13.0 TRANSPORTATION AND CIRCULATION

The following section provides an overview of the regional and local traffic, circulation, and parking systems in and around the Santa Barbara Cottage Hospital (SBCH) site as well as a description of transportation-related policy relevant to the proposed project. The section concludes with an evaluation of impacts related to pedestrian and vehicular transportation and parking that would result from implementation of the proposed project. Mitigation measures are prescribed, as appropriate. This section has been prepared using the following technical studies prepared for the project:

Traffic Impact Analysis, Santa Barbara Cottage Hospital Modernization and Seismic Compliance Plan, prepared by LSA Associates, Inc. in October, 2004 (Appendix J).

Traffic and Parking Study for the Santa Barbara Cottage Hospital Seismic Compliance and Modernization Plan, prepared by Kaku Associates in September 2003 (Appendix J).

Traffic and Circulation Study for the Castillo Street Closure, prepared by Associated Transportation Engineers (ATE) in September 1992.

13.1 TRANSPORTATION AND CIRCULATION - IMPACT SIGNIFICANCE GUIDELINES

Using significance criteria from the CEQA Guidelines and the City of Santa Barbara General Plan, the Cottage Hospital Modernization and Seismic Compliance project would be considered to have a significant effect on transportation, circulation, and safety if:

➢ Traffic

- Project peak-hour traffic would cause the volume-to-capacity (v/c) ratio at a signalized intersection to exceed 0.77 v/c or cause an increase of 0.01 (1 percent) or more at an intersection operating above 0.77 v/c at peak-hours (project-specific impact)
- Add peak-hour traffic to an intersection that is projected to operate above 0.77 v/c at peak hours (cumulative impact)

At Congestion Management Program (CMP) intersections, the project would be considered to have a significant effect on the level of service if it would:

- Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)
- Decrease the LOS at an intersection operating at LOS A or B, two levels of service from project added traffic.
- Decrease the level of service from LOS C to LOS D.
- Add 20 or more peak-hour trips to an intersection operating at LOS D.
- Add 10 or more peak-hour trips to an intersection operating at LOS E or F.

Generally, the City standards for LOS are more stringent than the CMP standards. However, this document will identify locations where the project trips exceed the CMP standard as stated above.

➢ Circulation

- Create or increase hazards due to a design feature (e.g., sharp curves, dangerous intersections, inadequate site distance, etc.)
- Result in inadequate emergency access or substantial degradation of emergency response times due to traffic congestion

➢ Parking

- Result in inadequate parking capacity

13.2 TRANSPORTATION AND CIRCULATION IMPACTS - METHODOLOGY

The *Traffix* (Version 7.6) computer software was utilized to determine the levels of service (LOS) at signalized study area intersections based on the Intersection Capacity Utilization (ICU) methodology and at unsignalized intersections based on the *Highway Capacity Manual 2000* (HCM) methodology.

Consistent with City of Santa Barbara and Congestion Management Program requirements, the ICU methodology compares the v/c ratios of conflicting turn movements at an intersection, sums up these critical conflicting v/c ratios for each intersection approach, and determines the overall ICU. A saturation flow rate of 1,600 vehicles per hour (vph) and a clearance interval of 10 seconds has been used in the intersection LOS calculations.

The resulting v/c ratio is expressed in terms of LOS, where LOS A represents free-flow activity and LOS F represents overcapacity operation. LOS is a qualitative assessment of the quantitative effects of such factors as traffic volume, roadway geometrics, speed, delay, and maneuverability on roadway and intersection operations. LOS criteria for signalized intersections using the ICU methodology are presented on the following page.

LOS	Description
A	No approach phase is fully utilized by traffic, and no vehicle waits longer than one red indication. Typically, the approach appears quite open, turns are made easily, and nearly all drivers find freedom of operation.
B	This service level represents stable operation, where an occasional approach phase is fully utilized, and a substantial number are nearing full use. Many drivers begin to feel restricted within platoons of vehicles.
C	This level still represents stable operating conditions. Occasionally, drivers may have to wait through more than one red signal indication, and backups may develop behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so.
D	This level encompasses a zone of increasing restriction approaching instability at the intersection. Delays to approaching vehicles may be substantial during short peaks within the peak period; however, enough cycles with lower demand occur to permit periodic clearance of developing queues, thus preventing excessive backups.
E	Capacity occurs at the upper end of this service level. It represents the most vehicles that any particular intersection approach can accommodate. Full utilization of every signal cycle is attained no matter how great the demand.

F This level describes forced flow operations at low speeds, where volumes exceed capacity. These conditions usually result from queues of vehicles backing up from a restriction downstream. Speeds are reduced substantially, and stoppages may occur for short or long periods of time due to the congestion. In the extreme case, speed can drop to zero.

The relationship between LOS and the ICU value (i.e., v/c ratio) is as follows:

Level of Service (LOS)	Intersection Capacity Utilization (ICU)
A	≤ 0.60
B	0.61–0.70
C	0.71–0.80
D	0.81–0.90
E	0.91–1.00
F	> 1.00

The HCM 2000 methodology has been used to determine intersection levels of service at unsignalized intersections. For the unsignalized HCM methodology, the LOS is presented in terms of total intersection delay and approach delay of the major and minor streets (in seconds per vehicle). The relationship of delay and LOS at signalized and unsignalized intersections are summarized below.

Level of Service (LOS)	Unsignalized Intersection Delay per Vehicle (sec)
A	≤10.0
B	>10.0 and ≤15.0
C	>15.0 and ≤25.0
D	>25.0 and ≤35.0
E	>35.0 and ≤50.0
F	>50.0

Based on the City of Santa Barbara General Plan, a v/c ratio of 0.80 (LOS C) is the minimum acceptable level of service for all signalized study area intersections. However, for purposes of environmental assessment, a signalized intersection is considered impacted if a project causes the v/c ratio to exceed 0.77. If the intersection exceeds an ICU of 0.77 and the project causes an increase of 0.01 or more to the ICU at LOS C, then mitigation measures are required to offset the project's impact. The City's General Plan does not set forth a level of service threshold for unsignalized intersections. However, an analysis of unsignalized intersections is provided because all of the intersections adjacent to the project are unsignalized. The intent of the unsignalized intersection analysis is to fully disclose the effects of the proposed project on the surrounding circulation system. Because the City does not have a threshold for unsignalized intersections, an increase in project-related traffic of greater than one percent to the total traffic volume at the intersection would be considered a significant project impact.

Project impacts to neighborhood streets were analyzed using an approach developed by the City Planning Department of San Francisco. This approach evaluates the livability of a neighborhood by the traffic volumes on each neighborhood street. This method was applied to the forecasted additional traffic generated by SBCH.

Parking demand for the proposed project was determined by identifying the existing parking demand based on the existing travel characteristics of hospital uses (i.e., staff, patients, visitors). The parking demand per user type was then applied to forecast estimates of hospital users to identify the project's parking demand.

13.3 TRANSPORTATION AND CIRCULATION IMPACTS - REGULATORY FRAMEWORK

The following section identifies agencies that could affect transportation in and around the project site.

➢ U.S. Department of Transportation

The Federal Highway Administration (FHWA) is the agency of the federal Department of Transportation responsible for the federally-funded roadway system, including the Interstate Highway network and portions of the primary State Highway network. FHWA funding is provided through the Transportation Equity Act for the 21st Century. The moneys made available under this legislation can be used to fund local transportation improvement projects, such as projects to improve the efficiency of existing roadways, traffic signal coordination, bikeways, and transit system upgrades.

➢ California Department of Transportation (Caltrans)

Caltrans is responsible for the planning, design, construction, and maintenance of all State highways. Any federally funded transportation improvements along State highways are subject to review by Caltrans.

➢ Santa Barbara County Association of Governments (SBCAG)

The Santa Barbara County Association of Governments (SBCAG) is the designated Congestion Management Agency (CMA) for Santa Barbara County. The SBCAG is required to monitor Congestion Management Program implementation and annually determine if each local jurisdiction is in conformance with the Congestion Management Program. The Congestion Management Program is required to be updated biennially to address legislative changes and allow SBCAG to assess various program elements to ensure mandated programs are implemented in the most cost-effective manner for each agency.

➢ City of Santa Barbara

The City of Santa Barbara is responsible for the planning, design, construction, and maintenance of all roadway improvements within the City limits. Roadway improvements and mitigation measures must be reviewed and approved by the City's Public Works staff and should be consistent with the General Plan Circulation Element.

➢ Circulation Element

The purpose of the Circulation Element is twofold. First, the Circulation Element addresses the requirements of State law, which are to evaluate the transportation needs of the community and to present a comprehensive plan to meet those needs. Second, it contains measures for the implementation of the Comprehensive Goal and Vision Statement, from which all the Goals, Policies, and Implementation Strategies of the Circulation Element are derived. Implementation of specific goals are accomplished through a three-phased process of: (1) establishing defined benchmarks or objectives, (2) monitoring and measuring policy impacts and results, and (3) developing City-initiated response strategies.

The primary objectives of the Circulation Element considered applicable to the SBCH project include the following:

- Provide a transportation system that supports the economic vitality of the City
- Strive to achieve equality of convenience and choice among all modes of transportation
- Review traffic impact standards used at City intersections for consistency with the goals of the Circulation Element and the General Plan
- Establish a process to include neighborhoods in discussions of the effects of traffic on residential streets
- Establish a process to include business and non-residential property owners in discussions of the effects of traffic along business corridors
- Apply land use planning strategies that support the City's mobility goals
- Coordinate with regional systems and goals

Traffic and circulation studies have been prepared for the proposed project and are contained in Appendix J. The Traffic Impact Analysis used the City's standards to analyze potential traffic impacts. Mitigation measures, where necessary, are included to ensure that potential traffic impacts are reduced to a less than significant level. With implementation of these measures, the proposed Specific Plan is considered consistent with the applicable goals of the Transportation Element, as outlined above.

13.4 TRANSPORTATION AND CIRCULATION IMPACTS - EXISTING SETTING

The following discussion provides an overview of the regional and local transportation and circulation systems in and around the project site, including roadways, bicycle and pedestrian facilities, and parking facilities. Figure 13.1 illustrates the facilities discussed in this section. The section concludes with a discussion of transportation-related policy.

➢ Regional Transportation System

Regional access in the vicinity of the project site is provided via the following route:

United States Highway 101. United States Highway 101 (U.S. 101) connects the City of Santa Barbara with San Luis Obispo County to the north and to the Ventura and Los Angeles areas to the southeast. Within the project study area, U.S. 101 is oriented northwest-southeast

and provides access to the project site via its interchanges at Mission Street, Pueblo Street, and Las Positas Road.

➢ Local Transportation System

Local access in the vicinity of the project site is provided via the roadways discussed below.

Las Positas Road. Las Positas Road is a four-lane north-south major arterial located north of the hospital site. Las Positas Road provides access to the proposed project site from its interchange with U.S. 101, as well as "cut-through" traffic via Tallant Road. Las Positas Road is designated a Principal Arterial on the Congestion Management Program (CMP) System of Roadways.

Junipero Street. Junipero Street is a two-lane undivided east-west local street located west of and adjacent to the project site. Junipero Street provides on-street parking for the SBCH site and other adjacent residential and medical land uses.

Pueblo Street. Pueblo Street is a two-lane undivided east-west local street located south of and adjacent to the project site. Pueblo Street provides access to the proposed project site from a northbound U.S. 101 off ramp and from De La Vina Street. Pueblo Street provides on-street parking and access to adjacent parking lots for the SBCH site and other adjacent residential and medical land uses.

Los Olivos Street. Los Olivos Street is a two-lane undivided east-west local street located east of the project site. Los Olivos Street provides access to the southernmost area of the proposed project site from the adjacent local streets. Los Olivos Street provides on-street parking and access to parking lots south of the SBCH site and to other adjacent residential and medical land uses.

Mission Street. Mission Street is a four-lane east-west major arterial located south of the hospital site. Mission Street provides access to the proposed project site from its interchange with U.S. 101. Mission Street is designated a Principal Arterial on the Congestion Management Program (CMP) System of Roadways.

De La Vina Street. De La Vina Street is a two-lane north-south one-way (southbound) collector street within the vicinity of the hospital site. Existing land uses along De La Vina Street between Constance Avenue and Mission Street include mainly residential and with some medical related land uses. De la Vina is a two-lane divided, one-way street north of Constance with mainly commercial related land uses. Most of the intersections along De La Vina Street are unsignalized. De La Vina Street provides access to the eastern portion of the SBCH site.

Bath Street. Bath Street is a two-lane north-south collector street located east of and adjacent to the hospital site. Bath Street is one-way in the northbound direction south of Mission Street. Bath Street provides on-street parking and access to adjacent parking lots for the SBCH site and to other adjacent residential and medical land uses.

Castillo Street. Castillo Street is a two-lane undivided north-south collector street running through the hospital site. Castillo Street provides access to the proposed project site from the Pueblo Street off-ramp at U.S. 101 and the Mission Street interchange. Castillo Street is one-way in the southbound direction south of Mission Street. Castillo Street has on-street parking and access to adjacent parking lots for the SBCH site and other adjacent residential and

medical land uses. The portion of Castillo Street between Junipero Street and Pueblo Street is proposed to be vacated as part of the project.

Oak Park Lane. Oak Park Lane is a two-lane undivided north-south local street located south of the hospital site with on-street parking. Immediately adjacent to the project, Oak Park Lane is exclusively related medical land uses, but mainly residential to the south of Pueblo Street.

Calle Real. Calle Real is a two-lane undivided east-west arterial located adjacent to U.S. 101 south of the hospital site. Calle Real is a two-way street from Pueblo Street to Treasure Drive and a one-way street (westbound) between Treasure Drive to the U.S. 101 off-ramp at Las Positas Road. West of Las Positas, Calle Real is two-way again and has a northbound freeway on-ramp at the Earl Warren Showground's driveway. Caltrans created the one-way portion of Calle Real in the 1980's to make improve freeway access at it's intersection with Las Positas. This change in circulation patterns, however, has limited access to the hospital from the Las Positas interchange and has created cut-through traffic via Tallant Road.

State Street. State Street is a two-lane divided north-south street located east of the hospital site. State Street is a primary arterial providing access to the eastern portion of the SBCH site via Quinto Street, Pueblo Street, and Mission Street. State Street turns at into a four lane undivided street at Constance Avenue and then turns direction at Calle Laurales becoming an east-west street to the north of the project site.

Tallant Road. Tallant Road is a two-lane undivided north-south residential street located north of the hospital site. Tallant Road provides access to the proposed project site from Las Positas Road as a "cut-through" route. Tallant Road provides access to the northern portion of the SBCH site via Castillo Street.

➢ Public Transportation

The Santa Barbara Metropolitan Transit District (MTD) currently provides public transportation to the project area.

MTD Bus Service. The Santa Barbara MTD is the sole provider of bus service to and from SBCH via Route 3—Oak Park, Route 6—State/Hollister, and Route 11—Downtown Santa Barbara to University of California Santa Barbara (UCSB), according to the information contained in the MTD website (http://www.sbmtd.gov/). Route 3 is described below.

- **Route 3—Oak Park.** Route 3 originates at the intersection of State Street and La Cumbre Road and ends at the Transit Center at Carrillo Boulevard and Chapala Street, as of September 7, 2004. The bus operates between 5:30 a.m. and 7:30 p.m. Monday through Friday, between 6:30 a.m. and 7:30 p.m. on Saturdays, and between 8:30 a.m. and 6:30 p.m. on Sundays. This route provides a service frequency of every half-hour for a total of 26 weekday trips, 14 Saturday trips, and 11 Sunday trips.
- **Route 6—State/Hollister.** Route 6 originates at the intersection of San Felicia and The Plaza and ends at the Transit Center at Carrillo Boulevard and Chapala Street via State Street and Hollister Avenue, as of September 7, 2004. The bus operates between 6:42 a.m. and 7:05 p.m. Monday through Friday, between 6:15 a.m. and 7:20 p.m. on Saturdays, and between 6:15 a.m. and 7:24 p.m. on Sundays. This route provides a service frequency of every half-hour for a total of 26 weekday trips, 25 Saturday trips,

and 25 Sunday trips. It should be noted that this bus route is located approximately two blocks east of the hospital and is not within the immediate vicinity of the hospital.

- **Route 11—Downtown/UCSB Connection.** Route 11 originates at UCSB and ends at the Transit Center at Carrillo Boulevard and Chapala Street via State Street and Hollister Avenue, as of September 7, 2004. The bus operates between 5:51 a.m. and 11:59 p.m. Monday through Friday, between 6:00 a.m. and 11:15 p.m. on Saturdays, and between 6:30 a.m. and 10:15 p.m. on Sundays. This route provides a service frequency of every half-hour for a total of 35 weekday trips, 32 Saturday trips, and 30 Sunday trips. It should be noted that this bus route is located approximately two blocks east of the hospital and is not within the immediate vicinity of the hospital.

Amtrak. Amtrak provides intercity passenger rail throughout the country. In the vicinity of the project site, Amtrak provides passenger rail service to and from Santa Barbara. Amtrak's Pacific Surfliner route provides service to San Luis Obispo to the north and Los Angeles and San Diego to the south.

