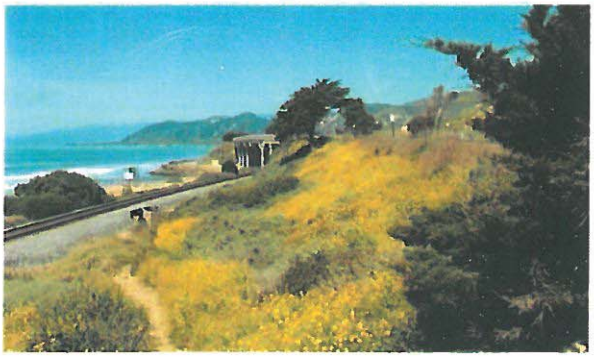
Transportation Concept Report

US 101

District 5

December 2014



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California Department of Transportation

Caltrans Improves Mobility Across California

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CHAPTER 1: EXECUTIVE SUMMARY

Caltrans mission is to provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability. Transportation Concept Reports (TCRs) play an active role in achieving this mission to serve the traveling public. The Transportation Concept Report (TCR) is primarily a technical document that: (1) identifies trends and deficiencies within a transportation corridor, and (2) provides a basis for considering future actions to preserve the integrity of the corridor over the long-term. This information is valuable to Caltrans and its local and regional partners as they consider needs and priorities for future investments.

The TCR is unique and complementary to the Regional Transportation Plan/Metropolitan Transportation Plan – Sustainable Communities Strategy (RTP-SCS or MTP-SCS) developed by Metropolitan Planning Organizations (MPOs) and Regional Transportation Planning Agencies (RTPAs). These documents guide decision making in support of transportation facilities that sustain mobility into the future. Table 1.1 outlines the characteristics of these complementary efforts. The TCR is a technical document, focused on one specific corridor, and identifies projected future corridor deficiencies. The scope expands multiple counties and provides an interregional perspective on travel. By contrast, the RTP-SCS is a policy element that interprets the land use and transportation interrelationship, evaluates future growth scenarios, considers overall transportation needs, and applies regional priorities and funding constraints to establish an action plan for implementing specific improvements.

Table 1.1: RTP/MTP-SCS and TCR Relationship

Characteristics	RTP/MTP-SCS	TCR
Transportation System Analysis	Yes	Yes
Corridor Focus	No	Yes
Scope	Regional	Interregional
Sustainability Component	Yes	Yes
Multimodal Perspective	Yes	Yes
Horizon Year Projections	Yes	Yes
Future Growth Scenarios	Yes	No
Ultimate Facility Concept	No	Yes
Fiscal Constraint	Yes	No
Considers other Planning Documents	Yes	Yes
Informs Decision Makers about Transportation Systems Needs	Yes	Yes
Establishes Transportation Policies	Yes	No
Leads to Project Programming	Yes	No

Supporting regional travel demand models from approved RTP/MTP-SCS efforts and Caltrans historic data served as a basis for the technical analysis presented in the TCR. These projections forecast future demand on US 101 in a 2035 horizon year. This demand indicates that a combination of different improvements including implementation of Intelligent Transportation Systems, Transportation System Management, Transportation Demand Management, bicycle, transit, rail, operational improvements, and access management must be considered and implemented strategically to maintain US 101 mainline mobility. In some segments, additional need for capacity is expected, and therefore efforts to preserve infrastructure to support this need is important. The US 101 corridor concept of freeway with capacity of four to six lanes reflects the need to preserve transportation options for the corridor into the future.

US 101 Corridor Vision:

Caltrans vision for the US 101 corridor is to:

- Optimize system efficiency through improvements that encourage mode-shifts and a reduction of single occupancy vehicle travel. This includes:
  - Support for Transportation Demand Management strategies, including vanpooling, ridesharing, new and improved park-and-ride lot facilities, increased efficiency and transitions between transit systems, online real time traffic information programs, and other commuter programs.
  - Implementation of Transportation System Management strategies including ramp metering, High Occupancy Vehicle lanes, Changeable Message Signs and other Intelligent Transportation Systems features where appropriate.
- Increase opportunities for improved multimodal options and integration to and along US 101 through:
  - Transit, rail and bicycle improvements.
  - Support for development of parallel road networks to provide alternative travel options.
- Improve safety and operations by managing access and reducing conflict points through continuing, cooperative, and comprehensive planning with local entities on parallel and local route development to enhance the transportation network.
- Provide for a sustainable transportation system through asset management and life-cycle cost considerations.
- Support reliable travel. Where demand exceeds capacity, options for expansion should remain viable.

US 101 TCR Key Findings:

The US 101 TCR serves as a technical resource that contains route characteristics data, corridor performance projections, and identifies issues and recommendations to address projected future demand on the corridor. It is intended that this resource will be a useful tool for collaboration with our local and regional partners in developing strategies to address future deficiencies. The following highlights information presented in the body of the report.

Route Characteristics:

In District 5, US 101:

- Extends 270 miles from the Santa Barbara County/Ventura County line to the San Benito/Santa Clara County Line. It traverses the counties of Santa Barbara, San Luis Obispo, Monterey and San Benito.
- Serves local, regional and interregional travel needs, including business, recreation, tourism, journey-to-work, freight and goods movement, and national defense transport.
- Is designated with the following state federal functional classifications:
  - Federal Aid Primary Route
  - Freeway Expressway System (F&E)
  - National Highway System (NHS)
  - Strategic Highway Corridor Network (STRAHNET)
  - Interregional Road System (IRRS)
  - Focus Route
  - High Emphasis Route
  - Eligible to be part of the Scenic Highway System
- Transitions between freeway (67%), expressway (32%), and conventional highway (1%).

- The US 101 mainline is not pedestrian-accessible but Caltrans supports coordination in local parallel facility development for pedestrian travel across US 101.
- Is part of the Pacific Coast Bicycle Route utilized primarily for regional and interregional travel. Approximately 50 percent of the facility is open to bicyclists. Where the route is closed to bicycle access, alternative bicycle travel options are available on the local network. The District 5 Bicycle Map provides detailed information about where access is open to bicyclists. This resource can be found at the following link: http://www.dot.ca.gov/dist05/planning/transit_alternatives.htm.
- Supports ridesharing opportunities through access to park-and-ride lots. There are 21 park-and-ride lots located near US 101 in District 5. Caltrans owns seven of these lots, and an additional 14 lots are locally owned and/or managed. A complete inventory of park-and-ride lots in District 5 can be found in Appendix G.
- Supports freight and goods movement essential to regional, state and national economic prosperity. Within District 5, agricultural production, processing and warehousing is a primary generator of revenue and jobs on the Central Coast. Agricultural production on the central coast is projected to generate $6.5 billion in revenues per year and is home to the number one vegetable-producing region in the nation (USDA National Agricultural Statisics Service, 2010). The area supplies 80 percent of the nation's lettuces and nearly the same percentage of artichokes. The agricultural industry is responsible for 25 percent of employment on the Central Coast.
- Is a corridor for military transport, spaceport, and national defense operations. It serves Vandenberg Air Force Base near Lompoc, the only installation in the United States where operational intercontinental ballistic missiles and polar-orbiting space satellites are launched. It also bisects Camp Roberts near the San Luis Obispo/Monterey county line and supports training and both foreign and domestic missions for the California National Guard.
- Provides travelers with en-route advisory information on Amber Alerts, accidents, events, construction, estimated travel times, and road closures on nine Changeable Message Signs (CMS) in District 5.
- Is influenced by uncontrolled access in some segments which has important implications for systems management, operations and traveler safety. Continuing, cooperative and comprehensive interagency planning for improved local connectivity and parallel route development will facilitate access management improvements incrementally over time.

Corridor Performance and Concept:

Future growth and development is projected to have operational impacts on US 101. A combination of different improvements including: transit and bicycle improvements, new peak period passenger rail service, expanding carpool and ride-share opportunities, evaluating operational improvements, and developing access management strategies must be considered and implemented strategically to maintain US 101 mainline mobility and effectively manage the system. However, even with implementation of these demand reduction strategies and operational improvements (referenced in Chapter 5 and Appendix I), the need for additional capacity may be needed in the future.

South Coast Santa Barbara is an example of one area of US 101 where demand is exceeding capacity and increasing capacity has been identified by Santa Barbara County taxpayers as part of the solution to improved mobility on the South Coast. The US 101 South Coast HOV project will increase capacity of the route through this area by adding a High Occupancy Vehicle (HOV) lane in each direction. This project coupled with future peak period passenger rail service from Los Angeles to Goleta is part of the larger solution to reduce congestion on US 101 through the Santa Barbara South Coast.

In San Luis Obispo County, high levels of congestion to areas where demand is exceeding capacity is projected in the 2010 base year and 2035 horizon year for most of the South County which extends from the Santa Barbara/San Luis Obispo County line through the City of San Luis Obispo. SLOCOG's 2014 *Draft US 101 Corridor Mobility Master Plan* identifies increasing capacity by adding HOV lanes on US 101 through this area as an improvement concept for the future. In Monterey and San Benito counties, 6-lane widening and increased capacity improvements are also identified in the *2035 AMBAG MTP-SCS* (2014). This includes the US 101 Salinas Corridor Widening project and two US 101 6-lane widening projects from the Monterey/San Benito County line to SR 129.

The 2035 Corridor Concept for US 101 of "freeway with capacity of four to six lanes" and Ultimate Corridor Concept (beyond 2035) of "freeway with capacity of up to six lanes" facilitates capacity increasing options for the future. Preserving existing infrastructure and designing future infrastructure to accommodate the potential need for future increased capacity is a wise long-range planning strategy for US 101. This planning concept supports improvements, such as those identified above and may have additional cost benefits. This concept is also consistent with Caltrans *Interregional Transportation Strategic Plan* (2013).

The concept of a "freeway" is also a key component of the 2035 Corridor Concept and Ultimate Concept and is reflected as such in the statewide Caltrans *Interregional Transportation Strategic Plan* (2013). US 101 transitions between freeway or expressway with only one small portion of the corridor serving as conventional highway in San Luis Obispo County at the Cuesta Grade. Freeway conversion supports a reduction in the number of conflict points and will improve overall operations of the US 101 mainline. This will require coordination with local and regional agencies to develop access management strategies to achieve the long-term concept for freeway conversion. Local and parallel route development is supported as one access management strategy.

Issues and Recommendations:

Bicycle:

Issue: Key issues facing bicyclists on US 101 District 5 include:

- Travel across US 101 including through interchanges.
- Structural or other limitations to widening at the Arroyo Quemado Bridge and Gaviota Tunnel in Santa Barbara County where an alternate route is not available.
- Pavement quality on shoulders.
- Planning for bicycle travel during construction.
- Suitable alternate routes parallel to US 101 where bicycles currently travel on US 101.

Recommendation: Future improvements should be focused to addressing the key issues listed in coordination and funding partnership with the local agencies, RTPAs, and MPOs. Caltrans supports parallel network development and cross access improvements to provide bicyclists with alternatives to US 101. Providing these improvements will require coordination with local partners.

Multimodal Travel:

Issue: Multimodal travel options must be improved to meet future transportation needs.

Recommendation: Caltrans will continue to work in partnership with the Metropolitan Planning Organizations (MPOs) and Regional Transportation Planning Agencies (RTPAs) in District 5 to support the improvement of rail and transit service. This includes supporting: extensions of existing and new peak period passenger rail service; rail infrastructure improvements; enhanced bus service; bus rapid transit studies; transit studies intended to guide overall transit efficiency, connectivity and reliability; and studies that would investigate origin and destination trends to improve transit and rail services across county lines.

Transportation Demand Management (TDM) and Multimodal Transportation:

Issue: Dependence on the single occupancy vehicle for travel will not contribute to sustained mobility of US 101.

Recommendation: Multimodal transportation enhancements must be pursued to reduce demand and support long-term mobility on US 101. As identified in the *Caltrans Deputy Directive 64: Complete Streets-Integrating the Transportation System* (2008), the Department supports viable transportation choices for all users. Caltrans in partnership with the MPOs and RTPAs in District 5 support the integration of transit, bicycle, and pedestrian transportation on frontage roads, parallel routes, and adjacent paths into a coordinated multimodal transportation system. Improving the carrying capacity for bicycles on trains and buses is also recommended to encourage the integration of modes. Multimodal stations or future transit centers should be strategically placed in locations accessible to all modes of transportation. Caltrans looks to its local and regional partners to coordinate multimodal strategies.

Recommendation: Transportation Demand Management (TDM) strategies must be pursued to reduce overall travel demand on US 101 and better facilitate mobility options. This includes promoting transportation choices such as telecommuting, vanpools, carpools, ridesharing, alternate work schedules, and route selection. Caltrans supports local and regional agency efforts to establish new park-and-ride lots and transit centers at locations that are multimodal accessible. Public transit providers should also be encouraged to serve existing park-and-ride lots.

Transportation System Management (TSM):

Issue: Existing and future demand will require implementation of strategies to maximize system performance and long-term mobility of US 101.

Recommendation: Transportation System Management (TSM) strategies must be pursued to improve system performance and maximize the efficiency, safety, and utility of existing and planned infrastructure of US 101. This includes activities such as incident management, traffic signal coordination, transit signal priority (TSP) and bus rapid transit (BRT), freight management, work zone management, special event management, road weather management, congestion pricing, managed lanes (ramp meters, High Occupancy Vehicle [HOV] and High Occupancy Toll [HOT]lanes), parking management, electronic toll collection, transit smart cards, and other operational improvements. On US 101 in District 5, Caltrans currently operates and constructs managed lane improvements including ramp meters and (HOV) lanes. Caltrans will continue to evaluate viability and application of managed lane improvements and other TSM strategies for US 101. Additionally, Caltrans will continue to support the MPOs and RTPAs in management of freeway service patrol programs and pursuit of other TSM improvements.

Intelligent Transportation Systems (ITS):

Recommendation: Caltrans will continue to pursue and implement ITS strategies to improve safety, reduce congestion, enhance mobility, minimize environmental impacts, conserve energy and promote economic productivity on US 101. This is demonstrated through Caltrans active leadership role in the incorporation and communication of real time data and data collected from existing in road detection devices. As ITS technology continues to advance, Caltrans will continue to coordinate with its local and regional partners on strategies to utilize new ITS technology for the benefit of US 101 and the state transportation system.

Travel Demand:

Issue: Chapter 5 corridor performance analysis section of this report identifies locations throughout the corridor where demand is expected to exceed capacity by the 2035 horizon year.

Recommendation: A combination of different improvements including implementation of Intelligent Transportation Systems, Transportation System Management, Transportation Demand Management, bicycle, transit, rail, operational improvements, and access management must be considered and implemented strategically to maintain US 101 mainline mobility. In some segments, additional need for capacity is expected. Prioritization and implementation of these improvements must happen through continuing, cooperative and comprehensive planning with local and regional transportation partners in District 5. A list of currently planned and programmed projects for US 101 is located in Appendix J.

Access Management:

Issue: At-grade intersections and driveways create potential conflict points and affect travel reliability of the corridor.

Recommendation: Focus access management of at-grade intersections where congestion levels are projected to be high or demand is projected to equal or exceed capacity by the 2035 horizon year. Continuing, cooperative and comprehensive interagency planning to improve local route connectivity and parallel route development is needed to achieve this goal. Access management should also be considered opportunistically and coordination with other US 101 projects. This supports the 2035 corridor concept and ultimate concept for freeway conversion. This goal is consistent with the 2013 Interregional Transportation Strategic Plan (ITSP), 2013 DSMP project list, and freeway agreements.

Issue: Closely spaced interchange ramps create US 101 mainline operational deficiencies (specific locations include but are not limited to US 101 interchanges in the City of San Luis Obispo and City of Salinas).

Recommendation: Partner with local agencies to develop interchange reconfiguration strategies, through the appropriate planning process.

Freight:

Issue: With the high level of freight/goods movement on US 101, there is a need to evaluate existing and future truck access, parking, and overall travel needs throughout District 5. Providing roadside rest area facilities which can accommodate a sufficient numbers of large trucks, is a challenge. For example, the Gaviota roadside rest areas have limited and informal truck parking or break check areas such as those located at Nojoqui Summit, Refugio Interchange or Cuesta Grade have experienced litter and human waste left onsite. Because of this, these areas have been/are subject to permanent closure. Truck parking also creates tensions between communities and the industry, which frequently result in complaints to Caltrans or other public agencies.

Recommendation: Caltrans is working in partnership with AMBAG and the other MPOs and RTPAs in District 5 on a regional freight study to identify priorities for improvements that would have the greatest benefit to freight.

System Management and Preservation:

Issue: The 2013 Ten-Year SHOPP estimates that $2 billion per year will be available to address annual statewide needs. This covers only 25 percent of the total need for the State Highway System on an annual basis.

Recommendation: Caltrans will continue to maintain the State Highway System in an equitable manner statewide and encourage policy decisions that will garner additional funding for maintenance needs. This includes maintenance and operational improvements designed to get full return on system investments, as well as to maintain safety and reduce traveler costs and delay.

Climate Change and Sea Level Rise:
Issue: Sea level rise projections within the next 100 years anticipate a threat to infrastructure.

Recommendation: Caltrans supports and is involved in future long-range planning for sea level rise impacts. Caltrans' 2013 *Caltrans Activities to Address Climate Change* report identifies efforts by Caltrans to identify best practices in GHG emission reduction for its operations.

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CHAPTER 2: ABOUT THE TRANSPORTATION CONCEPT REPORT

A Transportation Concept Report (TCR) guides the development of California's state highway system (SHS) as required by Government Code 65086, Title 23 CFR Part 450 Subpart B, and the transportation needs of the public, stakeholders, and SHS users. A comprehensive TCR for each highway route and the corresponding transportation corridor provides a focused look at the existing conditions and performance of the route, future transportation needs and demands, and improvements necessary to address those needs within the context of the communities and rural areas the highways traverse. Each Caltrans district is delegated the responsibility to create a TCR for each SHS route within their boundaries. The purpose of a TCR is to:

- Report on a range of performance measures.
- Provide a 20 to 25+ year concept and ultimate concept for how each State Highway System corridor should operate and possible improvements to obtain those operating conditions across all modes of transportation.
- Provide a basis for Caltrans' initial input into the regional transportation planning process and nomination of SHS projects for funding.
- Provide the basis for evaluating local government and developer requests for highway improvements and mitigation for local development.
- Provide future system goals for guiding operational improvements.

The goal of the TCR is to present a long-range concept for, and relevant data about, a corridor or route to inform decisions made regarding the management of the transportation network, all toward meeting the goals of safety and health; stewardship and efficiency; sustainability, livability and economy; system performance; and organizational excellence. These goals enable the TCR to be a relevant and useful tool for a broad audience, such as regional and local transportation agencies, tribal governments, external stakeholders, partner agencies, and related Caltrans functional units.

TCRs are one component of Caltrans' transportation planning process called System Planning which serves as the foundation for project initiation and programming. Other statewide and district specific System Planning efforts that influence TCRs include: the California Transportation Plan (CTP), the Interregional Transportation Strategic Plan (ITSP), the District System Management Plan (DSMP) and Project List, and Corridor System Management Plans (CSMPs). *Figure 2.1* illustrates the geographic scope of these planning efforts.

- California Transportation Plan: The state-wide CTP is a long-range transportation plan to meet our future mobility needs and reduce greenhouse gas emissions. The CTP defines performance-based goals, policies, and strategies to achieve our collective vision for California's future, statewide, integrated, multimodal transportation system. The CTP is prepared in response to Federal and State requirements.

- Interregional Transportation Strategic Plan: The state-wide ITSP was written in response to the passage of SB 45 in 1997 to identify transportation corridors to focus investment for the Interregional Transportation Improvement Program (ITIP). This five year program is funded by twenty five percent of State Transportation Improvement Program (STIP) revenues approved by the California Transportation Commission (CTC). The 2013 ITSP identifies the Focus Route Concept and Facility Standard to meet for US 101 to be a, "Four- to ten-lane freeway from Los Angeles through the San Francisco Bay Area to Cloverdale with added lane capacity for increased interregional travel demand, emphasizing goods movement and interregional travel volumes".

- District System Management Plan: The district-wide DSMP is a strategic policy and planning document that focuses on maintaining, operating, managing, and developing the transportation system. The DSMP Project List is a list of planned and partially programmed transportation projects used to recommend projects for funding.

- Corridor System Management Plan: The route specific CSMP is a multi-jurisdictional planning document that identifies future needs within corridors experiencing or expected to experience high levels of congestion. CSMPs often provide a more focused analysis of a portion of a route and are required for any project in the state receiving Proposition 1B Corridor Mobility Improvement Account (CMIA) and SR99 Bond Program funding. Within District 5, two CSMPs have been completed for projects on US 101 in 2009 and 2012 for the Ventura to Santa Barbara High Occupancy Vehicle (HOV) project and US 101 Santa Maria River Bridges widening and Union Valley Parkway Interchange projects.

  In April 2012, the CTC awarded Caltrans and the Transportation Agency for Monterey County (TAMC) $30.8 million for the San Juan Road Interchange project on US 101. Since this TCR provides a detailed analysis of existing conditions, corridor performance, key issues and recommendations, and a corridor concept, a separate CSMP was not needed for the San Juan Road Interchange project. The San Juan Road Interchange project is located near the Monterey/San Benito county line (between segments 9 and 10) and will address safety concerns in the corridor, eliminate left turn conflicts, and reduce delays on US 101. Construction began on the project in November 2012 and it is anticipated that the project will be complete by Winter 2014.

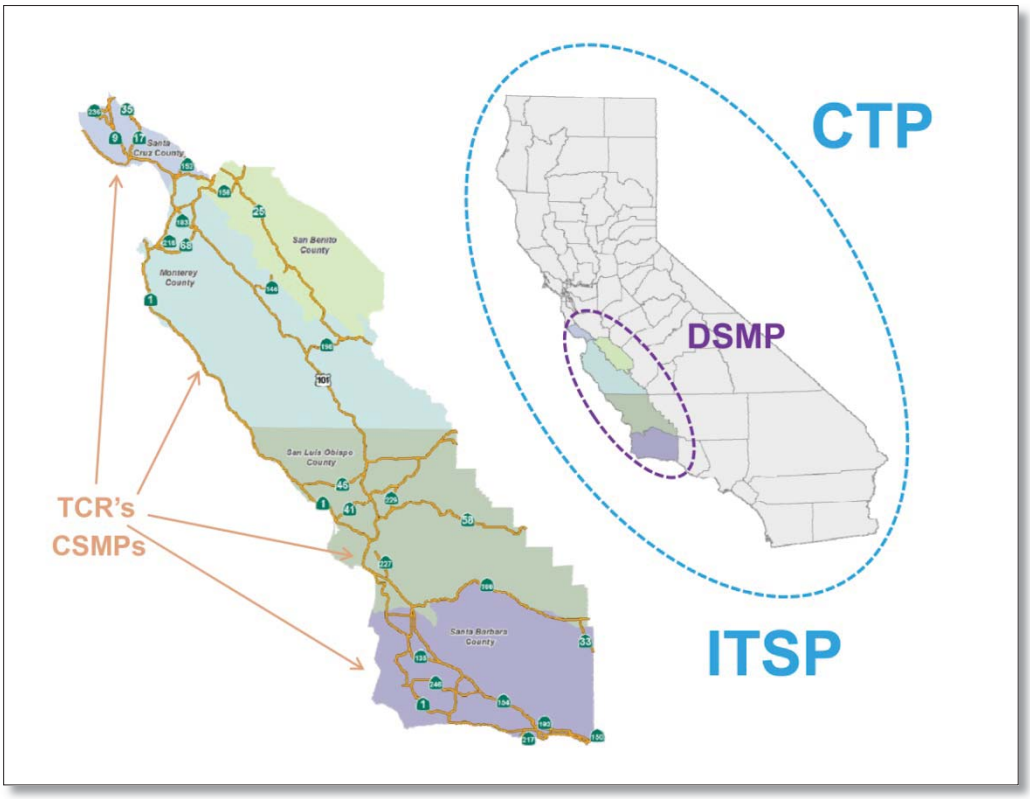

Figure 2.1: Scope of System Planning Products

The TCR is a report, and is not considered a plan under the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) process. Individual projects and sets of projects will be subject to NEPA/CEQA as they are developed and projects included in a Regional Transportation Plan (RTP) will be part of the plans programmatic Environmental Impact Report (EIR). Although an environmental document is not required for a TCR, environmental considerations still need to be adequately addressed in the planning process per SAFETEA-LU Section 6001 and MAP-21.

TCR Relationship with Regional And Local Planning Efforts

Complementary transportation planning efforts exist between state, regional and local governments. These efforts have a unique scope and focus but often have overlapping objectives that, when integrated, contribute to a continuing, cooperative and comprehensive planning process.

It is the intent of all transportation concept reports to coordinate with local and regional planning efforts. General plan circulation elements, bicycle and pedestrian master plans, transit studies, regional transportation plans & sustainable communities strategy, and other comprehensive corridor studies are a few examples of the types of efforts that were influential in the development of this report. Likewise, it is intended that the TCR will serve as a useful tool to serve these complementary efforts as well (a list of resources used for this report can be found in Appendix K). The scope of a TCR is unique to the planning efforts listed above, as it is the only plan that focuses long-term mobility of a single state route on an interregional scale.

As the owner-operator of the State Highway System, Caltrans maintains its Transportation Concept Reports to guide long-range planning for individual routes. The TCR evaluates current trends, anticipates future demand and identifies a vision in the form of a facility concept to meet that demand. The TCR takes an interregional perspective on travel demands. It is a diagnostic and prognostic tool to inform decision making about future needs and investments to improve the system for the future.

Regional Planning:

Regional Transportation Plans & Sustainable Communities Strategy (RTP-SCS) and Metropolitan Transportation Plans & Sustainable Communities Strategy (MTP-SCS) played an instrumental role in the development of the US 101 TCR. These plans evaluate integration of land use and transportation policies and programs to achieve lower greenhouse gas emissions as directed through Senate Bill 375. Approved RTP/MTP-SCS reports were a primary source of information for this plan. Data from approved regional travel demand models in District 5 also served as the basis for the corridor performance evaluation section of the US 101 TCR (Chapter 5). The RTP/MTP-SCS introduces complexity beyond the TCR. The RTP/MTP-SCS outlines a comprehensive set of transportation needs for the larger transportation network within a region. Moreover, the RTP/MTP superimposes fiscal constraint to achieve the regional vision for transportation into the future, considering all modes and the entire network of transportation systems.

The TCR serves primarily as a technical document to identify projected future deficiencies of US 101 and provides recommendations and goals to be further considered within the RTP/MTP-SCS process. The RTP/MTP-SCS considers overall needs, and applies regional priorities and funding constraints to establish an action plan for making specific transportation improvements. The RTP/MTP-SCS and TCR have different and overlapping objectives and scope but are complementary to guide decision making in support of transportation facilities that sustain mobility into the future.

The TCR identifies the potential for needs to arise within a planning horizon and beyond. The TCR also identifies improvements that could address long-term need, but it is not a document that leads directly to project programming, unlike the RTP/MTP-SCS. A comprehensive list of planned and programmed projects on US 101 organized by segment can be found in Appendix J.

Local Planning:

US 101 extends through the counties of Santa Barbara, San Luis Obispo, Monterey and San Benito within District 5 and serves as the lifeline to numerous communities. These communities depend on the highway to receive and distribute goods and for regional and interregional travel. All the counties and the cities in the corridor have their own general plans which guide future community growth through established goals and policies. By state law, local governments must include a circulation element consistent with their general plan's land use element. A local agency's specific or area plan(s) also provides recommendations and guidance for future development. It is anticipated that the TCRs will serve as a tool for local planning in order to better coordinate local and state goals. Likewise, local general plan recommendations pertaining to US 101 were reviewed in developing this TCR. A comprehensive survey of general plan recommendations pertaining to US 101 throughout District 5 considered in the development of this TCR can be found in Appendix B.

Local agencies are also responsible for planning, implementing, and monitoring land use, development. The TCR should be consulted to ensure that permitted land uses are compatible with the TCR route concept and recommendations for the State Highway System.

CHAPTER 3: STAKEHOLDER PARTICIPATION

Stakeholder participation was an integral part of the TCR development process. US 101 resides within the counties of Santa Barbara, San Luis Obispo, Monterey, and San Benito in District 5, and it was important that the MPOs and RTPAs within these jurisdictions were given the opportunity to provide input into the effort. This was done through outreach to agency staff, technical advisory committees, and the Central Coast Coalition. Meetings, presentations, and circulation of a frequently asked questions sheet served as mechanisms to solicit discussion and feedback on the effort. Detailed information about outreach is provided below.

- September 16, 2013: August 2013 draft US 101 TCR was circulated to SBCAG, SLOCOG, AMBAG, TAMC and SBtCOG Executive Directors to initiate external agency review and comment of the document.

- October 2013: Meetings were held with District 5 MPO and RTPA agency staff and presentations were provided to technical advisory committees and the Central Coast Coalition.

- January 31, 2014: A US 101 TCR workshop was held with SBCAG, SLOCOG, AMBAG, TAMC and SBtCOG staff to discuss comment themes on the draft document and opportunities to incorporate Regional Transportation Plans – Sustainable Communities Strategy findings into the US 101 TCR.

- March 2014: Meetings were held with SBCAG, SLOCOG, AMBAG and SBtCOG planning and modeling staff individually and collectively on March 27, 2014 to discuss the data and methodology to be presented in the corridor performance evaluation section of the US 101 TCR.

- July 2014: A revised draft was published to the District 5 Systems Planning website.

- August 2014: Meetings were held with SBCAG, SLOCOG, AMBAG, TAMC, and SBtCOG staff to discuss key revisions to the July 2014 draft, solicit additional feedback, and schedule opportunities to share the revised draft with technical advisory committee members.

- September 2014: Presentation were given to SBCAG, SLOCOG, and SBtCOG technical advisory committee members to inform and obtain feedback on the document.

- October 2014: A revised draft was circulated to AMBAG, TAMC and SBtCOG staff to review integration of the 2014 AMBAG regional travel demand model data into the document. A presentation was provided to TAMC staff and technical advisory committee member jurisdictions located along the US 101 corridor on October 8, 2014.

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CHAPTER 4: CORRIDOR OVERVIEW

US 101 ROUTE SEGMENTATION

Table 4.1: Route Segmentation

Segment #	Location Description	Beginning PM Prefix	Beginning PM	County_ Route_ Beg. PM	End PM Prefix	End PM	County_ Route_ End PM
1	**South Coast Santa Barbara** Ventura/Santa Barbara County Line to Hollister Avenue Interchange	R	0.00	SB_101_R0.00		26.907	SB_101_26.907
2	**Gaviota Coast and Santa Ynez Valley** Hollister Avenue Interchange to Clark Avenue Interchange		26.907	SB_101_26.907		82.183	SB_101_82.183
3	**Santa Maria City** Clark Avenue Interchange to SR 166 East Interchange		82.183	SB_101_82.183		0.802	SLO_101_0.802
4	**South San Luis Obispo County/Five Cities** SR 166 East Interchange to South Higuera Street Interchange		0.802	SLO_101_0.802	R	24.296	SLO_101_R24.296
5	**San Luis Obispo City** South Higuera Street Interchange to SR 58 Interchange	R	24.296	SLO_101_R24.296		37.863	SLO_101_37.863
6	**Northern San Luis Obispo County** SR 58 Interchange to SR 46 East Interchange		37.863	SLO_101_37.863		57.900	SLO_101_57.900
7	**Salinas Valley** SR 46 East Interchange to Airport Boulevard Interchange		57.900	SLO_101_57.900		85.624	MON_101_85.624
8	**Salinas City** Airport Boulevard Interchange to Sala Road Interchange		85.624	MON_101_85.624	R	92.205	MON_101_ 92.205
9	**Prunedale** Sala Road Interchange to Monterey/San Benito County Line	R	92.205	MON_101_92.205		101.316	MON_101_101.316
10	**San Benito County** Monterey/San Benito County Line to San Benito/Santa Clara County Line		0.00	SBt_101_0.00		7.55	SBt_101_7.55

Figure 4.1: US 101 Corridor in District 5

ROUTE DESCRIPTION

Route Location:

US 101 is California's major north-south *coastal* route between Los Angeles and San Francisco, and is a vital asset to the national, state, and local economies. Its close proximity to two of the nation's largest cities makes it an essential route for national and international goods movement, commerce, trade, tourism, education, military transport, spaceport, and national defense operations, and other important industrial activities.

In Caltrans District 5, US 101 begins at the Santa Barbara/Ventura County line(PM SB-R0.00) and extends approximately 270 miles north through San Luis Obispo, Monterey, and San Benito counties to the San Benito/Santa Clara County line (PM SBt-7.55). The route closely follows the Camino Real from the Spanish Colonial period providing diverse vistas for travelers. US 101 also connects to critical east-west highways for goods movement between the central valley and central coast via highways 1, 41, 46, 58, 166, 156, and 152 (*Figure 4.1*). These key transportation networks, combined with the central coast region's robust commercial activities and $6.5 billion dollar agricultural industry makes this area a principal economic producer/generator for both the state and nation.

Route Purpose:

US 101 in District 5 accommodates interregional, regional, and urban traffic. Common personal mobility purposes related to business, government, recreation, tourism, and daily living, including the journey-to-work, account for a high percentage of trips. The highway accommodates freight and goods movement related to agriculture, commerce, and manufacturing. National defense-related transport, including the movement of troops, equipment, and hazardous materials is also served by US 101.

US 101 functions as an alternate route for a portion of Interstate 5 (I-5), the state's main north-south route between the inland cities and counties. At times I-5 is closed down in both directions at the "Grapevine", located in the Tehachapi Mountains at the southern end of the Central Valley. During these closures, caused by inclement weather (most often snow or fog), fires, traffic incidents, or other adverse conditions, traffic diverts to US 101 for north-south travel within the state. Between January 2006 and January 2011, I-5 has experienced 17 full closures, each ranging in duration from two to 23 hours (Appendix C). Within this same time period US 101 in District 5 has experienced three full closures ranging in duration from four to 12 hours.

Route Designations and Characteristics:

The high traffic volumes, strategic location, and environmental setting of US 101 have resulted in numerous special designations by federal and state governments (Appendix D.2). These designations and classifications provide information regarding the facility itself and its intended use. They also indicate the availability of special purpose funding related to the designation.

The federal functional classification of US 101 is Other Freeway or Expressway. This classification recognizes trip lengths and travel densities indicative of substantial statewide and interstate travel. US 101 is a Federal Aid Primary Route and designated Freeway and Expressway as part of the Freeway Expressway System (F&E). The U.S. Department of Defense, in cooperation with the U.S. Department of Transportation, has identified US 101 as part of the National Highway System as a Strategic Highway Corridor Network (STRAHNET) route. STRAHNET is a network of linked highways deemed essential to national defense for facilitating the movement of troops and equipment to airports, ports, rail lines and military bases. Detailed information on route designation and route classification by segment can be found in Appendix D, Table D.1.

US 101 is part of the State of California Department of Transportation Interregional Road System (IRRS) and designated as a Focus Route and High Emphasis Route in the *Interregional Transportation Strategic Plan (ITSP)* (2013). This is significant as routes identified in the ITSP receive funding priority in the Interregional Transportation Improvement Program (ITIP). The 2013 ITSP identifies that the facility concept to meet for US 101 is a four to ten lane freeway from Los Angeles through the San Francisco Bay area. Currently efforts are underway to update the ITSP by 2015.

US 101 segments one through six and portions of segments nine and 10 also are eligible to be part of the state Scenic Highway System. On January 1, 1998, California Senate Bill 45 created an Interregional Improvement Program (IIP) for which the Department submits projects to the California Transportation Commission (CTC) in specified categories. The IIP funds project components that serve interregional movement of people and goods, including state highway projects on the IRRS. Because of the Focus Route designation, projects located along US 101 receive a higher funding priority than other IRRS routes or non-IRRS routes. US 101 is designated a Terminal Access Route to the National Truck Network.

The Metropolitan Planning Organization's (MPOs) and Regional Transportation Agencies (RTPAs) in District 5 surrounding US 101 include: Santa Barbara Association of Governments (SBCAG), San Luis Obispo Council of Governments (SLOCOG), Association of Monterey Bay Area Governments (AMBAG), Transportation Agency for Monterey County (TAMC), and San Benito Council of Governments (SBTCOG). Santa Cruz County Regional Transportation Commission (SCCRTC) is also within District 5 but does not overlap with the US 101 corridor. There are three Air Pollution Control Districts (APCDs) within District 5. Santa Barbara County is the only county in District 5 that includes tribal territory. The Santa Ynez Band of Chumash Indians land is located east of US 101 off of SR 246 near the City of Solvang. The terrain of the route ranges vastly by segment ranging from flat to rolling to mountainous.

COMMUNITY CHARACTERISTICS

Santa Barbara County:

Santa Barbara County includes eight incorporated cities as well as unincorporated communities and Chumash Native American tribal territory. Within District 5, Santa Barbara is the largest in population at 423,895 (U.S. Census Bureau, 2010). The two largest developed areas in the county are the South Coast and Santa Maria Valley. The South Coast area is the largest urban area in the county, encompassing approximately 130 square miles, and is home to the University of California, Santa Barbara. The Santa Maria Valley serves as the largest retail trade center in northern Santa Barbara County.

Between these two major urban areas lies the scenic Gaviota Coast and the Santa Ynez Valley. The Santa Ynez Valley serves as the gateway to multiple north county communities and large employment centers east and west of US 101 by way of SR 246. These include the communities of Solvang, Buellton, Lompoc, the Chumash Native American tribe and Vandenberg Air Force Base. According to the SBCAG 2012 Regional Growth Forecast 2010-2040, employment in Santa Barbara County is projected to grow from 197,400 to 257,600 between year 2010 and 2040 (Santa Barbara County Association of Governments, 2012).

San Luis Obispo County:

San Luis Obispo County is composed of seven incorporated cities and multiple unincorporated communities that total 269,637 in population (U.S. Census Bureau, 2010). South County, consisting of the Nipomo Mesa and the Five Cities Area, has shown significant growth over the past decades. This includes growth in residential and commercial development as well as in the tourism industry. This area serves as a popular vacation destination driven by beach access and the multiple golf courses located in South County. Central County includes the City of San Luis Obispo and home to CSU-Cal Poly, San Luis Obispo, which serves approximately 20,000 students and faculty.

North County including Santa Margarita, Templeton, Atascadero and Paso Robles is separated from the City of San Luis Obispo by the Santa Lucia Mountain Range and is the fastest growing sub-region. In 2008, approximately 36 percent of the region's population lived in this area (San Luis Obispo Council of Governments, 2010). Between the years 2010 and 2035, employment in San Luis Obispo County is forecast to grow from 95,900 to 120,800 (San Luis Obispo Council of Governments, 2014).

Monterey County:

Monterey County extends more than 3,300 square miles and is comprised of diverse natural habitats and residential communities. The county consists of 12 cities and several unincorporated communities. US 101 serves as the lifeline to many of these communities: including the cities of King, Greenfield, Soledad, Gonzales, and Salinas. Monterey County is comparable in size to Santa Barbara County with a population of 415,057 (U.S. Census Bureau, 2010). Monterey County has eight planning areas, but population and economic activity within the county is focused most in the Greater Salinas and Greater Monterey Peninsula areas.

