CORRIDOR DATA SHEET
STATE ROUTE 217

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SR 217 Corridor Data Sheet

District 5, Santa Barbara County

Inputs: PM Peak Hour Analyzed
Base Year 2012
Horizon Year 2040

Appendix E provides a glossary and references to supplement the information in the Traffic Data and Planning Data. It includes a description of each data item, the data source, and the year of the data reflected in the sheet.

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Last Saved: 9/9/2015

Segment 1 Traffic Data: SR 217

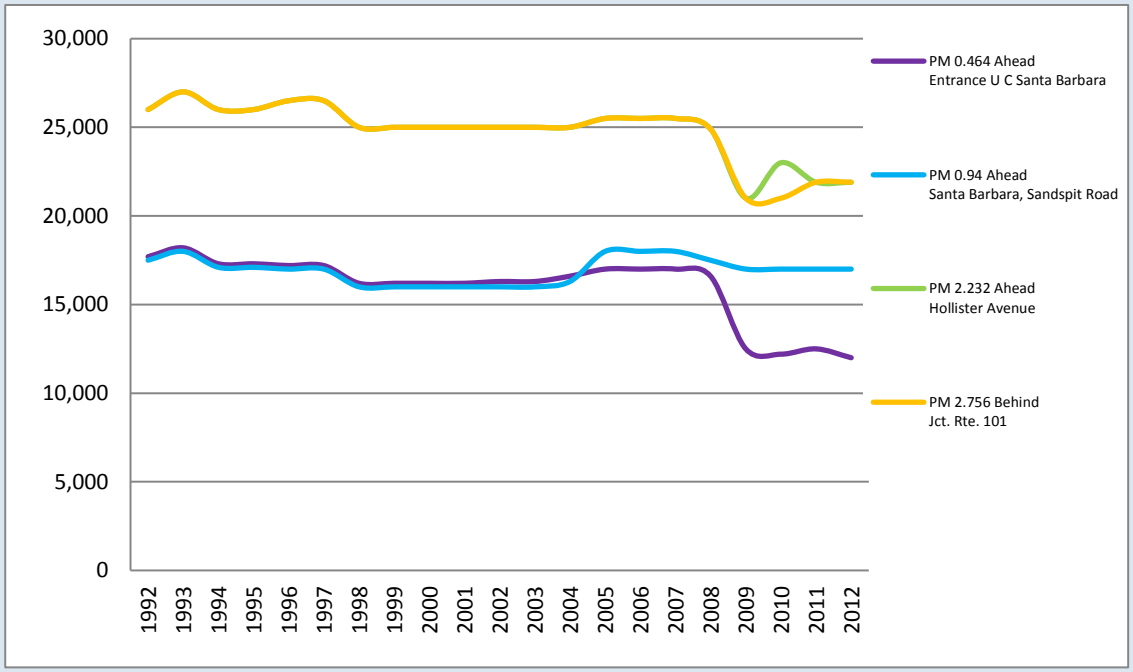
Daily Traffic Data

AADT Base Year 2012	12,000 to 21,900
AADT Horizon Year 2040	12,800 to 22,700
AADT: Growth Rate (Vehicles/Year)	20 to 30
VMT Base Year 2012	39,300
VMT Horizon Year 2040	40,900

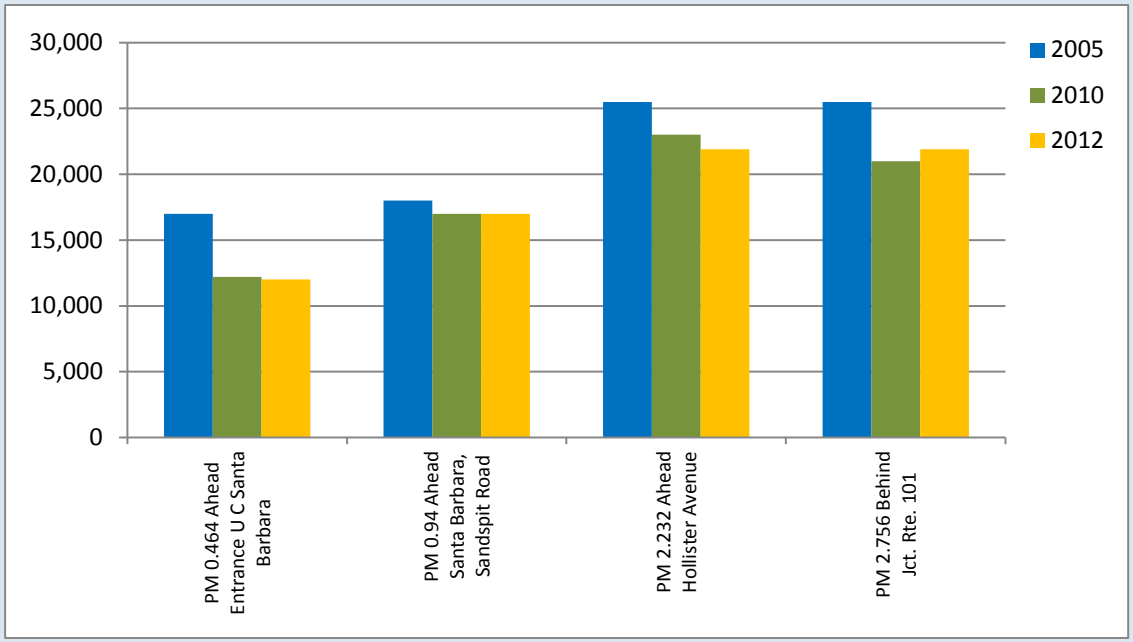
PM Peak Hour Traffic Data

	Northbound	Southbound
Segment Length (Miles)	2.292	
PM Peak Hour	5:00 - 6:00 PM	
PM Peak Hour Directional Split Base Year 2012	51.2% to 61.9%	38.1% to 48.8%
PM Peak Hour Directional Split Horizon Year 2040	51.8% to 60.8%	39.2% to 48.2%
PM Peak Hour Volume Base Year 2012	1,500 to 3,100	
	800 to 1,900	700 to 1,200
PM Peak Hour Volume Horizon Year 2040	1,500 to 2,800	
	800 to 1,700	700 to 1,100
PM Peak Hour Growth Rate (vehicles/year)	-9 to -1	
PM Peak Hour VMT Base Year 2012	3,200	2,100
PM Peak Hour VMT Horizon Year 2040	2,900	2,000
PM Peak Hour Model VHT Base Year 2012	50	40
PM Peak Hour Model VHT Horizon Year 2040	50	40
PM Peak Hour V/C Base Year 2012	0.375 to 0.501	0.231 to 0.515
PM Peak Hour V/C Horizon Year 2040	0.334 to 0.455	0.220 to 0.500
PM Model Speed (mph) Base Year 2012	37.0 to 65.0 mph	29.3 to 65.0 mph
PM Model Speed (mph) Horizon Year 2040	37.3 to 65.0 mph	30.2 to 65.0 mph