➢ Bicycle and Pedestrian Facilities

The Circulation Element of the City of Santa Barbara's General Plan establishes goals and objectives for the bicycle and pedestrian network. As stated in the General Plan, the Circulation Element's objective is "to create and maintain an extensive network of bikeways, which enhances access between residential, recreational, educational, institutional, and commercial areas within and outside the city." The document also contains an objective to increase walking within the City. Bicycle trails and pedestrian facilities within the vicinity of the project site are described below. There are no bicycle facilities (lanes or routes) directly adjacent to the Santa Barbara Cottage Hospital site. Pedestrian movements adjacent to the project are facilitated by sidewalks, which are provided along all the streets adjacent to the hospital. Figure 13.1 illustrates the existing bike routes located within the vicinity of the hospital.

Several Class II bikeways are located in the vicinity of the project. A Class II (on-road) bikeway is a bike route that provides a right-of-way designated by signs or permanent markings and shared with pedestrians or motorists. These lanes are striped, providing a painted separation between motor vehicles and bicycles, and may be signed. The following roadways and bike routes in the vicinity of the project provide Class II bikeways.

- Modoc Road (west of the project site)—This bike route is part of the Cross Town Bike Route and also includes a section of the Pacific Coast Route.
- State Street—The bike route is located east and north of the project site along State Street within the vicinity of the project and is known as the State Street Route.
- Castillo Street between Mission Street and Cabrillo Boulevard
- Bath Street between Mission Street and Haley Street
- De La Vina Street between State Street and Constance Avenue
- Alamar Avenue between Foothill Road and De La Vina Street

Cabrillo Boulevard is the only Class I bikeway within the study area and is known as the Coast Route. Cabrillo Boulevard is approximately two miles south of the project site. Class I

bikeways, as defined by the City of Santa Barbara, are off-street bike paths that provide a completely separated right-of-way designated for the exclusive use of bicycles and pedestrians with crossflows by motorists minimized; they are multi-purpose paths that often provide many types of non-motorists with connections between areas not well served by the street system.

The Santa Barbara County Bike Map also designates several alternative bicycle routes in the vicinity of the proposed project. An alternative route is a bike route that is unsigned or non-painted. The following roadways in the vicinity of the project are designated as alternative routes:

- Bath Street between Alamar Avenue and Mission Street
- Castillo Street between Alamar Avenue and Mission Street
- Junipero Street between Alamar Avenue and Modoc Road via Junipero Pedestrian Bridge

In addition, pedestrian facilities are provided in the vicinity of SBCH. Figure 13.1 illustrates the pedestrian facilities adjacent to the hospital. As shown in the figure, sidewalks are provided at all roadways in the vicinity of the hospital. Pedestrian crosswalks are provided along the boundary at intersections adjacent to the hospital to accommodate staff and visitors. In addition, handicap access ramps are located at the intersections adjacent to the hospital.

A pedestrian bridge is located west of the project site, at the western terminus of Junipero Street, spanning across U.S. 101 to Modoc Road. The bridge provides access to the Cross Town Bike Route (along Modoc Road), and provides pedestrian and bicycle access between the SBCH neighborhood and the area south of U.S. 101. It should be noted that some deficiencies along the pedestrian bridge include the lack of lighting and ADA accessibility.

➢ Parking Facilities

There are several existing parking lots, as well as on-street parking in the area surrounding SBCH. These parking lots serve only the users of the existing hospital, while the on-street parking segments serve users of the existing hospital as well as the other medical offices and residents adjacent to the hospital. These lots and on-street parking segments along with the existing parking supply in each area are shown in Figure 13.2.

As shown in the figure, on-street parking spaces are provided along De La Vina Street, Bath Street, Castillo Street, Pueblo Street, Junipero Street, Nogales Street, Oak Park Lane, Quinto Street, Los Olivos Street, and Fletcher Avenue. The on-street parking spaces located within two blocks of the hospital are restricted to 90-minute parking on weekdays from 9:00 a.m. to 6 p.m. with no restrictions on weekends and between 6:00 p.m. and 9:00 a.m. on weekdays. The following on-street parking locations have no parking restrictions:

- Oak Park Lane (north side and south side)
- Fletcher Avenue (north side and south side)
- Castillo Street (north side and south side, west of Junipero Street)
- Bath Street (north side and south side, west of Junipero Street)
- Junipero Street (west side, between Castillo Street and Oak Park Lane)

The on-street parking spaces are located on public streets and are available to hospital users only on an as-available basis and within the prevailing parking restrictions.

➢ Traffic Volume of Local Roadways and Intersections (Existing Conditions)

Intersection operations and the relationship between capacity and traffic volumes are generally expressed in terms of levels of service (LOS). As the amount of traffic moving through a given intersection increases, the conditions that motorists experience deteriorate. As traffic approaches absolute capacity, there is general instability in the traffic flow, which means that relatively small incidents (e.g., momentary engine stall) can cause considerable fluctuations in speeds and delays that lead to congestion. This near-capacity situation is labeled LOS E (levels of service are designated A through F). Beyond LOS E, capacity has been exceeded, and arriving traffic would exceed the ability of the intersection to accommodate it.

Intersection level of service calculations were performed for the weekday a.m. and p.m. peak hours at the following 22 study area intersections.

1. Calle Real/U.S. 101 northbound on-ramp[1]
2. Tallant Road/Las Positas Road
3. Calle Real/Las Positas Road[1]
4. U.S. 101 southbound ramps/Las Positas Road[1]
5. Modoc Road/Las Positas Road[1]
6. Calle Real/U.S. 101 northbound off-ramp
7. Bath Street/Junipero Street
8. Castillo Street/Junipero Street
9. Oak Park Lane/Junipero Street
10. Calle Real/Junipero Street
11. De La Vina Street/Nogales Avenue
12. De La Vina Street/Pueblo Street
13. Bath Street/Pueblo Street
14. Castillo Street/Pueblo Street
15. Oak Park Lane/Pueblo Street
16. Calle Real/Pueblo Street—U.S. 101 northbound off-ramp
17. De La Vina Street/Mission Street
18. Bath Street/Mission Street
19. Castillo Street/Mission Street
20. U.S 101 northbound ramps/Mission Street[1]

[1] CMP Intersections

21. U.S. 101 southbound ramps/Mission Street[1]
22. Modoc Road/Mission Street

➢ Intersection Level of Service (Existing Conditions)

The existing daily, a.m. peak-hour, and p.m. peak-hour traffic volumes as of March 2004 are illustrated in Figure 13.3. Table 13.A summarizes the existing a.m. and p.m. peak-hour levels of service for the study area intersections.

As Table 13.A indicates, study area intersections are currently operating at satisfactory levels of service (LOS C) during the a.m. and p.m. peak hours, with exception of the following intersections.

- Tallant Road/Las Positas Road (LOS E in the p.m. peak hour)
- U.S. 101 southbound ramps/Las Positas Road (LOS D in the a.m. and p.m. peak hours)
- U.S. 101 northbound ramps/Mission Street (LOS F in the a.m. and p.m. peak hours)
- U.S. 101 southbound ramps/Mission Street (LOS E in the a.m. and p.m. peak hours)
- Modoc Road/Mission Street (LOS F in the a.m. and p.m. peak hours)

In the existing condition, the U.S. 101 ramps at Mission Street and Las Positas road and are operating at unsatisfactory levels of service. SBCH, in its current operating condition, contributes approximately 7 percent of the through traffic on Mission Street at the U.S. 101 interchange and approximately 4 percent of the through traffic along Los Positas Road at the U.S. 101 interchange.

Currently, the hospital has several entrances along Pueblo Street, Castillo Street, Junipero Street and Bath Street. Vehicles park in one of several lots located around the hospital or on the street within a couple of blocks of the hospital. The existing circulation and hospital access creates many possible routes for vehicles to access the parking areas around SBCH. With the implementation of the proposed project, most of the vehicles destined to be directed to one of two parking lots and any vehicles parking on the street, will most likely park within one block of SBCH. As a result of the project, traffic generated by SBCH will utilize the streets adjacent to SBCH and would not be likely to cause vehicles to circulate upon neighborhood streets in search of on street parking for more than one or two blocks from the hospital.

Existing daily traffic volumes were collected on roadways in the vicinity of the hospital. Table 13.B shows the existing daily traffic for these locations.

[1] CMP Intersections

Table 13.A: Existing Intersection Level of Service (LOS) Summary

	AM Peak Hour		PM Peak Hour	
Intersection	**ICU**	**LOS**	**ICU**	**LOS**
Signalized Intersections				
1. Calle Real / US-101 NB on-ramp	0.758	C	0.734	C
3. Calle Real / Las Positas Road	0.660	B	0.776	C
4. US-101 SB Ramps / Las Positas Road	0.875	D	0.840	D
5. Modoc Road / Las Positas Road	0.785	C	0.730	C
17. De La Vina Street / Mission Street	0.702	C	0.787	C
18. Bath Street / Mission Street	0.657	B	0.798	C
19. Castillo Street / Mission Street	0.715	C	0.795	C
20. US-101 NB Ramps / Mission Street	1.118	F	1.088	F
21. US-101 SB Ramps / Mission Street	0.953	E	0.940	E
	Delay	**LOS**	**Delay**	**LOS**
Unsignalized Intersections				
2. Tallant Road / Las Positas Road	24.0 sec (NB)	C	35.2 sec (NB)	E
6. Calle Real / US-101 NB off-ramp	13.1 sec (EB)	B	14.4 sec (EB)	B
7. Bath Street / Junipero Street	9.9 sec (EB)	A	10.5 sec (EB)	B
8. Castillo Street / Junipero Street	11.6 sec (NB)	B	12.3 sec (NB)	B
9. Oak Park Lane / Junipero Street	9.6 sec (NB)	A	10.5 sec (NB)	B
10. Calle Real / Junipero Street	9.5 sec (4-Way)	A	11.4 sec (4-Way)	B
11. De La Vina Street / Nogales Avenue	10.5 sec (EB)	B	11.2 sec (EB)	B
12. De La Vina Street / Pueblo Street	17.9 sec (WB)	C	22.2 sec (WB)	C
13. Bath Street / Pueblo Street	9.5 sec (4-Way)	A	10.2 sec (4-Way)	B
14. Castillo Street / Pueblo Street	10.5 sec (4-Way)	B	10.1 sec (4-Way)	B
15. Pueblo Street / Oak Park Lane	9.7 sec (4-Way)	A	8.9 sec (4-Way)	A
16. Calle Real / Pueblo Street-US-101 NB off-ramp	12.4 sec (WB)	B	12.3 sec (WB)	B
22. Modoc Rd / Mission Street	> 50.0 sec (SB)	F	> 50.0 sec (SB)	F

Note: Shaded values indicate ICU > 0.80 for signalized intersections or delay $\geq$ LOS D for unsignalized intersections.

TABLE 13.B: EXISTING ROADWAY DAILY TRAFFIC VOLUMES

Roadway	Limits	Lanes	Existing ADT
Bath Street	Quinto Street to Junipero Street	2U	4,300
Bath Street	Nogales Avenue to Pueblo Street	2U	5,407
Bath Street	Pueblo Street to Los Olivos Street	2U	4,719
Castillo Street	Quinto Street to Junipero Street	2U	2,334
Castillo Street	Junipero Street to Pueblo Street	2U	3,280
Castillo Street	Pueblo Street to Los Olivos Street	2U	3,820
Fletcher Avenue	Quinto Street to Junipero Street	2U	594
Oak Park Lane	Junipero Street to Pueblo Street	2U	1,400
Oak Park Lane	Pueblo Street to Los Olivos Street	2U	1,091
Junipero Street	Mission Creek to Oak Park Lane	2U	5,270
Junipero Street	Oak Park Lane to Castillo Street	2U	3,865
Junipero Street	Castillo Street to Bath Street	2U	3,049
Pueblo Street	Mission Creek to Oak Park Lane	2U	5,502
Pueblo Street	Oak Park Lane to Castillo Street	2U	5,728
Pueblo Street	Castillo Street to Bath Street	2U	5,379

U=Undivided

➢ Neighborhood Traffic Management Program (Existing Conditions)

The Neighborhood Traffic Management Program (NTMP) has been underway since January, 2004 and has been a collaborative effort between the City of Santa Barbara and the neighborhood stakeholders of the Oak Park neighborhood. The goal of the NTMP, as stated in Chapter 12 of the City of Santa Barbara's Circulation Element, is to establish a process to include neighborhoods in the discussion of the effects of traffic on residential streets. The NTMP boundaries are: State Street to the north, Mission Street to the east, U.S. 101 to the south, and Las Positas Road to the west. SBCH is within the boundary of the project area for the Oak Park NTMP and has been an active participant in the program.

The final product for the collaborative process of the Oak Park NTMP will be a Neighborhood Mobility Plan. The Mobility Plan will identify programmatic and physical street improvements that, if implemented, can improve the livability of the Oak Park neighborhood by addressing traffic and parking concerns.

Some of the problems that were identified through the neighborhood meeting process, include on street parking deficiencies within the general medical neighborhood, poor pedestrian and vehicular crossing opportunities at various intersections, and cut through traffic in the Samarkand neighborhood from people accessing the medial related land uses at and around SBCH.

A draft Mobility Plan has been crafted to address the problems that were identified and includes approximately 30 improvements in the project area. Some of the traffic calming solutions within the medical land use area include curb extensions at intersection to improve sight visibility and to reduce crossing distance; mini roundabout at Los Olivos and Castillo

Street to slow speeds of drivers while improving pedestrian safety; and a raised intersection at Pueblo and Castillo street to slow speeds and alert drivers to a high pedestrian environment.

The draft Mobility Plan is currently under review by the neighborhood and should be ready for adoption by City Council in January 2005. The draft plan requires 65 percent of support from petitioned property owners in order to be adopted and implemented by the City.

13.5 TRANSPORTATION AND CIRCULATION IMPACTS - PROJECT FEATURES

With the implementation of the proposed project, several features would be provided to enhance and/or improve the circulation system. The features may improve areas such as parking facilities, pedestrian circulation, and the quality of life of the surrounding neighborhood. Some project features that the proposed project would provide are discussed below.

PF 13-1 Off-Street Parking Facilities. The project will provide a total of 1,252 parking spaces in off-street surface lots and parking structures. The project would construct two parking structures providing a total of approximately 1,191 parking spaces. One parking structure, referred to as the Knapp Parking Structure, would be located on the existing Knapp surface parking lot at the northeast corner of Bath Street/Junipero Street and would contain approximately 556 parking spaces. The other structure, referred to as the Pueblo Parking Structure, would be constructed on the southwest corner of Castillo Street/Pueblo Street and would contain approximately 635 parking spaces. The project will provide 61 surface parking spaces: 34 spaces would be located adjacent to the emergency department, 5 would be located at the service yard at Oak Park Lane and Junipero Street, 12 would be located at the Fletcher building, and 10 would be located adjacent to the outpatient drop-off at Bath Street and Pueblo Street.

PF 13-2 Castillo Street Closure. Implementation of the proposed project would require the closure of Castillo Street. The closure of Castillo Street would change the vehicular and pedestrian circulation patterns in the immediate vicinity of the hospital. The effect on circulation is discussed later in this document.

PF 13-3 Exterior Entrances. The project would provide entrances to the hospital along both Junipero Street and Pueblo Street to accommodate pedestrians entering the hospital from the Knapp Parking Structure and the new Pueblo Parking Structure, as well as patrons who park on-street surrounding the hospital. These proposed multiple entrances would minimize the distance that a pedestrian must travel to enter the hospital.

PF 13-4 Construction Worker Parking. During the construction phases, a shuttle service for construction workers would be implemented. All construction workers except for construction project manager staff and subcontractor staff would park off site and be shuttled to the project site from the off-site parking location.

PF 13-5 Transportation Demand Management. The project would provide a Transportation Demand Management (TDM) Program for Santa Barbara Cottage Hospital employees. The program would provide TDM measures such as Vanpool Subsidy, discounts on bus passes, carpool incentives, etc. These measures would potentially minimize the

amount of vehicles trips by employees, as well as promote alternative modes of transportation.

PF 13-6 Hospital Entrance Circulation. The proposed project would include a circulation feature at the main entrance of the hospital. The project would construct an additional drop-off loop along Pueblo Street at Castillo Street to serve patients/visitors of the hospital at the main lobby. This feature would concentrate patient drop-offs at two locations of the hospital and alleviate the delay along the drop-off area at Bath Street/Pueblo Street.

13.6 TRANSPORTATION AND CIRCULATION IMPACTS - LONG-TERM IMPACTS

13.6.1 PROJECT LONG-TERM TRAFFIC, CIRCULATION, AND PARKING IMPACTS

➢ Project Trip Generation and Trip Distribution

A typical hospital is made up of many different uses that have different trip-generating characteristics. Typical uses can include emergency room, surgery, imaging, physical therapy, obstetrics, psychiatry, administration, and other specialized services. When analyzed separately, each type of use within the hospital has different trip generation characteristics based upon staffing, number of patients, and schedule of each use. However, hospitals are, by definition, made up of all the uses to form an integrated facility for which vehicle trips are generated.

To analyze the hospital as an integration of multiple uses, a variable must be identified that would represent the trip-generating characteristics of the entire facility. Traditionally, variables such as beds, employees, or square feet are used to generate vehicle trips for hospitals. However, for SBCH, these variables do not seem to represent the future anticipated growth in patient volume and outpatient services. As stated in the project description, the licensed beds would decrease from 456 to 337. Furthermore, while the square footage of the hospital would be increased by approximately 48 percent, the increase in square footage does not necessarily translate into more vehicle trips per square foot. The additional square footage proposal is in direct response to State building codes (California Building Code, Chapter 4) requiring additional space to accommodate existing functions, including larger patient rooms, additional support space, infectious disease control, and wider corridors.

