

APPENDIX F – *Santa Barbara Cottage Hospital Origin-Destination Survey*

Santa Barbara Cottage Hospital Origin-Destination Survey

Several methods were used to compile information regarding the routes traveled to access Cottage Hospital, including questionnaires, employee zip code analysis, and a license plate survey. The findings of these data collection efforts are summarized in this section.

Santa Barbara Cottage Hospital Questionnaire (from EIR)

The Cottage Hospital Expansion EIR Traffic and Parking Study report included hospital staff and customer parking surveys conducted in July 2003. Questionnaires for the staff parking survey were distributed on site and through email. A total of 293 employees completed the questionnaire. Approximately ninety percent (90%) of those employees drove and parked their vehicles in the study area, and the remaining ten percent (10%) were either dropped off, carpooled, rode the bus, rode a bicycle, or walked. Of the employees who drove and parked, approximately sixty to seventy percent (60% - 70%) parked in available parking structures, and ten percent (10%) used on-street parking located within one block of the hospital. The majority of employees arrived between 6:00 AM and 9:00 AM and departed between 3:00 PM and 6:00 PM.

SBCH volunteers were stationed at various hospital entrances to conduct a two day survey with a random sample of patients and visitors as they entered the hospital. A total of 153 people responded to the questionnaire. The majority of the respondents' primary purpose of the trip to the hospital was for an outpatient visit. Approximately eighty-five percent (85%) of the respondents drove and parked in the study area. The remaining fifteen percent (15%) of respondents were dropped off, rode the bus or walked. None of the respondents rode a bike to the hospital during the two days the survey was conducted. Of those survey respondents who drove and parked, approximately half used on-street parking. The arrival time of patients and visitors was evenly distributed between 6:00 AM and 5:00 PM. The average visitor is expected to stay between 3.1 and 3.8 hours, and inpatients are expected to stay overnight. The average outpatient stay is between 1.2 and 1.4 hours.

SBCH EMPLOYEE ZIP CODES

Cottage Hospital provided a list of the residential zip codes of their employees for an origin-destination analysis of hospital workers. Employees that provided an address located outside of a 50-mile radius of the hospital or a P.O. Box number in lieu of a physical address were excluded from consideration. The employee residence data helps to provide information on the anticipated access routes for employees traveling to and from the hospital and provides information on the magnitude of employee trips using particular routes on a day-to-day basis.

A summary of the employee zip code data is presented in Table F-1. Out of 2,578 employees, about 1,019 people (39%) live in or near the Cottage Hospital area and Downtown Santa Barbara (in zip codes 93101, 93103, 93105, and 93109). Employees that live south of Highway 101 need to cross the freeway to get to the hospital, and are expected to use Las Positas Road or Mission Street.

Five-hundred and seven employees (20%) live further south and east of SBCH and downtown Santa Barbara. These employees would be expected to travel to the hospital using the northbound Highway 101. In comparison, 1,052 employees (41%) live north of SBCH and are expected to use southbound Highway 101 for access. This is the largest percentage of employees and the group most impacted by the limited access from Las Positas Road to the hospital.

Table F-1: SBCH Employee Zip Codes

Zip Code(s)	Area Description	Expected Route to Access SBCH	Number of Employees	Percent of Total
91360, 91362, 93001 – 93067, 93108	South/East of SBCH and Downtown Santa Barbara	North on Highway 101	507	20%
93101	Downtown Santa Barbara, Laguna, Eastside, and Lower Eastside neighborhoods	Local streets	339	13%
93103	Cielito, Riviera and Lower Riviera neighborhoods	Local streets	207	8%
93105	Hidden Valley, Oak Park, Upper East, Foothill, San Roque, Hitchcock and Samarkand neighborhoods	Local streets	357	14%
93109	Coast Village, East and West Mesa, Alta Mesa, Campanil	Las Positas Road or Mission Street	116	4%
93110, 93111, 93117, 93427 - 93463	North of SBCH	South on Highway 101	1,052	41%
TOTAL			2,578	100%

LICENSE PLATE SURVEY

A targeted license plate survey was performed by National Data Services (NDS) on Thursday, September 11th, 2008. The goal of the survey was to identify vehicles traveling to the SBCH employee parking structure, Pueblo public parking structure, or the hospital vicinity from southbound Highway 101 and northbound Mission Street. The survey was conducted during the AM peak period (7-9 AM) and the PM peak period (4-6 PM) to correspond to peak traffic generation time periods and the time periods of peak congestion on surrounding roadways and Highway 101.

The license plate survey does not include every vehicle that traveled to the hospital. To collect data on every possible route and to capture vehicles utilizing on-street parking would not be cost-effective. However, the data collected does provide a snapshot of travel routes used by visitors and employees of the hospital. The information on travel patterns also provides support for the development of specific transportation improvements to improve access to the hospital.

It should be noted that construction activities to implement new Class II bike lanes on Mission Street at the Highway 101 interchange were under way during the survey. The roadway project may have had an affect on travel patterns in the vicinity of the interchange, but is not expected to significantly impact the results of the license plate survey.

The vehicles captured in the license plate survey represent a minimum number of vehicles that traveled to the selected off-street parking lots serving Cottage Hospital on each surveyed route. The results of the license plate survey are summarized in Table F-2.

