	LTR		LTR			LTR	
v (vph)	2	11		26			375	
C (m) (vph)	1384	1611		981			778	
v/c	0.00	0.01		0.03			0.48	
95% queue length	0.00	0.02		0.08			2.65	
Control Delay	7.6	7.3		8.8			13.9	
LOS	A	A		A			B	
Approach Delay	–	–		8.8			13.9	
Approach LOS	–	–		A			B	

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*Darryl Nelson*	Intersection	*Cuyama Lane/Hutton Road*
Agency/Co.	*ATE*	Jurisdiction	*SLO*
Date Performed	*02/06/2003*	Analysis Year	*Existing Conditions*
Analysis Time Period	*P.M. Peak Hour*	Project ID	*A.J. Diani*

East/West Street: *Cuyama Lane* | North/South Street: *Hutton Road*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	6	52	0	14	19	315
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Hourly Flow Rate, HFR	6	56	0	15	20	342
Percent Heavy Vehicles	2	–	–	2	–	–
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LTR			LTR		
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	2	19	268	0	2
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Hourly Flow Rate, HFR	0	2	20	291	0	2
Percent Heavy Vehicles	2	2	2	2	2	2
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 Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LTR	LTR		LTR			LTR	
v (vph)	6	15		22			293	
C (m) (vph)	1197	1549		922			630	
v/c	0.01	0.01		0.02			0.47	
95% queue length	0.02	0.03		0.07			2.46	
Control Delay	8.0	7.3		9.0			15.6	
LOS	A	A		A			C	
Approach Delay	–	–	9.0			15.6		
Approach LOS	–	–	A			C		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*Darryl Nelson*	Intersection	*Cuyama Lane/Hutton Road*
Agency/Co.	*ATE*	Jurisdiction	*SLO*
Date Performed	*02/06/2003*	Analysis Year	*Existing + Project Conditions*
Analysis Time Period	*A.M. Peak Hour*	Project ID	*A.J. Diani*

East/West Street: *Cuyama Lane*	North/South Street: *Hutton Road*
Intersection Orientation: *East-West*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	*2*	*9*	*0*	*38*	*34*	*142*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*2*	*9*	*0*	*41*	*36*	*154*
Percent Heavy Vehicles	*2*	–	–	*2*	–	–
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LTR*			*LTR*		
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*0*	*4*	*48*	*341*	*3*	*2*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*0*	*4*	*52*	*370*	*3*	*2*
Percent Heavy Vehicles	*2*	*2*	*2*	*2*	*2*	*2*
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 Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LTR*	*LTR*		*LTR*			*LTR*	
v (vph)	*2*	*41*		*56*			*375*	
C (m) (vph)	*1384*	*1611*		*1017*			*665*	
v/c	*0.00*	*0.03*		*0.06*			*0.56*	
95% queue length	*0.00*	*0.08*		*0.17*			*3.53*	
Control Delay	*7.6*	*7.3*		*8.7*			*17.2*	
LOS	*A*	*A*		*A*			*C*	
Approach Delay	–	–		*8.7*			*17.2*	
Approach LOS	–	–		*A*			*C*	

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	Darryl Nelson	Intersection	Cuyama Lane/Hutton Road
Agency/Co.	ATE	Jurisdiction	SLO
Date Performed	02/06/2003	Analysis Year	Existing + Project Conditions
Analysis Time Period	P.M. Peak Hour	Project ID	A.J. Diani

East/West Street: Cuyama Lane	North/South Street: Hutton Road
Intersection Orientation: East-West	Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	6	52	0	14	19	315
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Hourly Flow Rate, HFR	6	56	0	15	20	342
Percent Heavy Vehicles	2	–	–	2	–	–
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LTR			LTR		
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	3	24	268	0	2
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Hourly Flow Rate, HFR	0	3	26	291	0	2
Percent Heavy Vehicles	2	2	2	2	2	2
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 Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LTR	LTR		LTR			LTR	
v (vph)	6	15		29			293	
C (m) (vph)	1197	1549		910			622	
v/c	0.01	0.01		0.03			0.47	
95% queue length	0.02	0.03		0.10			2.52	
Control Delay	8.0	7.3		9.1			15.8	
LOS	A	A		A			C	
Approach Delay	–	–	9.1			15.8		
Approach LOS	–	–	A			C		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*Darryl Nelson*	Intersection	*Cuyama Lane/Hutton Road*
Agency/Co.	*ATE*	Jurisdiction	*SLO*
Date Performed	*02/06/2003*	Analysis Year	*Cumulative Conditions*
Analysis Time Period	*A.M. Peak Hour*	Project ID	*A.J. Diani*