According to SBCH, inpatient admissions have increased over the past five years by one or two patients per day per year. Yet, at the same time, the average number of inpatients in the hospital at any one time has decreased by about 10 patients per day due to shorter lengths of stay. Outpatient visits have increased steadily and are projected to continue to increase by 2 percent per year. The increase over time in inpatient hospitalizations and outpatient services could translate into an increase in the vehicle trips generated by the hospital. It should be noted that while outpatient services would seem to generate more vehicle trips, inpatient hospitalization-related trips could rise due to the secondary trip generation of visitor trips. SBCH estimates that each inpatient has approximately 1.5 visitors per day, which would generate additional vehicle trips over the patient-generated vehicle trips.

The change in physical and operational characteristics with the proposed project is illustrated in Figure 13.4. As shown in this figure, the licensed beds would be decreased while the total square footage and number of treatment rooms would be increased with the completion of the project. Licensed beds, therefore, are not a good variable with which to generate vehicle trips because they would be decreased, which would result in fewer trips from licensed beds. Square footage is not a good variable either, because it would seem to indicate that vehicle trips would rise with the completion of the hospital renovation and then remain steady as the building size would increase and then remain constant. However, over the next 10 years, inpatient and outpatient volumes are forecast to increase from 97,255 per year to 119,823 per year. Inpatient projections are based upon historical inpatient volumes from 1999 to 2003 provided in the Cottage Health System Modernization and Seismic Compliance Plan, *Past, Present, and Projected Volume and Capacity*. Outpatient projections are based on the SBCH estimate that outpatients tend to increase at a rate of 2 percent per year. Because the trip generation of the hospital would increase over time as demand for inpatient and outpatient services increase, it would seem that the best variable for forecasting vehicle trips is project patient volumes.

Because the hospital has been operating in its current location for many years, it is possible to quantify the existing vehicle trips generated by the hospital. The existing vehicle trips can then be compared to the existing patient volumes to arrive at a trip generation rate per patient. In addition to actual patient volume, the actual observed trip generation rate would also account for any secondary, ancillary, and support uses at the hospital that are present during the vehicle trip surveys (such as cafeteria, pharmacy, and gift shop uses and hospital staff and visitors).

Kaku Associates, on behalf of SBCH, took existing traffic volume counts at the hospital parking lots in July 2003. These traffic counts indicate that 367 vehicles in the a.m. peak hour and 332 vehicles in the p.m. peak hour enter and leave the hospital's parking lots. However, parking for SBCH is available both in the parking lots and on the street surrounding the hospital; therefore, the trip generation for those parked on the street must also be determined. Therefore, the Kaku observations only account for a portion of the trips generated by the hospital and those parked in the hospital parking lots. The parking demand analysis, discussed later in this section, indicates that 31 percent of vehicles parked in the SBCH parking system are parked on the street, while 69 percent are parked in the hospital's parking lots. If the percent of vehicles parked on the street and in the parking lots is applied to the trip generation, then 69 percent of the total trip generation (i.e., 367 a.m. and 332 p.m. trips) can be attributed to those parked in the hospital's parking lots. Therefore, 31 percent, or 164 a.m. and 148 p.m. peak hour trips, of the total trip generation can be assigned to on-street parking locations. Table 13.C shows the existing trip generation based upon the trip generation surveys at the hospital parking lots adjusted for on-street parking. The adjusted observed trip generation indicates that the hospital generates 531 trips during the a.m. peak hour and 480 trips during the p.m. peak hour.

TABLE 13.C: ADJUSTED OBSERVED TRIP GENERATION

	ADT	A.M. Peak Hour[1]			P.M. Peak Hour[1]		
		In	Out	Total	In	Out	Total
Trips counted at parking lots (69 percent of total parking)	4,089	302	65	367	61	271	332
Trips from vehicles parked on the street (31 percent of total parking)	1,837	135	29	164	27	121	148
Existing Trips[2]	5,926	437	94	531	88	392	480

[1] In/out split based on existing trips.
[2] Existing trips based on observed on-street/off-street parking percentages applied to the existing trips at parking lots.

The adjusted observed trip generation was then compared to the existing (2004) yearly patient volume for SBCH to arrive at a trip generation rate per patient as shown in Table 13.D.

TABLE 13.D: PROJECT TRIP RATE BASED ON EXISTING TRIP GENERATION

	Patients (1,000s)	ADT	A.M. Peak Hour			P.M. Peak Hour		
			In	Out	Total	In	Out	Total
Existing Trip Generation [1]	97.255	5,926	437	94	531	88	392	480
Trip Rate (Trips per 1,000 Yearly Patients)		60.93	4.49	0.97	5.46	0.90	4.03	4.94

ADT = Average Daily Trips
[1] Trip generation from Table 13.C

Applying the rates above to the new patient volumes results in a forecast project trip generation as shown in Table 13.E.

TABLE 13.E: PROJECT TRIP GENERATION

	Patients (1,000s)	ADT	A.M. Peak Hour			P.M. Peak Hour		
			In	Out	Total	In	Out	Total
Project Trips in 2014[1]	119.823	7,301	538	116	654	108	483	591
New Project Trips		**1,375**	**101**	**22**	**123**	**20**	**91**	**111**

ADT = Average Daily Trips
[1] Project trips calculated using the trip rates derived from the existing trip generation (Table 13.D).

The trips generated by the project were then distributed to the surrounding roadways using the trip generation from the Kaku Associates traffic study. The trip distribution is based on consideration of the following factors:

- Geographic distribution of the existing SBCH staff
- Locations of existing and future campus access points and parking lots
- The closure of the 2300 block of Castillo Street between Junipero Street and Pueblo Street

- Traffic patterns implied by the existing volumes and turning movements at the campus access points on Bath Street, Pueblo Street, Junipero Street, and Castillo Street.

Based on these considerations, approximately 28 percent of the trips are destined west via U.S. 101 northbound and Calle Real; 20 percent are destined south via Las Positas Road and Mission Street; 26 percent are destined east via U.S. 101 southbound, Castillo Street, Bath Street, and De La Vina Street; and 26 percent are destined north via Las Positas Road and Mission Street. The project trip distribution is illustrated in Figure 13.5.

The project traffic volumes were assigned to the adjacent street system by applying the trip distribution percentages to the project trip generation. The project trips at each study area intersection are illustrated in Figure 13.5.

➢ Future Transportation System Changes

The City has provided a list of funded roadway or intersection projects in the study area. The following projects are anticipated:

- Mission Interchange Bicycle/Pedestrian Improvements: This project would provide bicycle lanes from Modoc Road to Castillo Street through the Mission Interchange, construct access ramps, and improve pedestrian conditions. This project is currently funded in fiscal years 2005/2006 and 2005/07.
- Las Positas/Modoc Road Improvements: This project is identified as a mitigation measure in the Santa Barbara Christian School EIR and would restripe the eastbound approach to provide one left-turn lane and one shared left-through lane, and traffic signal modifications. According to the City, this improvement is not planned, funded, or scheduled at this time.

According to the City of Santa Barbara Bicycle Master Plan (October 1998), proposed bicycle lanes and facilities are being planned within the vicinity of the project site. Figure 13.6 illustrates the existing and proposed bike routes in the vicinity of the project site. The following bicycle lanes and facilities are being planned along the following roadways.

- A Class II bike lane along State Street from De La Vina Street to Constance Avenue
- A Class II bike lane along Mission Street from Modoc Road to Castillo Street
- A Class II bike lane along De La Vina Street from Constance Avenue to Mission Street
- A Class II bike lane along San Andres Street from Mission Street to Canon Perdido Street

Currently, the City is working with the Oak Park neighborhood to develop a Neighborhood Traffic Management Plan (NTMP), as described in existing setting. The NTMP identifies physical measures and capital projects to address traffic and circulation issues within the neighborhood. This "toolbox" of physical measures may include the following recommendations/improvements:

- Curb extensions
- Dual ramps at intersection corners
- Mini-roundabouts

The City has funding available to implement some of the proposed measures after the Mobility Plan is endorsed by the neighborhood and adopted by City Council. Therefore, some of the select traffic calming measures will most likely be implemented in the near future in the Oak Park neighborhood.

➢ Future Baseline Traffic Volumes

According to the project applicant, the proposed expansion of SBCH would be completed by 2013. To develop a cumulative (2013) project opening condition, traffic volumes for other committed and/or approved (cumulative) developments within this time frame were added to the existing baseline traffic volumes.

A list of cumulative projects was provided by the City of Santa Barbara Planning Department. The cumulative projects list includes approximately 110 projects. However, a majority of these projects are very small and would only generate a nominal number of vehicle trips. To represent any projects that would generate fewer than 10 peak-hour trips, a growth rate of 1 percent per year was added to the existing traffic volumes. Cumulative projects that would generate more than 10 peak-hour trips were then added to the existing plus growth rate traffic volumes to arrive at the cumulative (2013) condition.

Ten cumulative projects were identified in the cumulative condition based on the 10 peak-hour trip threshold and concurrence with City staff. The complete list of cumulative projects is provided in Appendix J, Traffic Impact Analysis. The following projects were used in this analysis.

1. 1221 Anacapa Street—8,810 square feet of office use
2. 601 E. Micheltorena Street—115 condominium dwelling units
3. 3721 Modoc Road—9,120 square feet of classroom expansion
4. 1298 Las Positas Road—12,950-square-foot community center
5. 3815 State Street—5,979 square feet of shopping center
6. 3869 State Street—a 2,858-square-foot day care center
7. 2520 Modoc Road—18 single-family dwelling units
8. 315 W. Carrillo Street—61 apartment dwelling units
9. 900-1100 Las Positas Road—24 single-family dwelling units
10. 1235 Veronica Springs Road—178 apartment dwelling units

Figure 13.7 illustrates the locations of the cumulative projects. As shown in this figure, most of the cumulative projects are located outside of the study area. However, cumulative project traffic still has the potential to contribute to the study area street network. Traffic generated by these cumulative projects was assigned to the local roadways and intersections based on logical origins and destinations for each type of land use. Project trip generation for the cumulative projects was determined utilizing trip rates from the Institute of Transportation Engineers (ITE) *Trip Generation*, 7th Edition (2003). Table 13.F presents the trip generation for the cumulative projects. Trips from the cumulative projects are then added to the existing

Table 13.F: Cumulative Projects Trip Generation Summary

Land Use	Size	Unit	ADT	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
1. 1221 Anacapa Street (APN# 039-183-034)									
Trip Rate [1]									
Office		TSF	11.01	1.36	0.19	1.55	0.25	1.24	1.49
Trip Generation	8.810	TSF	97	12	2	14	2	11	13
2. 601 E. Micheltorena Street (APN# 027-270-030)									
Trip Rate [1]									
Condominum		DU	5.86	0.07	0.37	0.44	0.35	0.17	0.52
Trip Generation	115	TSF	674	9	42	51	40	20	60
3. 3721 Modoc Road (APN# 049-030-018)									
Trip Rate [1]									
Private School		TSF	-	6.55	5.36	11.91	3.33	3.47	6.80
Trip Generation	9.120	TSF	-	60	49	109	30	32	62
4. 1298 Las Positas Road (APN# 047-010-034)									
Trip Rate [1]									
Community Center		TSF	22.88	0.99	0.63	1.62	0.48	1.16	1.64
Trip Generation	12.950	TSF	296	13	8	21	6	15	21
5. 3815 State Street (APN# 051-010-014)									
Trip Rate [1]									
Shopping Center		TSF	ITE Regression Equation						
Trip Generation	5.979	TSF	1,088	18	11	29	47	51	98
6. 3869 State Street (APN# 051-022-037)									
Trip Rate [1]									
Day Care Center		TSF	79.26	6.78	6.01	12.79	6.19	6.99	13.18
Trip Generation	2.858	TSF	227	19	17	37	18	20	38
7. 2520 Modoc Road (APN# 049-091-008)									
Trip Rate [1]									
Single-Family Residential		DU	9.57	0.19	0.56	0.75	0.64	0.37	1.01
Trip Generation	18	DU	172	3	10	13	11	7	18
8. 315 W. Carrillo Street (APN# 039-302-030)									
Trip Rate [1]									
Apartments		DU	6.72	0.102	0.408	0.51	0.403	0.217	0.62
Trip Generation	61	DU	410	6	25	31	25	13	38
9. 900-1100 Las Positas Road (APN#047-010-016)									
Trip Rate [1]									
Single Family Residential		DU	9.57	0.19	0.56	0.75	0.64	0.37	1.01
Trip Generation	24	DU	230	5	14	18	15	9	24
10. 1235 Veronica Springs Road (APN# 047-010-039)									
Trip Rate [1]									
Apartments		DU	6.72	0.102	0.408	0.51	0.403	0.217	0.62
Trip Generation	178	DU	1,196	18	73	91	72	39	110
TOTAL TRIP GENERATION			**4,390**	**162**	**250**	**437**	**266**	**216**	**533**

[1] Trip rates taken from the Institute of Transportation Engineers (ITE) *Trip Generation* Manual, 7th Edition (2003).

No daily trip rates provided for Private School

DU = Dwelling Unit, TSF = Thousand Square Feet

condition, along with a yearly growth rate, to arrive at the cumulative baseline traffic volumes. Figure 13.8 illustrates the resulting cumulative baseline a.m. and p.m. peak-hour traffic volumes.

➢ Project Long-Term Traffic Impacts

To determine the cumulative plus project condition, traffic generated by the proposed project was added to the cumulative (2013) baseline traffic volumes at the study area intersections. In addition, the volumes were manually adjusted at the study area intersection adjacent to the hospital to account for the trips that would be diverted by the closure of the 2300 block of Castillo Street. Figure 13.9 shows the resulting cumulative plus project a.m. and p.m. peak-hour traffic volumes at the study area intersections. The cumulative plus project LOS calculation worksheets are contained in Appendix J, Traffic Impact Analysis.

➢ Summary of Traffic Impacts (Project Long-Term)

Table 13.G summarizes the results of the cumulative and the cumulative plus project a.m. and p.m. peak-hour LOS analysis for all study area intersections. As this table indicates, the following 12 study area intersections are forecast to operate at unacceptable levels of service (LOS D or worse) in the peak hours:

- Calle Real/U.S. 101 northbound On-ramp
- Tallant Road/Las Positas Road
- Calle Real/Las Positas Road
- U.S. 101 southbound Ramps/Las Positas Road
- Modoc Road/Las Positas Road
- De La Vina Street/Pueblo Street
- De La Vina Street/Mission Street
- Bath Street/Mission Street
- Castillo Street/Mission Street
- U.S. 101 northbound Ramp/Mission Street
- U.S. 101 southbound Ramp/Mission Street
- Modoc Road/Mission Street

The following six signalized study area intersections would continue to exceed the City's LOS standards. These intersections would not have a project specific impact based on the City's criteria (project would contribute less than 1 percent increase in volume to capacity ratio).

- Calle Real/U.S. 101 northbound on-ramp
- Calle Real/Las Positas Road
- U.S. 101 southbound Ramps/Las Positas Road
- Modoc Road/Las Positas Road

Table 13.G: Cumulative plus Project Intersection Level of Service (LOS) Summary

	Cumulative Condition				Cumulative Plus Project			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
Signalized Intersections	**ICU**	**LOS**	**ICU**	**LOS**	**ICU**	**LOS**	**ICU**	**LOS**
1. Calle Real / US-101 NB on-ramp	0.835	D	0.804	D	0.837	D	0.811	D
3. Calle Real / Las Positas Road	0.733	C	0.867	D	0.735	C	0.870	D
4. US-101 SB Ramps / Las Positas Road	0.965	E	0.925	E	0.970	E	0.926	E
5. Modoc Road / Las Positas Road	0.899	D	0.830	D	0.900	D	0.846	D
17. De La Vina Street / Mission Street	0.764	C	0.857	D	0.764	C	0.857	D
18. Bath Street / Mission Street	0.711	C	0.868	D	0.727	C	**0.883**	**D**
19. Castillo Street / Mission Street	0.777	C	0.864	D	**0.791**	**C**	**0.885**	**D**
20. US-101 NB Ramps / Mission Street	1.213	F	1.183	F	1.218	F	1.190	F
21. US-101 SB Ramps / Mission Street	1.039	F	1.025	F	**1.051**	**F**	**1.035**	**F**
	Delay	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**
Unsignalized Intersections								
2. Tallant Road / Las Positas Road	> 50.0 sec (NB)	F	> 50.0 sec (SB)	F	> 50.0 sec (NB)	F	>50.0 sec (SB)	F
6. Calle Real / US-101 NB off-ramp	14.9 sec (EB)	B	15.5 sec (EB)	C	15.1 sec (EB)	B	16.4 sec (EB)	C
7. Bath Street / Junipero Street	10.1 sec (EB)	B	10.8 sec (EB)	B	11.8 sec (EB)	B	12.9 sec (EB)	B
8. Castillo Street / Junipero Street	11.8 sec (NB)	B	12.7 sec (NB)	B	11.3 sec (SB)	B	11.8 sec (SB)	B
9. Oak Park Lane / Junipero Street	9.8 sec (NB)	A	10.7 sec (NB)	B	10.1 sec (NB)	B	10.8 sec (NB)	B
10. Calle Real / Junipero Street	10.1 sec (4-Way)	B	12.7 sec (4-Way)	B	10.1 sec (4-Way)	B	13.2 sec (4-Way)	B
11. De La Vina Street / Nogales Avenue	10.8 sec (EB)	B	11.7 sec (EB)	B	10.8 sec (EB)	B	11.7 sec (EB)	B
12. De La Vina Street / Pueblo Street	20.0 sec (WB)	C	27.0 sec (EB)	D	20.2 sec (WB)	C	27.4 sec (EB)	D
13. Bath Street / Pueblo Street	9.9 sec (4-Way)	A	10.8 sec (4-Way)	B	11.3 sec (4-Way)	B	12.9 sec (4-Way)	B
14. Castillo Street / Pueblo Street	11.0 sec (4-Way)	B	10.5 sec (4-Way)	B	11.2 sec (4-Way)	B	10.7 sec (4-Way)	B
15. Pueblo Street / Oak Park Lane	10.2 sec (4-Way)	B	9.2 sec (4-Way)	A	11.6 sec (4-Way)	B	10.3 sec (4-Way)	B
16. Calle Real / Pueblo Street-US-101 NB off-ramp	13.1 sec (WB)	B	13.0 sec (WB)	B	13.2 sec (WB)	B	13.2 sec (WB)	B
22. Modoc Rd / Mission Street	> 50.0 sec (SB)	F	> 50.0 sec (SB)	F	>50.0 sec (SB)	F	>50.0 sec (SB)	F

Notes:

Shaded values indicate ICU > 0.80 for signalized intersections or delay > LOS D for unsignalized intersections.

