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## STAFF REPORT

**SUBJECT:** Congestion Management Program Annual Conformance Assessment

**MEETING DATE:** April 20, 2006

**AGENDA ITEM:** 6C

**STAFF CONTACT:** Andrew Orfila, Michael Powers

### RECOMMENDATION:

- A. Adopt a determination, pursuant to Section 65089.3 of the California Government Code that the County of Santa Barbara and the cities of Santa Maria, Buellton, Solvang, Lompoc, Santa Barbara, Guadalupe, Goleta, and Carpinteria are conforming to the adopted Congestion Management Program.
- B. Add the State Route 246 intersections at Refugio Road and Casino Drive to the CMP network in order to more closely monitor operations on the segment of Route 246 between Alamo Pintado Road and State Route 154 in Santa Ynez.
- C. Extend the seasonal monitoring of the Montecito Street/Castillo Street intersection in the City of Santa Barbara to include one additional count to be completed during either April or May of this year.

### SUMMARY

As part of its duties as the Congestion Management Agency (CMA) for Santa Barbara County, SBCAG must annually determine if each city and the County is conforming to the requirements of the Congestion Management Program (CMP). Upon review of all submitted data required in 2005, SBCAG has determined that all agencies are conforming to the adopted Congestion Management Program for Santa Barbara County. CMP conformance findings are a requisite step to keep state gas tax subvention funds (Section 2105) flowing to the local agencies. The County as a whole received slightly over \$4.1 million in Section 2105 funds in 2005 – a slight decrease compared to the 2004 Section 2105 apportionments. The City of Santa Maria demonstrated the largest increase – 2 percent between 2004 and 2005.

Member Agencies

Buellton ■ Carpinteria ■ Goleta ■ Guadalupe ■ Lompoc ■ Santa Barbara ■ Santa Maria ■ Solvang ■ Santa Barbara County

According to the most recent data available from Caltrans (2004), traffic volumes on the State Highways on the CMP network remained relatively constant when compared with the previous year, with the exception of the following:

- The 2004 peak hour traffic volumes on Highway 101 decreased by more than two percent within the South Coast when compared with the 2003 volumes. Consequently, the number of Highway 101 segments operating at LOS E and F conditions in the A.M. and P.M. peak hours dropped slightly between 2003 and 2004, most notably the northbound segment between Carrillo Street and Mission Street during the A.M. peak hour (where the peak hour volume declined by 7% compared to 2003) and the southbound segment between North Padaro Lane and Evans Avenue during the P.M. peak hour (where volumes declined 9-13%). These segments improved from LOS E to LOS D. One notable exception is the northbound segment P.M. peak hour volume of Highway 101 between Fairview Road and Los Carneros Road, which increased by 13% compared to 2003. This segment dropped from LOS D in 2003 to LOS E in 2004.
- Route 192 between Ontare Road and Mountain Drive experienced a slight increase in traffic (approximately 3%) resulting in a change from LOS C to LOS D. Also, the segment of Route 192 between San Ysidro Road and Sheffield Drive experienced a 5% increase in traffic, resulting in a change from LOS D to LOS E.
- Route 166 between Bonita School Road and Black Road experienced a slight increase (4%) in traffic volumes resulting in a change from LOS C to LOS D.

Traffic signals were recently installed at the Route 246 intersections with Casino Drive and Edison Street as part of a mitigation measure for the Chumash Casino expansion project. The 4.3 mile-long corridor of Route 246 between Alamo Pintado Road and Route 154 now contains four signalized intersections (at Alamo Pintado Road, Refugio Road, Casino Drive, and Edison Street). Therefore, staff is recommending that this segment of Route 246 be classified as a "signalized segment" and that the Route 246 intersections at Refugio Road and Casino Drive be added to the CMP network. This will allow for better analysis of the State Route 246 corridor operationally, using intersection LOS as the performance measure, rather than the 2-lane highway LOS.

The County of Santa Barbara and the Cities of Goleta, Santa Barbara, Santa Maria, Solvang, and Lompoc were required to submit P.M. peak hour intersection counts in 2005. All jurisdictions have met the CMP signalized intersection monitoring requirements. Thirty intersections were monitored in 2005 and there were no new deficiencies identified. For last year's assessment, staff recommended that the City of Santa Barbara conduct a seasonal monitoring count program in 2005 at the Castillo Street/Montecito Street intersection in order to address a reported deficient LOS E for the 2003 monitoring year. Since the 2003 traffic count, the City has completed three traffic counts at this location (January 2004, October 2004, and December 2005). Monitoring opportunities were limited in 2005 due to the construction activities occurring at the Castillo Street/Highway 101 interchange. Therefore, staff is recommending that the City complete one more count in April or May to complete the seasonal monitoring at this facility.

## **DISCUSSION:**

Pursuant to state statutes, an annual conformance assessment must include a determination of each agency's compliance with the following CMP elements:

- 1) Consistency with the traffic level of service standards of the CMP; and,
- 2) Implementation of the program to analyze and mitigate the impacts of local land use decisions on the CMP system and on neighboring jurisdictions.

If SBCAG determines that a local jurisdiction is not conforming to the requirements of the CMP, the agency will have 90 days to correct any issues of non-conformance. If the local agency fails to resolve these issues, SBCAG is required to notify the State Controller, who shall then withhold all apportionments of Section 2105 gas tax subvention funds to the nonconforming jurisdiction until the issue of nonconformance is resolved. If the local jurisdiction has not resolved the issue of nonconformance after 12 months, the State Controller must allocate the withheld gas tax apportionment to SBCAG who is then required to spend the apportionment on regionally significant projects identified in the CMP Capital Improvement Program countywide or improvements identified in adopted deficiency plans. In addition, the Metropolitan Planning Organization (SBCAG) shall not program federal Surface Transportation Program (STP) or Congestion Mitigation and Air Quality (CMAQ) funds for any project in the nonconforming jurisdiction unless it is considered a regionally significant project or is identified in an adopted deficiency plan.

### **CMP Information Submittals**

To facilitate the determination of CMP conformity, local jurisdictions within the county were notified in July of 2005 and in February 2006 to submit information to SBCAG. The submittals typically consist of turning movement counts at specified CMP intersections, land use permit data, and deficiency plans if applicable. As of March 29, 2006 each local agency has fully complied with the CMP submittal requirements for the 2005 monitoring year. Each jurisdiction's CMP data submittal status and the 2005 apportionment of Proposition 111 gas tax (Section 2105) funds are provided in Table 1 below. The County as a whole received slightly over \$4.1 million in Section 2105 funds in 2005 – a slight decrease when compared with the 2004 Section 2105 apportionments. The City of Santa Maria demonstrated the largest increase - 2 percent between 2004 and 2005.

**Table 1  
CMP Submittal Status**

<b>Jurisdiction</b>	<b>Submittal Status</b>	<b>2005 Apportionment</b>
County of Santa Barbara	Complete	\$ 2,250,847
City of Buellton	Complete	\$ 27,751
City of Carpinteria	Complete	\$ 89,846
City of Goleta	Complete	\$ 290,161
City of Guadalupe	Complete	\$ 38,868
City of Lompoc	Complete	\$ 260,466
City of Santa Barbara	Complete	\$ 579,964
City of Santa Maria	Complete	\$ 536,306
City of Solvang	Complete	\$ 33,522

### **Conformity Determination**

#### *State Highway System Level of Service*

To assess the current level of service (LOS) on the state highway system for average weekday morning (A.M.) and evening (P.M.) peak period conditions, SBCAG applied the most recent traffic volume data (Caltrans 2004 average annual daily traffic volumes) to the Highway Capacity Manual (HCM) Operational Analysis methodology for freeways, multi-lane highways and 2-lane highways.<sup>1</sup> Worksheets illustrating the LOS calculations for the freeway segments on the CMP network (U.S. Highway 101, portions of State Route 135, and State Route 217) are contained in Attachment 1. Worksheets illustrating the LOS calculations for the multi-lane and 2-lane highway segments on the CMP network are contained in Attachment 2.

U.S. Highway 101, South Coast: The CMP defines peak period as either the A.M. or P.M. peak hour, whichever is greater. Historical traffic counts within Santa Barbara County have shown that P.M. peak hour traffic levels typically exceed A.M. peak hour traffic levels at most locations. Hence, SBCAG has usually chosen the evening peak hour for LOS analyses. However, given that Highway 101 within the South Coast experiences heavy congestion during the morning commute hours, an analysis of the A.M. peak hour was also performed for this facility. Table 2 summarizes operations on the segments of Highway 101 in the South County (Ventura County Line to Milpas Street) with peak hour congestion (LOS D or worse) in 2004.

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<sup>1</sup> Highway Capacity Manual, Transportation Research Board, National Research Council, 1997, 2000.

