Appendix K
PARKING STUDY REPORT

LINSCOTT LAW & GREENSPAN engineers

PARKING STUDY REPORT

HENRY MAYO NEWHALL MEMORIAL HOSPITAL (HMNMH)

MASTER PLAN

Valencia, Santa Clarita, California
May 19, 2008

Prepared for:

Henry Mayo Newhall Memorial Hospital
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Valencia, California 91355

and

G & L Realty
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EXECUTIVE SUMMARY

1. The Henry Mayo Newhall Memorial Hospital (HMNMH) Master Plan includes site modifications to add three medical office buildings (MOBs), a hospital expansion, and other site refinements/modifications, supported by the provision of up to four parking structures. The program summary for existing site and future Master Plan conditions is presented in *Table 2-1 and Table 2-2.* The format of this program summary matches the basis for input to "code" parking calculations for the site.

2. A total of 2,231 spaces are planned to support the total Master Plan (see *Table 2-2*).

3. Actual existing conditions at the HMNMH Master Plan site were extensively inventoried for parking provisions, types and restrictions (typically by intended user group and designated by signage and/or pavement markings). The existing parking supply for the HMNMH Master Plan site totals 1,114 spaces, consisting of 968 spaces in surface lots, and 146 "On-Street" spaces along internal circulation roadways of the site.

4. In order to determine the existing parking demand characteristics of the HMNMH Master Plan site at various times throughout a typical day, a survey of actual parking utilization was conducted beginning at 6:00 AM and ending at 8:00 PM on the following two days:

   Wednesday, November 7, 2007
   Thursday, November 8, 2007

   Wednesday exhibited the greatest overall demand, which peaked at 11:00 AM with a site-wide parking demand of 1,051 spaces (921 in lots and 130 at the curb). This demand peak translates to 94% of inventoried supply. Thursday demand was about 5% less at the peak.

5. Other influencers of observed parking demand during the field surveys included 30 spaces related to construction workers parked on the site, and 15 spaces related to "poaching" from parkers actually visiting the Ambulatory Care Center (ACC) and the Valencia Medical Office Building located on a separate parcel to the north of the HMNMH Master Plan site.

6. Express/commuter bus service is supported by stops on McBean Parkway near the site, and the site could/may be used for park and ride activities that would influence site-wide observed parking demand. Review of field data suggests only a few (less than 5) possible parkers contributing parking demand to the site but riding these services. Given their relative magnitude, these parkers can generally be ignored as a possible adjustment factor for site parking.

7. A review of MOB and hospital "code" parking requirements of the City of Santa Clarita reveal those requirements to be among the most conservative of a broad sample of 39 other jurisdictions, with the Santa Clarita requirements ranking in the top (most conservative) 10%. MOB ratios in the sample range from a low of 2.86 to a high of 6.67 spaces/1000 sf. Santa Clarita's value for MOB of 5.0 spaces/1000 sf is the most common requirement (22 out of 39 sampled cities), and only three cities have a greater requirement. At 2.0 spaces/bed, Santa Clarita is among eight cities with that requirement, and only three cities have a greater per bed requirement. All three of those (Downey, Monterey Park and Pasadena) require 3.0 spaces/bed, but unlike Santa Clarita, none have a further additive requirement for other hospital elements. Twenty-eight jurisdictions require less than 2.0 spaces/bed.

8. *Table 4-2* carries out a city code calculation for existing and Master Plan conditions at the site. The latter is further evaluated for the accumulating increments of Master Plan implementation. The resulting development on the site due to all added elements of the Master Plan will result in a city code requirement of 2,190 spaces, versus a planned supply of 2,231 spaces. On that basis, the total Master Plan parking provisions will exceed the city's requirements by 41 spaces. Other values in *Table 4-2* indicate that the sequential building and parking additions at the site will remain balanced with the code requirements throughout the Master Plan implementation period. Code surpluses are calculated to range from 2 to 155 spaces, depending on development increment.

9. Field study data has been used to validate the city's code parking requirement for MOB uses. Actual MOB demand at the peak was 94% of the predicted needed supply as calculated by code. The MOB code ratio can be expected to provide for a essentially a 6% contingency factor (equivalent to an operational surplus), even at peak demand times.

10. Field study data, combined with detailed hospital census and added staffing projections, confirm that the planned total future supply of 2,231 spaces (which equates to 41 spaces in excess of the 2,190 space total site code requirement) will meet the peak parking needs of the hospital and MOB facilities. *Table 5-2* illustrates how hospital parking demands are expected to "ramp up" following the addition of Building A facilities as utilization of the added beds matures. A minimum parking surplus of 3% is projected for hospital parking demand alone in the maximum (estimated Year 2025) condition. When combined with the 6% contingency factor inherent to the city's code for MOB, the overall site contingency is forecast to be 108 spaces, or 5.0% of the projected peak parking needs.

11. As a further "crosscheck" to the city's code requirements, this study develops a HMNMH parking "formula" based on field-studied demand characteristics of the

site. This "crosscheck" formula will supplement the code calculation to ensure adequate parking on the site at Master Plan completion as well as within intervening stages of Master Plan development (see *Section 5.4*)

12. *Section 6.0* presents a program of implementation strategies suggested to accompany the implementation of the Master Plan. These include ensuring that code-required parking is provided at each stage of development, together with monitoring, management and information strategies.

13. Given the Master Plan aspect of the *Figure 2-3* site plan, the overall access and internal circulation features of the site can be expected to function properly. As Master Plan elements are translated to actual construction drawings, it is recommended that on-site roadway elements such as lane widths, auxiliary turning lane provisions, curb return radii, service/"oversized" vehicle turning path needs, intersection sight lines and pedestrian circulation and roadway crossing details be finally evaluated. It is also recommended that each increment of site modification/Master Plan implementation be accompanied by traffic striping and signing plans for internal roadway segments. These plans will depict pavement markings along all on-site roadways and intervening parking access points, and identify traffic-related signage to include stop sign postings and similar regulatory signs. The placement of the wayfinding signage recommended in *Section 6.0* should be coordinated with these striping and signing plans.

PARKING STUDY REPORT

HENRY MAYO NEWHALL MEMORIAL HOSPITAL (HMNMH)

MASTER PLAN

Valencia, Santa Clarita, California
May 19, 2008

1.0 INTRODUCTION

This report has been prepared to assess current and future parking characteristics and requirements for the existing Henry Mayo Newhall Memorial Hospital (HMNMH) and its added Master Plan elements. Those elements include site modifications to add three medical office buildings (MOBs), a hospital expansion, and other site refinements/modifications, supported by the provision of up to four parking structures.

1.1 STUDY OBJECTIVES

Hospital and medical campuses like that of the HMNMH Master Plan site are, from a parking analytical point of view, sometimes complex settings whose realistic parking needs may not be precisely described by typical "code" parking calculations. As an existing campus, perspectives on the current parking setting and workability may vary among its user groups, ownership, community, city staff and city officials. Those existing conditions need further documentation to facilitate an understanding among all of these groups, and to further ensure a future parking balance at the site as the Master Plan is implemented.

On that basis, city staff has requested that a parking study be prepared to document existing relationships, and using that information combined with other technical resources, that analyses be performed to ensure that future parking demands will be balanced by added parking facilities called out in the plan.

The elements of the scope of work represented in this study were identified in cooperation with city staff, and are intended to address at least four key issue areas as follows:

- Determine the site's true operational parking needs, now and in the future.
- Confirm the relevance of code or other parking planning factors in establishing those needs.
- Integrate "real time" wayfinding within the plan.
- Identify further operational elements important to the success of the plan.

1.2 STUDY ELEMENTS

Key elements of this study include the following:

- Inventory of the existing parking supply within the HMNMH Master Plan site by sub-area/location, type, restrictions (through signage or other pavement/curb markings), and other characteristics.

- Results of two days (Wednesday and Thursday) of parking surveys throughout the site and its sub-areas to develop a typical existing "snapshot" of actual parking conditions.

- Comparison of observed parking demand against existing inventoried supply to determine any parking surplus or deficiency within the HMNMH Master Plan site.

- Consideration of temporary or external parking "influencers" at the site. These include construction activities, park and ride activity for express/commuter bus service stops on McBean Parkway near the site, and/or use of HMNMH site parking facilities by others not having the medical venues/services of HMNMH as their destination. The results of this and the above tasks were initially provided in a "Part One" letter report dated December 31, 2007. They now form the basis of *Section 3.0* of this report.

- Identification of city "code" parking requirements and a compilation of similar requirements for other jurisdictions throughout Southern California.

- Calculation of "code" parking requirements for existing and future conditions related to the Master Plan, and confirmation that the parking supply to be provided at each stage of development balances with or exceeds the code requirement.

- A verification that the code and/or planned site parking provisions will provide a parking supply "envelope" consistent with the demonstrated or forecast parking needs of the site.

- Derivation of a parking "formula" based on field-studied parking demand characteristics of the site. This "crosscheck" formula will supplement the code calculation to ensure adequate parking on the site at Master Plan completion as well as for intervening stages of Master Plan implementation.

- Identification of parking and on-site circulation implementation strategies.

- A review and analysis of planned on-site circulation provisions.

2.0 PROJECT DESCRIPTION

2.1 Project Location

Figure 2-1 illustrates the HMNMH Master Plan site location, generally north and west of McBean Parkway, roughly opposite Orchard Village Road, in the City of Santa Clarita.