Bold numbers indicate a significant project impact based on the City of Santa Barbara Environmental Impact Evaluation Guidelines.

An intersection is considered "impacted" if the volume to capacity (v/c) ratio is 0.77 v/c or greater and the project contribution is 0.01 or greater.

- De La Vina Street/Mission Street
- U.S. 101 northbound Ramps/Mission Street

Implementation of the proposed project would cause an increase of 0.010 or greater to the v/c at the following three signalized intersections. ***This would constitute a significant project specific impact.***

- Mission Street/Bath Street
- Mission Street/Castillo Street
- Mission Street/U.S. 101 southbound ramps

Implementation of the proposed project would contribute greater than one percent increase in delay time at these three unsignalized intersections, and they would continue to exceed the City's LOS C standards:

- Tallant Road/Las Positas Road
- De La Vina Street/Pueblo Street
- Modoc Road/Mission Street

Analysis of Signalized Intersection Improvements. Specific improvements were analyzed for each of the three impacted signalized intersections. Specific improvements evaluated included:

- Bath Street/Mission Street: Convert the southbound through lane into a southbound left-through lane. The resulting LOS would be reduced to the baseline condition. (See Figure 22 in the Project Traffic Impact Analysis in Appendix J)
- Castillo Street/Mission Street: Convert the northbound left turn lane into a northbound shared left/through right turn lane; convert northbound and southbound traffic signal phasing to split phase. The resulting LOS would be reduced to baseline condition. (See Figure 23 in the Project Traffic Impact Analysis in Appendix J)
- U.S. 101 southbound Ramps/Mission Street: Convert the southbound approach to dual left-turn lanes and a shared through/right-turn lane. The construction of the southbound right-turn lane would require the construction of a retaining wall. The resulting improvement would reduce the ICU to the baseline condition. (See Figure 13.10).

However, the physical improvements described above for Castillo Street/Mission Street and Bath Street/Mission Street intersections were deemed infeasible because they would limit the pedestrian phase, preclude navigation onto the freeway, or obstruct signal progression along the Mission Street Corridor.

As an alternative to intersection-specific improvements, the construction of a vehicular overcrossing starting at the existing western terminus of Junipero Street and ending at Modoc Road was considered. A Junipero overcrossing would accommodate project traffic traveling from SBCH to the west side of U.S. 101, resulting in a diversion of project trips from the Mission Street corridor. Between five and 15 percent of the existing and cumulative traffic along Mission Street, Las Positas Road, and De La Vina Street would be diverted to Junipero Street, as it would provide an alternative route to the west side of U.S. 101.

Although preliminary calculations of traffic volume and levels of service along Mission Street and Junipero Street with a Junipero Street overcrossing indicate that levels of service along Mission Street would actually improve between five and 15 percent, due to the diversion of existing traffic as well as project trips, additional trips would be added to Junipero Street, resulting in a slight decline in levels of service along this roadway. Implementation of Mitigation Measure TRF-1 would provide for a reduction in project-related and ambient traffic volumes along Mission Street and would improve LOS at the three impacted intersections.

Currently, a pedestrian bridge is located at the western terminus of Junipero Street and spans over U.S. 101 to Modoc Road. A vehicle overcrossing from Calle Real to Modoc Road has been discussed, but a feasibility study has not been completed. The construction of the overcrossing would provide an alternate route for non-freeway related east-west traffic in the Mission Street and Las Positas corridors. ***A Junipero Street vehicle bridge would also improve access to and from the SBCH site to the west side of U.S. 101 and would divert vehicles that would typically travel through the intersections along Mission Street as well as the intersections from the Las Positas interchange to Tallant Road. However, Mitigation Measure TRF-1 is currently not fully planned, funded, or scheduled. Therefore, the proposed project's traffic contribution to Mission Street/Bath Street and Castillo Street/Mission Street would remain significant and unavoidable.***

Mitigation Measure TRF-2, improvements to Mission Street/U.S. 101 southbound ramp, would require conversion of the southbound approach to dual left turn lanes and a shared through/right-turn lane. These improvements would reduce the project contribution to the ICU to baseline conditions, and therefore, potential impacts would be reduced to less than significant.

Three unsignalized study area intersections would continue to exceed the City's LOS standards (LOS C) with the proposed project. A criteria similar to the signalized intersections (an increase of 1 percent to the delay) was applied to the unsignalized intersections to determine a project impact. The following three unsignalized intersections will exceed LOS C standards.

- *Tallant Road/Las Positas Road:* increase in LOS F delay of 3.2 seconds in the a.m. peak hour and LOS F delay of 0.6 second in the p.m. peak hour.

The proposed project would increase the delay greater than 1 percent (> 0.5 seconds of delay) to the unsignalized intersection. The delay represents eastbound and westbound vehicles waiting to turn onto Las Positas Road. High through volumes on Las Positas Road causes significant delay on the stop-controlled side street (Tallant Road). A peak-hour traffic signal warrant was conducted at this intersection during the existing, cumulative, and cumulative plus project conditions. The peak-hour signal warrant analysis is shown in Figure 13.11. Based on the signal warrant analysis, a traffic signal is not warranted at this location during the existing, cumulative, and cumulative plus project horizons. No other mitigation measure is feasible to alleviate the impact at this intersection. It should be noted that the significance criteria for a signalized intersection was applied as a guide to analyze the project contribution of traffic. However, ***the increase in delay (3.2 seconds in the a.m. peak hour) is nominal and would not be noticeable by the driver. Therefore, the increase in delay is not considered a significant impact.***

- *De La Vina Street/Pueblo Street:* increase in LOS D delay of 0.4 seconds in the p.m. peak hour.

The proposed project would increase the delay greater than 1 percent (0.3 seconds) to the unsignalized intersection in the p.m. peak hour. A peak-hour traffic signal warrant was conducted at this intersection during the existing, cumulative, and cumulative plus project conditions. The peak-hour signal warrant analysis is shown in Figure 13.12. Based on the signal warrant analysis, a traffic signal is not warranted at this location during the existing, cumulative, and cumulative plus project horizons. No other mitigation measure is feasible to alleviate the impact at this intersection. It should be noted that the significance criteria for a signalized intersection was applied as a guide to analyze the project contribution of traffic. However, ***the increase in delay (3.2 seconds in the a.m. peak hour) is nominal and would not be noticeable by the driver. Therefore, the increase in delay is not considered a significant impact.***

- *Modoc Road/Mission Street:* increase in LOS F delay of 18.0 seconds in the a.m. peak hour and increase in LOS F delay of 11.9 seconds in the p.m. peak hour.

The proposed project would increase the delay greater than 1 percent (> 0.5 seconds of delay) to the unsignalized intersection. A peak-hour traffic signal warrant was conducted at this intersection during the existing, cumulative, and cumulative plus project conditions. The peak-hour signal warrant analysis is shown in Figure 13.13. Based on the signal warrant analysis, a traffic signal is warranted at this location during the existing, cumulative, and cumulative plus project horizons. By itself, the addition of project traffic does not cause a traffic signal to be warranted at this location because project traffic would be added to the existing deficient intersection. It is feasible to install a traffic signal at the Modoc Road/Mission Street intersection; however, the City staff has determined that the installation of a signal could adversely impact the LOS of the intersections along Mission Street due to the close spacing of the intersections. To address the project's impact at this location, Mitigation Measure TRF-1 is prescribed. ***Mitigation Measure TRF-1 would reduce total traffic volume at the Modoc Road/Mission Street Intersection by five to 15 percent, resulting in an improved LOS at this intersection. However, this measure is unplanned and unfunded at this time, and as such, a significant unavoidable adverse impact would remain.***

Potential Additional Impacts (Project Long-Term). The project proposes to supply parking in two structures and four surface parking lots. The current hospital does not have enough off street parking to meet demand; in fact, SBCH only provides 73 percent of the existing parking demand on the SBCH campus. The remaining amount of parking demand must be provided on-street. On-street parking is particularly limited for employees because of the 90-minute parking zones surrounding the hospital. The existing limited availability of parking can negatively influence an employee's decision to drive to work. Therefore, the hospitals proposal to provide all hospital related parking off-street may increase the number of trips generated by the hospital by making it easier to park. In other words, the lack of parking is a factor in mode choice for the users of the hospital, especially for SBCH employees who visit the facility on a daily basis. Therefore, the impacts described in the previous section may be more severe if SBCH users are encouraged to drive (i.e., more trips) by ensuring ample parking. On the contrary, not providing all of the off-street parking spaces required for the

project would further exacerbate an existing on-street parking problem surrounding the hospital. The existing parking deficit has had impacts on the neighborhood.

To balance the competing interests of providing for the project's parking demand versus maintaining incentives to use other modes of travel to/from the hospital, a parking cash out program is proposed to effectively manage the increase in parking resources (refer to Mitigation Measure TRF-3. The parking cash out program would give employees a parking allowance in addition to other fiscal compensation. Conversely, the hospital would charge employees for parking on a daily basis. This would give employees a monetary incentive to use alternative modes of transportation. ***With implementation of Mitigation Measure TRF-3, the project's impacts to the intersections of Bath Street/Mission Street and Castillo Street/Mission Street would be lessened but would remain significant and unavoidable.***

➢ Traffic Mitigation Measures (Project Long-Term)

TRF-1 Project Study Report. SBCH shall provide funding for a Project Study Report (PSR) to determine feasibility and cost of a vehicular overcrossing from Calle Real to Modoc Road. The PSR shall be submitted to Caltrans and the City Public Works Department prior to issuance of Certificates of Occupancy.

The reduction in traffic along Mission Street will improve the LOS at the three impacted intersections. SBCH shall pay its "fair-share" contribution for construction of an overcrossing at the western terminus of Junipero Street.

TRF-2 Mission Street/U.S. 101 Southbound Ramp. Prior to issuance of a Certificate of Occupancy, SBCH shall construct to the satisfaction of Caltrans, in coordination with the City of Public Works Department the following intersection improvements at the intersection of U.S. 101 southbound ramps/Mission Street: Convert the southbound approach to dual left-turn lanes and a shared through-right-turn lane. The construction of the proposed southbound right-turn lane would require the construction of a retaining wall. The resulting geometric improvement would reduce the ICU to the baseline condition. The resulting LOS with this improvement would be LOS E (0.936 ICU) in the p.m. peak hour. Figure 13.10 illustrates the prescribed improvements at this intersection.

TRF-3 Parking Cash-Out Program. SBCH shall implement a Parking Cash-out Program as part of the Transportation Demand Management (TDM) program (PF 13-5). This program will be implemented prior to issuance of a Certificate of Occupancy for Phase I.

➢ Congestion Management Program Impacts (Project Long-Term)

The Congestion Management Program establishes a threshold for the number of trips added to an intersection. This threshold is 20 trips if it is operating at LOS D and 10 or more peak-hour trips if it is operating at LOS E or F. The following intersections would exceed this threshold as a result of the proposed project:

- U.S. 101 northbound Ramps/Mission Street (a.m. and p.m. peak hour)
- U.S. 101 southbound Ramps/Mission Street (a.m. and p.m. peak hour)

Impacts to the U.S. 101 northbound ramps/Mission Street intersection would be reduced to a less than significant level by Mitigation Measure TRF-6, and impacts to U.S. 101

southbound ramps/Mission Street intersection would be reduced to a less than significant level by Mitigation Measure TRF-2.

➢ Castillo Street Closure (PF 13-2) Impacts (Project Long-Term)

The proposed expansion of SBCH includes the permanent closure, or abandonment of the 2300 block of Castillo Street between Junipero Street and Pueblo Street. The closure of Castillo Street would change vehicular, bicycle, and pedestrian circulation patterns in the immediate vicinity of the hospital. This section provides an analysis of the traffic and circulation impacts related to the proposed closure, as well as the potential impacts on pedestrian and bicycle flow in the area.

A previous study was conducted by Associated Transportation Engineers (ATE) on the effects of a Castillo Street closure on surrounding roadways.[1] In this study, ATE evaluated the potential traffic and circulation impacts associated with the proposed closure of Castillo Street by conducting a "temporary closure" of the street. Existing daily and peak-hour traffic volumes were collected before and during the temporary closure of Castillo Street. In addition, pedestrian and bicycle counts were collected along Castillo Street between Junipero Street and Pueblo Street during the a.m. and p.m. peak hours. The volumes collected before the closure were compared to the volumes collected during the closure to determine the percent change in traffic along the adjacent roadways. For purposes of this analysis, the percent change in traffic volumes from the ATE study were utilized. These percentages assist in the forecast of the proposed closure using current traffic volumes and flows.

Existing daily and peak-hour traffic volumes along Castillo Street between Junipero Street and Pueblo Street were collected in March 2004. The percent diversion of traffic observed during the temporary closure of Castillo Street, referenced in the ATE study, was applied to the cumulative baseline traffic volumes calculated using the March 2004 traffic counts. Table 13.H shows the percentage of diverted traffic due to the closure of Castillo Street along the adjacent roadway segments. Figure 13.14 illustrates the diverted volumes and project traffic following the closure of Castillo Street. Figure 13.15 illustrates the cumulative plus project volumes before and after the closure of Castillo Street.

TABLE 13.H: 1992 ATE STUDY PERCENTAGE OF DIVERTED TRIPS—CASTILLO STREET CLOSURE

Street	Segment	% Change in Trips
Bath Street	Nogales Ave to Junipero St	10%
Oak Park Lane	Junipero St to Pueblo St	131%
Junipero Street	Oak Park Ln to Castillo St	-11%
Junipero Street	Castillo St to Bath St	30%
Pueblo Street	Oak Park Ln to Castillo St	15%
Pueblo Street	Castillo St to Bath St	17%

Note: For purposes of this analysis, a zero percent change in trips along Junipero Street between Castillo Street and Bath Street was analyzed.

[1] Traffic and Circulation Study for the Castillo Street Closure (September 2, 1992).

Cumulative pedestrian and bicycle destination surveys were also conducted along the 2300 block of Castillo Street on March 31, 2004, and April 1, 2004. The pedestrian and bicycle destination surveys are included in Appendix J. Data from the surveys were used to determine the destination of the pedestrians and bicyclists along Castillo Street. Figure 13.16 illustrates the existing pedestrian movements along Castillo Street, Junipero Street, and Pueblo Street for the entire day, the a.m. peak hour, and the p.m. peak hour.

Existing pedestrian traffic along Castillo Street, Junipero Street, and Pueblo Street includes staff and patrons destined to the existing hospital from on-street parking; patients and staff traveling between adjacent medical uses and the hospital; and bicyclists and pedestrians using Castillo Street to travel through the neighborhood. Currently, hospital entrances are provided on Castillo Street, Junipero Street, Bath Street, and Pueblo Street. Locations of hospital entrances influence the routes of pedestrians traveling from on-street parking to the hospital entrances. With the project, entrances to the hospital would be provided on Pueblo Street, Junipero Street, and Bath Street. These entrances are proposed with the Castillo Street closure so that staff and patrons would not have to walk around the hospital in order to enter. In addition, the proposed entrances along Junipero Street and Pueblo Street would be focused to serve the pedestrians that would access the hospital from the proposed parking structures.

Based on the surveys, approximately 1,309 pedestrians and 50 bicyclists per day, 137 pedestrians and 7 bicyclists during the a.m. peak hour, and 116 pedestrians and 7 bicyclists during the p.m. peak hour use Castillo Street to access the hospital. However, approximately 427 daily, 37 a.m. peak-hour, and 47 p.m. peak-hour pedestrians (47 daily, 7 a.m. peak hour, and 7 p.m. peak-hour bicyclists) utilize the 2300 block of Castillo Street to travel past the hospital though the adjacent neighborhood or to walk to and from on-street parking spaces. With the proposed closure of Castillo Street, these pedestrians and bicyclists would have to use alternate routes (i.e., 2300 blocks of Bath Street and Oak Park Lane) to continue towards the neighborhood.