Historic AADT by Year

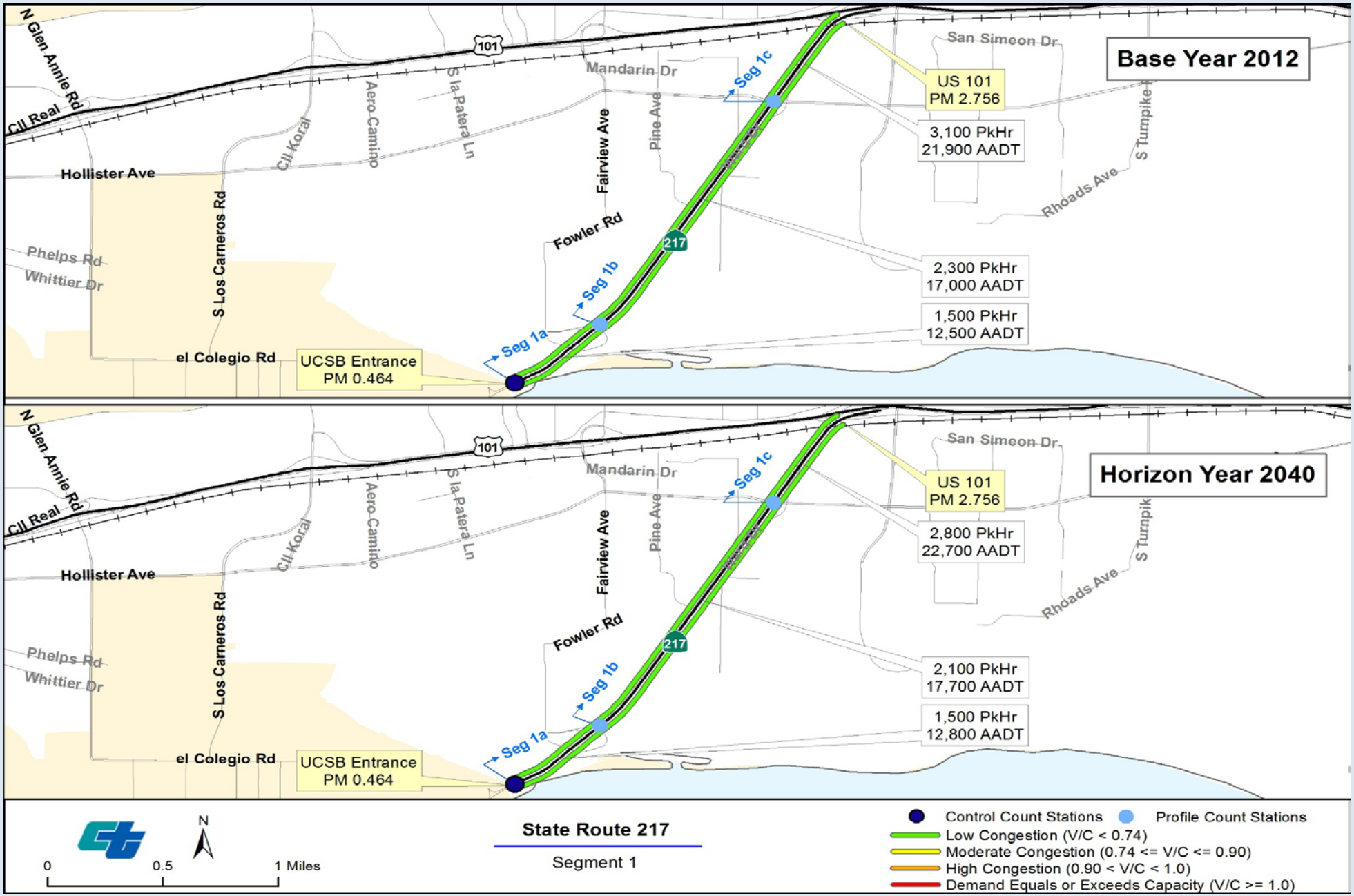


Historic AADT by Location



Segment 1 Traffic Data: SR 217

PM Peak Hour Congestion*



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Segment 1 Planning Data: SR 217

Location Description

Segment Description	From UCSB Entrance to US 101
Urban/Rural	Rural
Local Planning Jurisdiction	SBCAG
County	Santa Barbara
City	N/A
Prevalent Land Use	Agriculture

Highway Type

Freeway/Expressway System	Yes
Facility Type	Freeway
Functional Classification	Principle Arterial

Highway Designations

National Highway System	Intermodal Connector
Interregional Road System	No
Scenic Highway	No

Highway Characteristics

Number of Lanes	2-4
Pavement Condition Right	Minor
Pavement Condition Left	No Distress
Shoulder Width Right (ft)	0-8+
Shoulder Width Left (ft)	0-8+

Modal

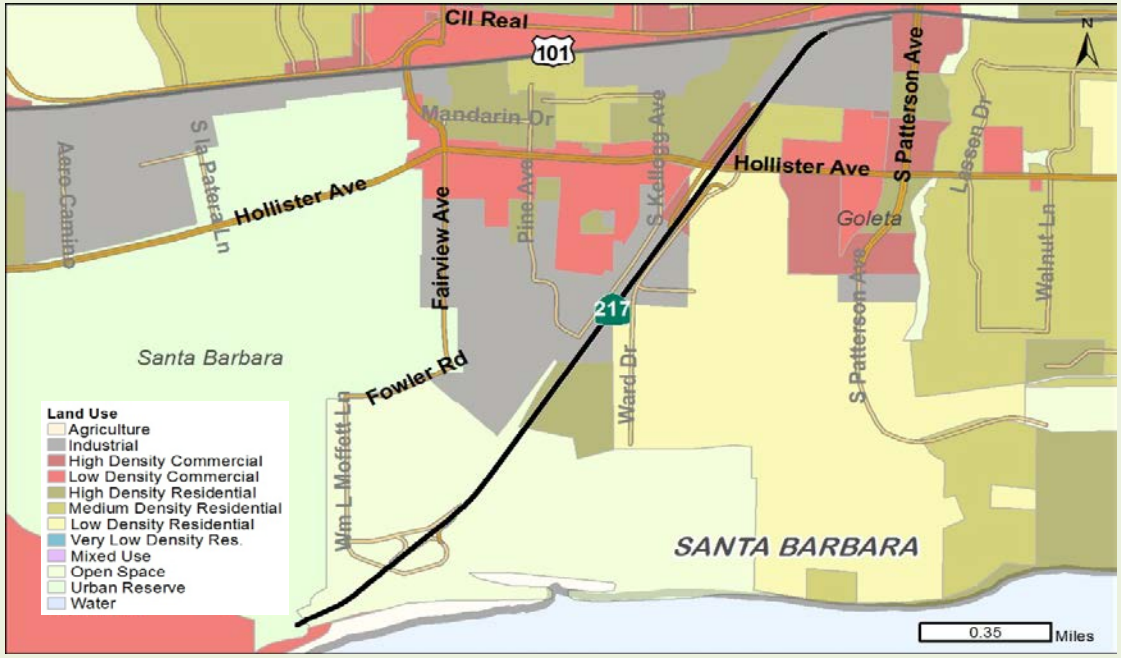
Airports Served	Santa Barbara Municipal
Bicycle Access	Closed
AMTRAK Bus Stations	N/A
AMTRAK Rail Stations	N/A
AMTRAK Thruway Bus	No
Parallel/Nearby AMTRAK	Coast Starlight; Pacific Surfliner
Rail/SHS Crossings	Yes - Grade separated
Rail Crossing Description	UP