The Greater Salinas area serves as the hub for agricultural activity and the Greater Monterey Peninsula which includes the City of Carmel and the City of Monterey supports tourism, recreation, and the arts. The Coast planning area also contains the spectacular Big Sur Coast that draws tourists from around the world. The North County planning area contains no incorporated cities but continues to experience steady growth in the Prunedale and Royal Oaks communities. Between the years 2010 and 2035, employment is projected to increase from 182,000 to 222,137 in the Monterey County (Association of Monterey Bay Area Governments, 2014).

San Benito County:

San Benito County is the only inland county in Caltrans District 5. San Benito County is also the smallest in population totaling 55,269 (U.S. Census Bureau, 2010). The county's population is concentrated in the less rugged northwest area of the county. Hollister is the location of San Benito County's seat of government and the largest city in the county. The county serves as the main gateway to Pinnacles National Park located in the Gabilan Mountain Range and is the site of Mission San Juan Bautista. Much of the county's land area is in rugged terrain. In San Benito county, employment is projected to increase from 16,200 to 19,546 between the years of 2010 and 2035 (Association of Monterey Bay Area Governments, 2014).

LAND USE AND TRANSPORTATION

There is a direct nexus between land use and transportation; changes to one will inevitably impact the other. A better understanding of future development growth and transportation trends will help determine how to best plan for a transportation system that can accommodate future growth. The transportation system includes a network of local routes as well as state routes that serve different functions. Local routes are intended to serve transportation needs within a community. The focus of routes that are part of the National Highway System including US 101 is to maintain mobility of regional and interregional travel.

SB 375 and Sustainable Communities Strategy:

The connection between land use and transportation planning is a priority for the State, with the implementation of Senate Bill 375 legislation by the MPO area jurisdictions. Each MPO in California is responsible, pursuant to statute (SB 375), for developing a Sustainable Communities Strategy (SCS) for its regional transportation plan (RTP) or Metropolitan Transportation Plan (MTP). The SCS is intended to demonstrate how, through more efficient coordination of land use decisions and transportation investments, each region can reduce per capita greenhouse gas (GHG) emissions from cars and light trucks.

SBCAG's 2013 RTP-SCS defines a preferred scenario strategy for Santa Barbara County to achieve GHG emission reductions is a Transit-Oriented Development (TOD)/Infill plan called "Scenario 3 + enhanced transit strategy". According to the RTP-SCS, "It selectively increases residential commercial land use capacity within existing transit corridors, shifting a greater share of future growth to these locations…The preferred scenario shifts more housing growth to the South County to rely more heavily on transit and address jobs-housing imbalance and in infill areas over time". The preferred scenario was developed through a multi-year stakeholder engagement effort and is consistent with adopted local General Plans and intensification of land use along transit corridors are consistent with local draft plan updates.

AMBAG's 2035 MTP-SCS approved in June 2014 explains that the preferred scenario includes placetypes that transition commercial corridors into mixed use areas served by high quality transit. Outside of those mixed use areas, the placetypes largely remain the same as the baseline.

SLOCOG is developing their RTP-SCS for San Luis Obispo County concurrently with the US 101 Corridor Mobility Master Plan effort funded through a Caltrans Partnership Planning grant. The US 101 TCR predates completion of the RTP-SCS. It is anticipated that the RTP-SCS will be adopted by Spring 2015. Significant findings from the final plan will be appended to the US 101 TCR corridor data sheets subsequent to adoption.

SB 743:

A primary change identified in SB 743 is to reduce reliance on roadway capacity, level of service and delay as corridor performance measures. SB 743 instead directs performance measure analysis to be based on vehicle miles traveled (VMT) for conducting transportation analysis under California Environmental Quality Act (CEQA). Preliminary efforts are underway to investigate standards for VMT performance measurement. The corridor performance section of this TCR focused on a volume/capacity analysis based on the data that was currently available. After guidance is developed to provide more direction on how VMT performance measures can be evaluated in CEQA analysis, it is expected that this will also influence the approach to corridor performance analysis in future TCR updates.

Land Use Characteristics:

Santa Barbara County:

Santa Barbara County from the southern county line through Goleta surrounding US 101 is urbanized. Commercial, retail, institutional, and residential uses are focused in this area with development built out to the adjacent right-of-way and recreational uses are abundant due to the close proximity of the freeway to the Pacific Ocean. Santa Barbara County has 152,834 total housing units and a vacant housing unit rate of 7 percent (U.S. Census Bureau, 2010). University of California Santa Barbara (UCSB) is also a few miles from US 101 by way of SR 217.

From the City of Goleta to the Gaviota tunnel and rest stop area, US 101 lies within the Coastal Zone and runs parallel to the Union Pacific Rail Road (UPRR). Gaviota land use predominately includes agricultural, recreational, and rural residential holdings. Significant oil and gas uses (both active and inactive) are located off-shore of US 101 through miles of pipeline. The Gaviota Terminal adjacent to US 101 served the oil and gas industry until it was decommissioned in 2005 and now lies vacant. California State Parks also have significant holdings along the Gaviota coast.

Between Gaviota and the city of Buellton, land use is agricultural. Livestock, row crops and viticulture predominate. In Buellton, US 101 intersects with SR 246, which provides access east and west to additional communities, agriculture and recreational/tourism uses. North of Buellton, agricultural/viticulture and some oil and gas uses predominate as US 101 passes through the town of Los Alamos and arrives at the Clark Avenue interchange in Orcutt. Between Orcutt and the Santa Maria River, urbanized uses of all types are west of US 101. East of US 101, agriculture and oil and gas uses predominate until just south of the US 101/SR 166 interchange. At this point, residential, medical, institutional and commercial uses expand easterly and northerly toward the Santa Maria River.

The interchanges at US 101 and Clarke Avenue, SR 246, and SR 1, provide surface transportation connections to Vandenberg AFB and the Chumash Native American Reservation. Also, the City of Santa Maria has approved a regional landfill adjacent to US 101 a few miles south of the community of Orcutt with an anticipated 90 year life. The City of Santa Maria has also recently approved a significant industrial, manufacturing, and commercial specific plan, located approximately three miles west of US 101. Although somewhat uncertain due to the national economic situation, the Bradley Ranch annexation and specific plan remains an effort under consideration by the city. This development area is located east of US 101 between Union Valley Parkway and Betteravia Road. One resulting feature would be a new interchange at McCoy Road and an easterly connection to the Union Valley Parkway interchange which was completed in Fall 2013. Other larger developments planned for the area include Area 9, DJ Farms, Orcutt Marketplace, Enos Ranch, and Woodlands, all of which are projected to generate 203,829 Average Daily Trips.

San Luis Obispo County:

From the Santa Barbara/San Luis Obispo county line to the City of Arroyo Grande, land uses are small industrial and agricultural. Nipomo is an urbanizing community with numerous rural residential holdings and previously approved residential and commercial uses continue to gradually build out. Between Arroyo Grande and the northern limits of the City of San Luis Obispo, US 101 is urbanized and predominately residential, commercial/retail and recreational/tourism. According to the 2010 U.S. Census Bureau, San Luis Obispo County has 117,315 total housing units and a vacant housing unit rate of 13 percent. Multiple interchanges with US 101 in the Five Cities area provide connections for the recreational/tourism industry which centers on the Oceano Dunes State Vehicular Recreation Area. Institutional and governmental land uses provide much of the economic base in San Luis Obispo. The city of San Luis Obispo supports a growing high tech industry. Also of importance in the county is Pacific Gas & Electric's Diablo Nuclear power generation facility located approximately eight miles from US 101. US 101 is the primary surface evacuation route for the county.

US 101 extends to north county by way of the Cuesta Grade within the Los Padres National Forest. US 101 passes by four communities and roughly parallels the Union Pacific Rail Road and the Salinas River. These communities predominately provide residential and commercial/retail. Paso Robles is becoming an interregional attractor oriented on recreation and tourism associated with its rural and viticulture oriented character. Of note are the US 101/SR 46 interchanges which provides east-west interregional connectivity for freight movement both statewide and nationally as well as recreational traffic from California's Central Valley. At the northern county line, US 101 extends through the National Guard training installation of Camp Roberts into east and west Garrison.

Monterey County:

US 101 in Monterey County begins at the Camp Roberts military base and continues approximately 100 miles to the San Benito County line. Camp Roberts is a key training site for the State and provides key support in helping meet both foreign and domestic missions. For approximately 40 miles, the landscape is rural with few motorist services. King City is the first of a number of cities and small communities along the US 101 corridor surrounded by vast agricultural resources, rich soils and active farming operations. Each community generally consists of housing adjacent to US 101 and grocery shopping options and has participated in active development strategies in the last decade to accommodate a growing need for housing and retail services.

The King City Downtown Revitalization Plan identifies plans to enhance vibrancy of the downtown corridor through redevelopment. This includes 650 residential units and an additional 190,000 square feet of commercial development. North of King City on the US 101 corridor, in the City of Greenfield, the Walnut Avenue Specific Plan proposes 50 acres, 220 residential units, and 445,000 square feet of commercial development and open space/park facilities for the community. Additionally, plans for the Yanks Air Museum in the City of Greenfield are intended to draw travelers into the community from US 101. This 600,000 square foot highway commercial and visitor center will include a museum, educational center, hotel, winery, restaurants, an RV park, service stations, retail commercial, an aircraft hanger and general aviation landing strip, and amphitheatre.

The City of Soledad is the next community north of the City of Greenfield along the US 101 corridor and has plans to expand retail services in the community with a new 120,000 square foot big box-retail commercial development and associated business park services. The City of Soledad also serves as a gateway to Pinnacles National Park. North of the City of Soledad, the City of Salinas has plans for a Future Growth Area plan and a Unikool agriculture processing facility. The Future Growth Area will encompass approximately 3,347 gross acres and plans for up to 14,318 dwelling units and 9.023 million square feet of commercial/retail/mixed used, general industrial, and semi-public uses. The Unikool project's EIR and Trip Generation Report anticipates that the project will generate 16,219 new daily trips. Of those trips, 5,839 are heavy-truck trips. New truck trips

associated with this development are expected to create significant operational impacts to US 101 as well as the interchanges at Airport Boulevard, Sanborn Road, and South Abbott Street. At full operation, this development will impact the south Salinas traffic grid. In anticipation of this, Caltrans has required ramp metering and improved signal operations at specific locations to preserve future mobility of US 101. According to the 2010 U.S. Census Bureau, Monterey County has 139,048 total housing units and a vacant housing unit rate of 9 percent.

San Benito County:

Highway 101 in San Benito County begins just north of where the San Juan Road interchange is being constructed and continues approximately eight miles to the Santa Clara County line. Land use is primarily rural, with portions winding through rock outcroppings and eucalyptus groves. Future developments include a potential for a new highway commercial project at the US 101 San Juan Road interchange.

A prominent feature of US 101 through San Benito County is the junction of Highway 156 east heading toward Hollister. San Benito County has a long history of agricultural production and continues to be the economic driver of the region, boasting a $255 million industry. These agriculture operations draw traffic onto Highway 156 making their way to the central valley. Further north near the San Benito/Santa Clara County line is the Betabel/Y Road interchange. While the land surrounding this area is undeveloped, this location is of interest and has the potential to be impacted by a future residential/retail/commercial growth center to the east. Project proponents have been in discussions with both Caltrans and the County to begin early scoping of their project, which may include constructing an entirely new interchange north of Betabel/Y Road. Further, San Benito County improved the likelihood of a developing this area by changing the land designation of the site to "New Communities" in their General Plan Update. When the development ultimately occurs, increased traffic on US 101 is expected as the workforce will most likely commute north to Silicon Valley or south to Salinas. The county has 17,870 total housing units and a vacant housing rate of 5 percent (U.S. Census Bureau, 2010).

Travel Patterns:

Santa Barbara County:

In Santa Barbara County, commute patterns centers on incoming workers to the Santa Barbara and Goleta area. Many people commute from north Ventura County to Santa Barbara for work since the housing costs in north Ventura County are significantly less. SBCAG's 2007 Travel Trends Report for Santa Barbara County suggests that, although the commute volume is generally "leveling off," the commute period itself is broadening out as observations indicated rising volumes occurring beyond the typical "peak hour" time. This data appears to indicate that commuters are leaving Ventura County earlier and returning home later in the evening. A noticeable commute also occurs from Lompoc to Goleta and Santa Barbara. These trips enter and exit US 101 at the Las Cruces interchange in Gaviota. To a lesser extent there are also commutes from Buellton and Santa Maria southerly to the larger urbanized area.

In the Santa Maria area, commute patterns may substantially change when the local, state, and national economy improves. The City of Santa Maria has approved multiple residential subdivisions and a substantial industrial, manufacturing, and commercial specific plan but many of these large residential projects have not transitioned into the construction phase. Over time, as these projects are constructed, this could improve the jobs-housing balance in the Santa Maria Valley.

San Luis Obispo County:

In southern San Luis Obispo County, commute patterns center across the San Luis Obispo/Santa Barbara County line where residents commute between southern San Luis Obispo County and Santa Maria with some commuting further south in Santa Barbara County. As identified in the 2012 US 101 CSMP for Santa Maria and Arroyo Grande, the commute pattern split across the county line between SR 135 and SR 166 is an approximate 50/50 split northbound and southbound during the PM peak hour. In northern San Luis Obispo County, US 101 is serves as the lifeline for goods movement through the central coast and between Monterey and the Salinas Valley to the Central Valley by way of SR 46. The City of San Luis Obispo also serves as a primary employment center in the county with morning commute entering from Nipomo and the Five Cities area from the south; Paso Robles, Templeton and Atascadero from the north; and Cambria and Morro Bay/Los Osos from the coastal communities.

Monterey County:

Agriculture, goods movement, and hospitality industries drive trip generation in Monterey County on US 101. Agriculture and farm to processing facility trips generally stay within the Salinas Valley and thus generate the demand for interchange improvements from King City to southern Salinas. From US 101, highways 68 and 156 serve as east-west connectors to the coast to provide services to hotels, restaurants, and other hospitality-based businesses in the Monterey Peninsula. Noticeable increases in special events in the Monterey Peninsula such as the Monterey Bay Aquarium, Laguna Seca raceway, and City of Monterey Concours d'Elegance increasingly draws large crowds each year. From the City of Salinas north, a large percentage of trips are made to Santa Clara County for tech-industry based jobs. Also, due to the economic changes of the year 2000 decade, communities were impacted as home prices rose, especially in Salinas and northern Monterey. Many citizens moved farther south in the county where housing was more affordable and now commute to Salinas and northern Monterey county for work. This trend has placed a greater demand on US 101 and resulted in higher peak hour congestion heading north from Gonzales through Salinas.

San Benito County:

Travel on US 101 in San Benito County is almost entirely interregional in nature. The landscape is mostly rural with little development to generate significant trips. Motorists on this portion of the highway primarily consist of those commuting to work in the Silicon Valley/Gilroy areas from the south, tourists going to or coming from the Monterey Peninsula, or travelers using US 101 as a interregional route to traverse California north and south as an alternative to Interstate 5. SR 156 east and SR 152 through interconnection with US 101 serve as key statewide connectors for goods movement. According to the Central Coast California Commercial Flows Study, in 2007, trucks moved about 2.4 million tons of freight in San Benito County (Association of Monterey Bay Area Governments (AMBAG), 2012). These shipments constituted approximately $2.5 billion in value, or 82 percent of the County's freight value moved.

Future Development:

Transportation planning and future land use changes and development should support concepts outlined in *Smart Mobility 2010: A Call to Action for the New Decade* (California Department of Transporation) including: convenient and safe multimodal travel, speed suitability, accessibility, management of the circulation network, and efficient use of land. Sustainable communities and intermodal transportation including multimodal, frontage road, and mixed use improvements, are encouraged.

As developments are approved locally, potential impacts to US 101 will be identified through the development review process. Anticipating future impacts to US 101 provides an opportunity for Caltrans and its local partners

to collaborate to develop solutions before the transportation system is overwhelmed. The locally led environmental review process for future development projects provide opportunities to study their respective contribution to cumulative and specific impacts. This process includes a traffic analysis which determines the magnitude of impacts to the local and regional transportation networks and outlines potential mitigation measures appropriate to these impacts. Identifying these impacts can also aid MPOs, RTPAs, counties, and cities in developing and implementing transportation impact fee programs and/or other funding strategies for infrastructure improvements.

ENVIRONMENTAL CONSIDERATIONS

The purpose of this section is to highlight environmental considerations specific to US 101 within the current political climate of the 2006 Global Warming Solutions Act (AB 32) and 2008 Sustainable Communities and Climate Protection Act (SB 375). This section includes an overview of coastal resources, noise, air quality and climate change. This section is not intended to act as a plan under the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) process, but provide a broad overview of environmental considerations as required per SAFETEA-LU Section 6001 and MAP-21.

Coastal Resources:

The demand to access coastal resources continues to grow and one of the principal goals of the 1976 California Coastal Act is to increase opportunities for public coastal access. US 101 is within the coastal zone through southern Santa Barbara County, the Gaviota Coast, and the San Luis Bay planning area. In these areas, whenever intensification of local land use occurs, much effort is taken to increase access to the coast through coastal permitting.

The 2012 administrative draft of the Gaviota Coast Plan identifies that public beach access locations along the coast area are limited to four locations: El Capitan State Beach, Refugio State Beach, Gaviota State Park, and Jalama Beach County Park. It further explains that the rest of the Gaviota coast is comprised of large private land holdings where public access is only allowed under privately managed access programs (Santa Barbara County, 2012). These public beach access locations are commonly not contiguous to one another or are largely inaccessible by trails. As a result, many travelers will park on Caltrans right-of-way or Union Pacific Rail Road (UPRR) property adjacent to the paved highway in order access better vista points or isolated beach areas.

Without the benefit of grade-separation facilities, this travel behavior contributes to differential traffic speeds and operational challenges to all users of the facility. While this portion of US 101 continues to serve as an expressway without access control and at-grade crossings, this behavior will continue. Caltrans supports ultimate conversion of US 101 from expressway to freeway through this area to maintain mobility of US 101 and influence other alternatives for coastal access. The California Coastal Trail (CCT) planning effort envisions a trail alignment as close to the coast as feasible. The precise trail alignment cannot be known at this time due to many variables which have yet to be studied. The relationship between US 101, local and coastal access, the California Coastal Commission, Caltrans, UPRR, the County of Santa Barbara, and State Parks is complex. Coordination between these agencies must take place to develop a cohesive planning concept to improve corridor access.

According to the 2007 San Luis Obispo County Local Coastal Program (LCP), in the San Luis Bay Planning area public holdings for beach access are limited to Avila and Pismo State beaches. The program recommends that access should be secured in the future between Point San Luis and Point Buchon. Pirates Cove between Avila and Shell Beach is privately owned and experiences intensive recreational uses (San Luis Obispo County, 2007). In the San Luis Bay Planning area, US 101 is less directly impacted by travelers attempting to access the coast as the facility is designated freeway through this area.

Habitat Connectivity for Wildlife and Plants:

The US 101 corridor is unique with large tracts of public land, open space, and agricultural lands occurring near or adjacent to the highway. These lands provide important habitat for many species of wildlife and plants. Future transportation projects along the highway have the potential to impact habitat connectivity in the region and affect the ability of wildlife to move across the landscape as habitat becomes more fragmented.

US101 north of the City of San Luis Obispo is an example where the highway bisects a major wildlife corridor for mule deer, black bear, and mount lions in and near the Los Padres National Forest (Perrine, 2011) (Thorne, 2011). Important linkages have also been identified in the *California Essential Habitat Project: A Strategy for Conserving a Connected California* (Spencer, 2010) prepared for the California Department of Transportation and California Fish and Wildlife Department.

The purpose of identifying important habitat linkages along the highway corridor in the long-range planning process serves to better align transportation projects in a regional perspective that will help maintain landscape connectivity for wildlife and plants, reduce habitat fragmentation and promote public safety. This is consistent with the 2005 Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU).

Noise:

Land uses sensitive to noise include places of worship, libraries, schools, and passive recreation areas. Noise is measured in decibels and is mapped as contours and distance from the generator to the receptor. Noise studies are completed as part of the project development process for any new project. Sound attenuation materials research is evolving and as new pavement strategies are developed, construction constraints and the implication for long-term maintenance needs to be fully studied.

Air Quality:

The Clean Air Act of 1963 requires the U.S. Environmental Protection Agency (EPA) to set National Ambient Air Quality Standards for six common air pollutants. These include: Ozone, Particulate Matter (PM), Carbon Monoxide, Nitrogen Oxides, Sulfer Dioxide, and Lead. The EPA designates areas as in either meeting these standards (attainment) or not meeting these standards (nonattainment). In District 5, San Luis Obispo County the only area that is in nonattainment is for 8-hour Ozone (2008).

In April 2005, the California Air Resource Board (CARB) published the *Air Quality and Land Use Handbook: A Community Health Perspective" which identifies "Sensitive Land Use* generally as residential areas, schools, playgrounds, daycare centers, and medical facilities. CARB guidelines recommend that these land uses not be located within 500 feet of freeways, urban roads (100,000ADT), and rural roads (50,000ADT).

In the Santa Barbara and San Luis Obispo County area, many residential areas are within 500 feet of US 101. Some areas are separated by frontage or local road networks, while other areas are separated by only the Caltrans right-of-way fence. This includes hotels, motels and one special use, Santa Barbara Juvenile Services. These conditions exist in both urbanized and rural areas. There are at least 25 parks, recreation areas, and campgrounds, two regional fairgrounds, five golf courses, and one city zoo near or abutting the route. Approximately a dozen child and adult day care, and specialty medical facilities exist, and for individual medical offices, there is a strong potential for a significant number. There are approximately 16 schools near or abutting US 101; approximately six are just outside the 500 foot mark. These range from elementary to college level, public and private. There are 28 houses of worship and one library within 500 feet of the route.

In Monterey County the towns lining US 101 in the Salinas Valley all include housing and in some cases retail in close proximity along the roadway. Since these towns are small in nature, at freeway speeds within one to two

minutes a motorist has entered and exited the city. Of more threat to these communities' air quality is related to the use of pesticides in the fields adjacent to housing and commercial development. In San Benito County, the landscape is generally rural with no significant development adjacent to the highway.

Climate Change:

The Coastal Zone areas along US 101 in southern Santa Barbara, the Gaviota coast and the San Luis Bay Planning area are subject to coastal climate influences. Climate change studies including *Sea Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future* (National Research Council, 2012) identify sea level rise over the next 100 years as an anticipated threat to infrastructure. This study has been endorsed and accepted by the State of California and demonstrates a combination of variables expected to increase sea level between 36.65 inches to as much as 5.5 feet.

Caltrans *Guidance on Incorporating Sea Level Rise* (2011), similarly show estimates of a 44- to 55- inch increase in mean sea level by year 2100 from year 2000 levels. According to the Final Environmental Document for the *South Coast 101 HOV Lanes Project* (2014), it is anticipated that a 55 inch sea level rise by 2100 would have impacts to US 101 in three locations on the Santa Barbara South Coast: Carpinteria (PM 2.8 to PM 5.0), Arroyo Paredon Creek (PM 5.3 to PM 5.9), and Andree Clark Bird Refuge (PM 11.4 to PM 12.5). To accommodate this projected sea level rise, a 118 foot-wide viaduct/bridge is proposed for these locations. Long range catastrophic planning is required through Shell Beach and northern Pismo in anticipation of increased sea level rise and its effect upon the railroad and the US 101 right-of-way.

SYSTEM CHARACTERISTICS

The conversion of US 101 from expressway to freeway is a long-standing goal for the corridor as identified in the Caltrans *Interregional Transportation Strategic Plan* (2013). The 2013 ITSP identifies the Focus Route Concept and Facility Standard to meet for US 101 to be a, "Four- to ten-lane freeway from Los Angeles through the San Francisco Bay Area to Cloverdale with added lane capacity for increased interregional travel demand, emphasizing goods movement and interregional travel volumes." This understanding between Caltrans and local jurisdictions along the route pertaining to access control is also documented in a collection of Freeway Agreements (Appendix E).

Facility Geometrics:

US 101 extends 270 miles through the counties of Santa Barbara, San Luis Obispo, Monterey, and San Benito and primarily functions as a 4 to 6 lane freeway or expressway throughout District 5. The Cuesta Grade in Segment 5 in San Luis Obispo County is the only portion of the route which maintains a conventional highway status. Facility classification is based on multiple factors including design, access and terrain.

- A freeway is a divided facility with full control of access and with grade separations at intersections. Sixty-seven percent or 181 miles is designated freeway on US 101 in District 5.

- An expressway is an arterial highway with at least partial control access, which may or may not be divided or have grade separations at intersections. Thirty-two percent or 86 miles in US 101 in District 5 is designated expressway.

- A conventional highway does not have complete control of access and is usually not divided. Grade separations at intersections or access control may be used when justified at spot locations. Less than one percent or approximately 3 miles of the route is designated conventional highway in District 5. The only section of conventional highway is along the Cuesta Grade in San Luis Obispo County.

While US 101 extends approximately 270 center line miles through District 5, Caltrans maintains 1,100 lane miles of roadway for US 101. Center line miles are different from lane miles. Center line miles capture the distance between the begin point and end point of any route or portion of a route, while lane miles account for the total number of physical lane miles on the ground between a given begin and end point.

US 101 in District 5 does not contain High Occupancy Toll (HOT) lanes/Express lanes, or Bus Rapid Transit (BRT) lanes. The Mussel Shoals to Carpinteria HOV lane project that is under construction and the South Coast 101 HOV lane project that is currently in the final environmental document phase (PA&ED) will add an HOV lane in each direction between the City of Santa Barbara and Mussel Shoals in Ventura County. The 2006 City of San Luis Obispo General Plan recommended that 6 lane widening of US 101 through the city be focused on HOV and transit use. Operating Intelligent Transportation Systems (ITS) elements along the route include but are not limited to closed circuit television cameras, changeable message signs, and different types of vehicle sensors and loop detectors. A full inventory of ITS elements and other geometric features of US 101 by segment can be found in Appendix D.2.

Access Management:

Access management is the systematic control of the location, spacing, design, and operations of driveways, median openings, interchanges, and street connections according to the *Access Management Manual* (Transportation Research Board, 2014) (*Figure 4.2*). Proper implementation of access management should strive to balance access and mobility needs. Mobility is the ability to efficiently move people and goods while access is about connecting people and goods to/from specific properties or locations.

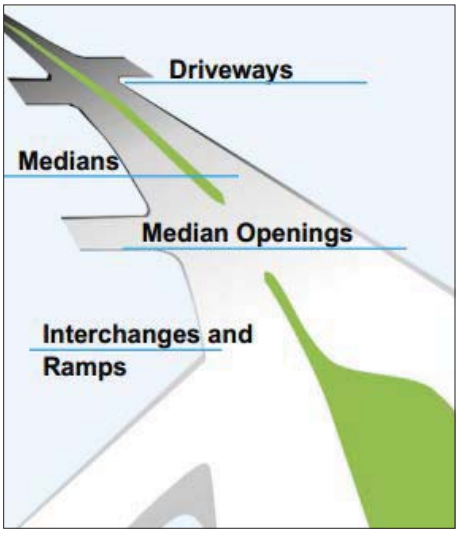

Figure 4.2: Access Features

Access management also reduces congestion and can reduce conflict points. The frequency of vehicles turning off and/or onto a road impacts the ability to maintain free flow conditions on that facility. Vehicles making turning movements onto or off a mainline often requires traffic on that road to slow down to accommodate acceleration or deceleration. According to Federal Highway Administration (FHWA) approximately 55 percent of crashes result from access-related issues at driveways and intersections.

The National Cooperative Highway Research Program Report 420, *Impacts of Access Management Techniques* further illustrates the relationship between the ratio of crashes to number of access points per mile (Transportation Research Board National Research Council, 1999) (*Figure 4.3*). As the number of access points per mile increase, so does the ratio of crashes. *Figure 4.4* and *Figure* 4.5 provide two examples of at-grade intersections that can be found along US 101 in District 5. The number of at-grade access points that can be found in each segment is provided Appendix D.2.

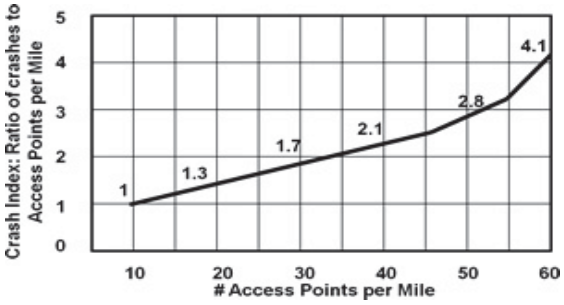

Figure 4.3: Crash Index

In lieu of the operational benefits and ability to reduce conflict points, opportunities to improve access management on US 101 should be pursued. For long-term mobility of US 101, this includes identifying opportunities for merging and separation of crossing movements on expressway segments of the route which allow less disruption of the mainstream flow of traffic. Continuing, cooperative and comprehensive interagency planning for improved local connectivity and parallel route development will facilitate access management improvements incrementally overtime.

Figure 4.4: South San Luis Obispo County At-grade

Figure 4.5: South San Luis Obispo County At-grade

PEDESTRIAN FACILITIES

Since there is no pedestrian access on the US 101 mainline, pedestrian movements are for access across US 101 on the local road network. This access is provided commonly in the form of sidewalks, in some cases with dedicated overcrossings or undercrossings. At ramp intersections, Caltrans maintains responsibility for Americans with Disabilities Act (ADA) compliant access. Currently there are multiple ongoing projects throughout District 5 to construct curb ramps and sidewalks for ADA compliance.

Other future improvements should consider ways to accommodate pedestrian travel across the US 101 corridor in coordination and funding partnership with the local agencies, RTPAs and MPOs. The Caltrans Sustainable Transportation Planning Grant Program continues to fund projects and provide opportunities to partnership in analysis of pedestrian and safe routes to school improvements on and adjacent to the State Highway System. The Santa Maria River Bridge at the Santa Barbara/San Luis Obispo County line on US 101 is one example of a project where partnership has directly improved pedestrian and bicycle accessibility. With completion of this project in January 2014, the bridge was expanded to six lanes and provides a Class I multi-use path to facilitate pedestrian and bicycle travel across the river. Previously, the river crossing for pedestrian and bicycles was located five miles from the US 101 corridor.

The California Coast Trail also provides pedestrian and bicycle access along the US 101 corridor on the Santa Barbara south coast and in the Five Cities area in San Luis Obispo County. The trail is partially completed and will extend 1200 miles through 15 counties along the California coast from the Mexico border to the Oregon state line. On the Santa Barbara South Coast, active proposals to close gaps of the trail include two projects at Rincon and Santa Claus Lane. Currently, funding opportunities to close the gaps on this portion of the trail are being pursued. Together it is estimated that these two project would cost 14.5 million.

BICYCLE TRAVEL

Bicycling is one of the active modes of transportation supported within the US 101 corridor. On US 101 in District 5, bicyclists have access to approximately 50 percent of US 101. Where the route is closed to bicycle access, alternative bicycle travel options are available on the local network. An example of this is between Arroyo Grande and the City of San Luis Obispo in San Luis Obispo County. Caltrans supports local and regional agency initiatives to improve alternative bicycle routes and to plan for future alternative bicycle routes in locations where US 101 is open to bicycle travel. This includes locations such as between Atascadero and Templeton in San Luis Obispo County where the alternate local route is circuitous. In anticipation of freeway conversion in the long-term, alternate routes for bicycles would be desirable to limit the exposure of cyclists to high speed traffic. More detailed information about bicycle access by segment can be found in *Figure 4.7* and Table 4.2.

Figure 4.6 Pacific Coast Bicycle Route

The Pacific Coast Bicycle Route also serves as the most popular long distance bicycle touring route in California and a primary means of interregional bicycle travel. The route expands over 1,000 miles from the California-Mexico border to the California-Oregon state line. Within the central coast and District 5, the route is located on SR 1 with portions of the route extending on and coinciding with US 101. Along the Gaviota Coast in Santa Barbara county from the intersection of US 101/SR 1 to Hollister Avenue, US 101 coincides with SR 1 and is part of the Pacific Coast Bicycle Route and is one of the most heavily used areas by bicyclists on US 101 *(Figure 4.7)*. Efforts are currently under way by Santa Barbara County through the Gaviota Coast Plan to identify future alternative bicycle and pedestrian trail route improvements in this area.

Longer contiguous sections of US 101 that are accessible to bicycles include: much of Segment 2 between the Hollister Avenue Interchange and Clark Avenue Interchange in Santa Barbara County, south of Arroyo Grande, 20 miles north from the San Luis Obispo/Monterey County line, intermittently between the City of King and the City of Salinas, north of the City of Salinas to SR 156 east, and SR 129 and the San Benito/Santa Clara County line in Monterey and San Benito counties (*Figure 4.7*).

Many local agencies have bicycle plans which identify community goals for bicycle improvements. Caltrans Complete Streets Deputy-Directive 64-R1 advocates for safe mobility of all users, including motorists, bicyclists, pedestrians and transit riders. Both local bicycle plans and Caltrans Complete Streets policy implementation and guidelines should be consulted prior to construction of new projects. Consulting the local bicycle plans and Caltrans Complete Streets policy early in the project development process will provide greater opportunity to coordinate mutual interests and integrate in multimodal components into projects.

Key issues facing bicyclists on US 101 District 5 include:

- Travel across US 101 including through interchanges
- Structural or other limitations to widening at the Arroyo Quemado Bridge and Gaviota Tunnel in Santa Barbara County where an alternate route is not available.
- Pavement quality on shoulders
- Planning for bicycle travel during construction
- Suitable alternate routes parallel to US 101 where bicycles currently travel on US 101

Future improvements should be focused to addressing the key issues listed in coordination and funding partnership with the local agencies, RTPAs, and MPOs. Caltrans supports parallel network development and cross access improvements to provide bicyclists with alternatives to US 101.

Figure 4.7: Bicycle Access

Table 4.2: Bicycle Access

Segment	Post Mile	Location Description	Bicycle LEFT Access Prohibited	Bicycle RIGHT Access Prohibited	Facility Type
1	SB_R0.00-SB_26.907	*Ventura/Santa Barbara County Line to the Hollister Avenue Interchange*	*SB_R0.48-27.1*	*SB_R0.45-27.1*	*No bikeway designation (paved shoulder)*
2	SB_26.907-SB_82.183	*Hollister Avenue Interchange to the Clark Avenue Interchange*	*SB_R56.34-R57.78; SB_70.762-L72.58*	*SB_R56.34-R57.69; SB_70.73-L72.58*	*No bikeway designation (paved shoulder)*
3	SB_82.183-SLO_0.802	*Clark Avenue Interchange to the SR 166 East Interchange*	*SB_84.21-90.85; SLO_0.68-0.8*	*SB_84.07-90.95; SLO_0.68-0.8*	*No bikeway designation (paved shoulder)*
4	SLO_0.802-SLO_R24.296	*SR 166 East Interchange to South Higuera Street Interchange*	*SLO_0.8-8.255; SLO_11.83-R24.2*	*SLO_0.8-8.06; SLO_12.43-R24.2*	*No bikeway designation (paved shoulder)*
5	SLO_R24.296-SLO_37.863	*South Higuera Street Interchange to SR 58 Interchange*	*SLO_R24.2-30.09; SLO_37.54-37.8*	*SLO_R24.2-30.09; SLO_37.79-37.8*	*No bikeway designation (paved shoulder)*
6	SLO_37.863-SLO_54.900	*SR 58 Interchange to SR 46 East Interchange*	*SLO_37.8-49.25; SLO_50.48-57.9*	*SLO_37.8-49.25; SLO_50.48-57.9*	*No bikeway designation (paved shoulder)*
7	SLO_54.900-MON_85.624	*SR 46 East Interchange to the Airport Boulevard Interchange*	*SLO_57.9-59.02; SLO_64.39-R68.0; MON_R21.88-R41.19L; MON_52.43-54.96; MON_61.3-63.38; MON_64.41-66.61; MON_69.1-72.79*	*SLO_57.9-59.66; SLO_64.96-R68.0; MON_R21.804-R41.29R; MON_52.43-55.05; MON_61.3-62.99; MON_64.32-66.54; MON_69.1-72.9*	*No bikeway designation (paved shoulder)*
8	MON_85.624-MON_R92.205	*Airport Boulevard Interchange to the Sala Road Interchange*	*MON_85.64-R89.3*	*MON_85.64-R89.3*	*No bikeway designation (paved shoulder)*
9	MON_R92.205-MON_101.316	*Sala Road Interchange to the Monterey/San Benito County Line*	*MON_R89.3-R91.292*	*MON_R89.3-R91.9*	*No bikeway designation (paved shoulder)*
10	MON_101.316-SBt_7.55	*Monterey/San Benito County Line to the San Benito/Santa Clara County Line*	*SBt_2.74L-5.11*	*SBt_2.81R-4.99*	*No bikeway designation (paved shoulder)*

**CALTRANS DISTRICT 5 BICYCLE MAP-HTTP://WWW.DOT.CA.GOV/DIST05/PLANNING/TRANSIT_ALTERNATIVES.HTM* (California Department of Transportation, 2004)

RAIL, TRANSIT AND COMMUTER TRAVEL

Intercity and Peak Period Passenger Rail Service:

The California state rail system includes intercity, commuter, and freight rail services and the infrastructure to operate them. All three systems frequently share the same infrastructure, which is generally owned by private railroads, and in some cases, public entities. In District 5, Union Pacific Rail Road (UPRR) is the sole owner of the rail right of way between Moorpark and San Jose. The railroad is located parallel to US 101 through much of District 5. Because freight and passenger services share the same corridor, joint planning and policy development increases the efficiency and effectiveness of the system, and supports more cost-effective infrastructure development and maintenance. The state works closely with the Los Angeles-San Diego-San Luis Obispo Rail Corridor Agency (LOSSAN) and Coast Rail Coordinating Council (CRCC) to improve service speeds, reliability and frequency of rail in southern California (California Department of Transportation, 2013).

Intercity rail includes state-supported corridor routes and Amtrak-supported long-distance routes (*Figure 4.8*). Within District 5, Amtrak operates the Coast Starlight and LOSSAN operates the Pacific Surfliner, which is the second-busiest passenger rail line in the United States. Eleven round trips operate daily between Los Angeles and San Diego. Five daily round trips operate in District 5 between Los Angeles and Santa Barbara, with two of these continuing to San Luis Obispo. As of October 2013, the Pacific Surfliner was funded completely by the state, using Public Transportation Account funds. Ridership on the Pacific Surfliner in federal FY 2013 was 2.7 million, a 2.5 percent increase from the previous year. Amtrak also operates the long-distance Coast Starlight train, which offers one daily round trip between Los Angeles and Seattle with stops in District 5 in the City of Santa Barbara, City of San Luis Obispo, the City of Paso Robles, and City of Salinas. Ridership on the Coast Starlight in federal FY 2013 was 479,522, a 5.5 percent increase from the previous year.

Throughout District 5, there are multiple efforts ongoing to improve passenger rail service. In Santa Barbara County, the 2006 SBCAG *101 in Motion* study raised the profile and importance of improved rail service between East Ventura and Goleta to sustain mobility in and through the county. While discussions continue between SBCAG, Caltrans and UPRR toward establishing the operation of a single round-trip Metrolink commuter train within this corridor, efforts to improve the supporting rail line infrastructure to accommodate this new peak period passenger rail service are progressing. This includes the development of a rail platform in Goleta and improvements to the Santa Barbara Station and Ortega and Sea Cliff sidings. These improvements total approximately $30 million in funds from the State Transportation Improvement Program (STIP), the Federal Railroad Administration's High Speed and Intercity Passenger Rail Program/American Recovery and Reinvestment Act, and SBCAG's Measure A Program.