A majority of the pedestrians who currently utilize the 2300 block of Castillo Street are hospital patrons accessing the hospital from on-street parking, from the Pueblo Street parking structure, and from adjacent medical buildings. Currently, the Pueblo Street parking structure is located along the west side of Pueblo Street south of Castillo Street. With implementation of the proposed project and closure of Castillo Street, pedestrians would travel between the hospital and the new Pueblo Street parking structure (located at the northeast corner of Pueblo Street and Castillo Street) or the Knapp parking structure (located at the northwest corner of Junipero Street and Bath Street). This would reduce pedestrian movements along the adjacent streets and increase the number of pedestrians at the intersections of Pueblo Street/Castillo Street and Junipero Street/Bath Street.

The existing Pueblo Street parking structure is located along Pueblo Street between Castillo Street and Oak Park Lane. Currently, hospital patrons access this parking structure at the intersection of Pueblo Street and Castillo Street. The intersection is a four-way stop and provides striped pedestrian crosswalks on each leg. The Knapp parking lot, located at the intersection of Bath Street and Junipero Street, provides additional parking for hospital patrons. The intersection is an all-way stop and provides a striped pedestrian crosswalk on only the west leg on Bath Street. ***The planned closure of Castillo Street between Junipero and Pueblo Streets and the concentration of all the hospital parking in two locations would***

concentrate pedestrians in two locations adjacent to the hospital and cause a potentially adverse impact to pedestrian circulation during the peak hour.

➢ Recommended Mitigation for Castillo Abandonment

Mitigation will be required to address adverse impacts to vehicle, bicycle, and pedestrian traffic related to the hospital, adjacent medical community and residential neighborhood. The following are recommended circulation improvements that would offset the negative adverse impact of the permanent closure of Castillo Street between Pueblo and Junipero Streets.

Hospital Access. One function of Castillo street is to provide access to the hospital from Pueblo and Junipero Streets. The existing hospital provides public access from several sides of the hospital, including Castillo Street. Users of the hospital currently access the hospital from various locations, including: on-street parking, on site parking facilities, from the neighborhood, bus stops around the perimeter, and from adjacent medical offices. The benefit of multiple access points encourages pedestrian travel, making it convenient to go from origin to destination more efficiently.

The closure of Castillo would eliminate an entrance to the hospital and divert pedestrians a greater distance to reach an access point. The proposed hospital would provide two main public entrances, one on Bath and one on Junipero as well as security restricted, employee access points. These access points will mitigate the loss of the existing public entrances and would enable users from adjacent medical offices, bus stops, on street parking and from various neighborhood locations to still access the hospital conveniently.

Intersections Around Campus Perimeter. Castillo Street is currently used not only by patrons of the hospital, but also by patrons of the adjacent medical offices utilizing on-street parking facilities around the hospital and by people of the neighborhood simply passing through.

In order to minimize impacts to pedestrian travel as a result of the closure of Castillo, intersection improvements to enhance the walking experience around the campus will be required. There are eight intersections surrounding the hospital. As the perimeter of the hospital increases and as traffic and pedestrians are diverted, enhancing these intersections, will encouraged continued pedestrian use and safety.

Improve Neighborhood Circulation. The existing street network around the hospital provides a grid like configuration, which offers choices for a dispersed circulation network for pedestrians and vehicular travel. The existing hospital fronts Junipero Street, Pueblo Street, Bath Street, Castillo street and Oak Park Lane. All of these streets are currently used to access the hospital.

The closure of Castillo would require traffic to be dispersed to different routes in the neighborhood. Traffic would be diverted to a concentrated number of intersections on adjacent streets; it would also impact intersections that are not immediately adjacent to the hospital. Some of the affected intersections would include Calle Real/Junipero, Junipero/Oak Park Lane, and Junipero/Alamar, Los Olivos/Oak Park Lane and Pueblo/Oak Park Lane, Los Olivos/Bath and Los Olivos/Castillo. It is recommended that physical enhancements to these intersections be provided to encourage continued pedestrian use and appropriate driver behavior.

➢ Neighborhood Street Analysis

The proposed project fronts Junipero Street, Pueblo Street, Bath Street, Castillo Street, and Oak Park Lane. These streets are all two-lane local streets with on-street parking. In addition to medical and hospital land uses, residences are located along these streets. Because SBCH is located in a residential area and has the potential to impact residents in the vicinity of the hospital, an analysis of the proposed project's impact on the neighborhood streets was prepared. The adjacent land uses, including residential uses, is shown in Figure 13.17

As a guideline to characterize impact significance to the neighborhood vehicular circulation, a study conducted by the City Planning Department of San Francisco (Appleyard 1970) was referenced. In this study, a field survey was conducted of every street block in the City of San Francisco. In this study, observers drove down each block, rating each street on a 1 to 5 scale based on its various visible qualities. Three streets were studied based on identical appearance but difference in traffic volumes. The streets were labeled as "Heavy," "Medium," and "Light" traffic streets to account for their average daily traffic volumes. In addition, attitudinal surveys were conducted to explore the environmental values held by residents of the neighborhoods.

Based on interviews, five sets of issues were explored: (1) Traffic Hazard; (2) Noise, Stress and Pollution; (3) Neighborhood and Visiting; (4) Privacy and Home Territory; and (5) Street Images: Environmental Awareness. Traffic Hazard was the most widespread environmental problem on all three streets, especially on the "Heavy" street. The increase in traffic speeds was seen as being dangerous for children, washing cars, and cars backing out of driveways. Also, the "Light" street, which had less through traffic, tended to attract drivers that would speed and neglect stop signs. During the interviews, each resident characterized the "Light" street as safe, the "Medium" street as neither safe nor unsafe, and the "Heavy" street as unsafe. Therefore, the increase in neighborhood traffic volumes and traffic hazards resulted in the neighborhood being perceived by residents as less livable.

As discussed previously, the proposed project is forecast to generate approximately 1,421 ADT. The daily project traffic was assigned to the study area roadway segments and added to the cumulative (2013) ADT. The existing, cumulative, and cumulative plus project average daily traffic (ADT) volumes for the roadway segments are shown in Table 13.I. In addition, the table provides the increase in project traffic, as well as the diverted trips due to the closure of the 2300 block of Castillo Street. The forecasts of project-related daily traffic on the neighborhood streets provide an indicator of the magnitude of traffic volume increases on residential roadways.

As shown in Figure 13.17, a majority of the residential land uses located within one block of the hospital are along Junipero Street between Fletcher Street and Alamar Avenue, along Quinto Street between Alamar Avenue and De La Vina Street, Oak Park Lane between Pueblo Street and Los Olivos Street, and Los Olivos Street between Oak Park Lane and Castillo Street. In addition, Oak Park is an adjacent recreational use located along Alamar Avenue and Junipero Street.

Based on the Appleyard study, a roadway with approximately 2,000 ADT and/or 200 peak-hour trips was classified as "Light Traffic," approximately 8,000 ADT and/or 550 peak-hour trips was classified as "Moderate Traffic," and approximately 16,000 ADT and/or 1,900

Table 13.I: Cottage Hospital Neighborhood Street Analysis

Street	Segment	Existing ADT	Cumulative ADT	Project Traffic	Diverted Trips due to Castillo Closure	Cumulative Plus Project ADT
Bath Street	Quinto Street to Junipero Street	4,300	4,687	688	0	5,375
	Nogales Avenue to Pueblo Street	5,407	5,894	481	589	6,964
	Pueblo Street to Los Olivos Street	4,719	5,144	523	0	5,666
Castillo Street	Quinto Street to Junipero Street	2,334	2,544	344	0	2,888
	Junipero Street to Pueblo Street	3,280	3,575	0	-3,575	0
	Pueblo Street to Los Olivos Street	3,820	4,164	536	0	4,700
Fletcher Avenue	Quinto Street to Junipero Street	594	647	41	0	689
Oak Park Lane	Junipero Street to Pueblo Street	1,400	1,526	206	1,999	3,731
	Pueblo Street to Los Olivos Street	1,091	1,189	96	0	1,285
Junipero Street	Mission Creek to Oak Park Lane	5,270	5,744	110	0	5,854
	Oak Park Lane to Castillo Street	3,865	4,213	261	0	4,474
	Castillo Street to Bath Street	3,049	3,323	523	997	4,843
Pueblo Street	Mission Creek to Oak Park Lane	5,502	5,997	289	0	6,286
	Oak Park Lane to Castillo Street	5,728	6,244	385	937	7,565
	Castillo Street to Bath Street	5,379	5,863	509	997	7,369

peak-hour trips was classified as "Heavy Traffic." Based on the existing and cumulative traffic volumes, all study area roadway segments would be classified as "Moderate Traffic" streets, with the exception of Fletcher Avenue and Oak Park Lane, which would be classified as "Light Traffic" streets from the Castillo Street closure.

As shown in Table 13.I, the majority of project-related traffic (approximately 2,200 additional trips) would travel along Oak Park Lane between Junipero Street and Pueblo Street. The increase in traffic volumes would classify this roadway segment from a "Light Traffic" street to a "Moderate Traffic" street. However, the land uses along this roadway segment consists of hospital use, two residential uses, and a commercial uses. The increase in traffic would not impact the livability, as discussed in the Appleyard Study, of this roadway segment based on the amount of residential units. The other roadway segments would continue to be classified as "Moderate Traffic" streets, with exception to Fletcher Avenue and Oak Park Lane between Pueblo Street and Los Olivos Street, which would continue to be considered a "Light Traffic" street, even after the addition of project trips. The project traffic volumes along the roadway segments where residential uses and park uses are located would not increase greater than 114 ADT. ***Therefore, the addition of cumulative traffic, project traffic, and diverted trips would not significantly impact the livability of the residential uses and park uses within one block of the project site.***

However, the increase in project traffic at five roadway segments are forecast to increase more than 1,000 ADT in the cumulative plus project condition. Intensity of 1,000 ADT surrounding the hospital has the potential to impact livability on five roadway segments including: Junipero Street between Fletcher Street and Alamar Avenue, Quinto Street between Alamar Avenue and De La Vina Street, Oak Park Lane between Pueblo Street and Los Olivos Street, Los Olivos Street between Oak Park Lane and Castillo Street, and Oak Park, an adjacent recreational use, located along Alamar Avenue and Junipero Street. This impact is identified as adverse but not significant. ***The improvements as specified under the mitigation for the closure of Castillo would also be effective mitigation for the increase in neighborhood traffic, maintenance of appropriate vehicle speeds, promotion of pedestrian safety, and maintaining of the livability of the neighborhood.***

➢ Parking Impacts (Project Long-Term)

To document existing parking demand in the hospital parking lots and on the streets in the vicinity, parking accumulation surveys were conducted at all SBCH parking lots and on-street parking within two blocks of Santa Barbara Cottage Hospital (SBCH). The survey was conducted between 7:00 a.m. and 7:00 p.m. on Wednesday and Thursday, April 28–29, 2004. The 12-hour survey period was selected to ensure that the highest parking demand of the day was included in the study. Although the hospital operates 24 hours a day, most activity (such as outpatient visits, deliveries, and visitors) takes place between 7:00 a.m. and 7:00 p.m. For each hour, parked vehicles were counted along each roadway segment as well as in the hospital parking lots. The parking accumulation surveys are provided in Appendix J, Traffic Impact Analysis.

The existing off-street parking supply is approximately 888 spaces. The peak parking demand in the off-street parking lots was observed to be 842 during the 10:00 a.m. hour on April 28 and 858 spaces during the 11:00 a.m. hour on April 29. However, the peak parking demand of the entire SBCH parking system is based on the combined peak hour of both off-street and

on-street parking. Based on the parking surveys, the peak existing parking demand for both off-street and on-street parking occurred during the 11:00 a.m. hour on April 28, when 828 vehicles were parked in the hospital's parking lots. Although 828 is not the peak off-street parking, this was the off-street parking accumulation when the greatest number of vehicles were parked in the SBCH parking system. As a result, 828 vehicles would be considered the on-site parking demand during the peak hour of parking demand for the hospital.

Parking for SBCH is available both in the SBCH parking lots and along the streets surrounding the hospital. Because the lots are reserved for SBCH use, 100 percent of the parking demand in the parking lots can be attributed to the hospital. However, because there are medical office and residential land uses adjacent to the hospital, vehicles parked on the street cannot all be assigned to the hospital. Therefore, it is necessary to use another method, besides direct observation, to document the on-street parking demand of SBCH.

Kaku Associates (Kaku) conducted surveys to obtain information on the mode of travel, auto occupancy, duration of stay, and parking location of hospital staff and customers. The staff surveys were completed on Wednesday, July 2, and Tuesday, July 8, 2003. Customer surveys were conducted on Wednesday and Thursday, July 9–10, 2003. A copy of the questionnaire used for the surveys and the survey results are provided in Appendix J, Traffic Impact Analysis.

For each type of hospital user, Kaku was able to determine the utilization of different modes of travel to and from the hospital. For example, on July 9, 2003, 100 percent of visitors and inpatients traveled to the hospital by automobile, while 94 percent of outpatients and 74 percent of other users traveled by automobile. The surveys also differentiated between those who traveled by automobile and parked, and those who traveled by automobile and were dropped off—so that the vehicles parked on site could be estimated. Kaku then examined the duration of stay of each type of user to estimate the percentage that would be parked on site at the same time. For example, while a certain number of visitors may arrive and depart during the peak period, because of the duration of stay they may not be on site at the same time. While some visitors stay for several hours, others might stay for a half-hour or less. This means that more than one visitor may utilize the same parking space during the peak period.

Using the time of arrival and duration of stay, Kaku was able to determine parking utilization factors for each type of hospital user (i.e., doctor, staff, patient, visitor). These parking utilization factors represent the ratio of parked vehicles to the number of users on site during the peak period. The parking utilization factors calculated by Kaku for each user type are shown in Table 13.J.

By applying these parking factors to existing hospital operations, existing parking demand was calculated. Table 13.K shows existing parking demand as calculated by Kaku Associates.

TABLE 13.J: PARKING UTILIZATION FACTORS BY USER TYPE

User Type	Parking Utilization Factor
Employees	0.90
Doctors	1.00
Volunteers	0.95
Outpatients (non-Emergency)	0.89
Outpatients (Emergency)	0.89
Inpatients	0.60
Inpatient Visitors	0.75
Cancer Center Employees	0.90
Cancer Center Volunteers	0.90

Source: Kaku Associates, 2003.

TABLE 13.K: EXISTING PARKING DEMAND

	Existing (2003)			
User Type	**Total per Day**	**On-Site during Peak Period**	**Parking Utilization Factor**	**Parking Demand**
Employees	1,666	908	0.90	817
Doctors	100	100	1.00	100
Volunteers	35	11	0.95	10
Outpatients (non-Emergency)[1]	151	45	0.89	40
Outpatients (Emergency)[2]	71	8	0.89	7
Inpatients (based on occupied beds)	226	203	0.60	122
Inpatient Visitors (1.5 per inpatient)	339	58	0.75	44
Cancer Center Employees[1]	70	70	0.90	63
Cancer Center Volunteers[1]	35	4	0.90	4
Total Parking Demand				**1,207**

Source: Kaku Associates, 2003.
[1] Based on 250 days per year
[2] Based on 365 days per year.

Existing peak on-street parking demand, including both hospital demand and demand for other adjacent land uses, was observed to be 734 parking spaces during the 11:00 a.m. hour on April 28, when parking demand in the entire SBCH parking system was the greatest. As discussed previously, the on-site peak parking demand was observed to be 828 vehicles during this time. As demonstrated in Table 13.K, total existing parking demand is 1,207 vehicles. Therefore, on-street parking demand is 379 vehicles, or 52 percent of the total vehicles parked on the street within two blocks of the hospital. The other 48 percent of vehicles parked on the street within two blocks of the hospital is destined for the medical office and residential land uses adjacent to the hospital.

Using the method and parking utilization factors from the Kaku study, the future parking demand was calculated using estimates of future employees and patients. The future estimates of employees and patients includes only the total and does not include the number on site

during the peak period. To determine this number, the percent of daily employees and patients estimated to be on site during the peak period was calculated using the estimate in the Kaku study. This percentage was applied to the future daily projections of employees and patients. The parking demand calculation is shown in Table 13.K.

