
CITY OF SOLVANG

CIRCULATION ELEMENT



Solvang City Council

Linda Jackson, Mayor
Ken Palmer
Edwin Skytt
Jim Richardson
Eugene J. Boyle

Planning Commission

Aaron Petersen, Chair
Day Yeager
Melissa DeLeon
Jim Hickling
Kathi Hopkins

Staff

Bradley S. Vidro, City Manager
Roy Hanley, City Attorney
Shelley Stahl, Planning & Community Development Director
Tully Clifford, Public Works Director

Consultants

Firma

David Foote, Principal ASLA
Kristina Gee, Senior Planner

Penfield & Smith

Derek Rapp, Principal Transportation Engineer
Lisa Valdez, Senior Transportation Planner

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CITY OF SOLVANG

Circulation Element of the General Plan



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1.0 INTRODUCTION

The Circulation Element is the guide for the City to provide a balanced circulation system that addresses existing deficiencies and provides adequate capacity to support the travel demands of future development. To achieve this, the Circulation Element establishes acceptable roadway service levels and identifies improvements required to maintain the service levels. The Circulation Element promotes alternative modes of transportation, such as transit, walking, and bicycling to reduce the demand for transportation system improvements and to improve air quality. The Circulation Element contains policies to facilitate the development of more detailed circulation system implementation programs for the future.

The Circulation Element addresses transportation problems, yet recognizes solutions for these may be beyond the City's ability to remedy. As the Santa Ynez Valley continues to develop, traffic volumes will increase on Mission Drive (State Route 246) through Solvang. The solution to this problem involves focus on regional coordination and a joint planning effort between the City, County of Santa Barbara, City of Buellton, local service districts, the Santa Ynez Band of Chumash Indians, Caltrans and the Santa Barbara County Association of Governments.

The Circulation Element is divided into four sections: (1) Introduction; (2) Goals, Policies, and Action Items; (3) the Circulation Plan; and Appendix A – Traffic Analysis.

PURPOSE

The Circulation Element is one of seven required elements of a City or County's General Plan. State planning law states that a Circulation Element shall consist of:

“...the general location and extent of existing and proposed major thoroughfares, transportation routes, terminals, and other local public utilities and facilities, all correlated with the land use element of the plan.”

Since the Circulation Element was first required in 1955, transportation technology and needs in California have changed greatly, with the emphasis today on the development of a balanced, multi-modal transportation system. The Circulation Element addresses all facets of circulation including streets and highways, transportation corridors, public and para-public transit, railroads, bicycle, pedestrian and parking facilities, and commercial and general airports. The State's General Plan Guidelines recommend that the circulation policies and plans:



- Coordinate the transportation and circulation system with planned land uses;
- Promote the efficient transport of goods and the safe and effective movement of all segments of the population;
- Make efficient use of existing transportation facilities; and,
- Protect environmental quality and promote the wise and equitable use of economic and natural resources.

HISTORY

The City of Solvang's Circulation Element was last updated in April 1991. The primary change to the previous plan included removing the planned Elverhoy Way road extension which would have extended the terminus of Elverhoy Way across the Duff Mesa to the terminus of Alamo Pintado Road, south of Mission Drive. This was in response to the approval of Measure Q which was on the ballot in June 1990. Seventy-five percent of the Voters supported removing the Elverhoy Way extension from the General Plan. On September 13, 1993, the City Council gave final approval to eliminate the roadway extension from the General Plan. There have been no major changes to the policies and proposals as part of the current Circulation Element update. The update provides new traffic data and analysis (Appendix A) and incorporates the Parking Element into the Circulation Element.

KEY ISSUES

The key issues affecting circulation in Solvang have not changed significantly since the last Circulation Element update. The primary deficiencies in the existing circulation system include the following:

- Local and regional traffic are forced to use Mission Drive as the primary east-west route.
- A lack of alternative east-west routes through the City.
- Significant regional traffic traveling through the City (approximately 65% of Mission Drive traffic).
- Diversion of local and regional traffic through neighborhoods.



The lack of an alternate to Mission Drive (State Route 246) for an east-west route through the City is resulting in increasing congestion on Mission Drive and diversion of traffic through residential neighborhoods. State Route 246 (Mission Drive) is currently operating at level of service D to E within the City limits. The signalized intersections on Mission Drive are operating at LOS C or better, however upon build-out of the residential and commercial zones within the City, these intersections would be operating at unacceptable levels.

In the short term, Mission Drive will continue to serve as the major access route to the Village area and as a through route for regional traffic. The Circulation Element proposes minor intersection improvements and local east-west connectors that will assist traffic flows to maintain acceptable intersection operations, with a complete bypass for the Valley, as the desired long-term solution.

Finally, the volume and speed of traffic on residential streets are key determinants in the quality of life residents perceive of their neighborhoods. Therefore the circulation system must not only facilitate the movement of people and goods and be coordinated with regional facilities, but also maintain an acceptable quality of life in residential areas.

RELATED PLANS AND PROGRAMS

Other General Plan Elements

In accordance with State planning law, the Circulation Element must be consistent with the other General Plan elements. The Land Use Element, Housing Element and Circulation Element are directly related. The Land Use Element specifies the type, density, intensity, and pattern of development, thus establishing the potential magnitude and pattern of future vehicle trips. The policies and circulation plans in the Circulation Element identify the improvements to the transportation system that will be required in

order to service traffic generated by the uses allowed in the Land Use and Housing Elements. In addition, the Circulation Element promotes alternative modes of transportation to minimize the regional impacts of planned local development.

The Noise Element contains policies and plans geared towards easing the adverse effects of noise on the community that are directly attributable to the future transportation plans contained in the Circulation Element. Exposure to noise will be a key consideration when locating and designing new developments along roadways and other transportation related noise sources.



Regional Plans

State Route 246 (Mission Drive) is a regional route that provides the primary connection between U.S. Highway 101 and State Route 154 through the Santa Ynez Valley. The regional traffic plans that the City must consider include the Metropolitan Transportation Plan (formerly the Regional Transportation Plan) and the Congestion Management Program (CMP). Both plans are administered by the Santa Barbara County Association of Governments (SBCAG). The regionally significant transportation improvements contained in the Metropolitan Transportation Plan (MTP) for the Santa Ynez Valley involve improvements to the Highway 101 interchange in Buellton and a reconfiguration of the intersection at Routes 154 and 246 to improve safety. In addition, bikeway system improvements and minor capacity additions to roadways are proposed.

Unresolved in the MTP is the issue of addressing the potential for congestion along SR 246 (Mission Drive) associated with increased traffic growth. The two main proposals for addressing congestion along SR 246 (Mission Drive) are expansion of the roadway to four lanes and a bypass route that would extend Santa Rosa Road to bypass Buellton and Solvang. The Buellton City Council has tabled consideration of the Santa Rosa bypass until the year 2009. The bypass project is not included in the County's General Plan and more recently it has been removed from the MTP. According to the MTP, the bypass should be a focus of a corridor wide update and include the two cities, County, SBCAG, and Caltrans. As such the Santa Rosa bypass is identified in Section 3 of the Circulation Element as a Plan Proposal.

The SBCAG Congestion Management Program (CMP) is intended to address congestion problems on State Highways and principal arterials in a coordinated manner between transportation and land use agencies, transit providers and air pollution control districts. The CMP applies to all incorporated cities and unincorporated areas

in the County of Santa Barbara. In Solvang, both SR 246 (Mission Drive) and the intersection of Alamo Pintado Road and SR 246 are part of the CMP network. The City must comply with the following key components of the CMP:

- The annual monitoring of the designated network of CMP intersections and roadways (through the collection of traffic counts);
- The application of the CMP impact thresholds in the CEQA review process for development projects; and
- The Transportation Demand Management (TDM) element aimed at reducing the rate of growth in single occupant vehicle usage.



EXISTING TRANSPORTATION SYSTEM

The City of Solvang is served by a simple network of roadways and bikeways. Located inland, access to Solvang is possible via three primary corridors: U.S. Highway 101 and State Routes 154 and 246. These corridors traverse the County in a north, northwesterly and westerly orientation, creating a triangular network of roads. This network connects Solvang to the City of Buellton, communities of Los Olivos and Santa Ynez, the City of Santa Barbara and points north and south in the State.

Within the limits of Solvang, all of the roads fall under the jurisdiction of the City, except Mission Drive which is part of the State Highway system and under the jurisdiction of Caltrans. Outside of the City, in the adjacent areas of the Santa Ynez Valley, the roads fall under the jurisdiction of the County of Santa Barbara and are constructed, maintained and operated by the County Department of Public Works. In addition to the City, County, and State which build and maintain roads in the vicinity of Solvang, the Santa Barbara Association of Governments is responsible for the long-range planning of transportation facilities in the Valley.

State Highways

U.S. Highway 101 indirectly serves Solvang. Being one of the major links connecting facilities between San Francisco and Los Angeles, this freeway carries a considerable amount of north-south traffic. Located approximately four miles west of Solvang, Highway 101 is primarily a four-lane freeway within the County of Santa Barbara. Highway 101 is accessible to Solvang by means of State

Route 246 which intersects Highway 101 in Buellton. The average daily traffic on Route 101 near State Route 246 is approximately 24,000 vehicles.



State Route 246 is a two-lane route that extends in an east-west direction beginning at the westerly city limits of Lompoc and moving easterly through the communities of Lompoc, Buellton, Solvang, and Santa Ynez terminating at State Route 154. Route 246 is Solvang's major access route to U.S. Highway 101. Average daily traffic on this route near the Solvang Village Area ranges from about 22,600 vehicles on weekends during the summer tourist season to 20,630 on a typical weekday.

State Route 154 constitutes a bypass route of U.S. Highway 101 extending from San Marcos Pass in Santa Barbara to north of Los Olivos. The route passes through the inland communities of Los Olivos and Santa Ynez. The average daily traffic along the route near Solvang is approximately 16,000 vehicles daily north of Route 246 and 9,300 vehicles daily south of Route 246. The route is a two-lane roadway that extends in northwesterly and southeasterly directions. It accommodates considerable recreational traffic since it is the only route providing access to Lake Cachuma. The route does not directly serve Solvang but meets State Highway 246 approximately 5 miles east of the City.

Key Arterials and Local Streets

A description of the major road segments within Solvang's Village area is provided in the following section. The existing street network is illustrated in Exhibit 1 and the existing average daily traffic volumes on these roadways are presented on Exhibit 2.

Mission Drive is a two-lane east-west roadway that passes through the Village Area of the City. It is the only direct east-west route through the City. Mission Drive is an integral segment of State Route 246 and is under the jurisdiction of Caltrans. It carries a considerable amount of traffic passing through the City as well as traffic going to the Village area. This road carries an average daily traffic volume of approximately 20,630 vehicles, west of Fifth Street, 17,640 vehicles between Fifth and Alisal Road, and approximately 22,190 vehicles between Pine Street and Alamo Pintado Road. This road is intended to serve as a secondary type of intercity or community highway, with an engineering design capacity of up to 1,900 vehicles per peak hour. Caltrans reconstructed Mission Drive through downtown Solvang (from the western side of the Village to east of Pine Street), which included installation of a traffic signal at

Fifth Street, curb, gutters and sidewalks, a median with a left-turn lane and designated on-street parking spaces. The project improved the flow of traffic along Mission Drive by providing designated left-turn pockets which eliminate the congestion caused by left-turning vehicles blocking the through travel lane. Traffic counts conducted along Mission Drive during May 2007 indicate that all of the signalized intersections are operating at level of service C or better on weekday afternoon peak hours. Mission Drive road segments are operating at level of service D to E.



Fifth Street is a two-lane collector street that provides access to Mission Drive and the central business district. In general, this street was observed to carry moderate levels of traffic, estimated to be approximately 2,220 vehicles per day north of Mission Drive and 3,120 south of Mission Drive.

Atterdag Road provides access to the Village area, to Chalk Hill Road and Ballard Canyon Road which lead to the communities north of Solvang. Atterdag is a north-south, two-lane roadway which carries 3,090 vehicles a day, north of Mission Drive. Being a collector road and providing access to the heart of the City, Atterdag Road has relatively heavy volumes of traffic.