Figure 4.8: Amtrak Train - Santa Barbara Coast

Along the Central Coast, there is widespread support for return of the Coast Daylight route from Los Angeles to San Francisco, with twenty agencies along the corridor passing Resolutions of Support for the project. The Coast Rail Coordination Council, including SLOCOG, TAMC, SBCAG, Caltrans, Amtrak, and other entities along the corridor, has been instrumental in planning for this new service and will continue to have an important role in the planning and operation of this improvement. The Coast Daylight will begin with one round trip between San Luis Obispo and San Francisco and expand as demand warrants. This route is anticipated to generate an annual ridership of 216,000 passengers (2012).

A total of $43 million was secured in Proposition 1B and STIP funding for the extension. Additional state funding for annual operating costs must be identified and negotiations with the railroads must be completed prior to operation of the new route. In Monterey County, the Transportation Agency for Monterey County (TAMC) has been working cooperatively with Caltrans, the Caltrain Joint Powers Board and the Capitol Corridor Joint Powers Agency to extend the Capital Corridor rail service. The service is planned to consist of two round trips per day running from Salinas to San Jose, and beyond to Sacramento, and will be increased to up to six round trips, as demand warrants. The extension will include three new station stops for the Capitol Corridor: Pajaro/Watsonville, Castroville, and Salinas. The rail extension, in addition to connecting Salinas with San Jose and the jobs base of Silicon Valley, will also connect to other cities via the Capitol Corridor service and Caltrain, Altamont Commuter Express and planned High-Speed Rail service with stations in Gilroy and San Jose.

Bus Service:

Bus service in District 5 is managed and operated by a combination of local and regional transit providers within each county. These operators provide express, commuter and traditional bus service. Express bus service is typically located within an urban corridor and maintains short headways, while commuter bus service accommodates commonly longer distances, with minimal stops and a focus on commutes to and from work. Traditional bus service refers to local bus trips customized to meet the unique needs of the community.

Santa Barbara Metropolitan Transit District (SBMTD), San Luis Obispo Regional Transit Authority (SLORTA), Monterey-Salinas Transit District (MST), and Santa Maria Area Transit (SMAT) are members of the California Transit Association and the four largest transit operators in District 5. A comprehensive list of bus services and operators providers in each county is identified by segment in Appendix F. Many local, regional and inter county services also offer local and regional shuttle services as well and Amtrak users are commonly offered free transfers onto regional transit bus services. This is coordinated by Caltrans under contract with Amtrak to provide connecting feeder bus services with private bus operators.

Currently in District 5 there is no Light Rail or Bus Rapid Transit (BRT) service. However, SLOCOG completed a BRT study in June 2013 which further analyzed and prioritized bus stop, transit, and on-board amenity improvements for San Luis Obispo county. Along US 101, this includes newly proposed and improved park-and-ride lots and express bus service. This effort was funded through FTA 5304 Transit Planning Grant funds.

Park-and-Ride Lots:

Park-and-ride lot improvements facilitate reduced single-occupant-vehicle travel and have a direct benefit for supporting multimodal options for the public and maintaining mobility on US 101. Commute patterns drive the number and location of park-and-ride lots along US 101 in District 5. In District 5, there are 12 Caltrans owned park-and-ride lots. Seven of these lots are located directly adjacent to or nearby US 101. In addition to these lots, there are 14 privately or locally owned park-and-ride lots that are located adjacent to the US 101 corridor. A complete inventory of Caltrans and locally operated park-and-ride lots that serve regional and interregional travel in District 5 can be found in Appendix G.

SBCAG's June 2014 *Park & Ride Lot Study* places high priority on expanding both US 101/SR 135 interchange park-and-ride lots in Santa Maria and the park-and-ride lot in Lompoc. The study proposes, as a high priority, a new park-and-ride lot at the northern end of the City of Santa Maria near the SR 135/US 101 interchange and in Lompoc near the intersection of Central Avenue and H Street/SR 1. As a second priority, the study proposes new park-and-ride facilities near the US 101/Casitas Pass interchange in Carpentaria and US 101/Hollister Avenue Interchange in Goleta. Currently Caltrans is working with the City of Buellton to develop a park-and-ride lot at US 101/Avenue of Flags.

The SLOCOG 2013 *Park & Ride Lot Study* (2013) has identified proposed park-and-ride lot locations for lease, as well as new small and large park-and-ride lot locations in San Luis Obispo County. This includes the following lots

near US 101: Capistrano Avenue near the US 101/41 East Interchange in Atascadero; Niblick Road in Paso Robles; Pine Street in Paso Robles; West Tefft Street in Nipomo; Spyglass Drive in Shell Beach; Calle Joaquin in San Luis Obispo; Brisco Road in Arroyo Grande; and Los Berros Road/Thompson Avenue in Nipomo. The *San Luis Obispo South County Bus Rapid Transit Assessment* (2011) also highlights West Tefft Street and Spyglass Drive as potential locations for future park-and-ride lots.

Caltrans supports locating future park-and-ride lots where multimodal nodes exist by encouraging local and regional agencies to construct and maintain park-and-ride lot facilities at locations that address safety and mobility needs of bicyclists, pedestrians, and transit users in all projects. Due to current state funding constraints, funding the construction, maintenance and operation of new park-and-ride facilities in the state's right-of-way by Caltrans is not available. The Caltrans 2010 *Park and Ride Program Resource Guide* provides more guidance on the steps to develop a new park and ride lot or improve and existing park and ride lot in Caltrans right-of-way.

FREIGHT

US 101 is California's major north-south coastal route linking two of the nation's largest metropolitan areas, Los Angeles and the San Francisco Bay Area, and is a vital asset to the national, state, and local economies. When Interstate 5 is closed due to inclement weather, fires, or major collisions, US 101 serves as a major through connector. Between January 2006 and January 2011, I-5 experienced 17 full closures, each ranging in duration from two to 23 hours (Appendix C).

US 101 is an essential route for goods movement in serving as the lifeline surface facility for shippers, growers, aggregate miners, and manufacturers. Agricultural commodities, raw materials, and manufactured goods are transported to, from, and through the central coast predominately on heavy trucks. According to the *Central Coast California Commercial Flows Study* (2012) developed by AMBAG in partnership with Caltrans, SBCAG, SLOCOG, TAMC, SCCRTC, and SBtCOG, 82 percent of freight movement by tonnage within District 5 takes place by truck.

All counties on the central coast are major producers of agricultural products including related agricultural processing and warehousing. Agricultural production is clustered around US 101 through Santa Maria, the Salinas Valley, and south of Watsonville (*Figure 4.10*) and dependent on the route for distribution to the state and nation. Agricultural production in the central coast is projected to generate $6.5 billion in revenues per year. Major products from these areas include strawberries, lettuces, broccoli, and wine. Known to many as the "Salad Bowl of the World", the Salinas Valley is home to the number one vegetable-producing region in the nation (USDA National Agricultural Statisics Service, 2010). The area supplies 80 percent of the nation's lettuces and nearly the same percentage of artichokes. The agricultural industry supports 25 percent of employment on the central coast.

US 101 is also a corridor for military transport, spaceport, and national defense operations in the central coast and designated as a Strategic Highway Network facility. Vandenberg Air Force Base in Lompoc is home to the 30th Space Wing and the 14th Air Force and is Air Force Space Command's premier missile base. It is the only installation in the United States where operational intercontinental ballistic missiles and polar-orbiting space satellites are launched (*Figure 4.9*). US 101 also serves Camp Roberts, home of the California Army National Guard, army reserve and active component units that support Federal, State and community missions. Camp Roberts is located on the San Luis Obispo/Monterey county line east of US 101.

Figure 4.9: Vandenberg AFB

US 101 is identified as a Focus Route and High Emphasis Route within the Department's Interregional Transportation Strategic Plan. Caltrans' Statewide Goods Movement Strategy recommends these routes receive the highest priority for improvement. US 101 is also the only District 5 highway that is designated a through component of the Surface Transportation Assistance Act (STAA) National Network. Union Pacific Railroad's (UPRR) California coastal freight line parallels US 101 but does not conduct significant loading and unloading operations within the region, therefore, regional freight imports and exports travel by truck to their destination or to an intermodal facility elsewhere in California.

The *Salinas Valley Truck to Rail Intermodal Facility Feasibility Study* (2011) developed by AMBAG identifies possible sites for an inter-modal truck-to-rail terminal in Gonzales or Chualar. This truck-to-rail intermodal facility would be located adjacent to US 101 and support the movement of perishable agricultural products from this region and expand methods of truck shipping. This facility is intended to reduce the impacts of truck impacts on the air quality, roadway congestion, safety and quality of life in this region. Interchange improvements on US101 and the installation or improvement of frontage roads to facilitate the efficient movement of trucks into and out of the facility is anticipated. Caltrans supports additional freight planning to address interregional trucking needs including areas of truck congestion, access and parking. AMBAG, in partnership with Caltrans and the other MPOs and RTPAs in District 5, is developing the *US Highway 101 Central Coast California Freight Plan* which will further evaluate freight mobility, assess data collection opportunities, and identify short and long-term cost-effective strategies to improving freight movement and operations on the central coast. On US 101 within District 5 there are four roadside rest stops. Two are located in northbound and southbound directions approximately 8.5 miles north of San Miguel in Monterey County and two are located northbound and southbound near the Gaviota tunnel in Santa Barbara County. The roadside rest stops in Monterey County were recently rehabilitated. Rehabilitation of the Gaviota roadside rest stops is currently underway with plans to reopen these facilities to the public in February 2015. Ultimately it is desired to relocate these rest stops in the future as traveler demands currently exceed capacity.

Informal truck parking areas such as those located at Nojoqui Summit or the Refugio interchange in Santa Barbara or the Cuesta Grade in San Luis Obispo have been/are subject to permanent closure due to litter and human waste left onsite. Truck parking also creates tensions between communities and industry, which frequently result in complaints to Caltrans or other public agencies. Caltrans recognizes the need to evaluate existing and future truck parking needs in District 5 in order to facilitate goods movement as well as the general traveler's needs. Truck volumes are significant on the US 101 corridor and affect freight flows. In northern Monterey County, truck traffic averages over 18 percent, while in the Santa Maria region it ranges from 7.5-13.1 percent (a summary of truck traffic volumes can be found in Appendix H). The Central Valley is a major destination for agricultural processing, however there are limited east-west connections to US 101 for goods movement. They include state routes 46, 166, 156, and 152. These routes in addition to north-south routes SR 41 and SR 1 play an important role in delivering goods from the US 101 corridor to Interstate 5 as well as eastern parts of the state. It is recommended that connectivity between US 101 and I-5 be improved and that an intermodal truck to rail facility be explored.

As the central coast continues to evolve, it will be faced with the challenge of providing mobility for agriculture and defense within and across the region (Table 4.3). In addition, designated truck parking whether at safety roadside rest areas or elsewhere has been identified as an inadequate resource since at least 1995 through AMBAG's Regional Truck Study[1]. In order to accommodate the projected changes in demographics and goods movement needs, ongoing investment in these facilities will be required.

[1] In collaboration with Caltrans District 5, Association of Monterey Bay Area Governments, Santa Barbara County Association of Governments, San Luis Obispo Council of Governments and three regional RTPAs, the Central Coast California Commercial Flows Study was developed to identify the most important freight movement bottlenecks along the central coast, and to identify solutions for freight movement in the five counties of the central coast (Santa Barbara, San Luis Obispo, Monterey, San Benito and Santa Cruz). The study was completed in 2012 and identifies capital improvements and legislative priorities to meet freight movement challenges along the central coast.

Source: (Association of Monterey Bay Area Governments (AMBAG), 2012)

Figure 4.10: Crop Production Centers in District 5

Table 4.3: Freight Centers in District 5

Facility Type/Freight Generator	Location	Mode	Name	Major Commodity/ Industry	Comments/Issues
Agriculture	*Monterey County*	*Truck*	*Salinas Valley*	*Agriculture*	*Freight of agricultural products will continue to be a need as well as growing agricultural cooling, warehousing, intermodal/rail transportation and processing industry*
Agriculture	*Paso Robles*	*Truck*	*Paso Robles Wine Country*	*Agriculture*	-
Agriculture	*Santa Maria Valley*	*Truck*	*Santa Maria Valley*	*Agriculture*	*Freight of agricultural products will continue to be a need as well as growing agricultural cooling, warehousing, and processing industry*
Air Force Base	*Lompoc*	*Truck*	*Vandenberg Air force Base*	*Defense*	-
Army National Guard	*San Luis Obispo and Monterey*	*Truck*	*Camp Roberts*	*Defense*	-

TRANSPORTATION SYSTEM MANAGEMENT

Transportation Systems Management (TSM) refers to multimodal transportation strategies to maximize the efficiency, safety, and utility of existing and planned transportation infrastructure. These strategies are relatively low-cost and highly effective, focusing on improving transportation system performance (Institute of Transportation Engineers, 2008). This encompasses many activities such as incident management, traffic signal coordination, transit signal priority (TSP) and bus rapid transit (BRT), freight management, work zone management, special event management, road weather management, congestion pricing, managed lane, parking management, electronic toll collection and transit smart cards. Within District 5, the focus of TSM strategies is on managed lanes which include ramp metering and HOV lanes.

As identified in the Caltrans *Ramp Metering Development Plan* (2013), there are currently four ramp meters operating in District 5 at Garden Street and Carrillo Street in Santa Barbara, the US 101/SR 156/Prunedale interchange in Monterey County, and Spring Street in Paso Robles in San Luis Obispo County. Additional priority locations for ramp metering in District 5 on US 101 within the next 10 years include Patterson Avenue and SR 217 in Santa Barbara County, and Sanborn Road/Fairview Avenue and from Harris Road to Espinosa Road in Monterey County.

Within District 5 there are two projects under way to construct HOV lanes. The US 101 South Coast HOV lane project extends from Sycamore Creek in the city of Santa Barbara to Bailard Avenue in the City of Carpinteria and will add an HOV lane in each direction and is currently in the environmental analysis stage. This project will connect to the south with the US 101 HOV lane project currently under construction from Carpinteria to Mussel Shoals in Ventura. Ramp metering for the US 101 South Coast HOV lane project was considered was but ultimately determined not viable.

SLOCOG completed a BRT study in June 2013 that analyzed and prioritized BRT improvements within San Luis Obispo County. Pertaining to US 101, this includes new/improved park-and-ride lots in northern San Luis Obispo County and express bus service intended to improve regional transportation needs. The completed study can be referenced on the SLOCOG website for a comprehensive list of recommended improvements.

TRANSPORTATION DEMAND MANAGEMENT

Transportation Demand Management (TDM) is the application of strategies and policies to reduce overall travel demand on the transportation system and facilitate mobility options. It is necessary to propose new TDM programs and enhance existing programs, such as ridesharing programs, transit facilities, park-and-ride lots, and traveler information to reduce demand on US 101.

In District 5, ridesharing programs are largely managed through the Regional Transportation Planning Agencies (RTPAs) and Metropolitan Planning Organizations (MPOs). This includes *Traffic Solutions* in Santa Barbara County, *Rideshare in* San Luis Obispo County, *Commute Alternatives* in Monterey County and *Rideshare* in San Benito County. These organizations promote programs to conserve fuel, reduce air pollution and make it easier for commuters to reach their destination. These programs include: carpooling, vanpooling, emergency ride home, transportation choices program, and bicycle and transit events. Caltrans also often funds ridesharing programs during highway construction to mitigate traffic impacts in coordination with the RTPAs and MPOs. Transit facilities are commonly constructed and maintained by local and regional agencies. Park-and-ride lots can also be built and maintained by local, regional or state agencies.

INTELLIGENT TRANSPORTATION SYSTEMS

Intelligent Transportation Systems (ITS) include a range of diverse technologies which, when applied to a transportation system, can help improve safety, reduce congestion, enhance mobility, minimize environmental impacts, save energy, and promote economic productivity. ITS technologies are varied and include traffic signal controls, network surveillance, en-route traveler information systems, and transit management systems.

Traveler information in District 5 includes Changeable Message Signs (CMS) as well online real time traffic information programs. Changeable Message Signs provide advisory information to en-route motorists, including Amber Alerts, accidents, events, construction, estimated travel times and road closures. CMS signs can help reduce traffic delays by keeping motorists informed of road conditions and closures so they may alter their routes accordingly. Caltrans maintains permanent CMS signs and operates mobile CMS units. Along US 101 in District 5, Caltrans operates nine permanent CMS signs. A detailed inventory of ITS elements by segment can be found in Appendix D.2.

Caltrans provides online real time traffic information systems. In 2012, Caltrans launched QuickMap, an online service that provides real-time traffic and travel information throughout California to allow motorists to make better decisions about how to reach their travel destination. Information on QuickMap includes information from the Performance Measurement System (PeMS) and traffic conditions, incidents, lane closures, travel time and Amber Alerts as well as access to nearly 1,000 freeway cameras and 700 electronic message signs statewide. The QuickMap website and information on how to add the QuickMap application to your smart phone can be found at: http://quickmap.dot.ca.gov/. SBCAG also maintains an online real time traveler information website called SBRoads.com which provides resources for commuters and travelers in the Santa Barbara region. SLOCOG also has a “511” system in place and SCCRTC and TAMC are evaluating the feasibility of a “511” system. The “511” system is a nationally utilized program which provides online real time traffic information, commonly through websites and the telephone.

The *Central Coast ITS Implementation Plan* (2007) developed in partnership with stakeholder agencies from Santa Barbara, San Luis Obispo, Monterey, San Benito, and Santa Cruz counties included participation from Caltrans, CHP and FHWA identifies ITS goals for the Central Coast. The plan outlines needs and deficiencies and provides recommended projects on the central coast. These recommended projects are prioritized by short term (less than 5 years), medium term (5-10 years), and long-term (greater than 10 years) goals and possible

responsible agencies for these improvements are identified. ITS goals for US 101 include improved: network surveillance, freeway control (ramp metering), traffic information dissemination, incident management (motorist aid call boxes), advanced railroad grade crossings, road weather information systems, and radar speed enforcement. A complete list of project recommendations for US 101 can be found in Exhibit A-1 of the *Central Coast ITS Implementation Plan*.

SYSTEM MAINTENANCE AND PRESERVATION

As owner and operator of the State Highway System, Caltrans is responsible for maintaining and operating the existing state highway system. The system is monitored through periodic inspections, traffic studies, and system analysis which is used to develop the Ten-Year State Highway Operation and Protection Program Plan (SHOPP). The *Caltrans Ten-Year SHOPP* (2013) identifies the constrained need for the rehabilitation and operation of the system from the period between FY 2014-2015 through FY 2023-2024. The next update to the Caltrans Ten-Year SHOPP is scheduled for March 2015. The eight categories that make up the SHOPP program include: major damage restoration, collision reduction, legal and regulatory mandates, mobility improvements, bridge preservation, roadway preservation, roadside preservation, and facility improvement. The 2013 Ten-Year SHOPP estimates that $2 billion per year will be available to address annual statewide needs. This covers only 25 percent of the total need for the State Highway System on an annual basis. Caltrans nominates the highest priority projects to compete statewide for programming.

Two examples of work funded through the SHOPP program include pavement restoration and landscape maintenance. In District 5, Caltrans maintains 3,174 lane miles and more than a third of these lane miles (1,102) are from US 101. According to the *2013 State of the Pavement Report* (California Department of Transportation, 2013). In District 5, 49 percent of the lane miles are in good/excellent condition, 24 percent of the lane miles are in minor pavement distress, and 27 percent range between poor ride, minor structural distress, and major structural distress. These percentages in District 5 are proportional to statewide pavement conditions. Caltrans also maintains landscaping adjacent to the highway and in highway medians. With limited resources, maintaining landscaping to a standard that is expected by the public and local jurisdictions is a challenge. Caltrans supports landscaping strategies that utilize native species and promotes safety by reducing the amount of time maintenance workers are exposed to the traffic for roadside maintenance.

Caltrans will continue to maintain the State Highway System in an equitable manner statewide and encourage policy decisions that will garner additional funding for maintenance needs. This includes maintenance and operational improvements designed to get full return on system investments, as well as to maintain safety and reduce traveler costs and delay. However, the long-term issue remains that the needs are growing faster than the revenues available. The source of funding for the SHOPP is the State Highway Account, funded primarily through state and federal excise taxes on gasoline and diesel fuel.

CHAPTER 5: CORRIDOR PERFORMANCE AND CONCEPT

Corridor Performance:

The corridor performance analysis section of this plan evaluates projected existing and future demand on the US 101 mainline in District 5. The purpose of this analysis is to serve as a tool to inform existing and future deficiency areas. It is anticipated through continuing, cooperative and comprehensive planning with our regional and local partner agencies and planning efforts, this will serve as a technical tool that might aid in decision making.

The TCR analysis was largely possible through data provided by our regional partners. SBCAG's approved August 2013 RTP-SCS and supporting regional travel demand model was used for Santa Barbara County analysis (segments 2 & 3) and the 2035 AMBAG MTP-SCS and supporting regional travel demand model was used for the Monterey and San Benito County analysis in this document (segments 7-10). Caltrans historical data was used for San Luis Obispo County segments (segments 4-6) since completion of this TCR will predate board adoption of the SLOCOG RTP-SCS planned for spring 2015. This data facilitated the evaluation of PM peak hour projected volumes for a 2010 base year and 2035 horizon year through a Volume/Capacity analysis. Segment 1 data is based on the 2008 and 2009 US 101 South Coast HOV traffic studies and has a 2008 base year and 2040 horizon year. More detail about the data and technical methodology can be found in Appendix I.

Access management influences corridor performance and the ability to optimize travel times and improve safety for the public. Limiting the traffic movements onto US 101 will contribute to reduced wait times and potential incident conflicts for travelers. In order to facilitate improved service, interagency coordination is needed to facilitate local and parallel route development that can serve to provide alternative travel options. Over time this would allow for closure of at-grade access locations and ultimately freeway conversion. This long standing perspective is supported by freeway agreements between Caltrans and local jurisdictions (see Appendix E for comprehensive list of US 101 Freeway Agreements) and reflected in the 2013 Interregional Transportation Strategic Plan. The goal is to manage the system to better accommodate interregional and local traveler needs. An inventory of existing expressway and conventional portions of the route that contain at-grade intersections with and without median access are identified by segment in this chapter.

The following information is evaluated in greater detail in this chapter for each segment:

- System Characteristics identifies if a route is a Freeway, Expressway or Conventional Highway and the number of lanes it features. More detailed information is available in Appendix D.
- System Operation is evaluated through regional traffic models, Caltrans historic data, and the South Coast 101 HOV Traffic Study for Segment 1. In segments 2 through 10, the base year Annual Average Daily Traffic is based on Caltrans historical data and horizon year AADT projections were based on regional traffic model data. The one exception is for segments 4 and 5 in San Luis Obispo County where AADT data is based on Caltrans historic trends for the horizon year since the regional traffic model is currently being updated. More information about is available in Appendix I: Corridor Performance Modeling Methodology and Assumptions.
- Peak Hour analysis evaluated congestion during the PM Peak period as congestion is typically higher than during the AM Peak period. It is important to note that in locations where congestion levels are projected to be high in the PM peak hour, it is common that these same locations will have similar congestion levels during AM peak hour in the opposite direction of traffic.

Additional information about the technical methodology can be found in Appendix I.

Corridor Concept:

Why?

A corridor concept is based on projected future need and preserves transportation options for the corridor into the future. It is a statewide standard for all TCRs to have a concept, and it serves as the beacon to guide wise transportation decisions now and into the future. It is the intent that future plans and projects are evaluated for compatibility with this concept. Determining consistency with the concept is important not only for designing transportation improvement projects, but also for approving encroachments within the state right-of-way and considering the compatibility of local development proposals. Before implementation of any improvement, the cost/benefits and impacts of an improvement is thoroughly evaluated and disclosed through the project development environmental review process.

What?

The TCR corridor performance analysis and existing statewide policy influences the 2035 concepts and ultimate concept for US 101. These concepts reflect anticipated infrastructure needed to meet the projected demands of US 101. The scope of the corridor vision expands beyond the physical infrastructure of the route to include strategies to improve overall operations of the facility. Caltrans' vision and concepts for the US 101 corridor are outlined below.

US 101 Vision:

- Optimize system efficiency through improvements that encourage mode-shifts and a reduction of single occupancy vehicle travel. This includes:
    - Support for Transportation Demand Management strategies including vanpooling, ridesharing, new and improved park-and-ride lot facilities, increased efficiency and transitions between transit systems, online real time traffic information programs, and other commuter programs.
    - Implementation of Transportation System Management strategies including ramp metering, High Occupancy Vehicle lanes, Changeable Message Signs, and other Intelligent Transportation Systems features where appropriate.
- Increase opportunities for improved multimodal options and integration to and along US 101 through:
    - Transit, rail, and bicycle improvements.
    - Support for development of parallel road networks to provide alternative travel options.
- Improve safety and operations by managing access and reducing conflict points through continuing, cooperative, and comprehensive planning with local entities on parallel and local route development to enhance the transportation network.
- Provide for a sustainable transportation system through asset management and life-cycle cost considerations.
- Support reliable travel. Where demand exceeds capacity, options for expansion should remain viable.

US 101 Concept:

- The 2035 year concept is freeway with capacity of four to six lanes.
- The Ultimate Concept (beyond 2035) is freeway with capacity of up to six lanes.

These corridor concepts are supported by the future travel demand projected for US 101 by segment in this chapter. Even with implementation of the improvements identified in the corridor vision, in some areas, additional need for capacity is expected. Preserving existing infrastructure and designing future infrastructure to support the potential need for future increased capacity is the purpose of this concept. The following section provides a detailed picture of corridor demand by segment.

SEGMENT 1: SOUTH COAST SANTA BARBARA

VENTURA/SANTA BARBARA COUNTY LINE TO HOLLISTER AVENUE INTERCHANGE (PM 0.00/26.907)

Segment 1 extends from the Ventura/ Santa Barbara County line to Hollister Ave Interchange in Goleta. Traffic characteristics vary considerably along the segment from the Ventura County Line to the City of Santa Barbara. This ranges from low congestion in some areas to demand exceeding capacity in other locations. There are no parallel roadways to US 101 in this segment that can serve as a suitable alternative for goods movement and commuter trips. Express bus service serves passenger needs along the corridor daily. Rail service in this corridor is currently limited to interregional Amtrak Service at times that are not optimal for commuters. This segment is critical to interregional travel on the Central Coast.

System Characteristics

Segment 1 is 27.61 miles beginning at the Ventura/Santa Barbara County Line (PM 0.00) and concluding at the Hollister Avenue Interchange (PM 26.907) in Goleta. This segment operates as a 4- to 6-lane freeway. (*Figure 5.1.1*). More detailed information of system characteristics is found in Appendix D, Table D.2.

System Operations

The US 101 South Coast HOV Traffic Study shows 2008 Annual Average Daily Traffic (AADT) volumes range from 16,000 to 79,000 in the northbound direction and 14,000 to 72,000 in the southbound direction (Table 5.1.1). Caltrans Historical 2010 AADT volumes show AADT volumes range from 35,000 to 130,000. Caltrans Historic AADT data also indicates a steady increase in volumes between 1994 and 2010 (*Figure 5.1.2*). Volumes are expected to continue increasing to a range of 63,000 to 170,000 by 2040 according to the US 101 South Coast HOV Traffic Study.

PM Peak Hour Data

Within the 2008 base year, congestion is highest in the southbound direction between Cabrillo Boulevard and Evans Avenue where traffic demand exceeds capacity. High levels bordering this area include from Cabrillo Boulevard to Milpas Street, Evans to Linden Avenue and from Mission Street to La Cumbre. In the northbound direction congestion is high from Mission Street to Laguna Street (*Figure 5.1.4*).

Within the 2040 horizon year with completion of the US 101 South Coast HOV Lanes project, congestion is projected to improve to moderate levels between Cabrillo Boulevard and Evans Avenue in the southbound direction. Congestion south between Milpas Street to SR 154 and north between Los Caneros Road and Glen Annie Road is projected to be high (*Figure 5.1.4*).

While PM peak hour analysis was chosen to be the focus of study for US 101 throughout District 5 (as congestion is typically greatest in the PM peak district wide), it is important to note that AM peak congestion levels in the northbound direction for Segment 1 are overall greater than southbound PM peak congestion. A more detailed analysis of AM peak hour congestion as it relates to the US 101 South Coast HOV Lane project can be found in the SC 101 HOV Traffic Studies (2008 and 2009, amended 2011).

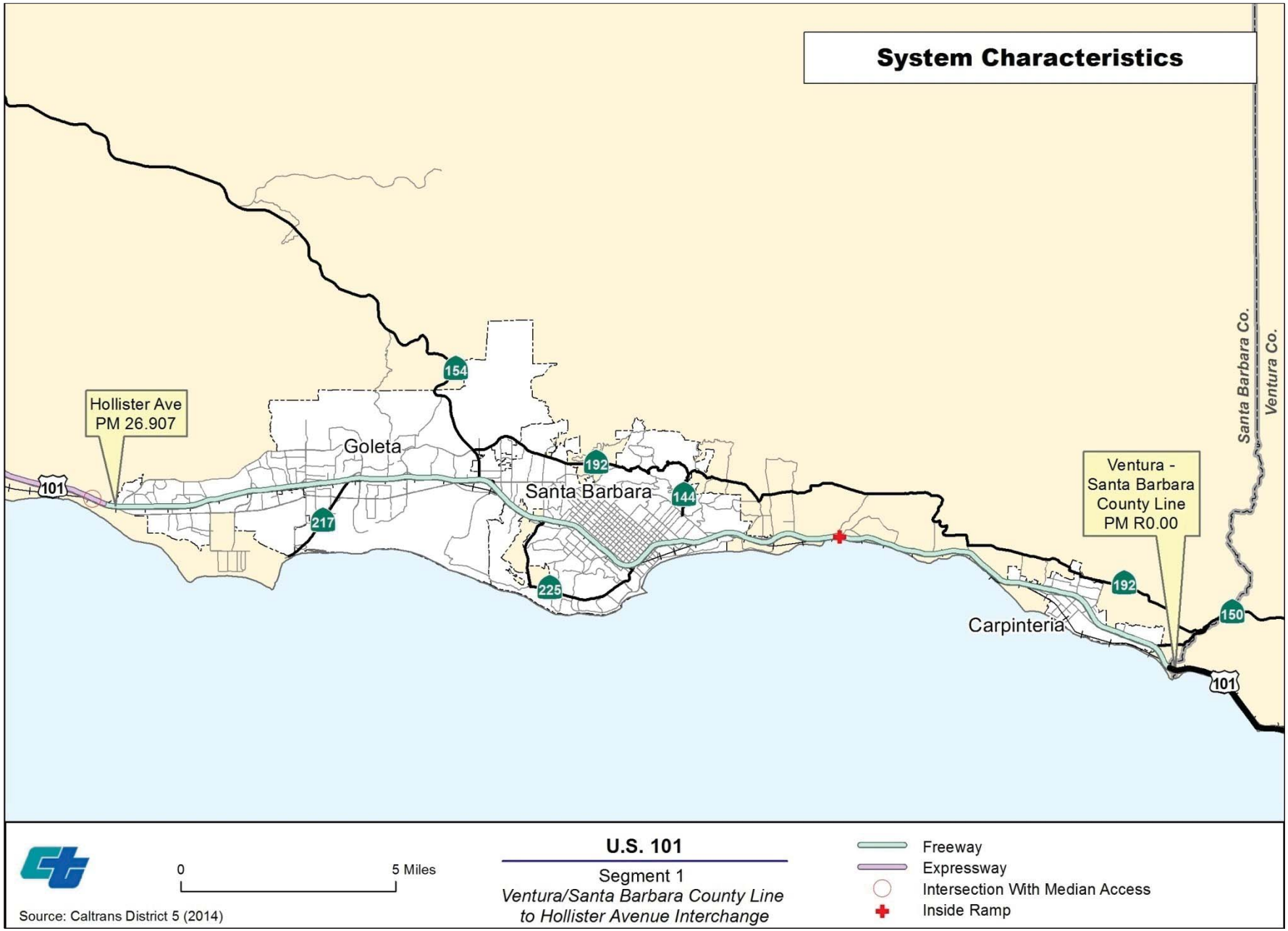

Figure 5.1.1: Segment 1- System Characteristics

Table 5.1.1: Segment 1-Daily System Operations

Daily System Operations		
Segment 1		
Direction	Northbound	Southbound
*AADT Base Year 2008	16,000-79,000	14,000-72,000
*AADT Horizon Year 2040	29,000-84,000	34,000-84,000
AADT: Growth Rate/Year	150-680	280-880
VMT Base Year 2008	N/A	N/A
VMT Horizon Year 2040	1,100,000	1,200,000
VHT Base Year 2008	13,000	13,000
VHT Horizon Year 2040	20,000	20,000
Daily Vehicle Hours of Delay (60-65 mph) Base Year 2008	1,300	1,100
Daily Vehicle Hours of Delay (60-65 mph) Horizon Year 2040	5,100	2,000
Daily VHD (60-65 mph) Method	FREQ	

**Data based on 2009 US 101 South Coast HOV Traffic Study.*

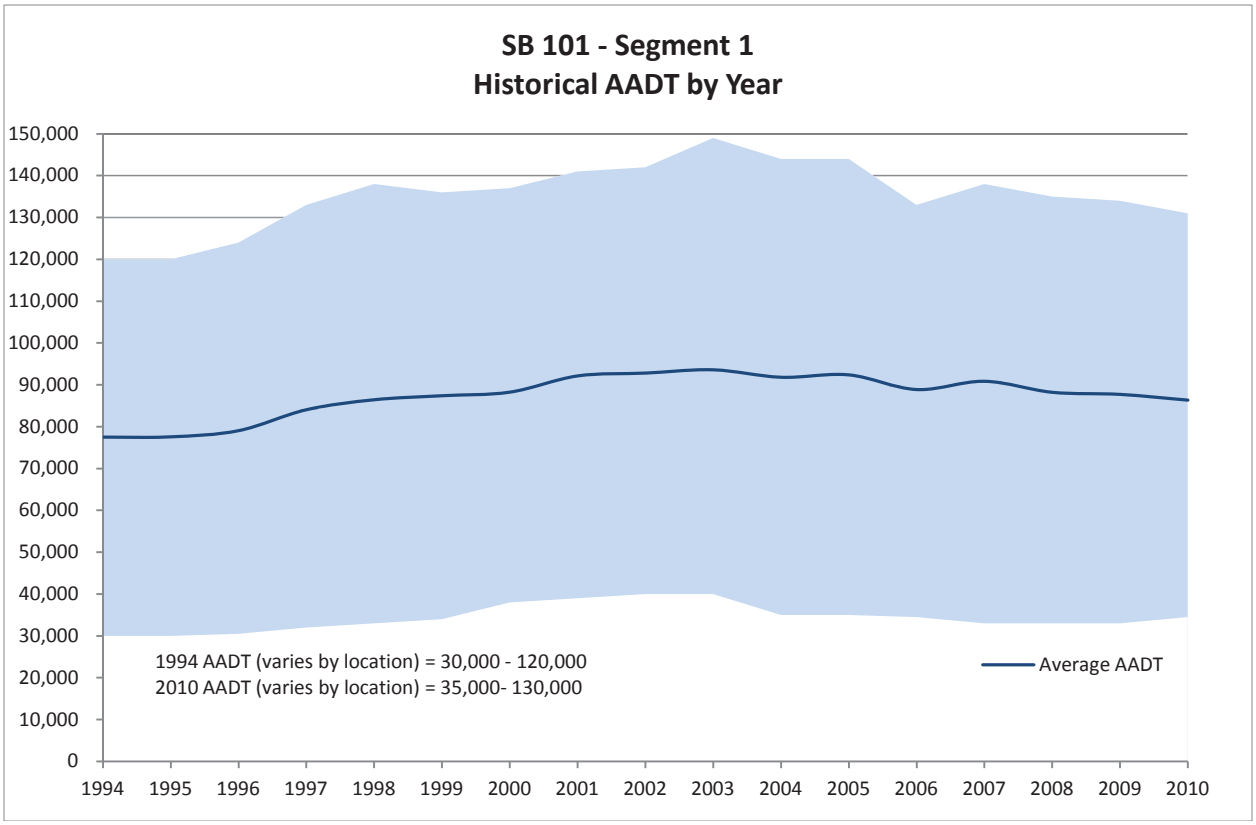

Figure 5.1.2: Segment 1-Historical AADT by Year

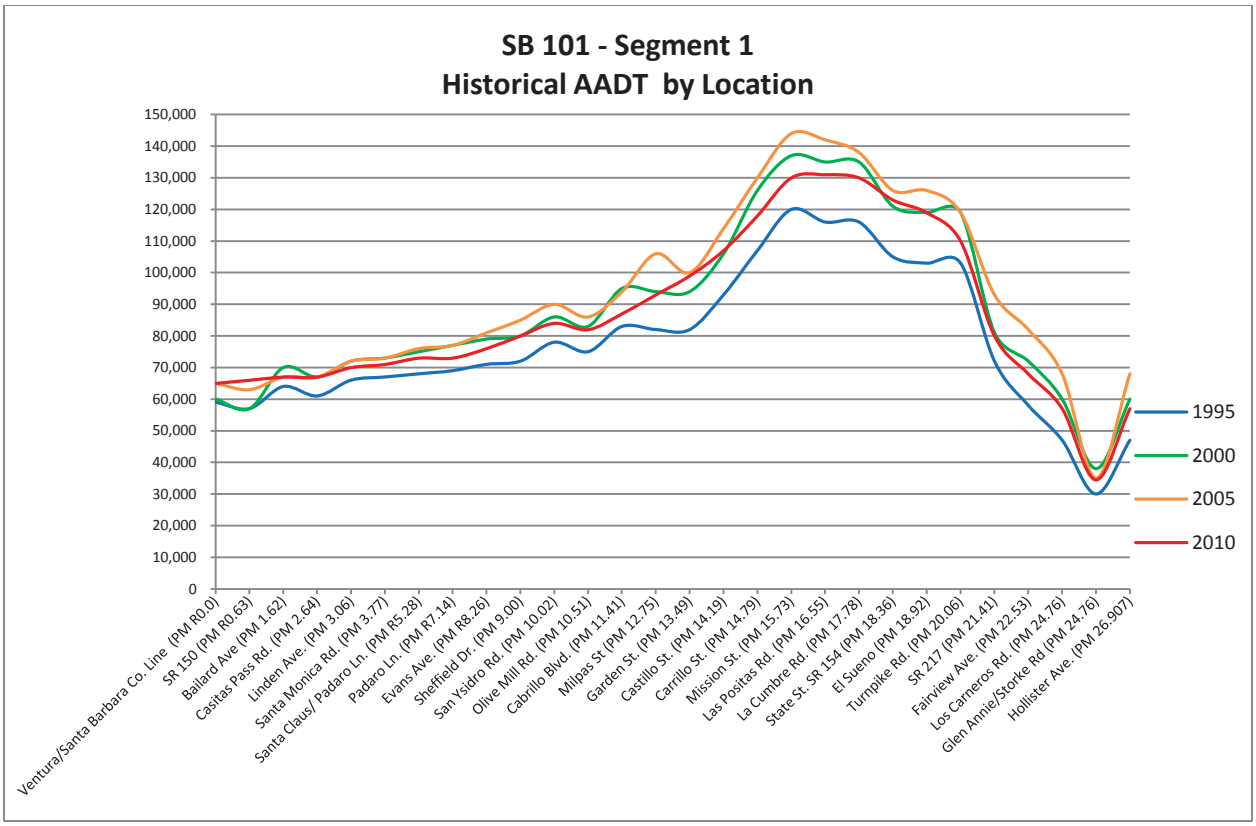

Figure 5.1.3: Segment 1-Historical AADT by Location

Table 5.1.2: Segment 1-Peak Hour Traffic Data

Peak Hour Traffic Data		
Segment 1		
Peak Hour Direction	Northbound	Southbound
*Peak Hour Length (Miles)	27	27
*Peak Hour Time of Day	5:00 p.m. - 6:00 p.m.	4:00 p.m. - 5:00 p.m.
Peak Hour Directional Split Base Year 2008	33/67-63/37	37/63-67/33
Peak Hour Directional Split Horizon Year 2040	41/59-61/39	39/61-59/41
*Peak Hour VMT Base Year 2008	81,000	103,000
*Peak Hour VMT Horizon Year 2040	111,000	135,000
*Peak Hour VHT Base Year 2008	1,600	2,100
*Peak Hour VHT Horizon Year 2040	3,400	2,100
Peak Hour V/C Base Year 2008	0.27-0.91	0.25-1.00
Peak Hour V/C Horizon Year 2040	0.51-1.00	0.35-1.00
*Peak Hour Avg. Speed (mph) Base Year 2008	53-56 mph	48-51 mph
*Peak Hour Avg. Speed (mph)Horizon Year 2040	32-33 mph	63 mph
Peak LOS Base Year 2008 (PM 0.0/27.7)	A-D	A-E
Peak LOS Horizon Year 2040(PM 0.0/27.7)	B-F	A-F
Peak LOS Method	FreQ	FreQ