**Table 2**  
**Segments of U.S. Highway 101 with Peak Hour Congestion in 2004 (LOS D or worse)**

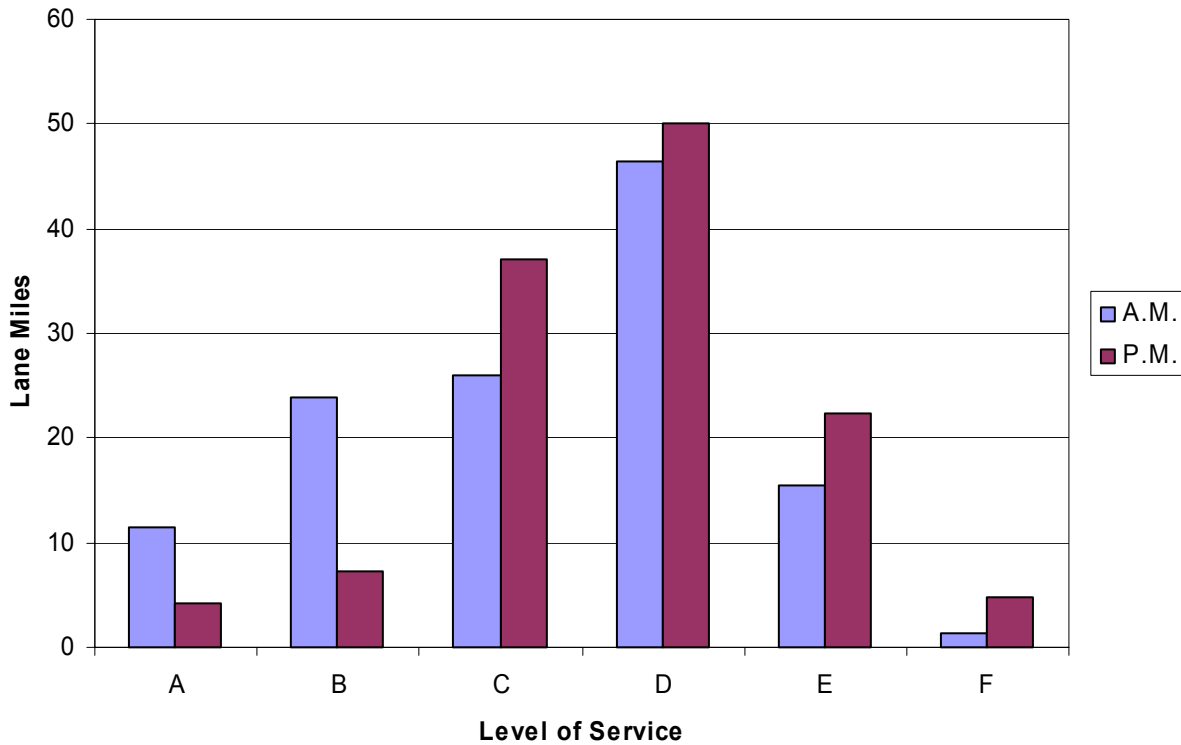
Roadway and Segment	ADT Volume	A.M. Peak Hour		P.M. Peak Hour	
		Volume	LOS*	Volume	LOS*
Ventura County Line to Route 150	67,000	-	-	5,494	B/D
Route 150 to Bailard Ave.	68,000	-	-	5,576	B/D
Bailard Ave. to Route 224	67,000	-	-	5,494	C/D
Linden Ave. to Santa Monica Rd.	73,000	4,453	D/A	5,913	C/D
Santa Monica Rd. to Padaro Ln.	74,000	4,514	D/B	5,994	C/D
Padaro Ln. S. to Padaro Ln. N.	78,000	4,758	D/B	6,318	C/D
Padaro Ln. N. to Evans Ave.	78,000	5,850	D/B	6,630	C/D
Evans Ave. to Sheffield Dr.	82,000	6,150	<b>F/B</b>	6,970	D/D
Sheffield Dr. to San Ysidro Rd.	84,000	6,300	<b>E/C</b>	7,308	D/F
San Ysidro Rd. to Olive Mill Rd.	89,000	6,675	<b>E/C</b>	7,743	D/E
Olive Mill Rd. to Cabrillo Blvd.	86,000	6,450	<b>E/C</b>	7,482	D/E
Cabrillo Blvd. to Milpas St.	97,000	7,275	<b>E/D</b>	8,633	<b>E/F</b>
Milpas St. to Castillo St.	105,000	9,450	D/C	9,555	C/D
Castillo St. to Carrillo St.	110,000	9,900	D/C	10,230	C/D
Carrillo St. to Mission St.	125,000	11,250	D/D	12,125	D/E
Mission St. to Las Positas Rd.	144,000	12,960	<b>E/E</b>	12,960	<b>E/E</b>
Las Positas Rd. to La Cumbre Rd.	136,000	12,240	<b>E/D</b>	12,240	<b>E/E</b>
La Cumbre Rd. to Route 154	137,000	11,371	D/D	12,330	D/D
Route 154 to Turnpike Rd.	125,000	9,500	D/C	10,250	D/D
Turnpike Rd. to Route 217	119,000	9,044	C/D	9,760	D/C
Fairview Rd. to Los Carneros Rd.	80,000	5,760	B/D	6,880	<b>E/C</b>
Los Carneros Rd. to Glen Annie Rd.	67,000	4,824	B/D	-	-

**Bold** indicates LOS E or F operations.

\* LOS shown separately for north and southbound directions.

Figure 1 shows a breakdown of the number of lane miles operating at designated levels of service on the South Coast segment of Highway 101. Table 3 summarizes conditions for the 4-lane corridor of Highway 101 between the Ventura County line and Milpas Street and the 6-lane corridor between Milpas Street and Winchester Canyon, including; number of miles by segment, deficient miles and lane miles (LOS E or worse), average A.M. peak hour volumes traveling on those deficient segments, number of vehicle miles traveled (VMT) within the deficient segments, and the average volume-to-capacity (V/C) ratio for those deficient segments.

**Figure 1  
2004 Highway 101 Level of Service – South Coast**



**Table 3  
2004 Highway 101 (South Coast) A.M. Peak Hour LOS Summary**

Section	Miles	Deficient Miles		Deficient Lane Miles	Average PHT <sup>a</sup>	Peak Hour VMT on Deficient Segments <sup>b</sup>	Avg. V/C on Deficient Segments <sup>c</sup>
		NB	SB				
County line-Milpas	12.5	4.5	0.7	10.4	4,120	18,540	0.97
Milpas-Winchester	14.1	1.9	0	5.7	6,427	16,710	0.95
<b>Total</b>	<b>26.6</b>	<b>6.4</b>	<b>0.7</b>	<b>16.1</b>	<b>5,274</b>	<b>35,250</b>	<b>0.96</b>

<sup>a</sup> Calculated by multiplying each deficient segment's peak hour directional volume with the segment length (miles).

<sup>b</sup> Calculated by taking the average of all deficient segments' V/C ratios.

<sup>c</sup> Average weighted by number of deficient lane miles.

As indicated by the average V/C ratios, the severity of congestion is slightly greater on Highway 101 between the Ventura County line and Milpas Street. However, given its greater lane capacity and utilization, congestion experienced on Highway 101 between Milpas Street and Winchester Canyon typically affects more vehicles during the A.M. peak hour (6,427 vehicles vs. 4,120 vehicles). Given the greater length of the deficient 4-lane section, the amount of VMT operating at LOS E-F levels is slightly higher than that experienced along the 6-lane section of Highway 101 (18,540 VMT on the 4-lane section vs. 16,710 VMT on the 6-lane section).

The P.M. peak hour LOS for Highway 101 on the South Coast is summarized in Table 4. Similar to the A.M. peak hour LOS results, the severity of congestion is greater on Highway 101 between the Ventura County line and Milpas Street (1.00 V/C vs. 0.94 V/C). However, more drivers are affected with the congestion on the 6-lane segment between Milpas Street and Winchester Canyon (6,314 PHT and 30,308 VMT on the 6-lane segment vs. 4,253 PHT and 22,117 VMT on the 4-lane segment).

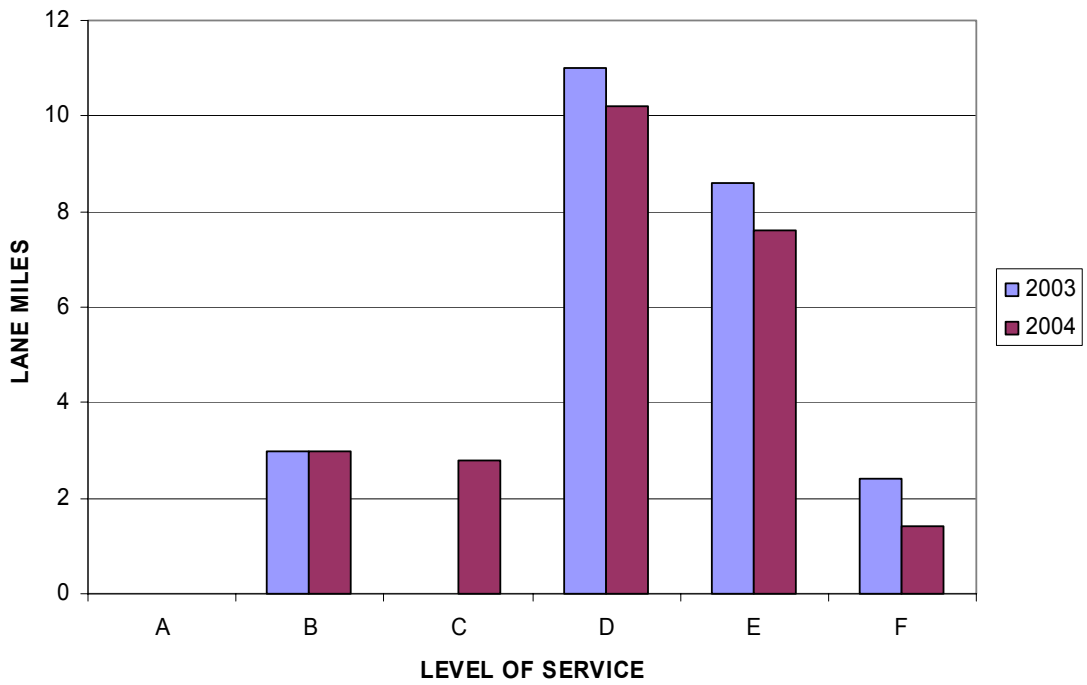
**Table 4**  
**2004 Highway 101 (South Coast) P.M. Peak Hour LOS Summary**

Section	Miles	Deficient Miles		Deficient Lane Miles	Average PHT	Peak Hour VMT on Deficient Segments	Avg. V/C On Deficient Segments
		NB	SB				
County line-Milpas	12.5	1.4	3.8	10.4	4,253	22,117	1.00
Milpas-Winchester	14.1	3.1	2.9	18	6,314	30,308	0.94
Total	26.6	4.5	6.7	28.4	5,284	52,425	0.97

