









































# **Appendix A**

*Traffic and Circulation Study*



# 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, 2007

Marc Bierdzinski, AICP  
City of Buellton  
P.O. Box 1819  
Buellton, California 93427

## ***TRAFFIC ANALYSIS FOR MODIFICATION OF THE OAK SPRINGS VILLAGE SPECIFIC PLAN - CITY OF BUELLTON, CALIFORNIA***

An application to modify The Oak Spring Village Specific Plan has been made. The significant change is the inclusion of a hotel, a reduction in the retail commercial component, an increase in the number of dwelling units and the deletion of the assisted living component. The site plan will be modified to accommodate the proposed mix of uses.

### Project Trip Generation

The trip generation of the revised uses will be compared to the approved uses to determine if the difference is significant, thus necessitating additional analysis. The Specific Plan is to be modified to consist of 244 multi-family dwellings, 43,000 square feet of retail commercial space, a 225 room hotel and 1.5 acres of park/open space situated on approximately 23.86 acres. The Institute of Transportation Engineering (ITE), Trip Generation, 7<sup>th</sup> Edition was used to estimate the number of "new" trips which would be generated by the Specific Plan modification. The retail commercial trip generation for the current and the modified Specific Plan was reduced by 20 percent to account for "pass-by" trips. "Pass-by" trips are trips in the adjacent street system traffic stream that would be attracted to the retail commercial uses in the project. These types of trips are not new to the study-area street system but would be included in the project's driveway volumes. The trips between the retail commercial and other Specific Plan components are accounted for in the project trip distribution.

Table 1 summarizes the estimated average daily and P.M. peak hour trip generation of the modified Specific Plan.

**Table 1  
Modified Specific Plan Trip Generation**

Land Use	Size	ADT		P.M. Peak Hour Trips	
		Rate	Trips	Total	
				Rate	Trips
Retail/Commercial	43,000 s.f.	42.94	1,846	3.75	161
Less "pass-by" trips (20%):			-369		-32
Subtotal <sup>1</sup> :			1,477		129
Hotel*	225 rooms	8.92	2,007	0.70	158
Subtotal <sup>2</sup> :			3,484		287
Multi-Family	244 d.u.'s	6.59	1,608	0.58	141
Subtotal <sup>3</sup> :			5,092		428
Park/Open Space	1.5 acres	50.00	75	4.00	6
Total New Trips (2 + 3):			5,167		434

The data presented in Table 1 indicates that the Modified Specific Plan would generate a total of 5,167 average daily trips and 434 P.M. peak hour trips.

The trip generation for the Modified Specific Plan and the trip generation for the FEIR project were compared to determine any changes. Table 2 shows the comparison.

**Table 2  
FEIR Project Trip Generation vs. Modified Plan Trip Generation**

Project	Size	ADT	P.M. Peak Hour Trips
		Trips	Total
<u>Original Oak Springs Village SP:</u>			
Retail/Commercial	107,000 s.f.	2,577	225
General Service/Commercial	80,000 s.f.	914	120
Single Family	22 d.u.'s	210	22
Attached Townhouse	34 d.u.'s	199	18
Apartment	36 d.u.'s	237	21
Assisted Living	75 beds	206	28
<u>Total New Trip Generation:</u>		<u>4,343</u>	<u>434</u>
<u>Modified Village SP:</u>			
Retail/Commercial	43,000 s.f.	1,477	129
Hotel	225 rooms	2,007	158
Multi-Family	244 d.u.'s	1,608	141
Park/Open Space	1.5 acres	75	6
<u>Total New Trip Generation:</u>		<u>5,167</u>	<u>434</u>
<u>Net Trip Change:</u>		<u>+824</u>	<u>0</u>

The data presented in Table 2 shows that the trip generation forecasted for the Oak Springs Specific Plan is 4,343 average daily trips and 434 P.M. peak hour trips and for the modified Specific Plan 5,167 average daily trips and 434 P.M. peak hour trips. The Modified Specific Plan increases the average daily trips with no increase in the P.M. peak hour trips. Project traffic impacts are evaluated based upon the P.M. peak hour volumes thus the traffic impacts associated with the Modified Specific Plan would be consistent with those identified in the FEIR, and the identified mitigation measures would still be applicable.