**Data based on 2009 US 101 South Coast HOV Traffic Study.*

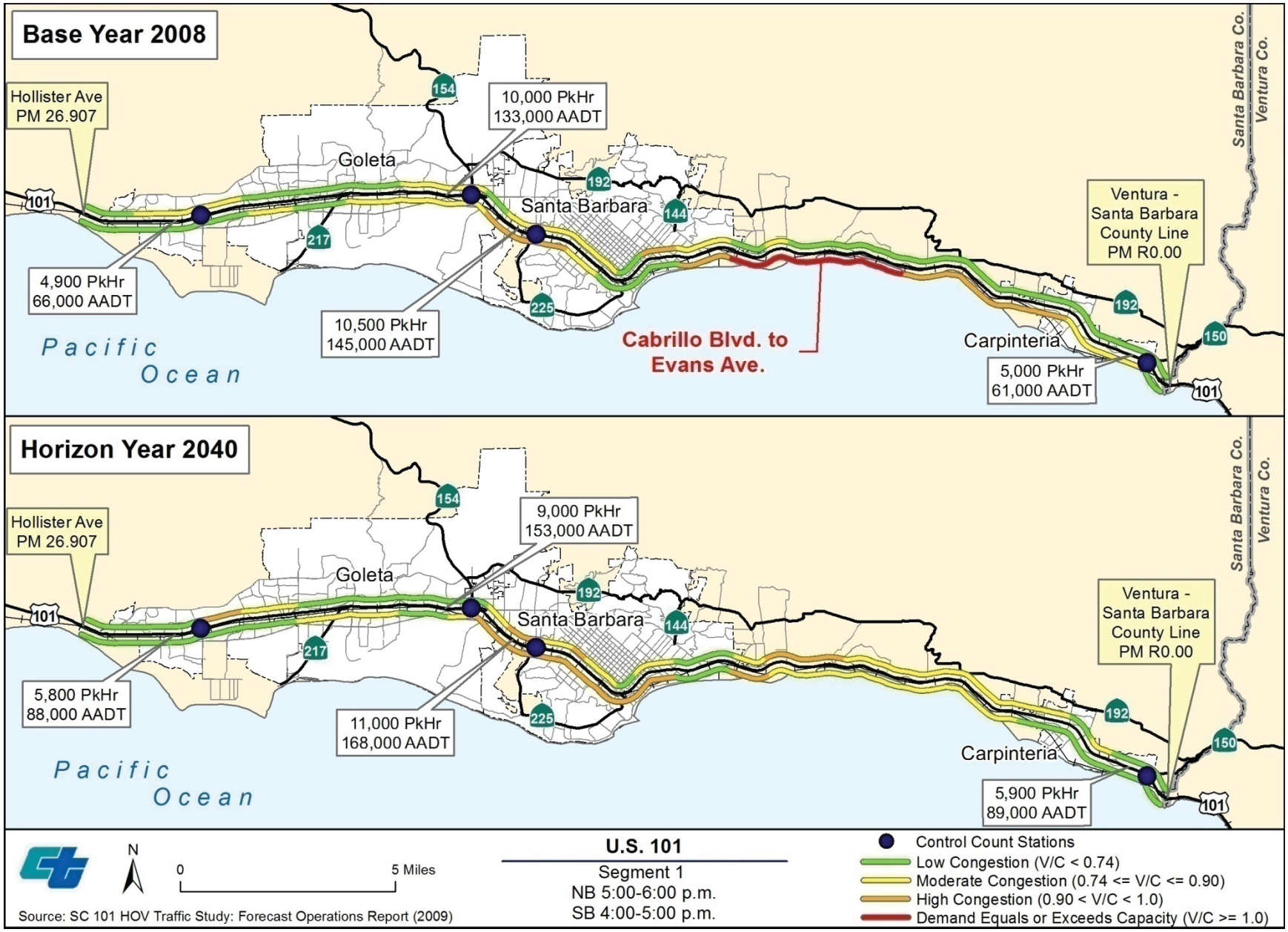

Figure 5.1.4: Segment 1-Base Year & Horizon Year Peak Hour Congestion

Segment 1 Corridor Performance Key Findings:

- Base Year (2008) Peak Hour Projections: Southbound congestion is projected to exceed capacity between Cabrillo Boulevard and Evans Avenue.

- Horizon Year (2040) Peak Hour Projections: With completion of the US 101 South Coast HOV project, congestion is projected to improve to moderate levels between Cabrillo Boulevard and Evans Avenue in the southbound direction. Congestion between Milpas Street and SR 154 and Los Caneros Road and Glen Annie Road is projected to be high.

- System Operations: Traffic volumes are expected to continue increasing to a range of 63,000 to 170,000 by 2040 according to the US 101 South Coast HOV Traffic Study.

**Note: The US 101 South Coast HOV Traffic Study analysis was used for the Segment 1 corridor performance analysis. This project level analysis is based on different data and assumptions than the 2013 SBCAG Regional Travel Demand Model and RTP-SCS planning level analysis.*

Segment 1 Corridor Concept (2035):

As identified in *101 in Motion* (Santa Barbara County Association of Governments, 2006), a six lane widening of US 101 in the South Coast with peak period passenger rail service is a recommended management concept for the corridor to facilitate travel from Ventura County to the South Coast. The Measure A Strategic Plan (Santa Barbara County Association of Governments, 2011) has identified funding and support for this improvement, in addition to carpool and vanpool services, enhanced transit services, ITS implementation, ramp metering, regional bicycle and pedestrian services, and local street transportation improvements. These types of improvements are consistent with SBCAG's 2013 RTP-SCS and will work together toward reducing demand on US 101 in the South Coast and are supported by Caltrans. Planned and programmed projects to improve operations in Segment 1 are in Appendix J. This segment is currently meeting the 2035 facility concept operating as a freeway with capacity from four to six lanes planned and partially programmed.

SEGMENT 2: GAVIOTA COAST AND SANTA YNEZ VALLEY

HOLLISTER AVENUE INTERCHANGE TO CLARK AVENUE INTERCHANGE (PM 26.907/82.183)

Segment 2 serves as a commuter route providing connection to SR 135, SR 154, SR 246 and SR 1. It provides ocean views, coastal access, and the only rest stops in the county for travelers located at the Gaviota tunnel.

System Characteristics

Segment 2 transitions between a freeway and expressway facility that extends for 55.05 miles of flat and mountainous terrain. It begins near the City of Goleta/City of Santa Barbara city limits at the Hollister Avenue Interchange (PM 26.907) crossing through Buellton and Los Alamos, and concluding in Orcutt at a northern limit of the Clark Ave Interchange (PM 82.183) (*Figure 5.2.1*). Segment 2 is a 4-lane freeway with truck climbing lanes on the Nojoqui Grade. There is also a small segment of three northbound lanes near the Refugio State Park. More detailed information of system characteristics is found in Appendix D, Table D.2.

System Operations

AADT growth per year between years 2010 and 2035 is expected to range between -130 and -20 vehicles (Table 5.2.1). The AADT range in 1994 was between 16,000 and 29,000. By 2010, AADT volume increased to 22,000 to 32,000 and is expected to continue to decrease by 2035 to a range of 19,000 to 31,000 (Table 5.2.1 and *Figure 5.2.2*). The highest AADT volume in 2010 is located between Hollister Ave interchange (PM 26.907) and El Capitan Beach State Park (PM 33.852) with an AADT of 32,000 (Figure 5.2.3).

Peak Hour Data

Within the base year, segment 2 vehicles experience moderate p.m. peak hour volumes in the northbound direction between El Capitan Beach State Park (PM 33.852) and SR 1 (PM R48.847) (*Figure 5.2.4*). Peak Hour ranges between 2,700 and 5,000 vehicles in the base year. Within the horizon year, peak hour northbound traffic volumes are expected to be moderate between El Capitan Beach State Park (PM 33.852) and south of the City of Buellton (PM R57.430) (*Figure 5.2.5*). In the 2035 horizon year, peak hour volumes will range between 2,900 and 5,200 vehicles (Table 5.2.2).

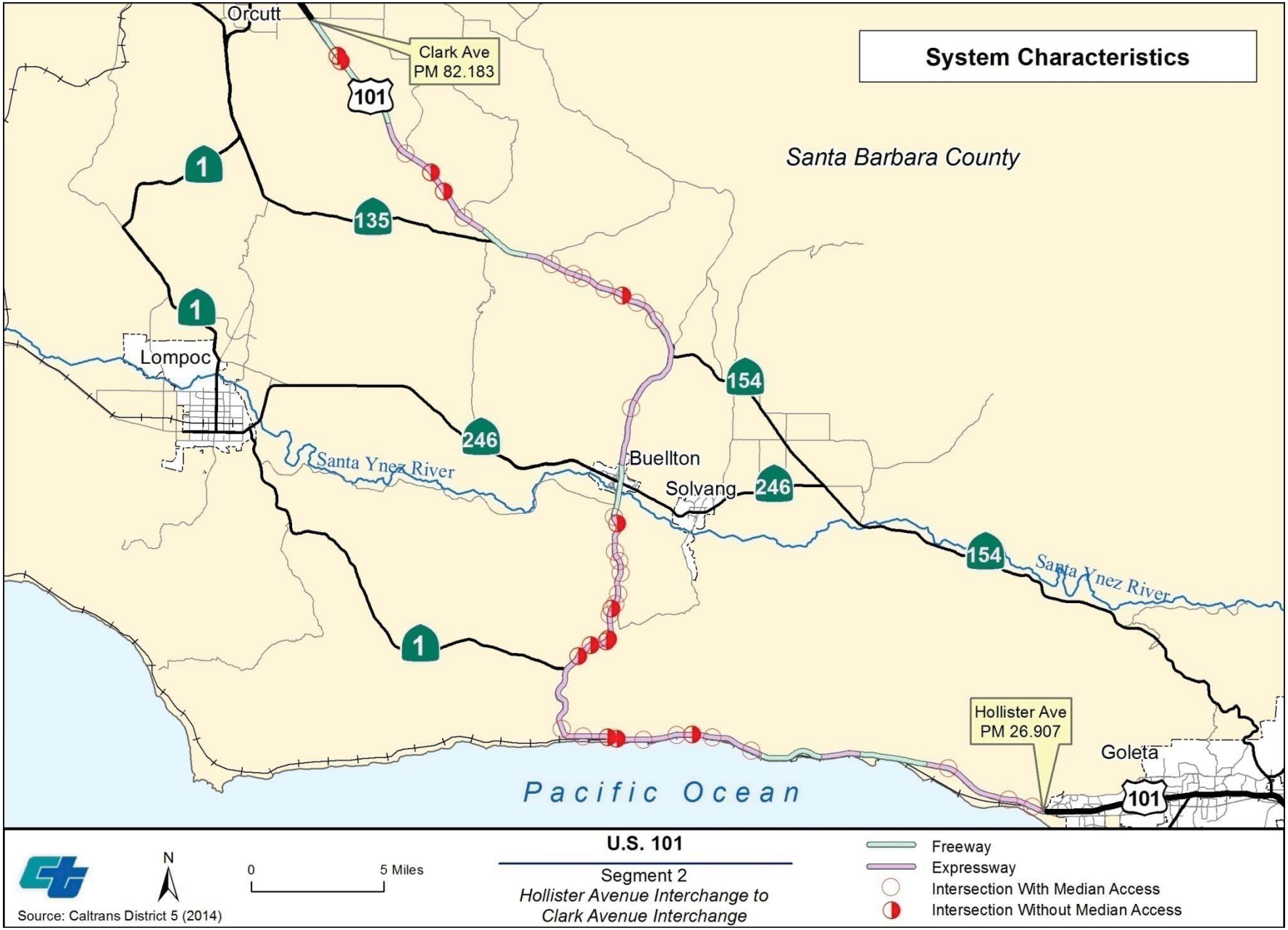

Figure 5.2.1: Segment 2-System Characteristics

Table 5.2.1: Segment 2-Daily System Operations

Daily System Operations	
Segment 2	
AADT Base Year 2010	22,000-32,000
AADT Horizon Year 2035	19,000-31,000
AADT: Growth Rate/Year	-130 to -20
VMT Base Year 2010	1,500,000
VMT Horizon Year 2035	1,400,000

**2010 base year is established by Caltrans historic data and 2035 horizon year projections are based on the SBCAG regional traffic model.*

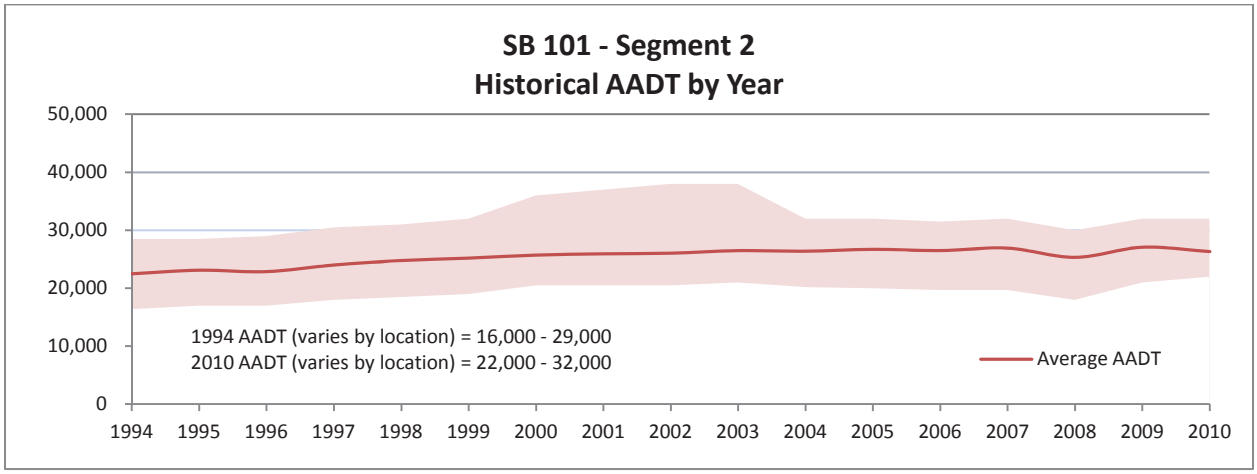

Figure 5.2.2: Segment 2-Historical AADT by Year

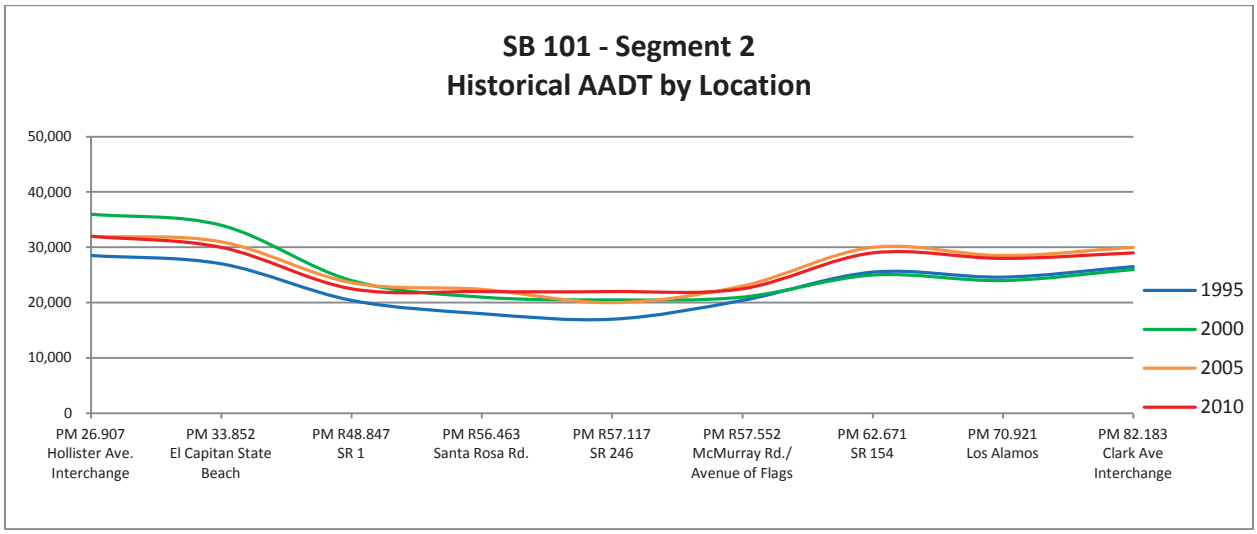

Figure 5.2.3: Segment 2-Historical AADT by Location

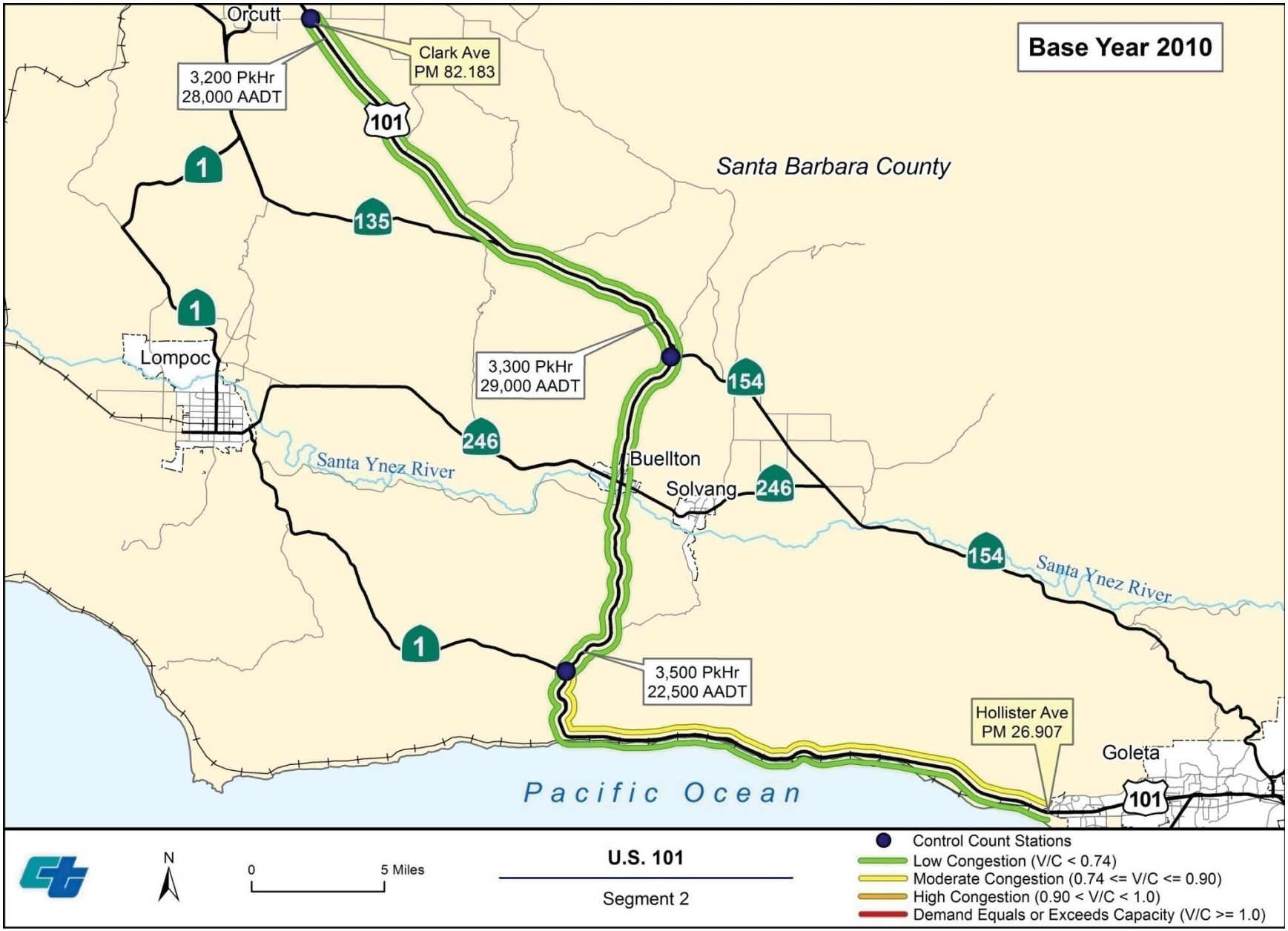

Figure 5.2.4: Segment 2-Base Year Peak Hour Congestion

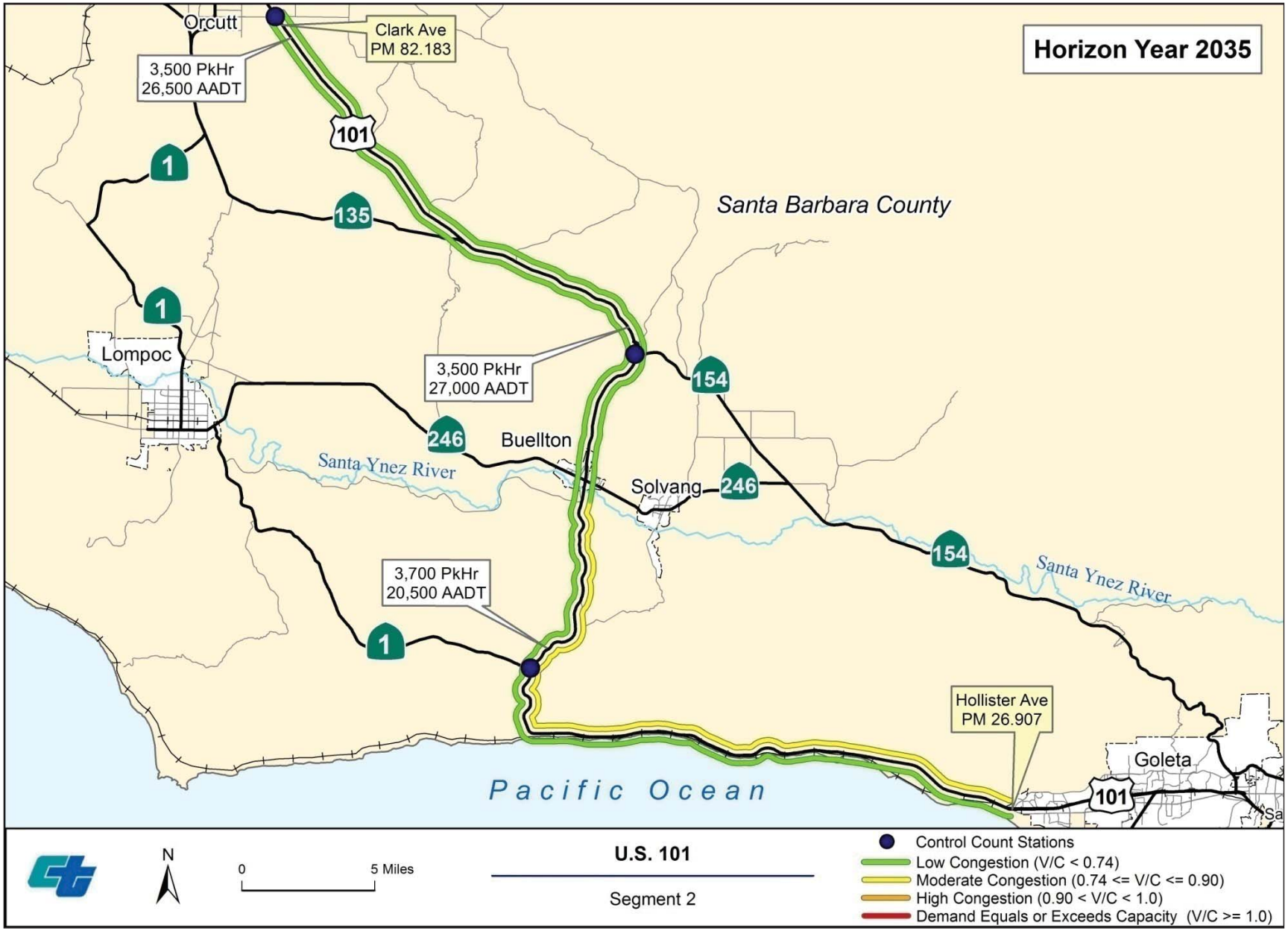

Figure 5.2.5: Segment 2-Horizon Year Peak Hour Congestion

Table 5.2.2: Segment 2-Peak Hour Traffic Data

Peak Hour Traffic Data		
Segment 2		
Peak Direction	Northbound: PM: 26.907/R57.117	
	Southbound: PM R57.117/82.183	
Peak Hour Length (Miles)	55.049 miles	
Peak Hour Volumes Base Year 2010	2,700-5,000	
Peak Hour Volumes Horizon Year 2035	2,900-5,200	
Peak Hour Directional Split Base Year 2010	42/58-66/34	
Peak Hour Directional Split Horizon Year 2035	46/54-67/33	
Peak Hour VMT Base Year 2010	Northbound: 118,500	Southbound: 94,900
Peak Hour VMT Horizon Year 2035	Northbound:130,700	Southbound: 94,100
Peak Hour VHT Base Year 2010	Northbound:1,900	Southbound: 1,600
Peak Hour VHT Horizon Year 2035	Northbound: 2,100	Southbound: 1,600
Peak Hour Growth Rate	4-11	
Peak Hour V/C Base Year 2010	Northbound: 0.27-0.86	Southbound: 0.34-0.64
Peak Hour V/C Horizon Year 2035	Northbound: 0.32-0.91	Southbound: .38-.63
Peak Hour LOS Base Year 2010	Northbound: A-D	Southbound: B-C
Peak Hour LOS Horizon Year 2035	Northbound: B-E	Southbound: B-C
Peak Hour Avg. Speed (mph) Base Year 2010	Northbound: 63-70 mph	Southbound: 69-70 mph
Peak Hour Avg. Speed (mph) Horizon Year 2035	Northbound: 61-70 mph*	Southbound: 69-70 mph
Peak Hour Capacity Per Lane	1,300 - 2,500	

**Speeds and VHT with LOS F are not reflected in the data due to unstable speeds.*

Segment 2 Corridor Performance Key Findings:

- Base Year (2010) Peak Hour Projections: Congestion levels are low throughout the segment with exception to the area between El Capitan Beach State Park interchange and SR 1 interchange which has moderate congestion levels in the northbound direction.

- Horizon Year (2035) Peak Hour Projections: Moderate congestion levels are projected between El Capitan Beach State Park interchange and the southern limits of the City of Buellton in the northbound direction. *Note: The SBCAG 2013 Regional Travel Demand Model based on growth projections identifies lower travel demand levels in the Gaviota Coast than what is presented in the TCR. 2010 traffic count data adjustments were made to these growth projections to result in the higher congestion level projections as shown in the TCR.*

- System Operations: A majority of Segment 2 operates as expressway with 41 at-grade intersections. Nine of these at-grade intersections are located between El Capitan State Beach Park interchange and SR 1 interchange where congestion is projected to be moderate in the base year and high by the horizon year.

Segment 2 Corridor Concept (2035):

Segment 2 is a 4-lane facility operating primarily as an expressway with portions of the route functioning as freeway near the City of Goleta, City of Buellton, and community of Los Alamos. The corridor performance analysis identified that by 2035 congestion is projected to reach moderate levels between El Capitan State Beach Park interchange and the southern limits of the City of Buellton in the northbound direction. This segment also contains multiple at-grade access points. Coordination with agency partners on local route development is encouraged to facilitate access management improvements. In order to help ensure that congestion levels will not be greater than projected, increased transit use and increased housing options on the South Coast in infill areas will be an essential component to demand reduction as identified in SBCAG's 2013 RTP-SCS.

The 2035 Corridor Concept also includes sustained mobility for bicyclists on US 101 through the Gaviota Coast, which serves as the Pacific Coast Bicycle Route for interregional bicycle travel. Promoting safety improvements like the flashing beacons that were recently installed at the Gaviota Tunnel and Arroyo Quemado Canyon Bridge and improvements such as future shoulder widening at the Arroyo Quemado Canyon Bridge is recommended to support bicycle travel.

Improved management of truck parking needs is also recommended within Segment 2. The Gaviota Roadside Rest Areas provide two of the four total roadside rest areas for US 101 in District 5. A project is currently under construction to make improvements to these rest areas but it is recommended that efforts be initiated for eventual relocation and expansion of these roadside rest areas in this segment to better accommodate interregional traveler and trucking needs. Other planned and programmed projects to improve operations in Segment 2 are in Appendix J.

SEGMENT 3: SANTA MARIA CITY

CLARK AVE INTERCHANGE TO SR 166 EAST INTERCHANGE (SB PM 82.183/ SLO PM 0.802)

Segment 3 serves the City of Santa Maria and as well as commuters from southern San Luis Obispo County and Santa Barbara County. It also serves regional and interregional travel and facilitates goods movement and military transport needs from the Central Valley to the coast by way of SR 166.

System Characteristics

Segment 3 begins to the south at the Clark Ave interchange (PM 82.183) passing north through the City of Santa Maria and across the Santa Maria River Bridge and the San Luis Obispo County line to SR 166 East (PM 0.802). Segment 3 is a 4-lane freeway starting at the Clark Ave interchange (PM 82.183) and ending at Santa Maria Way interchange (PM 84.336). US 101 was widened to a 6-lane freeway between Santa Maria Way interchange and SR 135 Broadway (PM 90.749) to meet traffic demand. The Santa Maria River Bridges Widening project that was recently completed extended the 6-lane widening from the SR 135 Broadway interchange (PM 90.749) to the SR 166 East interchange (PM 0.802). It also added a Class I bicycle and pedestrian path that connected the Santa Maria River Levee Trail from south of the river to Hutton Road, north of the river. There are eight full interchanges in Segment 3 (Table 4.3). More detailed information of system characteristics are in Appendix D, Table D.2.

System Operations

AADT growth per year between years 2010 and 2035 is expected to range between 380 and 880 (Table 5.3.1). In 1994, AADT volumes ranged from 32,000 to 53,000. In 2010, AADT volumes increased to a range of 37,000 to 65,000 (*Figure 5.3.2*). The highest AADT is located at the SR 135 Broadway interchange (PM 90.8) and SR 166 East interchange (PM 0.81) with 65,000 AADT (*Figure 5.3.3*).

Peak Hour Data

Congestion is projected to overall be low in the base year with some locations experiencing moderate congestion by the horizon year (*Figure 5.3.4*). The exception to this is near the county line north of the SR 135 interchange where congestion is anticipated to increase from moderate level in the base year to high levels and demand exceeding capacity in the horizon year. It is anticipated that this congestion is due to population growth and commuting between Santa Barbara and San Luis Obispo counties.

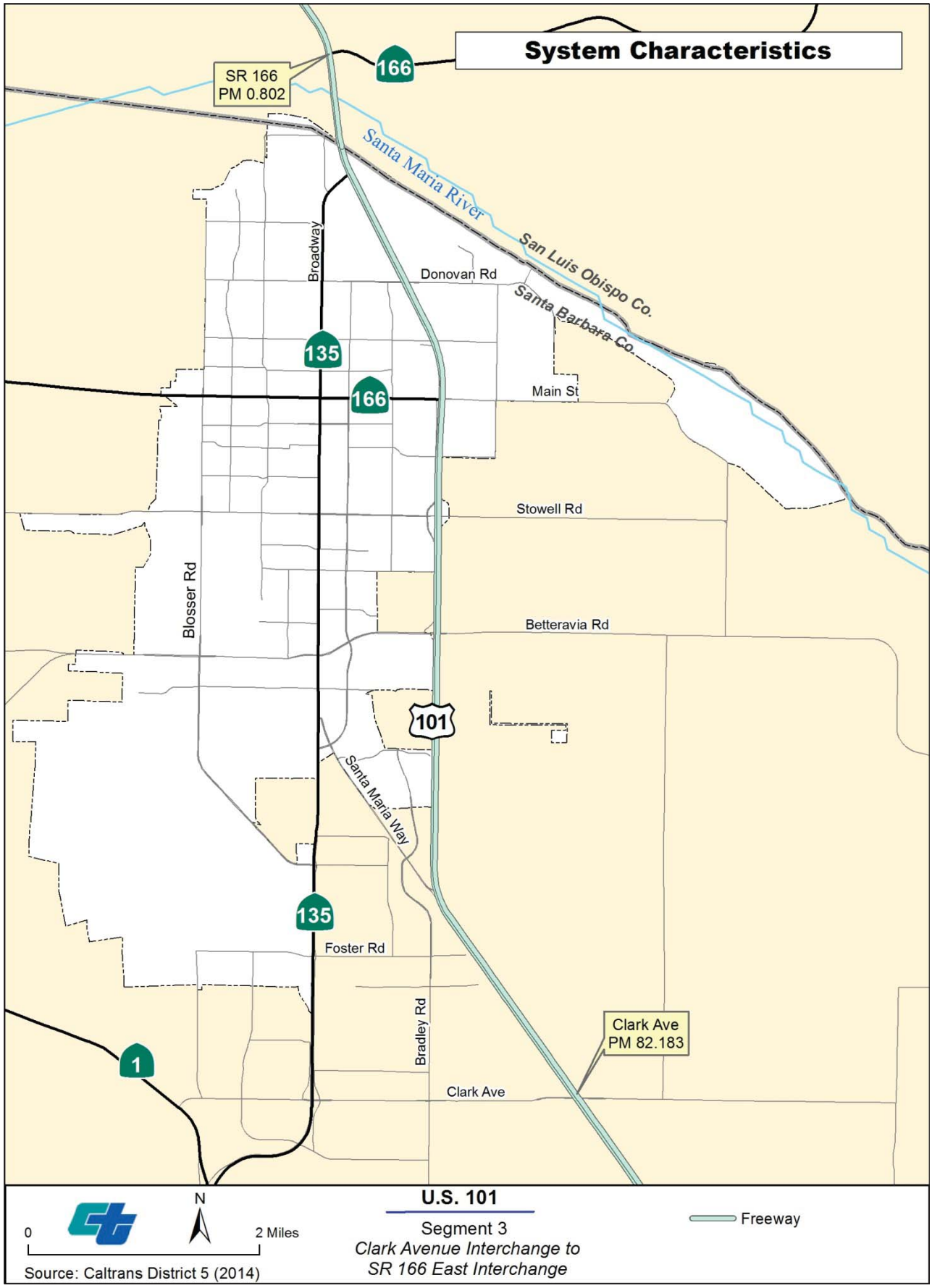

Figure 5.3.1: Segment 3- System Characteristics

Table 5.3.1: Segment 3-Daily System Operations

Daily System Operations	
Segment 3	
AADT Base Year 2010	37,000-65,000
AADT Horizon Year 2035	46,000-81,000
AADT: Growth Rate/Year	380-880
VMT Base Year 2010	475,000
VMT Horizon Year 2035	608,000

**2010 base year is established by Caltrans historic data and 2035 horizon year projections are based on the 2013 SBCAG regional traffic model.*