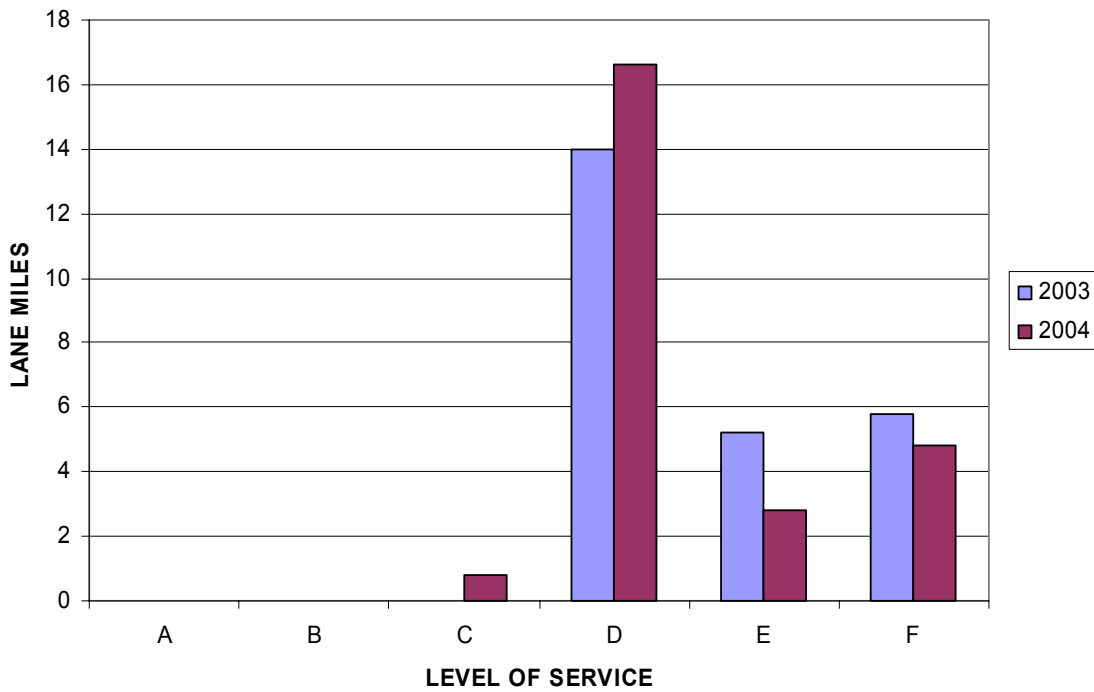
There are a number of projects planned for addressing congestion and the deficient roadway segments on the U.S. 101 corridor in the South Coast, including; the Milpas to Hot Springs Operational Improvements, the Ortega Hill Class I Bike Lane and Auxiliary Lane Project, and the 101 In Motion Project.

It is worth noting that the 2004 peak hour traffic volumes on Highway 101 decreased by more than two percent in the South Coast when compared with the 2003 volumes. Consequently, the number of Highway 101 segments operating at LOS E and F conditions in the AM and PM peak hours dropped slightly between 2003 and 2004, most notably the northbound segment between Carrillo Street and Mission Street during the A.M. peak hour (where the peak hour volume declined by 7% compared to 2003) and the southbound segment between North Padaro Lane and Evans Avenue during the P.M. peak hour (where volumes declined 9-13%). These segments improved from LOS E to LOS D. One notable exception is the northbound segment P.M. peak hour volume of Highway 101 between Fairview Road and Los Carneros Road, which increased by 13% compared to 2003. This segment dropped from LOS D in 2003 to LOS E in 2004. Figures 2 and 3 compare the 2003 and 2004 lane miles and levels of service on the congested directions (northbound during the A.M. peak hour and southbound during the P.M. peak hour) for the 4-lane segment of Highway 101 between the Ventura County line and Milpas Street.

**Figure 2**  
**Highway 101 Level of Service**  
**Northbound Direction During the A.M. Peak Hour (Ventura County Line to Milpas Street)**



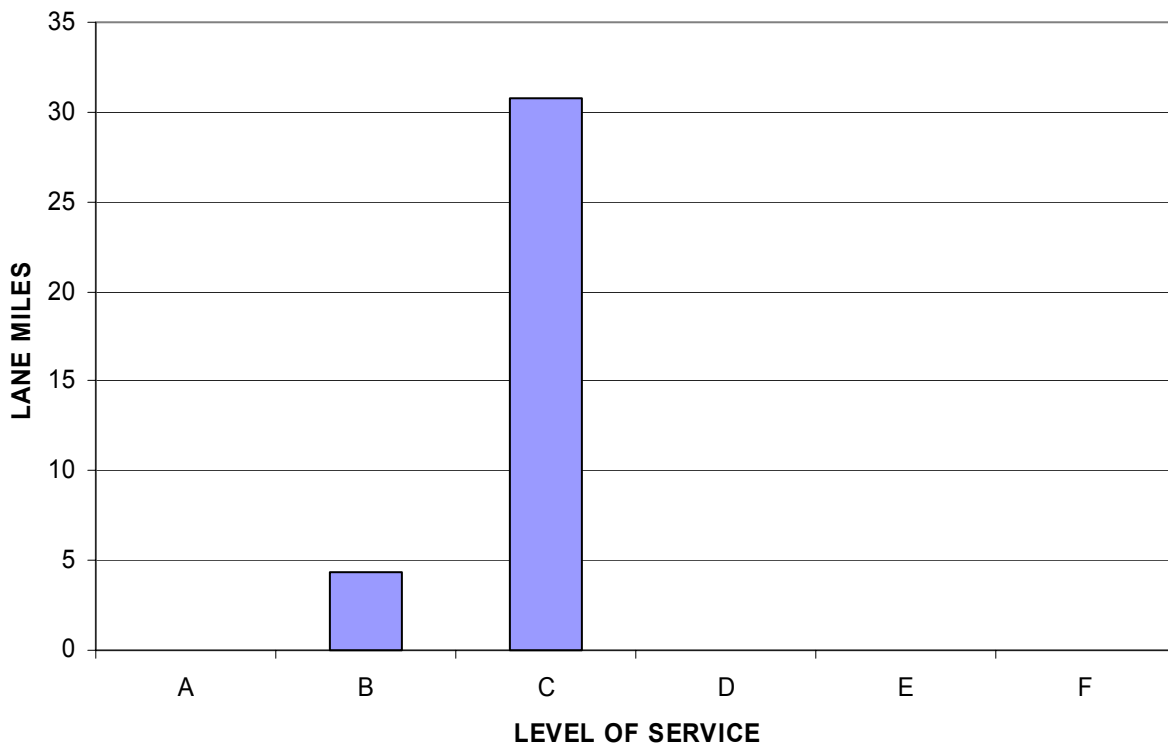
**Figure 3**  
**Highway 101 Level of Service**  
**Southbound Direction During the P.M. Peak Hour (Ventura County Line to Milpas Street)**



U.S. Highway 101, North County: On the North County portion of the Highway 101 corridor (between Santa Rosa Road and the SLO County line), the 2004 average annual daily traffic (AADT) volumes increased by about 3% when compared with the 2003 AADT volumes. There were notable traffic volume increases on some segments of Highway 101, including the AADT volumes on the segment of Highway 101 between Route 154 and Clark Avenue (10-15% increase) and the AADT volumes on the segment between Santa Maria Way and Betteravia Road (9% increase).

The North County corridor of Highway 101 is operating at LOS C or better within the City of Santa Maria and LOS A-B within and south of the unincorporated area of Orcutt during the P.M. peak hour. Figure 4 shows the lane miles and LOS on the Highway 101 segments within the urban area of the City of Santa Maria.

**Figure 4**  
**2004 Highway 101 P.M. Peak Hour Level of Service**  
**North County (Clark Avenue to San Luis Obispo County Line)**



CMP Highway Segments: Traffic volumes remained relatively constant on the other CMP State highways between 2003 and 2004. However, the following segments did experience traffic growth that resulted in changes in PM peak hour LOS.

- Route 192 between Ontare Road and Mountain Drive experienced a slight increase in traffic (approximately 3%) resulting in a change from LOS C to LOS D. Also, the segment of Route 192 between San Ysidro Road and Sheffield Drive experienced a 5% increase in traffic, resulting in a change from LOS D to LOS E.

- Route 166 between Bonita School Road and Black Road experienced a slight increase (4%) in traffic volumes resulting in a change from LOS C to LOS D.

The methodology used to calculate the highway LOS is consistent with that contained in the 1997 Highway Capacity Manual. State highway segments that are currently operating at LOS E or worse are listed in Table 5.

**Table 5**  
**Deficient State Highway Segments on the CMP Network**

<b>State Highway</b>	<b>Segment</b>	<b>LOS</b>
Route 1	Las Cruces, Rte. 101 – Jalama Road	E
Route 154	Jct. Rte. 246 West – Jct. Rte. 192	E
Route 192	San Ysidro Road – Sheffield Drive	E
Route 246	Alamo Pintado Road – Santa Ynez, Route 154	E

It should be noted that the deficient segments shown in Table 5 are two-lane highways. The recent update of the Highway Capacity Manual (HCM 2000) has significantly revised the methodology for estimating LOS for rural two lane highways. Consequently, SBCAG is not recommending the preparation of a deficiency plan for these facilities at this time. SBCAG plans to re-evaluate two-lane highway segments to be more consistent with segmentation used in recent Transportation Concept Reports for Route 166, Route 246 and Route 154 prepared by Caltrans and also apply the new HCM 2000 software for two-lane highways. SBCAG plans to budget funds in the 2006/07 fiscal year for the purchase of the Highway Capacity Software (HCS).

With expanded operations at the Chumash Casino, traffic volumes on Route 246 between Alamo Pintado Road and the Route 154 juncture in Santa Ynez are increasing. Along with the LOS E operations cited above in Table 5, the Route 246 / Alamo Pintado Road intersection, located in the City of Solvang, is operating at LOS D during the P.M. peak hour (a traffic count was done at this intersection in November 2005). Traffic signals were recently installed at the Route 246 intersections with Casino Drive and Edison Street as part of a mitigation measure for the Chumash Casino expansion project. The 4.3 mile-long corridor of Route 246 between Alamo Pintado Road and Route 154 now contains four signalized intersections (at Alamo Pintado Road, Refugio Road, Casino Drive, and Edison Street). Therefore, it is recommended that this section of Route 246 be classified as a “signalized segment” and that the following two intersections be added to the CMP network:

- State Route 246 / Refugio Road
- State Route 246 / Casino Drive

Monitoring of these intersections will allow for better analysis of the State Route 246 corridor operationally, using intersection LOS as the performance measure, rather than the 2-lane highway LOS.