Table F-2: License Plate Survey Results

From	To	7:00 – 9:00 AM	4:00 – 6:00 PM
Eastbound Tallant Road	Pueblo Parking Structure - Pueblo entrance	1	3
	Pueblo Parking Structure - Castillo entrance	0	3
	SBCH Employee Parking Structure	18	0
Northbound Las Positas Road south of 101 interchange	Pueblo Parking Structure - Pueblo entrance	2	2
	Pueblo Parking Structure - Castillo entrance	2	0
	SBCH Employee Parking Structure	17	0
	Tallant Rd	31	12
Southbound 101 exit to northbound Las Positas Road	Tallant Rd	18	31
	Pueblo Parking Structure - Pueblo entrance	4	1
	Pueblo Parking Structure - Castillo entrance	3	1
	SBCH Employee Parking Structure	11	0
Northbound 101 exit to Pueblo Street	Pueblo Parking Structure - Pueblo entrance	36	9
	Pueblo Parking Structure - Castillo entrance	32	12
	SBCH Employee Parking Structure	56	4
Eastbound Mission Street west of 101 interchange	Pueblo Parking Structure - Pueblo entrance	5	0
	Pueblo Parking Structure - Castillo entrance	10	5
	SBCH Employee Parking Structure	23	0
	NB 101 Pueblo exit - Calle Real	48	50
	NB 101 Pueblo exit - Pueblo St	35	23
	WB Castillo St	39	21
	WB Bath St	49	9
Southbound 101 exit to eastbound Mission Street	Pueblo Parking Structure - Pueblo entrance	1	7
	Pueblo Parking Structure - Castillo entrance	6	10
	SBCH Employee Parking Structure	8	2
	NB 101 Pueblo exit - Calle Real	35	32
	NB 101 Pueblo exit - Pueblo St	35	48
	WB Castillo St	16	26
	WB Bath St	14	26
Eastbound left turn from Mission Street onto Castillo Street	Pueblo Parking Structure - Pueblo entrance	1	1
	Pueblo Parking Structure - Castillo entrance	23	5
	SBCH Employee Parking Structure	2	0
Eastbound left turn from Mission Street onto Bath Street	Pueblo Parking Structure - Pueblo entrance	2	0
	Pueblo Parking Structure - Castillo entrance	5	2
	SBCH Employee Parking Structure	90	1
Total Parking Structure Entering Vehicles	Pueblo Parking Structure - Pueblo entrance	99	22
	Pueblo Parking Structure - Castillo entrance	138	37
	SBCH Employee Parking Structure	404	8

The license plate survey data can be used to identify common or popular routes that hospital visitors and employees use the travel to the hospital. The survey locations were selected to focus on vehicles traveling to the hospital from Highway 101, Las Positas Road, and Mission Street. These routes were identified as the most congested in the Santa Barbara Cottage Hospital Seismic Compliance and Modernization Plan EIR and through the existing traffic conditions analysis presented in this report. The findings and observations from the survey are summarized below.

Of the 237 vehicles that entered the Pueblo Public Parking Structure between 7:00 AM and 9:00 AM, 68 of those vehicles were observed on the northbound Highway 101 exit to Pueblo Street, at least seven (3%) used the southbound Highway 101 exit to Las Positas Road, and seven (3%) used the southbound Highway 101 exit to Mission Street. At least 19 vehicles (8%) traveled to the Pueblo Public Parking Structure from the neighborhoods south of Highway 101, with four (2%) crossing the freeway on Las Positas Road and 15 (6%) crossing on Mission Street. This data shows that vehicles accessing the Pueblo Public Parking Structure during the AM Peak follow a diverse number of routes and that the Las Positas and Mission Street interchanges serve only a portion of the total vehicles traveling to this parking facility during the AM peak period.

Four-hundred and four vehicles entered the SBCH Employee Parking Structure between 7:00 AM and 9:00 AM. Fifty-six (14%) of those vehicles traveled on the northbound Highway 101 exit to Pueblo Street, 17 (4%) came from the southbound Highway 101 exit to Las Positas Road, and eight (2%) exited southbound Highway 101 at Mission Street. At least 40 (10%) vehicles traveled to the Employee Structure from the neighborhoods south of Highway 101, with 17 (4%) crossing the freeway on Las Positas Road and 23 (6%) crossing on Mission Street. The employee trips show a much higher use of the Las Positas Road and Mission Street interchanges to access the hospital.

Of the 213 vehicles that turned left from northbound Mission Street to westbound Castillo Street during the morning observation period, 24 (11.3%) entered the Pueblo Public Parking Structure and 2 (0.9%) entered the Employee Parking Structure. Of the 468 vehicles that turned left from northbound Mission Street to westbound Bath Street, 7 (1.5%) entered the Pueblo Structure and 90 (19.2%) entered the Employee Structure. Bath Street is observed to be a major access route of SBCH employees accessing the hospital's employee parking structure. Of the 1,042 vehicles that exited the northbound Highway 101 to Pueblo Street, 68 vehicles (6.5%) entered the Pueblo Public Parking Structure and 56 (5.4%) entered the Employee Parking Structure, for a total of 11.9% of the off-ramp vehicles destined for Cottage Hospital, not including vehicles that may have parked on adjacent streets.

The data collected also revealed that at least 70 AM peak period vehicles and 80 PM peak period vehicles exited southbound Highway 101 at Mission Street, turned left onto eastbound Mission Street and left again onto the northbound Highway 101 on-ramp. These vehicles then exited the freeway at Pueblo Street to access the SBCH area. The objective of this travel pattern is to avoid traffic congestion on Mission Street and delays making left turns at Castillo and Bath Streets. Local traffic traveling eastbound on Mission Street from points west of Highway 101 also follow this travel pattern, with 83 vehicles in the AM peak period and 73 vehicles in the PM peak period entering the northbound Highway 101 at Mission Street and exiting at Pueblo Street. The negative effect of these observed travel patterns is increased average delays through the Highway 101 interchange at Mission Street. Commuters have limited options to access the hospital from southbound Highway 101, and the congestion on Mission Street encourages people to find alternative, nontraditional routes to access the hospital area.