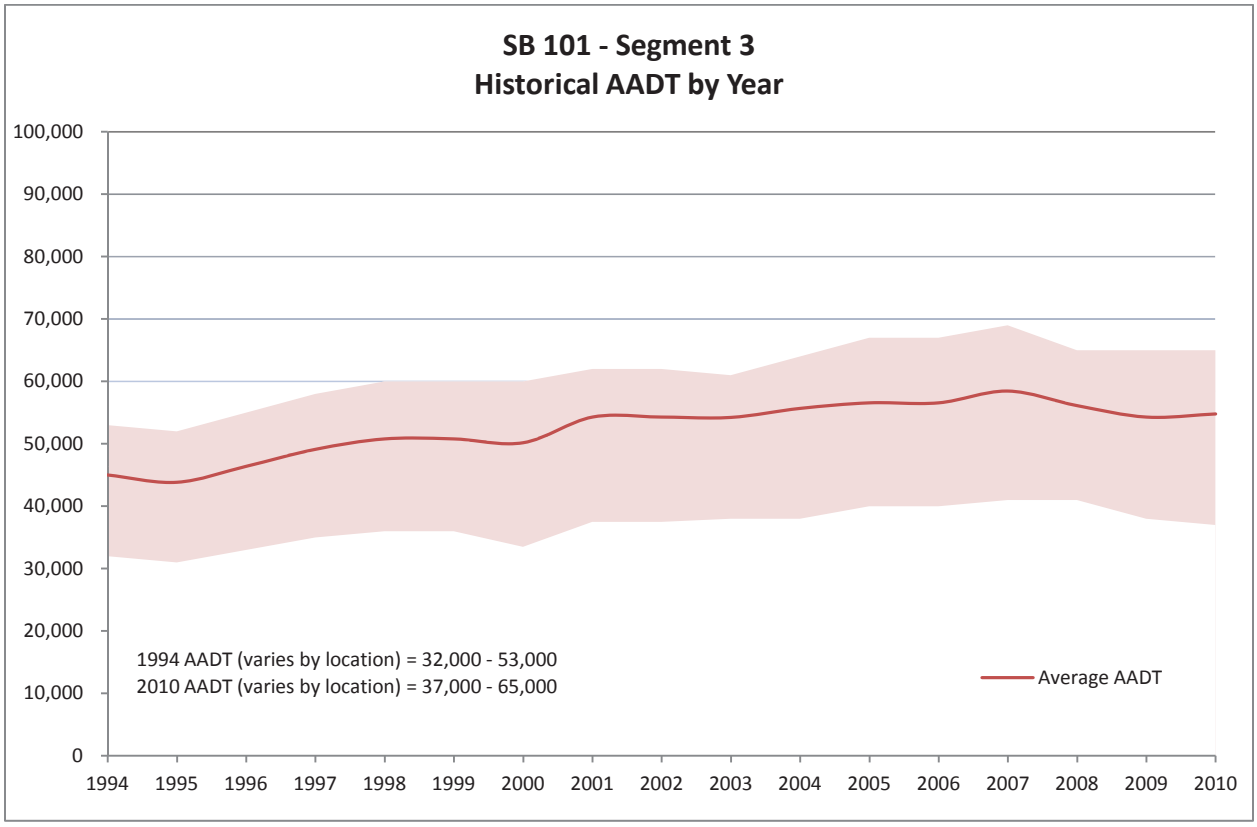

Figure 5.3.2: Segment 3-Historical AADT by Year

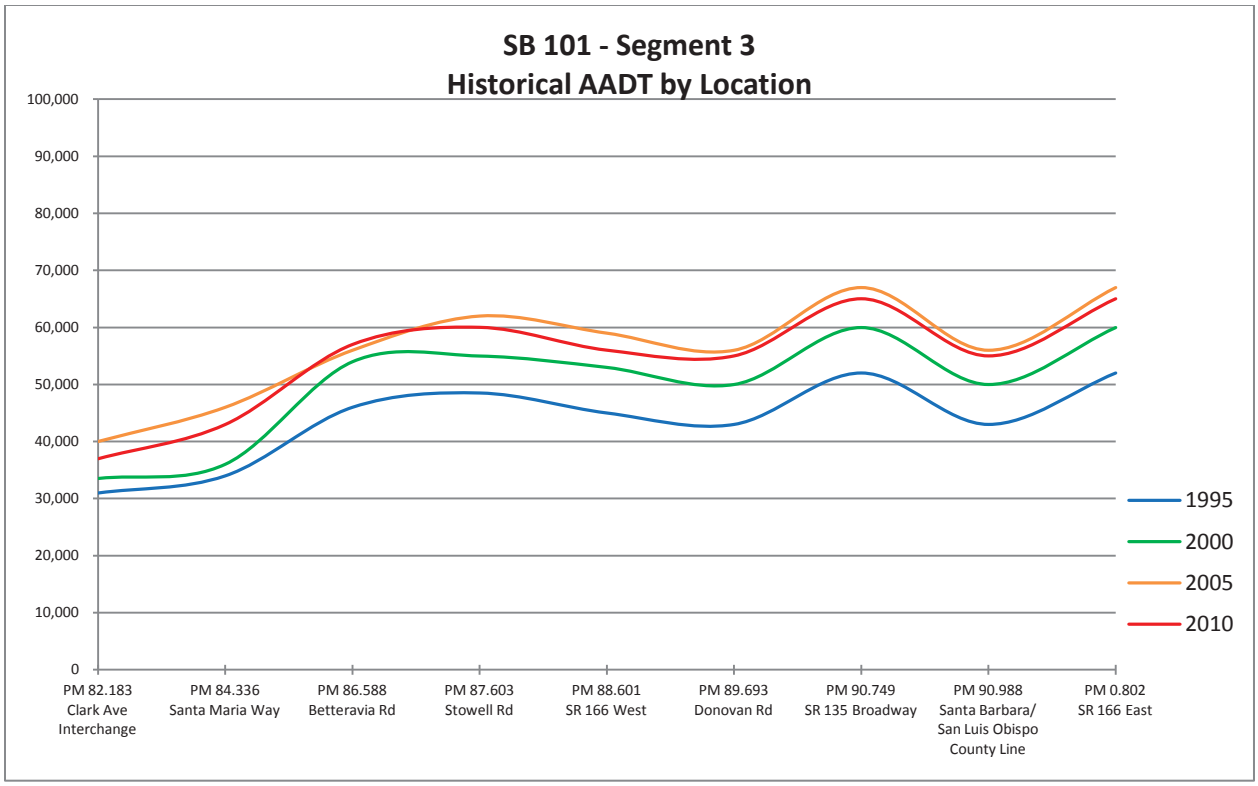

Figure 5.3.3: Segment 3-Historical AADT by Location

Table 5.3.2: Segment 3-Peak Hour Traffic Data

Peak Hour Traffic Data		
Segment 3		
Peak Hour Direction	Southbound: SB PM: 82.183/ 87.603, 89.693/SLO PM0.0	
	Northbound: SB PM: 87.603/90.749	
Peak Hour Length (Miles)	9.61 Miles	
Peak Hour Volumes Base Year 2010	4,100-6,700	
Pear Hour Volumes Horizon Year 2035	5,400-8,700	
Peak Hour Directional Split Base Year 2010	38/62-54/46	
Peak Hour Directional Split Horizon Year 2035	43/57-54/46	
Peak Hour VMT Base Year 2010	Northbound: 24,000	Southbound: 28,000
Peak Hour VMT Horizon Year 2035	Northbound: 33,000	Southbound: 35,000
Peak Hour VHT Base Year 2010	Northbound: 370	Southbound: 420
Peak Hour VHT Horizon Year 2035	Northbound: 510	Southbound: 540*
Peak Hour Growth Rate	51-103	
Peak Hour V/C Base Year 2010	Northbound: .29-.83	Southbound: .48-.85
Peak Hour V/C Horizon Year 2035	Northbound: .43-.99	Southbound: .57-1.03
Peak Hour LOS Base Year 2010	Northbound: A-D	Southbound: B-D
Peak Hour LOS Horizon Year 2035	Northbound: B-E	Southbound: C-F
Peak Hour Avg. Speed (mph) Base Year 2010	Northbound: 65-70 mph	Southbound: 61-70 mph
Peak Hour Avg. Speed (mph) Horizon Year 2035	Northbound: 53-70 mph	Southbound: 65-70 mph
Peak Hour Capacity Per Lane	1,900	

**Speeds and VHT with LOS F are not reflected in the data due to unstable speeds.*

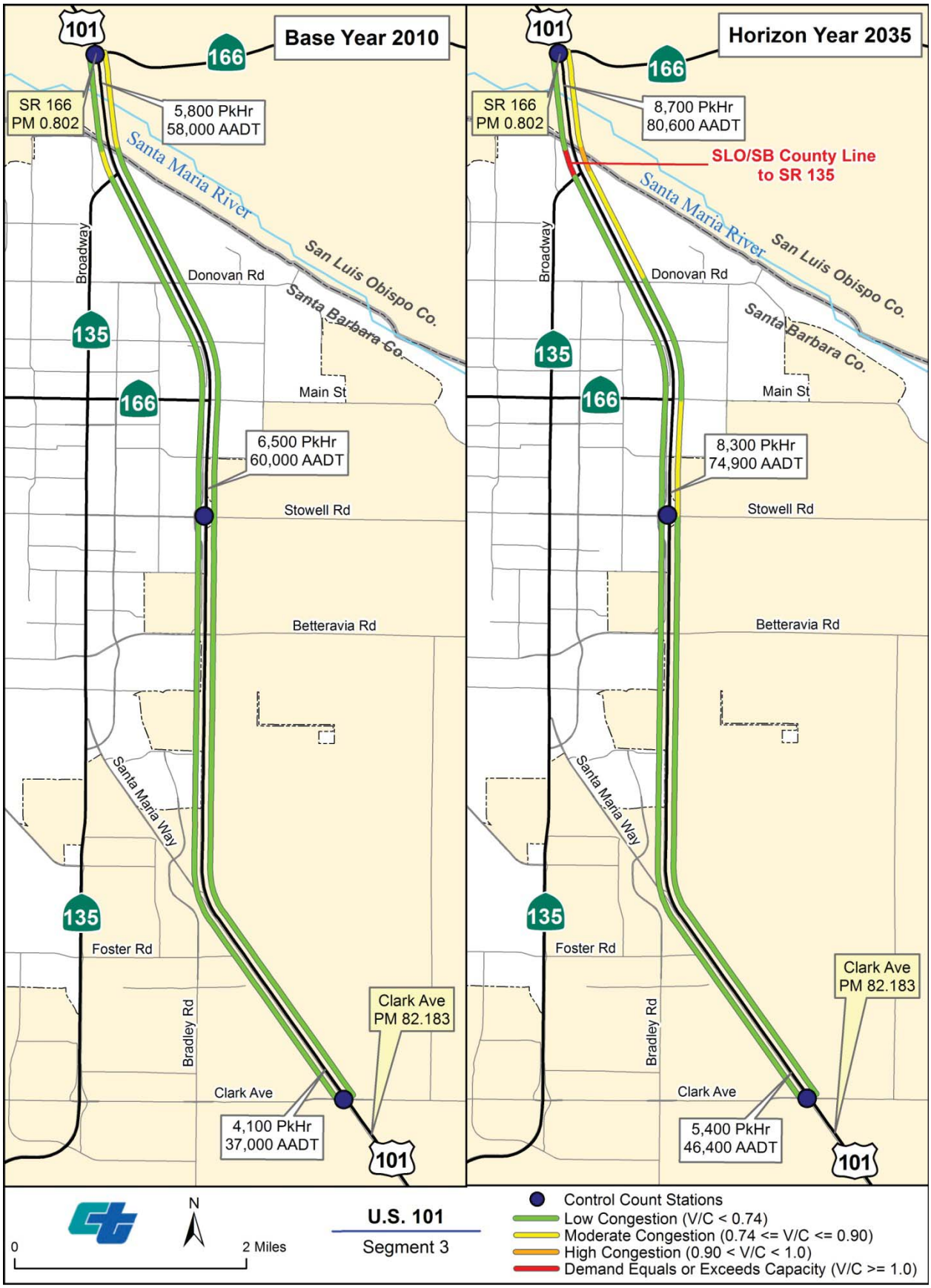

Figure 5.3.4: Segment 3-Base Year & Horizon Year Peak Hour Congestion

Segment 3 Corridor Performance Key Findings:

- Base Year (2010) Peak Hour Projections: Moderate congestion is projected between the SR 135 interchange and the Santa Maria River Bridge in the southbound direction and between the bridge and the SR 166 East interchange in the northbound direction. Otherwise, congestion is projected to be low.

- Horizon Year (2035) Peak Hour Projections: High congestion is projected between the SR 135 Interchange and the Santa Maria River Bridge in the northbound direction. In the southbound direction at this location, it is projected that demand will exceed capacity. This can likely be contributed to population growth projections and cross-county commuting trends. *Note: The SBCAG 2013 Regional Travel Demand Model based on growth projections identifies lower travel demand levels at the northern portion of this segment from SR 135 to the Santa Barbara/San Luis Obispo County line than what is presented in the TCR. 2010 traffic count data adjustments made to these growth projections result in the higher congestion level projections as shown in the TCR.*

- System Operations: The highest Historical AADT recorded occurs between SR 135 Broadway and the SR 166 East interchange at 65,000 AADT. This is supported by the horizon year projections. Operational improvements to manage the demand at this location should be further evaluated.

Segment 3 Corridor Concept (2035):

Segment 3 operates primarily as a 6-lane freeway with one 4-lane section between Clark Avenue and Santa Maria Way and therefore, currently meets the 2035 facility concept for US 101. Future development in Santa Barbara County is centered in the Santa Maria Valley within significant growth projected by the 2035 horizon year. Continued investment in system operational improvements including assessing ramp metering viability, interchange improvements and parallel route development will be vital to sustain mobility on US 101 within the 2035 horizon year. Two SR 135 interchange improvement projects are listed on the planned and programmed list in Appendix J. Other operational improvements strategies should be further evaluated at this location to address projected future demand. This includes support for a new park-and-ride lot near SR 101/135 to promote ridesharing as identified in SBCAG's *Park & Ride Lot Study* (Santa Barbara County Association of Governments, 2014).

Major arterial parallel route development to accommodate future growth is recommended and supported by the 2012 US 101 CSMP and 2011 Santa Maria General Plan Circulation Element. The Union Valley Parkway Interchange completed in Fall 2013 and US 101/McCoy and US 101/SR 135 interchange programmed improvements work towards achieving this goal. The viability of ramp metering through this segment is continually being monitored. Other planned and programmed projects to improve operations in Segment 3 can be found in Appendix J. Enhanced transit throughout this segment is also recommended to facilitate an integrated, sustainable and efficient transportation system. This is supported by SBCAG's 2013 RTP-SCS.

SEGMENT 4 : SOUTH SAN LUIS OBISPO COUNTY/FIVE CITIES

SR 166 EAST INTERCHANGE TO SOUTH HIGUERA ST INTERCHANGE (PM 0.802/R24.296)

Segment 4 connects and provides vital access to Arroyo Grande, Grover Beach, Oceano, Pismo Beach, Shell Beach, and Avila Beach. Local traffic is dependent upon the route in this portion of the corridor to make locally based and destined trips. This dependence on the corridor for local trips, multiple at-grade access points to US 101 on this portion of the corridor, as well as the corridor serving interregional travel, has impacted mobility through the corridor.

System Characteristics

Segment 4 is approximately 23.5 miles starting in the southern limit at SR 166 East interchange (PM 0.802) and concludes in the northern limit at the South Higuera Street interchange (PM R24.296). Throughout Segment 4, US 101 is a 4-lane freeway starting at the SR 166 East interchange and continuing through the community of Nipomo, where it transitions to an expressway from Los Berros Road (PM 7.851) to Traffic Way (PM 12.521). US 101 continues as a 4-lane freeway with auxiliary lanes through the Five Cities Area and Shell Beach including a southbound truck climbing lane at Avila Beach Drive (PM R21.105). Segment 4 contains seven at-grade intersections north of Nipomo between Los Berros Road and Traffic Way (*Figure 5.4.1*). More detailed information of system characteristics is in Appendix D, Table D.2.

System Operations

AADT growth per year between years 2010 and 2035 is expected to range between 510 and 1,400. In 1994, AADT ranged from 41,000 to 59,000. In 2010, AADT volumes increased from 49,000 to 68,000 and AADT is expected to grow to a range of 62,000 to 97,000 by 2035 (Table 5.4.1 and *Figure 5.4.2*). The highest AADT in 2010 is located in the urban areas of Segment 4 around Oak Park Boulevard (PM 14.613), 4th Street (PM 15.579), Spyglass (PM R19.812), and San Luis Bay Drive (PM R22.289) with AADT ranging from 66,000 to 68,000 (*Figure 5.4.3*).

Peak Hour Data

Within the base year, vehicles currently experience high peak hour volumes in both the southbound and northbound directions. In the 2010 base year, traffic demand exceeds capacity in the northbound direction from the Oak Park Road interchange to SR 1 and in the southbound direction from the South Higuera Street interchange to SR 1, Oak Park Road interchange to Halcyon Road interchange, and Traffic Way to the Los Berros Road interchange (*Figure 5.4.4*). By 2035, traffic demand exceeds capacity in the northbound direction between the Oak Park Road interchange to San Luis Bay Drive interchange. In the southbound direction, traffic demand is anticipated to exceed capacity between the South Higuera Street interchange the Avila Beach Drive interchange, Spy Glass Drive interchange to SR 1, the Five Cities Drive interchange to the Oak Park Blvd interchange, and the Traffic Way interchange to the SR 166 East interchange. The remainder of the corridor in both directions will have moderate to high congestion in the 2035 horizon year except from Tefft Street to Los Berros Road in the northbound direction, which will maintain low congestion conditions (*Figure 5.4.5*).

Figure 5.4.1: Segment 4-System Characteristics

Table 5.4.1: Segment 4-Daily System Operations

Daily System Operations	
Segment 4	
AADT Base Year 2010	49,000-68,000
AADT Horizon Year 2035	62,000-97,000
AADT: Growth Rate/Year	510-1,400
VMT Base Year 2010	1,400,000
VMT Horizon Year 2035	1,800,000

**2010 base and 2035 horizon year data is based on Caltrans historic data. Data from updated regional travel demand model and RTP-SCS planned for completion spring 2015 will be appended in US 101 Corridor Data Sheets*

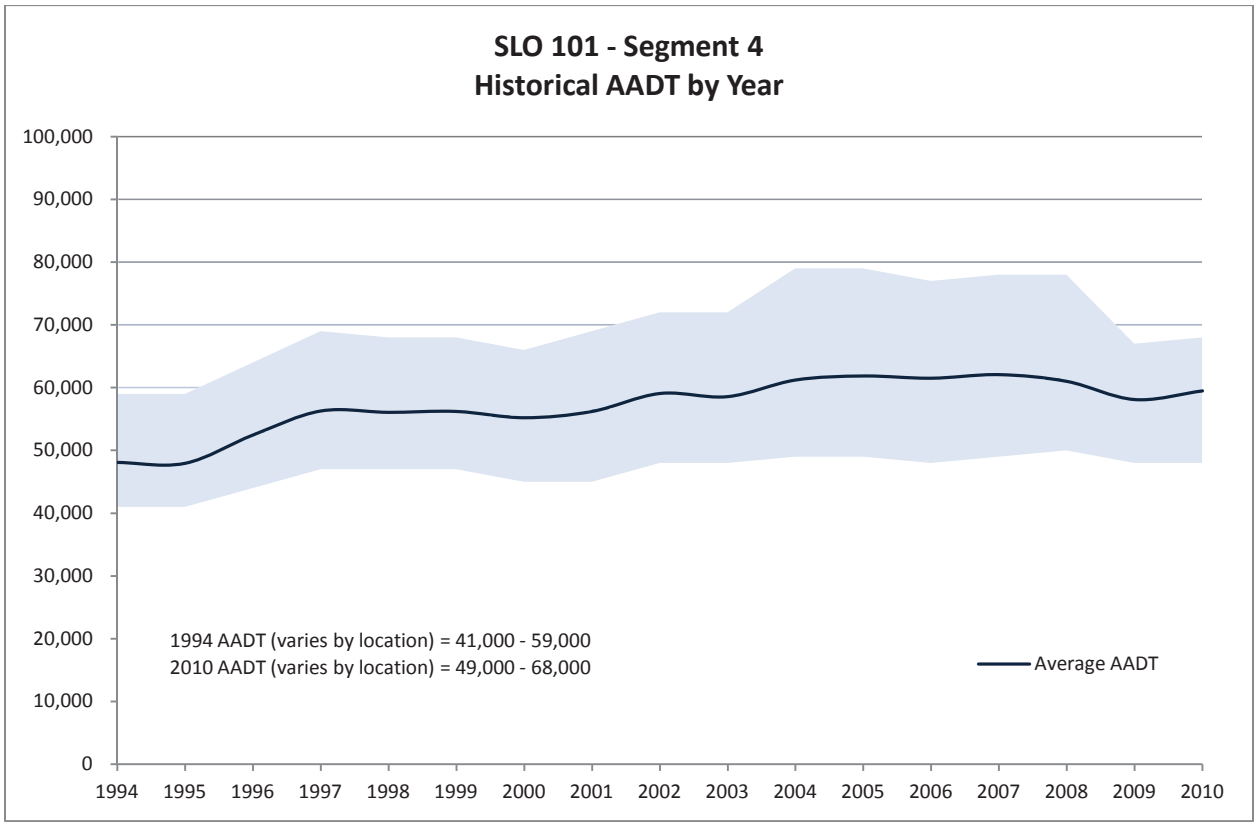

Figure 5.4.2: Segment 4-Historical AADT by Year

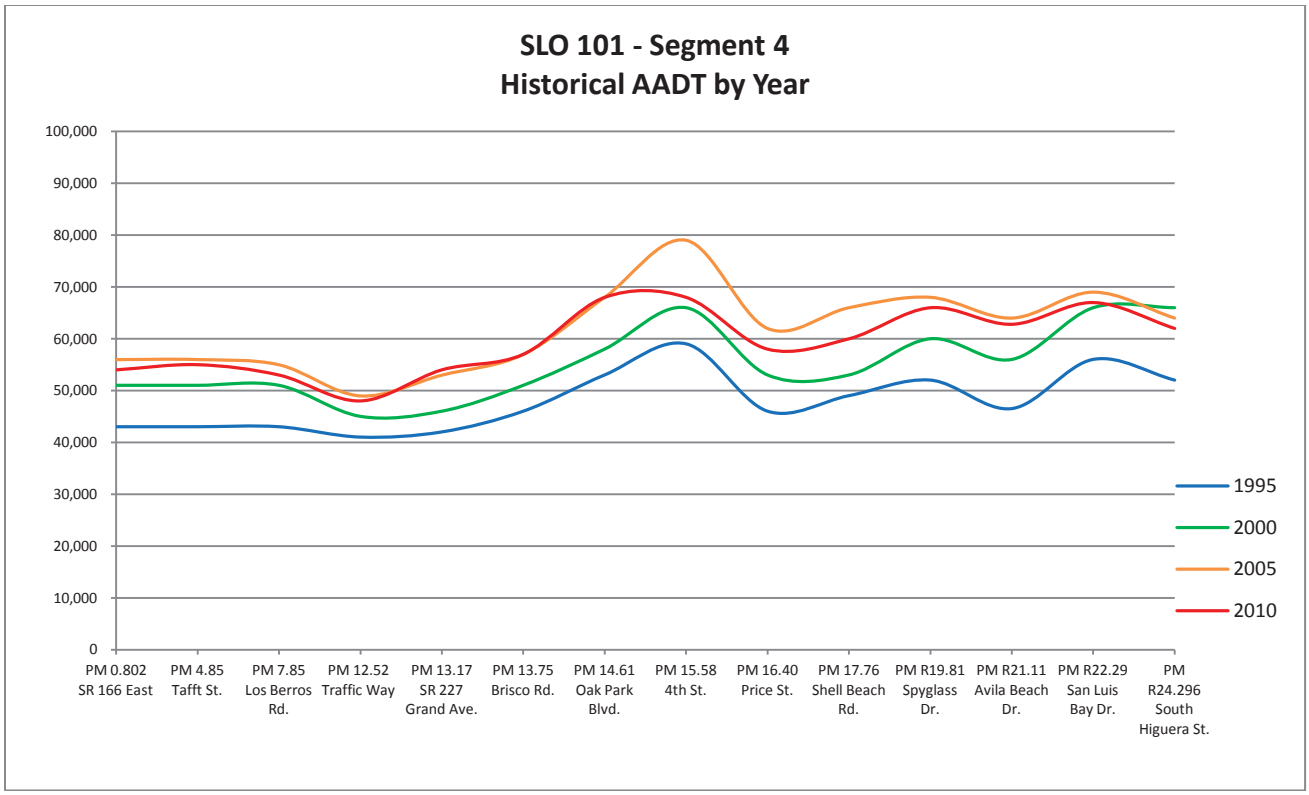

Figure 5.4.3: Segment 4-Historical AADT by Location

Table 5.4.2: Segment 4-Peak Hour Traffic Data

Peak Hour Traffic Data		
Segment 4		
Peak Direction	Southbound: PM 14.613/.802, PM R24.296/17.756	
	Northbound: PM 14.613/17.756	
Peak Hour Length (Miles)	23.5 Miles	
Peak Hour Volumes Base year 2010	5,300-8,600	
Peak Hour Volumes Horizon Year 2035	6,300-12,000	
Peak Hour Directional Split Base year 2010	40/60 - 60/40	
Peak Hour Directional Split Horizon Year 2035	40/60 - 60/40	
Peak Hour VMT Base year 2010	Southbound: 88,000	Northbound: 66,000
Peak Hour VMT Horizon Year 2035	Southbound: 120,000	Northbound: 88,000
Peak Hour VHT Base year 2010	Southbound: 620*	Northbound: 780*
Peak Hour VHT Horizon Year 2035	Southbound:620*	Northbound: 780*
Peak Hour Growth Rate	34-163	
Peak Hour V/C Base year 2010	Southbound: 0.63-1.00	Northbound: 0.58-1.00
Peak Hour V/C Horizon Year 2035	Southbound: 0.84-1.48	Northbound: 0.70-1.37
Peak Hour LOS Base year 2010	Southbound: C-F	Northbound: C-F
Peak Hour LOS Horizon Year 2035	Southbound: D-F	Northbound: C-F
Peak Hour Avg. Speed (mph) Base year 2010	Southbound: 53-65 mph*	Northbound: 61-70 mph*
Peak Hour Avg. Speed (mph) Horizon Year 2035	Southbound: 53-61 mph*	Northbound: 54-69 mph*
Peak Hour Capacity Per Lane	1,800	

**Speeds and VHT with LOS F are not reflected in the data due to unstable speeds.*

Figure 5.4.4: Segment 4-Base Year Peak Hour Congestion

Figure 5.4.5: Segment 4-Horizon Year Peak Hour Congestion

Segment 4 Corridor Performance Key Findings:

- Base Year (2010) Peak Hour Projections: In both directions, congestion levels range between low, moderate, high, and beyond capacity. Congestion conditions are overall higher in the southbound direction during the p.m. peak hour than in the northbound direction.

- Horizon Year (2035) Peak Hour Projections: The majority of the corridor in the southbound direction is projected to exceed capacity with few portions operating at moderate and high capacity levels. In the northbound direction the corridor transitions between moderate, high or beyond capacity levels with only a small portion of the corridor from Tefft Street to Los Berros Road operating at low congestion levels.

- Systems Operations: The highest AADT in 2010 is located in the urban areas around Oak Park Boulevard, 4th Street, Spyglass, and San Luis Bay Drive with AADT ranging from 66,000 to 68,000.

Segment 4 Corridor Concept (2035):

To support a safe and sustainable transportation system for travelers, access management and, ultimately, freeway conversion, efforts should be focused where congestion is projected to be the highest by the 2035 horizon year. In Segment 4, freeway conversion and parallel route development efforts should be focused between the Los Berros Road interchange and Traffic Way interchange. This recommendation is supported in the *US Route 101 Corridor System Management Plan* (California Department of Transportation, 2012) and referenced in the SLOCOG *Draft US 101 Corridor Mobility Master Plan* (San Luis Obispo Council of Governments, 2014) and SLOCOG 2010 RTP-SCS.

The 2035 corridor concept also includes interchange, ramp and auxiliary lane improvements. This includes planned and programmed interchange and ramp improvement projects at Tefft Street and Brisco Road and new auxiliary lanes from Halcyon Road to north of the Oak Park Boulevard overcrossing. Other operational improvements recommended include a new interchange at El Campo Road and interchange and/or ramp improvements at Price Canyon Road and San Luis Bay Drive. Enhanced transit, rail, TDM and TSM are also recommended as part of the concept.

Specifically, SLOCOG's 2014 *Draft US 101 Corridor Mobility Master Plan* identifies support for increased regional transit service frequency, an increased vanpool subsidy program, and implementation of TDM strategies. Other US 101 improvements evaluated in the *Draft US 101 Corridor Mobility Master Plan* within the US 101 TCR Segment 4 limits include: Price Street Extension, US 101 HOV Lanes, US 101 auxiliary lanes, improved park and ride lots (12 lots, 262 new spaces), and US 101 ramp meters. Identification and prioritization of future improvements will be developed as part of the SLOCOG RTP-SCS update effort currently underway and anticipated to be completed by Spring 2015. A complete list of planned and programmed projects within Segment 4 is in Appendix J.

SEGMENT 5: SAN LUIS OBISPO CITY

SOUTH HIGUERA STREET INTERCHANGE TO SR 58 INTERCHANGE (PM R24.296/37.863)

Segment 5 is extends through the City of San Luis Obispo and traverses the Cuesta Grade. It serves as a principal arterial for the City of San Luis Obispo and accommodates interregional travel, tourism, goods movement, and commuter traffic.

System Characteristics

Segment 5 is 13.2 miles and serves primarily as a 4-lane freeway with 4- and 6-lane expressway and conventional highway sections. The route is a 4-lane freeway from the southern limit of the segment beginning at South Higuera Street interchange (PM R24.296) through the City of San Luis Obispo. The route then transitions to a 6-lane expressway and conventional highway through the Cuesta Grade and reduces to a 4-lane expressway and then freeway from north of the Cuesta Grade to the SR 58 interchange in Santa Margarita (PM 37.863) (*Figure 5.5.1*). Segment 5 contains multiple at-grade intersections located on the Cuesta Grade between the City of San Luis Obispo and the SR 58 Interchange. More detailed information of system characteristics can be found in Appendix D, Table D.2.

System Operations

Little to no growth in AADT is expected with some areas experiencing negative growth between California Boulevard (PM 29.375) and Grand Avenue (PM 29.767). In 1994, AADT volumes ranged from 32,000 to 62,000 vehicles per day; which in 2010 AADT volumes stayed relatively the same with volumes ranging from 35,000 to 62,000 (Table 5.5.1 and *Figure 5.5.2*). By 2035, AADT is expected to increase between 41,000 to 78,000. The most congested location in 2010, is located at Los Osos Valley Road (PM 27.501) and South Higuera Street Interchange (PM R24.296) with AADT around 62,000 (*Figure 5.5.3*).

Peak Hour Data

Within the 2010 base year, vehicles experience p.m. peak hour congestion operating beyond capacity in the southbound direction between South Higuera Street Interchange (PM R24.296) and Los Osos Valley Road (PM 25.911). The portion of the corridor within San Luis Obispo City limits is operating with congestion ranging low to high. North of the city limits through the Cuesta Grade, the corridor is operating at low congestion levels. By the 2035 horizon year, between the South Higuera Street interchange and Madonna Road interchange, congestion levels are projected to exceed capacity in the southbound direction and range from moderate to high in the northbound direction. North of Madonna Road, in both directions, congestion ranges from low to high within the San Luis Obispo City limits and low to moderate through the Cuesta Grade (*Figure 5.5.4*).

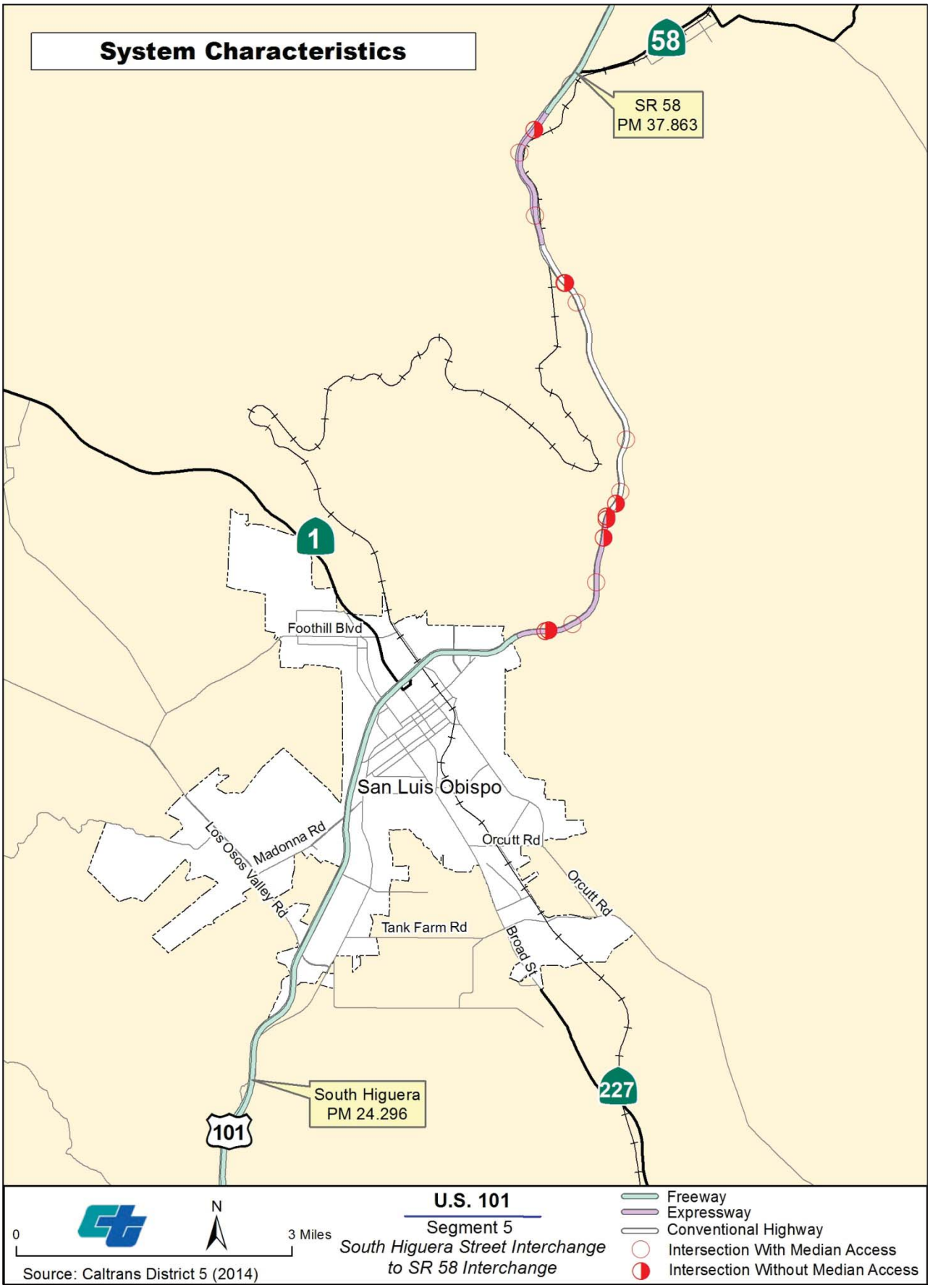

Figure 5.5.1: Segment 5-System Characteristics

Table 5.5.1: Segment 5-Daily System Operations

Daily System Operations	
Segment 5	
AADT Base Year 2010	35,000-62,000
AADT Horizon Year 2035	41,000-78,000
AADT: Growth Rate/Year	-60-840
VMT Base Year 2010	630,000
VMT Horizon Year 2035	760,000

**2010 base and 2035 horizon year data is based on Caltrans historic data. Data from updated regional travel demand model and RTP-SCS planned for completion spring 2015 will be appended in US 101 Corridor Data Sheets*

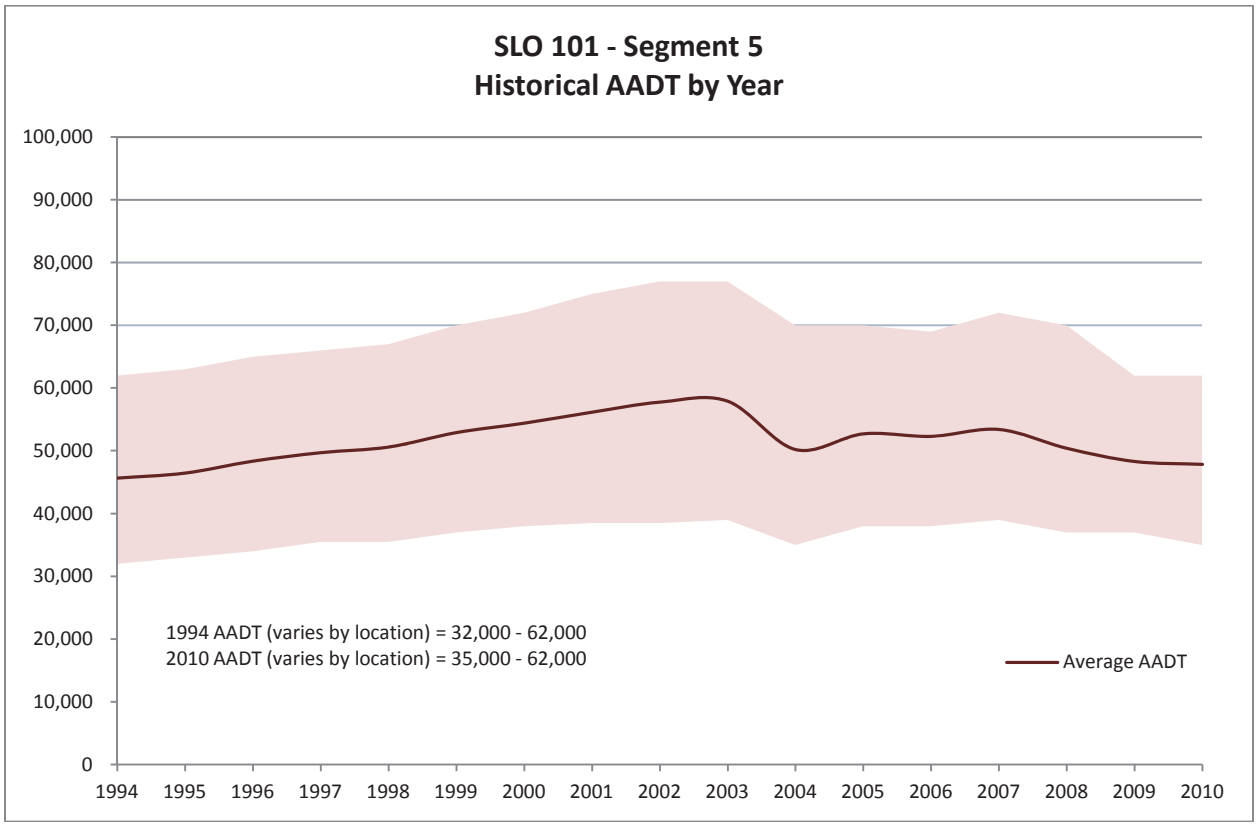

Figure 5.5.2: Segment 5-Historical AADT by Year

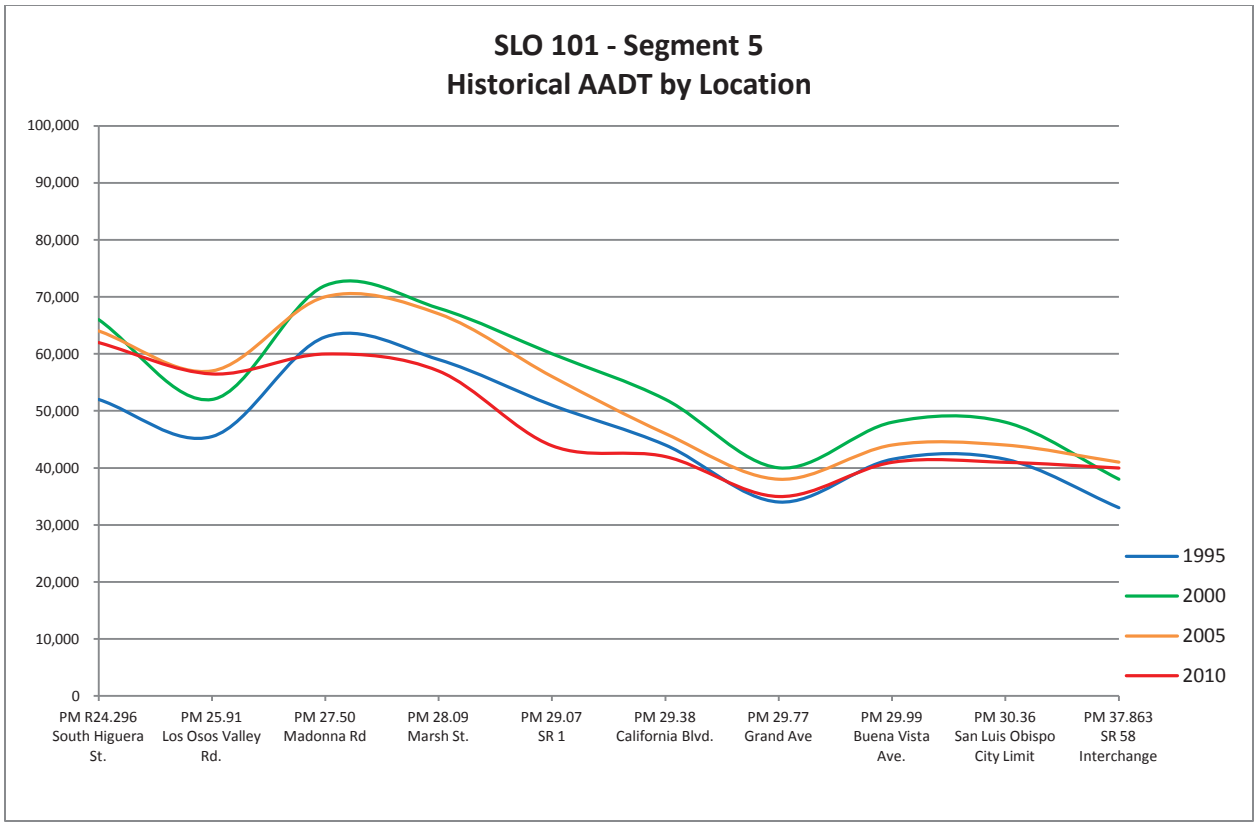

Figure 5.5.3: Segment 5-Historical AADT by Location

Table 5.5.2: Segment 5-Peak Hour Traffic Data

Peak Hour Traffic Data		
Segment 5		
Peak Hour Direction	Southbound: PM 24.3/37.5	
Peak Hour Length (Miles)	13.2 miles	
Peak Hour Volumes Base year 2010	3,700-6,400	
Peak Hour Volumes Horizon Year 2035	4,200-7,800	
Peak Hour Directional Split Base year 2010	40/60-46/54	
Peak Hour Directional Split Horizon Year 2035	40/60-46/54	
Peak Hour VMT Base year 2010	Southbound: 37,000	Northbound: 30,000
Peak Hour VMT Horizon Year 2035	Southbound: 45,000	Northbound: 36,000
Peak Hour VHT Base year 2010	Southbound: 470*	Northbound: 450
Peak Hour VHT Horizon Year 2035	Southbound: 480*	Northbound: 580
Peak Hour Growth Rate	-16-71	
Peak Hour V/C Base year 2010	Southbound: .47-1.00	Northbound: .40-.77
Peak Hour V/C Horizon Year 2035	Southbound: .43-1.21	Northbound: .37-1.00
Peak Hour LOS Base year 2010	Southbound: B-F	Northbound: B-D
Peak Hour LOS Horizon Year 2035	Southbound: B-F	Northbound: B-E
Peak Hour Avg. Speed (mph) Base year 2010	Southbound: 59-70 mph*	Northbound: 63-70mph
Peak Hour Avg. Speed (mph) Horizon Year 2035	Southbound: 54-70 mph*	Northbound: 52-70 mph
Peak Hour Capacity Per Lane	1,752	