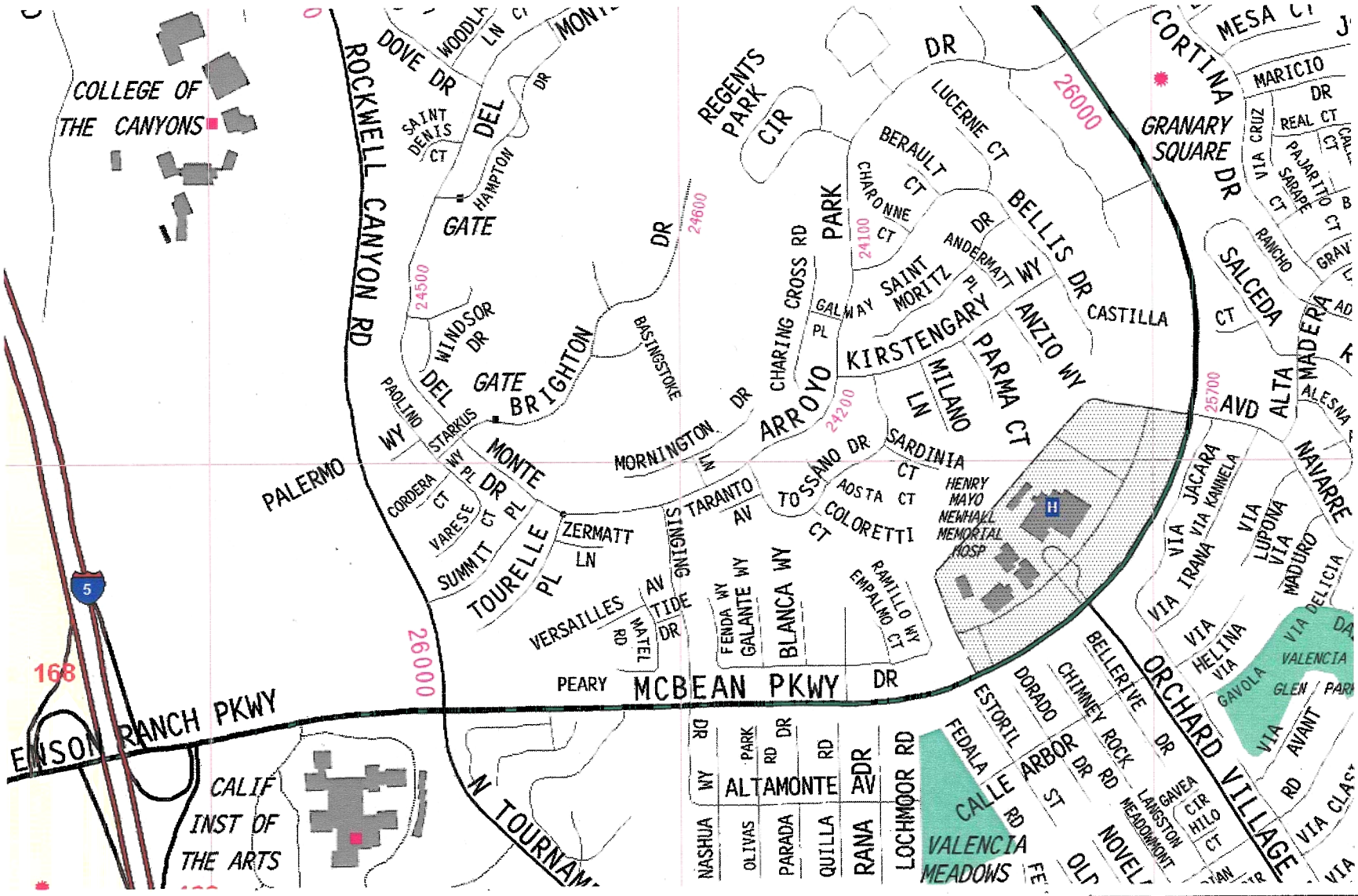
2.2 Project Description

Figure 2-2 presents a project site plan depicting existing conditions on the site. As shown, the Main Hospital and Nursing Pavilion buildings are located in the northern portion of the site, together with a large surface parking footprint and other smaller surface parking lots. Medical Office Buildings (MOB) A through F are located in the southern portion of the site, as is the Foundation Building. Surface parking areas are interspersed amongst the MOBs. A "ring road" extends throughout the site tying all of these components to primary and secondary site access connections along McBean Parkway.

The Master Plan calls for the eventual addition of three medical office buildings (MOBs), the demolition of the Foundation Building, and the further addition of Inpatient Building A. Other site adjustments would result in the provision of up to four parking structures. While the "ring road" and site access connections to McBean would remain largely intact, the Master Plan would result in refinements and select improvements to this internal circulation system. All of these Master Plan elements, and those of the exiting campus that are programmed to remain with Master Plan implementation, are illustrated in ***Figure 2-3***.

Table 2-1 presents a program summary for the existing site, the additions of the Master Plan, and the resulting total Master Plan of development. In some cases, the MOB floor areas of ***Table 2-1*** have two values. The first value corresponds to the floor area reported by the project architect based on the "floor area (gross)" definition of the City of Santa Clarita Municipal Code. That definition excludes vertical elements within the building such as stairwells and shafts, as well as mechanical spaces as footnoted in the table. These "floor area (gross)" square footages are the basis of the parking calculation. In cases where values presented for these buildings in the Environmental Impact Report Program Summary are different, they are reported in *Table 2-1* parenthetically.

From that table, existing medical buildings on the site (including the Foundation Building) total just over 95,000 sf. The Master Plan calls for the further addition of MOB 1 at 77,600 sf, and MOB 2 and MOB 3, each totaling 58,000 sf, with the parallel demolition of the Foundation Building.



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LINSCOTT LAW & GREENSPAN engineers

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SOURCE: THOMAS BROS.

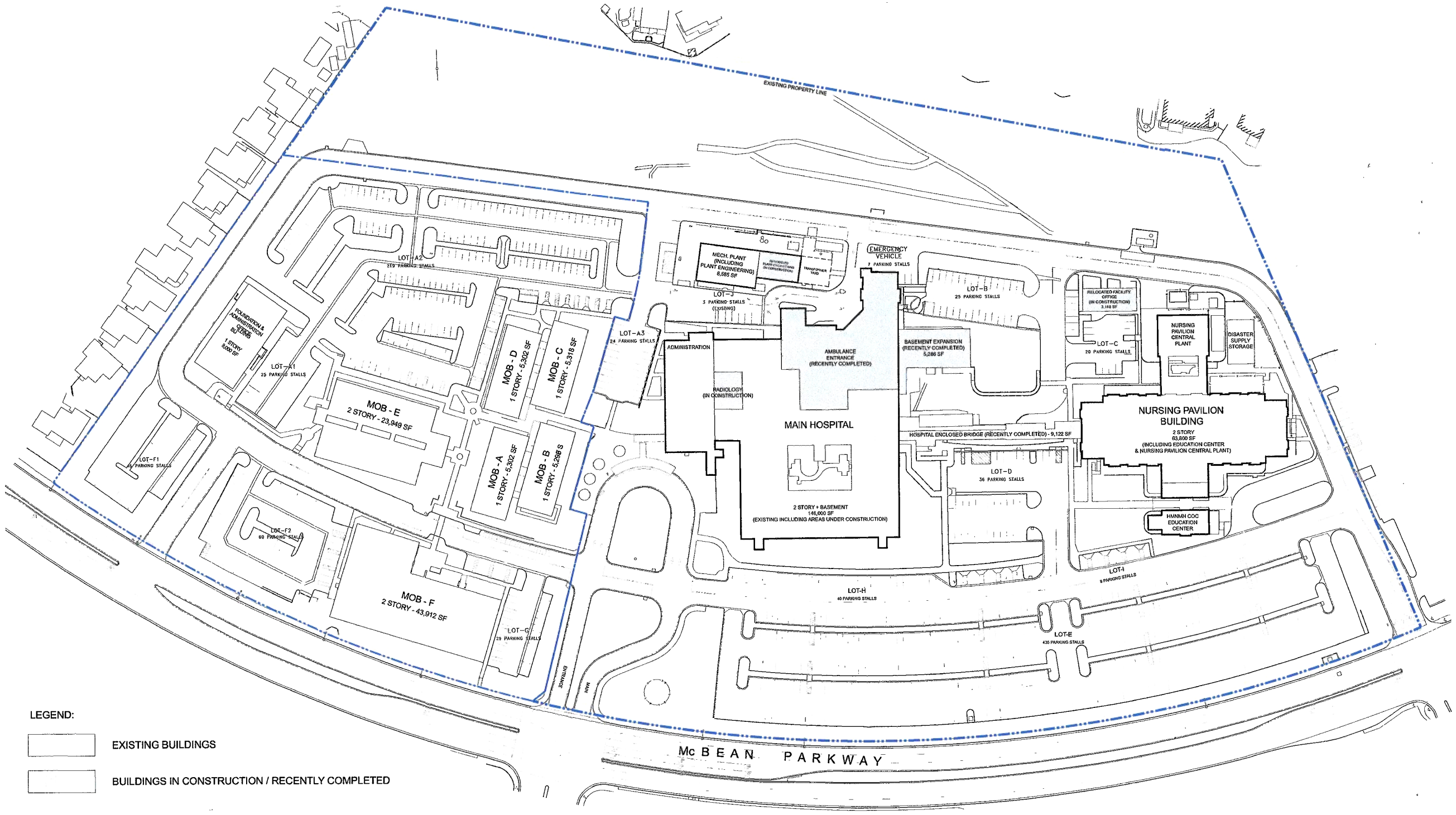
KEY

= PROJECT SITE

FIGURE 2-1

VICINITY MAP

HMNMH, SANTA CLARITA



BASE SOURCE: SWA ARCHITECTS

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NO SCALE

FIGURE 2-2

EXISTING CONDITIONS PLAN
HMNMH, SANTA CLARITA

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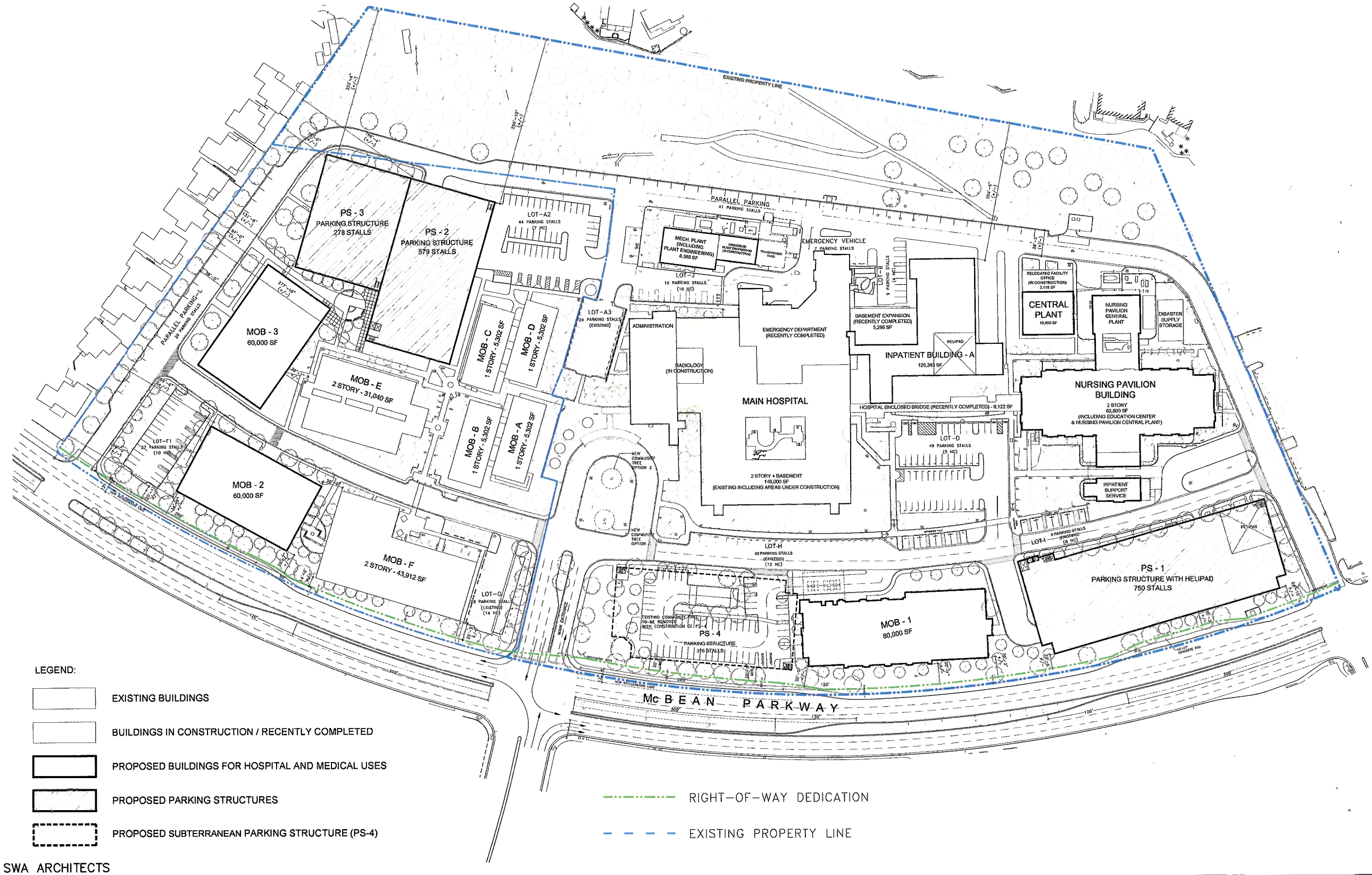