City Traffic Section

Associated Transportation Engineers

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





# Appendix B

*Air Emissions Model Results*

URBEMIS 2002 For Windows 8.7.0

File Name: L:\ESP\S Barbara Co\Buellton\07-61100 Buellton The Village Revised Specific Plan\Document\Drafts\Appendices\Air Quality\Village SP.urb  
 Project Name: Village SP EIR  
 Project Location: Santa Barbara County  
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT  
(Pounds/Day - Summer)

OPERATIONAL (VEHICLE) EMISSION ESTIMATES	ROG	NOx	CO	S02	PM10
TOTALS (lbs/day, unmitigated)	63.27	90.47	745.69	0.52	5.05

URBEMIS 2002 For Windows 8.7.0

File Name: L:\ESP\S Barbara Co\Buellton\07-61100 Buellton The Village Revised Specific Plan\Document\Drafts\Appendices\Air Quality\Village SP.urb  
 Project Name: Village SP EIR  
 Project Location: Santa Barbara County  
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT  
(Pounds/Day - Summer)

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	S02	PM10
Condo/townhouse general	20.07	29.72	240.19	0.16	1.58
City park	0.88	1.28	10.69	0.01	0.07
Hotel	25.03	34.35	286.10	0.21	1.96
Regnl shop. center	17.29	25.11	208.72	0.15	1.43
TOTAL EMISSIONS (lbs/day)	63.27	90.47	745.69	0.52	5.05

Does not include correction for passby trips.  
 Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2007 Temperature (F): 75 Season: Summer

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Condo/townhouse general	15.25	6.59 trips/dwelling unit	244.00	1,607.96
City park		50.00 trips/acres	1.50	75.00
Hotel		8.92 trips/rooms	225.00	2,007.00

Village SP URBEMIS.txt  
 Regnl shop. center 34.35 trips/1000 sq. ft. 43.00 1,477.05  
 Sum of Total Trips 5,167.01  
 Total Vehicle Miles Traveled 54,685.08

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent	Type	Non-Catalyst	Catalyst	Diesel
Light Auto	55.20		1.80	97.80	0.40
Light Truck < 3,750 lbs	15.10		3.30	94.00	2.70
Light Truck 3,751- 5,750	16.10		1.90	96.90	1.20
Med Truck 5,751- 8,500	7.10		1.40	95.80	2.80
Lite-Heavy 8,501-10,000	1.10		0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.40		0.00	50.00	50.00
Med-Heavy 14,001-33,000	1.00		0.00	20.00	80.00
Heavy-Heavy 33,001-60,000	0.90		0.00	11.10	88.90
Line Haul > 60,000 lbs	0.00		0.00	0.00	100.00
Urban Bus	0.10		0.00	0.00	100.00
Motorcycle	1.70		82.40	17.60	0.00
School Bus	0.10		0.00	0.00	100.00
Motor Home	1.20		8.30	83.30	8.40

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.5	9.6	11.3	12.5	10.2	10.2
Rural Trip Length (miles)	15.0	15.0	15.0	15.0	10.0	10.0
Trip Speeds (mph)	25.0	30.0	35.0	25.0	25.0	25.0
% of Trips - Residential	20.6	18.0	61.4			
% of Trips - Commercial (by land use)						
City park				5.0	2.5	92.5
Hotel				5.0	2.5	92.5
Regnl shop. center				2.0	1.0	97.0

Page: 3  
 06/05/2007 2:57 PM

Changes made to the default values for Land Use Trip Percentages

The Trip Rate and/or Acreage values for Condominium/townhouse general have changed from the defaults 6.9/15.25 to 6.59/15.25

Changes made to the default values for Operations

The road dust option switch changed from on to off.  
 The operational emission year changed from 2005 to 2007.





---

## **Appendix C**

*Noise Model Results*

# ROADWAY TRAFFIC NOISE

Project: Oak Springs Village Revised SP EIR Project No. 07-61100  
 Date: 5-Jun-07

Roadway: Highway 246 east of McMurray Road

## **PROJECT DATA and ASSUMPTIONS**

Vehicle Reference Energy Mean Emission Levels (FHWA 1977, TNM®, or CALVENO): TNM  
 Distance to Receptor: 50 feet  
 Site Condition (Hard or Soft): soft  
 Upgrade longer than 1 mile: 0 %  
 Existing Total Traffic Volume (ADT): 18,200 vehicles  
 Ambient Growth Factor: 0.0%  
 Future Year : 2007  
 Total Project Volume (ADT): 1550 vehicles  
 Total Cumulative Growth Volume (ADT): 779 vehicles  
 Source of Traffic Data: Associated Transportation Engineers, 2007.