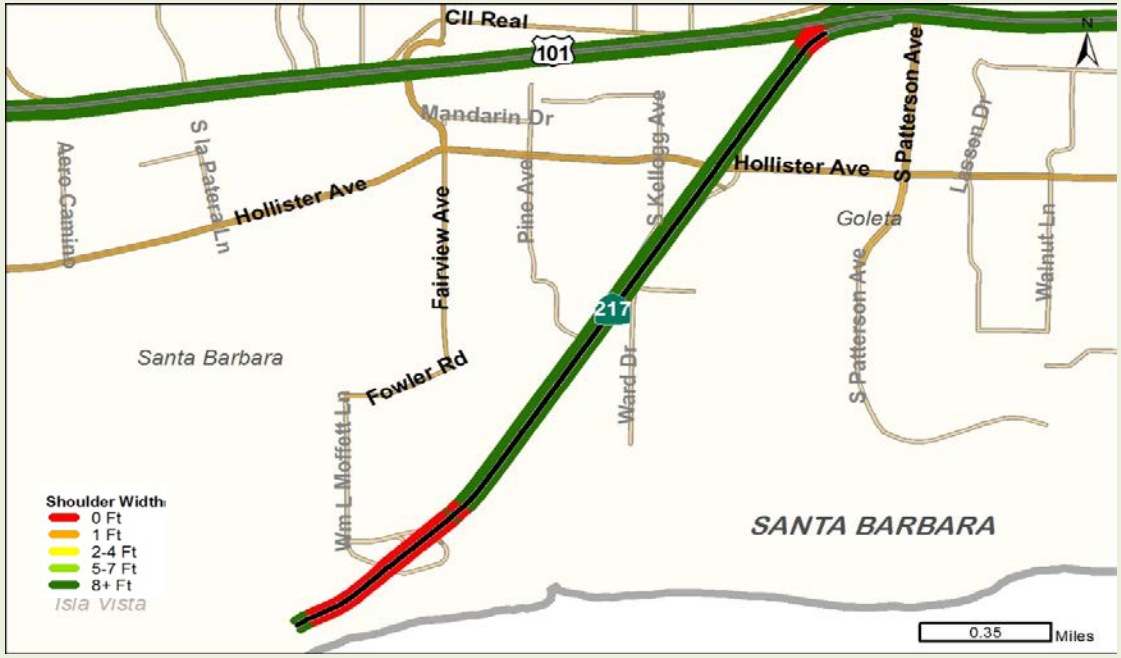
Intelligent Transportation Systems

Signals/Mile	0
Other Features: Call Box(s); Vehicle Detection	

Freight

Land Use





Shoulder Width

Freight

Segment 1 Planning Data: SR 217

Percent Trucks	2%-3%
Key Freight Highway	No
California Truck Network	Terminal Access
Annual Freight Tonnage	0 - 5,000,000
Freight VMT	0 - 10,000
Reported Freight Issues: N/A	

Cultural & Scenic

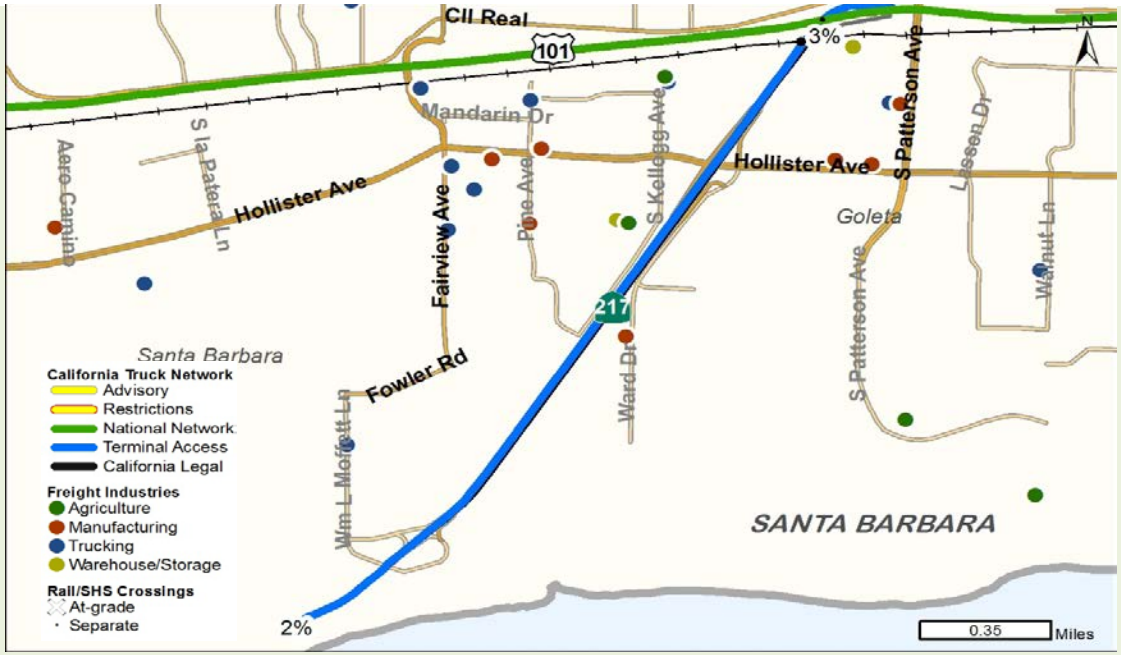
Historic Bridges	No
Lighthouses	No
Vista Points	No
Parks	Goleta Beach Park
Federal Lands	California Coastal Natl Monument
Landmarks	UC Santa Barbara

Environmental

Surrounding Vegetation	Urban-Agriculture
Coastal Zone	Yes
Water Crossing Description	Atascadero Creek; San Pedro Creek; San Jose Creek (parallel)
Flood Zone	100 Year Flood Plain
Critical Habitat	Steelhead