*Intersection Level of Service (LOS) Analysis*

The CMP LOS measurements for the each jurisdiction are provided in Table 6. All LOS measurements are based on the Intersection Capacity Utilization LOS methodology and reflect PM peak hour traffic conditions. The traffic counts and level of service calculation worksheets can be provided upon request. The County of Santa Barbara and the Cities of Goleta, Santa Barbara, Santa Maria, Solvang, and Lompoc were required to submit traffic counts in 2005.

**Table 6  
Results of Intersection LOS Monitoring for 2005**

<b>Jurisdiction</b>	<b>Intersection</b>	<b>V/C / LOS</b>
County of Santa Barbara	Hollister Avenue / Turnpike Road	0.61 / B
	Betteravia Road / Hwy. 101 NB Ramps	0.56 / A
	Bradley Road / Santa Maria Way	0.64 / B
	SR 135 / Foster Road	0.77 / C
City of Goleta	Storke Road-Glen Annie Road / Hwy. 101 NB Ramps-Calle Real	0.66 / B
	Storke Road / Hwy. 101 SB Ramps	0.51 / A
	Patterson Road / Hwy. 101 SB Ramps	0.84 / D
	Hollister Avenue / Patterson Road	0.69 / B
	Hollister Avenue / Los Carneros Road	0.69 / B
	Calle Real / Fairview Avenue	0.81 / D
City of Santa Barbara	Castillo Street / Hwy. 101 NB On Ramp-Haley Street	0.76 / C
	Castillo Street / Hwy. 101 SB Ramps	0.61 / B
	Carrillo Street / Hwy. 101 NB Ramps	0.76 / C
	Mission Street / Hwy. 101 NB Ramps	0.76 / C
	Mission Street / Hwy. 101 SB Ramps	1.13 / F*
	Las Positas Road / Calle Real-Hwy. 101 NB Off Ramp	0.81 / D
	Las Positas Road / Hwy. 101 SB Ramps	0.71 / C
	Calle Real / Hwy. 101 NB On Ramp – Earl Warren Dvwy.	0.71 / C
	Castillo Street / Montecito Street	0.79 / C
	Carrillo Street / Castillo Street	0.75 / C
	State Street / Hope Avenue	0.71 / C
	State Street / Calle Real – Hwy. 101 NB On Ramp	0.66 / B
City of Santa Maria	Betteravia Road / Hwy. 101 SB Ramps	0.50 / A
	Blosser Road / Main Street	0.72 / C
	Miller Street / Betteravia Road	0.65 / B
	Rte. 135 / Main Street	0.82 / D
	Rte. 135 / Stowell Road	0.80 / C
City of Solvang	Rte. 246 / Alamo Pintado Road	0.81 / D
	Rte. 246 / Alisal Rd.	0.67 / B
City of Lompoc	H Street / North Avenue	0.76 / C

\* The City of Santa Barbara adopted the Mission St/Rte. 101 SB-Ramp Deficiency Plan on January 6, 1999 and the plan was approved by SBCAG on February 18, 1999. The plan identified two system wide improvements: the Crosstown Shuttle Service and a Class II bikeway connecting Modoc and Castillo – a missing link on the regional bikeway system. The Crosstown Shuttle Service was implemented in 2000 and the Class II bikeway is scheduled for construction in fiscal year 2006/07.

All jurisdictions have met the CMP signalized intersection monitoring requirements. Table 7 summarizes intersections on the CMP network with existing congestion (LOS D or worse).

**Table 7  
CMP Network Congested Intersections (LOS D or Worse)**

<b>Jurisdiction</b>	<b>Intersection</b>	<b>V/C / LOS</b>
City of Goleta	Patterson Road / Hwy. 101 SB Ramps	0.84 / D
	Calle Real / Fairview Avenue	0.81 / D
City of Santa Barbara	Mission Street / Hwy. 101 SB Ramps	1.13 / F
	Las Positas Road / Calle Real-Hwy. 101 NB Off Ramp	0.81 / D
City of Santa Maria	Rte. 135 / Main Street	0.82 / D
City of Solvang	Rte. 246 / Alamo Pintado Road	0.81 / D

Table 8 shows the intersections that are scheduled for monitoring in 2006. This was done in order to give local agencies some advance notice when preparing their count programs for 2006.

**Table 8  
Intersection Monitoring Requirements for 2006**

<b>Jurisdiction</b>	<b>Intersection</b>
County of Santa Barbara	State Street / Hwy. 101 SB Off-Ramp
	Hollister Avenue / Modoc Road
	Cathedral Oaks Road / Turnpike Road
	Cathedral Oaks Road / Patterson Avenue
	Calle Real / Turnpike Road
	Route 1 / Purisima Road
	Route 135 NB Ramps / Clark Avenue
	Route 135 SB Ramps / Clark Avenue
	Route 135 / Lakeview Avenue
	Route 246 / Refugio Road
City of Goleta	Patterson Road / Hwy. 101 NB Ramps
	Patterson Road / Hwy. 101 SB Ramps
	Hollister Avenue / Route 217 SB Ramps
	Hollister Avenue / Fairview Avenue
	Hollister Avenue / Storke Road
	Calle Real / Fairview Avenue

City of Santa Barbara	Garden Street / Hwy. 101 NB Ramps
	Mission Street / Hwy. 101 SB Ramps
	Las Positas Road / Calle Real-Hwy. 101 NB Ramps
	Hope Avenue / Hwy. 101 NB Ramps
	Foothill Road / Alamar Road
	Foothill Road / San Roque Road
	Foothill Road / Ontare Road
	Cabrillo Boulevard / Milpas Street
	Cabrillo Boulevard / State Street
	Cabrillo Boulevard / Castillo Street
	Castillo Street / Montecito Street
	Meigs Road / Cliff Drive
	Carrillo Street / Chapala Street
	Carrillo Street / State Street
	Carrillo Street / Anacapa Street
	Anacapa Street / Haley Street
	Chapala Street / Haley Street
	Chapala Street / Mission Street
	Las Positas Road / State Street
	State Street / La Cumbre Road
State Street / Plaza Street	
La Cumbre Road / La Cumbre Lane	
City of Santa Maria	College Drive / Stowell Road
	Blosser Road-Skyway Drive / Betteravia Road
	Blosser Road / Stowell Road
	Bradley Road / Stowell Road
	Miller Street / Main Street
	Miller Street / Santa Maria Way
	Route 135 / Miller Street
	Route 135 / Main Street
Route 135 / Donovan Road	
City of Carpinteria	Carpinteria Avenue / Casitas Pass Road
	Carpinteria Avenue / Linden Avenue
City of Solvang	Route 246 / Alamo Pintado Road
City of Lompoc	Ocean Avenue / A Street
	Ocean Avenue / H Street
	Ocean Avenue / I Street
	H Street / Central Avenue
	H Street / College Avenue
	Route 1 / Route 246
City of Buellton	Hwy. 101 NB Ramps / Route 246
	Hwy. 101 SB Ramps / Route 246

### *Deficiency Plans*

The CMP legislation requires member agencies to prepare deficiency plans for CMP system facilities located within their jurisdictions that exceed the CMP traffic LOS standard. In Santa Barbara County, any facility operating at LOS E or worse triggers the need for the preparation of a deficiency plan. The legislation requires that deficiency plans either mitigate the deficiency at its location through capital improvements or alternatively, implement system-wide improvements which benefit circulation and air quality. If a CMP facility exceeds the LOS standard and does not have a Congestion Management Agency (CMA)-approved deficiency plan, then the local jurisdiction in which the facility is located is at risk of losing new gat tax revenues provided by Proposition 111.

There were no deficiency plans required in 2005. However, staff recommended that the City of Santa Barbara conduct a seasonal monitoring count program in 2005 at the Castillo Street/Montecito Street intersection. This was done in order to address a reported deficient LOS E for the 2003 monitoring year.

Since the 2003 traffic count, the City has completed three traffic counts at this location. Table 9 summarizes the count dates and levels of service for each of the three counts.

**Table 9**  
**Monitoring at the Castillo Street/Montecito Street Intersection**

<b>Count Date</b>	<b>V/C / LOS</b>
October 28, 2004	0.74 / C
January 21, 2004	0.81 / D
December 7, 2005	0.79 / C

As shown, there were no instances of LOS E for the two counts done in 2004 and the one count in 2005. It should be noted that monitoring opportunities were limited in 2005 due to the construction activities occurring at the Castillo Street/Highway 101 interchange. It is recommended that the City complete one more count in April/May to complete the seasonal monitoring at this facility.

### *Progress Implementing Existing Deficiency Plans*

Carrillo Street / Highway 101 NB-Ramp Intersection: The Carrillo Street / Highway 101 NB-Ramp Intersection Deficiency Plan was adopted in 1998 and programmed in the STIP that same year. The initial project scope entailed widening the northbound on-ramp to accommodate two travel lanes and adding an auxiliary lane connecting the northbound ramp to the off-ramp at Arrellaga Street. This was considered a viable alternative until it was determined that the auxiliary lane could not meet the vertical clearance standard at the Anapamu Pedestrian over-crossing, which is one of the lowest structures over this segment of Highway 101. Consequently, this alternative was dropped after the proposed project could not meet the criteria necessary for an exception to Caltrans standards.

A revised project scope has been developed that entails widening the northbound on-ramp at Carrillo Street for a distance of 280 meters (919 feet) to accommodate two travel lanes, the

merge point with Highway 101, a pullout area for California Highway Patrol/Maintenance purposes, a ramp meter with closed circuit TV, and a retaining wall between the ramp and Mission Creek. The signal phasing at the ramp intersection will be modified to allow for simultaneous left and right turns onto the northbound ramp and a pedestrian-protected phase for pedestrians crossing the northbound ramp entrance. Analysis of these improvements indicates that the level of service at this intersection will improve to LOS C. Construction on this project is scheduled to begin during the 2006/2007 fiscal year.