### **Daily Vehicle Mix**

	<i>Existing</i>	<i>Project</i>	<i>Future</i>
Automobile	97.5%	99.0%	97.6%
Medium Truck	1.8%	0.5%	1.7%
Heavy Truck	0.7%	0.5%	0.7%

Source: Assumed given land use and road characteristics

### **Percentage of Daily Traffic**

	<i>Existing and Future</i>		
	<i>Day (7 am-7 pm)</i>	<i>Evening (7-10 pm)</i>	<i>Night (10 pm - 7 am)</i>
Automobile	77.5%	12.9%	9.6%
Medium Truck	84.8%	4.9%	10.3%
Heavy Truck	86.5%	2.7%	10.8%

Source: Default Assumption

	<i>Project</i>		
	<i>Day (7 am-7 pm)</i>	<i>Evening (7-10 pm)</i>	<i>Night (10 pm - 7 am)</i>
Automobile	77.5%	12.9%	9.6%
Medium Truck	84.8%	4.9%	10.3%
Heavy Truck	86.5%	2.7%	10.8%

Source: Default Assumption

### **Average Speed**

	<i>Existing</i>		
	<i>Day (7 am-7 pm)</i>	<i>Evening (7-10 pm)</i>	<i>Night (10 pm - 7 am)</i>
Automobile	45	45	45
Medium Truck	45	45	45
Heavy Truck	45	45	45

Source: Speed Limit

	<i>Future</i>		
	<i>Day (7 am-7 pm)</i>	<i>Evening (7-10 pm)</i>	<i>Night (10 pm - 7 am)</i>
Automobile	45	45	45
Medium Truck	45	45	45
Heavy Truck	45	45	45

Source: Speed Limit

# ROADWAY TRAFFIC NOISE

Project: Oak Springs Village Revised SP EIR  
 Date: 5-Jun-07

Project No. 07-61100

Roadway: Highway 246 east of McMurray Road

Vehicle Noise Emission Levels\*: TNM

## RESULTS

DAY-NIGHT AVERAGE LEVEL (Ldn)	Ldn at Site		Distance to dBA Contour Line				
	50 feet	from road centerline	75	70	65	60	55
Existing	70.5 dBA		18	54	117	251	542
Existing + Project	70.9 dBA		19	57	123	265	570
Future with Ambient Growth	70.5 dBA		18	54	117	251	542
Future with Ambient Growth and Project	70.9 dBA		19	57	123	265	570
Future with Ambient Growth and Cumulative Projects	70.5 dBA		18	54	117	251	542
Future with Ambient, Cumulative, and Project Growth	70.9 dBA		19	57	123	265	570
Change in Noise Levels							
Due to Project	0.3 dBA						
Due to Ambient Growth	0.0 dBA						
Due to Ambient and Cumulative	0.0 dBA						
Due to All Future Growth	0.3 dBA						

COMMUNITY NOISE EXPOSURE LEVEL (CNEL)	CNEL at Site		Distance to dBA Contour Line				
	50 feet	from road centerline	75	70	65	60	55
Existing	71.1 dBA		20	59	127	273	588
Existing + Project	71.4 dBA		22	62	133	287	619
Future with Ambient Growth	71.1 dBA		20	59	127	273	588
Future with Ambient Growth and Project	71.4 dBA		22	62	133	287	619
Future with Ambient Growth and Cumulative Projects	71.1 dBA		20	59	127	273	588
Future with Ambient, Cumulative, and Project Growth	71.4 dBA		22	62	133	287	619
Change in Noise Levels							
Due to Project	0.3 dBA						
Due to Ambient Growth	0.0 dBA						
Due to Ambient and Cumulative	0.0 dBA						
Due to All Future Growth	0.3 dBA						

\*NOTES: Based on algorithms from the Federal Highway Administration "Traffic Noise Model ®", FHWA-PD-96-010, January, 1998.