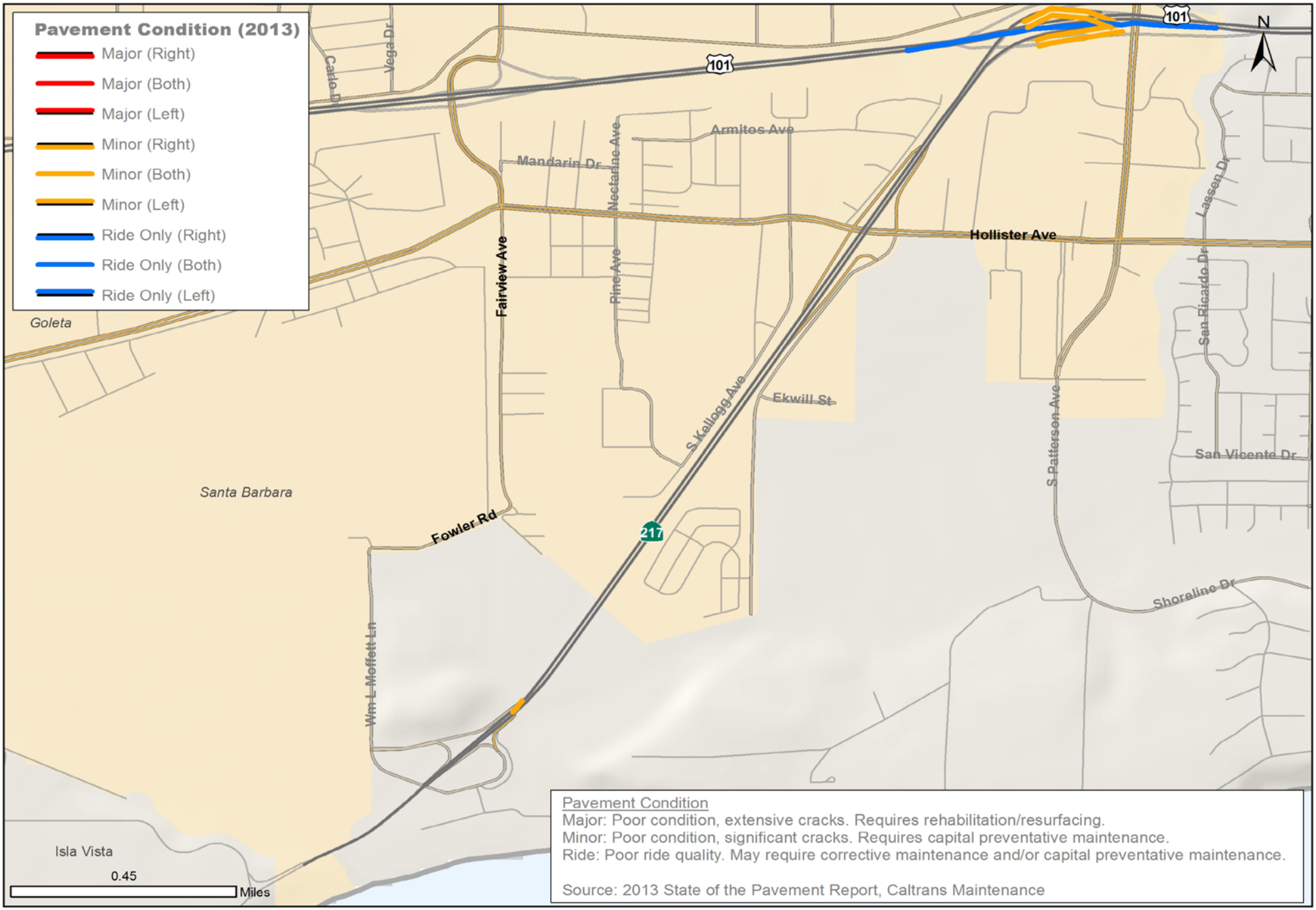
Air Quality Standards

Criteria Pollutant	State	Federal
Ozone	Nonattainment	Unclassified/Attain.
Carbon Monoxide	Attainment	Attainment
Nitrogen Dioxide	Attainment	Unclassified/Attain.
Sulfer Dioxide	Attainment	No information
Particulate Matter (10)	Nonattainment	Attainment
Particulate Matter (10)	Unclassified	Unclassified/Attain.
Lead	Attainment	Unclassified/Attain.



Critical Habitat

Appendix A:
Detailed Pavement Condition



TCR Name:	217
Base Year (BY):	2012
Horizon Year (HY):	2040
Peak Hour:	PM
Primary Direction:	NB
Secondary Direction:	SB

Segment Label	Segment	Begin Co	Rte	Begin PM	End Co	End PM	Begin Name	End Name	2012 ADT Ahead Point	2012 ADT Behind Point	2012 PM Volume Ahead Point	2012 PM Volume Behind Point	2012 NB V/C	2012 SB V/C	2040 ADT Ahead Point	2040 ADT Behind Point	2040 PM Volume Ahead Point	2040 PM Volume Behind Point	2040 NB V/C	2040 SB V/C
SBCAG 2013 SCS Preferred																				
1a	1	SB	217	0.464	SB	0.94	ENTRANCE U C SANTA BARBARA	SANTA BARBARA, SANDSPIT ROAD	12,000	12,500	1,500	1,500	0.40	0.52	12,793	13,326	1,475	1,475	0.40	0.50
1b	1	SB	217	0.94	SB	2.232	SANTA BARBARA, SANDSPIT ROAD	HOLLISTER AVENUE	17,000	17,000	2,300	2,300	0.37	0.23	17,671	17,671	2,107	2,107	0.33	0.22
1c	1	SB	217	2.232	SB	2.756	HOLLISTER AVENUE	JCT. RTE. 101	21,900	21,900	3,100	3,100	0.50	0.31	22,659	22,659	2,844	2,844	0.45	0.29

Appendix C:
Detailed AADT

AADT	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Segment 1																					
PM 0.464 Ahead Entrance U C Santa Barbara	17,700	18,200	17,300	17,300	17,200	17,200	16,200	16,200	16,200	16,200	16,300	16,300	16,600	17,000	17,000	17,000	16,600	12,500	12,200	12,500	12,000
PM 0.94 Ahead Santa Barbara, Sandspit Road	17,500	18,000	17,100	17,100	17,000	17,000	16,000	16,000	16,000	16,000	16,000	16,000	16,300	18,000	18,000	18,000	17,500	17,000	17,000	17,000	17,000
PM 2.232 Ahead	26,000	27,000	26,000	26,000	26,500	26,500	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,500	25,500	25,500	24,900	21,000	23,000	21,900	21,900
PM 2.756 Behind	26,000	27,000	26,000	26,000	26,500	26,500	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,500	25,500	25,500	24,900	21,000	21,000	21,900	21,900