**Speeds and VHT with LOS F are not reflected in the data due to unstable speeds.*

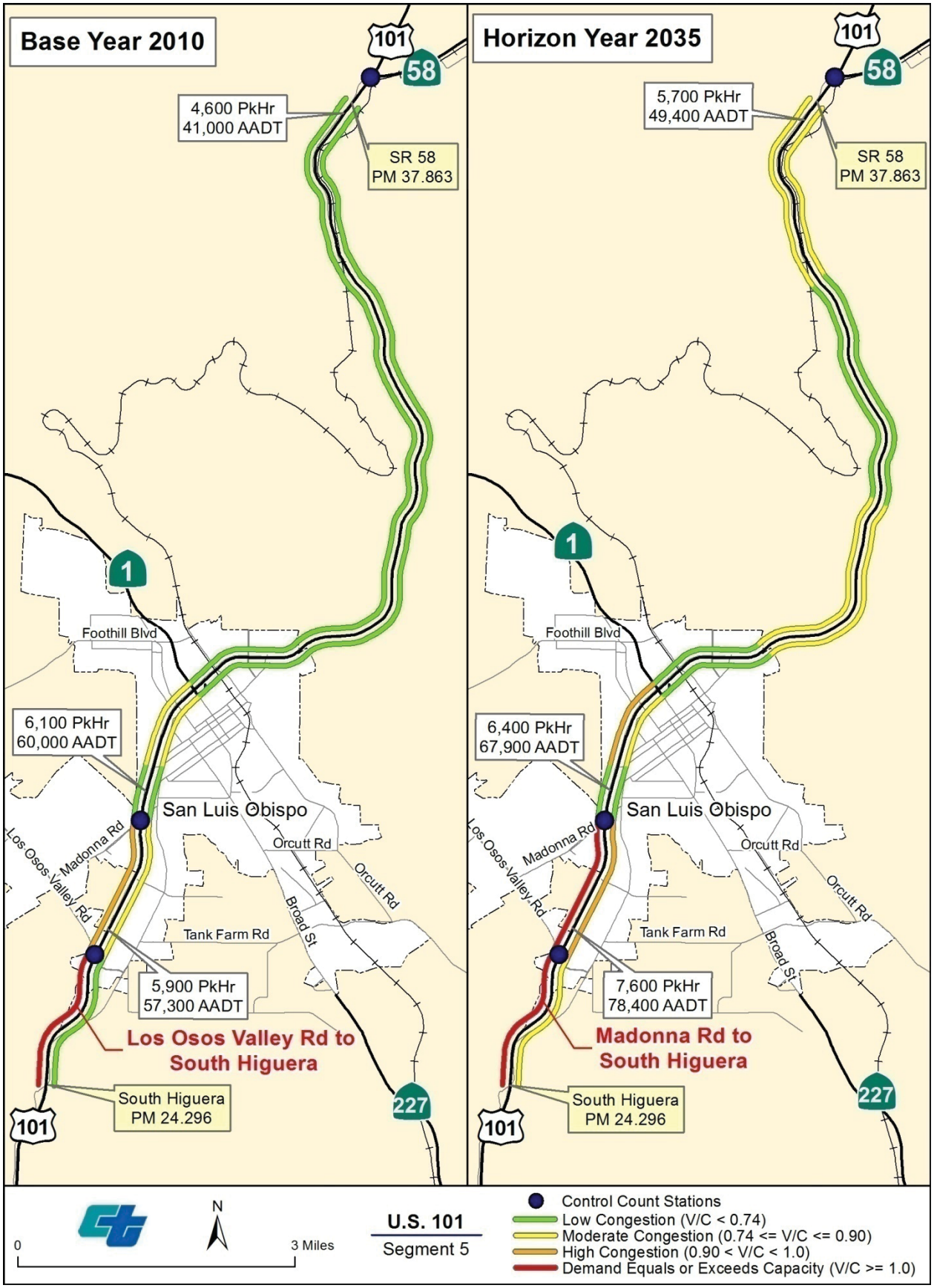

Figure 5.5.4: Segment 5-Base Year & Horizon Year Peak Hour Congestion

Segment 5 Corridor Performance Key Findings:

- Base Year (2010) Peak Hour Projections: Most of the corridor in both directions is projected to be operating in low to moderate congestion conditions. South Higuera Street interchange to Los Osos Valley Road interchange is the only portion projected to be operating at high congestion levels to exceeding capacity.

- Horizon Year (2035) Peak Hour Projections: Madonna Road interchange to the South Higuera interchange is projected to exceed capacity in the southbound direction and be operating at moderate to high congestion levels in the northbound direction.

- System Operations: In 2010, the most congested location in Segment 5 is projected to be located between the Madonna Road Interchange (PM 27.50) and South Higuera Street Interchange (PM R24.296) with an AADT of approximately 62,000.

Segment 5 Corridor Concept (2035):

Segment 5 currently operates as a 4- to 6-lane facility. The expressway and conventional highway portions of the segment on the Cuesta Grade are projected to maintain low to moderate levels of congestion into the 2035 horizon year. Access management strategies for the Cuesta Grade should be developed in partnership with SLOCOG and San Luis Obispo County to work toward the 2035 corridor concept and ultimate concept of freeway conversion.

The highest levels of demand are projected to be located within the City of San Luis Obispo between South Higuera Street and Madonna Road by the 2035 horizon year. Efforts should be focused on this portion of Segment 5 to sustain mobility for the local and interregional traveling needs of the public. Further analysis of operational improvements that may benefit this portion of the corridor include but are not limited to interchange, ramp and auxiliary lane improvements. Closely spaced interchanges located through the City of San Luis Obispo create US 101 mainline deficiencies. Interchange reconfiguration strategies should be developed in partnership with the City of San Luis Obispo in order to optimize US 101 mobility. Enhanced transit, rail, TDM and TSM is also recommended as part of the 2035 corridor concept.

Specifically, SLOCOG's 2014 *Draft US 101 Corridor Mobility Master Plan* identifies support for increased regional transit service frequency, an increased vanpool subsidy program, and implementation of TDM strategies. Other US 101 improvements evaluated in the 2014 *Draft US 101 Corridor Mobility Master Plan* within Segment 5 US 101 TCR limits include: Broad Street Ramps, Santa Rosa Street Interchange, Prado Road Interchange, US 101 HOV Lanes, US 101 auxiliary lanes, improved park and ride lots (12 lots, 262 new spaces), and US 101 ramp meters. Identification and prioritization of future improvements will be developed as part of the SLOCOG RTP-SCS update effort currently underway and anticipated to be completed by Spring 2015. A complete list of planned and programmed projects within Segment 5 is in Appendix J.

SEGMENT 6: NORTHERN SAN LUIS OBISPO COUNTY

SR 58 INTERCHANGE TO SR 46 EAST INTERCHANGE (PM 37.863/57.900)

Segment 6 serves regional and interregional traffic by providing connectivity with east/west routes 58, 41 and 46. Within this segment, US 101 also serves the local circulation needs of Atascadero, Templeton, and Paso Robles.

System Characteristics

Segment 6 is a 4-lane freeway. This segment is 20.4 miles of rolling terrain beginning at the SR 58 (PM 37.863) interchange, extending through the cities of Atascadero and Templeton and concluding at the SR 46 East Interchange (PM 57.900) in Paso Robles (*Figure 5.6.1*). More detailed information of system characteristics is in Appendix D, Table D.2.

System Operations

AADT growth per year between years 2010 and 2035 is expected to range between 570 and 1,700 (Table 5.6.1). In 1994, AADT volumes ranged from 24,000 to 41,000. In 2010, AADT volumes increased to a range of 32,000 to 63,000 and it is expected to continue to increase by 2035 to a range of 47,000 to 100,000. The most congested location in 2010 is projected to be located at SR 46 West interchange (PM 54.116) with AADT of 63,000 (*Figure 5.6.2* and *Figure 5.6.3*).

Peak Hour Data

Within the 2010 base year, Segment 6 demand is expected exceed capacity in the northbound direction between Del Rio Road (PM 48.430) and San Ramon Road (PM 49.120). There is low to moderate congestion in the southbound direction. In 2035, northbound traffic volumes are expected to exceed capacity between the Santa Rosa Road interchange (PM 44.160) and South Spring Street interchange (PM 55.674) and in the southbound direction between South Spring Street interchange (PM 55.674) and Curbaril Avenue interchange (PM 44.840). The remainder of the corridor in both directions ranges between low and high congestion (*Figure 5.6.4*).

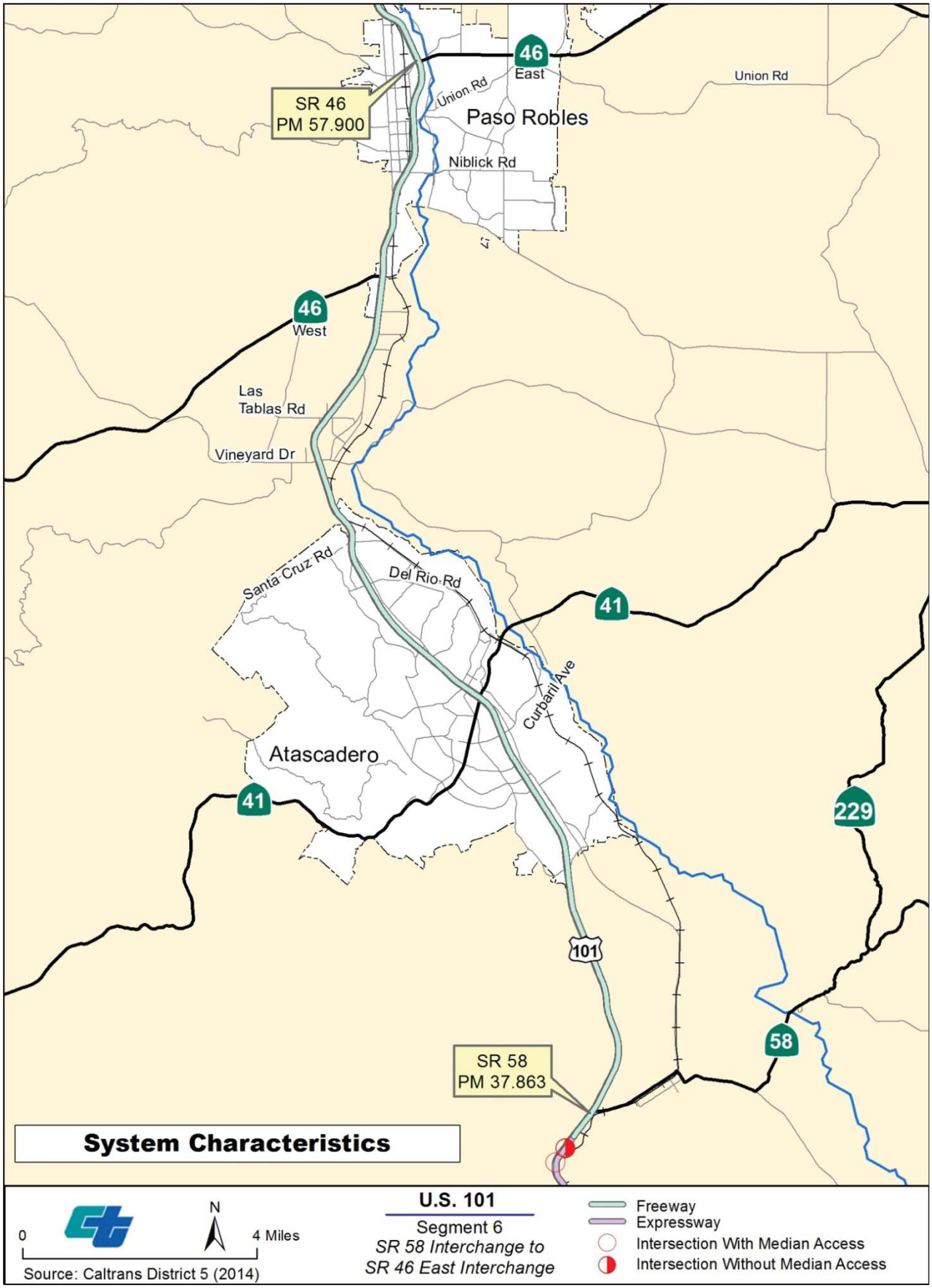

Figure 5.6.1: Segment 6-System Characteristics

Table 5.6.1: Segment 6-Daily System Operations

Daily System Operations	
Segment 6	
AADT 2010 Base Year 2010	32,000-63,000
AADT 2035 Horizon Year 2010	47,000-100,000
AADT: Growth Rate/Year	570-1,700
VMT Base Year 2010	1,000,000
VMT Horizon Year 2035	1,500,000

**2010 base and 2035 horizon year data is based on Caltrans historic data. Data from updated regional travel demand model and RTP-SCS planned for completion spring 2015 will be appended in US 101 Corridor Data Sheets.*

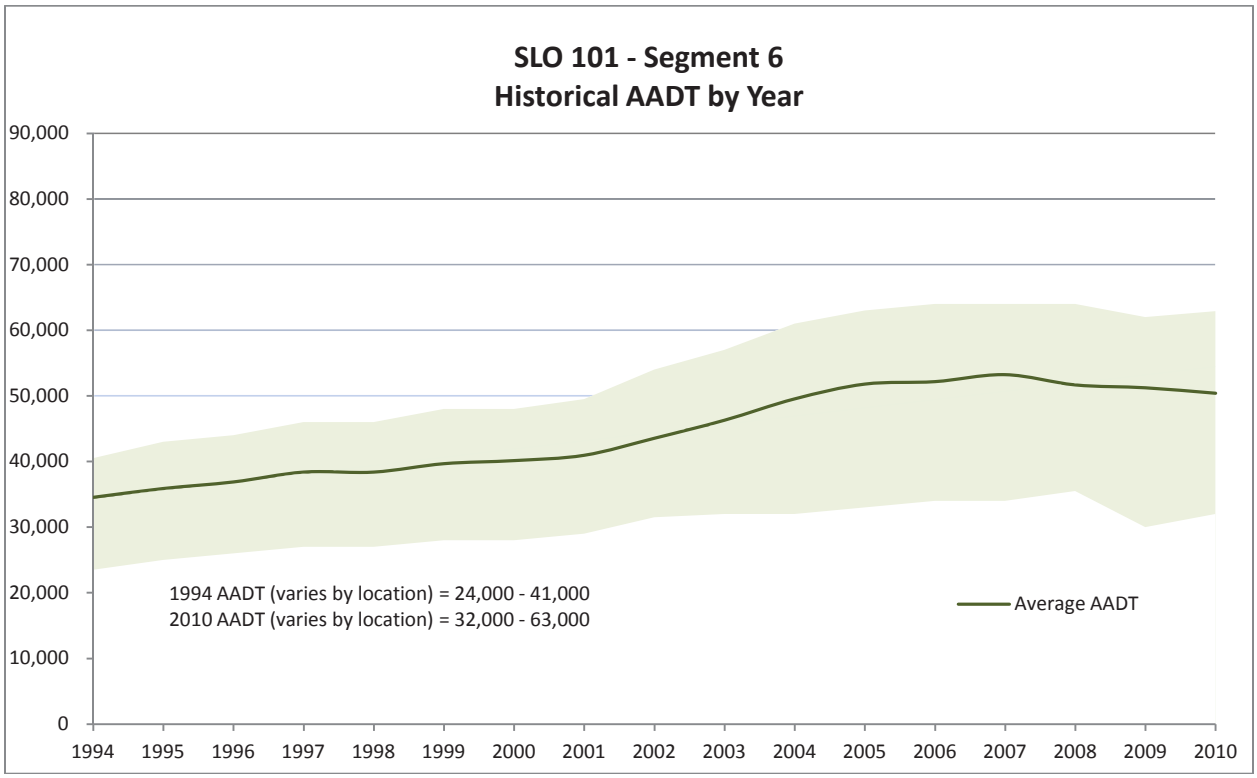

Figure 5.6.2: Segment 6-Historical AADT by Year

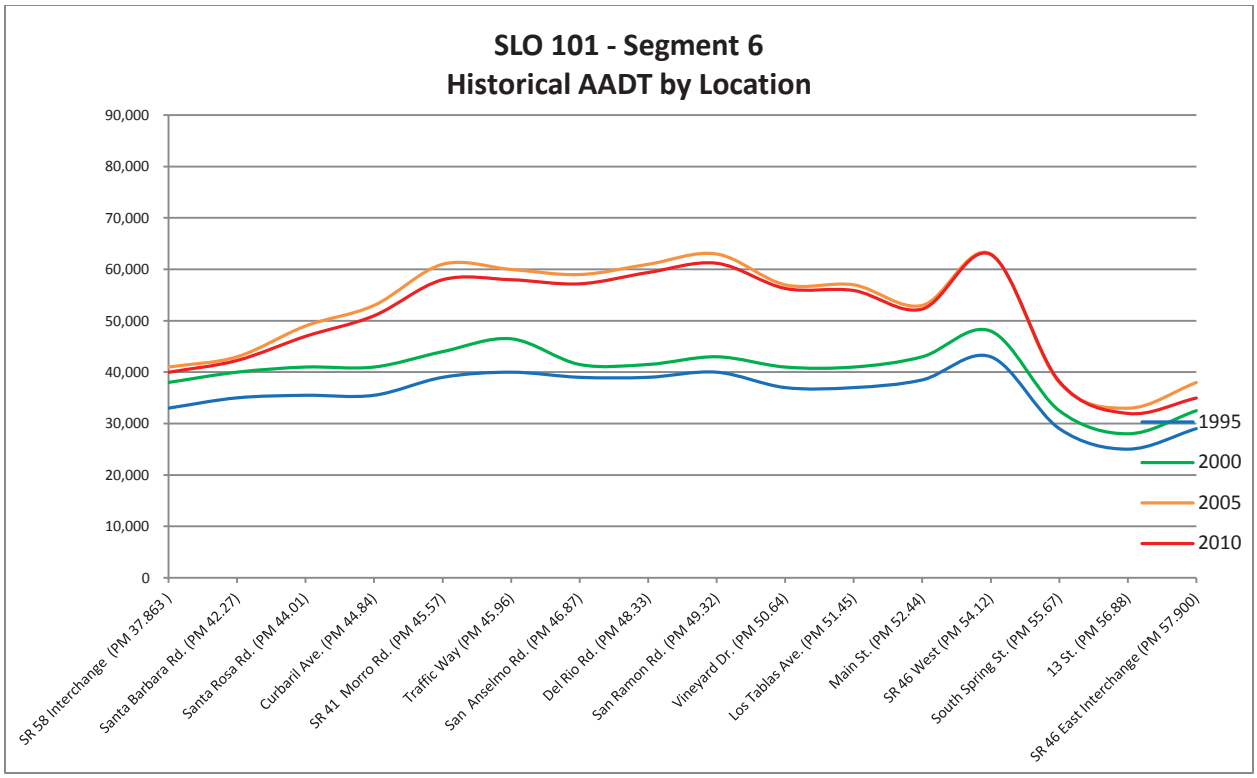

Figure 5.6.3: Segment 6-Historical AADT by Location

Table 5.6.2: Segment 6-Peak Hour Traffic Data

PM Peak Hour Traffic Data		
Segment 6		
Peak Hour Direction	Southbound:	PM 37.563/42.268
	Northbound:	PM: 42.268/57.900
Peak Hour Length (Miles)	20.4 Miles	
Peak Hour Volumes Base year 2010	3,500-6,500	
Peak Hour Volumes Horizon Year 2035	5,000-10,000	
Peak Hour Directional Split Base year 2010	46-54 - 54/46	
Peak Hour Directional Split Horizon Year 2035	46/54 - 54/46	
Peak Hour VMT Base year 2010	Southbound: 50,000	Northbound: 55,000
Peak Hour VMT Horizon Year 2035	Southbound: 76,000	Northbound: 84,000
Peak Hour VHT Base year 2010	Southbound: 770	Northbound: 900
Peak Hour VHT Horizon Year 2035	Southbound: 770*	Northbound: 900*
Peak Hour Growth Rate	60-170	
Peak Hour V/C Base year 2010	Southbound: .46-.85	Northbound: .52-0.96
Peak Hour V/C Horizon Year 2035	Southbound: .66-1.34	Northbound: .74-1.57
Peak Hour LOS Base year 2010	Southbound: B-D	Northbound: C-E
Peak Hour LOS Horizon Year 2035	Southbound: C-F	Northbound: D-F
Peak Hour Avg. Speed (mph) Base year 2010	Southbound: 63-68 mph	Northbound: 57-65 mph*
Peak Hour Avg. Speed (mph) Horizon Year 2035	Southbound: 56-65 mph*	Northbound: 57-64 mph*
Peak Hour Capacity Per Lane	1,800	

**Speeds and VHT with LOS F are not reflected in the data due to unstable speeds.*

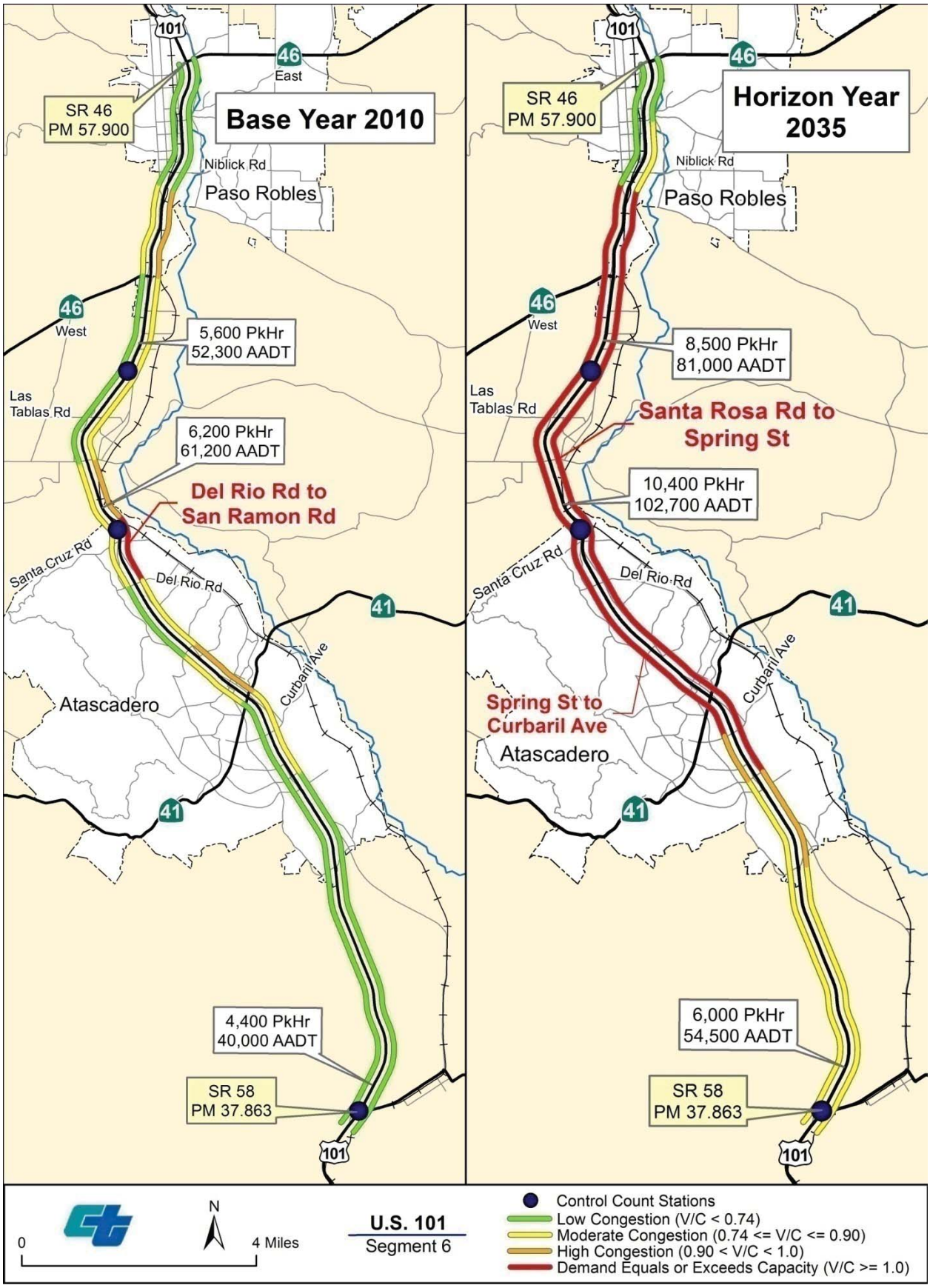

Figure 5.6.4: Segment 6-Base Year & Horizon Year Peak Hour Congestion

Segment 6 Corridor Performance Key Findings:

- Base Year (2010) Peak Hour Projections: Congestion is projected to range between moderate and exceeding capacity primarily in the northbound direction between the urbanized area of Atascadero to south of the Paso Robles urban boundary.

- Horizon Year (2035) Peak Hour Projections: In the horizon year, demand is projected to exceed capacity in both northbound and southbound directions between the urbanized area of Atascadero and south of the Paso Robles urban boundary.

- System Operations: 2010 data identifies the most congested location in the segment to be at the SR 46 West interchange with an AADT of 63,000.

Segment 6 Corridor Concept (2035):

Segment 6 operates as a 4- to 6-lane freeway and therefore meets the 2035 corridor concept. Other improvements, however, are needed to address future demand projected within the Atascadaro urbanized area to north of the Paso Robles urban area boundary. Systems operations and management strategies including interchange improvements, parallel route development, ramp and auxiliary lane improvements, enhanced transit and rail service, and implementation of TDM and TSM strategies should be further evaluated. This includes support for efforts like the Templeton to Atascadero bicycle connector project that will provide an alternative Class I bicycle connection between two adjacent communities parallel to US 101.

SLOCOG's 2014 *Draft US 101 Corridor Mobility Master Plan* also identifies support for increased regional transit service frequency, an increased vanpool subsidy program, and implementation of TDM strategies. Other US 101 improvements evaluated in the 2014 *Draft US 101 Corridor Mobility Master Plan* within the Segment 6 US 101 TCR limits include: San Anselmo Road Interchange, Del Rio Road Interchange, Traffic Way/Rosario Avenue Interchange, Curbaril Avenue Interchange, SR 46 East Interchange, US 101 auxiliary lanes, improved park and ride lots (12 lots, 262 new spaces), and US 101 ramp meters. Identification and prioritization of future improvements will be developed as part of the SLOCOG RTP-SCS update effort currently underway and anticipated to be completed by Spring 2015. A complete list of planned and programmed projects within Segment 6 is in Appendix J.

SEGMENT 7: SALINAS VALLEY

SR 46 EAST INTERCHANGE TO AIRPORT BOULEVARD INTERCHANGE (SLO PM 57.900/MON PM 85.624)

Segment 7 spans across San Luis Obispo and Monterey counties. The route accommodates significant amounts of interregional traffic, including commercial, agricultural, tourism, business and military transport. US 101 also serves commuter traffic through the urbanized areas linking the City of Salinas with other areas in the county, including the bedroom communities of Greenfield, Soledad, and Gonzales. Local commute traffic includes travel for Salinas agriculture processing, Salinas Valley State Prison, and a correctional training facility.

System Characteristics

Segment 7 is 94.4 miles and begins to the south in Paso Robles at SR 46 East Interchange (PM 57.900). The route traverses north past Camp Roberts and the Monterey County Line through King City, Greenfield, Soledad, and Gonzales and ends in the City of Salinas at Airport Blvd interchange (PM 85.624). This segment is a 4-lane freeway from the San Luis Obispo County Line to King City. A five-mile section of 4-lane expressway extends between King City and Greenfield. There is a small segment of freeway through Greenfield, and then US 101 transitions into an expressway facility until southern Soledad where it again turns into a 4-lane freeway through Gonzales. North of Gonzales, it turns into a four lane expressway and then back to a freeway at the southern Salinas city limits (*Figure 5.7.1*). Segment 7 has multiple at-grade intersections within the expressway portions of the route. More detailed information of system characteristics is in Appendix D, Table D.2.

System Operations

Segment 7 is divided into two segments 7a and 7b. Segment 7a encompasses the San Luis Obispo County area portion of the segment and Section 7b captures Monterey County portion of the segment.

Segment 7a. Little to no daily vehicle growth is expected in Segment 7a, with growth rates ranging from 121 to 335 AADT(Table 5.7.1.a). In 1994, AADT volumes ranged from 14,000 to 18,000. In 2010, AADT volumes slightly increased with AADT ranging from 17,000 to 23,000 and it is expected to slowly increase in 2035 ranging from 20,000 to 31,000 (*Figure 5.7.2a*). The highest AADT volumes in 2010 are located at North Spring Street (PM 58.762) with an AADT of 23,000 (*Figure 5.7.3.a*).

Segment 7b. A steady increase in AADT growth is expected with a high rate increase starting at the South Greenfield interchange (Table 5.7.1.b). In 1994, AADT volumes ranged from 13,000 to 33,000. In 2010 AADT volumes slightly increased with AADT ranging from 14,000 to 45,000 and it is expected to increase by 2035 to a range of 25,000 to 57,000 (Table 5.7.1b and *Figure 5.7.2.b*). The highest AADT volumes in 2010 are located at Chualar/Main Street (PM 76.973) and Airport Boulevard (PM 85.624) with an AADT of 45,000 (*Figure 5.7.3.b*).

Within the expressway portions of US 101 between King City and Airport Boulevard there are multiple at-grade access points with median openings which contribute to increased congestion levels within the northern portion of Segment 7b. Opportunities to develop access management strategies in coordination with TAMC and local adjacent jurisdictions to work toward ultimate freeway conversion should be pursued (Table 7.9).

Peak Hour Data

Segment 7a. The peak hour growth rate for Segment 7a ranges from 7 to 27 (Table 5.7.2.a). Within the base year and horizon year, Segment 7a vehicles experience low congestion in the northbound and southbound direction between SR 46 East Interchange (PM 57.900) and San Luis Obispo/Monterey County Line (PM R69.322) with a LOS A and B (*Figure 5.7.4* and *Figure 5.7.5*).

Segment 7b. The peak hour growth rate for Segment 7b ranges from 10 to 44 (Table 5.7.2.b). Within the 2010 base year, traffic volumes are expected to have low congestion with one portion of moderate congestion in the southbound direction between Gonzalez and Salinas (*Figure 5.7.4*). In the 2035 horizon year, traffic volumes are expected to be moderate to high between North Soledad (PM 62.696) in Soledad and Main Street in Chualar (PM 76.973) in the northbound direction and low congestion in the southbound direction (*Figure 5.7.5*).

Figure 5.7.1: Segment 7-System Characteristics

Table 5.7.1.a: Segment 7a-Daily System Operations

Daily System Operations	
Segment 7a SLOCOG	
AADT Base Year 2010	17,000-23,000
AADT Horizon Year 2035	20,000-31,000
AADT: Growth Rate/Year	120-340
VMT Base Year 2010	210,000
VMT Horizon Year 2035	270,000

**2010 base year is established by Caltrans historic data and 2035 horizon year projections are based on the AMBAG regional traffic model.*

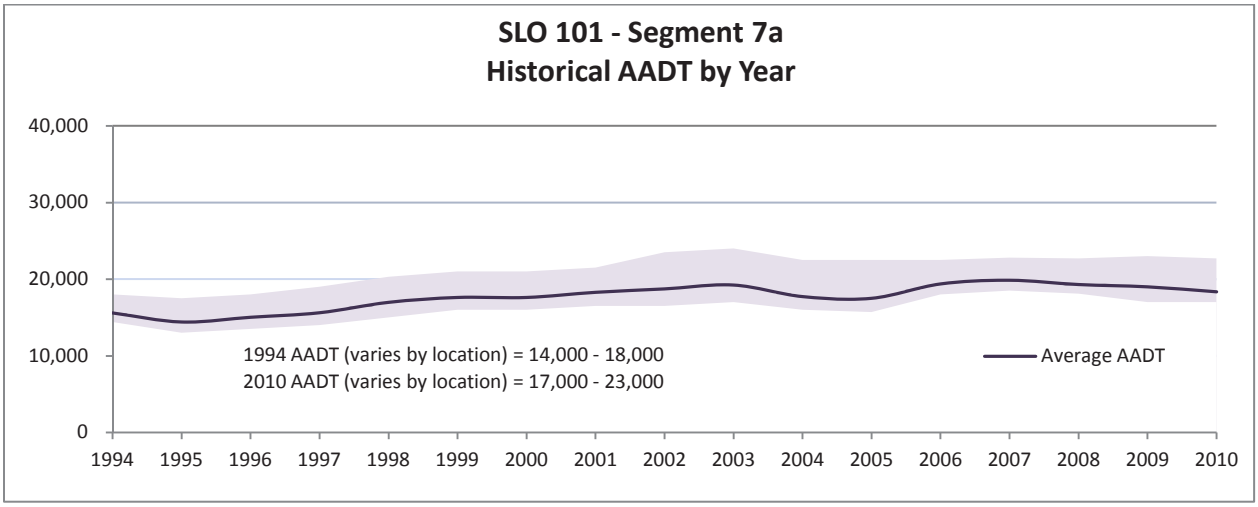

Figure 5.7.2.a: Segment 7a-Historical AADT by Year

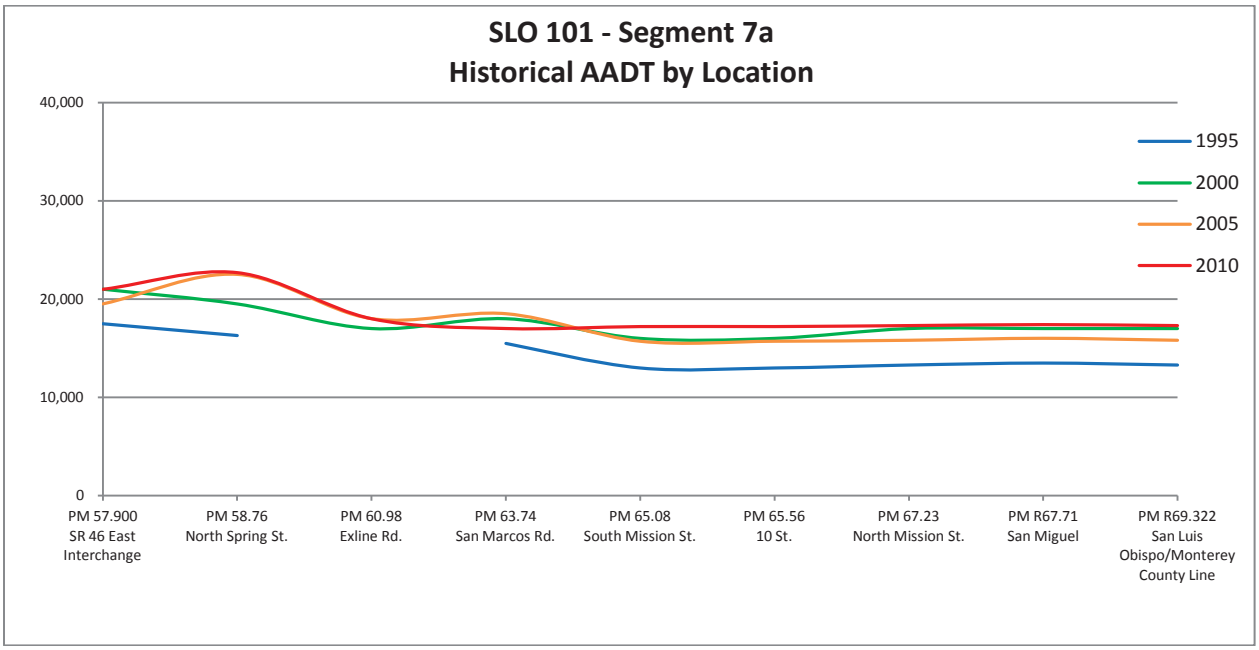

Figure 5.7.3.a: Segment 7a-Historical AADT by Location

Table 5.7.1.b: Segment 7b-Daily System Operations

Daily System Operations	
Segment 7b AMBAG	
AADT Base Year 2010	14,300 to 44,700
AADT Horizon Year 2035	24,700 to 57,400
AADT: Growth Rate (Vehicles/Year)	350 to 590
VMT Base Year 2010	2,131,700
VMT Horizon Year 2035	3,046,200