As shown in Table 13.L, the future parking demand with the proposed project is forecast to be 1,359 spaces. To accommodate the forecast future parking demand of the hospital project, at least 1,359 parking spaces should be available for SBCH staff and patrons. Figure 13.18 illustrates the future off-street parking locations at the SBCH site. PF 13-1 would provide approximately 1,191 parking spaces in the two proposed parking structures and 61 spaces in four surface parking lots. With the construction of the proposed new parking structures, it is anticipated that hospital employees and visitors would not park on-street more than one block from the hospital as more convenient parking would be available in the structures or lots. However, it is expected that hospital patients and visitors would still utilize the on-street parking spaces available within one block of the hospital. The on-street parking supply within one block of the hospital is approximately 230 spaces. Based on the parking demand analysis described previously, approximately 52 percent of the parked vehicles within one block of the hospital are destined to the hospital. The other 48 percent are destined for adjacent land uses. It is anticipated that approximately 120 on-street parking spaces within one block of the hospital, would be utilized by SBCH patrons. Therefore, the proposed parking supply would include approximately 1,372 parking spaces in the two proposed parking structures, four surface parking lots, and on-street within one block of the hospital. This is more than the 1,359 spaces forecast for parking demand. ***As a result, no significant impacts on parking supply are forecast.***

TABLE 13.L: PROJECT PARKING DEMAND

	Future (2014)			
User Type	**Total per day**	**On-Site during Peak Period**	**Parking Utilization Factor**	**Parking Demand**
Employees	1,694	923	0.90	831
Doctors[1]	123	123	1.00	123
Volunteers	35	11	0.95	10
Outpatients (non-Emergency)[2]	203	61	0.89	54
Outpatients (Emergency)[3]	119	13	0.89	12
Inpatients (based on occupied beds)	337	303	0.60	182
Inpatient Visitors (1.5 per inpatient)	506	86	0.75	65
Cancer Center Employees[1]	86	86	0.90	77
Cancer Center Volunteers[1]	43	5	0.90	4
Total Parking Demand				**1,359**

[1] No estimate of future doctors or Cancer Center employees/volunteers was provided by SBCH. Doctors and Cancer Center employees/volunteers were estimated to have increased 23 percent from 2003, consistent with the increase in patient volumes.
[2] Based on 250 days per year.
[3] Based on 365 days per year.

Transportation Demand Management (TDM) strategies have been shown to be effective in mitigating parking demand. Parking Cash-Out, a program that considers free parking to be a

subsidy and pays the subsidy in cash to employees who give up their parking spaces, has been shown to be effective in reducing single-occupant travel to and from the workplace by up to 35 percent. Studies completed by the Environmental Protection Agency (EPA)[1] and the Federal Transit Administration (FTA)[2] includes case studies that demonstrate that Parking Cash-Out can reduce single occupancy travel to and from the workplace between 21 percent and 35 percent. An average reduction of 25 percent was noted in five case studies. Implementation of Parking Cash-Out could reduce the project parking demand and lessen the hospital's utilization of on-street parking spaces.

- **Public Transportation Impacts (Project Long-Term)**

The current number of Full Time Equivalents (FTE) employees at SBCH is 1,666. If outpatient volumes grow as projected, the number of FTE employees[3] could increase by 28 by 2013. SBCH currently offers an Employee Commuter Program that provides suggestions and incentives to employees who participate in a variety of traffic-reducing alternative transportation modes, including bus service provided by MTD. SBCH is also participating in the Oak Park Neighborhood Traffic Management Master Plan.

According to a MTD staff letter (dated June 7, 2004), the MTD would continue to be able to provide service to the proposed project area once the project is complete.[4] However, implementation of the project would result in the realignment of MTD Route 3 (Oak Park), which includes bus stops within or directly adjacent to the project site at Junipero Street/Castillo Street and Pueblo Street/Bath Street. The westbound portion of MTD Route 3 travels along the portion of Castillo Street that would be closed by the project. The potential addition of 28 FTE employees may result in increased ridership of MTD Route 3. ***Mitigation Measure TRF-9 addresses the closure of Castillo Street and the potential for increased ridership by the project and reduces the proposed project's impacts to public transportation to a less than significant level.***

13.6.2 SPECIFIC PLAN LONG-TERM IMPACTS

In addition to the proposed hospital modernization project, SBCH is seeking approval of a Specific Plan, which would allow the future demolition and reconstruction of a portion of the existing hospital that would be remodeled as part of the project. As a reasonable worst-case assumption, the Specific Plan would allow for an additional nursing pavilion of up to 100 beds.

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1 *Parking Cash Out: Implementing Commuter Benefits Under the Commuter Choice Leadership Initiative*, United States Environmental Protection Agency, September 2001.

2 *Parking Cash Out*, U.S. Department of Transportation, Federal Transit Administration, www.fta.dot.gov/library/planning/tdmstatus/FTACASH3.HTM.

3 Based on a fiscal year of 2,080 work hours.

4 E-mail correspondence with Rachel Grossman, MTD Transit Planner (as shown in Appendix I).

➢ Traffic Impacts (Specific Plan Long-Term)

As stated in the trip generation discussion, trips for the proposed project were based on projections of future patient volumes. The projections of future patients used historical patient volumes from 1999 through 2003. Increases in patient volumes after the project completion could necessitate the construction of an additional nursing pavilion or similar use as allowed under SP-8 and could result in additional traffic impacts in the long-term operations of the new reconstruction.

Although the trip generation is based on the presumption that patient volumes would continue to increase steadily over time, increases in patient volumes are affected by many factors, and could slow or even decrease over time. To present a conservative analysis, this analysis assumes that patient volumes would continue to rise. It is more likely that patient volumes would reach a peak at some future time when the Santa Barbara Area reaches build-out, another medical facility is constructed in the area, or SBCH reaches its capacity. For this reason, the Specific Plan trip generation for a fourth nursing pavilion has been forecast assuming an additional five years of growth in patient volumes after the completion of the proposed modernization project.

When patient volumes are projected for an additional five years (to the year 2019), 132,449 yearly inpatients and outpatients is forecast. Using the trip generation methodology described previously, vehicle trips were generated for the 2019 patient projections. The Specific Plan trip generation is shown in Table 13.M. As shown in this table, implementation of the future development allowed under SP-8 would result in the generation of 769 additional daily, 69 additional a.m. peak-hour and 63 additional p.m. peak-hour vehicle trips.

TABLE 13.M: SPECIFIC PLAN TRIP GENERATION

			A.M. Peak Hour			P.M. Peak Hour		
	Patients (1,000s)	**ADT**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Existing Trip Generation		5,926	437	94	531	88	392	480
Trip Generation with Project (2014)		7,301	538	116	654	108	483	591
Trip rate per Patients		60.93	4.49	0.97	5.46	0.90	4.03	4.94
Future Trips with SP-8 (2019)	132.449	8,070	595	128	723	120	534	654
New Trips with SP-8[1]		**769**	**57**	**12**	**69**	**12**	**51**	**63**

[1] Potential future development only.

To represent the year 2019 baseline condition, five years of cumulative growth were added to future baseline traffic volumes. The year 2019 trip generation was then distributed to the study area intersections consistent with the project trip generation discussed previously. Levels of service at the study area intersections in the 2019 baseline and 2019 plus project condition were then calculated. The 2019 baseline and 2019 plus project levels of service are summarized in Table 13.N.

➢ Summary of Traffic Impacts (Specific Plan Long-Term)

As Table 13.N indicates, the following 12 study area intersections are forecast to operate at unacceptable LOS (LOS D or worse) in the peak hours:

- Calle Real/U.S. 101 northbound on-ramp
- Tallant Road/Las Positas Road
- Calle Real/Las Positas Road
- U.S. 101 southbound Ramps/Las Positas Road
- Modoc Road/Las Positas Road
- De La Vina Street/Pueblo Street
- De La Vina Street/Mission Street
- Bath Street/Mission Street
- Castillo Street/Mission Street
- U.S. 101 northbound Ramp/Mission Street
- U.S. 101 southbound Ramp/Mission Street
- Modoc Road/Mission Street

The following four signalized study area intersections would exceed the City's LOS standards, however would not be significantly impacted by the project based on the City's criteria.

- Calle Real/Las Positas Road
- U.S. 101 southbound Ramps/Las Positas Road
- Modoc Road/Las Positas Road
- De La Vina Street/Mission Street

Implementation of the proposed project would cause an increase of 0.010 to the ICU at the following five signalized intersections:

- U.S. 101 northbound on-ramp/Calle Real
- Bath Street/Mission Street
- Castillo Street/Mission Street
- U.S. 101 northbound ramps/Mission Street
- U.S. 101 southbound ramps/Mission Street

Table 13.N: Year 2019 plus Specific Plan Intersection Level of Service (LOS) Summary

	Year 2019 Condition				Year 2019 Plus Specific Plan			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
Intersection	**ICU**	**LOS**	**ICU**	**LOS**	**ICU**	**LOS**	**ICU**	**LOS**
Signalized Intersections								
1. Calle Real / US-101 NB on-ramp	0.874	D	0.842	D	0.878	D	**0.854**	**D**
3. Calle Real / Las Positas Road	0.767	C	0.908	E	0.771	C	0.912	E
4. US-101 SB Ramps / Las Positas Road	0.979	E	0.893	D	0.985	E	0.895	D
5. Modoc Road / Las Positas Road	0.939	E	0.882	D	0.941	D	0.884	D
17. De La Vina Street / Mission Street	0.800	C	0.898	D	0.800	C	0.898	D
18. Bath Street / Mission Street	0.744	C	0.910	E	0.768	C	**0.933**	**E**
19. Castillo Street / Mission Street	0.814	D	0.906	E	**0.836**	**D**	**0.937**	**E**
20. US-101 NB Ramps / Mission Street	1.275	F	1.242	F	1.281	F	**1.254**	**F**
21. US-101 SB Ramps / Mission Street	1.090	F	1.075	F	**1.109**	**F**	**1.092**	**F**
	Delay	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**
Unsignalized Intersections								
2. Tallant Road / Las Positas Road	> 50.0 sec (NB)	F	> 50.0 sec (SB)	F	> 50.0 sec (NB)	F	>50.0 sec (SB)	F
6. Calle Real / US-101 NB off-ramp	15.9 sec (EB)	B	19.3 sec (EB)	C	16.2 sec (EB)	C	21.9 sec (EB)	C
7. Bath Street / Junipero Street	10.3 sec (EB)	B	11.0 sec (EB)	B	12.5 sec (EB)	B	13.9 sec (EB)	B
8. Castillo Street / Junipero Street	12.4 sec (SB)	B	13.5 sec (SB)	B	11.6 sec (SB)	B	12.2 sec (SB)	B
9. Oak Park Lane / Junipero Street	9.9 sec (NB)	A	10.9 sec (NB)	B	10.2 sec (NB)	B	11.1 sec (NB)	B
10. Calle Real / Junipero Street	10.5 sec (4-Way)	B	13.8 sec (4-Way)	B	10.6 sec (4-Way)	B	14.8 sec (4-Way)	B
11. De La Vina Street / Nogales Avenue	10.9 sec (EB)	B	11.9 sec (EB)	B	11.0 sec (EB)	B	12.0 sec (EB)	B
12. De La Vina Street / Pueblo Street	21.5 sec (WB)	C	31.7 sec (EB)	D	22.0 sec (WB)	C	32.6 sec (EB)	D
13. Bath Street / Pueblo Street	10.3 sec (4-Way)	B	11.3 sec (4-Way)	B	12.1 sec (4-Way)	B	14.1 sec (4-Way)	B
14. Castillo Street / Pueblo Street	11.9 sec (4-Way)	B	10.5 sec (4-Way)	B	12.0 sec (4-Way)	B	11.3 sec (4-Way)	B
15. Pueblo Street / Oak Park Lane	10.6 sec (4-Way)	B	9.4 sec (4-Way)	A	12.4 sec (4-Way)	B	10.7 sec (4-Way)	B
16. Calle Real / Pueblo St-US-101 NB off-ramp	13.5 sec (WB)	B	13.5 sec (WB)	B	13.8 sec (WB)	B	14.0 sec (WB)	B
22. Modoc Rd / Mission Street	> 50.0 sec (SB)	F	> 50.0 sec (SB)	F	>50.0 sec (SB)	F	>50.0 sec (SB)	F

Notes:

Shaded values indicate ICU > 0.80 for signalized intersections or delay > LOS D for unsignalized intersections.

Bold numbers indicate a significant project impact based on the City of Santa Barbara Environmental Impact Evaluation Guidelines.

An intersection is considered "impacted" if the volume to capacity (v/c) ratio is 0.77 v/c or greater and the project contribution is 0.01 or greater.

In the event that future development is proposed under SP-8 in addition to the proposed project, ***Mitigation Measure TRF-5 would mitigate the project impact at U.S. 101 northbound on-ramp/Calle Real. Mitigation Measure TRF-1 would partially mitigate the project impacts at the intersections of Bath Street/Mission Street and Castillo Street/Mission Street. Mitigation Measures TRF-2 and TRF-6 would reduce the impacts at the U.S. 101/Mission Street ramps.***

Three unsignalized study area intersections would continue to exceed the City's LOS standards (LOS E) with the build-out of the Specific Plan. The following are the unsignalized intersections that would exceed the LOS C standards in the Specific Plan Plus Project Scenario.

- *Tallant Road/Las Positas Road:* decrease in LOS F delay of 4.9 seconds in the a.m. peak hour and increase in LOS F delay of 1.0 second in the p.m. peak hour. The proposed project would increase the delay greater than 1 percent (> 0.5 seconds of delay) to the unsignalized intersection. However, a majority of project traffic is along the eastbound and westbound through movements, which do not contribute to the delay at this intersection. The delay is caused by northbound and southbound vehicles waiting to turn into Las Positas Road, which has high through volumes. The significance criteria for a signalized intersection was applied as a guide to analyze the project contribution of traffic. However, the increase in delay (4.9 seconds in the a.m. peak hour) is nominal and would not be noticeable by the driver. Therefore, the increase in delay is not considered a significant impact. A peak-hour traffic signal warrant was conducted at this intersection during the existing, cumulative, and cumulative plus project conditions. ***Based on the signal warrant analysis, a traffic signal is not warranted at this location during the existing, cumulative, and cumulative plus project horizons. Therefore, the proposed project's traffic impact would not be considered significant at this intersection.***
- *De La Vina Street/Pueblo Street:* increase in LOS D delay of 0.9 second in the p.m. peak hour. The proposed project would increase the delay greater than 1 percent (> 0.3 seconds of delay) to the unsignalized intersection. The significance criteria for a signalized intersection was applied as a guide to analyze the project contribution of traffic. However, the increase in delay (0.9 seconds in the a.m. peak hour) is nominal and would not be noticeable by the driver. Therefore, the increase in delay is not considered a significant impact. A peak-hour traffic signal warrant was conducted at this intersection during the existing, cumulative, and cumulative plus project conditions. ***Based on the signal warrant analysis, a traffic signal is not warranted at this location during the existing, cumulative, and cumulative plus project horizons. Therefore, the project traffic impact would not be considered significant at this intersection.***
- *Modoc Road/Mission Street:* increase in LOS F delay of 32.1 seconds in the a.m. peak hour and increase in LOS F delay of 22.3 seconds in the p.m. peak hour. The proposed project would increase the delay greater than 1 percent (> 0.5 seconds of delay) to the unsignalized intersection. A peak-hour traffic signal warrant was conducted at this intersection during the existing, cumulative, and cumulative plus project conditions. Based on the signal warrant analysis, a traffic signal is warranted at this location during the existing, cumulative, and cumulative plus project horizons. By itself, the addition of project traffic does not cause a traffic signal to be warranted at this location because project traffic would be added to the existing deficient intersection. It is feasible to install

a traffic signal at the Modoc Road/Mission Street intersection; however, the City staff has determined that the installation of a signal could adversely impact the LOS of the intersections along Mission Street due to the close spacing of the intersections. ***Mitigation Measure TRF-1 would partially reduce the impacts of future Specific Plan development at the intersection of Modoc Road/Mission Street; however, a significant adverse impact would remain since the measure's improvements are currently not fully planned, funded, or scheduled.***

➢ Traffic and Circulation Mitigation Measures (Specific Plan Long-Term)

TRF-5 Calle Real-Las Positas Road/U.S. 101 Northbound Ramps at Earl Warren Showgrounds. Prior to issuance of a Certificate of Occupancy for a fourth nursing pavilion, SBCH shall provide funding for or construct to the satisfaction of the City of Public Works Department the following intersection improvements at the intersection of Calle Real-Las Positas Road/ U.S. 101 northbound ramps at Earl Warren Showgrounds: convert the westbound through-right lane to a westbound left-through-right lane, resulting in two westbound left-turn lanes onto U.S. 101. Ramp metering will be required as part of the design improvements. The resulting geometric improvement would reduce the ICU to below the baseline condition. The resulting LOS with this improvement is LOS B (0.682 ICU) in the p.m. peak hour. It should be noted that this improvement may not be feasible due to the absence of two receiving lanes on the U.S. 101 on ramp. However, if the Specific Plan is implemented, a subsequent CEQA review, including an updated traffic analysis, may be required. At such time, the intersection of U.S. 101 northbound on-ramp/Calle Real shall be reanalyzed.

TRF-6 U.S. 101 Northbound Ramps/Mission Street. Prior to issuance of a Certificate of Occupancy for a fourth nursing pavilion, SBCH shall provide funding for or construct to the satisfaction of the Caltrans and the City of Public Works Department the following intersection improvements at the intersection of U.S. 101 northbound ramps/Mission Street: convert the eastbound-southbound right-turn lane to a free right-turn lane onto northbound U.S. 101. Ramp metering will be required as part of the design improvements. The resulting geometric improvement would reduce the ICU to below the baseline condition. The resulting LOS with this improvement is LOS E (0.921 ICU) in the p.m. peak hour.

➢ Public Transportation Impacts (Specific Plan Long-Term)

SBCH currently supports an Employee Commuter Program that offers suggestions and incentives to employees who participate in a variety of traffic-reducing alternative transportation modes, including bus service provided by MTD.