Mission Street / Highway 101 SB-Ramp Intersection: The City of Santa Barbara adopted the Mission Street / Highway 101 SB-Ramp Deficiency Plan on January 6, 1999 and the plan was approved by SBCAG on February 18, 1999. The plan identified two system-wide improvements: the Crosstown Shuttle Service and a Class II bikeway connecting Modoc Road and Castillo Street – a missing link on the regional bikeway system. The Crosstown Shuttle Service was implemented in 2000 and the Class II bikeway is currently scheduled for construction during the 2006/2007 fiscal year.

Highway 101 – South Coast (Ventura County Line – Winchester Canyon): On May 20, 1999, the SBCAG Board approved the 1998 Annual Conformance Assessment of the Congestion Management Program for Santa Barbara County. This determination included the recommendation that SBCAG staff develop a multi-jurisdictional Deficiency Plan for the Highway 101 corridor. As directed, development of the plan would be in cooperation with Caltrans, the County of Santa Barbara, the cities of Santa Barbara and Carpinteria, and other agencies as appropriate. Development of the South Coast Highway 101 Deficiency Plan was approved by the County of Santa Barbara (March 2002) and the Cities of Santa Barbara (June 2002) and Carpinteria (June 2002). SBCAG approved the plan in June 2002.

The Highway 101 Deficiency Plan identified 36 short-term improvements that will serve to alleviate congestion on Highway 101 within the South Coast between Winchester Canyon and the Ventura County Line. Implementation of the 101 Deficiency Plan will be annually tracked as part of the CMP Annual Conformance Assessment process. Table 10 lists those projects identified in the Local Agency Highway 101 Short-Term Package of Projects that have either been implemented or are currently programmed. Two projects were implemented this past year; the Freeway Service Patrol and the installation of CCTV equipment by Caltrans along Highway 101 within the Goleta urbanized area.

In addition to establishing a list of short-term improvements, the 101 Deficiency Plan included a commitment to initiate a more comprehensive effort to identify longer-term solutions for the deficiencies on Highway 101. In June 2002, the SBCAG board directed the formation of a Technical Advisory Group (TAG) to initiate the development of the 101 In-Motion process that would focus on long-range solutions to these deficiencies. A consultant was retained by SBCAG, following a competitive selection process, to examine a range of options as part of the 101 In-Motion project. These alternatives included: widening of Highway 101, improvements to interchanges and adjacent local roads in the corridor, the enhancement and use of alternative modes including bicycles, transit and passenger rail, and potential changes in local land use policies as they impact transportation.

**Table 10**  
**Status of Local Agency Highway 101 Short-Term Package of Projects from 101**  
**Deficiency Plan**

Project	Lead Agency	Funding Source	Status
<u>Highway 101 Operational Improvements</u> a. Add 3 <sup>rd</sup> Lane Milpas over-crossing and construct new SB off-ramp & Milpas to Cabrillo – add 3 <sup>rd</sup> Lane NB Aux Lane.	Caltrans	STIP (1996-2006) Measure D	Environmental (completed) PS&E Phase (on-going)
b. Improve Rte. 101/Cabrillo Interchange	Caltrans	STIP (1996-2006) Measure D	Programmed
c. Improve Evans/Ortega Hill Intersection	County	STIP (1996-2004)	Programmed
d. Evans to Sheffield – NB Aux Lane & Bike Lane	Caltrans	STIP (1996-2004)	Under Const.
e. Lengthen SB – On-Ramp at Eucalyptus Ln.	Caltrans		Complete
f. Reconstruct Rte. 101 Interchanges at Casitas & Linden	Caltrans	STIP (1996-2006)	Environmental Review
g Construct Road extension of Via Real	Carpinteria/ Caltrans	STIP (1996-2006)	Environmental Review
Public Transit to Ventura (Coastal Express)	SBCAG VCTC	CMAQ Measure D (2002)	On-Going
Expansion of Clean Air Express	SBCAG	CMAQ Measure D (2002)	On-Going
Regional Traffic Management Center (San Luis Obispo)	Caltrans CHP	STIP (2000)	Completed
County Traffic Management Center	County		Planned
Rte. 101 Network Surveillance – Loop Detectors	Caltrans	SHOPP (2001)	Installed south of Milpas. Hook up to TMC awaiting funding
South Coast Highway 101 Freeway Service Patrol	SBCAG	SAFE State	Initiated 2006
Rte. 101 Network Surveillance - CCTVs	Caltrans	Minor Capital B	Two cameras installed with web access

The 101 In-Motion project began in November 2003. Public involvement is a key component of this project. Important milestones that have been accomplished to date include: development and implementation of a public participation plan; a Highway 101 Baseline Performance report; development of screening criteria; community outreach; and analysis of alternative improvement packages. SBCAG approved the 101 In-Motion consensus package in October 2005. The recommended package included a major highway capacity improvement south of Milpas, widening to six lanes between Milpas and Carpinteria, to accommodate a new High Occupancy Vehicle lane in each direction, and commuter rail between Ventura County and Goleta. These flagship projects are complemented with enhancements to the bus system, including express bus service to North County, better connecting services to the rail stations, and improved regional bus services from Ventura County and within the south coast. Expanded demand management programs promote flexible work hours and telecommuting and include other marketing measures directed at individuals in order to encourage single occupant vehicle drivers into carpools and onto the bus. Telecommunications technologies are also added to

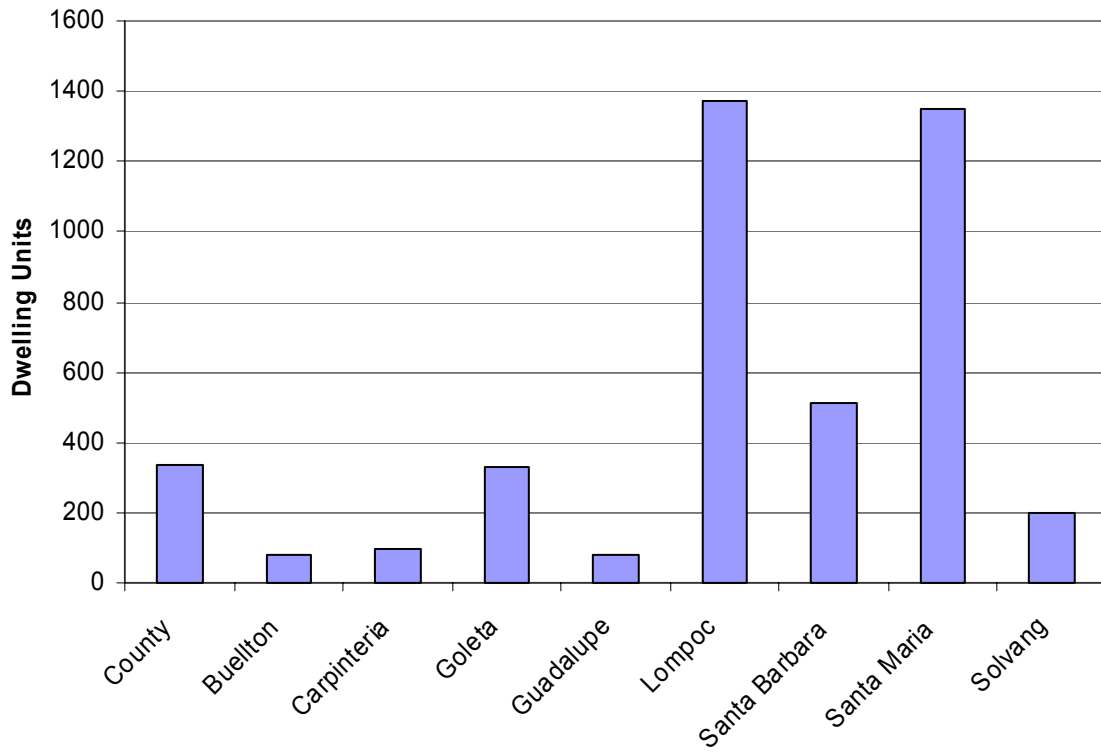
improve the flow of information about traffic conditions to allow drivers to make better informed choices about traveling in the 101 corridor. Examination of the sensitivity of the travel forecasts to potential land use changes suggest that improvements to the highway north of Milpas to Goleta should be targeted at current congestion hot spots since impending changes to General Plans could significantly impact future traffic growth. Progress on all these projects will be evaluated on an annual basis to insure the projects are being implemented in an expeditious manner. A Project Study Report and Action Plan are currently being developed that will identify project phasing and funding options. The 101 In-Motion improvement projects and programs will be amended into the South Coast Highway 101 Deficiency Plan and the Regional Transportation Plan to provide both a short-term and a long-term blueprint for improving mobility within the South Coast Highway 101 corridor.