Appendix D:
Ramps

Ramps along SR217 by segment

Filter	Segment	Ramp ID	Ramp Name	Location	Length (feet)	Speed (mph)	Lane Capacity	Lanes	Total Hourly Capacity	2012 Daily Volume	2012 PM Hour Volume	2012 PM Hour V/C	2012 Daily VMT	2012 PM Hour VMT	2040 Daily Volume	2040 PM Hour Volume	2040 PM Hour V/C	2040 Daily VMT	2040 PM Hour VMT
	1a	217000356	SANDSPIT WB ON	SB SR-217 PM 0.82	673	35	1800	1.0	1800	503	56	0.03	64	7	535	60	0.03	68	8
	1a	217000416	SANDSPIT EB OFF	SB SR-217 PM 0.88	1,200	35	1800	1.0	1800	481	67	0.04	109	15	514	71	0.04	117	16
	1b	217000486	WB OFF SANDSPIT RD SA	SB SR-217 PM 0.95	1,150	35	1800	1.0	1800	3,240	332	0.18	706	72	3,405	349	0.19	742	76
	1b	217000496	SANDSPIT EB ON	SB SR-217 PM 0.96	530	35	1800	1.0	1800	3,217	564	0.31	323	57	3,305	579	0.32	332	58
	1b	217001556	HOLLISTER AVE EB OFF	SB SR-217 PM 2.02	1,400	35	1800	1.5	2700	844	148	0.05	224	39	867	152	0.06	230	40
	1b	217001566	HOLLISTER AVE WB ON	SB SR-217 PM 2.03	1,100	35	1800	1.0	1800	772	79	0.04	161	16	812	83	0.05	169	17
	1c	217001976	HOLLISTER AVE EB ON	SB SR-217 PM 2.44	900	35	1800	1.5	2700	8,148	1,496	0.55	1,389	255	8,319	1,528	0.57	1,418	260
	1c	217001986	HOLLISTER AVE WB OFF	SB SR-217 PM 2.45	1,150	35	1800	1.5	2700	9,056	974	0.36	1,972	212	9,488	1,021	0.38	2,067	222
	1c	217002386	EB OFF TO PATTERSON A	SB SR-217 PM 2.85	2,000	35	1800	1.5	2700	6,340	1,180	0.44	2,401	447	6,473	1,204	0.45	2,452	456
	1c	217002406	WB ON FR PATTERSON A	SB SR-217 PM 2.87	2,000	35	1800	1.5	2700	6,435	696	0.26	2,438	264	6,742	730	0.27	2,554	276

Traffic Data Methodology

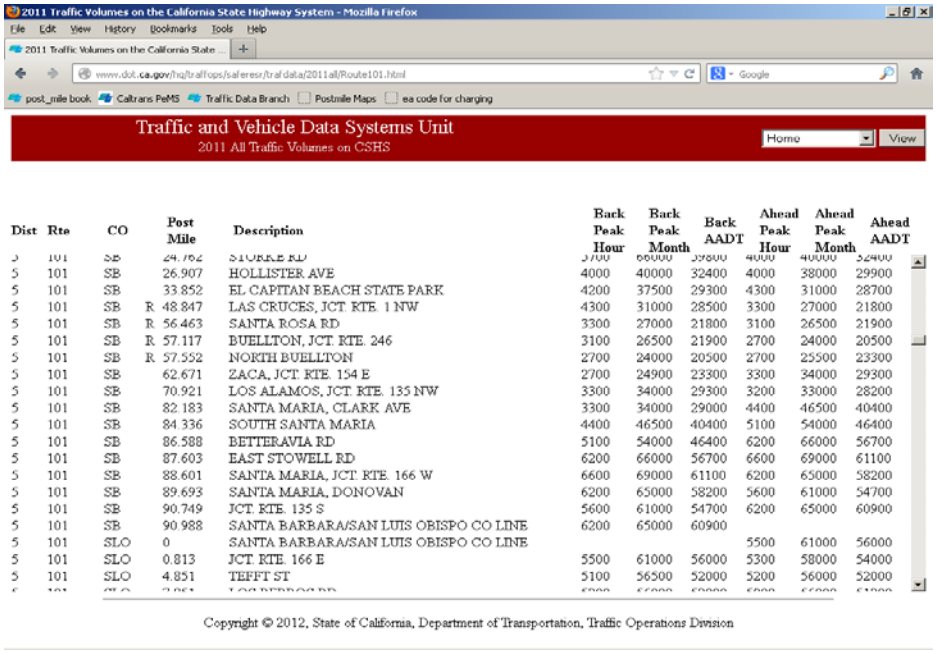
I - Methods for Calculating Base Year Traffic Data

Base Year AADT Volumes

Annual Average Daily Traffic (AADT) is a measure of the average daily traffic over an entire year. The calculation includes both weekday and weekend traffic. More information regarding the methodology for calculating AADT can be found on the following website:
http://www.dot.ca.gov/hq/traffops/saferesr/trafdata/

Caltrans Headquarters Traffic Branch publishes traffic for both control and profile stations. Control stations are locations where actual traffic counts are collected. Profile stations are locations where traffic volumes are inferred based on trends, patterns, and control station and ramp volumes. Figure 1 below shows traffic volumes. We used Back Peak Hour, Back AADT, Ahead Peak Hour, and Ahead AADT for our analysis.

Figure 1: Caltrans Traffic Volumes



Dist	Rte	CO		Post Mile	Description	Back Peak Hour	Back Peak Month	Back AADT	Ahead Peak Hour	Ahead Peak Month	Ahead AADT
5	101	SB		24.762	SAUKE RD	3700	66000	59800	4000	40000	52400
5	101	SB		26.907	HOLLISTER AVE	4000	40000	32400	4000	38000	29900
5	101	SB		33.852	EL CAPITAN BEACH STATE PARK	4200	37500	29300	4300	31000	28700
5	101	SB	R	48.847	LAS CRUCES, JCT. RTE. 1 NW	4300	31000	28500	3300	27000	21800
5	101	SB	R	56.463	SANTA ROSA RD	3300	27000	21800	3100	26500	21900
5	101	SB	R	57.117	BUELLTON, JCT. RTE. 246	3100	26500	21900	2700	24000	20500
5	101	SB	R	57.552	NORTH BUELLTON	2700	24000	20500	2700	25500	23300
5	101	SB		62.671	ZACA, JCT. RTE. 154 E	2700	24900	23300	3300	34000	29300
5	101	SB		70.921	LOS ALAMOS, JCT. RTE. 135 NW	3300	34000	29300	3200	33000	28200
5	101	SB		82.183	SANTA MARIA, CLARK AVE	3300	34000	29000	4400	46500	40400
5	101	SB		84.336	SOUTH SANTA MARIA	4400	46500	40400	5100	54000	46400
5	101	SB		86.588	BETTERAVIA RD	5100	54000	46400	6200	66000	56700
5	101	SB		87.603	EAST STOWELL RD	6200	66000	56700	6600	69000	61100
5	101	SB		88.601	SANTA MARIA, JCT. RTE. 166 W	6600	69000	61100	6200	65000	58200
5	101	SB		89.693	SANTA MARIA, DONOVAN	6200	65000	58200	5600	61000	54700
5	101	SB		90.749	JCT. RTE. 135 S	5600	61000	54700	6200	65000	60900
5	101	SB		90.988	SANTA BARBARA/SAN LUIS OBISPO CO LINE	6200	65000	60900			
5	101	SLO		0	SANTA BARBARA/SAN LUIS OBISPO CO LINE				5500	61000	56000
5	101	SLO		0.813	JCT. RTE. 166 E	5500	61000	56000	5300	58000	54000
5	101	SLO		4.851	TEFFT ST	5100	56500	52000	5200	56000	52000

Back AADT and Peak Hour traffic represents traffic at a location just before (a slightly lower postmile) the count station location. Ahead AADT and Peak Hour traffic represents traffic just past the count station location (a slightly higher postmile).