BASE SOURCE: SWA ARCHITECTS

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NO SCALE

FIGURE 2-3

MASTER PLAN
HMNMH, SANTA CLARITA

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TABLE 2-1
PROGRAM SUMMARY
HMNMH Existing and Master Plan [1]

Description	Existing	Master Plan Additions	Master Plan Total[3]
Medical Buildings			
MOB A	4,567 sf (5,302 sf)[2]	NC	4,567 sf
MOB B	4,560 sf (5,302 sf)	NC	4,560 sf
MOB C	4,561 sf (5,302 sf)	NC	4,561 sf
MOB D	4,560 sf (5,302 sf)	NC	4,560 sf
MOB E	25,156 sf (31,040 sf)	NC	25,156 sf
MOB F	43,912 sf (same)	NC	43,912 sf
Foundation	8,000 sf (same)	-8,000 sf	0
Subtotal	95,316 sf (104,160 sf)	-8,000 sf	87,316 sf
MOB 1		77,600 sf (80,000 sf)	77,600 Sf
MOB 2		58,000 sf (60,000 sf)	58,000 sf
MOB 3		58,000 sf (60,000 sf)	58,000 sf
Accumulated	95,316 sf	185,600 sf (296,160 sf)	280,916 sf
Hospital Buildings			
Main Hospital	121 beds	+18 beds	139 beds
Nursing Pavilion	100 beds[4]	+9 beds	109 beds
Emergency	5,518 sf	NC	5,518 sf
Radiology Outpatient	2,952 sf	NC	2,952 sf
Radiology Outpatient	2,905 sf*	NC	2,905 sf
Facility Building: Office	734 sf*	NC	734 sf
Facility Building: Warehouse	2,384 sf*	NC	2,384 sf
Bldg. A Inpatient		+120 beds	120 beds
Bldg. A Outpatient		+4,000 sf	4,000 sf
Accumulated			
Inpatient	221 beds	+247 beds	368 beds
Outpatient	11,375 sf	+4,000 sf	15,375 sf
Office	734 sf	NC	734 sf
Warehouse	2,384 sf	NC	2,384 sf
Total Parking Provided [5]	**1,114 sp**	**Net 1,117 sp**	**2,231 sp**

Notes:

* recent construction

NC no change

[1] Source: SWA Architects and RBF

[2] Non-parenthetical MOB value provided by SWA Architects based on City of Santa Clarita Municipal Code, Chapter 17.07.010 definition of "Floor Area (gross)" as follows:
"Floor Area (gross)" shall mean the sum of the gross horizontal areas of several floors of the building measured from the exterior faces of the exterior walls excluding exterior balconies and porches. Floor area shall not include stairwells, vertical shafts and attics and mechanical penthouses provided there are not usable rooms, no windows and the mechanical penthouse area is used exclusively for mechanical equipment.
The parenthetical values of this table identify the corresponding floor area, without these exclusions, and are consistent with the Development Program values to be reported in the project Environmental Impact Report.

[3] Using "Floor Area (gross)" values for input to parking calculations

[4] Equalled 96 beds at the time of the November, 2007 parking demand field studies

[5] Existing parking total per LLG field inventory of November 4, 2007. Future parking provisions per SWA summaries of February 21 and February 26, 2008.

In the hospital building category, the Main Hospital and Nursing Pavilion now provide a combined 221 beds. Hospital facilities added by the Master Plan would increase the bed count to 368, and further add 4,000 sf of outpatient space.

Using the "floor area (gross)" and other Master Plan Total values, ***Table 2-2*** breaks out the Master Plan elements of *Table 2-1* by their likely sequencing of construction, commencing most probably with MOB 1, followed by MOB 2 then Building A, or conversely Building A then MOB 2, with MOB 3 being the final component of the plan. It should be noted that this sequence is only illustrative of a likely sequencing of Master Plan implementation; the actual sequence could vary. Each of these building elements would be accompanied by specific parking enhancements from the menu of Parking Structures (PS) 1 through 4. *Appendix A* presents site plans and development/parking summaries for interim stages of Master Plan completion, which will ultimately lead to the project plan of *Figure 2-3*.

As noted above, site elements identified in *Table 2-2* are summarized in terms of their basis for input to "code" parking calculations for existing site development (including recent construction), as are the Master Plan elements themselves. "Code" parking calculations use MOB or other specific building square footages plus hospital bed totals. The resulting development total in each category, through each stage or increment of development, is also shown in *Table 2-2*.

The existing bed total for the Nursing Pavilion is reported as 100 in both *Table 2-1* and *Table 2-2*. This value reflects four new beds that are being added and will be licensed and on-line by the end of April, 2008. This 100-bed value varies slightly from the 96 beds located in this facility at the time of LLG's parking demand field studies performed in November, 2008. To ensure consistency between the field data and the on-site facilities at the time of the data collection, the 96-bed value is used in this study for analysis of field study (actual parking demand) conditions. When making code calculations for existing conditions, and for all future projection purposes, the 100-bed value is used.

Similarly, three floor area elements within the existing Main Hospital are footnoted as recently constructed. (These areas are shown in blue as "buildings in construction/recently completed" within the architect-supplied base plan of *Figure 2-2*.) These elements are treated as "existing" within the code calculations of this study.

Additionally, near term hospital bed adjustments within otherwise existing floor areas are anticipated to results in a net increase of 18 beds within the Main Hospital and 9 beds within the Pavilion as follows:

- Before the end of 2008, Main Hospital floor areas now allocated to administrative functions will be relocated to make way for new ICU beds.

TABLE 2-2
PROGRAM SUMMARY BY MASTER PLAN INCREMENT
HMNMH Existing and Master Plan [1]

		Incremental Master Plan Additions					
Description	**Existing**	**+MOB 1**	**+ MOB 2 or Bldg A[2]**		**+MOB 2 and Bldg A**	**+MOB 3**	**Master Plan Total**
Medical Buildings							
MOB A	4,567 sf	NC	NC	NC	NC	NC	4,567 sf
MOB B	4,560 sf	NC	NC	NC	NC	NC	4,560 sf
MOB C	4,561 sf	NC	NC	NC	NC	NC	4,561 sf
MOB D	4,560 sf	NC	NC	NC	NC	NC	4,560 sf
MOB E	25,156 sf	NC	NC	NC	NC	NC	25,156 sf
MOB F	43,912 sf	NC	NC	NC	NC	NC	43,912 sf
Foundation	8,000 sf	NC	NC	NC	NC	-8,000 sf	0
Subtotal	95,316 sf	NC	NC	NC	NC	NC	87,316 sf
MOB 1	-	+77,600 sf	NC	NC	NC	NC	77,600 sf
MOB 2	-	-	+58,000 sf	NC	58,000 sf	NC	58,000 sf
MOB 3	-	-	-		-	+58,000 sf	58,000 sf
Accumulated	95,316 sf	172,916 sf	230,916 sf	172,916 sf	230,916 sf	280,916 sf	280,916 sf
Hospital Buildings							
Main Hospital	121 beds	+18 beds	NC	NC	NC	NC	139 beds
Nursing Pavilion	100 beds	+9 beds	NC	NC	NC	NC	109 beds
Emergency	5,518 sf	NC	NC	NC	NC	NC	5,518 sf
Radiology Outpatient	2,952 sf	NC	NC	NC	NC	NC	2,952 sf
Radiology Outpatient	2,905 sf*	NC	NC	NC	NC	NC	2,905 sf
Facility Building: Office	734 sf*	NC	NC	NC	NC	NC	734 sf
Facility Building: Warehouse	2,384 sf*	NC	NC	NC	NC	NC	2,384 sf
Bldg. A Inpatient	-	-	-	+ 120 beds	120 beds	NC	120 beds
Bldg. A Outpatient	-	-	-	+4,000 sf	4,000 sf	NC	4,000 sf
Accumulated							
Inpatient	221 beds	248 beds	248 beds	368 beds	368 beds	368 beds	368 beds
Outpatient	11,375 sf	11,375 sf	11,375 sf	15,375 sf	15,375 sf	15,375 sf	15,375 sf
Office	734 sf	734 sf	734 sf	734 sf	734 sf	734 sf	734 sf
Warehouse	2,384 sf	2,384 sf	2,384 sf	2,384 sf	2,384 sf	2,384 sf	2,384 sf
Total Parking Provided [3]	**1,114 sp**	**1,433 sp**	**1,837 sp**	**1,644 sp**	**2,040 sp**	**2,231 sp**	**2,231 sp**
Illustrated in Appendix A or Other Figure	**2-2**	**A-1**	**A-2**	**A-3**	**A-4**	**2-3**	**2-3**

Notes:

* recent construction

NC no change

[1] Using "Floor Area (gross)" values, where applicable from Table 2-1

[2] Recognizes that the second added element of the Master Plan could be either MOB 2 or Hospital Building A.

[3] Existing parking total per LLG field inventory of November 4, 2007. Future parking provisions per SWA summaries of February 21 and February 26, 2008.