#### *Land Use Analysis Program*

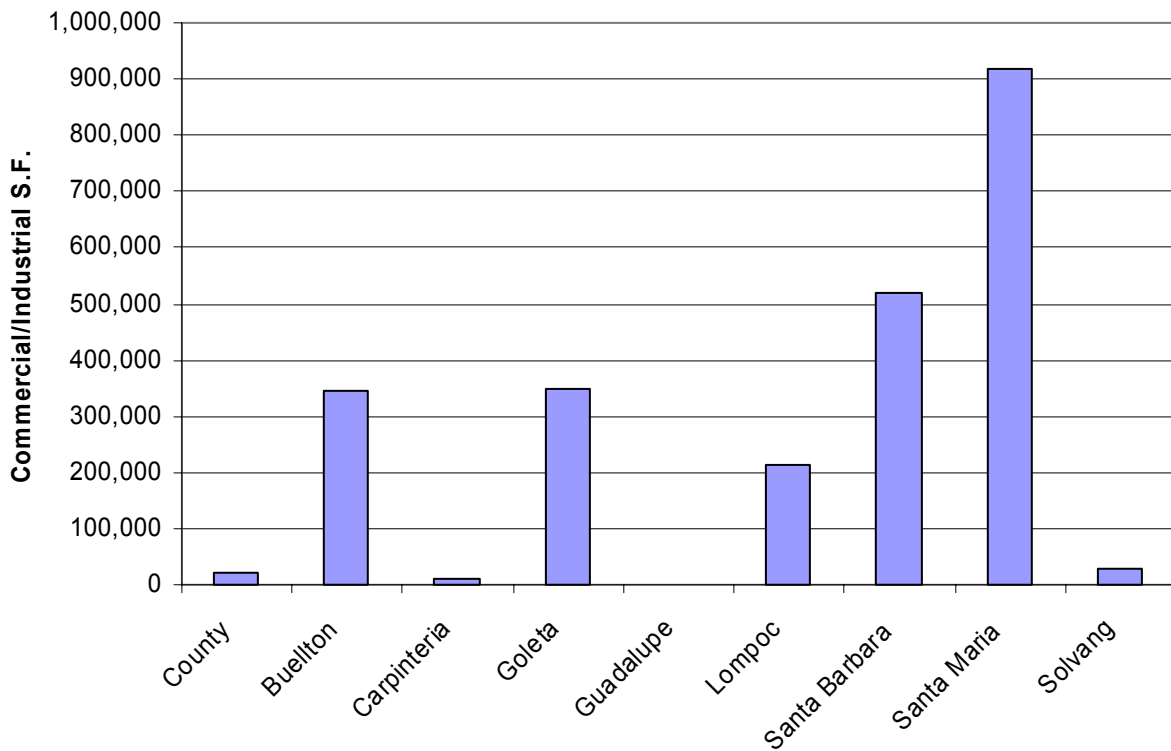
Land Use Impact Program: As required by the CMP statute, SBCAG, in consultation with the cities and the County, developed a uniform data base on traffic impacts for use in a countywide transportation computer model. SBCAG also reviewed and approved the use of transportation computer models of specific areas within the county for determining the quantitative impacts of development on the CMP system that are based on the countywide model and standardized modeling assumptions and conventions. The local area computer models must be consistent with the modeling methodology adopted by SBCAG. The data bases must also be consistent with the data bases used by SBCAG.

Building Permit Data: All jurisdictions have submitted land use data in the required format to neighboring jurisdictions and to SBCAG. Figure 5 summarizes the total number of residential units either approved or under construction in 2005 by jurisdiction. Figure 6 summarizes the total number of commercial/industrial square footage either approved or under construction in 2005 by jurisdiction.

**Figure 5**  
**Residential Projects Approved or Under Construction in 2005**



**Figure 6**  
**Commercial/Industrial Projects Approved or Under Construction in 2005**



CEQA Project Review: All jurisdictions have complied with the CMP CEQA project review requirements.

### **COMMITTEE REVIEW**

The CMP Conformance Assessment Staff Report and recommendations were approved at the April 6, 2006 meeting of the Technical Transportation Advisory Committee (TTAC). Staff also responded to questions regarding the following items:

- A question was asked regarding how the gas tax/Section 2105 funds are apportioned. These funds are apportioned based on a formula that incorporates the number of registered vehicles and maintained mileage within each County and population estimates in each of the Cities.
- Additional clarification was provided on the difference between the level of service methodology for roadways/highways (HCM method) and signalized intersections (ICU method).

# **ATTACHMENT 1**

## **FREEWAY LEVEL OF SERVICE CALCULATIONS**

**A.M. PEAK HOUR – U.S. HIGHWAY 101 SOUTH COAST SEGMENTS**

**P.M. PEAK HOUR – U.S. HIGHWAY 101, STATE ROUTES 217 & 135**

**FREEWAY LEVEL OF SERVICE ANALYSIS 2004  
WEEKDAY AM-MORNING PEAK HOUR**

Route 101 Between	Mi	Lns	Terrair	ADT	K Factor	% Truck	% BUS	% RV	% NB	% SB	Pk Hr Vol	Pk Hr NB Vol	Pk Hr SB Vol	f_w Adj	f_p Adj	f_hv NB Adj	f_hv SB Adj	MFR	SFR NB	SFR SB	V/C NB	V/C SB	LOS NB	LOS SB
Ventura County Line	1.1	4	F	67000	0.061	0.081	0.01	0.01	0.70	0.30	4087	2861	1226	1.0	1.0	0.954654	0.954654	4600	6491	4391	0.44	0.28	B	A
Route 150	0.4	4	F	68000	0.061	0.077	0.01	0.01	0.70	0.30	4148	2904	1244	1.0	1.0	0.95648	0.95648	4600	6505	4400	0.45	0.28	B	A
Bailard Ave.	1	4	F	67000	0.061	0.073	0.01	0.01	0.70	0.30	4087	2861	1226	1.0	1.0	0.958313	0.958313	4600	4408	4408	0.65	0.28	C	A
Route 224	0.4	4	F	67000	0.061	0.073	0.01	0.01	0.70	0.30	4087	2861	1226	1.0	1.0	0.958313	0.958313	4600	4408	4408	0.65	0.28	C	A
Linden Ave.	0.7	4	F	73000	0.061	0.073	0.01	0.01	0.70	0.30	4453	3117	1336	1.0	1.0	0.958313	0.958313	4600	4408	4408	0.71	0.30	D	A
Santa Monica Rd.	1.4	4	F	74000	0.061	0.073	0.01	0.01	0.70	0.30	4514	3160	1354	1.0	1.0	0.958313	0.958313	4600	4408	4408	0.72	0.31	D	B
Padaro Lane S.	2	4	F	78000	0.061	0.073	0.01	0.01	0.65	0.35	4758	3093	1665	1.0	1.0	0.958313	0.958313	4600	4408	4408	0.70	0.38	D	B
Padaro Lane N.	1	4	F	78000	0.075	0.073	0.01	0.01	0.65	0.35	5850	3803	2048	1.0	1.0	0.958313	0.958313	4600	4408	4408	0.86	0.46	D	B
Evans Ave.	0.7	4	R*	82000	0.075	0.073	0.01	0.01	0.65	0.35	6150	3998	2153	1.0	1.0	0.794281	0.958313	4600	3654	4408	1.09	0.49	F	B
Sheffield Dr.	1	4	R*	84000	0.075	0.074	0.01	0.01	0.65	0.35	6300	4095	2205	1.0	1.0	0.957854	0.792393	4600	4406	3645	0.93	0.60	E	C
San Ysidro Rd.	0.5	4	F	89000	0.075	0.073	0.01	0.01	0.65	0.35	6675	4339	2336	1.0	1.0	0.958313	0.958313	4600	4408	4408	0.98	0.53	E	C
Olive Mill Rd.	0.9	4	F	86000	0.075	0.073	0.01	0.01	0.65	0.35	6450	4193	2258	1.0	1.0	0.958313	0.958313	4600	4408	4408	0.95	0.51	E	C
Cabrillo Blvd.	1.4	4	F	97000	0.075	0.073	0.01	0.01	0.56	0.44	7275	4074	3201	1.0	1.0	0.958313	0.958313	4600	4408	4408	0.92	0.73	E	D
Milpas St.	1.4	6	F	105000	0.090	0.073	0.01	0.01	0.56	0.44	9450	5292	4158	1.0	1.0	0.958313	0.958313	7050	6756	6756	0.78	0.62	D	C
Castillo St.	0.6	6	F	110000	0.090	0.067	0.01	0.01	0.53	0.47	9900	5247	4653	1.0	1.0	0.961076	0.961076	7050	6776	6776	0.77	0.69	D	C
Carrillo St.	1	6	F	125000	0.090	0.068	0.01	0.01	0.53	0.47	11250	5963	5288	1.0	1.0	0.960615	0.960615	7050	6772	6772	0.88	0.78	D	D
Mission St.	0.7	6	F	144000	0.090	0.068	0.01	0.01	0.52	0.48	12960	6739	6221	1.0	1.0	0.960615	0.960615	7050	6772	6772	1.00	0.92	E	E
Las Positas Rd.	1.2	6	F	136000	0.090	0.068	0.01	0.01	0.52	0.48	12240	6365	5875	1.0	1.0	0.960615	0.960615	7050	6772	6772	0.94	0.87	E	D
La Cumbre Rd. **	0.7	6	F	137000	0.083	0.064	0.01	0.01	0.52	0.48	11371	5913	5458	1.0	1.0	0.962464	0.962464	7050	7535	7535	0.78	0.72	D	D
Route 154 **	1.7	6	F	125000	0.076	0.067	0.01	0.01	0.52	0.48	9500	4940	4560	1.0	1.0	0.961076	0.961076	7050	6776	6776	0.73	0.67	D	C
Turnpike Rd.	1.3	6	F	119000	0.076	0.075	0.01	0.01	0.43	0.57	9044	3889	5155	1.0	1.0	0.957396	0.957396	7050	6750	6750	0.58	0.76	C	D
Route 217	1.1	6	F	92000	0.076	0.082	0.01	0.01	0.40	0.60	6992	2797	4195	1.0	1.0	0.954198	0.954198	7050	6727	6727	0.42	0.62	B	C
Fairview Rd.	1.2	4	F	80000	0.072	0.102	0.01	0.01	0.34	0.66	5760	1958	3802	1.0	1.0	0.94518	0.94518	4600	5098	4348	0.38	0.87	B	D
Los Cameros Rd.***	1.1	4	F	67000	0.072	0.102	0.01	0.01	0.34	0.66	4824	1640	3184	1.0	1.0	0.94518	0.94518	4600	4348	4348	0.38	0.73	B	D
Glen Annie/Storke Rd.	2.1	4	F	35000	0.072	0.102	0.01	0.01	0.34	0.66	2520	857	1663	1.0	1.0	0.94518	0.94518	4600	4348	4348	0.20	0.38	A	B
Hollister Rd.	6.9	4	R	32000	0.072	0.102	0.01	0.01	0.34	0.66	2304	783	1521	1.0	1.0	0.742942	0.742942	4600	3418	3418	0.23	0.44	A	B
El Capitan Beach																								