Alisal Road is a two-lane road which serves local circulation in the Village area and is also a major access road for traffic moving north-south within the City as well as out of the City. This street has dual classification. North of Mission Drive, Alisal Road is classified as a major arterial road while south of Mission Drive it is classified as a secondary arterial. The average daily traffic volume on this road is about 8,080 vehicles immediately south of Mission Drive, decreasing steadily as you move south and toward Alisal Ranch. It carries approximately 2,980 vehicles per day north of Maple Avenue.

Copenhagen Drive is primarily a collector street that serves as the main route through the downtown area. Copenhagen Drive is a two-lane street with diagonal and parallel parking at various locations on either side.

Oak Street is an east-west, two-lane collector street that not only serves as an access road but also as a bypass route to traffic avoiding congestion in the Village area. Existing weekday traffic volumes observed on this street were 3,110 vehicles per day.

Alamo Pintado Road is a major north-south arterial which intersects Mission Drive at a signalized intersection on the eastern edge of the City and provides access to the communities north of

Solvang. Alamo Pintado has been fully improved as a four-lane road south of Village Lane but narrows to a two-lane facility north of Village Lane. Alamo Pintado crosses Mission Drive and ends at a dead-end about one block to the south. Existing average daily traffic volumes on Alamo Pintado between Mission Drive and Viborg Drive are approximately 12,620 vehicles per day and about 5,990 vehicles per day north of Viborg Drive.



Viborg Drive is a two-lane residential collector street extending in an east-west direction between Fredensborg Canyon Road and Alamo Pintado Road. It provides access to the residential areas in the northern portion of the City. Traffic volumes are estimated to be approximately 2,500 vehicles per day.

Fredensborg Canyon Road is a two-lane winding rural facility, which connects Atterdag Road to Viborg Road as well as providing access to homes farther to the north in Fredensborg Canyon. Traffic volumes on Fredensborg Canyon Road are estimated to be less than 2,500 vehicles per day.

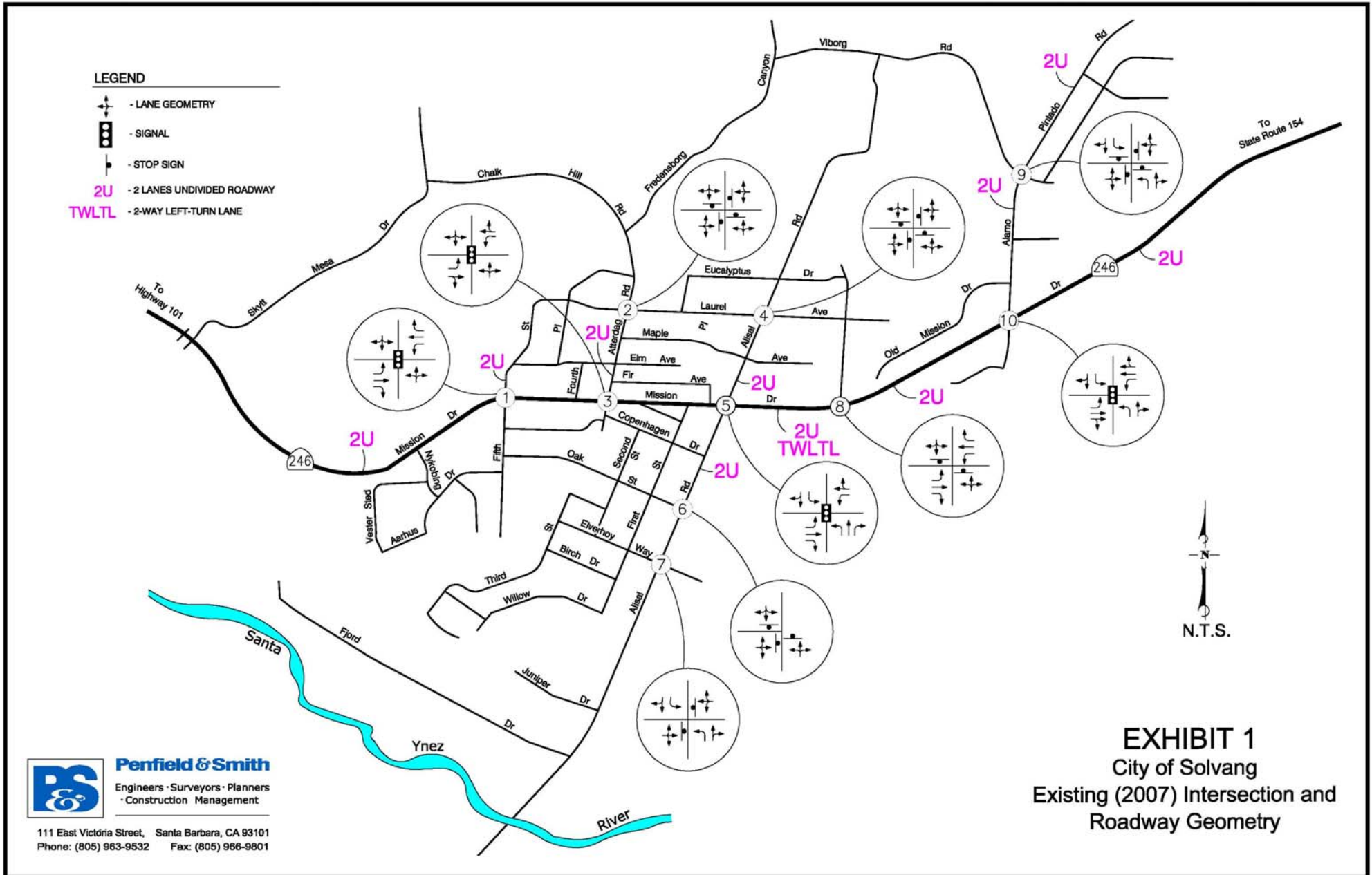
Functional Classification

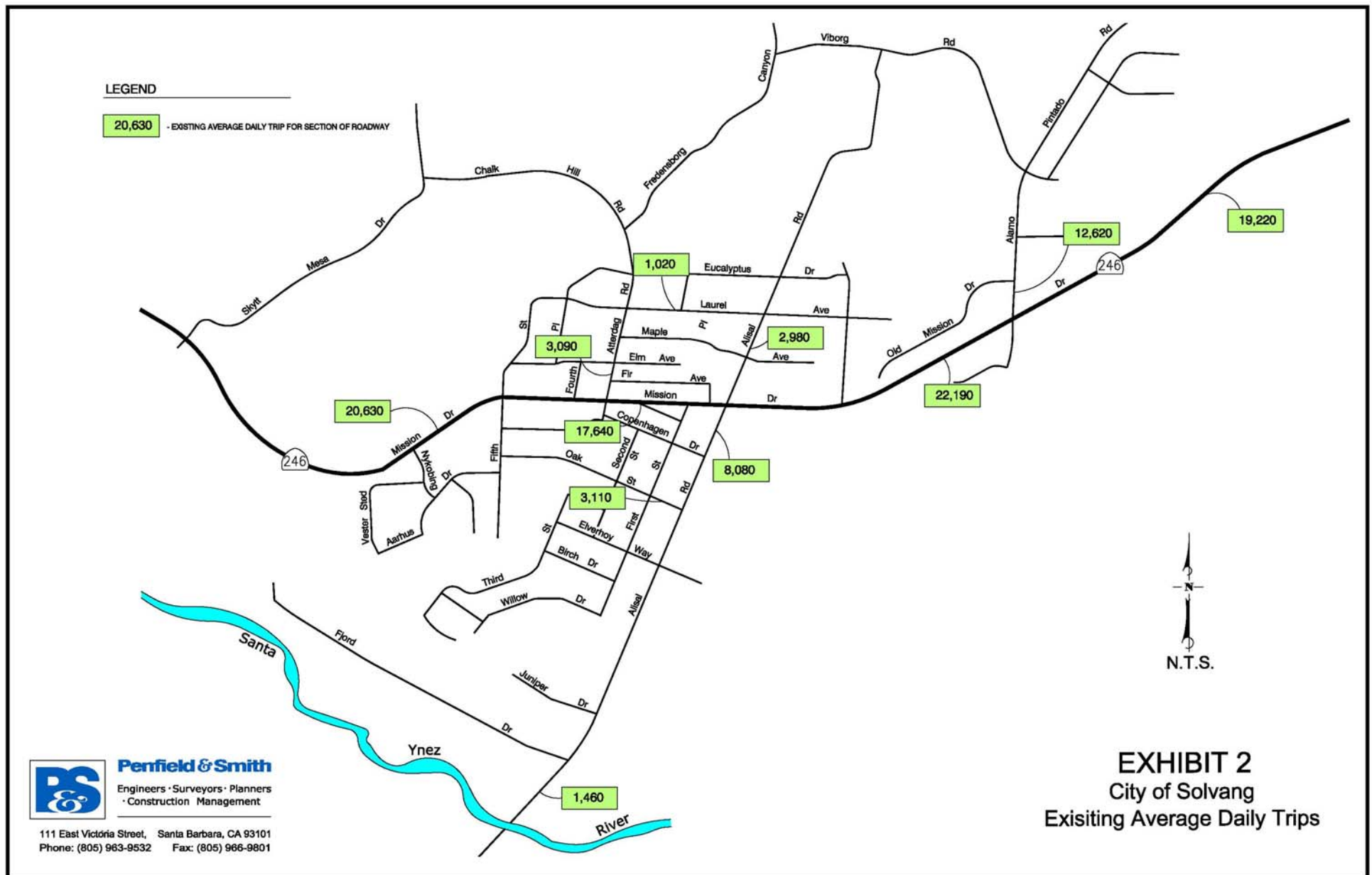
The functional classification of a roadway is intended to establish its function or role in the overall circulation system. It establishes the hierarchy of streets in terms of their purpose in relation to movement of through traffic versus provision of access to adjacent land uses. Typically, the hierarchy of roadway classifications ranges from freeways (with full access control, grade-separated interchanges, high speed/high volume traffic, etc.) to local streets (with unlimited access to fronting properties, low speed/low volume traffic, and emphasis on multi-purpose use of the street for travel, parking, pedestrian and bicycle activity). The City of Solvang's functional classification system ranges from Highway to Local. The City has adopted roadway design standards to conform to the functional classification descriptions included in the Circulation Element and requires that all new facilities be implemented in conformance with those standards.

Table 1 presents the City's designated roadway classifications and functional characteristics. Exhibit 3 illustrates the functional classifications by roadway.

Table 1
Roadway Classifications and Functional Characteristics

Description of Street Types	Travel Lanes	Desired Maximum ADT	Required Right-of Way	Designated Roads in Solvang
Highway <ul style="list-style-type: none"> ▪ At least partial control of access. ▪ May or may not be divided. ▪ Primary type of intercity or community facility expected to carry the majority of traffic between Solvang, adjacent communities and the Regional Highway/State Highway System. 	<ul style="list-style-type: none"> ▪ 2-4 lanes with shoulders and medians where right-of-way permits. ▪ Left turns at intersections. 	<p align="center">2 lanes- 26,500 ADT 4 lanes- 45,000 ADT</p>	100 feet	<ul style="list-style-type: none"> ▪ SR 246, west of Nykobing ▪ SR 246, east of Alamo Pintado ▪ Proposed Santa Rosa Rd. extension, between Highway 101 and SR 154
Major Arterial <ul style="list-style-type: none"> ▪ Divided road with at grade intersections. ▪ Partial control of access. ▪ Serves as secondary type of highway carrying local through traffic within City but primarily providing access to shopping, residential, and recreational areas, employment centers and places of assembly. 	<ul style="list-style-type: none"> ▪ 2-4 lanes with curb parking and median left turn lanes where right of way permits. ▪ Left turn lanes at major intersections. 	<p align="center">2 lanes- 19,000 ADT 4 lanes- 38,000 ADT</p>	96 feet	<ul style="list-style-type: none"> ▪ Mission Dr., between Nykobing and Alamo Pintado ▪ Alamo Pintado, north of Mission ▪ Alisal Rd., between Mission and the proposed Santa Rosa Rd. extension
Secondary Arterial <ul style="list-style-type: none"> ▪ Undivided road with at grade intersections. ▪ Partial control of access. ▪ Can serve as a secondary type of highway for locally-generated traffic to connect to the major arterial street network. ▪ Primarily serves as access routes for local residents to activity areas in the City. ▪ May also provide direct access to residences. 	<ul style="list-style-type: none"> ▪ 2 lanes with curb parking and left turn lanes at major intersections. 	10,000 ADT (Determined not by the physical road capacity, but by the desire to maintain an acceptable level of traffic on these facilities which may front residential land uses).	60 feet	<ul style="list-style-type: none"> ▪ Alisal Rd., north of Mission Dr.
Collector <ul style="list-style-type: none"> ▪ Undivided road with at grade intersections. ▪ Facilitates internal circulation within City by providing primary access to residential areas and connecting them to streets of higher classification. 	<ul style="list-style-type: none"> ▪ 2 lanes with curb parking in the Village area and unpaved shoulders in the rural/canyon areas. ▪ Centerline stripe not always provided. 	5,000 ADT (Determined not by the physical road capacity, but by the desire to maintain an acceptable level of traffic on these facilities which may front residential land uses).	60 feet	<ul style="list-style-type: none"> ▪ Oak St. ▪ Copenhagen Dr. ▪ Fifth St. ▪ Pine St. ▪ Laurel Ave., west of Pine St. ▪ First St., Elverhoy to SR 246 ▪ Elverhoy Way, First St. to Alisal ▪ Atterdag Rd., north of Copenhagen ▪ Fredensborg Canyon Rd., south of Viborg Rd. ▪ Viborg Rd. ▪ Chalk Hill Rd. ▪ Alisal Rd., south of proposed Santa Rosa Rd. extension
Local <ul style="list-style-type: none"> ▪ Undivided road with at grade intersections. ▪ Frequent driveway access. ▪ Intended to provide access to adjacent residential land uses and to feed traffic to collectors and other roads of higher classification. 	<ul style="list-style-type: none"> ▪ 2 lanes with curb parking. ▪ Centerline stripe not provided. 	2,000 ADT (Determined not by the physical road capacity, but by the acceptable level of traffic which will not adverse the quality of life in residential areas).	60 feet (52 feet allowed when approved by City Engineer)	<ul style="list-style-type: none"> ▪ The remaining streets in Solvang, not mentioned above, are classified as local streets.