Before the end of 2009, 18 new ICU beds will be put in service within the remodeled Main Hospital space.

- Once the 18 new ICU beds are operational, the hospital will remove from service 12 existing ICU beds in the Main Hospital building. These beds/rooms will be demolished and replaced with a new 12-bed neonatal unit by the end of 2010.

- The 9-bed increase in Nursing Pavilion capacity identified in *Table 2-1* will be brought on-line when needed during the term of the Master Plan.

Given that the 18-bed addition of the Main Hospital is a near-term modification, and that the 9-bed Nursing Pavilion increase is an "as-needed" element that, on a most conservative parking assessment case could occur in the near term, the combined 27-bed increase is presumed within *Table 2-2* to occur in the same timeframe as the MOB 1 addition.

2.3 Master Plan Parking Provisions

Table 2-3 summarizes the ultimate parking provisions of the Master Plan in terms of parking structure and surface parking provisions. As shown, a total of 2,231 spaces are planned.

The number of spaces to be provided through each increment of Master Plan implementation is also shown at the bottom of *Table 2-2* based on a tabulation by SWA Architects. The parking components that make up this total are also presented within the *Appendix A* site plan materials.

TABLE 2-3
TOTAL MASTER PLAN PARKING PROVISIONS[1]
by Component

Description	Spaces Provided
PS1 with 1 Subterranean Level	750
PS2 with 1 Subterranean Level	579
PS3 with 1 Subterranean Level	278
PS4 with 2 Subterranean Levels	316
Surface (general)	253
Surface (for physicians-currently gated)	48
Surface (for emergency)	7
Total Parking Provided	**2,231**

[1] Source: SWA Architects, February 21, 2008

3.0 EXISTING CONDITIONS

3.1 Existing Parking Provisions and Characteristics

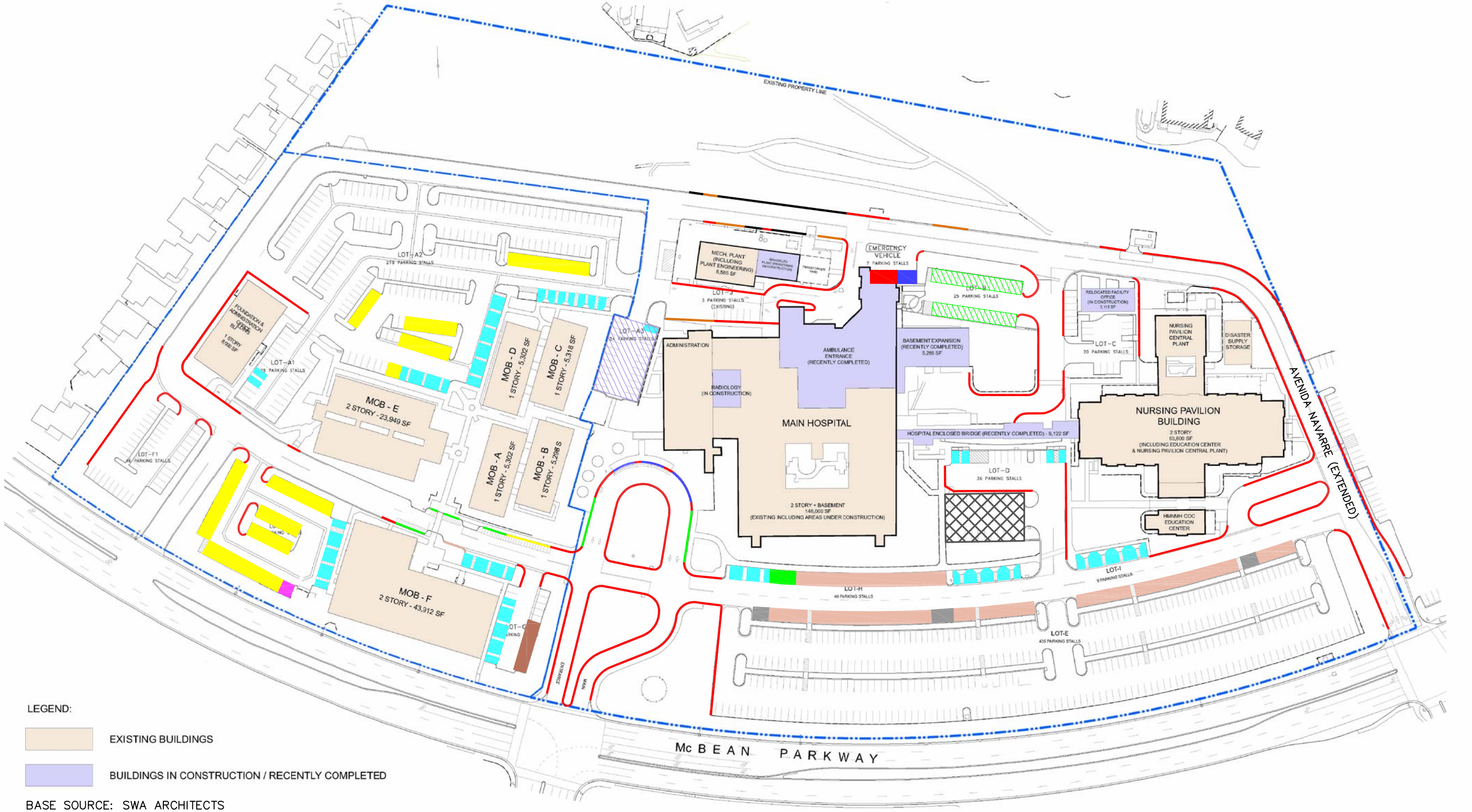
Actual existing conditions at the HMNMH Master Plan site were extensively inventoried for parking provisions, types and restrictions (typically by intended user group and designated by signage and/or pavement markings). ***Figure 3-1*** presents the resulting inventory. As indicated in the figure key, there are twelve parking space designation types (quotation marks indicate actual sign legends), and seven types of curb parking characteristics.

The *Figure 3-1* base plan was provided by SWA Architects, and close inspection will reveal parking lot references and potential space counts. Due to construction and other temporary site conditions at the time of the November 2007 field inventories and studies, these inventories may be slightly inconsistent with those of LLG. Thus for the purposes of this study, the SWA parking space inventories and lot references should be ignored and LLG-reported values used instead. The variations are small and are discussed later in this report.

Table 3-1 summarizes the number of marked spaces in each category. The *Table 3-1* summary distinguishes between actual marked spaces in parking lots, space equivalency for drop off areas (these are located near the hospital main entry, and sometimes used for short term parking), and "on-street" spaces along the curb of the internal "ring road" of the site. Where parking spaces are not explicitly marked along these curbs, the space count is estimated at 22 feet per vehicle.

As *Table 3-1* indicates, based upon a comprehensive inventory of on-site spaces in service during the November 2007 field studies, the existing parking supply for the HMNMH Master Plan site totals 1,114 spaces, consisting of 968 spaces in surface lots, and 146 "On-Street" spaces along internal circulation roadways of the site.

It is not unusual for space counts in large campus settings like that of the HMNMH Master Plan site to vary with time and among inventory sources. A summation of the SWA values in the *Figure 3-1* exhibit base indicates a total potential future parking lot supply of 977 spaces (versus the *Table 3-1* value of 968 spaces reported by LLG), but the SWA plan also identifies (in light blue) areas of recent or current construction. We understand further that an existing count of 972 spaces has previously been used by the city. In our recent field study, LLG noted a small number of what had/been would likely be again parking spaces that were out of service due to these construction activities. From our field review, we can conclude that four spaces from the city's prior reported inventory of 972 spaces are temporarily not in service (these are located in a small lot southwest of the ambulance entrance), but would be again as current construction activity ends, thus reconciling the variation between the city-reported total and that inventoried by LLG.



LEGEND:

EXISTING BUILDINGS

BUILDINGS IN CONSTRUCTION / RECENTLY COMPLETED

BASE SOURCE: SWA ARCHITECTS

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LINSCOTT LAW & GREENSPAN engineers

NO SCALE

KEY (BASED ON SIGNAGE OR OTHER DESIGNATION)

- = RED ZONE: EMERGENCY VEHICLE PARKING
- = HANDICAP
- = "SCV QUALITY CARE-RESERVED PARKING"
- = 20 MINUTE PARKING
- = "MEDICAL OFFICE BUILDING PATIENT PARKING ONLY"
- = "EMERGENCY ROOM PATIENT PARKING ONLY"
- = "RESERVED FOR OUTPATIENTS"
- = "PATIENT & VISITOR PARKING ONLY"
- = "RESERVED PARKING FOR DOCTORS ONLY"
- = "PARKING FOR HOSPITAL EMPLOYEES CARPOOL ONLY PERMIT REQUIRED"
- = "LAW ENFORCEMENT VEHICLES"
- = GATED (FOR DOCTORS)
- = STORAGE AREA/SPACES OUT OF SERVICE (TEMPORARY)
- = "RESERVED PARKING FOR ENGINEERING VEHICLES ONLY"
- = PATIENT LOADING
- = TIME RESTRICTED
- = "COMMERCIAL DELIVERY ZONE"
- = RED CURB
- = PHARMACY PARKING

FIGURE 3-1

PARKING LAYOUT PLAN

HENRY MAYO NEWHALL MEMORIAL HOSPITAL

HMNMH, SANTA CLARITA

TABLE 3-1
EXISTING PARKING SUPPLY
HMNMH Surface Lots and "On-Street" Parking

Category [a]	Parking Inventory (1,114 Total Spaces) Curb	Lots	Total
Surface Lots: Marked Spaces			
Unrestricted			
Regular	-	583	583
Handicap	-	74	74
Subtotal:	-	**657**	**657**
Restricted			
Medical Office Patients	-	88	88
"SVC Quality Care Reserved Parking"	-	8	8
"Patient and Visitor Parking Only"	-	102	102
"Reserved for Outpatients"	-	4	4
20 Minute Parking	-	2	2
"Reserved Parking for Doctors Only"	-	28	28
Gated (For Doctors)	-	23	23
"Parking For Hospital Employees Carpool Only Permit Required"	-	11	11
"Emergency Room Patient Parking Only"	-	22	22
Red Zone: Emergency Vehicle Parking	-	4	4
"Law Enforcement Vehicles"	-	3	3
Subtotal:	-	**295**	**295**
Surface Lots: Unmarked Spaces			
Drop-Off	-	16	16
Surface Lot Subtotal:	-	**968**	**968**
"On-Street" Parking [b]			
Regular	113	-	113
Yellow ("Commercial Delivery Zone")	3	-	3
Green (Time Restricted)	11	-	11
White (No Other Signage/Marking)	4	-	4
Pharmacy 20 minute	2	-	2
"Reserved Parking for Engineering Vehicles Only"	13	-	13
"On-Street Subtotal:	**146**	-	**146**
Total Site Wide	**146**	**968**	**1,114**