\* Reflects impact of Ortega Hill grade on medium and heavy duty trucks  
 \*\* NB & SB Auxiliary Lanes + 750 vplph  
 \*\*\* NB Auxiliary Lane + 750 vplph  
 Based on HCM 2000 - Basic Freeway Segments

**FREEWAY LEVEL OF SERVICE ANALYSIS 2004  
WEEKDAY PM-EVENING PEAK HOUR**

Route 101 Between	Mi	Lns	Terrair	ADT	K Factor	% Truck	% BUS	% RV	% NB	% SB	Pk Hr Vol	Pk Hr NB Vol	Pk Hr SB Vol	f_w Adj	f_p Adj	f_hv NB Adj	f_hv SB Adj	MFR	SFR NB	SFR SB	V/C NB	V/C SB	LOS NB	LOS SB
Ventura County Line	1.1	4	F	67000	0.082	0.081	0.01	0.01	0.36	0.64	5494	1978	3516	1.0	1.0	0.954654	0.954654	4600	6491	4391	0.30	0.80	B	D
Route 150	0.4	4	F	68000	0.082	0.077	0.01	0.01	0.36	0.64	5576	2007	3569	1.0	1.0	0.95648	0.95648	4600	6505	4400	0.31	0.81	B	D
Bailard Ave.	1	4	F	67000	0.082	0.073	0.01	0.01	0.39	0.61	5494	2143	3351	1.0	1.0	0.958313	0.958313	4600	4408	4408	0.49	0.76	C	D
Route 224	0.4	4	F	67000	0.081	0.073	0.01	0.01	0.42	0.58	5427	2279	3148	1.0	1.0	0.958313	0.958313	4600	4408	4408	0.52	0.71	C	C
Linden Ave.	0.7	4	F	73000	0.081	0.073	0.01	0.01	0.42	0.58	5913	2483	3430	1.0	1.0	0.958313	0.958313	4600	4408	4408	0.56	0.78	C	D
Santa Monica Rd.	1.4	4	F	74000	0.081	0.073	0.01	0.01	0.42	0.58	5994	2517	3477	1.0	1.0	0.958313	0.958313	4600	4408	4408	0.57	0.79	C	D
Padaro Lane S.	2	4	F	78000	0.081	0.073	0.01	0.01	0.42	0.58	6318	2654	3664	1.0	1.0	0.958313	0.958313	4600	4408	4408	0.60	0.83	C	D
Padaro Lane N.	1	4	F	78000	0.085	0.073	0.01	0.01	0.44	0.56	6630	2917	3713	1.0	1.0	0.958313	0.958313	4600	4408	4408	0.66	0.84	C	D
Evans Ave.	0.7	4	R*	82000	0.085	0.073	0.01	0.01	0.44	0.56	6970	3067	3903	1.0	1.0	0.794281	0.958313	4600	3654	4408	0.84	0.89	D	D
Sheffield Dr.	1	4	R*	84000	0.087	0.074	0.01	0.01	0.44	0.56	7308	3216	4092	1.0	1.0	0.957854	0.792393	4600	4406	3645	0.73	1.12	D	F
San Ysidro Rd.	0.5	4	F	89000	0.087	0.073	0.01	0.01	0.44	0.56	7743	3407	4336	1.0	1.0	0.958313	0.958313	4600	4408	4408	0.77	0.98	D	E
Olive Mill Rd.	0.9	4	F	86000	0.087	0.073	0.01	0.01	0.44	0.56	7482	3292	4190	1.0	1.0	0.958313	0.958313	4600	4408	4408	0.75	0.95	D	E
Cabrillo Blvd.	1.4	4	F	97000	0.089	0.073	0.01	0.01	0.46	0.54	8633	3971	4662	1.0	1.0	0.958313	0.958313	4600	4408	4408	0.90	1.06	E	F
Milpas St.	1.4	6	F	105000	0.091	0.073	0.01	0.01	0.46	0.54	9555	4395	5160	1.0	1.0	0.958313	0.958313	7050	6756	6756	0.65	0.76	C	D
Castillo St.	0.6	6	F	110000	0.093	0.067	0.01	0.01	0.46	0.54	10230	4706	5524	1.0	1.0	0.961076	0.961076	7050	6776	6776	0.69	0.82	C	D
Carrillo St.	1	6	F	125000	0.097	0.068	0.01	0.01	0.46	0.54	12125	5578	6548	1.0	1.0	0.960615	0.960615	7050	6772	6772	0.81	0.97	D	E
Mission St.	0.7	6	F	144000	0.090	0.068	0.01	0.01	0.48	0.52	12960	6221	6739	1.0	1.0	0.960615	0.960615	7050	6772	6772	0.92	1.00	E	E
Las Positas Rd.	1.2	6	F	136000	0.090	0.068	0.01	0.01	0.50	0.50	12240	6120	6120	1.0	1.0	0.960615	0.960615	7050	6772	6772	0.90	0.90	E	E
La Cumbre Rd. **	0.7	6	F	137000	0.090	0.064	0.01	0.01	0.50	0.50	12330	6165	6165	1.0	1.0	0.962464	0.962464	7050	7535	7535	0.82	0.82	D	D
Route 154 **	1.7	6	F	125000	0.082	0.067	0.01	0.01	0.51	0.49	10250	5228	5023	1.0	1.0	0.961076	0.961076	7050	6776	6776	0.77	0.74	D	D
Turnpike Rd.	1.3	6	F	119000	0.082	0.075	0.01	0.01	0.51	0.49	9758	4977	4781	1.0	1.0	0.957396	0.957396	7050	6750	6750	0.74	0.71	D	C
Route 217	1.1	6	F	92000	0.082	0.082	0.01	0.01	0.53	0.47	7544	3998	3546	1.0	1.0	0.954198	0.954198	7050	6727	6727	0.59	0.53	C	C
Fairview Rd.	1.2	4	F	80000	0.086	0.102	0.01	0.01	0.59	0.41	6880	4059	2821	1.0	1.0	0.94518	0.94518	4600	4348	4348	0.93	0.65	E	C
Los Cameros Rd.***	1.1	4	F	67000	0.086	0.102	0.01	0.01	0.59	0.41	5762	3400	2362	1.0	1.0	0.94518	0.94518	4600	5098	4348	0.67	0.54	C	C
Glen Annie/Storke Rd.	2.1	4	F	35000	0.086	0.102	0.01	0.01	0.59	0.41	3010	1776	1234	1.0	1.0	0.94518	0.94518	4600	4348	4348	0.41	0.28	B	A
Hollister Rd.	6.9	4	R	32000	0.086	0.102	0.01	0.01	0.59	0.41	2752	1624	1128	1.0	1.0	0.742942	0.742942	4600	3418	3418	0.48	0.33	C	B

El Capitan Beach  
 \* Reflects impact of Ortega Hill grade on medium and heavy duty trucks  
 \*\* NB & SB Auxiliary Lanes: +750 pcplph in each direction  
 \*\*\* NB Auxiliary Lane: +750 pcplph  
 Based on HCM 2000 - Basic Freeway Segments