According to a MTD staff letter (dated June 7, 2004), the MTD would continue to be able to provide service to the proposed project area once the project is complete.[1] Implementation of SP-8 would not result in any known realignments of MTD routes (Oak Park) or any bus stops within or directly adjacent to the project site and no impacts to public transportation. However, the possible addition of employees as a result of SP-8, if an additional 100-bed nursing pavilion is built, may result in increased ridership of MTD Route 3. ***Mitigation***

[1] E-mail correspondence with Rachel Grossman, MTD Transit Planner.

Measure TRF-9 addresses the potential for increased ridership by the project and reduces the proposed project's impacts to public transportation to a less than significant level.

13.6.3 CUMULATIVE LONG-TERM TRANSPORTATION IMPACTS

➢ Traffic Impacts (Cumulative Long-Term)

As discussed previously in the Project-Specific Impact section, the Cottage Hospital Seismic Compliance and Modernization project would not be completed until the year 2013. As a result, the Project-Specific and Specific Plan impact analyses were conducted in a "cumulative" horizon and reflect the project's impact upon the forecast 2014 and 2019 traffic conditions. As directed in the CEQA Guidelines, the cumulative traffic condition was developed using a list of future projects that could produce cumulative traffic impacts. Additionally, an ambient growth rate was applied to existing counts to account for traffic that might be generated by future projects not on the cumulative projects list. As a result, the cumulative impact of the project has been disclosed in previous sections.

As shown in Table 13.G, significant project contributions to cumulative levels of traffic would occur at the following signalized intersections:

1. Calle Real/U.S. 101 northbound Ramp
3. Calle Real/Las Positas Road
4. U.S. 101 southbound Ramp/Las Positas Road
5. Modoc Road/Las Positas Road
17. De la Vina Street/Mission Street
18. Bath Street/Mission Street
19. Castillo Street/Mission Street
20. U.S. 101 northbound Ramp/Mission Street
21. U.S. 101 southbound Ramp/Mission Street

In addition, significant project contributions to cumulative levels of traffic would occur at the following unsignalized intersections:

1. Tallant Road/Las Positas Road
12. De la Vina Street/Pueblo Street (pm peak hour)
22. Modoc Road/Mission Street

As discussed previously under Project Specific Impacts, Mitigation Measure TRF-2 would reduce project impacts at U.S. 101 southbound Ramps/Mission Street to below significance. Impacts from project traffic to the cumulative baseline at other intersections along Mission Street would be reduced with implementation of TRF-1; however, the residual impact would be significant and unavoidable since the mitigation improvements in TRF-1 are currently not fully planned, funded, or scheduled. Mitigation Measure TRF-3 (Parking Cash-Out Program) would reduce trips but the level of mitigation cannot be

assured. Therefore, project contributions to cumulative impacts would be significant and unavoidable.

➢ Public Transportation Impacts (Cumulative Long-Term)

The current number of FTE employees is 1,666. If outpatient volumes grow as projected, the number of FTE employees[1] could increase by 28 by 2013. SBCH currently supports an Employee Commuter Program that offers suggestions and incentives to employees who participate in a variety of traffic-reducing alternative transportation modes, including bus service provided by MTD. SBCH is also considering a shuttle/vanpool program to transport employees to and from the hospital and other Cottage Health system work sites as part of a separate project (Cottage Hospital Workforce Housing Project). SBCH would also be participating in the Oak Park Neighborhood Traffic Management Plan.

According to the response letter, the MTD would continue to be able to provide service to the proposed project area once the project is complete.[2] However, implementation of the project would result in the realignment of MTD Route 3 (Oak Park) that includes bus stops within or directly adjacent to the project site at Junipero Street/Castillo Street and Pueblo Street/Bath Street. The westbound portion of MTD Route 3 travels along the portion of Castillo Street that would be closed by the project. The potential addition of 28 FTE employees may result in increased ridership of MTD Route 3.

Mitigation Measure TRF-9 (provided subsequently in this chapter) would address the closure of Castillo Street and the potential for increased ridership by the project and reduce the proposed project's cumulative impacts to public transportation to a less than cumulatively considerable level.

13.7 TRANSPORTATION AND CIRCULATION IMPACTS - TEMPORARY CONSTRUCTION IMPACTS

The proposed project includes the demolition of 270,705 square feet, including 233,170 square feet of the existing main hospital building and Eye Center and 37,535 square feet of structures located on the adjacent block bounded by Oak Park Lane, Junipero Street, Castillo Street, and Pueblo Street. Due to the comprehensive nature of the project, demolition, reconstruction, and remodeling would be implemented in a series of phases over an approximately seven-year period during which the hospital must remain fully operational. Construction is proposed for the hours of 7:00 a.m. to 6:00 p.m., Monday through Friday, and 7:00 a.m. to 5:00 p.m. on Saturdays.

PF 13-4 would be implemented during the construction phases. Construction workers would be required to park at an off-site location and would be transported to and from the off-site parking area to the construction site. The off-site location has not been determined at this time, however, the locations under consideration are the Earl Warren Fairgrounds (located just north of U.S. 101 and west of Las Positas Road), and the St. Francis Hospital site

[1] Based on a fiscal year of 2,080 work hours.

[2] E-mail correspondence with Rachel Grossman, MTD Transit Planner.

(located at 601 Micheltorena Street). Employees parked off site would be shuttled by bus to the construction site. For purposes of this analysis, a maximum of 20 employees per shuttle bus would be transported to and from the construction site each day. On-site parking would be limited to the construction project manager staff and subcontractor staff. According to construction phasing information provided by SBCH, a maximum of 50 vehicles would be parked on site during construction.

Construction of the proposed project would be implemented over a total of eight phases as proposed by SBCH. The eight construction phases were consolidated into four phases to facilitate the analysis of construction impacts in this DEIR. Consolidation of the construction phases is not significant in that the overlapping of phases and schedule occur at the same time. The following provides a description of the construction phases and the temporary impacts that may occur during the duration of the construction. The estimated trips per phase are an average estimate for each construction day. Trips generated by construction activity may be lower or higher on a given day than the estimated average daily trips. Figure 3.10 in the project description chapter illustrates the construction activity during the construction phases.

13.7.1 PROJECT CONSTRUCTION TRANSPORTATION IMPACTS

➢ Construction Phase I

Construction Phase I for purposes of the EIR analysis consists of demolition of the Eye Center, demolition and clearing of the Pueblo Parking Structure site, and construction of the new Pueblo Parking Structure (PF 13-1), Child Care Center, Knapp Parking Structure (PF 13-1), and new Central Plant. The construction phase is estimated to take approximately two and one-half years. The number of construction workers on-site is expected to range from 15 to 155 per day, with a maximum of 290 construction workers on-site during Phase I. Approximately 50 employees (construction management) would be parked on site, while a maximum of 240 construction workers would be shuttled from off-site parking areas such as the Earl Warren Fairgrounds or the St. Francis Hospital site (PF 13-4). It should be noted that there are four different sub-phases with different construction periods and parking areas during Construction Phase I. See Table 3.F in Chapter 3.0.

Construction-Related Trip Generation (Phase I). To determine the number of construction trips and earthwork truck trips per day, the number of construction-related trips for each activity in Phase I was divided by the duration of the construction phase. The number of construction, hauling and worker trips is based on information provided by the construction project manager and SBCH. The trip generation for Phase I is shown in Table 13.O.

TABLE 13.O: PHASE I CONSTRUCTION TRIPS

	Construction Trips [1]	Earthwork Only Trips	Construction Worker Trips	Shuttle Bus Trips	Total Construction-Related Trips
Phase 1 Total Trips	37,600	6,800	45,750	-	-
Phase Duration (days)	783	783	783	-	-
Phase 1 Trip Generation	**48 ADT**	**9 ADT**	**58 ADT**	**24 ADT**	**139 ADT**

[1] Based on 20 trucks per day average for Demolition Work, 30 trucks per day average for Parking Structures, and 50 trucks per day for New Hospital and Remodel.

Vehicular Trips (Phase I). Approximately 139 daily construction trips are forecast at the project site during Phase I. The daily construction trips for Phase I were added to the existing condition to determine whether the construction traffic would create a temporary impact to the circulation system. Table 13.P illustrates the expected addition of construction trips on neighborhood streets for Phase I. As shown in the table, the daily traffic volumes on the roadway segments are forecast to increase approximately 139 ADT along Bath Street, Castillo Street, Junipero Street, and Pueblo Street when compared to the existing condition. ***The increase in trips would be temporary due to the construction activities on the project site. Therefore, the increase in neighborhood traffic due to construction activities would not create a significant increase in vehicular trips during Phase I.***

TABLE 13.P: PHASE I STREET ANALYSIS

Street	Segment	Existing ADT	Phase I ADT
Bath Street	Quinto Street to Junipero Street	4,300	139
	Nogales Avenue to Pueblo Street	5,407	139
	Pueblo Street to Los Olivos Street	4,719	139
Castillo Street	Quinto Street to Junipero Street	2,334	0
	Junipero Street to Pueblo Street	3,280	139
	Pueblo Street to Los Olivos Street	3,820	139
Fletcher Avenue	Quinto Street to Junipero Street	594	0
Oak Park Lane	Junipero Street to Pueblo Street	1,400	0
	Pueblo Street to Los Olivos Street	1,091	0
Junipero Street	Mission Creek to Oak Park Lane	5,270	139
	Oak Park Lane to Castillo Street	3,865	139
	Castillo Street to Bath Street	3,049	139
Pueblo Street	Mission Creek to Oak Park Lane	5,502	139
	Oak Park Lane to Castillo Street	5,728	139
	Castillo Street to Bath Street	5,379	139

It is probable that some streets may be temporarily closed for utility construction or other construction activities, throughout the construction period. It is conceivable at one time or throughout this construction phase, roadways indicated within the yellow area on Figure 3.10

could be closed and subject to construction activity. When streets are temporarily closed, the forecasted construction trips shown in Table 13.D would likely be diverted from the closed street segment to other surrounding streets.

Parking Impacts (Phase I). During Construction Phase I, the following parking lots would be demolished in order to construct the proposed new hospital facilities:

- Lot 3—80 parking spaces
- Lot 4 (Knapp Parking Lot)—131 parking spaces
- Lot 5 (Eye Center)—7 parking spaces
- Lot 6—20 parking spaces
- MRI Building Parking Lot—17 parking spaces

The closure of these parking facilities would cause a parking supply deficit of 255 parking spaces. Based on peak parking demand for the off-street parking lots, there are approximately 37 residual parking spaces. However, the remaining 216 parked vehicles would have to park on the street or at an off-site location. This would cause a temporary significant impact to the parking supply during Construction Phase I. ***Implementation of Mitigation Measure TRF-7 and PF 13-4 would reduce these impacts to less than significant.***

➢ Parking Mitigation Measure (Project Construction)

TRF-7 Construction Parking. To mitigate the expected parking deficiency due to the demolition of the existing parking structures during Construction Phase I, SBCH shall provide at least 216 parking spaces in an off-site parking area (i.e., not in the immediate vicinity of SBCH) for employees of the hospital and shall provide a shuttle service to transport hospital employees from the temporary off-site parking area to the hospital. The off-site parking area and shuttle shall remain available to SBCH employees until the 216 parking spaces are replaced by the construction of the new Pueblo and Knapp Parking structures. An off-site parking plan for the initial construction phases shall be reviewed and approved by the City Public Works Department prior to issuance of demolition permits.

Pedestrian Circulation Impacts (Phase I). The following sidewalks would be closed due to the installation of construction fences, which would prohibit pedestrian movements at these locations.

- Junipero Street and Bath Street at the existing Eye Center
- South side of Pueblo Street between Castillo Street and Oak Park Lane
- West side of Castillo Street between Pueblo Street and Los Olivos Street

Pedestrians may be diverted to the north side of Junipero Street continuing on the east side of Bath Street, the north side of Pueblo Street, and the east side of Castillo Street to avoid conflicts with the construction work. ***With implementation of Mitigation Measure TRF-8, impacts to pedestrian circulation would be reduced to less than significant.***

➢ Circulation and Parking Mitigation Measure (Project Construction)

TRF-8 Construction Management Plan. To minimize the impacts to local roadways, parking, and pedestrian circulation, SBCH shall prepare a Construction Management Plan

(CMP) for each phase of construction. The CMP shall establish routes for construction-related traffic that would minimize construction trips through residential areas. Other issues to be incorporated in the CMP include anticipated street closures by construction phase, detour routes during street closures, availability of parking for SBCH staff and patrons and alternative pedestrian facilities to replace those affected by the construction activity. The CMP shall be submitted to the City and approved by the City Traffic Engineer prior to the issuance of building permits.

➢ Construction Phase II

Trip Generation (Project Construction Phase II). Construction Phase II consists of demolition of the existing Central Plant and existing parking structure, construction of the Diagnostic and Treatment Building and Patient Pavilions, and partial remodel of the Centennial Building and Building E. The construction phase is estimated to take approximately 4 years. The number of construction workers on-site is expected to range from 57 to 375 per day with a maximum of 375 construction workers on-site during Phase II Approximately 50 construction workers would be parked on site, while a maximum of 325 construction workers would be shuttled from off-site parking areas. It should be noted that there are two different sub-phases with different construction periods during Construction Phase II. The trip generation for Phase II is shown in Table 13.Q below.

TABLE 13.Q: PHASE II CONSTRUCTION TRIPS

	Construction Trips [1]	Earthwork Only Trips	Construction Worker Trips	Shuttle Bus Trips	Total Construction-Related Trips
Phase 2 Total Trips	55,150	5,400	156,220	-	-
Phase Duration (days)	1,252	1,252	1,252	-	-
Phase 2 Trip Generation	**44 ADT**	**4 ADT**	**125 ADT**	**34 ADT**	**207 ADT**

[1] Based on 20 trucks per day average for Demolition Work, 30 trucks per day average for Parking Structures, and 50 trucks per day for New Hospital and Remodel.

Traffic Impacts (Project Construction Phase II). Approximately 207 daily construction trips are forecast at the project site during Phase II. The daily construction trips for Phase II were added to the existing condition to determine whether construction traffic would create a temporary impact to the circulation system. Table 13.R illustrates the expected addition of construction trips on neighborhood streets for Phase II. As shown in the table, daily traffic volumes on the roadway segments are forecast to increase approximately 207 ADT along Bath Street (between Pueblo Street and Los Olivos Street), Junipero Street, and Pueblo Street when compared to the existing condition. In addition, Bath Street (between Nogales Avenue and Pueblo Street) and Oak Park Lane (between Junipero Street and Pueblo Street) would increase approximately 104 ADT. The increase in trips would be temporary due to the construction activities on the project site. ***Therefore, the increase in neighborhood traffic due to construction activities would not create a significant increase in vehicular trips during Phase II.***

TABLE 13.R: PHASE II STREET ANALYSIS

Street	Segment	Existing ADT	Phase II ADT
Bath Street	Quinto Street to Junipero Street	4,300	0
	Nogales Avenue to Pueblo Street	5,407	104
	Pueblo Street to Los Olivos Street	4,719	207
Castillo Street	Quinto Street to Junipero Street	2,334	0
	Junipero Street to Pueblo Street	3,280	0
	Pueblo Street to Los Olivos Street	3,820	0
Fletcher Avenue	Quinto Street to Junipero Street	594	0
Oak Park Lane	Junipero Street to Pueblo Street	1,400	104
	Pueblo Street to Los Olivos Street	1,091	0
Junipero Street	Mission Creek to Oak Park Lane	5,270	207
	Oak Park Lane to Castillo Street	3,865	207
	Castillo Street to Bath Street	3,049	207
Pueblo Street	Mission Creek to Oak Park Lane	5,502	207
	Oak Park Lane to Castillo Street	5,728	207
	Castillo Street to Bath Street	5,379	207

It is probable that some streets may be closed for utility construction or other construction activities. These closures would be temporary and would occur throughout the construction period. It is conceivable at one time or throughout this construction phase, roadways indicated within the pink area on Figure 3.10 could be closed and subject to construction activity. When streets are temporarily closed, the forecasted construction trips shown in Table 13.E would likely be diverted from the closed street segment to other surrounding streets.

Parking Impacts (Project Construction Phase II). During Construction Phase II, the following parking lots would be demolished in order to construct the proposed new hospital facilities:

- Lot 1—69 parking spaces
- Lot 2—40 parking spaces
- Infant Care Center—2 parking spaces
- Child Care Center—2 parking spaces
- Existing Parking Structure—475 parking spaces

The closure of these parking facilities would cause a deficit of 588 parking spaces. However, the new Pueblo and Knapp parking structures would be in operation prior to the start of this construction phase. ***The two new parking structures would provide approximately 1,191 spaces and can accommodate the parking demand at the hospital site during Construction Phase II. Therefore, no significant parking impacts are anticipated during Construction Phase II.***

Pedestrian Circulation Impacts (Project Construction Phase II). The following sidewalks would be closed due to the installation of construction fences, which would prohibit pedestrian movements at these locations.