Notes:
Date of Supply Inventory: November 04, 2007
[a] based on signage or other designation
[b] estimated at 22 feet per curb space

3.2 Parking Demand Surveys

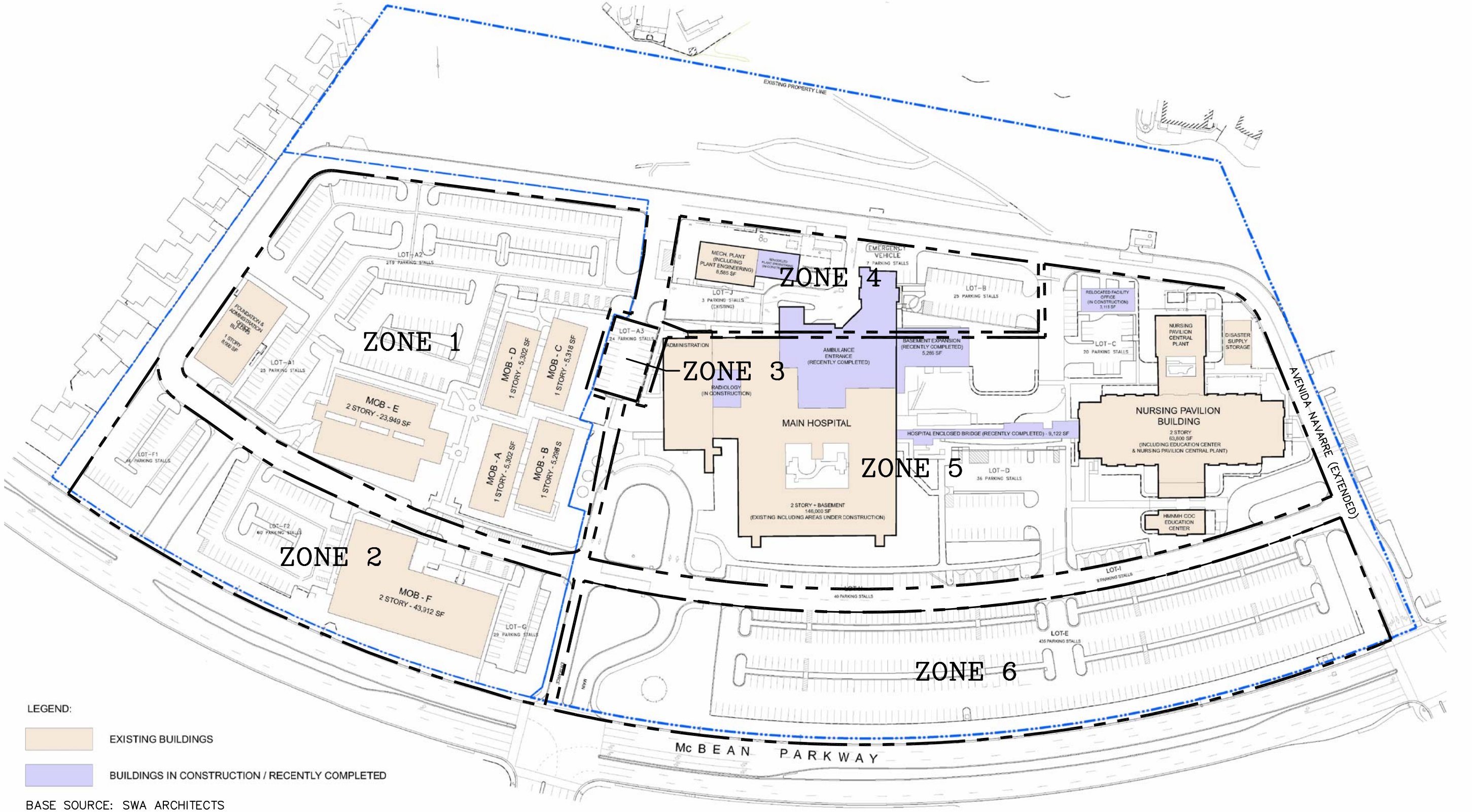
In order to determine the existing parking demand characteristics of the HMNMH Master Plan site at various times throughout a typical day, a survey of actual parking utilization was conducted on the following two days:

Wednesday, November 7, 2007
Thursday, November 8, 2007

Based on conversations with HMNMH representatives, a Wednesday-Thursday survey period was determined to be the most likely to capture the week-long peak of hospital and MOB activity. Data provided by HMNMH indicate that these were about average to slightly greater- than-average days when compared to annual averages of activity tracked by the hospital. The inpatient census (including newborn) was 185 on Wednesday and 167 on Thursday, compared to an annual average of 170. Emergency patients both days were consistent with the annual average of 114. Outpatient's visits for services related to main building surgery, ACC surgery, cardiology, gastrointestinal, endoscopy, breast imaging center, radiology, respiratory, etc totaled 93 on Wednesday, and 101 on Thursday, versus an annual average of 90. Lab visits for blood tests, pre surgery, etc, as well as wound care are not reported in these visit totals. Nor is activity in the MOBs.

In the course of the surveys, all vehicles parked in explicit sub-areas of the site, both in surface lots (in a marked space or not) and at the curb in "on-street" parking, were counted starting at the top of every hour, beginning at 6:00 AM and ending at 8:00 PM. ***Figure 3-2*** identifies the zone structure used to make the surveys. It should be noted that the zone structure of *Figure 3-2* was determined by logical parking footprints for inventory and survey purposes. Data collected in individual zones, or for a collection of zones, do not necessarily directly tie to the parking demand of individual buildings or user types (hospital versus MOB parking demand, for example). It is clear from the field data that the parking demand in some zones is a potential mix of both hospital and MOB demand largely due to unrestricted/unsigned curb spaces within some zones, although it can be concluded that one demand type is likely to dominate. Inclusionary parking signage (i.e.: for specific parking user types, as in parking areas signed for "Medical Office Building Patient Parking Only") and exclusionary signage (i.e.: "No Parking Allowed Beyond This Point for Hospital Employees, Hospital Contractors, Hospital Vendors") reinforces the dominant parking type.

Table 3-2 presents the hour-by-hour results for both survey days, segmented to curb versus lot demand, with a resulting total demand for each hour. As shown in *Table 3-2*, observed



LEGEND:

EXISTING BUILDINGS

BUILDINGS IN CONSTRUCTION / RECENTLY COMPLETED

BASE SOURCE: SWA ARCHITECTS

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NO SCALE

FIGURE 3-2

PARKING SUBAREAS
HENRY MAYO NEWHALL MEMORIAL HOSPITAL
HMNMH, SANTA CLARITA

TABLE 3-2
OBSERVED DEMAND VS. EXISTING SUPPLY
HMNMH Surface Lots and "On-Street" Parking

Time	Wednesday (11-07-07) Henry Mayo Newhall Memorial Hospital Zone 1-6 Curb	Lots	Total	Thursday (11-08-07) Henry Mayo Newhall Memorial Hospital Zone 1-6 Curb	Lots	Total
6:00 AM	45	173	***218***	42	143	**185**
7:00 AM	71	337	**408**	65	382	***447***
8:00 AM	95	687	***782***	91	678	**769**
9:00 AM	121	895	***1,016***	119	839	**958**
10:00 AM	130	910	***1,040***	118	850	**968**
11:00 AM	130	921	***1,051***	121	883	**1,004**
12:00 PM	131	844	***975***	113	846	**959**
1:00 PM	130	850	***980***	108	789	**897**
2:00 PM	112	859	***971***	105	788	**893**
3:00 PM	110	839	***949***	104	765	**869**
4:00 PM	82	697	***779***	77	625	**702**
5:00 PM	73	465	***538***	64	455	**519**
6:00 PM	67	395	***462***	55	358	**413**
7:00 PM	55	382	***437***	38	278	**316**
8:00 PM	28	231	***259***	21	167	**188**
Peak Demand	**131**	**921**	***1,051***	**121**	**883**	**1,004**
Supply	**146**	**968**	**1,114**	**146**	**968**	**1,114**
% Occupancy	***90%***	***95%***	***94%***	***83%***	***91%***	***90%***
Surplus (+) or Deficiency (-)	**15**	**47**	**63**	**25**	**85**	**110**
PEAK DAY (Wednesday 11-07-07)						
Peak Demand	**131**	**921**	**1,051**			
Supply	**146**	**968**	**1,114**			
% Occupancy	***90%***	***95%***	***94%***			
Surplus (+) or Deficiency (-)	**15**	**47**	**63**			

Note:

Corresponds to peak demand.

Italics identify the peak hourly demand for the two-day survey

parking demand throughout the site was consistently greater on Wednesday, versus Thursday. The actual peak occurred at 11:00 AM with a site-wide parking demand of 1,051 spaces (921 in lots and 130 at the curb). The Thursday demand of 1,004 spaces was about 5% less at the peak, and except at 7:00 AM, Thursday demand values, on an hour by hour basis, were consistently less than their Wednesday counterparts.

Looking to the bottom of *Table 3-2*, the observed peak represented an overall 94 % parking occupancy (calculated as a peak demand of 1,051 spaces versus a supply of 1,114 spaces), and resulted in a 63 space observed space surplus for the overall site.

Figure 3-3 translates the parking demand values of *Table 3-2* to parking profiles for both Wednesday and Thursday by time-of-day, and compares those demands to a supply line at 1,114 spaces. The left margin of the figure identifies the scale for actual demand (vehicles parked), while the right margin provides a scale for expressing observed demand as a percent of total supply. From the figure, it is evident that the mid to late morning hours have the greatest relative demand of the day, and on our peak Wednesday, ran at greater that 90 % of supply. Observed demand at mid-day and into the mid-afternoon hours fell just below 90 % on the same peak day.