East/West Street: *Cuyama Lane*	North/South Street:
Intersection Orientation: *East-West*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	*2*	*9*	*0*	*12*	*36*	*149*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*2*	*9*	*0*	*13*	*39*	*161*
Percent Heavy Vehicles	*2*	–	–	*2*	–	–
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LTR*			*LTR*		
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*0*	*4*	*22*	*358*	*3*	*2*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*0*	*4*	*23*	*389*	*3*	*2*
Percent Heavy Vehicles	*2*	*2*	*2*	*2*	*2*	*2*
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 Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LTR*	*LTR*		*LTR*			*LTR*	
v (vph)	*2*	*13*		*27*			*394*	
C (m) (vph)	*1372*	*1611*		*980*			*764*	
v/c	*0.00*	*0.01*		*0.03*			*0.52*	
95% queue length	*0.00*	*0.02*		*0.08*			*3.00*	
Control Delay	*7.6*	*7.3*		*8.8*			*14.6*	
LOS	*A*	*A*		*A*			*B*	
Approach Delay	–	–		*8.8*			*14.6*	
Approach LOS	–	–		*A*			*B*	

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	Darryl Nelson	Intersection	Cuyama Lane/Hutton Road
Agency/Co.	ATE	Jurisdiction	SLO
Date Performed	02/06/2003	Analysis Year	Cumulative Conditions
Analysis Time Period	P.M. Peak Hour	Project ID	A.J. Diani

East/West Street: Cuyama Lane	North/South Street: Hutton Road
Intersection Orientation: East-West	Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	6	55	0	15	20	331
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Hourly Flow Rate, HFR	6	59	0	16	21	359
Percent Heavy Vehicles	2	–	–	2	–	–
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LTR			LTR		
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	2	20	281	0	2
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Hourly Flow Rate, HFR	0	2	21	305	0	2
Percent Heavy Vehicles	2	2	2	2	2	2
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 Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LTR	LTR		LTR			LTR	
v (vph)	6	16		23			307	
C (m) (vph)	1178	1545		917			616	
v/c	0.01	0.01		0.03			0.50	
95% queue length	0.02	0.03		0.08			2.78	
Control Delay	8.1	7.4		9.0			16.5	
LOS	A	A		A			C	
Approach Delay	–	–	9.0			16.5		
Approach LOS	–	–	A			C		

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Darryl Nelson*
Agency/Co.	*ATE*
Date Performed	*02/06/2003*
Analysis Time Period	*A.M. Peak Hour*

Site Information

Intersection	*Cuyama Lane/Hution Road*
Jurisdiction	*SLO*
Analysis Year	*Cumulative + Project Condition*
Project ID	*A.J. Diani*

East/West Street: *Cuyama Lane* | North/South Street: *Hution Road*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	*2*	*9*	*0*	*39*	*36*	*149*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*2*	*9*	*0*	*42*	*39*	*161*
Percent Heavy Vehicles	*2*	–	–	*2*	–	–
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LTR*			*LTR*		
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	*7*	*8*	*9*	*10*	*11*	*12*
	L	T	R	L	T	R
Volume	*0*	*4*	*49*	*358*	*3*	*2*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*0*	*4*	*53*	*389*	*3*	*2*
Percent Heavy Vehicles	*2*	*2*	*2*	*2*	*2*	*2*
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 Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LTR*	*LTR*		*LTR*			*LTR*	
v (vph)	*2*	*42*		*57*			*394*	
C (m) (vph)	*1372*	*1611*		*1016*			*655*	
v/c	*0.00*	*0.03*		*0.06*			*0.60*	
95% queue length	*0.00*	*0.08*		*0.18*			*4.03*	
Control Delay	*7.6*	*7.3*		*8.8*			*18.4*	
LOS	*A*	*A*		*A*			*C*	
Approach Delay	–	–	*8.8*			*18.4*		
Approach LOS	–	–	*A*			*C*		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	Darryl Nelson	Intersection	Cuyama Lane/Hutton Road
Agency/Co.	ATE	Jurisdiction	SLO
Date Performed	02/06/2003	Analysis Year	Cumulative + Project Condition
Analysis Time Period	P.M. Peak Hour	Project ID	A.J. Diani