Base Year Peak Hour Volumes

Caltrans' Traffic Data Branch publishes Design Hourly Volumes (DHV) every year. DHV is an estimate of the “peak hour” traffic at count stations along the state highway system. This value is useful to traffic engineers and planners in estimating the amount of congestion experienced. Unless otherwise indicated, DHV indicate the volume in both directions. More information about how DHV are determined is located at http://www.dot.ca.gov/hq/traffops/saferesr/trafdata/.

K values are used to determine whether the DHV is in the AM or PM peak period. K values come from Caltrans Transportation System Network (TSN) and represent the proportion of AM and PM peak hour volume during a given day. For example, an AM K Value of 10% of a route that services 10,000 vehicles per day would mean that the AM peak hour comprises 10% of the daily volume, or 1,000 vehicles.

AM or PM peak hour for the entire route is analyzed depending on whether the majority of segments' traffic volumes are higher during the AM or PM period for a typical workday. For those segments whose volumes are higher during the peak hour being analyzed (the majority of segments,) we set the base year peak hour volume equal to the DHV, as published by Caltrans' Traffic Data Branch. For segments whose highest volumes fall outside the peak hour being analyzed, we calculate their base year peak hour volume by multiplying the K value for the peak hour being analyzed and the AADT.

Directional split information typically comes from the regional models. If the regional model is unavailable or determined to be less accurate, then the TSN database provided by Caltrans D5 Traffic Operations is used. The directional split % provides the directional split between northbound and southbound traffic during the time period being analyzed for the route. We apply direction splits to the 2-way peak hour volumes to get 1-way direction peak hour volumes.

Capacities

The regional models assign each route link an ideal capacity, and then adjust them downward based on conditions such as free flow speeds, facility type, and access points. The AMBAG AND SBCAG regional models show capacity as passenger cars (PCE) per hour. These PCE are later adjusted downward in the post-processing, assuming 1.5 vehicles per Truck for the SBCAG model and 1.7 vehicles per truck for the AMBAG model (source: Jim Lam, Caliper Corp.) All other model capacities are already shown as vehicles per hour, so no adjustments are needed.

We calculate a directional capacity for each subsegment by taking an average of the model's capacities along the length of each subsegment by direction. When the subsegment's adjusted base year peak hour volume for either direction exceeds it's capacity and both directions of the subsegment have similar capacities, we assume that the actual capacity for both directions of the sub-segment equals the higher of the two adjusted base year peak hour volumes for both directions. If both directions have significantly different capacities, we only adjust the direction where the adjusted peak hour volume exceeds capacity.

Base Year Truck Volumes

More information about truck data can be found at: http://www.dot.ca.gov/hq/traffops/saferesr/trafdata/. Daily truck percent is applied to AADT to get daily truck volumes.

II - Methods for Calculating Horizon Year Traffic Data

Forecast Tools

The regional travel demand model was used to determine growth rates to forecast horizon year traffic. When the model's growth rates are deemed inappropriate, historical trends are used. A 2040 horizon year is used for the current round of District 5 TCRs to align with the 2040 California Transportation Plan.

ALL MODELS - LAND USE

The regional traffic models' base and future forecasts are built upon land use estimates from Regional Growth Forecasts (RGF) and Census Data. The RGF bases its forecasts from general plans. Thus, if the latest general plans do not address land use needs created by specific developments, then the increased travel demand created by these proposed developments will not show up in the regional traffic model.

When a proposed development exceeds the amount designated in a General Plan land use element, an amendment to the General Plan is required; this change is not immediately incorporated in the regional model until new future-year land use scenarios are developed for input into the regional travel model; typically during a Regional Transportation Plan (RTP) or Sustainable Community Strategy (SCS) update. For this reason, the magnitude of some future proposed large development projects may not be factored into the regional model forecast analysis.

Each regional travel demand model is made up of Traffic Analysis Zones (TAZs). The land use in each TAZ includes census demographic data as well as the land use data forecasted from the RGF. The land use data in each Traffic Analysis Zone, which could be households, employment, shopping, schools, or a combination of land uses, will generate trips, which are then distributed to and from other Traffic Analysis Zones. Most travel demand models do not take into account induced/latent demand. Latent demand is the dormant demand for travel that is unrealized due to constraints. Induced Demand is demand that is generated because of transportation improvements.

SBCAG

The SBCAG travel demand model version 2013 SCS Preferred RTP is used for travel performance analysis in the Santa Barbara Region. The 2013 SCS Preferred RTP model incorporates Sustainable Community Strategies in future year scenarios and was adopted by the SBCAG Board on August 15, 2013 and accepted by the California Air Resources Board on November 21, 2013 (source: http://sbcag.org/planning/2040RTP/Calendar.html). Their horizon year is 2040.

SLOCOG

The SLOCOG 2014 RTP/SCS was adopted in April, 2015. The SLOCOG travel demand model accounts for: SB 375, Sustainable Communities Strategy, and future demand reduction strategies such as ridesharing, vanpools and public transit. They use a horizon year of 2035.

AMBAG

The AMBAG travel demand model is used for travel performance analysis in the Monterey, Santa Cruz and San Benito regions. This model incorporates Sustainable Community Strategies in future year scenarios. The AMBAG regional travel demand model developed for the MTP-SCS sets 2035 as the horizon year and incorporates Sustainable Community Strategies. The AMBAG RTP-SCS was adopted by the AMBAG Board in June 2014.

CALTRANS HISTORICAL COUNTS

Caltrans historical traffic counts can be used to develop growth rates using linear regression analysis, but the regional models are usually used. Historical traffic counts are shown graphically over time and over space by segment in the Route Data Sheet. For segment and sub-segment operational performance measures that use AADT and peak hour traffic as inputs, we take the average of back and ahead volumes between count stations. These averages are used in calculating performance measures such as V/C, VMT, VHT, speed and LOS.

Historical Growth Rate

Where model growth rates are deemed inappropriate, historical growth rates are used to project Caltrans base year counts to horizon year.

Model Growth Rate

Regional model growth rates were used to project base year counts to horizon year traffic volumes.

The regional model analyzes mainline volumes at a macro level, and it has not been validated or calibrated to a project level and therefore should not be used in a micro-level analysis such as calculating turning movement volumes and intersection level of service which would be included in traffic study operational analysis. The regional model is used as a basis to develop inputs for the micro level analysis.
Regional model outputs reflect traffic patterns during a typical Tuesday thru Thursday. The regional models include AM and PM peak hour volumes. PM Peak hour volumes are typically analyzed because they are typically higher than the AM Peak period.