**FREEWAY LEVEL OF SERVICE ANALYSIS 2004  
WEEKDAY EVENING PEAK HOUR**

<b>Route 101 Between</b>	<b>Mi</b>	<b>Lns</b>	<b>Terrair</b>	<b>ADT</b>	<b>K Factor</b>	<b>% Truck</b>	<b>% BUS</b>	<b>% RV</b>	<b>% NB</b>	<b>% SB</b>	<b>Pk Hr Vol</b>	<b>Pk Hr NB Vol</b>	<b>Pk Hr SB Vol</b>	<b>f_w Adj</b>	<b>f_p Adj</b>	<b>f_hv NB Adj</b>	<b>f_hv SB Adj</b>	<b>MFR</b>	<b>SFR NB</b>	<b>SFR SB</b>	<b>V/C NB</b>	<b>V/C SB</b>	<b>LOS NB</b>	<b>LOS SB</b>
El Capitan Beach	15	4	M	31000	0.089	0.102	0.01	0.01	0.56	0.44	2759	1545	1214	1.0	1.0	0.591017	0.591017	4600	2719	2719	0.57	0.45	<b>C</b>	<b>B</b>
Las Cruces, Rte.1	7.6	4	M	23500	0.089	0.118	0.01	0.01	0.56	0.44	2092	1172	920	1.0	1.0	0.559284	0.559284	4600	2573	2573	0.46	0.36	<b>B</b>	<b>B</b>
Santa Rosa Rd.	0.7	4	R	22400	0.089	0.135	0.01	0.01	0.56	0.44	1994	1117	877	1.0	1.0	0.692042	0.692042	4600	3183	3183	0.35	0.28	<b>B</b>	<b>A</b>
Buellton, Rte.246	0.4	4	R	20200	0.089	0.148	0.01	0.01	0.56	0.44	1798	1007	791	1.0	1.0	0.673854	0.673854	4600	3100	3100	0.32	0.26	<b>B</b>	<b>A</b>
North Buellton I/C	5.1	4	R	23000	0.089	0.142	0.01	0.01	0.56	0.44	2047	1146	901	1.0	1.0	0.682128	0.682128	4600	3138	3138	0.37	0.29	<b>B</b>	<b>A</b>
Zaca, Rte.154 East	8.3	4	R	29000	0.089	0.125	0.01	0.01	0.56	0.44	2581	1445	1136	1.0	1.0	0.706714	0.706714	4600	3251	3251	0.44	0.35	<b>B</b>	<b>B</b>
Los Alamos, Rte.135	10.8	4	R	27500	0.089	0.140	0.01	0.01	0.56	0.44	2448	1371	1077	1.0	1.0	0.684932	0.684932	4600	3151	3151	0.44	0.34	<b>B</b>	<b>B</b>
Clark Ave.	2.2	4	R	38000	0.087	0.124	0.01	0.01	0.52	0.48	3306	1719	1587	1.0	1.0	0.708215	0.708215	4600	3258	3258	0.53	0.49	<b>C</b>	<b>B</b>
Santa Maria Way	2.2	4	R	44000	0.087	0.090	0.01	0.01	0.52	0.48	3828	1991	1837	1.0	1.0	0.763359	0.763359	4600	3511	3511	0.57	0.52	<b>C</b>	<b>C</b>
Betteravia Rd.	1	4	F	55000	0.084	0.077	0.01	0.01	0.51	0.49	4620	2356	2264	1.0	1.0	0.95648	0.95648	4600	4400	4400	0.54	0.51	<b>C</b>	<b>C</b>
Stowell Rd.	1	4	F	61000	0.084	0.075	0.01	0.01	0.55	0.45	5124	2818	2306	1.0	1.0	0.957396	0.957396	4600	4404	4404	0.64	0.52	<b>C</b>	<b>C</b>
Route 166	1.1	4	F	59000	0.086	0.075	0.01	0.01	0.53	0.47	5074	2689	2385	1.0	1.0	0.957396	0.957396	4600	4404	4404	0.61	0.54	<b>C</b>	<b>C</b>
Donovan Rd.	1.1	4	F	58000	0.086	0.075	0.01	0.01	0.53	0.47	4988	2644	2344	1.0	1.0	0.957396	0.957396	4600	4404	4404	0.60	0.53	<b>C</b>	<b>C</b>
Route 135	0.2	4	F	64000	0.086	0.075	0.01	0.01	0.53	0.47	5504	2917	2587	1.0	1.0	0.957396	0.957396	4600	4404	4404	0.66	0.59	<b>C</b>	<b>C</b>
San Luis Cnty Line																								
<b>Route 217 Between</b>	<b>Mi</b>	<b>Lns</b>	<b>Terrair</b>	<b>ADT</b>	<b>K Factor</b>	<b>% Truck</b>	<b>% BUS</b>	<b>% HDV</b>	<b>% NB</b>	<b>% SB</b>	<b>Pk Hr Vol</b>	<b>Pk Hr NB Vol</b>	<b>Pk Hr SB Vol</b>	<b>f_w Adj</b>	<b>f_p Adj</b>	<b>f_hv NB Adj</b>	<b>f_hv SB Adj</b>	<b>MFR</b>	<b>SFR NB</b>	<b>SFR SB</b>	<b>V/C NB</b>	<b>V/C SB</b>	<b>LOS NB</b>	<b>LOS SB</b>
Sandspit Rd.	1.29	4	F	16300	0.115	0.035	0.01	0.01	0.69	0.31	1870	1290	580	1.0	1.0	0.976276	0.976276	4600	4491	4491	0.29	0.13	<b>A</b>	<b>A</b>
Hollister Ave.	0.53	4	F	25000	0.115	0.078	0.01	0.01	0.69	0.31	2868	1979	889	1.0	1.0	0.956023	0.956023	4600	4398	4398	0.45	0.20	<b>B</b>	<b>A</b>
Jct. Rte. 101																								
<b>Route 135 Between</b>	<b>Mi</b>	<b>Lns</b>	<b>Terrair</b>	<b>ADT</b>	<b>K Factor</b>	<b>% Truck</b>	<b>% BUS</b>	<b>% HDV</b>	<b>% NB</b>	<b>% SB</b>	<b>Pk Hr Vol</b>	<b>Pk Hr NB Vol</b>	<b>Pk Hr SB Vol</b>	<b>f_w Adj</b>	<b>f_p Adj</b>	<b>f_hv NB Adj</b>	<b>f_hv SB Adj</b>	<b>MFR</b>	<b>SFR NB</b>	<b>SFR SB</b>	<b>V/C NB</b>	<b>V/C SB</b>	<b>LOS NB</b>	<b>LOS SB</b>
North Jct. Rte. 1	1.58	4	F	15500	0.123	0.109	0.01	0.01	0.70	0.30	1907	1335	572	1.0	1.0	0.942063	0.942063	4600	4333	4333	0.31	0.13	<b>B</b>	<b>A</b>
Clark Avenue																								

Based on HCM 2000

## **ATTACHMENT 2**

### **MULTI-LANE AND RURAL 2-LANE HIGHWAY LEVEL OF SERVICE CALCULATIONS**





**TWO-LANE HIGHWAY LEVEL OF SERVICE ANALYSIS 2004  
WEEKDAY EVENING PEAK HOUR (continued)**

Route 154 Between	Mi	Terrain	ADT	K Factor	% Truck	% BUS	% RV	% Dir Split	Pk Hr Vol	f_d Adj	f_w Adj	f_hv Adj	MFR	SFR	V/C	LOS
Zaca, Rte. 101	2.63	R	11000	0.087	0.075	0.001	0.02	66/34	957	0.89	1.00	0.73508	2800	1832	0.52	D
Los Olivos, Calkins Rd.	5.46	R	9200	0.087	0.072	0.001	0.02	66/34	800	0.89	1.00	0.74162	2800	1848	0.43	D
Jct. Rte. 246 West	6.66	R	15500	0.087	0.051	0.001	0.02	66/34	1349	0.89	1.00	0.79089	2800	1971	0.68	E
Lake Cachuma Park	8.61	M	15500	0.087	0.040	0.001	0.02	66/34	1349	0.89	0.97	0.69013	2800	1668	0.81	E
Stagecoach Rd. 4-Lane Section San Marcos Pass Summit	7.15	M	15500	0.087	0.033	0.001	0.02	66/34	1349	0.89	0.93	0.7215	2800	1672	0.81	E
Jct. Rte. 192	0.74	R	17000	0.087	0.027	0.001	0.02	66/34	1479	0.89	1.00	0.85587	N/A - Signalized Segment			
Jct. Rte. 101																
Route 225 Between	Mi	Terrain	ADT	K Factor	% Truck	% BUS	% RV	% Dir Split	Pk Hr Vol	f_d Adj	f_w Adj	f_hv Adj	MFR	SFR	V/C	LOS
Jct. Rte. 101	0.18	R	23000	0.1	0.019	0.001	0.02	62/38	2300	0.94	1.00	0.87997	N/A - Signalized Segment			
Modoc Rd.	0.68	R	16500	0.1	0.019	0.001	0.02	62/38	1650	0.94	1.00	0.87997	N/A - Signalized Segment			
Veronica Springs	0.9	F	11900	0.1	0.019	0.001	0.02	62/38	1190	0.94	1.00	0.94895	2800	2498	0.48	D
Cliff Dr																
Route 150 Between	Mi	Terrain	ADT	K Factor	% Truck	% BUS	% RV	% Dir Split	Pk Hr Vol	f_d Adj	f_w Adj	f_hv Adj	MFR	SFR	V/C	LOS
Jct. Rte. 101	1.67	R	3100	0.117	0.085	0.001	0.02	54/46	363	1.00	0.88	0.71408	2800	1759	0.21	B
Jct. Rte. 192																
Route 135 Between	Mi	Terrain	ADT	K Factor	% Truck	% BUS	% RV	% Dir Split	Pk Hr Vol	f_d Adj	f_w Adj	f_hv Adj	MFR	SFR	V/C	LOS
Los Alamos, Rte. 101	1	F	4500	0.123	0.055	0.001	0.02	70/30	554	0.89	0.88	0.91158	2800	1999	0.28	C
Old State Highway	8.1	F	2400	0.123	0.102	0.001	0.02	70/30	296	0.89	0.88	0.867	2800	1901	0.16	B
Junction Old Route 1	0.51	M	2800	0.123	0.102	0.001	0.02	70/30	345	0.89	1.00	0.49826	2800	1242	0.28	C
San Antonio Rd.																
Route 166 Between	Mi	Terrain	ADT	K Factor	% Truck	% BUS	% RV	% Dir Split	Pk Hr Vol	f_d Adj	f_w Adj	f_hv Adj	MFR	SFR	V/C	LOS
Guadalupe, Rte. 1	3.75	F	8300	0.103	0.073	0.001	0.02	54/46	855	1.00	0.94	0.89397	2800	2353	0.36	C
Bonita School Rd.	1.07	F	10000	0.103	0.073	0.001	0.02	54/46	1030	1.00	0.94	0.89397	2800	2353	0.44	D
Black Rd.	2.05	F	11500	0.103	0.073	0.001	0.02	54/46	1185	1.00	0.94	0.89397	2800	2353	0.50	D
Santa Maria, Blosser Rd.																

PARAMETER DEFINITIONS			
<b>Mi</b>	miles of segment	<b>% Dir Split</b>	peak hour percent directional split (2-lane HWYs only)
<b>Terrain</b>	F-flat; R-rolling; M-mountainous	<b>Pk Hr NB Vol</b>	peak hour northbound volume (%NB * Pk Hr Vol)
<b>FFS</b>	free flow speed	<b>Pk Hr SB Vol</b>	peak hour southbound volume (%SB * Pk Hr Vol)
<b>ADT</b>	average daily travel	<b>f_w Adj</b>	capacity adjustment for lane width (HCM)
<b>K Factor</b>	peak hour factor	<b>f_p Adj</b>	capacity adjustment for driver population (HCM)
<b>% Truck</b>	percent of heavy duty trucks	<b>f_d Adj</b>	capacity adjustment for directional distribution (2-lane Hwys.)
<b>% Bus</b>	percent of buses	<b>f_hv NB Adj</b>	capacity adjustment for heavy duty vehicles NB (HCM)
<b>% RV</b>	percent of recreation vehicles	<b>MFR</b>	maximum flow rate (ideal lane capacity * # of lanes)
<b>% NB</b>	percent of northbound traffic	<b>SFR NB</b>	service flow rate NB (MSR * capacity adjustments)
<b>% SB</b>	percent of southbound traffic	<b>SFR SB</b>	service flow rate SB (MSR * capacity adjustments)
		<b>V/C NB</b>	volume to capacity ratio NB (SFR / MFR)
		<b>V/C SB</b>	volume to capacity ratio SB (SFR / MFR)