East/West Street: Cuyama Lane	North/South Street: Hutton Road
Intersection Orientation: East-West	Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	6	55	0	15	20	331
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Hourly Flow Rate, HFR	6	59	0	16	21	359
Percent Heavy Vehicles	2	–	–	2	–	–
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LTR			LTR		
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	3	25	281	0	2
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Hourly Flow Rate, HFR	0	3	27	305	0	2
Percent Heavy Vehicles	2	2	2	2	2	2
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 Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LTR	LTR		LTR			LTR	
v (vph)	6	16		30			307	
C (m) (vph)	1178	1545		905			607	
v/c	0.01	0.01		0.03			0.51	
95% queue length	0.02	0.03		0.10			2.85	
Control Delay	8.1	7.4		9.1			16.8	
LOS	A	A		A			C	
Approach Delay	–	–	9.1			16.8		
Approach LOS	–	–	A			C		

HIGGINS ASSOCIATES
CIVIL & TRAFFIC ENGINEERS

October 26, 2004

MEMORANDUM

TO: Kris Vardas

FROM: Dan Takacs

SUBJECT: Biorn EIR

I have reviewed the traffic report prepared by ATE for the Biorn CUP and my comments are provided in this memorandum. Richard Marshall of the County Public Works staff and Darryl Nelson of ATE were contacted for this review.

1. The ATE report indicates that U.S. 101 with 51,000 ADT north of Cuyama Hwy operates at LOS C and U.S. 101 with 62,000 ADT south of Cuyama Hwy operates at LOS C under existing conditions. The 1994 Update of the South County Circulation Study indicates that U.S. 101 south of Cuyama Hwy with an ADT of 50,000 and a peak hour volume of 5,200 vph operates at LOS D. The Transportation Concept Report for Hwy 101 published by Caltrans (2001) indicates that the section of US 101 between the San Barbara/San Luis Obispo County Line and Arroyo Grande South Urban Boundary operates at LOS C during off-peak periods and LOS D during peak periods based on 1998 data (ADT= 53,500). The level of service threshold volumes that Higgins Associates uses for 4-lane freeways also indicates that the US 101 segment south of Cuyama Hwy operates at LOS D. The ATE findings of LOS C operations on US 101 south of Cuyama Hwy with 62,000 ADT needs to be squared against from the other sources that indicate the segment operates at LOS D with lower volumes. It is recommended that the report reflect that the US 101 segment south of Cuyama Hwy operate at LOS D under existing conditions, unless additional justification can be provided by ATE.

2. The Appendix of the report includes a table showing roadway design capacities, but does not include the design capacities for freeway segments. The roadway capacity table should be modified to include the freeway segment values.

3. The project trip distribution provided in the EIR Project Description does not match the trip distribution pattern used by ATE. In the ATE report, the project trips were assigned to the local road network using the following distribution pattern: US 101 South-- 77%; US 101 North-- 20%; SR 166 East 2%; Hutton Rd North 1%. On page 3-17 of the Project Description prepared by Padre Associates the following trip distribution for the project is described: US 101 South-- 55%; US 101 North-- 40%; SR 166 East 5%; Hutton Rd North 0%. If the trip distribution pattern described in the EIR project description is accurate, the trip assignments and analysis contained in the ATE report will need to be revised.

1500-B First Street · Gilroy, California · 95020-4758 · voice/408 848-5122 · fax/408 848-2202 · www.kbhiggins.com

4. The ATE traffic study indicates that Hutton Road is scheduled to be upgraded to County urban standards (pg 25). This improvement has been completed.

5. The project site is located adjacent to existing uses that generate truck trips and the project will generate heavy truck trips. The level of service calculations in the ATE study used a default value of 2% heavy vehicles for all analysis scenarios. The level of service analysis should be revised to account for the impact of large vehicles in the traffic stream. This can be done by either changing the percent heavy vehicles in the LOS calculation or by adjusting the traffic volumes to reflect the passenger car equivalencies of trucks in the existing traffic volumes and the project trip generation.

6. Cuyama Hwy crosses under US 101 and the entry ramps onto US 101 from Cuyama Hwy are upgrades. Richard Marshall indicated that the adequacy of the ramp lengths to serve the acceleration capabilities of heavy trucks should be evaluated.

7. The proposed project will add new truck trips and axle loadings to the existing road network. The potential impact of the project to roadway surfaces and roadway maintenance requirements should be analyzed and mitigated.