Adjusted Model Growth Rate

The future AADT and peak hour volumes are forecasted using growth rates estimated from model volumes. These model volumes, both base year and future year, are adjusted to correct for differences between base year Caltrans' counts and base year model volumes. The model uses data sets and model step assumptions, such as the household travel surveys, trip rate assumptions, mode split formulations, and travel delay functions to create a best estimate of the expected travel patterns. Therefore, although the model has been validated and calibrated, the base year model volumes will not match perfectly to Caltrans' counts.

The base year model volume is always adjusted to match the base year count. The future year model volumes can be adjusted using one of three model volume adjustment methods described in NCHRP Report 255. The ratio and difference methods are defined by equations (1) and (2), while the average method is applied by taking the average result of the ratio and difference methods.

(1) Ratio Method = [Future Year Model Volume] x ([Base Year Count] / [Base Year Model Volume])

(2) Difference Method = [Future Year Model Volume] + [Base Year Count - Base Year Model Volume])

Although NCHRP Report 255 defines the adjustment methods, it does not provide guidance on the most appropriate method to use in any particular case. In some situations, certain adjustment methods may produce unreasonable results. For example, unreasonable results can occur when the difference between the base year count and model volume is relatively small yet the count to model volume ratio is large. In a high growth area where the forecasted traffic volume is large, applying a large NCHRP adjustment ratio would not be appropriate. Likewise, if the difference between the base year count and model volume is relatively large, the adjusted future year model volume may be negative, which would not be reasonable.

To avoid unreasonable results in traffic forecasts, we use a series of rules to determine the most appropriate adjustment methodology. These rules, defined in the table below, are applied individually for each sub-segment volume. In most cases, the process results in use of the average method.

If **Growth Factor** (Largest Future Year Model Volume / Base Year Model Volume) or **Error Factor** (Base Year Count / Base Year Model Volume)	Use Method	If Adjustment Results in Negative Flow, Use:
Growth Factor > 4	Difference	Unadjusted Future Year Model Volume
Error Factor < 1/3 or Error Factor > 3	Difference	Unadjusted Future Year Model Volume
All Other	Average	Ratio

After the base and future model AADT volumes are adjusted, the adjusted AADT growth rate is calculated by dividing the difference between the adjusted base and adjusted future model AADT volumes by the difference between the base and horizon years. The adjusted AADT growth rate is used to forecast the horizon year AADT volumes.

III - Methods for Calculating Mainline Performance Measures

Volume/Capacity

The base year and horizon year V/C ratios are calculated by dividing the adjusted base year and horizon year directional volumes by their respective directional capacities.

The data used in the evaluation of traffic volumes and capacities are typical values based on averages over time and represented in traffic forecasting tools. As such, the conditions indicated in the evaluation may not always reflect the experiences of travelers at any particular place at any specific time. For example, localized capacity restrictions (e.g. bottlenecks at a given interchange) are not well represented in regional traffic models. In addition, incidents on the road such as accidents and vehicle breakdowns (non-recurring congestion) are not represented in regional traffic models. The result of these limitations of the methodology and data used in this analysis is that many times the volume to capacity ratio or average speed shown in the evaluation may be more optimistic than what would actually be experienced on the roadway under the forecasted conditions.

LOS

When LOS is used, the base year and horizon year LOS is based on HCM 2000 methodology. Table 2 below shows the relationship between V/C and LOS for rural and urban areas.

Performance Table

LOS, V/C, and other performance measures by segment are presented in the main body of the Route Data Sheet. Performance measures are further broken down by sub-segment for each MPO and presented in the Route Data Sheet Appendix B, where each row of the table represents a sub-segment, where the first column shows a number representing the segment next to a letter representing the sub-segment. For example, '2c' represents the third sub-segment of segment 2.

Speeds are calculated using either the V/C and speed relationship shown in HCM 2000 Exhibit 23-2 below or obtained directly from the regional model. For LOS F, speeds are considered chaotic and difficult to ascertain. Likewise, for subsegments with LOS F, VHT is difficult to ascertain.

Table 1: HCM 2000 LOS Criteria for Basic Freeway Segments

Free Flow Speed = 70 mph (Assume this speed for rural sections						
Level of Service (LOS)	A	B	C	D	E	F
Speed (mph)	70	70	68.7	61.5	53.3	Unstable
V/C	<0.32	<0.53	<0.74	<0.90	<1.00	>=1
Free Flow Speed = 65 mph (Assume this speed for urban sections						
Level of Service (LOS)	A	B	C	D	E	F
Speed (mph)	65	65	64.6	59.7	52.2	Unstable
V/C	<0.30	<0.50	<0.71	<0.89	<1.00	>=1

VMT
Daily VMT is the directional AADT multiplied by the subsegment's distance. Peak Hour VMT is the directional peak hour volumes multiplied by the subsegment's distance.

VHT
Directional VHT is the directional peak hour volume multiplied by the subsegment's distance and then divided by the directional peak hour speed. Subsegment VHT (2 way) is the combination of both directional VHTs.

IV - Methods for Calculating Ramp Performance Measures

Daily ramp counts are obtained from Caltrans Headquarters Traffic Operations Branch. Counts are typically collected once every three years. We estimate daily volumes for all years by taking a ratio of the most recent ramp daily count to the adjusted mainline directional volume for that same year, and then apply that ratio to the adjusted mainline directional volume for base year and horizon year.

We estimate peak hour volumes for ramps by assuming the ratio of the ramp peak hour volume to daily volume is the same as the mainline ratio of peak hour volume to daily volume. We apply the mainline ratio to the ramp daily volumes for both base year and horizon year.

Ramp data, when available, is shown in Appendix D of the Data Sheet.

100-YEAR FLOOD – Areas of 1-percent-annual-chance flooding. Source: FEMA Digital Flood Insurance Rate Map, 2010. www.fema.gov/msc

500-YEAR FLOOD – Areas of 0.2-percent-annual-chance-flooding. Source: FEMA Digital Flood Insurance Rate Map, 2010. www.fema.gov/msc

AIR QUALITY STANDARDS – Designations in relation to the California standards and National standards Source: California Air Resource Board (ARB), 2013. www.arb.ca.gov/desig/desig.htm

AM/PM PEAK – The part of day when most traffic congestion occurs. Source: SBCAG Regional Model, 2013.

ANNUAL AVERAGE DAILY TRAFFIC (AADT) – Total volume of vehicle traffic for a year divided by 365 days. Source: Caltrans Traffic Operations, 2012. http://traffic-counts.dot.ca.gov/

ANNUAL FREIGHT TONNAGE – Tons per year. Source: Freight Analysis Framework, 2007. www.ops.fhwa.dot.gov/freight/freight_analysis/faf/

ATTAINMENT – Air quality in the area meets the standard. Source: California ARB, 2013. www.arb.ca.gov/desig/desig.htm

ATTAINMENT/UNCLASSIFIED – An Environmental Protection Agency (EPA) designation which, in terms of planning implications, is essentially the same as Attainment. Source: California ARB, 2013. www.arb.ca.gov/desig/desig.htm

BASE YEAR – 2012 - The initial year of the forecast

FREEWAY/EXPRESSWAY SYTEM – Concept of how the route is managed as defined in the Streets and Highways Code §250-257. Source: Caltrans, 2014. www.leginfo.ca.gov/.html/shc_table_of_contents.html

FREIGHT VMT – Truck Vehicle Miles Traveled. Source: Freight Analysis Framework, 2007. www.ops.fhwa.dot.gov/freight/freight_analysis/faf/

FUNCTIONAL CLASSIFICATION – System by which roads are grouped according to the type of service and amount of traffic the facility carries. Used to determine design standards of roads and determines Federal Aid funding eligibility. Source: FHWA, 2012. http://dot.ca.gov/hq/tsip/hseb/func_clas.html

GROWTH RATE – The forecasted change in vehicles per year from the base year to the horizon year. Source: SBCAG Regional Model, 2013.