Public Transportation

Transit service in Solvang is provided by the Santa Ynez Valley Transit (SYVT), which is administered by the City of Solvang through a Memorandum of Understanding with the City of Buellton and the County of Santa Barbara. SYVT operates two fixed routes and dial-a-ride services connecting the communities of Buellton, Solvang, Santa Ynez, Ballard, and Los Olivos. SYVT provides fixed route service Monday through Saturday, between the hours of 7:00 AM and 6:50 PM and on a dial-a-ride basis. Because the communities in the Santa Ynez Valley are considerable distances apart, the Transit provides an important service to those persons unable to drive, such as the elderly, disabled and young.



Route A connects Buellton, Solvang, Santa Ynez, Ballard, and Los Olivos. It travels in a clockwise loop from Solvang to Los Olivos. Service originates at Avenue of Flags and Second Street in Buellton with 90-minute headways. Route B is identical to Route A, although it provides a counter clockwise loop. Route B also operates on 90-minute headways. With Routes A and B, a bus arrives along the route every 45 minutes. Reservation based dial-a-ride service is available during fixed route service hours within the Santa Ynez Valley to seniors age 60 and up and ADA certified persons.

Most of the passengers riding the system to Solvang are destined to Solvang's Senior Center, commercial areas, and medical facilities. The 2006 ridership was approximately 35,620 fixed route passengers and roughly 4,975 demand response passengers. This reflects a 9.1% increase in the fixed route ridership and a -1% decrease in the demand response ridership from 2005. Because Solvang has a high rate of automobile ownership (94 percent of the residents have access to one automobile or more), the demand for transit by the general population is minimal.

In addition to the SYVT service, the Chumash Casino provides bus service to and from the Casino to Lompoc, Santa Maria, and the South Coast.

Railroads

There are no railroad facilities within the City of Solvang. AMTRAK provides daily northbound/southbound connecting bus service with the Pacific Surfliner, a rail passenger service traveling between San Diego and Paso Robles.

Air Transportation – Commercial, General and Military

There are no airport facilities within the City of Solvang. The nearby Santa Ynez Airport accommodates general aviation, a small commuter service and charter service. There are no plans for major changes in the type of operations at the airport. The current airport layout plan calls for the extension of the runway 500 feet to the east and for construction of additional hangars on the north side of the runway. Scheduled commercial airline flights are available at the Santa Barbara Municipal Airport and Santa Maria Airport.



Bicycle and Equestrian Trails

Recreational bicycling is popular in and around Solvang. The Solvang area presently has a Class I bike path (path that is separate from automobile traffic) located on the north side of SR 246, between Alamo Pintado Road and Refugio Road. A Class II on-street painted bike lane is provided on Alamo Pintado Road, between SR 246 and Alamo Pintado Avenue, linking the communities of Solvang, Ballard, and Los Olivos. A short segment of Class II bike lane is also located on Alisal Road, between Fjord Drive and Elverhoy Way. Atterdag Road, Chalk Hill Road and SR 246 (Mission Drive), east of U.S. Highway 101 to Alamo Pintado Road are designated as “Alternate Bike Routes”.

As of this writing, SBCAG is in the process of preparing a countywide bicycle plan. As part of the plan, specific recommendations will be provided for improving bicycle facilities in Solvang.

There is equestrian usage of the street system due to the ranches and ranchettes within and to the north and east of the City. The predominant horse area in the City is the Fredensborg Canyon/College Canyon area. There is a trail easement along Adobe Creek, but it is unimproved so horse riders utilize the shoulder of Fredensborg Canyon Road.

Pedestrian Access

There is a general lack of pedestrian incentives and linkages throughout the City as a whole. Sidewalks have been provided throughout most of the Village area to accommodate the high volume of tourist-related pedestrian traffic in the Village. However, in many of the residential neighborhoods of the City, streets were constructed without sidewalks, mainly to preserve the rural character

of the City. There is also the lack of a pedestrian connection from the industrial area to the west of the Village and east of town.



Parking

There are currently five municipal parking lots within the Village area. Four of the lots are located south of Mission Drive. The fifth lot is located north of Mission Drive, near the northeast corner of Mission Drive and Alisal Road. A portion of this lot is designated for Recreational Vehicle (RV) parking. There are numerous other private lots owned and operated by the commercial establishments in the Village, as well as additional off-street parking spaces at lodging facilities around the City. Most of the private off-street parking lots are restricted to employees and customers of the specific businesses/buildings for which the parking was provided and are generally signed as such. On-street parking is allowed on most streets in the Village area. There are no parking meters in the Village area.

2



2.0 GOALS, POLICIES AND ACTION ITEMS

PRIMARY CIRCULATION SYSTEM

Goal 1

TO PROVIDE A STREET NETWORK TO MOVE PEOPLE AND GOODS SAFELY AND EFFICIENTLY.

Policy 1.1

Maintain a minimum level of service D at all intersections during normal peak hours and level of service E during “average tourist-season peak hours” to ensure that traffic delays are kept to a minimum.

Action Item (A)

The City shall establish street standards and all new road facilities shall be constructed or existing roads upgraded, where feasible, to meet City standards.

Action Item (B)

The City shall require new developments to be served by roads of adequate capacity and design standards to provide reasonable access in accordance with City standards.

Action Item (C)

The City shall require an evaluation of potential traffic impacts associated with proposed new developments prior to project approval and require the payment of an off-site roadway improvement fee appropriate to the level of impact.

Action Item (D)

The City shall reserve and protect adequate rights-of-way to accommodate future roadway widening projects.

Action Item (E)

The City shall utilize its discretionary authority over land use development to ensure that development levels do not exceed the capacity of the City's transportation systems.



Action Item (F)

The City shall coordinate with Santa Ynez Valley Union High School to investigate opportunities for staggering school start/finish times.

Action Item (G)

The City shall coordinate with the California Department of Transportation to make modifications to Mission Drive (SR 246) to improve traffic flow.

Action Item (H)

The City shall coordinate with the Santa Barbara County Association of Governments, the City of Buellton, the County, the California Department of Transportation, and other jurisdictions in the planning of regional transportation alternatives. Mission Drive (SR 246) may not be widened to four lanes through the Village area; instead emphasis shall be placed on developing a regional alternative with the above referenced jurisdictions.

Action Item (I)

Public off-street parking shall be provided in a location(s) with convenient and readily apparent (well-signed) access to help circulation within the Village area and on Mission Drive by reducing congestion due to cars searching for parking spaces.

Action Item (J)

The City shall develop a program to monitor traffic volumes and levels of service to facilitate the maintenance of the City's minimum levels of service.

Policy 1.2

Preserve the quality of residential neighborhoods by discouraging tourism related parking, enforcing speed limits in residential areas and by discouraging the flow of truck traffic and through traffic in these areas.

Action Item (A)

The City shall enforce speed limits of twenty-five (25) miles per hour on local residential collector streets and consider lower posted speeds as warranted.

Action Item (B)

The City shall prohibit trucks and buses from traversing through residential neighborhoods.

Action Item (C)

The City shall maintain minimum levels of service on major City streets pursuant to Policy 1 in order to avoid diversion of through traffic into residential neighborhoods.

Action Item (D)

Through the development review process, ensure implementation of LUE Policy 2.1 to buffer neighborhoods from tourism related parking spillover.

Action Item (E)

Pursue and enact traffic calming measures as appropriate to meet the policy objectives, as conditions warrant.

Policy 1.3

Establish a capital improvements program that incorporates adequate funding for the City's roadway system.

Action Item (A)

The City shall periodically review and update the capital improvements program once established.

Action Item (B)

The City shall develop a phasing program for the implementation of new roadway facilities as part of the capital improvements program. Highest priority shall be given to facilities that improve safety and also to facilities that provide alternate routes to Mission Drive.

Action Item (C)

The City shall identify and evaluate potential revenue sources for financing roadway system development and improvement projects.

Action Item (D)

The City shall pursue viable revenue sources to meet the roadway system funding needs.

Action Item (E)

The City shall only implement street widenings when systems management strategies have been exhausted. All feasible systems management strategies shall be considered and



subsequent needs for street widenings shall be considered on a case-by-case basis.

PUBLIC TRANSPORTATION

Goal 2

TO PARTICIPATE IN A PUBLIC TRANSPORTATION SYSTEM THAT IS SAFE, CONVENIENT, EFFICIENT AND MEETS THE IDENTIFIED NEEDS OF THE SOLVANG COMMUNITY.

Policy 2.1

Continue to support the public transportation system to accommodate the mobility needs of residents, especially of transit-dependent persons such as the elderly and disabled.

Action Item (A)

The City shall support expansion of transit operations when demand levels are sufficient to warrant increased service.

Action Item (B)

The City shall support improved transit service for elderly and disabled persons.

PEDESTRIAN AND BICYCLE NETWORK

Goal 3

TO PROMOTE SAFE ALTERNATIVES TO MOTORIZED TRANSPORTATION THAT MEETS THE NEEDS OF ALL CITY RESIDENTS.

Policy 3.1

Establish a master plan of bikeways on public property that provides for an adequate system for the safe and efficient movement of cyclists.

Action Item (A)

The City shall adopt a master plan of bikeways on public property and shall develop trails as needed and feasible.

Action Item (B)

The City shall incorporate bicycle routes or trails into the design of new or expanded roadways when feasible.

Action Item (C)

The City shall allocate adequate resources to maintain a safe bikeway system.

Action Item (D)

The City may consider removal of on-street parking to facilitate bikeways as increased bike use decreases the need for parking.



Policy 3.2

Provide a system of sidewalks or pathways that provides a safe environment for pedestrians.

Action Item (A)

The City shall require the provision of adequate pedestrian access for new development projects through its Standards and its site plan review process.

Action Item (B)

The City shall require the installation of wheelchair ramps on all new sidewalks.

Action Item (C)

The City shall encourage the installation of sidewalks and wheelchair ramps in older neighborhoods, where appropriate.

Action Item (D)

The City shall support the installation of improved pedestrian paths and connections throughout the community.

PARKING

Goal 4

TO PROVIDE AN ADEQUATE SUPPLY OF PUBLIC PARKING TO MEET THE NEEDS OF RESIDENTS AND VISITORS TO THE CITY.

Policy 4.1

Ensure that developers of new projects or expansions provide adequate off-street parking.

Action Item (A)

The City shall enforce its Municipal Code and the Community Design Element through the development plan review process.

Action Item (B)

The City shall require developers to provide adequate parking. Contributions to an in lieu fee parking program to help pay for off-site facilities in exchange for a reduction in parking spaces provided on-site may be considered if the City chooses to administer such a program.