8. The proposed project involves a General Plan Amendment that will re-designate about 45 acres of land from Commercial Service to Industrial and about 9 acres of land from Residential Suburban to Industrial. The traffic study should document the potential change to the trip generation for the subject 54 acres given the proposed new land use designation. Analysis of General Plan buildout conditions may be required if the designation change increases the trip generation for the subject area.

9. The ATE traffic study used the County of San Luis Obispo impact thresholds to assess the significance of traffic related impacts. The study should also reference Caltrans impact thresholds for State highway facilities.

10. It is recommended that the project trip generation be adjusted to account for the generation of other miscellaneous trips. These would include trips by visitors, miscellaneous delivery and service trips and occasional non-commute related employee trips. For traffic studies of similar uses, Higgins Associates utilizes a daily trip generation rate of 3 trips per employee to account for the employee commute trips and other miscellaneous trips.

Please contact me if you have any questions regarding this information.

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

June 6, 2005 03009L02.LTR

Mr. Kris Vardas
Padre Associates
811 El Capitan Way, Suite 130
San Luis Obispo, CA 93401

RESPONSE TO COMMENTS ON THE TRAFFIC STUDY FOR THE A.J. DIANI ASPHALT PROJECT, SAN LUIS OBISPO COUNTY, CALIFORNIA

Associated Transportation Engineers (ATE) is providing following response to the comments on the traffic study prepared for the A.J. Diani Asphalt Project in San Luis Obispo County.

Comment 1: Why is a Project Study Report being done for the widening of the Santa Maria River Bridge? What is the outcome of the study?

Response 1: This is a Caltrans improvement project that has been consideration for many years. Refer to a Caltrans Transportation Concept Report approved on 10-19-01 at the following link: http://www.dot.ca.gov/dist05/planning/tcrs/166/maintext.pdf

Within a section entitled Transportation Concept, the following is noted regarding the Santa Maria River Bridge:

> *In addition to LOS, Caltrans considers continuity on the state highway system as desirable. Continuity within the system involves maintaining facility characteristics so traffic flows smoothly, and does not become restricted due to a particular component of the facility. As an example, the continuity of Route 101 will be impacted at the Santa Maria River Bridge when the project of widening Route 101 in Santa Maria from 4 to 6 lanes is completed. In this situation, the continuity to Route 101 will be returned when the Santa Maria River Bridge is widened to accommodate additional through lanes.*

The Santa Maria Ri-ver Bridge Project appeared on the 2004 FTIP Project Index: http://www.sbcag.org/PDFs/publications/Final2004FTIP.pdf

Implementing Agency	Project Title	Page No.	Primary Funding Source	MPO ID#
Caltrans	Santa Maria River Bridge Widening	27	STIP	CT13
Caltrans	Santa Maria Six Lane	28	STIP	CT10

More recently, this topic was discussed before the San Luis Obispo Council of Governments met on February 9, 2005, as noted in the following note in the meeting minutes: http://www.slocog.org/agendas/cog0205em.pdf

> ***4. Joint Santa Barbara County Association of Governments (SBCAG)/SLOCOG Meeting: Mr. De Carli*** *reviewed the considerations for a joint SBCAG/SLOCOG meeting as outlined in the Committee agenda, noting that SBCAG prefers to hold the meeting in Santa Maria, which is more of a mid-point between Santa Barbara and San Luis Obispo counties.* ***Vice President Ferrara*** *emphasized that if they would have this meeting, he would like the assurance that something would be accomplished. He noted the need to focus on coordination.* ***Past President Mecham*** *concurred, adding that the SLOCOG Board needs to focus on specific regional issues that need to be resolved. He asked if some of the issues summarized in the agenda would be resolved with this joint meeting, or if there is a need for those items to come back to their respective boards.* ***Mr. Devencenzi*** *responded it would be the latter, but this meeting would help to give SLOCOG an idea on SBCAG's position on these items, citing as an example the Santa Maria River Bridge project – it may be low priority for SLOCOG but it is high priority for Caltrans. An extensive discussion ensued. During the discussion,* ***Mr. Crawford*** *stressed the need to jointly notice the meeting per Brown Act requirement.*

The SBCAG FY 2005-06 Overall Work Program also mentions the Santa Maria River Bridge project at: http://www.sbcag.org/Meetings/TTAC/2005/April/Item7new.pdf

> *In addition, SBCAG and SLOCOG executed a Memorandum of Understanding for the Highway 101/Santa Maria River Bridge widening project. SBCAG is currently participating with Caltrans, SLOCOG, AMBAG and other central coast transportation agencies in developing the Central Coast Intelligent Transportation Systems (ITS) Architecture and Maintenance Plan.*

Comment 2: What about sharing costs for new bridge?