Appendix ***Tables B-1*** through ***B-14*** include the survey results for the site by sub-area and for the combination of sub-areas that make up each zone. ***Table B-13*** presents a detailed site-wide breakout of inventory by space type and the observed parking demand in each of those space groupings by time-of-day. From the appendix tables, and consistent with the 94% peak observed occupancy reported above, the following existing characteristics emerge:

- Peak demand conditions are characterized by parking occupancies of 94% or greater in Zones 1, 2, 3 and 6. Demand in Zones 4 and 5 peaks at 68%. The demand variations among zones result from a combination of factors including proximity to on-foot destination, space designations/allocations, and availability of attendant-assisted parking (the latter is provided in Zones 1 and 6 during potential peak demand periods, thus adding incrementally to the marked supply in those zones due attendant processing and staging of some arriving vehicles).
- Regardless of location, spaces explicitly reserved by signage for patients-only parking are fully occupied (100%) at peak times. Many other designated space groupings, ranging in size from a few to about 20 spaces, are also full.
- At the peak, the 633 "regular" (otherwise unrestricted) spaces have a combined occupancy of 103%. The overage demand occurs entirely in Zone 6, and is facilitated by attendant-assisted parking operations. During peak demand times, attendants will take a visitor's vehicle and stage that vehicle in an aisle until a marked space becomes available. This adds to the functional supply within the Zone 6 lot during those peak times.
- Among the least used spaces by category, the 74 handicap spaces on the site have a peak demand of 48 vehicles, for a 65% occupancy level. Provision of these spaces is required by both state and federal law, and thus their supply amount cannot be

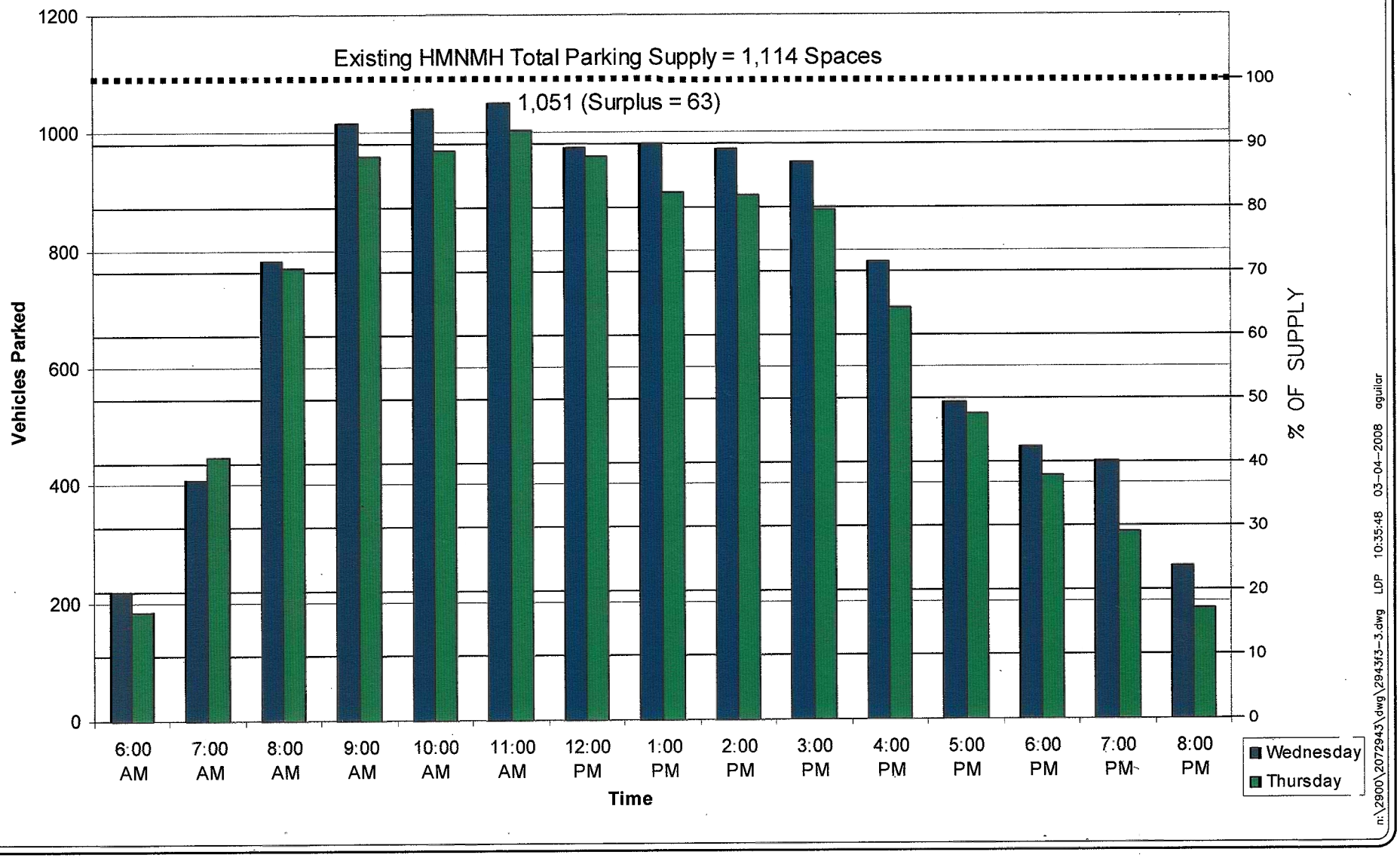

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FIGURE 3-3

HENRY MAYO NEWHALL MEMORIAL HOSPITAL PARKING DEMAND

HMNMH, SANTA CLARITA

adjusted or rebalanced. The 35% surplus (26 spaces) in the handicap category, when combined with other site demand characteristics, tends to improve the overall parking occupancy percentage. Without handicap demand or spaces included, the site parking occupancy grows to 96%, versus the 94% indicated at the bottom of *Table 3-2*.

Looking again to *Table 3-2*, it is clear that "on-street" curb spaces play an important role in the parking balance at the site. These clearly are not spaces of last resort, and their use ramps up early in the day, indicated by a *Table 3-2* demand of 95 spaces at 8:00 AM and 121 spaces at 9:00 AM, versus a day-long peak of 131 spaces. ***Figure 3-4*** illustrates this further by comparing the profile of demand in the curb spaces to their 146 supply. The figure also compares the aggregate parking demand in the lots by time-of-day to the 968 space marked supply of those lots.

3.3 ACC/Valencia Medical Office Building Parking Characteristics and Influences

An Ambulatory Care Center (ACC) and the Valencia Medical Office Building exist on a separate parcel to the north of the HMNMH Master Plan site. These buildings are not a part of the Master Plan footprint, but they are potential parking influencers of demand within the parking facilities of the HMNMH Master Plan site. On that basis, an inventory and field study process was undertaken of the ACC/Valencia MOB site concurrently with the HMNMH studies.

Figure 3-5 presents an inventory of parking provisions at the ACC/ Valencia MOB site. ***Table 3-3*** summarizes the parking inventory. That inventory identifies a total of 306 spaces on the ACC/Valencia MOB site, with 302 of these being marked spaces, and 4 spaces attributed to curb loading spaces. It is worth noting that the loading zone adjoining the north side of the Valencia MOB is now used for valet parking operations.

Table 3-4 presents the parking demand versus supply summary for the ACC/Valencia MOB site. These values do no overlap with any of the data presented previously for the HMNMH Master Plan site. As indicated in *Table 3-4,* the peak total parking demand of 306 spaces was also observed on the Wednesday survey day, and corresponds to a 100% occupancy condition for parking provisions on the ACC/Valencia MOB site. The peak demand occurred at 10:00 AM, but was virtually the same at both 9:00 AM and 11:00 AM. The *Table 3-4*-based data are broken out in *Appendix* ***Tables B-15*** and ***B-16.***

Figure 3-6 translates the parking demand values of *Table 3-4* to time-of-day profiles for both survey days. The figure reinforces the actual or near 100% occupancy levels throughout the 9:00 AM through 11:00 AM period. Occupancy levels fall off to about 90% at noon and remain that way through the 3:00 PM survey round.