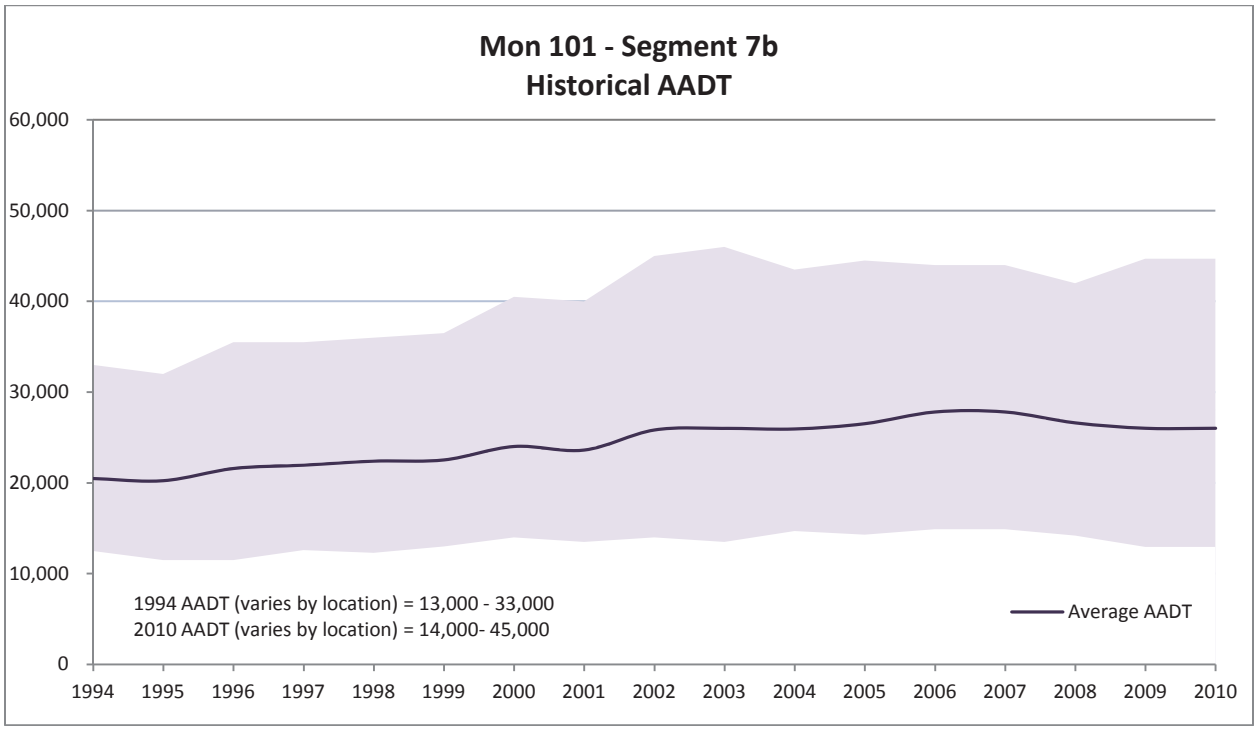

Figure 5.7.2b: Segment 7b-Historical AADT by Year

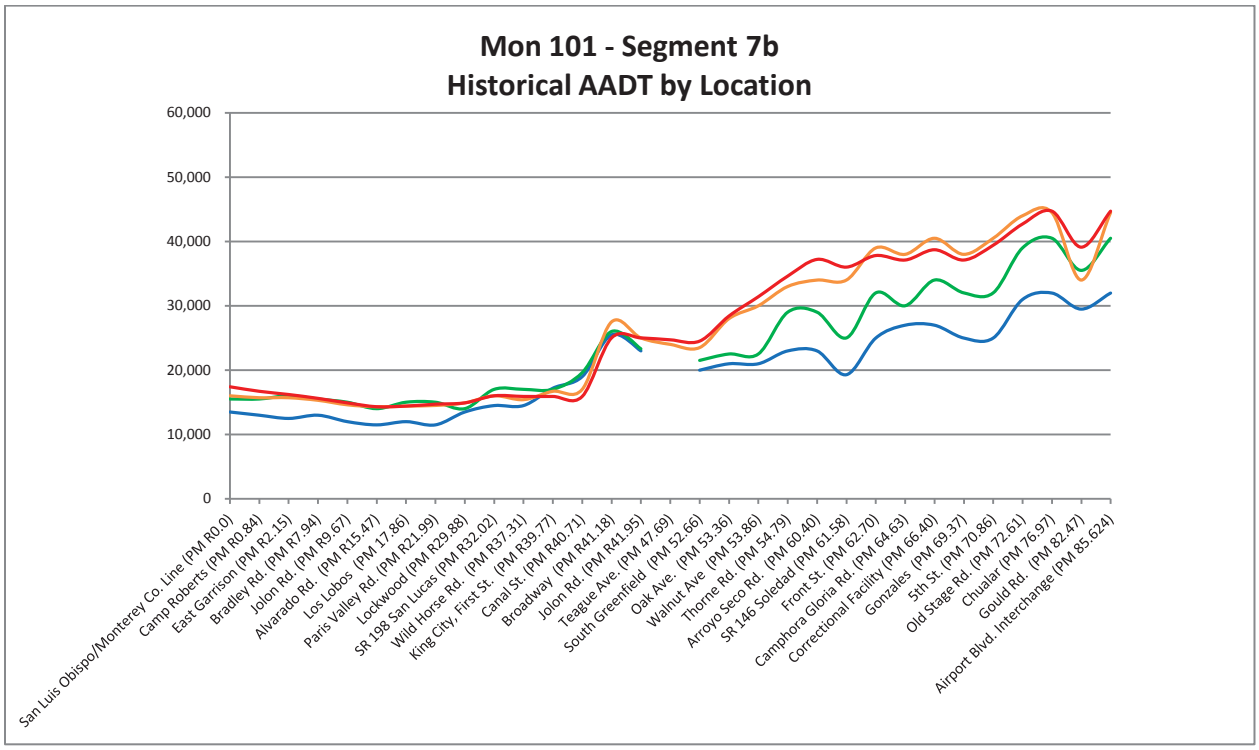

Figure 5.7.3b: Segment 7b-Historical AADT by Location

Table 5.7.2.a: Segment 7a-Peak Hour Traffic Data

Peak Hour Traffic Data		
Segment 7a SLOCOG		
Peak Hour Direction	Northbound	SLO PM 57.900/63.735
	Southbound	SLO PM 63.735/R69.322
Peak Hour Length (Miles)	11.4 Miles	
Peak Hour Volumes Base year 2010	2,000-2,500	
Peak Hour Volumes Horizon Year 2035	2,200-3,100	
Peak Hour Directional Split Base year 2010	53/47	
Peak Hour Directional Split Horizon Year 2035	53/47	
Peak Hour VMT Base year 2010	Northbound: 12,000	Southbound: 12,000
Peak Hour VMT Horizon Year 2035	Northbound: 15,000	Southbound: 15,000
Peak Hour VHT Base year 2010	Northbound: 180	Southbound: 170
Peak Hour VHT Horizon Year 2035	Northbound: 210	Southbound: 210
Peak Hour Growth Rate	7-27	
Peak Hour V/C Base year 2010	Northbound: .25-.36	Southbound: .27-.32
Peak Hour V/C Horizon Year 2035	Northbound: .28-.44	Southbound: .31-.39
Peak Hour LOS Base year 2010	Northbound: A-B	Southbound: A-B
Peak Hour LOS Horizon Year 2035	Northbound: A-B	Southbound: A-B
Peak Hour Avg. Speed (mph) Base year 2010	Northbound: 65-70 mph	Southbound: 65-70 mph
Peak Hour Avg. Speed (mph) Horizon Year 2035	Northbound: 65-70 mph	Southbound: 65-70 mph
Peak Hour Capacity Per Lane	1,850	

Table 5.7.2.b: Segment 7b-Peak Hour Traffic Data

Peak Hour Traffic Data		
Segment 7b AMBAG		
Peak Hour Direction	Southbound	MON PM R0.0/86.624
Peak Hour Length (Miles)	83.037	
Peak Hour Volumes Base year 2010	1,100-4,800	
Peak Hour Volumes Horizon Year 2035	2,000-5,900	
Peak Hour Directional Split Base year 2010	32/68-46/54	
Peak Hour Directional Split Horizon Year 2035	54/46-68/32	
Peak Hour VMT Base year 2010	Northbound: 82,700	Southbound: 138,500
Peak Hour VMT Horizon Year 2035	Northbound: 177,200	Southbound: 120,200
Peak Hour VHT Base year 2010	Northbound: 1,200	Southbound: 2,200
Peak Hour VHT Horizon Year 2035	Northbound: 2,900	Southbound: 1,800
Peak Hour Growth Rate	10-44	
Peak Hour V/C Base year 2010	Northbound: 0.11-0.40	Southbound: 0.16-0.82
Peak Hour V/C Horizon Year 2035	Northbound: 0.29-0.94	Southbound: 0.18-0.59
Peak Hour LOS Base year 2010	Northbound: A-B	Southbound: A-D
Peak Hour LOS Horizon Year 2035	Northbound: A-E	Southbound: A-C
Peak Hour Avg. Speed (mph) Base year 2010	Northbound: 65-70 mph	Southbound: 64-70 mph
Peak Hour Avg. Speed (mph) Horizon Year 2035	Northbound: 59-70 mph*	Southbound:65-70 mph*
Peak Hour Capacity Per Lane	2,000 - 2,350	

**Speeds with LOS F are not reflected in the data due to unstable speed.*

Figure 5.7.4: Segment 7-Base Year Peak Hour Congestion

Figure 5.7.5: Segment 7-Horizon Year Peak Hour Congestion

Segment 7 Corridor Performance Key Findings:

Segment 7a:

- Segment 7a Base Year (2010) Peak Hour Projections: No congestion is projected in the northbound or southbound direction between SR 46 East interchange and San Luis Obispo/Monterey County Line.

- Segment 7a Horizon Year (2035) Peak Hour Projections: No congestion is projected in the northbound or southbound direction between SR 46 East interchange and San Luis Obispo/Monterey County Line.

- Segment 7a System Operations: The highest AADT volumes in 2010 are located at North Spring Street interchange (PM 58.762) AADT of 23,000.

Segment 7b:

- Segment 7b Base Year (2010) Peak Hour Projections: There is moderate congestion projected in the southbound direction between Johnson Canyon Road/5th Street and Abbott Street.

- Segment 7b Horizon Year (2035) Peak Hour Projections: There is moderate to high congestion projected in the southbound direction between North Soledad and Main Street.

- Segment 7b System Operations: The highest AADT volumes in 2010 are located between North Soledad in Soledad to Main Street (PM 76.973) in Chualar (PM 82.469) and is 44,700.

Segment 7 Corridor Concept (2035):

Segment 7 operates as a 4-lane expressway and freeway. The expressway portions of the route are located primarily between King City and the City of Salinas in Monterey County with one expressway portion located north of SR 46 East in San Luis Obispo County. The corridor performance analysis for this segment forecasts that overall congestion will increase the greatest between the City of Soledad and Chualar by the 2035 horizon year. Congestion is projected to range between low and high.

Within the expressway portions of the segment between King City and the City of Salinas, there are multiple at-grade access locations with median openings. These access points impact mobility on US 101 through the Salinas Valley due to the speed differential of vehicles entering the highway and mainline traffic. In the Salinas Valley area this poses a particular operational challenge for the large number of truck users that access the route at slower speeds. Conversion of expressway portions of the route to freeway through implementing access management strategies should be pursued through coordination with TAMC and adjacent local jurisdictions. This will work toward the ultimate concept of freeway conversion. Strategies to discuss include interchange improvements, parallel frontage road development, and other operational improvements.

A programmed median barrier project in Greenfield is working toward access management and the ultimate concept of freeway conversion. The programmed South Salinas Corridor project will also upgrade US 101 from expressway to freeway and includes interchange and frontage road improvements between Chular and Airport Boulevard. Other currently planned and programmed projects including those identified in the AMBAG *2035 MTP-SCS* (2014) in Segment 7 are in Appendix J.

SEGMENT 8: SALINAS CITY

AIRPORT BOULEVARD INTERCHANGE TO SALA ROAD (PM 85.624/R92.205)

Segment 8 is located in the City of Salinas accommodating significant levels of daily local traffic and serves as a principal arterial for interregional traffic and goods movements.

System Characteristics

Segment 8 in Salinas is 6.3 miles and designated a 4-lane freeway and expressway with flat urban terrain. The segment begins as freeway at Airport Boulevard interchange (PM 85.624) to Espinosa Road interchange (PM R91.9) where it transitions to expressway until Sala Road interchange (PM R92.205). This segment carries heavy commercial, recreational, and commuter traffic. Airport Boulevard interchange and Sanborn Road interchange are the primary access points for trucks serving the industrial and agricultural processing hub of Salinas (*Figure 5.8.1*). More detailed information of system characteristics is in Appendix D, Table D.2.

System Operation

AADT growth per year between years 2010 and 2035 is expected to range between 280 and 560 (Table 5.8.1). In 1994, AADT volumes ranged from 38,000 to 60,000. In 2010, AADT volumes increased to a range of 49,000 to 74,000 and it is expected to continue increasing in 2035 from 63,000 to 86,000 (*Figure 5.8.2*). The highest AADT volume in 2010 is located between East Market Street and SR 183 with an AADT of 74,000 (*Figure 5.8.3*).

Peak Hour Data

Within the 2010 base year, Segment 8 vehicles experience high p.m. peak volumes in the southbound direction between East Market Street and SR 183. The rest of the corridor has low congestion (*Figure 5.8.4*). In the 2035 horizon year, congestion is expected to be moderate from Sanborn Road to SR 183 in the northbound direction and between Boronda Road and SR 68 in the southbound direction (*Figure 5.8.5*).

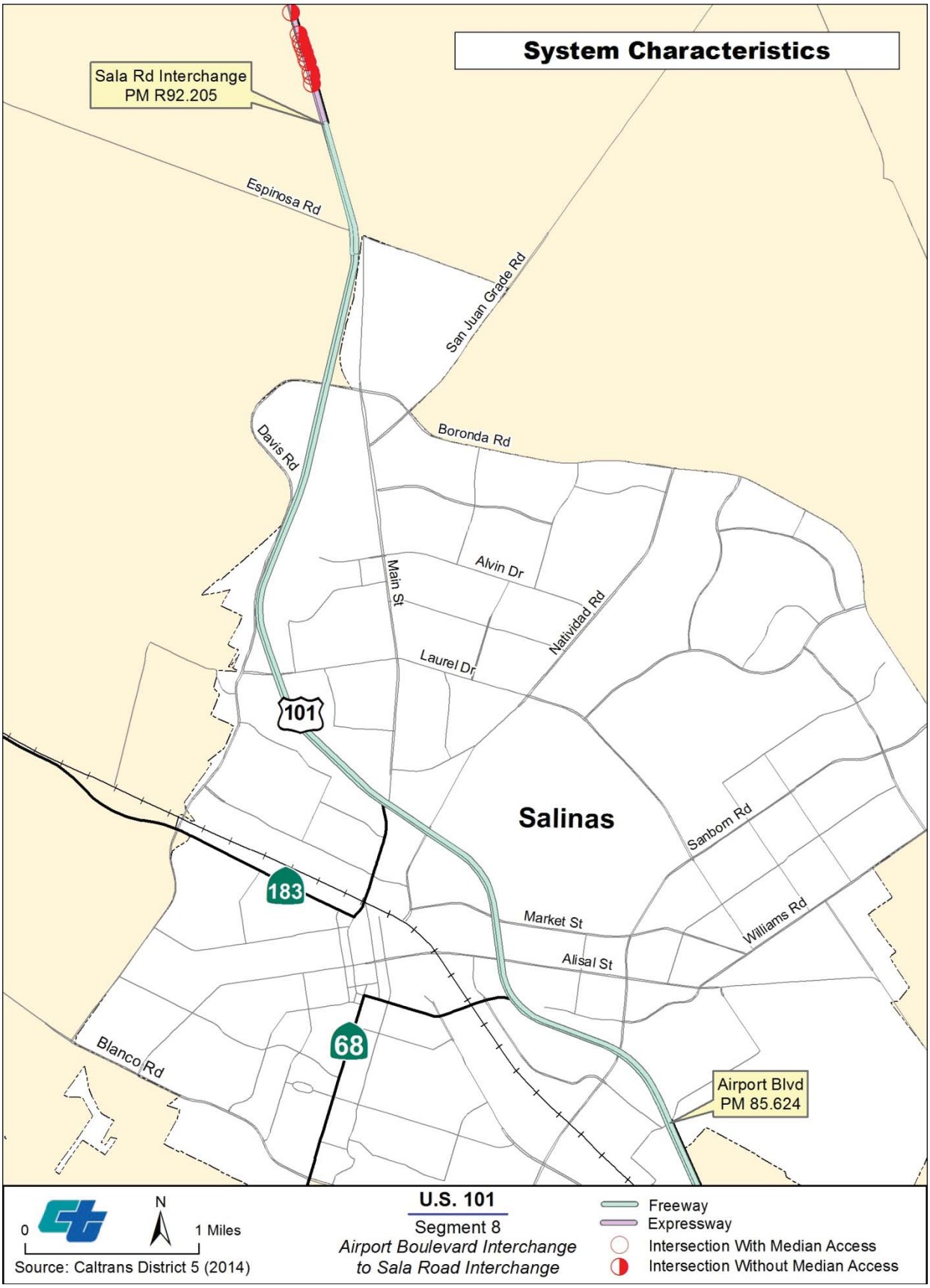

Figure 5.8.1: Segment 8-System Characteristics

Table 5.8.1: Segment 8-Daily System Operations

Daily System Operations	
Segment 8	
AADT Base Year 2010	49,000-74,000
AADT Horizon Year 2035	63,000-85,900
AADT: Growth Rate/Year	280-560
VMT Base Year 2010	383,500
VMT Horizon Year 2035	460,000

**2010 base year is established by Caltrans historic data and 2035 horizon year projections are based on the AMBAG regional traffic model.*

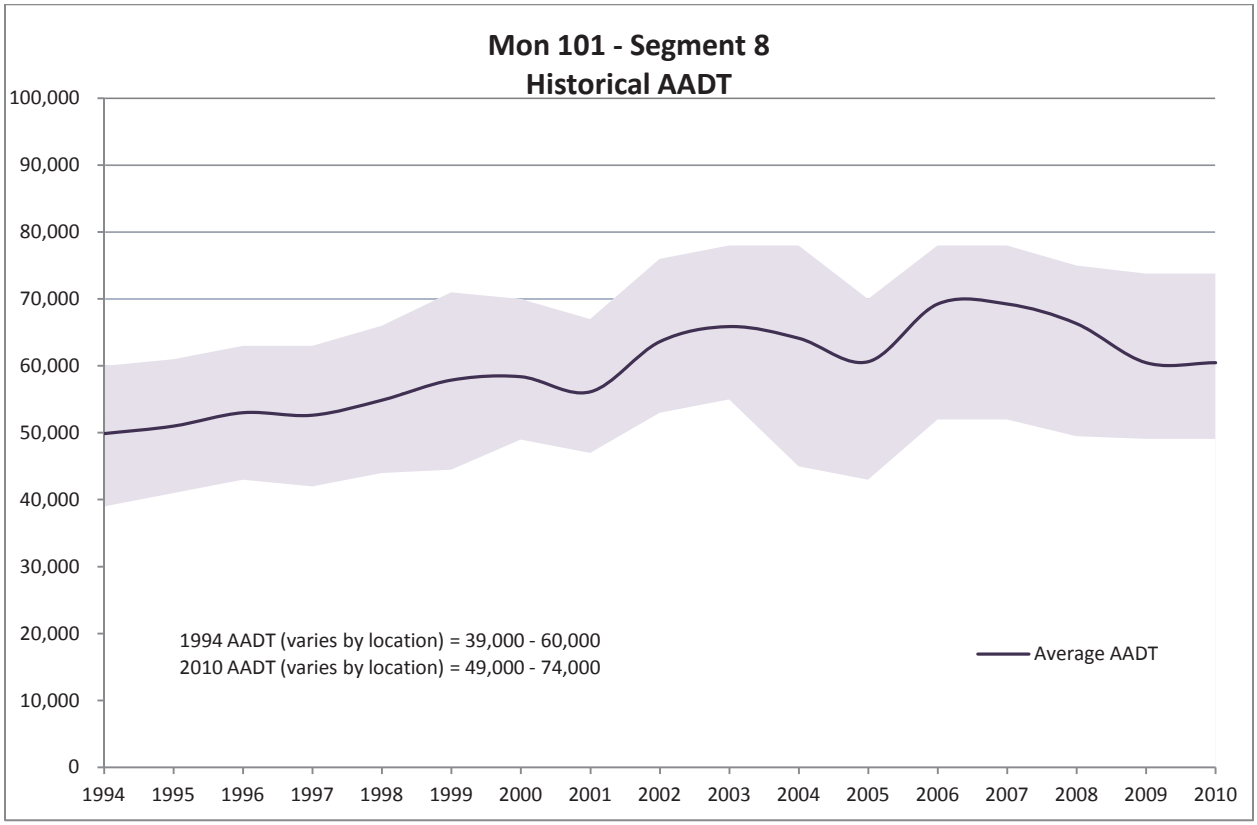

Figure 5.8.2: Segment 8-Historical AADT by Year

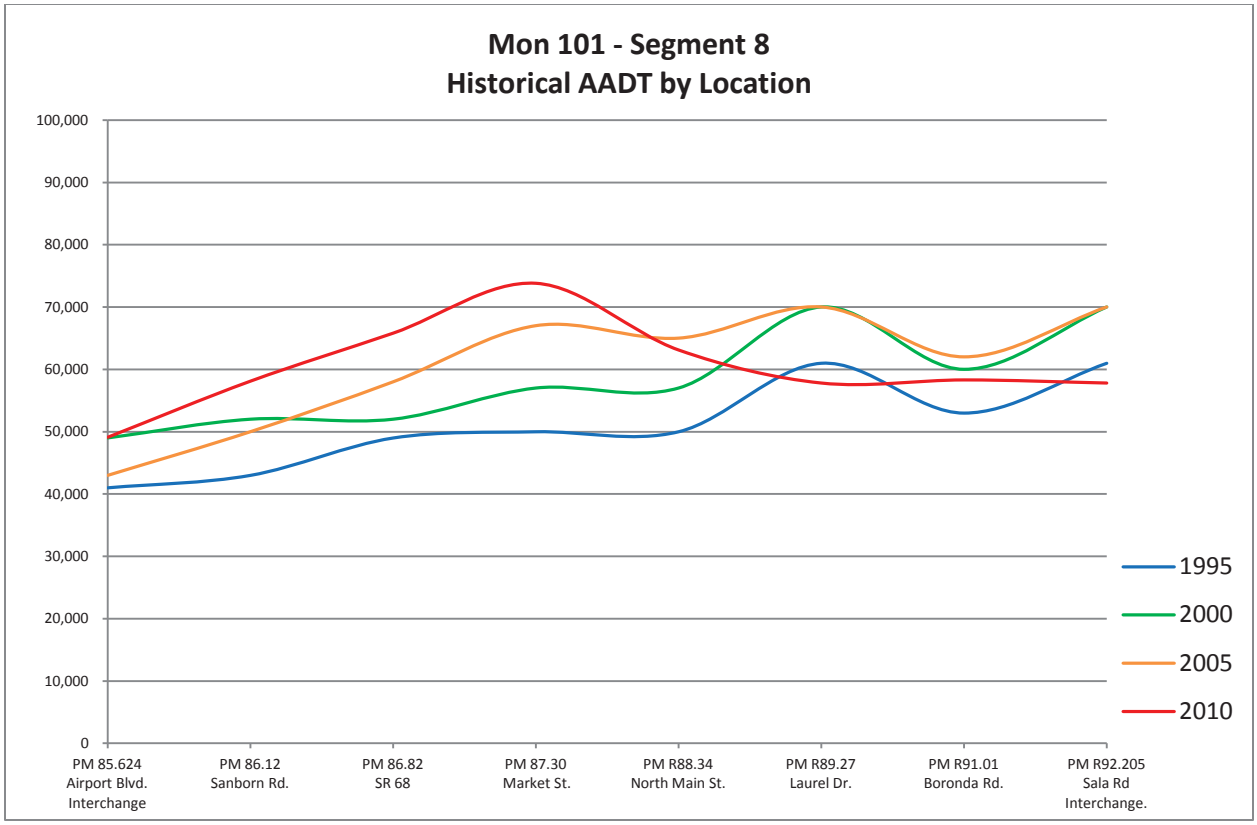

Figure 5.8.3: Segment 8-Historical AADT by Location

Table 5.8.2: Segment 8-Peak Hour Traffic Data

Peak Hour Traffic Data		
Segment 8		
Peak Hour Direction	Northbound	MON PM 85.624/R89.265
Peak Hour Length (Miles)	6.3 Miles	
Peak Hour Volumes Base year 2010	5,000-6,700	
Peak Hour Volumes Horizon Year 2035	6,000-7,500	
Peak Hour Directional Split Base year 2010	36/64-50/50	
Peak Hour Directional Split Horizon Year 2035	48/52-58/42	
Peak Hour VMT Base year 2010	Northbound: 17,300	Southbound: 18,900
Peak Hour VMT Horizon Year 2035	Northbound: 21,200	Southbound: 20,300
Peak Hour VHT Base year 2010	Northbound: 283	Southbound: 306
Peak Hour VHT Horizon Year 2035	Northbound: 342	Southbound: 334
Peak Hour Growth Rate	27-43	
Peak Hour V/C Base year 2010	Northbound: 0.38-0.72	Southbound: 0.54-0.75
Peak Hour V/C Horizon Year 2035	Northbound: 0.68-0.86	Southbound: 0.54-0.83
Peak Hour LOS Base year 2010	Northbound: B-C	Southbound: C-D
Peak Hour LOS Horizon Year 2035	Northbound: C-D	Southbound: C-D
Peak Hour Avg. Speed (mph) Base year 2010	Northbound: 64-69 mph	Southbound: 64-70 mph
Peak Hour Avg. Speed (mph) Horizon Year 2035	Northbound: 61-69 mph	Southbound: 61-69 mph
Peak Hour Capacity Per Lane	2,200 - 2,350	

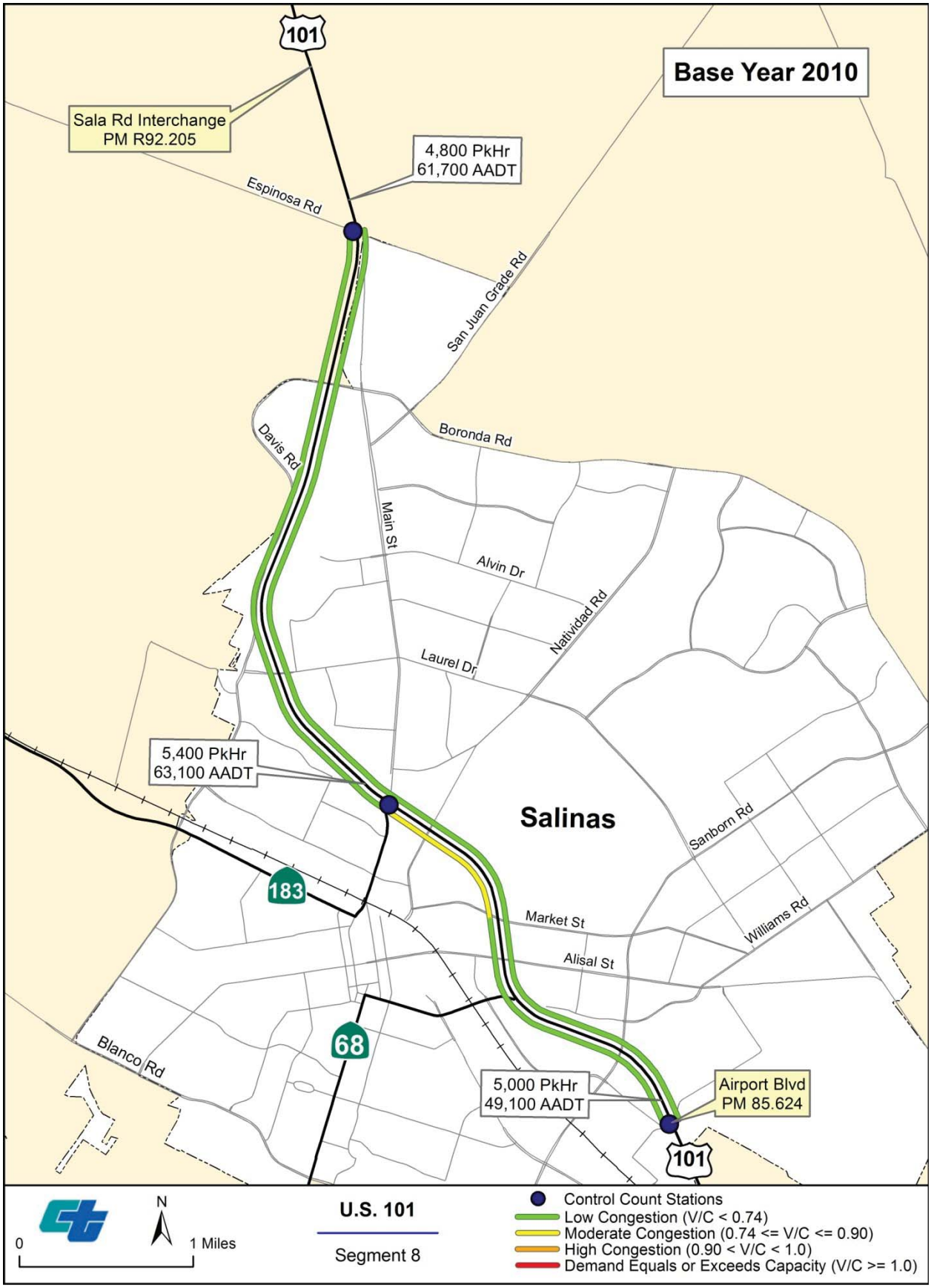

Figure 5.8.4: Segment 8-Base Year Peak Hour Congestion

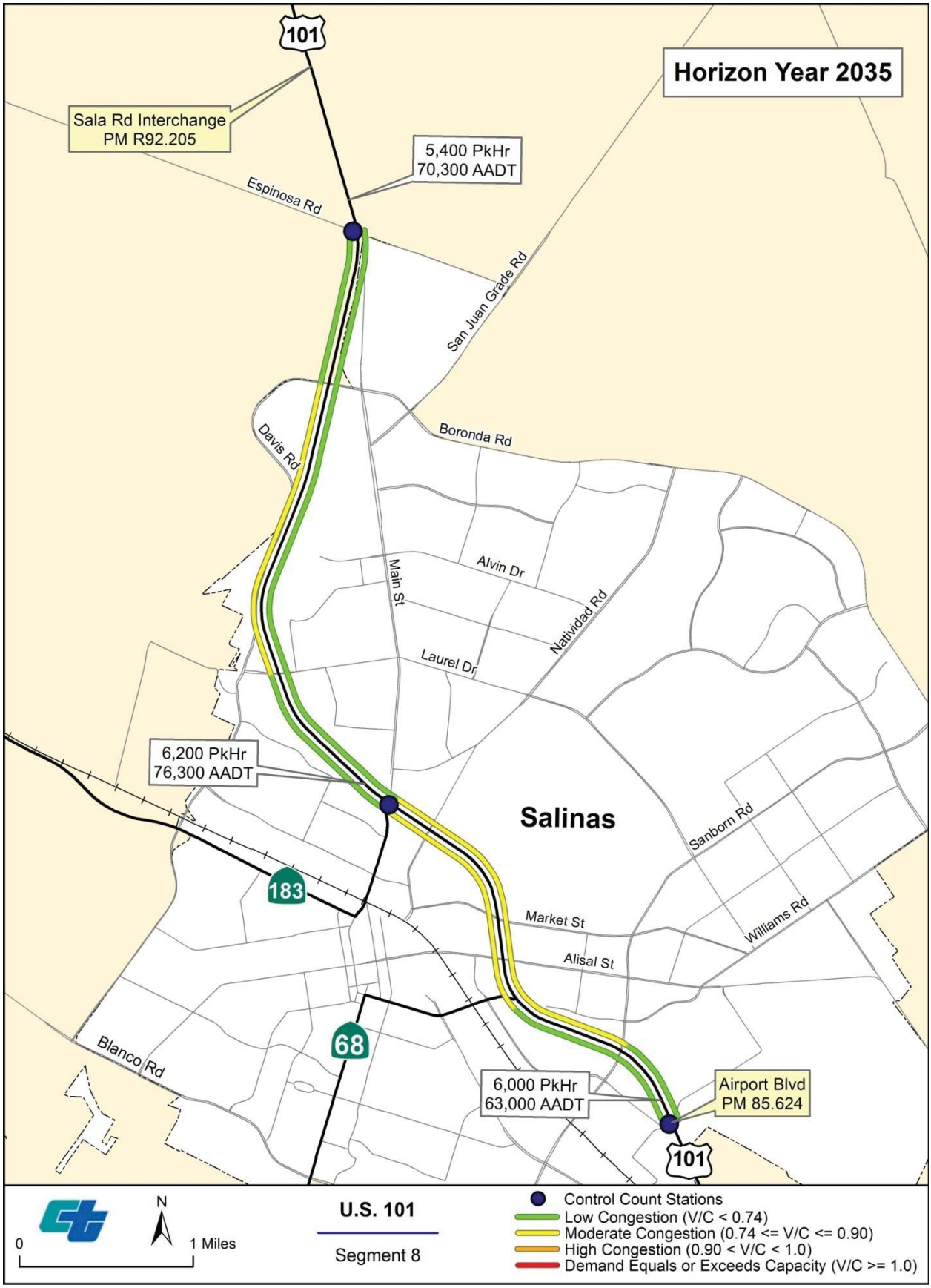

Figure 5.8.5: Segment 8-Horizon Year Peak Hour Congestion

Segment 8 Corridor Performance Key Findings:

- Base Year (2010) Peak Hour Projections: Low to moderate congestion is projected in the southbound direction between East Market Street and SR 183 in Salinas.

- Horizon Year (2035) Peak Hour Projections: Low to moderate congestion is projected in the southbound and northbound directions between Sanborn Road and Boronda Road.

- System Operations: The highest AADT volumes in 2010 are located between SR 68 and East Market Street and is 65,800.

Segment 8: Corridor Concept (2035)

Segment 8 operates as a 4-lane freeway. The segment between Espinosa Road and Sala Road recently transitioned from expressway to freeway with the closure of four at-grade access points through the Prunedale Improvement Project. The corridor performance analysis forecasts that congestion will be low to moderate between Sanborn Road and Boronda Road in the 2035 horizon year. The 2002 City of Salinas General Plan recommends 6-lane widening through the City of Salinas between Espinosa Road and Harris Road among other system operational improvements. Other currently planned and programmed projects for the corridor identified in the AMBAG *2035 MTP-SCS* (2014) include US 101 Salinas Corridor Widening project and Sanborn interchange and operational improvements. Implementation of these improvements will occur in coordination with the City of Salinas and TAMC fee programs for feasibility. A comprehensive list of planned and programmed projects within Segment 8 are in Appendix J. While only low to moderate congestion is projected in the 2035 horizon year, closely spaced interchanges located through the City of Salinas create US 101 mainline deficiencies. Interchange reconfiguration strategies should be developed in partnership with the City of Salinas in order to optimize long-term mobility of US 101.

SEGMENT 9: PRUNEDALE

SALA ROAD TO MONTEREY COUNTY LINE/SAN BENITO COUNTY LINE (PM 92.205/101.316)

Segment 9 is located in the Prunedale area which is known for high traffic volumes and the need for improved local road circulation networks. This segment accommodates significant amounts of regional and interregional traffic, including commercial and agricultural trucking, recreational, and business traffic.

System Characteristics

Segment 9 is approximately 9.4 miles starting in the southern limits at Sala Road (PM R92.205and concludes in the northern limit at Monterey /San Benito County Line (PM 101.316) (Table 5.9.2). Segment 9 is a 4- to 6-lane expressway with terrain progressing from relatively flat at the southern end of the project limits to mountainous at the northern end. Only two interchanges are located in this segment, SR 156 West interchange, and the San Miguel Canyon Road junction. Segment 9 has the largest number of at-grade intersections per segment (*Figure 5.9.1*). More detailed information about system characteristics is in Appendix D, Table D.2.

The San Juan Road Interchange project lies in Segment 9 just south of the Monterey/San Benito county line in Monterey. In April 2012 this project was awarded $30.8 million in Corridor Mobility Improvement Account (CMIA) funding for this project. Corridor System Management Plans (CSMPs) are typically required for all projects receiving CMIA funding, however, due to the detailed analysis and findings provided in this study, the US 101 TCR fulfills the CSMP requirement for the San Juan Road Interchange. The San Juan Road Interchange project is currently under construction and is expected to be completed by winter 2016 (includes plant establishment period).

System Operations

AADT growth per year between years 2010 and 2035 is expected to range between 340 and 1,200 (*Figure 5.5.1*). In 1994 AADT volumes ranged from 45,000 to 66,000. In 2010, AADT volumes increased from 56,000 to 84,000 and AADT is expected to continue to increase by 2035 from 70,000 to 105,000 (*Figure 5.9.2*). The highest AADT volume in 2010 is located between SR 156 West and San Miguel Canyon Road with an AADT of 105,000 (*Figure 5.9.3*).

Peak Hour Data

Within the 2010 base year, Segment 9 congestion is expected to exceed capacity in the northbound and southbound direction between SR 156 West and San Miguel Canyon Road, with LOS F. South of SR 156 West interchange, congestion is primarily low in both directions. In 2035, traffic demands are expected to exceed capacity in the northbound and southbound directions from SR-156W to the San Benito County line with LOS F (*Figure 5.9.4*). High volumes are projected for the majority of the remaining corridor not already exceeding capacity.