Response 2: There is no nexus for such cost sharing, given the improvement has long been planned by Caltrans.

Comment 3: Need to add discussion of South County circulation study in setting and what affected roads are included in study and that this area is subject to this feet. This program does not include any Caltrans improvements. Should development participate in bridge improvement efforts.

Response 3: "...subject to this feet"?? South County circulation study

Regarding the latter comment, there is no nexus for development participation, given the improvement has long been planned by Caltrans.

Comment 4: Need to verify that the current configuration of the interchange ramps will not result in a significant traffic safety issue. Any available info from the Bridge PSR? This analysis needs to be done by traffic consultant.

Response 4: The current interchange configuration meets Caltrans design standards which consider traffic safety issues.

Comment 5: Need to add description of Tefft Street and explain potential impacts. Need to mentioned impacts to Tefft St and why they are not cumulatively significant.

Response 5: Tefft Street is approximately 3.5 miles northwest of the Project and intersects US Highway 101 at an interchange. Because Tefft Street is not a proposed haul route, the Project will have no effect on that street. In the event local asphalt deliveries are needed for road improvements within the Tefft Street area, those effects would occur with or without the Project and are effects that should properly be attributed to the road improvement project, not the asphalt facility.

Comment 6: Are delivery trips round trip?

Response 6: All trips are expressed as one-way trips (i.e., divide by two to obtain roundtrips).

Comment 7: Why not 288 aggregate delivery truck loads as opposed to 216.

Response 7: Please refer to the Project Description submitted by the Applicant. In Section 2.3, Project truck traffic is summarized in Tables 2-1 and consists of outbound asphaltic concrete and inbound aggregate and asphaltic oil transport. Footnote 1 indicates the incoming aggregate truck trips are "net of sand deliveries from the adjacent project site."

Table 2-1 Incoming and Outgoing Deliveries

Scenario	# of Outgoing Product Deliveries	# of Incoming Materials Deliveries [1]	# of Incoming Asphaltic Oil Deliveries	# Total Deliveries [2]
Peak Daily	240	216	14	470
Average Daily	53	45	3	101

[1] Includes deliveries of aggregate, RAP, ground crumb rubber, hydrated lime, and other materials. Trips are net of sand deliveries from the adjacent project site.

[2] Refer to Table 2-3 regarding total one-way truck trips.

Table 2-3 provides information on Average Daily and Peak Daily truck trips.

Table 2-3 Proposed One-Way Vehicle Trips, Monday – Friday

	Average Daily	Peak Daily
Truck Trips		
Production (Outbound)	53	240
Aggregate (Inbound)	45	216
Asphaltic Oil (Inbound)	3	14
TOTAL DELIVERIES	101	470
TOTAL RETURNS	101	470
Employee Vehicle Trips		
TOTAL INCOMING	12	12
TOTAL OUTGOING	12	12
TOTAL DAILY (M-F)	226	964

Section 4.2 of the Project Description includes Table 4-1, which summarizes the expected asphalt production capacity for the site. The Project is defined as including the following:

- An "Average Annual Production Level" is based on the anticipated market conditions. During the proposed normal operating schedule (i.e., 20 hours per day, 303 days per year), an "Average Hourly Production Level" of 66 tons per hour, and the resulting "Average Daily Production Level" of 1,320 tons per day can be anticipated.

- A "Peak Daily Production Level" may be necessary to respond to brief periods of high demand. At other times, the Project will operate at the noted "Average Daily Production Level" to respond to expected demand.

- A "Peak Hourly Production Level" may be necessary to respond to brief periods of high demand. At other times, the Project will operate at the noted "Average Hourly Production Level" to respond to expected demand.

Table 4-1 Production

Scenario	Units	Production (Outbound)
Maximum Annual	tons/yr	400,000
Peak Daily	tons/day	6,000
Average Daily	tons/day	1,320
Peak Hourly	tons/hr	350
Average Hourly	tons/hr	66

Comment 8: Why not 366 (14 in, 14 out times 12 hours) product delivery truck loads as opposed to 240?