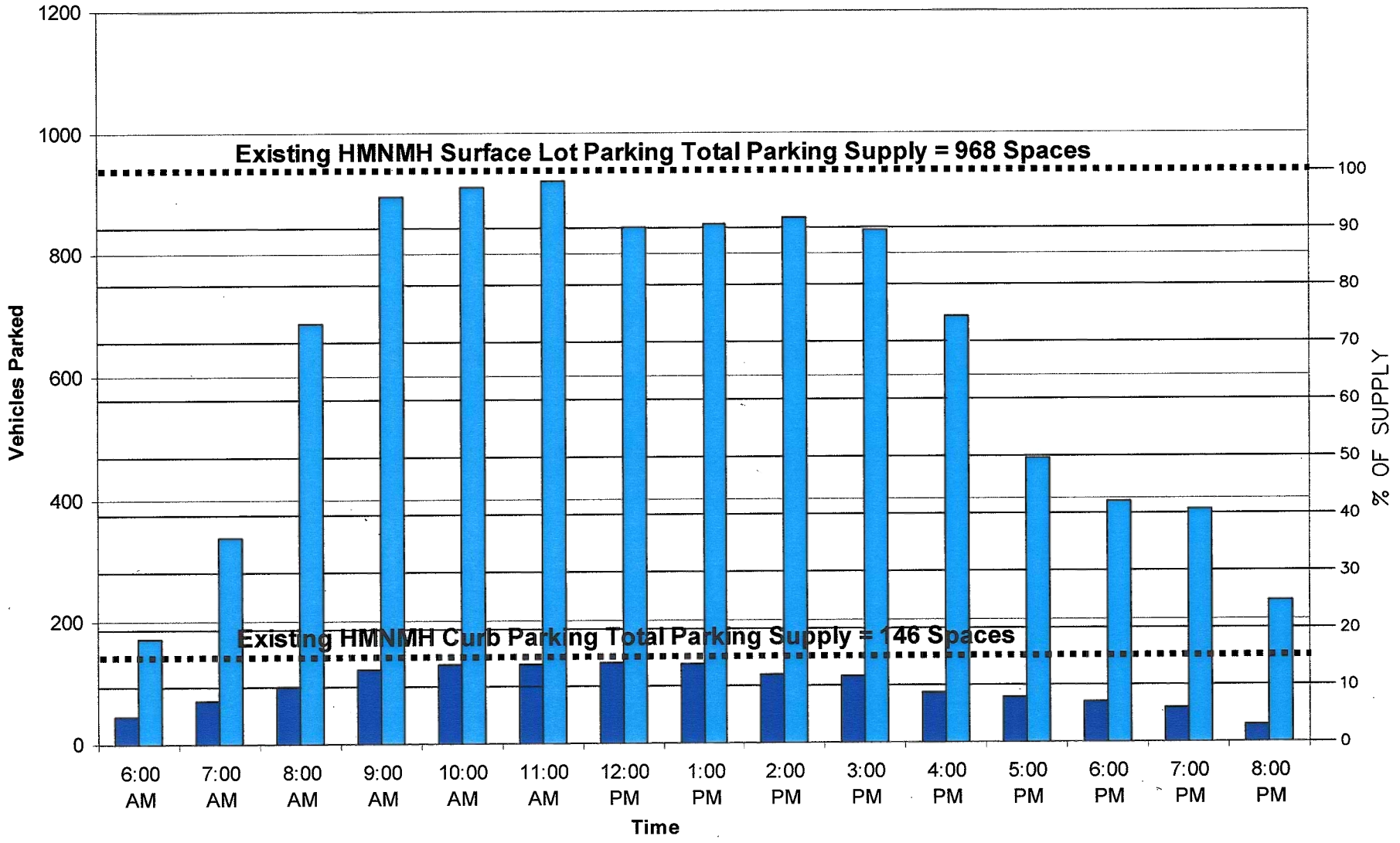

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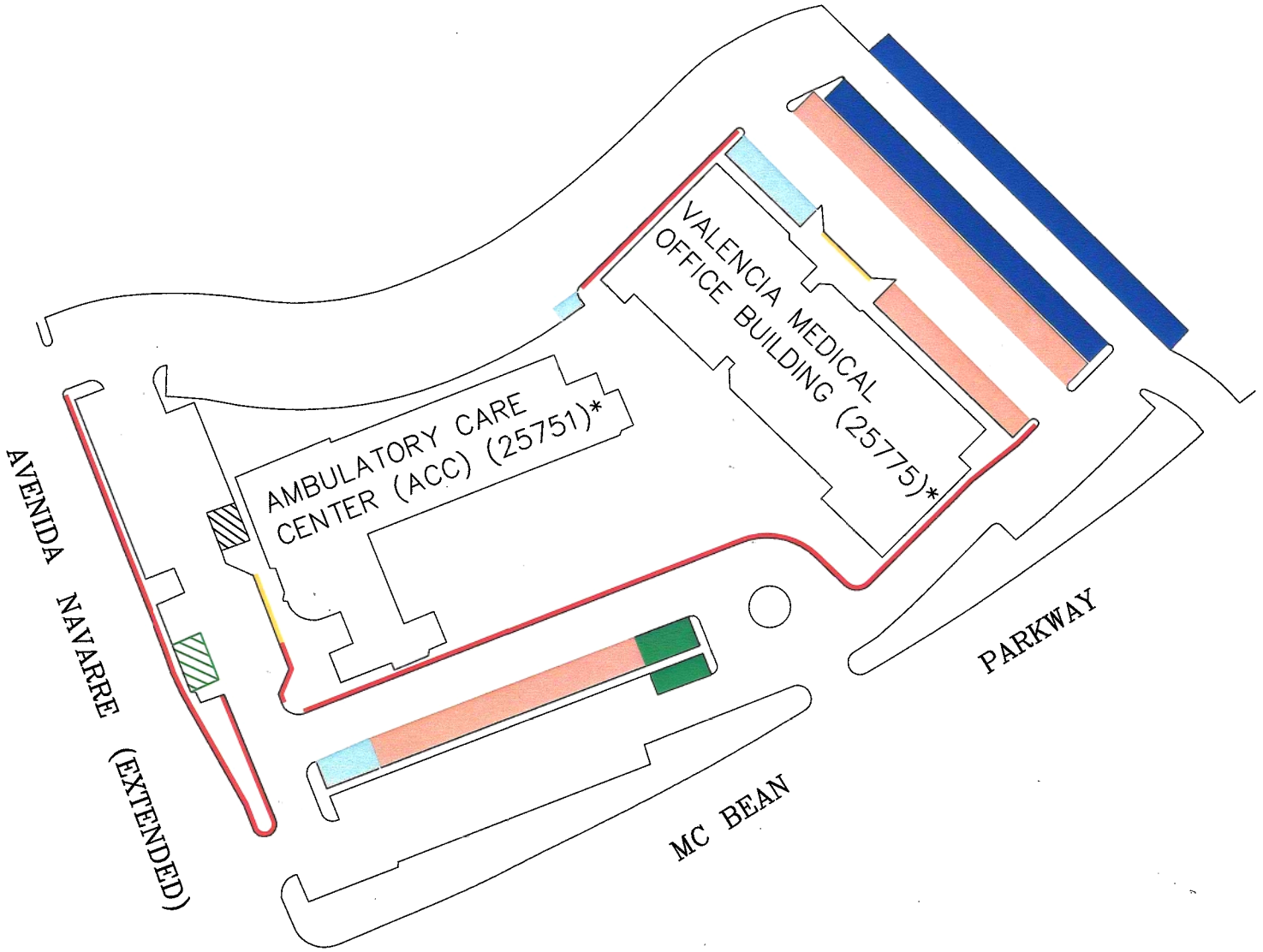
FIGURE 3-4

"ON-STREET" (CURB) VERSUS SURFACE LOT PARKING DEMAND
PEAK OBSERVATION DAY
WEDNESDAY, NOVEMBER 7, 2007
HMNMH, SANTA CLARITA



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NO SCALE

KEY(BASED ON SIGNAGE OR OTHER DESIGNATION)

- = HANDICAP
- = "RESERVED FOR OUTPATIENT THERAPY SERVICES"
- = "RESERVED FOR PATIENTS"
- = RESERVED PARKING FOR DOCTORS ONLY
- = LOADING ZONE/YELLOW CURB
- * = REFERS TO MC BEAN PARKWAY ADDRESS
- = WHITE CURB
- = RESERVED FOR TENANT PARKING
- = RED CURB

FIGURE 3-5

OFFSITE PARKING LAYOUT PLAN
ACC/VALENCIA MEDICAL OFFICE BUILDING
HMNMH, SANTA CLARITA

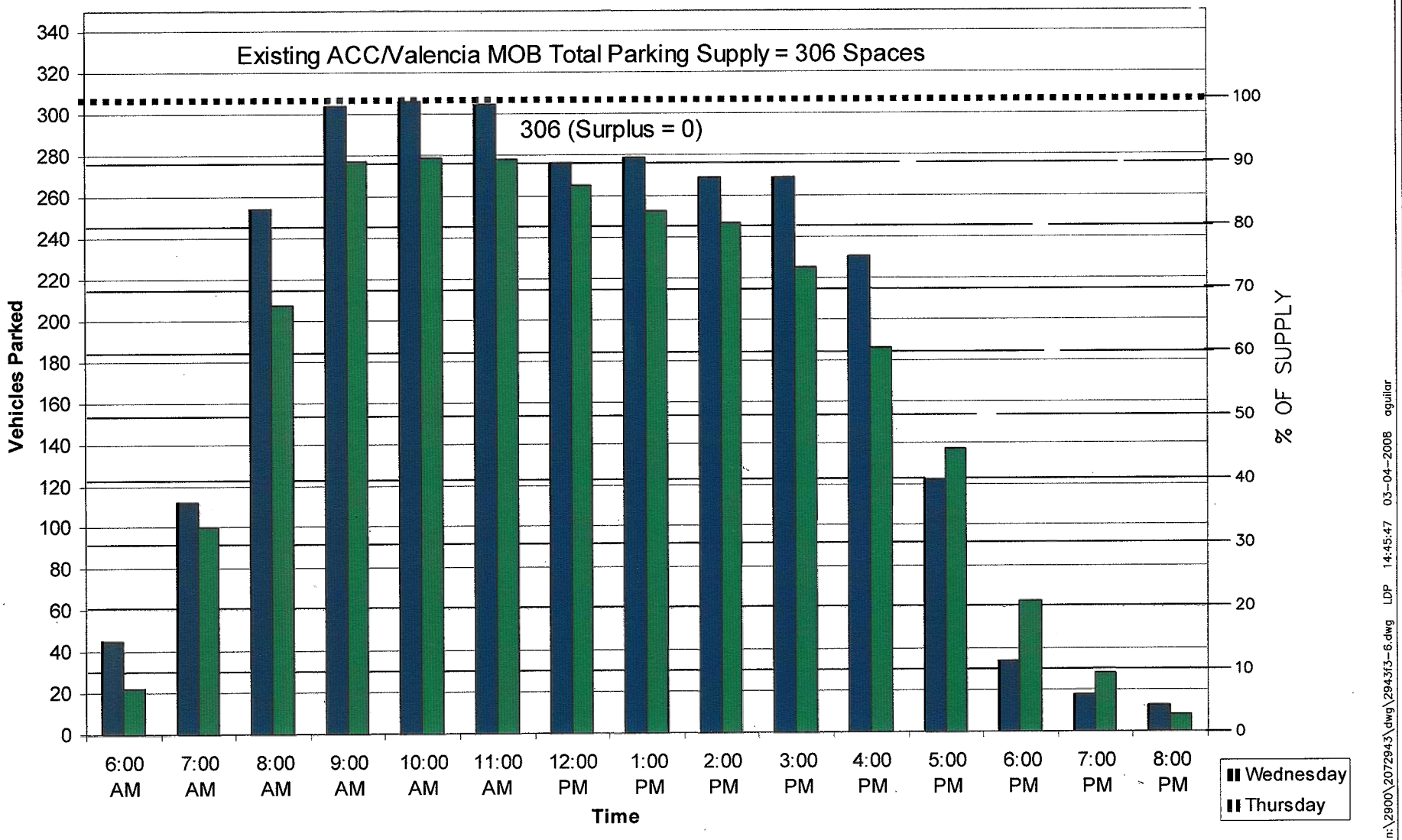

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FIGURE 3-6

ACC/VALENCIA MOB FACILITIES PARKING DEMAND
HMNMH, SANTA CLARITA

TABLE 3-3
EXISTING PARKING SUPPLY
ACC/Valencia MOB Surface Lot Parking

Category [a]	Parking Inventory (306 Total Spaces)		
	Curb	Lots	Total
Surface Lots: Marked Spaces			
Unrestricted			
Regular	-	177	177
Handicap	-	10	10
Subtotal:	-	**187**	**187**
Restricted			
"Reserved for Outpatients Therapy Service"	-	8	8
"Reserved for Patients"	-	58	58
Reserved for Tenants	-	45	45
Reserved Parking for Doctors Only	-	4	4
Subtotal:	-	**115**	**115**
Surface Lot Subtotal:	-	**302**	**302**
Curb "Zone" Spaces [b]			
Yellow	2		2
Loading Zone	2		2
Curb "Zone" Subtotal:	4	-	**4**
Total Site Wide	**4**	**302**	**306**

Notes:

[a] based on signage or other designation

[b] estimated at 22 feet per curb space

TABLE 3-4
OBSERVED DEMAND VS. EXISTING SUPPLY
ACC/Valencia MOB Surface Lots and "On-Street" Parking

Time	Wednesday (11-07-07)			Thursday (11-08-07)		
	ACC/Valencia MOB			ACC/Valencia MOB		
	Curb	Lots	Total	Curb	Lots	Total
6:00 AM	1	44	*45*	0	22	22
7:00 AM	0	112	*112*	0	100	100
8:00 AM	4	250	*254*	0	207	207
9:00 AM	4	300	*304*	2	275	277
10:00 AM	4	302	*306*	0	279	279
11:00 AM	4	301	*305*	2	276	278
12:00 PM	2	274	*276*	1	264	265
1:00 PM	3	276	*279*	0	253	253
2:00 PM	2	267	*269*	1	246	247
3:00 PM	1	268	*269*	0	225	225
4:00 PM	3	227	*230*	2	184	186
5:00 PM	1	121	122	0	137	*137*
6:00 PM	1	33	34	2	61	*63*
7:00 PM	0	18	18	0	28	*28*
8:00 PM	0	13	*13*	0	8	8
Peak Demand	4	302	*306*	2	279	279
Supply	4	302	306	4	302	306
% Occupancy	*100%*	*100%*	*100%*	*50%*	*92%*	*91%*
Surplus (+) or Deficiency (-)	0	0	0	2	23	27
PEAK DAY (Wednesday 11-07-07)						
Peak Demand	4	302	306			
Supply	4	302	306			
% Occupancy	*100%*	*100%*	*100%*			
Surplus (+) or Deficiency (-)	0	0	0			

Note:

Corresponds to peak demand.