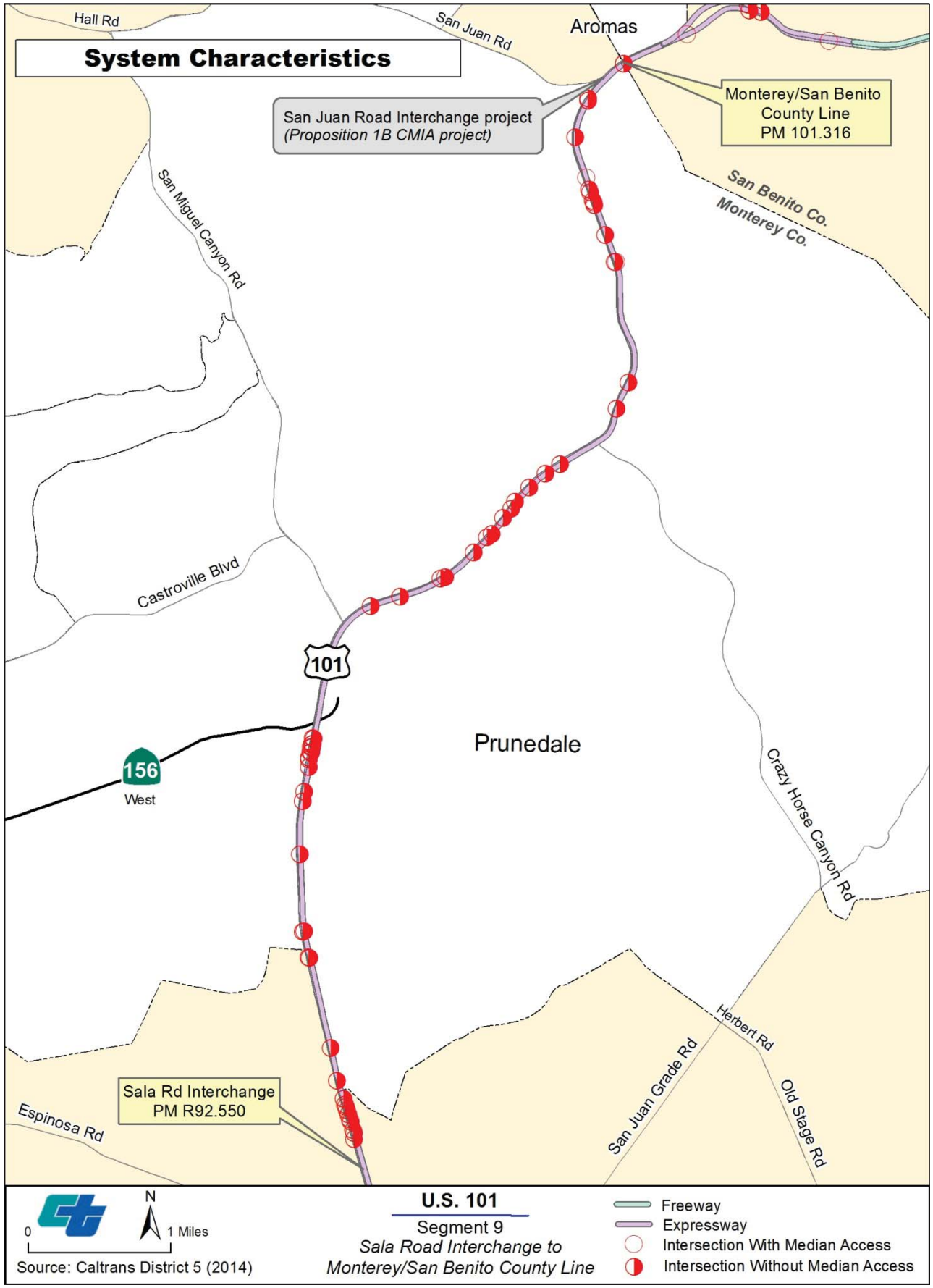

Figure 5.9.1: Segment 9-System Characteristics

Table 5.9.1: Segment 9-Daily System Operations

Daily System Operations	
Segment 9	
AADT 2010 Base Year 2010	56,000-84,000
AADT 2035 Horizon Year 2010	70,000-105,000
AADT: Growth Rate/Year	340-1,200
VMT Base Year 2010	590,000
VMT Horizon Year 2035	760,000

**2010 base year is established by Caltrans historic data and 2035 horizon year projections are based on the AMBAG regional traffic model.*

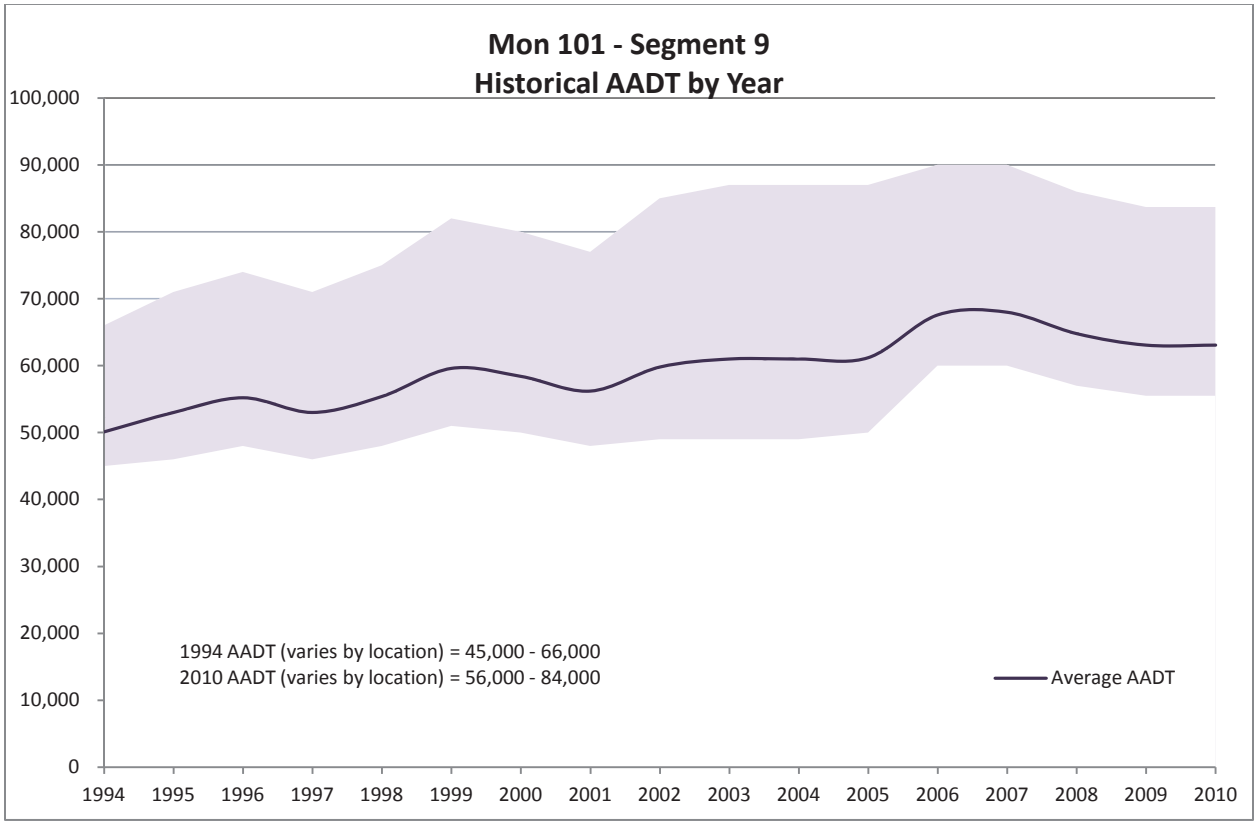

Figure 5.9.2: Segment 9-Historical AADT by Year

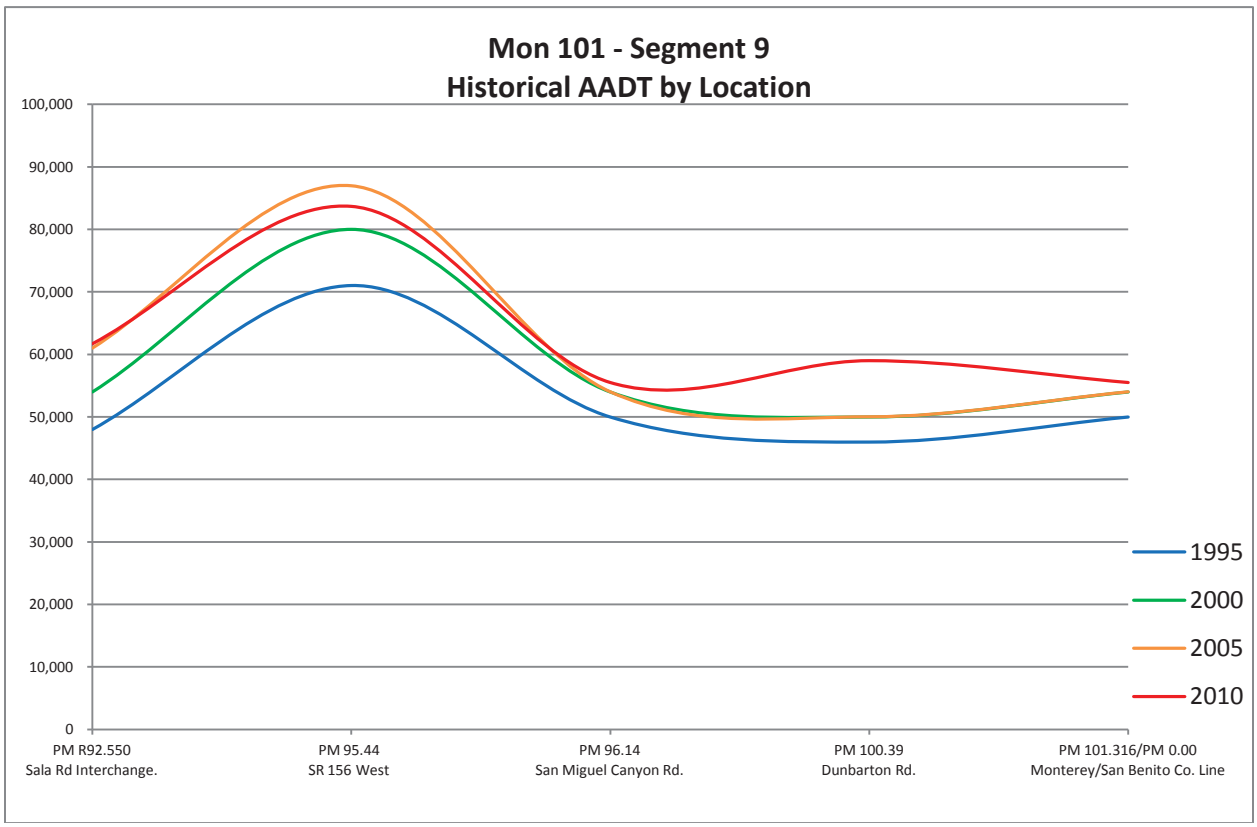

Figure 5.9.3: Segment 9-Historical AADT by Location

Table 5.9.2: Segment 9-Peak Hour Traffic Data

PM Peak Hour Traffic Data		
Segment 9		
Peak Direction	Southbound	MON PM 92.205/101.316
Peak Hour Length (Miles)	9.8 miles	
Peak Hour Volumes Base year 2010	4,800-10,300	
Peak Hour Volumes Horizon Year 2035	5,400-11,800	
Peak Hour Directional Split Base year 2010	49/51-52/48	
Peak Hour Directional Split Horizon Year 2035	48/52-50/50	
Peak Hour VMT Base year 2010	Northbound: 30,000	Southbound: 29,400
Peak Hour VMT Horizon Year 2035	Northbound: 35,900	Southbound: 38,300
Peak Hour VHT Base year 2010**	Northbound: 559+	Southbound: 523+
Peak Hour VHT Horizon Year 2035**	Northbound: 717+	Southbound: 822+
Peak Hour Growth Rate	27-108	
Peak Hour V/C Base year 2010	Northbound: 0.58-1.00	Southbound: 0.49-1.00
Peak Hour V/C Horizon Year 2035	Northbound: 0.63-1.09	Southbound: 0.59-1.21
Peak Hour LOS Base year 2010	Northbound: C- F	Southbound: B-F
Peak Hour LOS Horizon Year 2035	Northbound: C-F	Southbound: C-F
Peak Hour Avg. Speed (mph) Base year 2010	Northbound: 66-70 mph*	Southbound: 67-70 mph*
Peak Hour Avg. Speed (mph) Horizon Year 2035	Northbound: 54-69*	Southbound: 69-70*
Peak Hour Capacity Per Lane	2,000	

**Speeds and VHT with LOS F are not reflected in the data due to unstable speeds.*

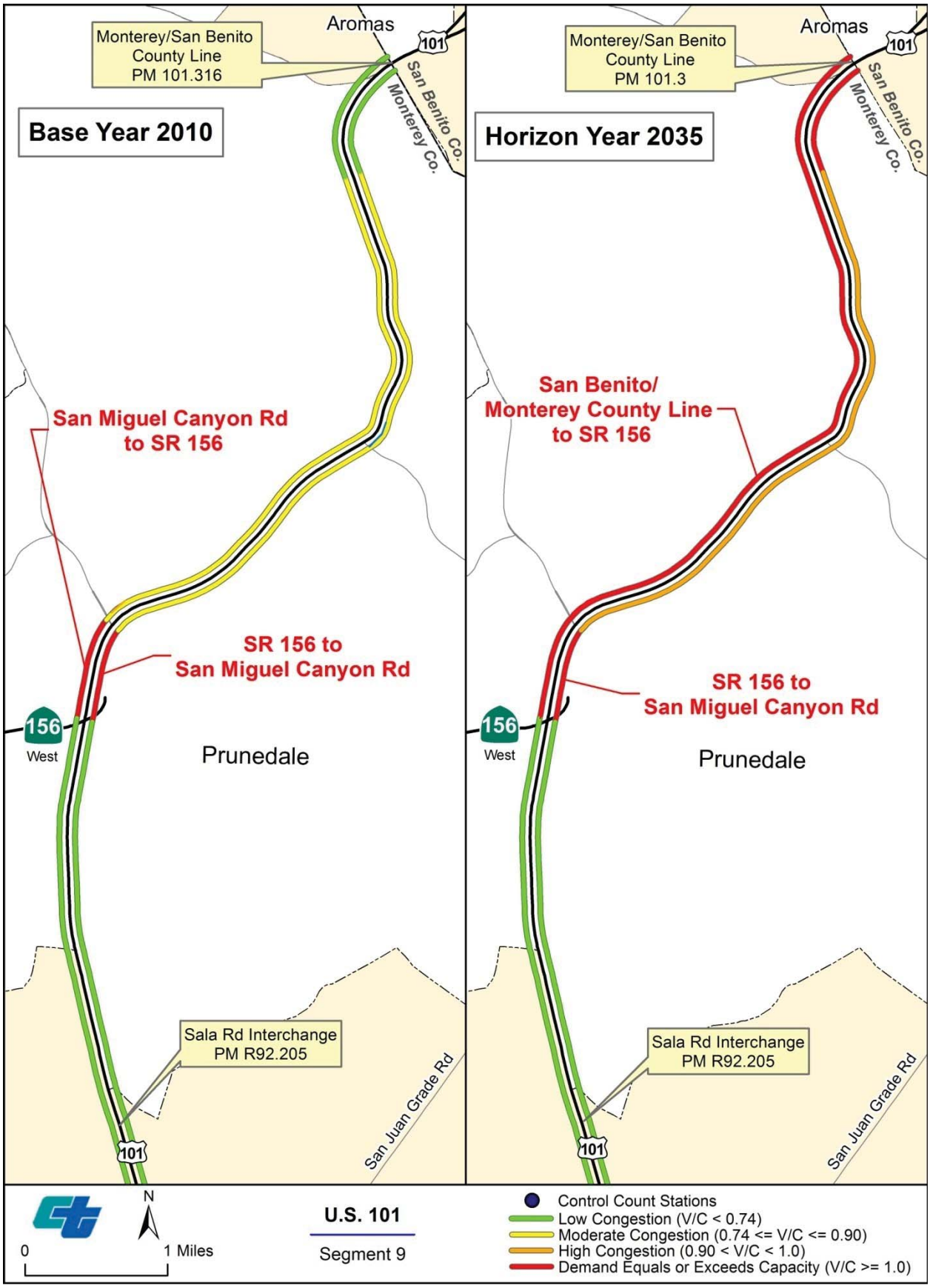

Figure 5.9.4: Segment 9-Base & Horizon Year Peak Hour Congestion

Segment 9 Corridor Performance Key Findings:

- Base Year (2010) Peak Hour Projections: Traffic volumes exceed capacity in the northbound and southbound direction between SR 156 West and San Miguel Canyon Road.

- Horizon Year (2035) Peak Hour Projections: Traffic volumes exceed capacity in the northbound and southbound direction between SR 156 West and the Monterey/San Benito county line.

- System Operations: The highest AADT volumes in 2010 are located between SR 156 West and San Miguel Canyon Road and is 83,700.

Segment 9 Corridor Concept (2035):

Segment 9 through Prunedale operates as a 4- to 6-lane expressway. The corridor performance analysis forecasts that within the 2010 base year demand is projected to exceed capacity between SR 156 West and San Miguel Canyon Road. By the 2035 horizon year, it is anticipated that from SR 156 West to the Monterey/San Benito County line congestion will range from high to demand exceeding capacity. To address this demand, the Prunedale Improvement project, completed Fall 2014, included construction of a new interchange, closed all median openings from Crazy Horse Canyon to Espinosa/Russell, and closed four at-grade access points within the project limits. The San Juan Road project, currently in construction will also construct a new interchange and remove three at-grade crossings. This project is reflected in Appendix J. The SR 156 West Corridor project, which includes widening and a new interchange at US 101/SR 156 West, is anticipated to provide added benefits to US 101. This project is currently in the design phase with construction planned for Fall 2019. Other operational improvement strategies to address congestion between SR 156 West and San Miguel Canyon Road should be discussed in partnership with TAMC. These strategies include but are not limited to auxiliary lane, ramp, and merge weave improvements.

Segment 9 has the greatest number cumulatively of at-grade access and driveway access points in District 5. The speed differential from vehicles entering and exiting the highway at these locations impact mainline mobility on US 101 and opportunities to develop access management strategies in partnership with TAMC and Monterey County should be pursued. This recommendation is consistent with 2013 ITSP and 2013 DSMP project list. Other strategies to improve mobility on US 101 through separation of local roadway movements from interregional movements on the facility should be further discussed with TAMC and Monterey County.

SEGMENT 10: SAN BENITO COUNTY

MONTEREY/SAN BENITO COUNTY LINE AND SAN BENITO/SANTA CLARA COUNTY LINE (PM 0.000/7.550)

Segment 10 is the primary route that connects the Salinas area with the Silicon Valley and provides an east-west connection between the cities of Monterey, Watsonville, and Santa Cruz to the Central Valley. This segment spans from the Dunbarton Road in Monterey to the San Benito/Santa Clara County line. Segment 10 accommodates significant amounts of interregional traffic, including commercial and agricultural trucking, and recreational traffic.

System Characteristics

Segment 10 is 7.4 miles of rural terrain starting at the southern limits at the Monterey/San Benito County Line and concluding in the north at the San Benito/Santa Clara County Line. This segment is four lanes containing truck climbing lanes and alternating between rural freeway and expressway (*Figure 5.10.1*). The 156 West interchange draws significant traffic volumes from US 101. Segment 10 contains five at-grade intersections. More detailed information of system characteristics is in Appendix D, Table D.2.

System Operations

AADT growth per year between years 2010 and 2035 is expected to range between 870 and 1,560 (Table 5.10.1). In 1994 AADT volumes ranged from 35,000 to 46,000 (*Figure 5.10.2*). In 2010, AADT volumes range from 48,000 to 58,000 and are expected to change in 2035 to a range of 75,000 to 88,100. The highest AADT is located at SR-156E with an AADT of 58,200 (*Figure 5.10.3*).

PM Peak Hour Data

Within the 2010 base year, congestion is low in both northbound and southbound directions (*Figure 5.10.4*). By the 2035 horizon year congestion is expected to increase to high levels with volumes exceeding capacity from SR 129 to the San Benito/Santa Clara county line in the northbound direction (*Figure 5.10.5*)

Capacity Need

By the 2035 horizon year, congestion is anticipated to increase to high levels between SR 129 (Chittenden Road) and the San Benito/Santa Clara county line (*Figure 5.10.5*).

Figure 5.10.1: Segment 10-System Characteristics

Table 5.10.1: Segment 10-Daily System Operations

Daily System Operations	
Segment 10	
AADT Base Year 2010	48,000-58,000
AADT Horizon Year 2035	75,000-88,000
AADT: Growth Rate/Year	870-1,560
VMT Base Year 2010	390,000
VMT Horizon Year 2035	630,000

**2010 base year is established by Caltrans historic data and 2035 horizon year projections are based on the AMBAG regional traffic model.*

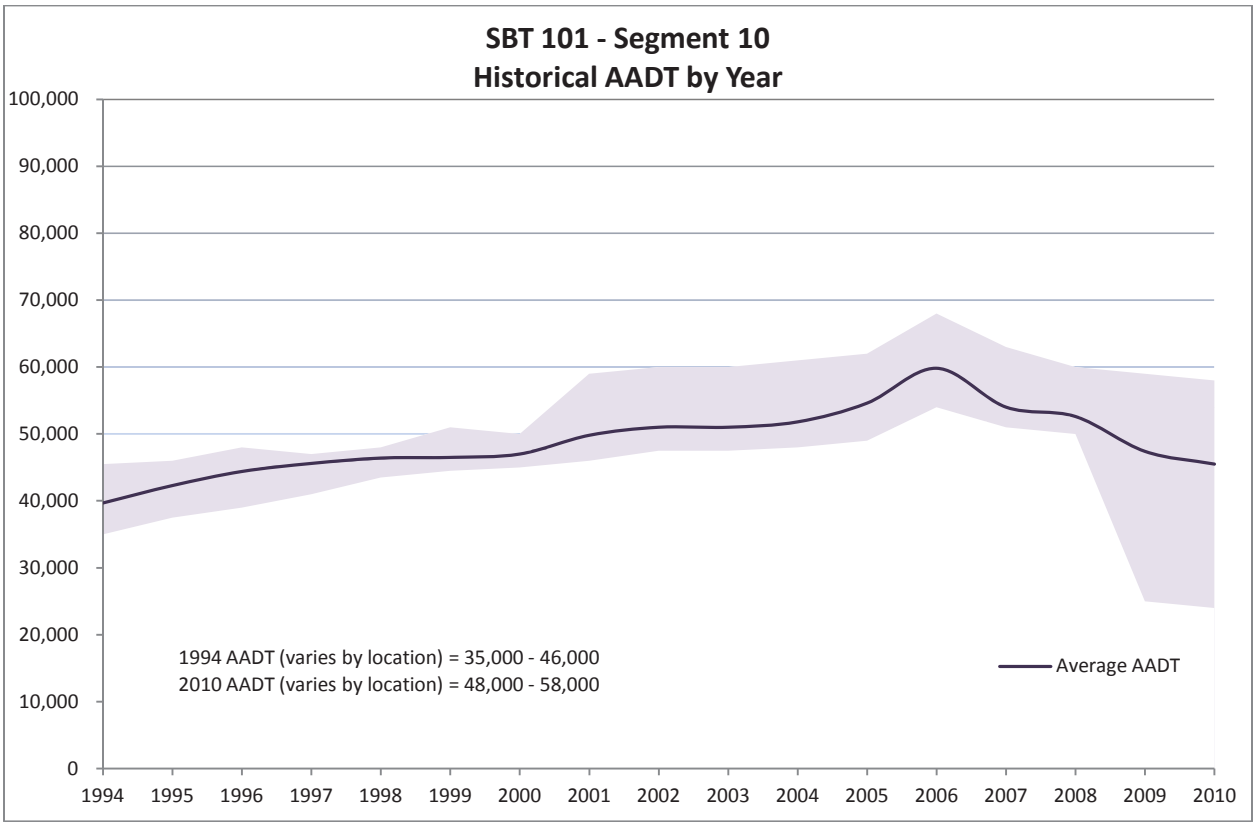

Figure 5.10.2: Segment 10-Historical AADT by Year

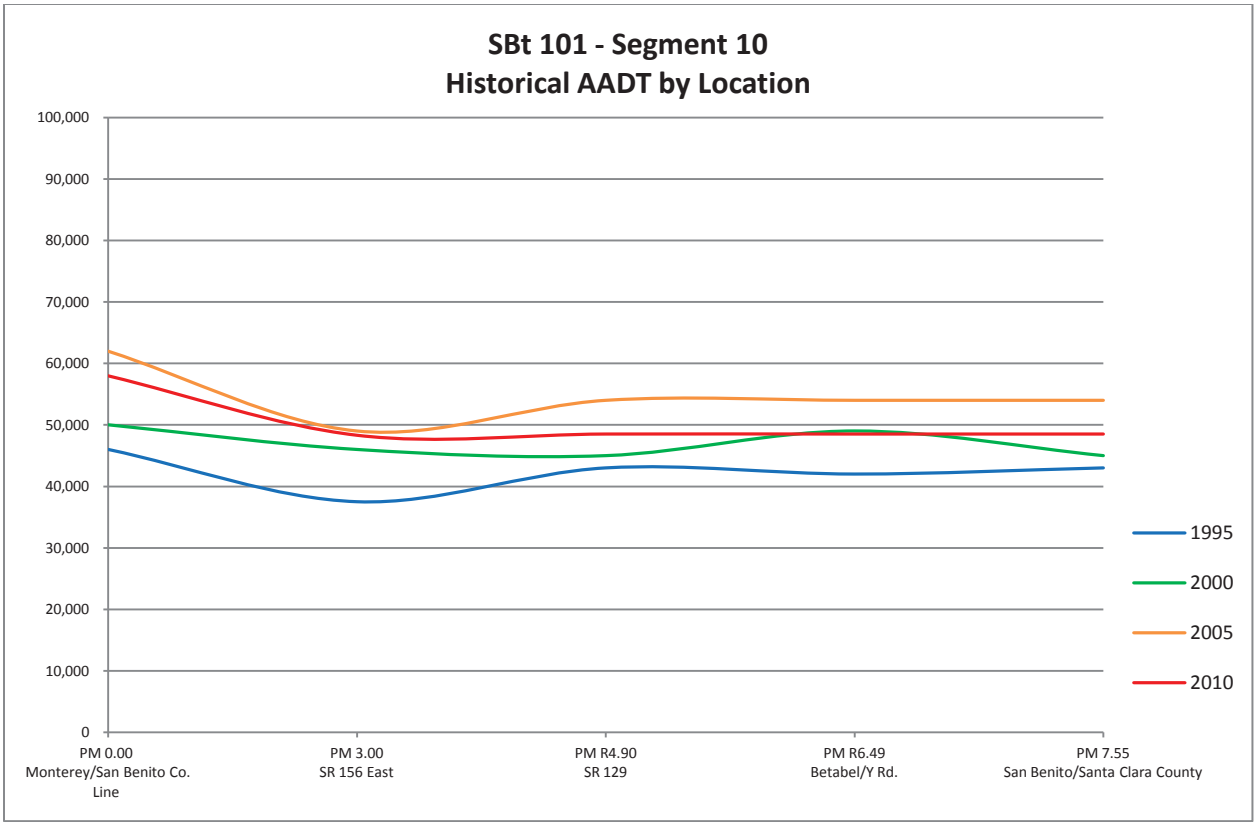

Figure 5.10.3: Segment 10-Historical AADT by Location

Table 5.10.2: Segment 10-Peak Hour Traffic Data

PM Peak Hour Traffic Data		
Segment 10		
Peak Hour Length (Miles)	7.411 miles	
Peak Hour Volumes Base year 2010	4,700-5,500	
Peak Hour Volumes Horizon Year 2035	7,400-8,400	
Peak Hour Directional Split Base year 2010	46/54-51/49	
Peak Hour Directional Split Horizon Year 2035	50/50-53/47	
Peak Hour VMT Base year 2010	Northbound: 18,100	Southbound: 19,900
Peak Hour VMT Horizon Year 2035	Northbound: 29,800	Southbound: 28,000
Peak Hour VHT Base year 2010	Northbound: 310	Southbound: 330
Peak Hour VHT Horizon Year 2035	Northbound: 610*	Southbound: 570
Peak Hour Growth Rate	85 - 134	
Peak Hour V/C Base year 2010	Northbound: 0.54-0.68	Southbound: 0.45-0.68
Peak Hour V/C Horizon Year 2035	Northbound: 0.93-1.11	Southbound: 0.61-1.00
Peak Hour LOS Base year 2010	Northbound: C	Southbound: B-C
Peak Hour LOS Horizon Year 2035	Northbound: E-F	Southbound: C-E
Peak Hour Avg. Speed (mph) Base year 2010	Northbound: 69-70 mph	Southbound: 69-70 mph
Peak Hour Avg. Speed (mph) Horizon Year 2035	Northbound: 55-59 mph	Southbound: 54-69 mph
Peak Hour Capacity Per Lane	2,000	

**Speeds and VHT with LOS F are not reflected in the data due to unstable speeds.*

Figure 5.10.4: Segment 10-Base Year Peak Hour Congestion

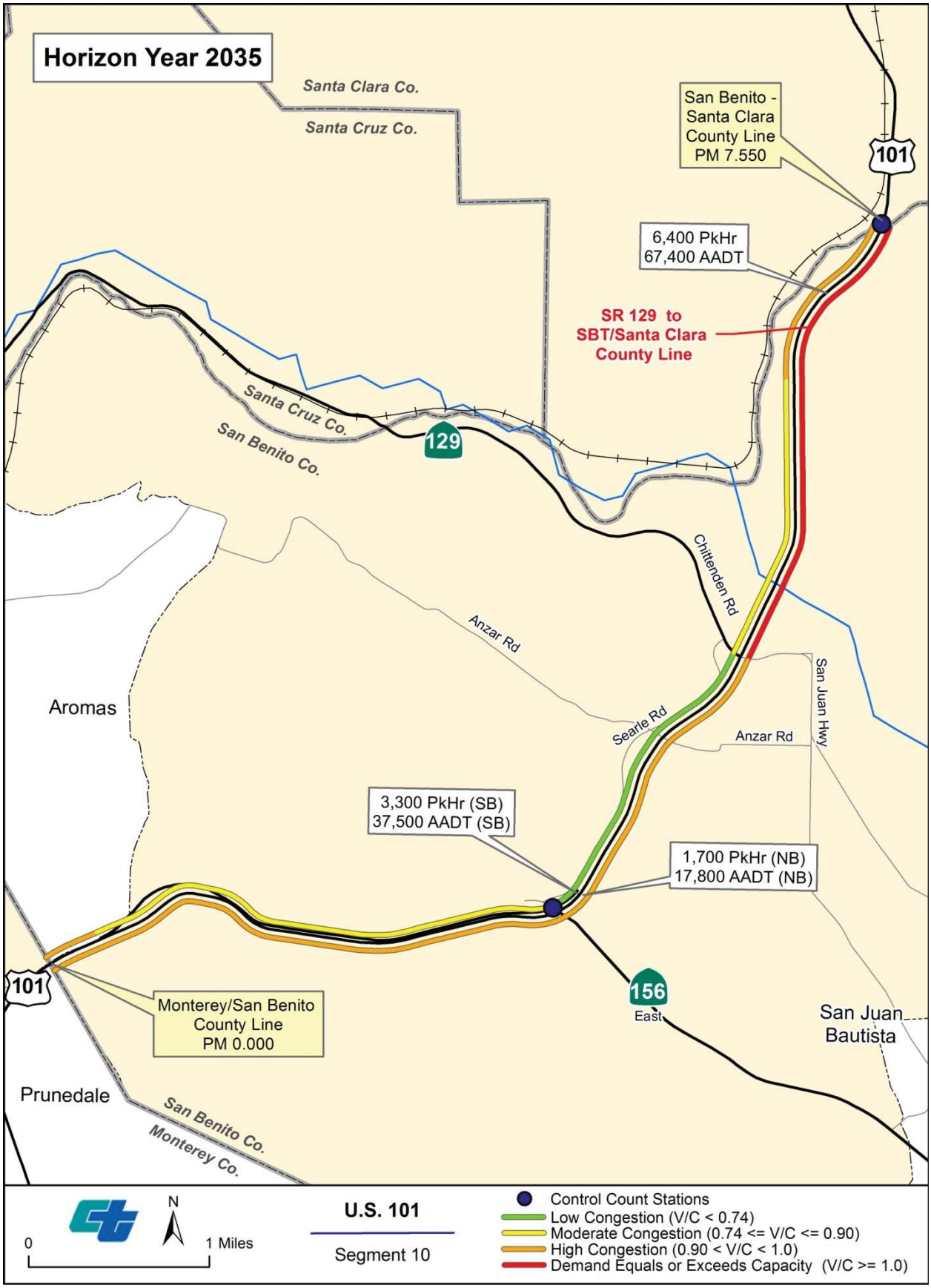

Figure 5.10.5: Segment 10-Horizon Year Peak Hour Congestion

Segment 10 Corridor Performance Key Findings:

- Base Year (2010) Peak Hour Projections: Congestion remains low in both the northbound and southbound directions.

- Horizon Year (2035) Peak Hour Projections: Traffic volumes exceed capacity in the northbound direction between SR 129 and the San Benito/Santa Clara county line.

- System Operations: The highest AADT volumes in 2010 is located at SR 156 East and is 58,200.

Segment 10 Corridor Concept (2035):

Segment 10 through San Benito County operates primarily as a 4-lane freeway with an expressway portion between the Monterey/San Benito county line and Pinecate Rock Creek. The corridor performance analysis forecasts that by the 2035 horizon year demand is projected to exceed capacity between Chittenden Road (SR 129) and the San Benito/Santa Clara county line. Increasing capacity in this segment is identified as a priority in the AMBAG *2035 MTP-SCS*.

District 4 has completed a project through PA&ED to widen US 101 to 6-lanes extending across Santa Clara County line to SR 129 but no funding has been identified for construction. The AMBAG *2035 MTP-SCS* (2014) identifies 6-lane widening of US 101 between SR 156 to SR 129 and from SR 129 to the Monterey/San Benito County line as two separate planned projects (Appendix J).

Opportunities to develop access management strategies in partnership with SBtCOG and San Benito County should be pursued from the Monterey/San Benito county line to Pinecate Rock Creek. This works toward the ultimate concept of freeway conversion.

CHAPTER 6: KEY CORRIDOR ISSUES AND RECOMMENDATIONS

Travel Demand:

Issue: Chapter 5's corridor performance analysis section of this report identifies locations throughout the corridor where demand is expected to exceed capacity by the 2035 horizon year.

Recommendation: A combination of different improvements including implementation of Intelligent Transportation Systems, Transportation System Management, Transportation Demand Management, bicycle, transit, rail, operational improvements, and access management must be considered and implemented strategically to maintain US 101 mainline mobility. In some segments, additional need for capacity is expected. Prioritization and implementation of these improvements must happen through continuing, cooperative and comprehensive planning with local and regional transportation partners in District 5. A list of currently planned and programmed projects for US 101 is located in Appendix J.

Access Management:

Issue: At-grade intersections and driveways create potential conflict points and affect travel reliability of the corridor.

Recommendation: Focus access management of at-grade intersections where congestion levels are projected to be high or demand is projected to equal or exceed capacity by the 2035 horizon year. Continuing, cooperative and comprehensive interagency planning to improve local route connectivity and parallel route development is needed to achieve this goal. Access management should also be considered opportunistically and coordination with other US 101 projects. This supports the 2035 corridor concept and ultimate concept for freeway conversion. This goal is consistent with the 2013 Interregional Transportation Strategic Plan (ITSP), 2013 DSMP project list, and freeway agreements.

Issue: Closely spaced interchange ramps create US 101 mainline operational deficiencies (specific locations include but are not limited to US 101 interchanges in the City of San Luis Obispo and City of Salinas).

Recommendation: Partner with local agencies, through the appropriate public outreach process, to develop interchange reconfiguration strategies.

Bicycle:

Issue: Key issues facing bicyclists on US 101 District 5 include:

- Travel across US 101 including through interchanges
- Structural or other limitations to widening at the Arroyo Quemado Bridge and Gaviota Tunnel in Santa Barbara County where an alternate route is not available.
- Pavement quality on shoulders
- Planning for bicycle travel during construction
- Suitable alternate routes parallel to US 101 where bicycles currently travel on US 101

Recommendation: Future improvements should be focused on addressing the key issues listed in coordination and funding partnership with the local agencies, RTPAs, and MPOs. Caltrans supports parallel network development and cross access improvements to provide bicyclists with alternatives to US 101.

Multimodal Travel:

Issue: Multimodal travel options must be improved to meet future transportation needs.

Recommendation: Caltrans will continue to work in partnership with the Metropolitan Planning Organizations (MPOs) and Regional Transportation Planning Agencies (RTPAs) in District 5 to support the improvement of rail and transit service. This includes supporting: extensions of existing and new peak period passenger rail service; rail infrastructure improvements; enhanced bus service; bus rapid transit studies; transit studies intended to guide overall transit efficiency, connectivity and reliability; and studies that would investigate origin and destination trends to improve transit and rail services across county lines.

Freight:

Issue: With the high level of freight/goods movement on US 101, there is a need to evaluate existing and future truck access, parking, and overall travel needs throughout District 5. Providing roadside rest area facilities which can accommodate a sufficient numbers of large trucks, is a challenge. For example, the Gaviota roadside rest areas have limited and informal truck parking or break check areas such as those located at Nojoqui Summit, Refugio Interchange or Cuesta Grade have experienced litter and human waste left onsite. Because of this, these areas have been/are subject to permanent closure. Truck parking also creates tensions between communities and the industry, which frequently result in complaints to Caltrans or other public agencies.

Recommendation: Caltrans is working in partnership with AMBAG and the other MPOs and RTPAs in District 5 on a regional freight study to identify priorities for improvements that would have the greatest benefit to freight.

Transportation System Management (TSM):

Issue: Existing and future demand will require implementation of strategies to maximize system performance and long-term mobility of US 101.

Recommendation: Transportation System Management (TSM) strategies must be pursued to improve system performance and maximize the efficiency, safety, and utility of existing and planned infrastructure of US 101. This includes activities such as incident management, traffic signal coordination, transit signal priority (TSP) and bus rapid transit (BRT), freight management, work zone management, special event management, road weather management, congestion pricing, managed lanes (ramp meters, High Occupancy Vehicle [HOV] and High Occupancy Toll [HOT] lanes), parking management, electronic toll collection, transit smart cards, and other operational improvements. On US 101 in District 5, Caltrans currently operates and constructs managed lane improvements including ramp meters and HOV lanes. Caltrans will continue to evaluate viability and application of managed lane improvements and other TSM strategies for US 101. Additionally, Caltrans will continue to support the MPOs and RTPAs in management of freeway service patrol programs and pursuit of other TSM improvements.

Transportation Demand Management (TDM) and Multimodal Transportation:

Issue: Dependence on the single occupancy vehicle for travel will not contribute to sustained mobility of US 101.

Recommendation: Multimodal transportation enhancements must be pursued to reduce demand and support long-term mobility on US 101. As identified in the *Caltrans Deputy Directive 64: Complete Streets-Integrating the Transportation System* (2008), the Department supports viable transportation options for all users. Caltrans, in partnership with the MPOs and RTPAs in District 5, support the integration of transit, bicycle, and pedestrian transportation on frontage roads, parallel routes, and adjacent paths into a coordinated multimodal transportation system. Improving the carrying capacity for bicycles on trains and buses is also recommended to encourage the integration of modes. Multimodal stations or future transit centers should be strategically placed in locations accessible to all modes of transportation. Caltrans looks to its local and regional partners to coordinate multimodal strategies.

Recommendation: Transportation Demand Management (TDM) strategies must be pursued to reduce overall travel demand on US 101 and better facilitate mobility options. This includes promoting transportation options such as telecommuting, vanpools, carpools, ridesharing, alternate work schedules, and route selection. Caltrans supports local and regional agency efforts to establish new park-and-ride lots and transit centers at locations that are multimodal accessible. Public transit providers should also be encouraged to serve existing park-and-ride lots.

Intelligent Transportation Systems (ITS):

Recommendation: Caltrans will continue to pursue and implement ITS strategies to improve safety, reduce congestion, enhance mobility, minimize environmental impacts, conserve energy and promote economic productivity on US 101. This is demonstrated through Caltrans active leadership role in the incorporation and communication of real time data and data collected from existing in road detection devices. As ITS technology continues to advance, Caltrans will continue to coordinate with its local and regional partners on strategies to utilize new ITS technology for the benefit of US 101 and the state transportation system.

System Management and Preservation:

Issue: The 2013 Ten-Year SHOPP estimates that $2 billion per year will be available to address annual statewide needs. This covers only 25 percent of the total need for the State Highway System on an annual basis.

Recommendation: Caltrans will continue to maintain the State Highway System in an equitable manner statewide and encourage policy decisions that will garner additional funding for maintenance needs. This includes maintenance and operational improvements designed to get full return on system investments, as well as to maintain safety and reduce traveler costs and delay.

Climate Change and Sea Level Rise:

Issue: Sea level rise projections within the next 100 years anticipate a threat to infrastructure.

Recommendation: Caltrans supports future long range planning for sea level rise impacts.