Response 8: This is a representation of the Peak Hourly Production Level (i.e., 350 tons divided by 25 tons per truck equals 14 loads). By using this level, ATE provided a worst-case analysis of Project effects during the AM peak hours. It is incorrect to assume this multiple relates to daily production. For total truck trips under Average Daily and Peak Daily Production Levels, please refer to Table 2-1 above. For Average Daily and Peak Daily production tons, please refer to Table 4-1 above.

Comment 9: 14 asphaltic oil delivery truck loads?

Response 9: This is the number of incoming asphaltic oil deliveries per day associated with the Peak Daily Production Level. Refer to Table 2-1 above.

Comment 10: Need to have ATE state they have looked at the data submitted for reasonable worst-case analysis and agree if it complies with Project Trip Distribution criteria.

Response 10: ATE's Traffic Study is inherently a worst-case analysis based upon Peak Hourly Production Levels during the peak AM travel hour. The Traffic Study describes this as follows:

> *The plant operates with 6 employees per shift. During the typical 7:00 - 9:00 A.M. peak hour commute period the following represents the maximum truck operations that potentially could occur during both the peak operational day and an average operational day:*
>
> *Product Trucks: 14 out and 14 in*
> *Aggregate Trucks: 12 out and 12 in*
> *Asphaltic Oil Trucks: 1 out and 1 in*
> *Employees: 6 per shift - all in place prior to the 7:00 A.M. peak hour*
>
> *There are no truck trips scheduled during the 4:00-6:00 P.M. peak hour commute period as this is when the work shift change occurs.*

Comment 11: Existing + Asphaltic Concrete Plant Peak Day Roadway Operations...when looking at trips of 57 which will only occur 12 hours/day, I get 685 trips to be distributed to all of the roads. How can you show amounts above 708 (24 employee trips add 684) when you subtract E+P from Existing.

Response 11: It is incorrect to make use of the truck trip estimate of the peak hour and apply it across the entire production day. For total truck trips under Average Daily and Peak Daily Production Levels, please refer to Table 2-1 above.

Comment 12: Need to clarify cumulative conditions of remaining project area sans asphalt plant. ATE assumed a 5 percent growth factor for the growth of the adjacent surface street. Total buildout yearly? Currently much of the Nipomo Mesa cannot growth faster that 2.3%. It would seem that 2% for a 20-year horizon would be a sound method to evaluate cumulative impacts from future LUO/LUE development.

Response 12: The Cumulative scenario described in the traffic study represents a worse case near-term growth scenario not the General Plan buildout scenario. As stated in the traffic study the annual growth of the adjacent freeway section was less than 2 percent over a 5 year period. Even with an unreasonable 5 percent growth factor the study-area roadways and intersections would continue to operate within the County's impact thresholds.

Comment 13: Need to add a traffic safety threshold.

Response 13: Neither the County or Caltrans has any safety thresholds which the project can be evaluated against.

Comment 14: Should development a mitigation measure that establishes thresholds for traffic counts to be taken, if threshold has been exceeded.

Response 14: As there is no significant impact identified in this regard, a mitigation measure is not required. If the County wishes to impose a truck traffic monitoring program for the project, the following is recommended:

The number of truck trips to and from the project site shall be limited as follows:

a. The permittee shall limit the number of truck trips to and from the project site to an average of 202 one-way trips per operating day, as calculated using a rolling monthly average. Additionally, the permittee shall limit the number of truck trips to and from the project site to a daily maximum of 840 one-way trips.

   Calculation: The permittee shall maintain daily trip records for all one-way trucks trips. Monthly, the actual number of Monday through Friday one-way truck trips shall be totaled then divided by the number of authorized Monday through Friday workdays that month. The resulting Monday through Friday average for the month shall be added to the Monday through Friday averages calculated for the preceding 11 months. This total shall then be averaged to determine the Monday through Friday average for the previous twelve (12) months. In this manner, the permittee will develop a "rolling monthly average" reflective of seasonal market variations while at the same time ensuring the facility operates within the overall one-way truck trip limit of 202, Monday through Friday.

b. When operating at the Peak Daily Production Level, the permittee shall limit the number of truck trips to and from the project site to a maximum of 840 one-way trips per operating day. The permittee shall maintain daily trip records for all one-way trucks trips in order to monitor/document compliance.

This limitation applies to all product trucks coming to and going from the site (full and empty trucks). Employee vehicles, service and maintenance vehicles do not count against this maximum.

Associated Transportation Engineers

Richard L. Pool, P.E.
President

RLP/DFN