#N/A = Not Applicable

# ROADWAY TRAFFIC NOISE

Project: Oak Springs Village Revised SP EIR Project No. 07-61100  
 Date: 5-Jun-07

Roadway: McMurray Road (Between 246 and Damassa)

## PROJECT DATA and ASSUMPTIONS

Vehicle Reference Energy Mean Emission Levels (FHWA 1977, TNM®, or CALVENO): TNM  
 Distance to Receptor: 50 feet  
 Site Condition (Hard or Soft): hard  
 Upgrade longer than 1 mile: 0 %  
 Existing Total Traffic Volume (ADT): 3,390 vehicles  
 Ambient Growth Factor: 0.0%  
 Future Year : 2007  
 Total Project Volume (ADT): 1292 vehicles  
 Total Cumulative Growth Volume (ADT): 670 vehicles  
 Source of Traffic Data: Associated Transportation Engineers, 2007

### Daily Vehicle Mix

	<i>Existing</i>	<i>Project</i>	<i>Future</i>
Automobile	97.5%	99.0%	97.9%
Medium Truck	1.8%	1.0%	1.6%
Heavy Truck	0.7%	0.0%	0.5%

Source: Assumed given land use and road characteristics

### Percentage of Daily Traffic

	<i>Existing and Future</i>		
	<i>Day (7 am-7 pm)</i>	<i>Evening (7-10 pm)</i>	<i>Night (10 pm - 7 am)</i>
Automobile	77.5%	12.9%	9.6%
Medium Truck	84.8%	4.9%	10.3%
Heavy Truck	86.5%	2.7%	10.8%

Source: Default Assumption

	<i>Project</i>		
	<i>Day (7 am-7 pm)</i>	<i>Evening (7-10 pm)</i>	<i>Night (10 pm - 7 am)</i>
Automobile	77.5%	12.9%	9.6%
Medium Truck	95.1%	4.9%	0.0%
Heavy Truck	100.0%	0.0%	0.0%

Source: Default Assumption

### Average Speed

	<i>Existing</i>		
	<i>Day (7 am-7 pm)</i>	<i>Evening (7-10 pm)</i>	<i>Night (10 pm - 7 am)</i>
Automobile	35	35	35
Medium Truck	35	35	35
Heavy Truck	35	35	35

Source: Assumed average speed

	<i>Future</i>		
	<i>Day (7 am-7 pm)</i>	<i>Evening (7-10 pm)</i>	<i>Night (10 pm - 7 am)</i>
Automobile	35	35	35
Medium Truck	35	35	35
Heavy Truck	35	35	35

Source: Assumed average speed

# ROADWAY TRAFFIC NOISE

Project: Oak Springs Village Revised SP EIR  
 Date: 5-Jun-07

Project No. 07-61100

Roadway: McMurray Road (Between 246 and Damassa)

Vehicle Noise Emission Levels\*: TNM

## RESULTS

DAY-NIGHT AVERAGE LEVEL (Ldn)	Ldn at Site		Distance to dBA Contour Line from roadway centerline, feet				
	50 feet from road centerline		75	70	65	60	55
Existing	60.1 dBA		#N/A	#N/A	#N/A	51	110
Existing + Project	61.3 dBA		#N/A	#N/A	#N/A	61	132
Future with Ambient Growth	60.1 dBA		#N/A	#N/A	#N/A	51	110
Future with Ambient Growth and Project	61.3 dBA		#N/A	#N/A	#N/A	61	132
Future with Ambient Growth and Cumulative Projects	60.9 dBA		#N/A	#N/A	#N/A	57	123
Future with Ambient, Cumulative, and Project Growth	61.9 dBA		#N/A	#N/A	#N/A	67	144
Change in Noise Levels							
Due to Project	1.2 dBA						
Due to Ambient Growth	0.0 dBA						
Due to Ambient and Cumulative	0.8 dBA						
Due to All Future Growth	1.8 dBA						

COMMUNITY NOISE EXPOSURE LEVEL (CNEL)	CNEL at Site		Distance to dBA Contour Line from roadway centerline, feet				
	50 feet from road centerline		75	70	65	60	55
Existing	60.6 dBA		#N/A	#N/A	#N/A	55	119
Existing + Project	61.9 dBA		#N/A	#N/A	#N/A	66	143
Future with Ambient Growth	60.6 dBA		#N/A	#N/A	#N/A	55	119
Future with Ambient Growth and Project	61.9 dBA		#N/A	#N/A	#N/A	66	143
Future with Ambient Growth and Cumulative Projects	61.4 dBA		#N/A	#N/A	#N/A	62	134
Future with Ambient, Cumulative, and Project Growth	62.4 dBA		#N/A	#N/A	28	73	157
Change in Noise Levels							
Due to Project	1.2 dBA						
Due to Ambient Growth	0.0 dBA						
Due to Ambient and Cumulative	0.8 dBA						
Due to All Future Growth	1.8 dBA						

\*NOTES: Based on algorithms from the Federal Highway Administration "Traffic Noise Model ®", FHWA-PD-96-010, January, 1998.

#N/A = Not Applicable