Action Item (C)

The City shall work cooperatively with developers and the business community to develop funding mechanisms for the construction of future public parking facilities.

Policy 4.2

Provide adequate parking in the Village area to promote the economic health of the City's vital commercial core.

Action Item (A)

The City shall pursue the establishment of a parking management program which includes provisions to manage employee and customer parking and which may include the establishment of an assessment district or other means to finance the development of additional parking facilities.

Action Item (B)

The City shall consider methods of ensuring parking space turnover as part of the parking management program.

Action Item (C)

The City shall develop parking occupancy threshold rates and monitor parking to determine when design and construction of new parking facilities needs to begin as part of the parking management program.

Action Item (D)

The City shall minimize intrusion of commercial visitor parking into neighborhoods through the provision of an adequate parking supply in the Village area and through appropriate control measures.

Policy 4.3

Recognizing the need to reduce vehicle emissions and accommodate evolving alternative vehicles, the City shall encourage the use of alternative transportation modes by providing adequate parking for small vehicles such as zero emission vehicles, scooters, "segways" and bicycles.

Action item (A)

In the development review process, encourage the inclusion of adequate alternative vehicle parking in projects, as demand warrants.



ENVIRONMENTAL PROTECTION & AIR QUALITY

Goal 5

PROTECT THE RESIDENTS OF SOLVANG FROM THE EFFECTS OF ENVIRONMENTAL DEGRADATION BY WORKING TO REDUCE CLIMATE CHANGE, AIR POLLUTION, AND THE EFFECTS OF THE EXPANSION OF THE ROADWAY SYSTEM.

Policy 5.1

Encourage the use of alternate forms of transportation and the reduction of vehicle trips to decrease the emission of greenhouse gases and air pollutants.

Action Item (A)

The City shall implement the provisions of the General Plan which promote the installation and expansion of pedestrian and bicycle pathways.

Action Item (B)

The City shall continue to support the use and expansion of the public transportation system.

Action Item (C)

The City shall encourage employers to promote carpooling, public transportation, and allow telecommuting.

Policy 5.2

Integrate air quality planning with the transportation planning process.

Action Item (A)

The City shall make a commitment to provide adequate access to alternative modes of transportation by implementing Goals 2 and 3.

Action Item (B)

The City shall work with the Santa Barbara County Association of

Governments to establish a Transportation Demand Management (TDM) Program.

Action Item (C)

The City shall work with the Santa Barbara County Air Pollution District and SBCAG to identify trip reduction opportunities.



Policy 5.3

Preserve the environmental integrity of the Alamo Pintado Creek area and the view shed of Mission Santa Ines. This policy is not intended to preclude the Santa Rosa Road bypass.

Action Item (A)

No roads or streets (public or private) shall be approved or constructed which encroach on the area south of Mission Drive/State Route 246 and east of Alisal Road, and which connect the area north of Mission Drive/State Route 246 and east of Alisal Road with the area south of Mission Drive/State Route 246 and west of Alisal Road.

Action Item (B)

The City may permit construction of roads, limited to driveways or private roads, to serve the development of properties in the area south of Mission Drive/State Route 246 and east of Alisal Road to the extent provided under current designations in the Land Use Element of the General Plan as it exists on September 13, 1993.

Action Item (C)

The City shall not allow the construction or expansion of any streets or roads (public or private) greater than 12 feet in width within 100 feet of Alamo Pintado Creek, or such greater distance as may be necessary to fully protect riparian habitat.

Action Item (D)

The City shall work with the County of Santa Barbara to reinforce similar policies pertaining to the protection of the Alamo Pintado Creek area, an area shared by both jurisdictions and identified by both as being open space and environmentally sensitive.

3



3.0 THE CIRCULATION PLAN

The circulation plan proposed for Solvang has been developed to provide adequate capacity to accommodate the travel demands of the Land Use and Housing Elements as well as to preserve the quality of life in Solvang. The plan is based on the issues, goals, and action items identified in the previous section.

MAJOR PLAN PROPOSALS

Primary Circulation System

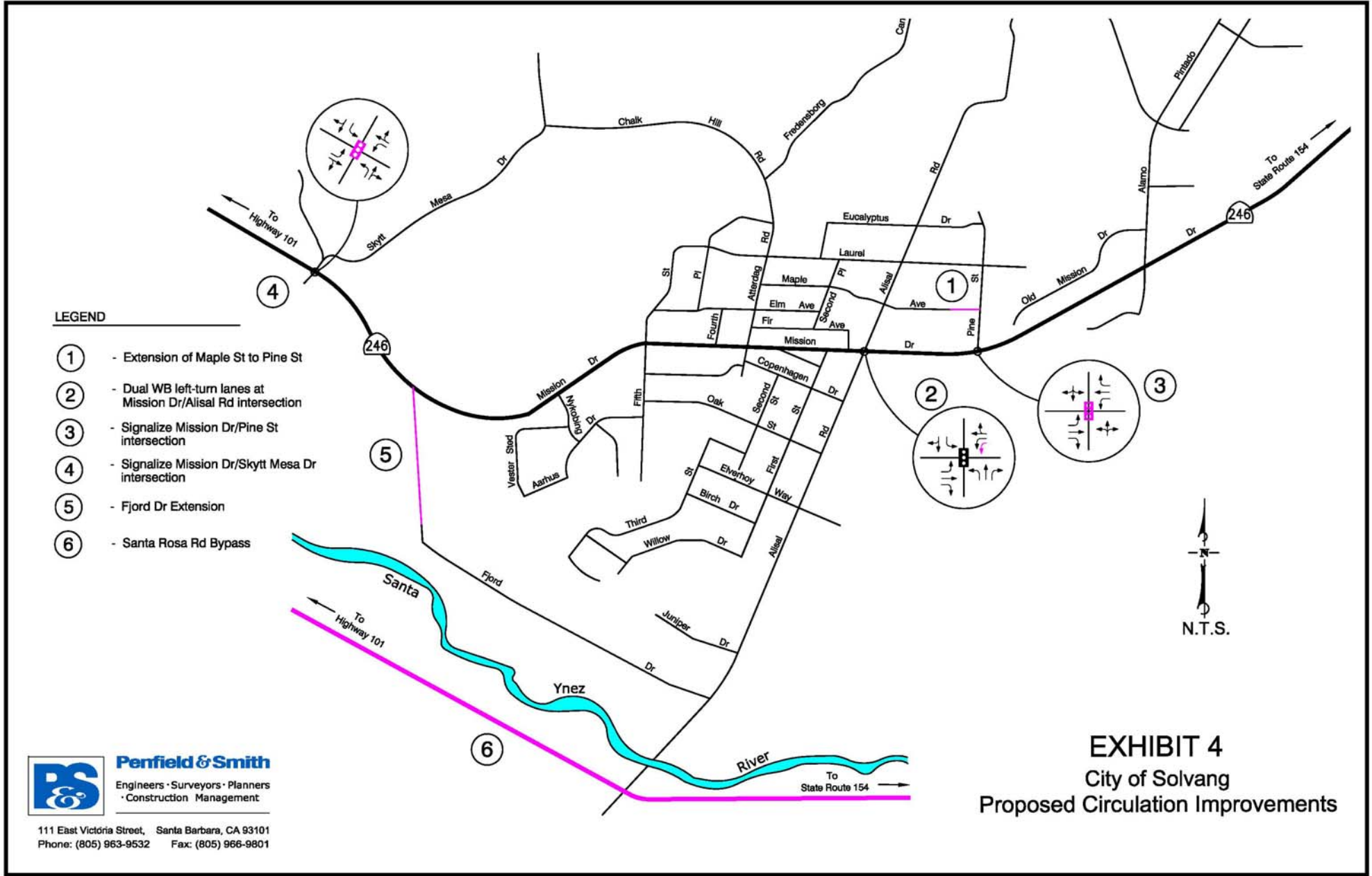
The major focus of the plan is on relieving congestion along Mission Drive through the Village area, with the ultimate goal of providing additional east-west connections as an alternative to Mission Drive. The major plan proposals are reflected on Exhibit 4 and include the following:

- Extend Maple Avenue east to Pine Street. (Goal 1, Policy 1.2, Action Item C)
- Install a dual westbound left turn lane at the intersection of Alisal Road and Mission Drive. (Goal 1, Policy 1.1, Action Item H)
- Install a signal at the intersection of Pine Street and Mission Drive. (Goal 1, Policy 1.1, Action Item H)
- Install a signal at the intersection of Skytt Mesa Drive and Mission Drive. (Goal 1, Policy 1.1, Action Item H)
- Extend Fjord Drive from Alisal Road west along the Santa Ynez River, then north to a junction with Mission Drive (SR 246). (Goal 1, Policy 1.2, Action Item C)
- Construct a regional bypass by extending Santa Rosa Road, from Highway 101 to SR 154, along the south side of the Santa Ynez River. This project is beyond the City of Solvang's sole ability to implement. The City proposes to

work cooperatively with adjacent jurisdictions, the County, Caltrans, and SBCAG. (Goal 1, Policy 1.1, Action Item H)

- Install signalized pedestrian crossings along Mission Drive. (Goal 3, Policy 3.2, Action Item D)
- Investigate opportunities for staggering school start/finish times for the Santa Ynez Valley Union High School. (Goal 1, Policy 1.1, Action Item F)
- Enforce speed limits throughout the City, particularly streets which parallel Mission Drive. (Goal 1, Policy 1.2, Action Item A)
- Investigate potential intersection improvements at Alamo Pintado Road and Old Mission Drive. (Goal 1, Policy 1.1, Action Item H)
- Investigate potential intersection improvements at Alamo Pintado Road and Mission Drive, in conjunction with the possible widening of the Alamo Pintado Creek bridge. (Goal 1, Policy 1.1, Action Item H)





Public Transportation

The City will continue to support improved transit services for the elderly and disabled persons. The City will also support improvement and expansion of the existing transit system as demand increases. A shuttle service may be implemented if/when remote parking facilities are provided outside the Village area.



Based on the 2006 North Santa Barbara County Transit Plan prepared by SBCAG, the following Short-Term Service Improvements will begin in Fiscal Year 2007/08:

- The City of Lompoc Transit (COLT), in collaboration with SYVT, will provide three peak-hour road trip extensions between Buellton/Solvang and Lompoc. The extended service will add potential connections to the SYVT and provide Solvang and Buellton residents with direct transit service to Lompoc, VAFB, and Santa Maria. (Goal 2, Policy 2.1, Action Item A)
- The Transit Plan also recommended that SYVT consider adding an earlier morning trip on one route on weekdays in order to provide a timed connection to the Valley Express morning peak runs. (Goal 2, Policy 2.1, Action Item A)

The second phase of the Short-Term Improvements, beginning in Fiscal Year 2010/2011 includes:

- Adding a second bus to the morning trip that connects with Valley Express. (Goal 2, Policy 2.1, Action Item A)

Bicycle and Equestrian Trails

The City shall continue to encourage bicycle use by expanding the network of bicycle trails and lanes. Specific measures proposed include the following:

- Consider the opportunity to incorporate bicycle routes or trails into the design of new or expanded roadways. (Goal 3, Policy 3.1, Action Item B)
- Incorporate an east-west bike route through the Valley with connections to the Village area as part of the construction of a regional bypass. (Goal 3, Policy 3.1, Action Item B)

- Construct two miles of Class II bike lane on Alisal Road from the Santa Ynez River Bridge south to the entrance to the Alisal Ranch. (Goal 3, Policy 3.1, Action Item A)
- Construct a Class I bike path/Class II bike lane on the south side of SR 246 from Nyborg to the eastern City limit. (Goal 3, Policy 3.1, Action Item A)
- Extend the Class II bike lane from Alamo Pintado Road to the Alamo Pintado Creek bridge. (Goal 3, Policy 3.1, Action Item A)



Pedestrian Access

The City will increase pedestrian accessibility by implementing the following items:

- Installation of sidewalks and wheelchair ramps along new and existing roadways where feasible. (Goal 3, Policy 3.2, Action Items B and C)
- Consideration of installing signalized pedestrian crossings in the Village area where heavy pedestrian activity occurs. (Goal 3, Policy 3.2, Action Item D)

Parking

The parking plan has been developed to provide a supply of parking adequate to meet the parking demands generated by the buildout of the Land Use and Housing Elements. The parking plan includes the following:

- Develop a Parking Management Plan. (Goal 4, Policy 4.2, Action Item A)
- Study retaining free on-street parking, including diagonal parking in the Village area, as part of developing the Parking Management Plan. (Goal 4, Policy 4.2, Action Item A)
- Increase requirements for off-street parking in tourist and retail commercial areas to 4.0 spaces per thousand square feet of gross floor area and encourage private developers to consolidate parking in public parking facilities through the payment of in-lieu parking fees or through the establishment of a new parking district. (Goal 4, Policy 4.1, Action Item A-D)

- Pursue construction of public parking structures on existing municipal lots in the Village area at the appropriate time as indicated by the Parking Management Plan. (Goal 4, Policy 4.1, Action Item B-D)
- Identify sites for additional parking facilities in the Village. At a minimum, it is recommended that two additional sites be located south of Mission Drive and one north of Mission Drive. Potential sites could include Oak Street and 2nd Street and Alisal Road near Maple Avenue. (Goal 4, Policy 4.2, Action Item A)
- Identify sites for remote parking facilities, with particular attention given to neighborhood protection policies contained in the Land Use and Conservation elements of the General Plan. (Goal 4, Policy 4.2, Action Item A)



IMPLEMENTATION PLAN

The Implementation Program provides actions to implement the adopted policies and plans identified in the Circulation Element. The following actions are proposed:

- Work with appropriate County and State agencies to pursue development of alternatives to the widening of Mission Drive through the Village area most importantly the southern bypass. (Ongoing) (Goal 1, Policy 1.1, Action Item H)
- Continue to work with Caltrans to maximize the capacity of existing Mission Drive through Solvang as an interim measure until a regional alternative is completed. (Ongoing) (Goal 1, Policy 1.1, Action Item G)
- Continue to update on an annual basis the Capital Improvement Program to plan for and fund future improvements to the circulation system. (Ongoing) (Goal 1, Policy 1.3, Action Item A)
- Continue the Congestion Management Program (CMP) requirement of monitoring traffic volumes and levels of service on Solvang roadways to facilitate the maintenance of the minimum levels of service specified in the Circulation Element. (Ongoing) (Goal 1, Policy 1.1, Action Item J)
- Develop a signage program that directs visitors to Solvang to parking facilities in the tourist commercial area via preferred

routes so as to minimize their intrusion into residential areas and their conflicts with local residential road users. (Ongoing) (Goal 1, Policy 1.1, Action Item I)

- Develop a phasing program for the implementation of the new roadway facilities shown on Exhibit 4, "Proposed Circulation Improvements." The phasing plan should give highest priority to facilities which will provide alternate routes to Mission Drive for residents' use and which improve safety conditions for motorists and/or pedestrians or bicyclists. The recommended highest priority circulation improvement is the southern bypass. (Goal 1, Policy 1.3, Action Item B)



FUNDING

The City's current budget allocations for streets and roads cover maintenance and operations of existing facilities (e.g., ongoing maintenance, street highway power and signalization, street sweeping), but not the construction of new facilities. Under typical development conditions, the costs of new roadways are paid for by developers as part of their project cost. The City imposes a traffic mitigation fee for off-site road improvements on developments within the City limits. This fee is assessed on a per-peak-hour-trip generated basis on new developments and is currently \$1,665.00 per peak hour trip. This source of revenue should continue, but should be updated based on projected costs of planned improvements.

Many of the improvements included in the Circulation Element will have citywide benefit and may need to be constructed prior to the development of the contiguous property. The City has developed alternate funding mechanisms to pay for the construction of circulation improvements included in the Circulation Element. Developed methods include allocation of general fund revenues to a Capital Improvement Program, implementation of Assessment Districts to assess all benefiting property owners for infrastructure improvements and passage of a sales tax for road improvements.

The City and County should work out a mechanism to jointly evaluate the impacts and cost-sharing of mitigation measures for new developments since projects in one jurisdiction often have impacts on the other jurisdiction. The major fiscal limitation affecting the future circulation system is the potential cost associated with the southern bypass. Right-of-way acquisition and construction costs are estimated to be in the range of \$32 million to \$50 million. The City has amended its traffic mitigation fee resolution to commit \$2.5 million toward construction of the bypass.

FUTURE CONDITIONS WITH PROPOSED PLANS

Implementation of the Circulation Plan proposals would result in increased capacity on Mission Drive.



APPENDIX A – TRAFFIC ANALYSIS

EXISTING TRANSPORTATION DEFICIENCIES

The primary deficiency in the existing circulation system is the lack of alternate east-west routes through the City. This deficiency is compounded by the fact that SR 246 not only serves as the primary access route for local traffic to/from Solvang, but also as the primary regional connection between Highway 101 and SR 154. It is estimated that 65% of the traffic on Mission Drive is through traffic. With both local and regional traffic forced to utilize SR 246 as their major access route, Solvang residents are negatively impacted in two ways: (1) local traffic peaks often coincide with peak tourist-related/regional traffic, causing residents to endure significant congestion, and (2) those drivers who seek circuitous alternate routes must use residential streets to travel between the eastern portion of the City and the central portion of the City, negatively impacting neighborhoods.

The concentration of traffic on Mission Drive has resulted in poor levels of service on this roadway and worsening congestion at the signalized intersections along Mission Drive, including the intersections at Fifth, Atterdag, Alisal and Alamo Pintado. The key north-south routes in the City have also been impacted and it has become increasingly difficult for residents and visitors alike to turn onto Mission Drive from unsignalized side streets.

In other areas of the City, capacity deficiencies have not yet developed, although quality of life issues such as the speed and volume of traffic have become concerns on some residential streets. This is particularly true of Viborg Road, Fredensborg Canyon Road and the northern segment of Alisal Road which serves as an alternate route between the Village area and the northern sections of the community. In the Village area, the flow of traffic on Alisal at Copenhagen is often congested due to heavy volumes of pedestrians crossing Alisal and tour buses seeking parking behind the Post Office. Local traffic traveling to/from the southern portions of the City is also forced to use Alisal, the only through roadway to the south, which further congests the area during peak hours. There is also a general lack of incentives for walking and bicycle use around town, which may result in additional vehicular trips.

Level of Service Analysis

A level of service (LOS) ranking scale was used to identify the operating condition of the major roadways and intersections in the



City. This scale identifies impacts of traffic volumes verses roadway capacity and assigns a letter value to this relationship. The letter scale ranges from A to F with LOS A representing free flow conditions and LOS F representing congested conditions. In order to determine the signalized intersection levels of service, the Intersection Capacity Utilization Methodology (ICU) was used and the results are shown as a volume to capacity ratio. For the unsignalized intersections the Highway Capacity Software (HCS-2000) was used and is based on average seconds of delay per vehicle. The level of service criteria is summarized in Table A-1.

**Table A-1
Intersection Level of Service Criteria**

LOS	Signalized intersections (V/C Ratio)	Unsignalized intersections (Sec. of delay)	Definition
A	< 0.60	≤ 10	Conditions of free unobstructed flow, no delays and all signal phases sufficient in duration to clear all approaching vehicles.
B	0.61 – 0.70	> 10 and ≤ 15	Conditions of stable flow, very little delay, a few phases are unable to handle all approaching vehicles.
C	0.71- 0.80	> 15 and ≤ 25	Conditions of stable flow, delays are low to moderate, full use of peak direction signal phases is experienced.
D	0.81 – 0.90	> 25 and ≤ 35	Conditions approaching unstable flow, delays are moderate to heavy, significant signal time deficiencies are experienced for short durations during the peak traffic period.
E	0.91 – 1.00	> 35 and ≤ 50	Conditions of unstable flow, delays are significant, signal phase timing is generally insufficient, congestion exists for extended duration throughout the peak period.
F	> 1.00	> 50	Conditions of forced flow, travel speeds are low and volumes are well above capacity. This condition is often caused when vehicles released by an upstream signal are unable to proceed because of back-ups from a downstream signal

Source: *Highway Capacity Manual, 2000 Edition*

The existing roadway segment operations are presented in Table A-2 and the existing intersection levels of service are presented in Table A-3. Exhibit A-1 summarizes the roadway and intersection levels of service by location.



**Table A-2
Existing (2007) Roadway Segment Levels of Service**

Roadway	Road Segment	ADT	Level of Service
Mission Drive	Western City limits to Fifth Street	20630	LOS E
	Fifth Street to Alisal Road	17640	LOS D
	Pine Street to Alamo Pintado Rd	22190	LOS E
	Alamo Pintado Rd to Eastern City Limit	19220	LOS E
Atterdag Road	Mission Drive to Laurel Avenue	3090	LOS A
Alisal Road	Alisal At City Limit	1460	LOS A
	Copenhagen Drive to Mission Dr	8080	LOS B
	Mission Drive to Laurel Avenue	2980	LOS A
Alamo Pintado Rd	Mission Drive to Old Mission Dr	12620	LOS A
Oak Street	Fifth Street to Alisal Road	3110	LOS B
Laurel Avenue	Atterdag Road to Alisal Road	1020	LOS A

Deficient roadway segment level of service is shown in bold.

**Table A-3
Existing (2007) PM Peak Hour Intersection Levels of Service**

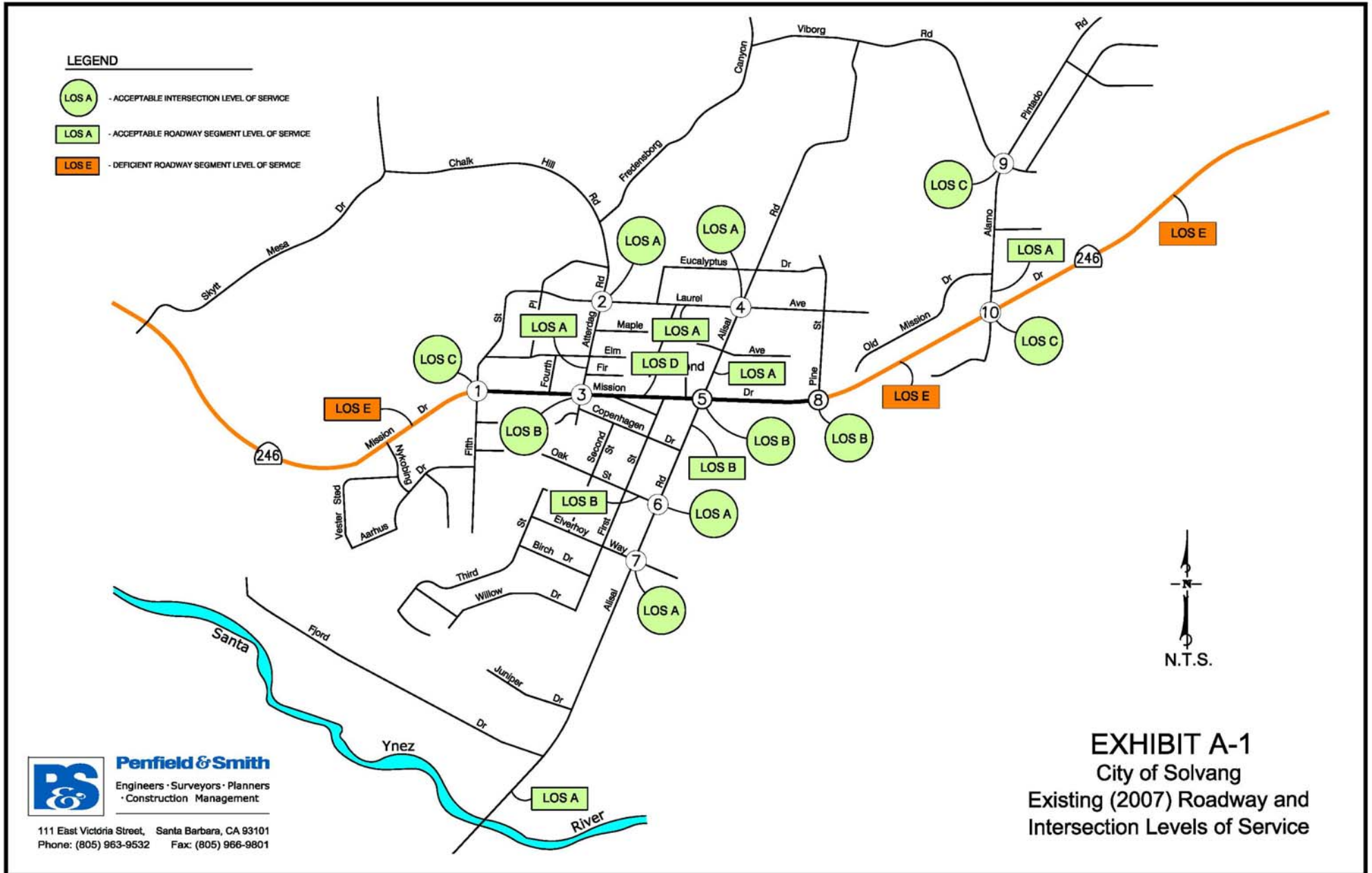
No.	Intersection	Traffic Control	Existing PM Peak Hour LOS
1.	Fifth Street/Mission Drive	Signal	0.77/LOS C
2.	Atterdag/Laurel Avenue	All-way Stop	7.9/LOS A
3.	Atterdag Road/Mission Drive	Signal	0.70/LOS B
4.	Alisal Road/Laurel Avenue	All-way Stop	7.6/LOS A
5.	Alisal Road/Mission Drive	Signal	0.69/LOS B
6.	Alisal Road/Oak Street	All-way Stop	9.9/LOS A
7.	Alisal Road/Elverhoy Court	Two-way Stop	9.7/LOS A
8.	Pine Street/Mission Drive	Two-way Stop	13.4/LOS B
9.	Alamo Pintado Road/Viborg Road	All-way Stop	11.5/LOS B
10.	Alamo Pintado Road/Mission Drive	Signal	0.80/LOS C

East of the City, between Alamo Pintado Road and the community of Santa Ynez, congestion levels on SR 246 are also increasing.