HIGH EMPHASIS ROUTE – Route with high interregional importance. Source: Caltrans Interregional Transportation Strategic Plan, 2013. www.dot.ca.gov/hq/tpp/offices/oasp/itsp.html

HORIZON YEAR – 2040 - The future forecast year used in the long range model. Source: SBCAG Regional Model, 2013.

INTERREGIONAL ROAD SYSTEM – Subset of State Highway System that provides connectivity among all California's regions. Source: Caltrans Interregional Transportation Strategic Plan, 2013. www.dot.ca.gov/hq/tpp/offices/oasp/itsp.html

CALIFORNIA LEGAL – Trucks up to 65 feet are allowed on the SHS except where otherwise prohibited. Source: Caltrans Traffic Operations, 2013. www.dot.ca.gov/hq/traffops/engineering/trucks/

CALIFORNIA TRUCK NETWORK – California Vehicle Code sections related to trucks, summarized here at the planning level only. **Note: Caltrans is not responsible for authorizing commercial trucks, other than issuing permits for oversize or overweight loads.** Source: Caltrans Traffic Operations, 2013. www.dot.ca.gov/hq/traffops/engineering/trucks/

CRITICAL HABITAT – Critical habitat for threatened and endangered species . Source: US Fish and Wildlife Service, 2014. www.fws.gov/gis/data/national/index.html

DISTRICT KEY FREIGHT HIGHWAY FACILITY – Route key to freight operations. Source: California Central Coast Commercial Flows Study, 2012. www.dot.ca.gov/dist05/planning/goods_movement.htm

FACILITY TYPE – Description of existing operations. Source: Caltrans TSN, 2011.

FLOOD ZONE – Special flood hazard areas. Source: FEMA Digital Flood Insurance Rate Map, 2010. www.fema.gov/msc

FOCUS ROUTE – Highest priority routes for completion to minimum facility concept standardsSource: Caltrans Interregional Transportation Strategic Plan, 2013.

MAJOR (PAVEMENT CONDITION) – Poor condition, extensive cracks. Requires rehabilitation/resurfacing Source: Caltrans Pavement Condition Survey, 2013. http://dot.ca.gov/hq/maint/Pavement/Offices/Pavement_Management/index.html

MINOR (PAVEMENT CONDITION) – Poor condition, significant cracks. Requires capital preventative maintenance. Source: Caltrans Pavement Condition Survey, 2013. http://dot.ca.gov/hq/maint/Pavement/Offices/Pavement_Management/index.html

NATIONAL HIGHWAY SYSTEM – The national system designated by Congress that includes the Interstate Highway System and other nationally significant highways and thoroughfares used for interstate and interregional travel, national defense, intermodal connection, and interstate commerce. Source: Caltrans Highway System Engineering, 2013. http://dot.ca.gov/hq/tsip/hseb/map21nhs.html

NATIONAL NETWORK – Allows for conventional tractor/semitrailer combinations. Source: Caltrans Traffic Operations, 2013. www.dot.ca.gov/hq/traffops/engineering/trucks/

NONATTAINMENT – Air quality in the area fails to the applicable standard. Source: California ARB, 2013. www.arb.ca.gov/desig/desig.htm

PAVEMENT CONDITION – Measurement of surface characteristics including roughness, cracking, and faulting (Caltrans, 2013). Source: Caltrans Pavement Condition Survey, 2013. http://dot.ca.gov/hq/maint/Pavement/Offices/Pavement_Management/index.html

PEAK HOUR DIRECTIONAL SPLIT – The percent of traffic volume in the predominant direction of flow as determined from the regional travel model. Source: SBCAG Regional Model, 2013.

PEAK HOUR TRAFFIC VOLUME – Represents an estimate of the heaviest traffic flow during the peak hour. Source: Caltrans Traffic Operations, 2012. http://traffic-counts.dot.ca.gov/

PERCENT TRUCKS – Rounded percentage of truck counts. Source: Caltrans Traffic Operations, 2012. http://traffic-counts.dot.ca.gov/

PREVALENT LAND USE – California County and local government existing land use designations. Source: UC Davis Information Center for the Environment, 2007. http://ice.ucdavis.edu/projects/land_use

RAIL/SHS CROSSINGS – At-grade crossings. Source: National Transportation Atlas Database, 2011. http://www.rita.dot.gov/bts/

RIDE (PAVEMENT CONDITION) – Poor ride quality. May require corrective maintenance and/or capital preventative maintenance. Source: Caltrans Pavement Condition Survey, 2013. http://dot.ca.gov/hq/maint/Pavement/Offices/Pavement_Management/index.html

RURAL – Areas outside urban land uses. Source: US Census, 2000). http://www.census.gov/

SCENIC HIGHWAY PROGRAM – Program to protect and enhance the natural scenic beauty of California highways and adjacent corridors, through special conservation treatment. Source Caltrans Landscape Architecture, 2014. http://www.dot.ca.gov/hq/LandArch/scenic_highways/scenic_hwy.htm

SERVICE ACCESS – National Network trucks may travel up to one mile from the off ramp to obtain services . Source: Caltrans Traffic Operations, 2013. www.dot.ca.gov/hq/traffops/engineering/trucks/

SURROUNDING VEGETATION – Land cover dataset. Source: US Forest Service & California Department of Forestry and Fire Protection, 1979. http://frap.fire.ca.gov/data/frapgisdata-land_cover.php

TERMINAL ACCESS – National Network trucks may exit and travel on these SHS routes Source: Caltrans Traffic Operations, 2013. www.dot.ca.gov/hq/traffops/engineering/trucks/

UNCLASSIFIED – Insufficient data to designate area, or designations have not been made Source: California ARB, 2013. www.arb.ca.gov/desig/desig.htm

URBAN - Represent densely developed territory and encompass residential, commercial, and other non-residential urban land uses. Source: US Census, 2000. http://www.census.gov/

VEHICLE HOURS OF TRAVEL (VHT) – A statistic representing the total number of vehicles multiplied by the total number of hours vehicles are traveling.

VEHICLE MILES TRAVELED (VMT) – Number of miles vehicles travel. Can be calculated for the peak hour and/or the entire day.

VOLUME TO CAPACITY RATIO (V/C) – The ratio of demand volume to capacity.