- South side of Junipero Street between Oak Park Lane and Castillo Street
- North side of Pueblo Street between Oak Park Lane and Castillo Street
- East side of Oak Park Lane between Junipero Street and Pueblo Street

Pedestrians may be diverted to the north side of Junipero Street, the south side of Pueblo Street, and the west side of Oak Park Lane to avoid conflicts with construction work. ***With implementation of Mitigation Measure TRF-8, impacts to pedestrian circulation would be reduced to less than significant.***

➢ Construction Phase III

Construction-Related Trip Generation (Project Construction Phase III). Construction Phase III consists of the partial remodeling of the South, East, and Centennial buildings, the demolition of the North Wing, West Wing, Reeves and Central Wing, and construction of the Diagnostic and Treatment Extension and Nursing Pavilion. This construction phase is estimated to take approximately 2½ years. The number of construction workers on-site is expected to range from 120 to 277 per day with a maximum of 347 construction workers on-site during Phase III. Approximately 50 employees (construction management) would be parked on site, while 297 construction workers would be shuttled from off-site parking areas. It should be noted that there are four different sub-phases with different construction periods during Construction Phase III. The trip generation for Phase III is shown in Table 13.S below.

TABLE 13.S: PHASE III CONSTRUCTION TRIPS

	Construction Trips [1]	Earthwork Only Trips	Construction Worker Trips	Shuttle Bus Trips	Total Construction-Related Trips
Phase 3 Total Trips	35,600	1,000	45,650	-	-
Phase Duration (days)	783	783	783	-	-
Phase 3 Trip Generation	**45 ADT**	**1 ADT**	**58 ADT**	**30 ADT**	**134 ADT**

1 Based on 20 trucks per day average for Demolition Work, 30 trucks per day average for Parking Structures, and 50 trucks per day for New Hospital and Remodel. The total construction trips were combined from the previous construction phases, provided in Appendix H of Appendix J, Traffic Impact Analysis.

Traffic Impacts (Project Construction Phase III). Approximately 134 daily construction trips are forecast at the project site during Phase III. The daily construction trips for Phase III were added to the existing condition to determine whether construction traffic would create a temporary impact to the circulation system. Table 13.T illustrates the expected addition of construction trips on neighborhood streets for Phase III. As shown in the table, daily traffic volumes on the roadway segments are forecast to increase approximately 134 ADT along Bath Street and Junipero Street when compared to the existing condition. The increase in trips would be temporary due to the construction activities on the project site. ***Therefore, the***

increase in neighborhood traffic due to construction activities would not create a significant roadway impact during Phase III.

TABLE 13.T: PHASE III STREET ANALYSIS

Street	Segment	Existing ADT	Phase III ADT
Bath Street	Quinto Street to Junipero Street	4,300	0
	Nogales Avenue to Pueblo Street	5,407	134
	Pueblo Street to Los Olivos Street	4,719	134
Castillo Street	Quinto Street to Junipero Street	2,334	0
	Junipero Street to Pueblo Street	3,280	0
	Pueblo Street to Los Olivos Street	3,820	0
Fletcher Avenue	Quinto Street to Junipero Street	594	0
Oak Park Lane	Junipero Street to Pueblo Street	1,400	0
	Pueblo Street to Los Olivos Street	1,091	0
Junipero Street	Mission Creek to Oak Park Lane	5,270	134
	Oak Park Lane to Castillo Street	3,865	134
	Castillo Street to Bath Street	3,049	134
Pueblo Street	Mission Creek to Oak Park Lane	5,502	0
	Oak Park Lane to Castillo Street	5,728	0
	Castillo Street to Bath Street	5,379	134

It is probable that some streets may be closed for utility construction or other construction activities. These closures would be temporary and would occur throughout the construction period. It is conceivable at one time or throughout this construction phase, roadways indicated within the green area on Figure 3.10 could be closed and subject to construction activity. When streets are temporarily closed, the forecasted construction trips shown in Table 13.H would likely be diverted from the closed street segment to other surrounding streets.

Parking Impacts (Project Construction Phase III). During Construction Phase III, no off-street parking lots would be closed due to construction. ***All hospital parking can be accommodated at the Pueblo and Knapp parking structures during Construction Phase III. Therefore, no significant parking impacts are anticipated during this construction phase.***

Pedestrian Circulation Impacts (Project Construction Phase III). The sidewalks along the north side of Pueblo Street between Castillo Street and west of Bath Street would be closed due to the installation of construction fences, which would prohibit pedestrian movements in this area. Pedestrians may be diverted to the south side of Pueblo Street to avoid conflicts with construction work. ***With implementation of Mitigation Measure TRF-8, impacts to pedestrian circulation would be reduced to less than significant.***

➢ Construction Phase IV

Trip Generation (Project Construction Phase IV). Construction phase IV consists of the remodeling of the South and East wings. This construction phase is estimated to take approximately 1 year. During this phase, a maximum of 179 employees is expected to be parked off site and shuttled to the construction site from the off-site parking areas.

Approximately 42 daily construction trips are forecast at the project site. In addition to the construction trips, approximately 18 shuttle bus trips per day would occur during Construction Phase IV. The trip generation for Phase IV is shown in Table 13.U below.

TABLE 13.U: PHASE IV CONSTRUCTION TRIPS

	Construction Trips[1]	Earthwork Only Trips	Construction Worker Trips	Shuttle Bus Trips	Total Construction Related Trips
Phase 4 Total Trips	13,000	-	-	-	-
Phase Duration (days)	313	-	-	-	-
Phase 4 Trip Generation	**42 ADT**	**-**	**-**	**18 ADT**	**60 ADT**

[1] Based on 20 trucks per day average for Demolition Work, 30 trucks per day average for Parking Structures, and 50 trucks per day for New Hospital and Remodel.

Traffic Impacts (Project Construction Phase IV). Approximately 60 daily construction trips are forecast at the project site during Phase IV. The daily construction trips for Phase IV were added to the existing condition to determine whether construction traffic would create a temporary impact to the circulation system. Table 13.V illustrates the expected addition of construction trips on neighborhood streets for Phase IV. As shown in the table, daily traffic volumes on the roadway segments are forecast to increase approximately 60 ADT along Bath Street, Junipero Street, and Pueblo Street when compared to the existing condition. ***The increase in trips would be temporary due to the construction activities on the project site. Therefore, the increase in neighborhood traffic due to construction activities would not create a significant roadway impact during Phase IV.***

TABLE 13.V: PHASE IV STREET ANALYSIS

Street	Segment	Existing ADT	Phase IV ADT
Bath Street	Quinto Street to Junipero Street	4,300	0
	Nogales Avenue to Pueblo Street	5,407	60
	Pueblo Street to Los Olivos Street	4,719	60
Castillo Street	Quinto Street to Junipero Street	2,334	0
	Junipero Street to Pueblo Street	3,280	0
	Pueblo Street to Los Olivos Street	3,820	0
Fletcher Avenue	Quinto Street to Junipero Street	594	0
Oak Park Lane	Junipero Street to Pueblo Street	1,400	0
	Pueblo Street to Los Olivos Street	1,091	0
Junipero Street	Mission Creek to Oak Park Lane	5,270	60
	Oak Park Lane to Castillo Street	3,865	60
	Castillo Street to Bath Street	3,049	60
Pueblo Street	Mission Creek to Oak Park Lane	5,502	0
	Oak Park Lane to Castillo Street	5,728	0
	Castillo Street to Bath Street	5,379	60

It is probable that some streets may be closed for utility construction or other construction activities. These closures would be temporary and would occur throughout the construction period. It is conceivable at one time or throughout this construction phase, roadways indicated within the blue area on Figure 3.10 could be closed and subject to construction activity. When streets are temporarily closed, the forecasted construction trips shown in Table 13.J would likely be diverted from the closed street segment to other surrounding streets.

Parking Impacts (Project Construction Phase IV). No parking areas would be affected by Phase IV Construction Activity; therefore, ***no significant parking impacts are anticipated with construction Phase IV.***

Pedestrian Circulation Impacts (Project Construction Phase IV). The following sidewalks would be closed due to installation of construction fences, which would prohibit pedestrian movements at these locations.

- North side of Pueblo Street west of Bath Street
- West side of Bath Street between Junipero Street and Pueblo Street

Pedestrians may be diverted to the south side of Pueblo Street and the east side Bath Street to avoid conflicts with construction work. ***With implementation of Mitigation Measure TRF-8, pedestrian impacts would be reduced to less than significant.***

➢ Other Transportation Impacts

Parking and Circulation Impacts to Oak Park (Project Construction). During Construction Phases I through IV, parking and circulation at Oak Park could be impacted. Oak Park is located at Alamar Avenue and Junipero Street. During Phase I, parking lots would be demolished in order to construct the proposed new hospital facilities. The closure of these parking facilities would cause a parking supply deficit and would cause a temporary significant impact to the parking supply. Although SBCH would provide an off-site parking location and a shuttle to transport employees to SBCH, it is possible that some employees or SBCH patrons may choose to park adjacent to Oak Park and walk to SBCH rather than utilize the shuttle service. As a result, the parking supply at Oak Park could be affected during Construction Phase I. However, the temporary parking impact would not occur during Phases II, III, and IV because of the addition of two new parking structures (PF13-1). Therefore, a temporary parking impact would occur during Phase I only.

During each construction phase, construction traffic adjacent to Oak Park is planned to travel along Junipero Street and Calle Real. It is anticipated that construction traffic would not travel through Alamar Street, and therefore would not contribute to the existing traffic volumes along this roadway segment. Based on the distribution of construction traffic to the adjacent circulation system, a maximum of 207 ADT (during Phase II) is forecast to travel via Junipero Street to Calle Real. Based on the roadway classifications from the Appleyard Study (as discussed previously in the neighborhood traffic analysis), this roadway segment could be considered to be a "Medium" street. ***With the addition of construction traffic, the roadway segment would continue to be considered a "Medium" street. Therefore, no significant circulation impacts are anticipated during the construction phases.***

Public Transportation Impacts (Project Construction). The project is not anticipated to generate significant demand for bus service in the vicinity during construction. Most

construction workers would be transported to the project site via private transportation (refer to PF13-3. The number of employees at the existing hospital would not increase during construction.

The project would result in the realignment of MTD Route 3 (Oak Park) that includes bus stops within or directly adjacent to the project site at Junipero Street/Castillo Street and Pueblo Street/Bath Street during construction phase 3. The westbound portion of MTD Route 3 travels along the portion of Castillo Street that would be permanently closed by the project. ***Mitigation Measure TRF-9, below, would address the closure of Castillo Street by the project and reduce the proposed project's impacts to public transportation to a less than significant level.***

➢ Public Transportation Mitigation Measure

TRF-9 MTD Alternative Route Plan. Prior to construction, the applicant shall coordinate with the MTD to develop a plan for alternative routes and bus stops to replace the existing routes and bus stops along MTD Route 3 that would be affected during construction and operation of the proposed project and the full implementation of the SP-8 Hospital Area Zone. The plan shall include options for rerouting MTD Route 3 and potential temporary and permanent locations for bus stops affected by project construction and operation, particularly the permanent closure of Castillo Street between Pueblo Street and Junipero Street. The plan shall also address potential increased ridership resulting from construction and operation of the proposed project and the full implementation of the SP-8 Hospital Area zone.

13.7.2 SPECIFIC PLAN TRANSPORTATION IMPACTS DURING CONSTRUCTION

➢ Traffic Circulation and Parking Impacts (Specific Plan)

Build out of the Specific Plan (SP-8) (potential future reconstruction) could consist of demolishing those portions of the hospital that are planned to be remodeled with the proposed project and reconstruction of that portion of the hospital pursuant to Alquist Act standards or subsequent State standards that may be in effect for acute care facilities. Potential future development that could take place under SP-8 would be in roughly the same physical area as Construction Phase IV. Because the facilities that could be constructed under the Specific Plan have not yet been planned or designed, estimates of construction workers, truck trips, parking facilities, and other operational elements of the construction period have not been determined.

The location of potential future development allowed under the Specific Plan in relation to hospital and parking facilities makes it likely that construction of any future redevelopment under the Specific Plan could impact pedestrian and vehicular circulation. With the proposed project, pedestrians traveling from the Knapp parking structure to the outpatient entry or main entry of the hospital would most likely walk across the Junipero Street/Bath Street intersection and then down the sidewalk along the west side of Bath Street. During construction of any future development, it is likely that the sidewalk on the west side of Bath Street would be closed and that pedestrians would travel on the east side of Bath Street to access the main entry. Additionally, the outpatient drop-off located at the northwest corner of Bath Street/Pueblo Street would need to be relocated during construction.

As stated in Section 3.4.1, any future development in the Specific Plan would be subject to subsequent review under CEQA. As a result, a detailed construction traffic analysis would need to be prepared for the proposed project along with an analysis of pedestrian and vehicle circulation and parking impacts associated with construction of the Specific Plan land use. Specifically, construction activities such as demolition and material hauling would be expected to add truck trips to the surrounding roadways. Vehicle trips would also be added to the roadways by construction workers and shuttle buses to and from any off-site parking locations. As discussed previously, pedestrian travel could also be impacted by future construction activities. Because future development allowed under SP-8 is similar in scale to the reconstruction of the existing acute care hospital buildings proposed as part of the project, similar types of construction impacts to those associated with Construction Phases I through IV are anticipated. ***With implementation of Mitigation Measure TRF-8, any potential construction impacts from future reconstruction work would be reduced to less than significant.***

Recommendations. A traffic analysis will be required to analyze the vehicle, pedestrian, and parking impacts of construction of future reconstruction under the Specific Plan when a specific development proposal is submitted. Additionally, SBCH shall develop a Construction Management Plan to the satisfaction of the City to mitigate any temporary impacts to vehicle, pedestrian, or parking facilities that may be affected by future Specific Plan construction activity.

➢ Public Transportation Impacts (Specific Plan Construction)

The construction of potential future development allowed under SP-8 is not anticipated to generate significant demand for bus service in the vicinity. Similar to the proposed project, the effects of any future reconstruction as part of the Specific Plan zoning allowance on the existing public transit system would be minimal, of any, because most construction workers would be transported to the project site via private transportation provided by SBCH. The number of employees at the existing facilities would not increase during construction.

13.7.3 CUMULATIVE CONSTRUCTION TRANSPORTATION IMPACTS

➢ Traffic, Circulation, and Parking Impacts (Cumulative Construction)

The City of Santa Barbara Planning Department provided a list of cumulative projects for use in the EIR. Ten “major” cumulative projects (those that would be expected to generate more than 10 peak-hour vehicle trips) were identified for use in the cumulative impact analysis. The locations of the 10 cumulative projects are shown in Figure 13.7. Many of the cumulative projects are anticipated to be built and operational during the project’s construction period. As a result, it is possible that traffic from the cumulative projects could be added to the roadways during the construction period.

The construction impact analysis focused on the roadways and pedestrian facilities in the immediate vicinity of the hospital. As a result, additional impacts from cumulative traffic would only be anticipated if the cumulative projects were expected to add traffic to the roadways in the immediate vicinity of the hospital. The cumulative projects are located north of Las Positas Road, south of Mission Street, and west of U.S. 101. As a result, cumulative traffic would not be expected to use the roadways directly adjacent to SBCH unless it was

destined to the hospital or to the adjacent medical uses. As a result, the traffic volumes experienced adjacent to SBCH are not expected to change significantly as the cumulative projects are built and occupied. ***Therefore, no additional significant construction impacts are expected in the cumulative condition.***

Public Transportation Impacts (Cumulative Construction). The project is not anticipated to generate significant demand for bus service in the vicinity during construction. Most construction workers would be transported to the project site via private transportation. The number of employees at the existing hospital is not anticipated to increase notably during construction.

The construction of surrounding projects in the vicinity, independent of the proposed project, may impact existing public transit routes and bus stops. Mitigation Measure TRF-9, above, would address the closure of Castillo Street by the project and reduce the proposed project's cumulative impacts upon public transportation to less than cumulatively considerable level. ***Demand on transit services by cumulative development including the project during project construction would not be cumulatively considerable.***

13.8 SUMMARY OF TRANSPORTATION AND CIRCULATION IMPACTS

With the implementation of the proposed project, four study area intersections would be significantly impacted as a result of the project. The following study area intersections would be impacted due to the contribution of project traffic:

(1) Bath Street/Mission Street

(2) Castillo Street/Mission Street

(3) U.S. 101 southbound ramps/Mission Street

(4) Modoc Road/Mission Street

The proposed project would contribute traffic to 12 area intersections currently exceeding the City's LOS threshold, thereby causing significant cumulative impacts at these intersections. Mitigation Measure TRF-2 would reduce project vehicular impacts to U.S. 101 southbound Ramps/Mission Street to less than significant levels.

Implementation of Mitigation Measure TRF-1 could divert approximately 5 to 15 percent of the traffic on Mission Street and would reduce the proposed project's impact at the intersections of Bath Street/Mission Street, Castillo Street/Mission Street, and Modoc Road/Mission Street. However, the measure is not fully planned, funded, or scheduled at this time. Therefore, impacts to Bath Street/Mission Street, Castillo Street/Mission Street, and Modoc Road/Mission Street are considered significant and unavoidable. Mitigation Measure TRF-3 would reduce project trips but the level of mitigation cannot be assured.

The adjacent streets were evaluated in terms of livability, pedestrian circulation, and the effects of the proposed Castillo Street closure. Circulation improvements adjacent to the proposed project are prescribed to alleviate the increase in traffic volumes, to maintain safe pedestrian circulation, and to improve vehicular circulation. With implementation of these improvements, the project would not significantly effect the vehicular or pedestrian circulation adjacent to the site.