Circulation Element

The Chumash Casino and hotel, located between the City of Solvang and the unincorporated Santa Ynez community is a significant visitor destination, and with over 500 employees, is the major employer in the valley. As a major trip destination, the Chumash Casino generates traffic that impacts State Route 246 in both directions. The Chumash Tribal Council has initiated frequent bus service from the Casino to Lompoc, Santa Maria, and the South Coast to provide an alternative means of travel.





FUTURE TRAVEL DEMANDS

New land use development is the key determinant of increased traffic generation. The proposed Land Use Plan will accommodate additional development, which in turn will generate increased travel within the City of Solvang. Further, growth in the Santa Ynez Valley will generate additional traffic which will increase travel through the City. Increases in job opportunities in the County's South coast and general growth in the Buellton/Santa Ynez areas also contribute to weekday peak hour traffic volumes. The amount of traffic generated in Solvang by developments outside the City is directly related to the number of Solvang residents driving to/from those developments or non-residents passing through the City to reach them.

In order to determine the future traffic that would be generated at Build-out of the Land Use Plan, all potential development within the City was identified and categorized into three groups, including, all "Vacant and Underutilized Land", pending "Residential" projects and pending "Non-residential" projects. Fifty-nine projects/sites were identified within these categories and include the following land uses:

- Residential (Estate, Single Family, Multi-family)
- General Office
- Tourist Commercial

The projected development by land use is summarized in Table A-4. Exhibits A-2 – A-5 illustrate the location of the potential development parcels for commercial and residential uses.



**Table A-4
Land Use Growth Potential¹**



Land Use Category	Existing Baseline 2006	Pending Development	Development Potential of Vacant/ Underutilized Land	
Estate Residential	2,076 residential units; 1,369,932 SF	0 units	0 units	Total at Build-Out
Low Density Residential		3 units	11 units	
Low Medium Density Residential		10 units	19 units	
Medium Density Residential		177 units	84 units	
Mobile Home Park		1 unit	0 units	
High Density Residential		2 units	149 units	
Retail Commercial		0 units	0 units	
General Commercial		0 units	0 units	
Tourist Commercial		0 units; 29,879 SF	26 units; 21,560 SF	
Guest Ranch		0 units; 5,504 SF	0 units	
Light Industry		0 units	0 units	
Institutional		9 units; 45,837 SF	0 units	
Professional Office		8 units; 12,656 SF	0 units	
Open Space Recreation		0 units	0 units	
Agriculture		0 units	0 units	
Residential Total		2,076 units	210 units	
Non-Residential Total	1,369,932 SF	93,876 SF	21,560 SF	1,485,368 SF

- Existing Land Use and Growth Potential data obtained from 2008 Land Use Element. These numbers represent additional build-out that could occur due to build-out under proposed zoning and the implementation of Housing Element Programs.
- Development potential was taken from the Updated Housing Element Table "Estimate of Vacant and Under-Utilized Land and Residential Capacity". Note that the Housing Element's 33 residential secondary unit projection is included in this total.

Based on the pending residential and non-residential project list and development of the vacant and underutilized sites, 8,548 trips will be generated by build-out of the General Plan. This is a worst-case scenario which assumes every parcel within the City develops to the maximum density allowed in the General Plan and includes implementation of the Housing Element programs. The trip generation by land use is presented in Table A-5.



**Table A-5
Solvang Land Use Plan-
Trip Generation by Land Use**

Land Use Category	Daily Trip Rates	General Plan Build-out Conditions ¹		
		Land Use Quantity	Daily Trip Ends	Percentage of Total Trips
Residential				
Estate	12.0/DU	36 units	432 trips	5%
Single Family	9.57/DU	268 units	2,565 trips	30%
Multi-Family	6.72/DU	228 units	1,532 trips	18%
<i>Subtotal</i>	-	<i>532 units</i>	<i>4,529 trips</i>	<i>53%</i>
General Office	11.01/KSF	20,304 SF	224 trips	3%
Tourist Commercial	44.32/KSF	95,132 SF	3,795 trips ²	44%
Total			8,548 trips	100%

1. Assumes proposed General Plan re-zoning.
2. Pass-by trip reduction applied to Tourist Commercial uses.

The most significant increases in potential trip making would be attributable to the residential development. The additional dwelling units would generate 4,529 new daily vehicle trip ends, 53% of the citywide increase. The increase in tourist commercial square footage would generate an additional 3,795 daily trip ends, approximately 44% of the citywide increase. The remainder of the additional new trips generated by the Land Use Plan would be generated by office uses.

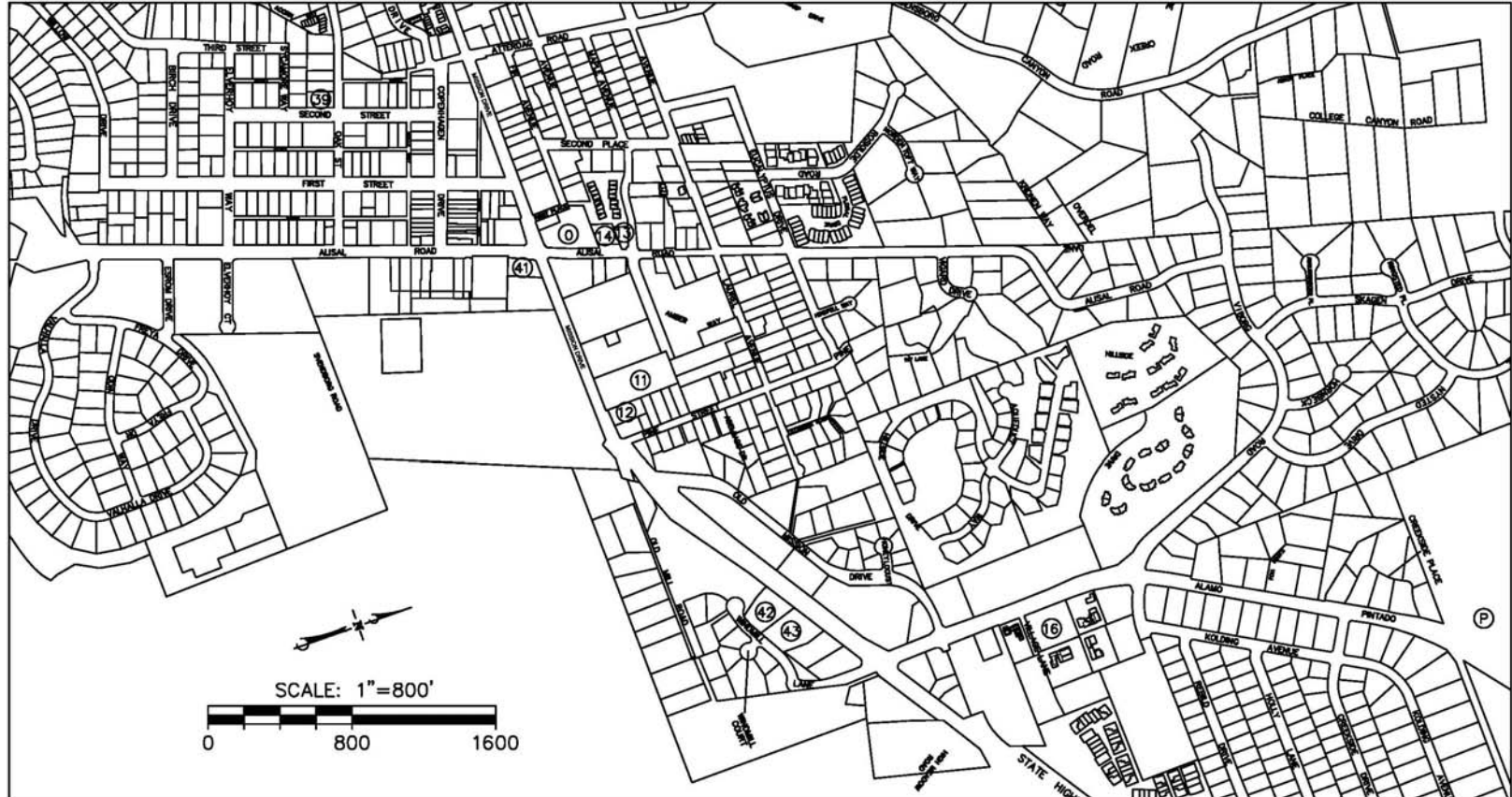
In addition to the trips that would be generated at City build-out, increases in regional traffic will occur as growth continues in the entire Santa Ynez Valley. The State Route (SR) 246 Transportation Concept Report (TCR) prepared by Caltrans in May 2004 evaluates current and projected conditions along SR 246. Based on this report, traffic volumes through Solvang are anticipated to grow 1.68% annually between 2001 and 2025. In September 2004, SBCAG prepared the *2030 Travel Forecast for Santa Barbara County*. According to this report, in the Santa Ynez Valley, traffic on SR 246 is forecast to increase 63% by 2030, taking into account the

Chumash Casino expansion and the build-out of land use plans in Buellton, Solvang, and the Santa Ynez Valley. This represents an average annual increase of 1.6%. Based on an average annual increase of 1.6%, by 2030, the level of through traffic on SR 246 could increase from approximately 14,425 average daily trips to approximately 20,780 daily vehicle trips, a 44% increase from existing (2007) conditions.



LEGEND

39 Vacant Underutilized Parcels



111 East Victoria Street, Santa Barbara, CA 93101
 Phone: (805) 963-9532 Fax: (805) 966-9801

- | | |
|-----------------------|-------------|
| 11. 1781 Mission Dr. | 139-150-009 |
| 12. 1785 Mission Dr. | 139-150-017 |
| 13. 545 Alisal Rd. | 139-143-018 |
| 14. 539 Alisal Rd. | 139-143-004 |
| 16. 670 Alamo Pintado | 139-530-005 |
| 39. Oak/Second St. | 139-211-004 |

- | | |
|------------------------|-------------|
| 41. 496 Alisal Rd. | 139-240-033 |
| 42. 1925 Windmill Lane | 139-540-013 |
| 43. 1927 Windmill Lane | 139-540-014 |

- O. 1704 Mission Dr - Alisal Mission - Commercial Bldg
 P. 2050 Viborg Rd. - SYV Cottage Hospital Expansion

EXHIBIT A-2
 City of Solvang
 Potential Commercial Development

LEGEND

39 Vacant Underutilized Parcels



Penfield & Smith
 Engineers • Surveyors • Planners
 • Construction Management

111 East Victoria Street, Santa Barbara, CA 93101
 Phone: (805) 963-9532 Fax: (805) 966-9801

- | | |
|--------------------|-------------|
| 4. 1506 Copenhagen | 139-174-001 |
| 5. 1512 Copenhagen | 139-174-002 |
| 6. 1516 Copenhagen | 139-174-003 |
| 7. 1524 Copenhagen | 139-174-027 |
| 8. 1532 Copenhagen | 139-174-028 |
| 9. 1540 Copenhagen | 139-174-005 |

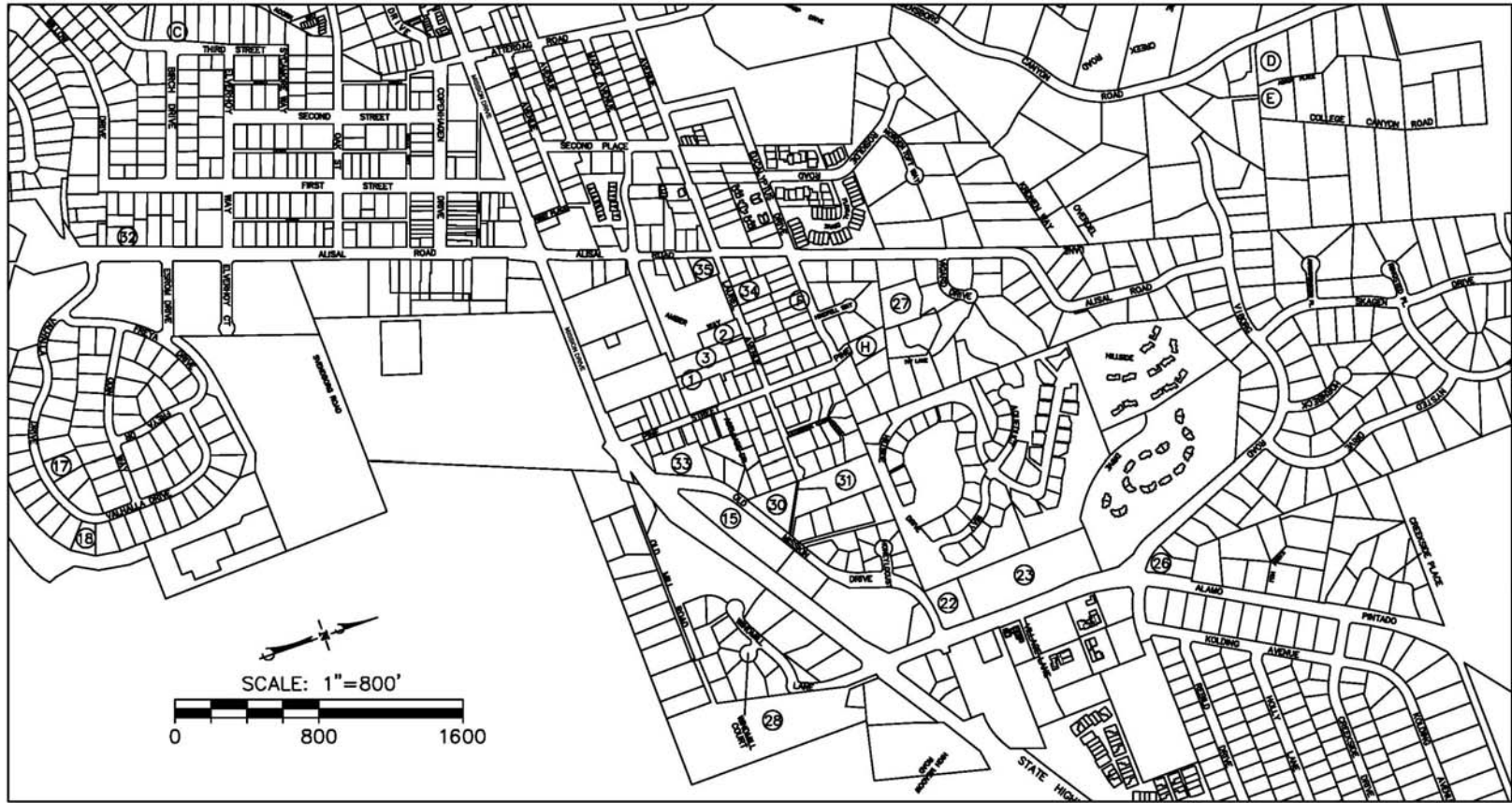
- | | |
|----------------------|-------------|
| 10. 1546 Copenhagen | 139-174-006 |
| 38. 1420 Mission St. | 137-590-010 |
| 40. 459 Atterdag Rd. | 139-174-014 |

- K. 1450 Mission St. — Apple Farm Arbors
 M. 636 Atterdag Rd. — Solvang Luthern House
 N. 1607 Mission Dr. — Atterdag Center

EXHIBIT A-3
 City of Solvang
 Potential Commercial Development

LEGEND

59 Vacant Underutilized Parcels



Penfield & Smith

Engineers · Surveyors · Planners
· Construction Management

111 East Victoria Street, Santa Barbara, CA 93101
Phone: (805) 963-9532 Fax: (805) 966-9801

- | | | | |
|------------------------|-------------|--------------------------|-------------|
| 1. Maple Ave. | 139-092-018 | 30. 1897 Old Mission Dr. | 139-160-007 |
| 2. 1746 Laurel Ave. | 139-092-008 | 31. 1871 Laurel | 139-100-029 |
| 3. 1758 Maple Ave. | 139-092-009 | 32. 235 Alisal Rd. | 139-234-064 |
| 15. Old Mission Dr. | 139-240-050 | 33. 1849 Old Mission Dr. | 139-160-010 |
| 17. 217 Valhalla | 139-490-042 | 34. 1731 Laurel Ave. | 139-091-019 |
| 18. 226 Valhalla | 139-490-024 | 35. 1706 Laurel Ave. | 139-092-005 |
| 22. Old Mission | 139-530-001 | C. 288 Third St. | SFD |
| 23. Alamo Pintado | 139-530-002 | D. 1887 Augustenborg | 2nd Unit |
| 26. Viborg/AP Road | 139-031-020 | E. 903 Skagen | 2nd Unit |
| 27. 675 Pine St. | 139-020-024 | F. 1764 Eucalyptus Dr. | 2nd Unit |
| 28. 1945 Old Mill Lane | 139-540-020 | H. 671 Pine St. | SFD |

EXHIBIT A-4
City of Solvang
Potential Residential Development

LEGEND

59 Vacant Underutilized Parcels



111 East Victoria Street, Santa Barbara, CA 93101
 Phone: (805) 963-9532 Fax: (805) 966-9801

19. 935 Fredensborg Cyn. 137-660-011
 20. Chalk Hill Rd. 137-670-005
 21. Solvang (Skytt) Mesa 137-120-048
 24. 1557 Gamby 137-660-036
 25. 1536 Gamby 137-660-038

29. 1201 Mission Dr. 137-120-047
 36. 290 Fifth St. 139-200-053
 37. 1545 Oak St. 139-174-021
 A. 785 Fredensborg Canyon Rd. SFD
 B. 888 Fredensborg Canyon Rd. SFD
 G. 636 Atterdag Rd. Solvang Luthern House

EXHIBIT A-5
 City of Solvang
 Potential Residential Development

FUTURE TRANSPORTATION DEFICIENCIES

The addition of traffic which could be generated by the land uses included in the General Plan, combined with increased through traffic associated with regional growth, would increase traffic volumes on many streets in Solvang but most significantly on Mission Drive. By 2030, the volume of traffic on Mission Drive could increase to as high as 31,000 vehicles per day, without the construction of an alternate east-west route. This would reach the engineering capacity of Mission Drive causing significant congestion at all intersections along SR 246 through Solvang. The existing circulation system, as is, would not be adequate to support the growth included in the Land Use Element plus regional growth, without significant negative impacts (i.e., congestion on Mission Drive and diversion of traffic to other streets). The future roadway segment levels of service and intersection levels of service are presented in Tables A-6 and A-7. Exhibit A-6 illustrates the future levels of service by location.

It should be noted that a significant portion of the traffic growth on Mission Drive would be a result of regional traffic through the Valley. As shown in Table 7, the traffic associated with General Plan Build-out only (excluding regional traffic) would result in three intersections operating at LOS D or worse. With the addition of regional through traffic, three additional intersections would be impacted.



**Table A-6
Future Roadway Levels of Service**

Roadway	Road Segment	Existing (2007) Conditions		General Plan Build-out		GP Build-out + Regional Traffic (to Year 2030)	
		ADT	LOS	ADT	LOS	ADT	LOS
Mission Dr	Western City limits to Fifth St	20630	LOS E	22400	LOS E	29710	LOS F
	Fifth St to Alisal Rd	17640	LOS D	19790	LOS E	25400	LOS E
	Pine St to Alamo Pintado Rd	22190	LOS E	24480	LOS E	31955	LOS F
	Alamo Pintado Rd to Eastern City Limit	19220	LOS E	20960	LOS E	27680	LOS E
Atterdag Rd	Mission Dr to Laurel Ave	3090	LOS A	5690	LOS A	5690	LOS A
Alisal Rd	Alisal Rd at City Limit	1460	LOS A	1550	LOS A	1550	LOS A
	Copenhagen Dr to Mission Dr	8080	LOS B	9100	LOS B	11635	LOS C
	Mission Dr to Laurel Ave	2980	LOS A	3890	LOS A	3890	LOS A
Alamo Pintado	Mission Dr to Old Mission Dr	12620	LOS A	13940	LOS A	18175	LOS B
Oak Street	Fifth St to Alisal Rd	3110	LOS B	3470	LOS B	4480	LOS B
Laurel Avenue	Atterdag Rd to Alisal Rd	1020	LOS A	1280	LOS A	1280	LOS A

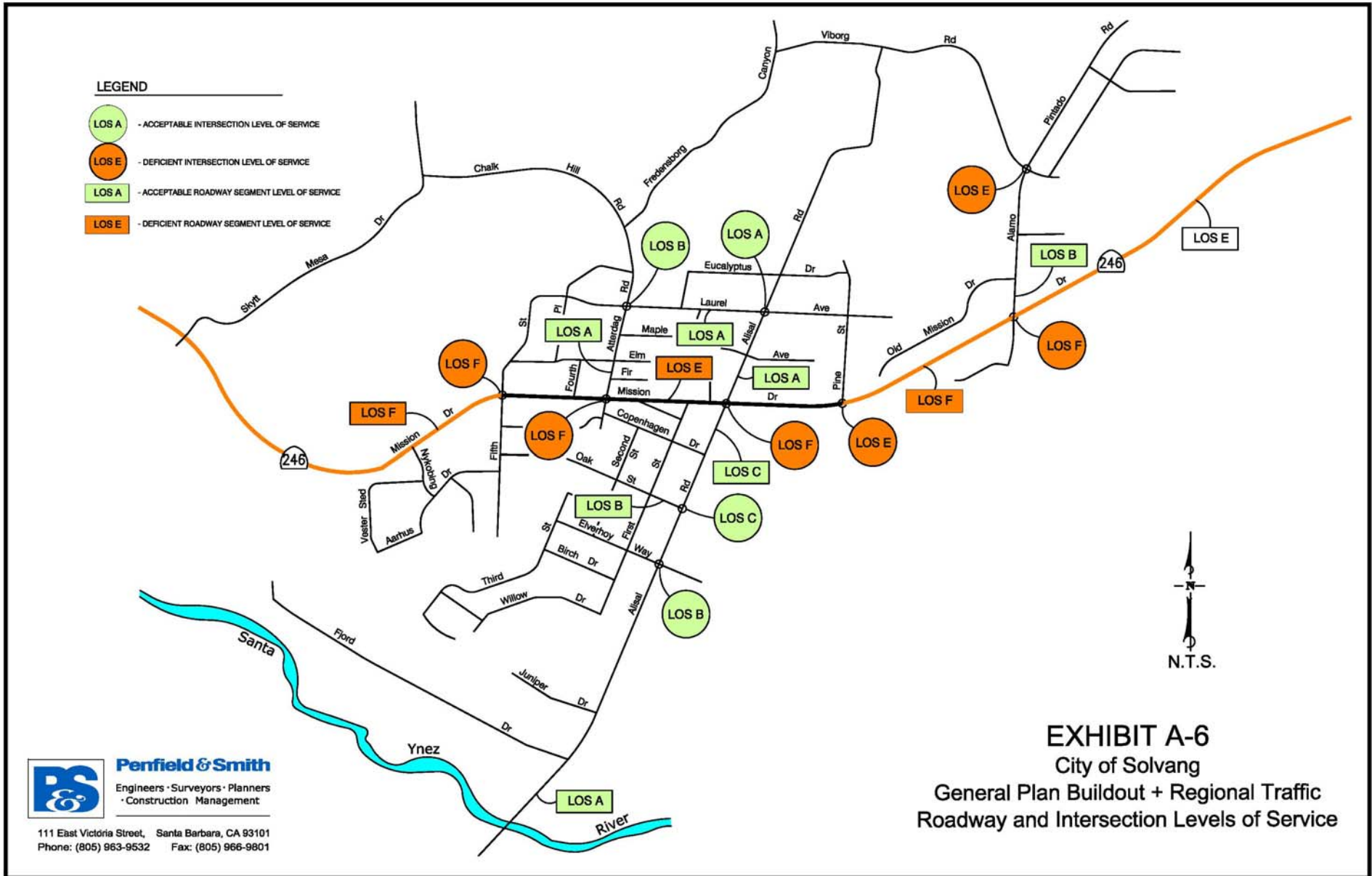


**Table A-7
Future PM Peak Hour Intersection Levels of Service**

No.	Intersection	Traffic Control	PM Peak Hour Intersection Level of Service ¹		
			Existing (2007)	General Plan Build-out	GP Build-out + Regional Traffic (to Year 2030)
1.	Fifth St/Mission Dr	Signal	0.77/LOS C	0.91/LOS E	1.13/LOS F
2.	Atterdag/Laurel Ave	All-way Stop	7.9/LOS A	9.7/LOS A	13.3/LOS B
3.	Atterdag Rd/Mission Dr	Signal	0.70/LOS B	0.89/LOS D	1.24/LOS F
4.	Alisal Rd/Laurel Ave	All-way Stop	7.6/LOS A	7.6/LOS A	8.0/LOS A
5.	Alisal Rd/Mission Dr	Signal	0.69/LOS B	0.77/LOS C	1.06/LOS F
6.	Alisal Rd/Oak St	All-way Stop	9.9/LOS A	10.7/LOS B	16.5/LOS C
7.	Alisal Rd/Elverhoy Ct	Two-way Stop	9.7/LOS A	10.4/LOS B	12.3/LOS B
8.	Pine St/Mission Dr	Two-way Stop	13.4/LOS B	15.9/LOS C	30.5/LOS E
9.	Alamo Pintado Rd/Viborg Rd	All-way Stop	11.5/LOS B	12.8/LOS B	40.8/LOS E
10.	Alamo Pintado Rd/Mission Dr	Signal	0.80/LOS C	0.88/LOS D	1.22/LOS F

1. The City's acceptable level of service is LOS D, however Caltrans has established their own traffic impact thresholds to assess traffic impacts on all State facilities. Caltrans endeavors to maintain a target LOS at the transition of between LOS C and LOS D.





PARKING ANALYSIS

A parking study was completed in May 1987 to determine the existing parking supply and the on and off-street parking demand in the Village area. The parking study was updated in July 2007 as part of the Circulation Element update. The parking study area is generally bounded by Fifth Street to the west, Elm and Fir Avenue to the north, Alisal Road to the east and Oak Street to the south. To facilitate the data collection efforts, the parking area was divided into 17 zones. The parking analysis zones are illustrated in Exhibit A-7. Within this area there are 1,114 parking spaces. Since 1987, there has been a 10% increase in the number of on-street parking spaces and a 50% increase in the number of public parking lot spaces.

The majority of the parking is distributed amongst the blocks and parking lots south of Mission Drive (76% of total spaces) where tourist commercial activities are concentrated. The downtown parking supply is summarized in Table A-8 and discussed in further detail below.

Municipal Parking Lots

There are currently five municipal parking lots within the Village area. No private lots or private on-street parking spaces were counted as part of the Parking Study update. The public parking lots were financed through benefit assessments on existing properties in the portion of the Village included in Parking District No. 1, which was formed under the Solvang Municipal Improvement District Act prior to incorporation of the City. Four of the lots are located south of Mission Drive. The fifth lot is located north of Mission Drive, near the northeast corner of Mission Drive and Alisal Road. A portion of this lot is designated for Recreational Vehicle (RV) parking. There are a total of 449 spaces within the public parking lots, comprising 40% of the total public parking spaces.

There are numerous other private lots owned and operated by the commercial establishments in the Village, as well as additional off-street parking spaces at lodging facilities around the City. Many tourists leave their cars parked at their motel and walk around the Village during the day. Most of the private off-street parking lots are restricted to employees and customers of the specific businesses/buildings for which the parking was provided and are generally signed as such. Enforcement of such restrictions however is very difficult because store managers generally do not have the time or ability to keep track of customers parking in their lots and



most Solvang visitors walk around the Village shopping area stopping at numerous shops.



On-Street Parking

In the portion of the Village bounded by Fifth Street, Elm Avenue/Fir Avenue, Alisal Road and Oak Street, Solvang's on-street parking supply consists of 665 spaces. Of these, 399 are parallel parking spaces and 268 are diagonal or angle parking spaces. On-street parking is allowed on most streets in the Village area. However on-street parking has been prohibited along certain sections of Mission Drive (SR 246). Diagonal parking is provided along much of Copenhagen Drive, Alisal Road, First Street and Second Street. The use of diagonal parking increases the supply of on-street parking although at times it causes some additional traffic congestion problems when large recreational vehicles park diagonally, extending into the travel lanes. Six spaces are controlled by a 15-minute time limit. There are no parking meters in the Village area.

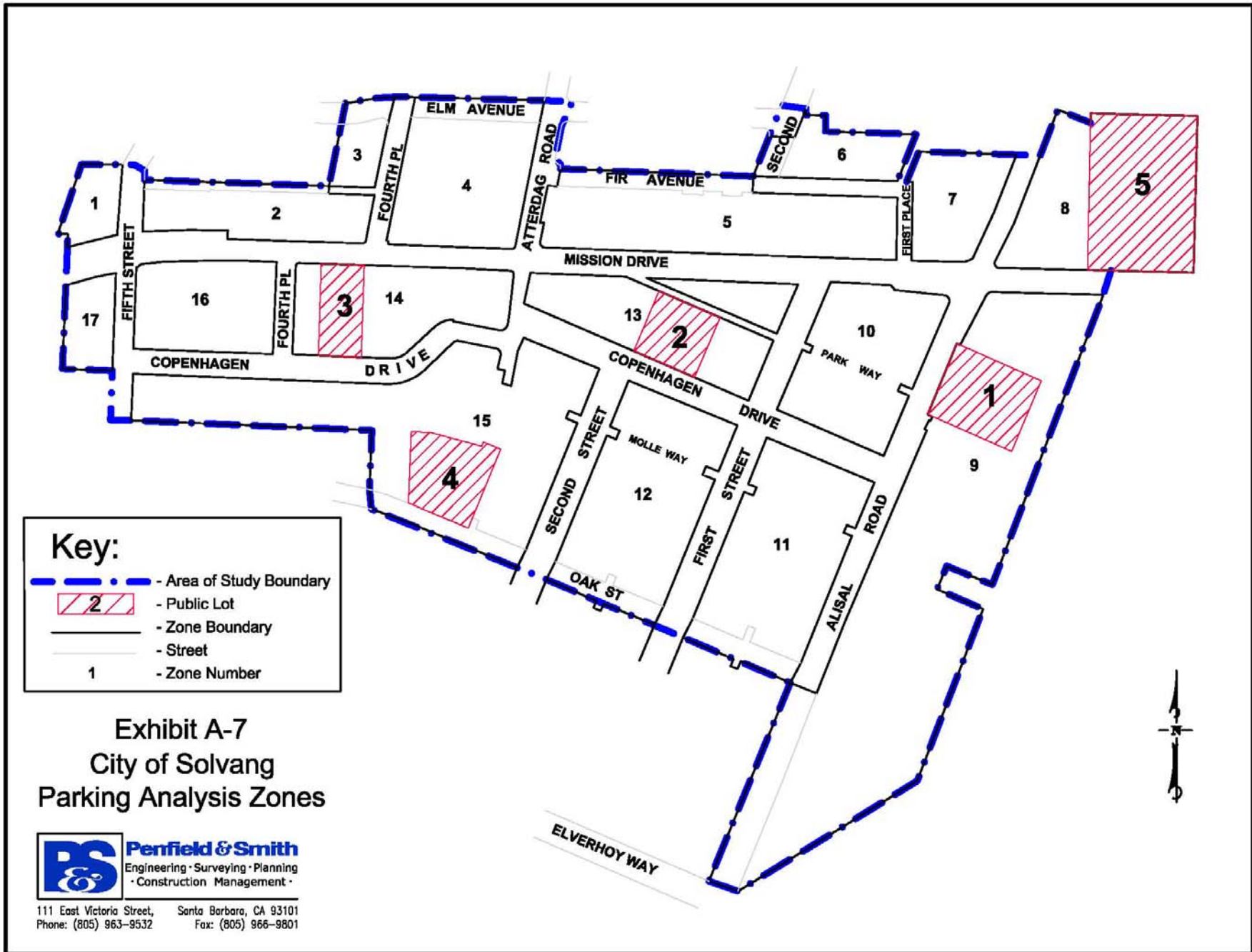
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**Table A-8
Downtown Solvang Parking Inventory**

Parking Zone	Parallel Spaces	Diagonal Spaces	Total On-Street	Total Public Parking Lot	Total Spaces
1	13	0	13	0	13
2	10	15	25	0	25
3	9	0	9	0	9
4	45	0	45	0	45
5	31	0	31	0	31
6	20	0	20	0	20
7	11	0	11	0	11
8	14	0	14	Lot 5- 100	114
9	17	70	87	Lot 1- 115	202
10	5	28	33	0	33
11	48	23	71	0	71
12	52	26	78	0	78
13	17	37	54	Lot 2- 78	132
14	17	0	17	Lot 3- 73	90
15	60	69	129	Lot 4- 83	212
16	25	0	23	0	23
17	5	0	5	0	5
Total	399 spaces	268 spaces	665 spaces	449 spaces	1114 spaces

1. All zones include both sides of the street per the Zone map.
2. Off-Street parking counts were collected in Public Lots only (including the RV lot-Lot #5).
3. There has been a 10% increase in the number of on-street parking spaces and a 50% increase in the number of public parking lot spaces since the last Parking Study conducted in 1987.





Existing Parking Demand

Parking counts were collected on Thursday, August 16, 2007 from 9:00 AM to 5:00 PM. It should be noted that the counts were collected during the Zaca Fire, which began on July 4th, 2007, approximately 15 miles northeast of Buellton. The fire was 100% contained by early September. During this time, vehicular access on SR 154 was limited. While the fire did not appear to affect tourism in Solvang, the parking demand in the Village area was unusually low for a typical summer peak season.

On average, 59% of the on-street parking spaces were occupied during the parking survey. The peak parking demand occurred between 12:00 PM and 2:00 PM when 61% of the on-street spaces were occupied. The public parking lots had an average parking occupancy of 45%, with a peak of 49%. The parking demand observed on-street and in the public parking lots is summarized in Table A-9. The parking demand for the public parking lots is further broken down by lot in Table A-10.



**Table A-9
Total Observed Parking Demand-
On-street and Public Parking Lots**

Time	Occupied Spaces			Vacant Spaces	Percent Occupied
	On-Street Spaces (665 total)	Off-Street Spaces (449 total)	Total Spaces (1114 total)		
9 AM	277	111	388	726	35%
10 AM	382	151	533	581	48%
11 AM	422	215	637	477	57%
12 PM	441	245	686	428	62%
1 PM	443	227	670	444	60%
2 PM	447	239	686	428	62%
3 PM	426	225	651	463	58%
4 PM	384	203	587	527	53%
5 PM	328	173	501	613	45%
Average	394	199	593	521	53%

**Table A-10
Public Parking Lots- Number of Spaces Occupied**

Time	Parking Lot					Total Average Demand (Spaces)
	#1. Alisal Rd. (115 sp)	#2. Central Park (78 sp)	#3. Copenhagen (73 sp)	#4. Oak St. (83 sp)	#5. RV Lot (100 sp)	
9 AM	38	21	13	16	23	22
10 AM	52	21	29	19	30	30
11 AM	68	49	48	25	25	43
12 PM	69	60	60	31	25	49
1 PM	64	53	58	24	28	45
2 PM	65	54	49	33	38	48
3 PM	62	49	54	26	34	45
4 PM	59	53	38	22	31	41
5 PM	53	41	28	22	29	35
Average Demand	51%	57%	57%	29%	29%	45%