Italics identify the peak hourly demand for the two-day survey

The results of *Table 3-4* and *Figure 3-6* clearly suggest that some ACC/Valencia MOB parking demand may be displaced elsewhere during the peak parking demand periods of that site. Qualitative observations suggest this displacement resurfaces as an element of parking demand in Zone 6 of the HMNMH Master Plan site. On that basis, observations were made of the on-foot crossing activity between the two sites at Avenida Navarre (extended). These consisted of pedestrian counts compiled by direction. With medical facilities on both sides of the crossing, an on-foot interaction between the two can be expected, so that any crossing of the intervening roadway cannot automatically be presumed to be parking related. On the other hand, the subset of those crossings between the ACC/Valenica MOB site and the HMNMH Zone 6 parking lot can be attributed to visitors to the northern site "poaching" parking spaces within the southern site (HMNMH Zone 6).

Table 3-5 and Table 3-6 present the results of these observations for the total of pedestrian movements between the two sites. The values were recorded as observed by field personnel stationed with a complete view of the crossing zone. A theoretical "accumulation", determined by the sum of the crossings to that point in the day from the hospital (south) side to the north (ACC/ Valencia MOB) side, less those in the reverse direction, begins to illustrate the level of interaction between the two sites. As shown in the table, the crossings by 15-minute interval were not large, and totaled about 150 to 170 per day in each direction, throughout the two observation days. The peak "accumulation" occurred before midday with a late afternoon peak accumulation on Thursdays, with the net difference in crossings typically less than 20 people. It will be noted from the bottom of *Table 3-5* that total crossings essentially balance (a net difference ranging from -8 to +1), by direction, by the end of the survey day.

Concurrent with the above field study performance, a video camera was trained at that portion of the crossing zone where direct crossings from the Zone 6 parking area to the ACC/Valencia MOB site are made. Those video observations were reviewed and analyzed in the office to obtain a similar "accumulation", but in this case, for parking "poachers" as a subset of the total observations presented in *Tables 3-5 and 3-6*. From those observations, "poaching" appeared to peak at less than 15 spaces (typically in the range of 10 to 15 spaces) in the mid to late morning hours, falling to less than 10 during the noon hour. On that basis, the parking demand peak for the HMNMH Master Plan site, reported in *Table 3-2* as 1,051 spaces, includes an estimated 15 parkers attributable to the ACC/Valencia MOB site.

TABLE 3-5
EXISTING PEDESTRIAN CROSSINGS BETWEEN HENRY MAYO NEWHALL MEMORIAL HOSPITAL ("South") AND ACC / VALENCIA MOB ("North")
Wednesday (11-07-07)

TIME BEGAN	1) South to North From HMNMH	2) North to South To HMNMH	Pedestrian Accumulation (Col.1 - Col.2)
6:00 AM	0	0	0
6:15 AM	0	1	-1
6:30 AM	0	1	-2
6:45 AM	0	2	-4
7:00 AM	0	1	-5
7:15 AM	0	1	-6
7:30 AM	0	0	-6
7:45 AM	0	0	-6
8:00 AM	0	2	-8
8:15 AM	0	0	-8
8:30 AM	0	0	-8
8:45 AM	1	0	-7
9:00 AM	0	0	-7
9:15 - 10:15 AM*	21	27	-13
10:30 AM	0	1	-14
10:45 AM	0	0	-14
11:00 AM	2	2	-14
11:15 AM	3	0	-11
11:30 AM	1	3	-13
11:45 AM	10	1	-4
12:00 PM	15	9	2
12:15 PM	12	4	10
12:30 PM	6	6	10
12:45 PM	10	9	11
1:00 PM	6	5	12
1:15 PM	3	3	12
1:30 PM	10	11	11
1:45 PM	5	8	8
2:00 PM	5	12	1
2:15 PM	2	1	2
2:30 PM	1	7	-4
2:45 PM	1	8	-11
3:00 PM	7	5	-9
3:15 PM	0	6	-15
3:30 PM	3	8	-20
3:45 PM	2	5	-23
4:00 PM	2	6	-27
4:15 PM	10	3	-20
4:30 PM	10	4	-14
4:45 PM	3	1	-12
5:00 PM	5	1	-8
5:15 PM	0	0	-8
5:30 PM	2	2	-8
5:45 PM	0	0	-8
6:00 PM	0	0	-8
6:15 PM	1	0	-7
6:30 PM	0	2	-9
6:45 PM	0	0	-9
7:00 PM	1	0	-8
7:15 PM	0	1	-9
7:30 PM	0	0	-9
7:45 PM	1	0	-8
TOTALS	161	169	

Notes:

Counts were conducted Wednesday 11-7-07

Pedestrian accumulation is determined by summation of south to north crossings less the summation of north to south crossings.

* Data unavailable due to field study staffing characteristics and schedule, but estimated using Thursday data.

TABLE 3-6
EXISTING PEDESTRIAN CROSSINGS BETWEEN
HENRY MAYO NEWHALL MEMORIAL HOSPITAL ("South")
AND ACC / VALENCIA MOB ("North")
Thursday (11-08-07)

TIME	1) South to North From HMNMH	2) North to South To HMNMH	Pedestrian Accumulation (Col.1 - Col.2)
6:00 AM	0	3	-3
6:15 AM	1	2	-4
6:30 AM	2	6	-8
6:45 AM	1	5	-12
7:00 AM	1	3	-14
7:15 AM	0	1	-15
7:30 AM	1	1	-15
7:45 AM	1	1	-15
8:00 AM	4	1	-12
8:15 AM	1	0	-11
8:30 AM	2	0	-9
8:45 AM	2	1	-8
9:00 AM	1	0	-7
9:15 AM	4	2	-5
9:30 AM	4	2	-3
9:45 AM	2	3	-4
10:00 AM	0	5	-9
10:15 AM	11	15	-13
10:30 AM	6	5	-12
10:45 AM	7	9	-14
11:00 AM	8	7	-13
11:15 AM	9	8	-12
11:30 AM	10	11	-13
11:45 AM	12	11	-12
12:00 PM	4	6	-14
12:15 - 1:00 PM*	34	24	-4
1:15 PM	3	2	-3
1:30 PM	0	0	-3
1:45 PM	0	0	-3
2:00 PM	1	0	-2
2:15 PM	0	2	-4
2:30 PM	1	0	-3
2:45 PM	0	0	-3
3:00 PM	1	3	-5
3:15 PM	4	1	-2
3:30 PM	1	1	-2
3:45 PM	0	0	-2
4:00 PM	0	2	-4
4:15 PM	0	2	-6
4:30 PM	0	2	-8
4:45 PM	0	0	-8
5:00 PM	4	0	-4
5:15 PM	2	1	-3
5:30 PM	2	1	-2
5:45 PM	2	0	0
6:00 PM	1	3	-2
6:15 PM	0	0	-2
6:30 PM	0	1	-3
6:45 PM	1	0	-2
7:00 PM	0	0	-2
7:15 PM	2	0	0
7:30 PM	0	0	0
7:45 PM	1	0	1
TOTALS	154	153	

Notes:

Counts were conducted Thursday 11-8-07

Pedestrian accumulation is determined by summation of south to north crossings less the summation of north to south crossings.

* Data unavailable due to field study staffing characteristics and schedule, but estimated using Wednesday data.

3.4 OTHER PARKING INFLUENCERS AT THE HMNMH MASTER PLAN SITE

3.4.1 Construction Parkers

The base plan of *Figure 3-1* identified recent and current construction projects within the overall HMNMH Master Plan site. The hospital reported a total of 40 construction workers among various on-going projects whose parking demand is included in the reported field study values. This population could be converted on a one-for-one basis to parking demand. So as not to potentially over-estimate the impacts of construction worker parking, this study has used a 0.75 conversion multiplier, creating a placeholder of 30 spaces within the reported demand totals as being construction-related and temporary in nature.

3.4.2 Express Bus "Park and Ride" Activity

Express/commuter bus service is supported by stops on McBean Parkway near the site, and the site could/may be used for park and ride activities that would influence site-wide observed parking demand. These stops are westbound on McBean, near side at Avenida Navarre, and further west between the Orchard Village Road-project entry intersection and the southern site boundary. ***Table 3-7*** presents the schedule for this express service. As shown, a total of 23 outbound buses pass by the site, with outbound service all typically in the 5:00 AM to 8:00 AM period.

Field review in the conduct of the parking demand observations revealed little if any interaction between the express/commuter bus service and HMNMH Master Plan site parking. The parking demand surveys began at 6:00 AM, and transit riders may have parked and boarded their buses with earlier start times. But review of field data for Zones 2 and 6, including where early morning parkers cluster in the lots, suggest only a few (less than 5) possible parkers contributing parking demand to the site but riding these services. Given their relative magnitude, these parkers can generally be ignored as a possible adjustment factor for site parking.

3.5 Hospital Employee Commuting Characteristics

HMNMH recently made its 2008 filing under Rule 2202 to the South Coast Air Quality Management District (SCAQMD). That filing (dated March 12, 2008) included employee survey results as to existing travel patterns compiled for the week of February 4 through 8, 2008. ***Appendix C*** of this study provides an excerpt of that application.

Evaluation of the *Appendix C* summary materials indicates the following:

- Only 2.6% of the surveyed employees report to the site by means other than conventional private vehicle. These include the alternative modes of bus, walking, and telecommuting.
- In contrast, 97.4% of the surveyed employees travel to the site by conventional private auto.

- Of these commuters, 95% do so by driving alone.
- Among all conventional private auto commuters, the actual calculated average vehicle occupancy is 1.06 persons per vehicle.
- For all commuters, regardless of mode, the composite vehicle occupancy is 1.09 persons per vehicle.

The above results confirm very little use of alternative travel modes or ridesharing by hospital employees now commuting to the site. The parking implications of these results reflected back to LLG's field study of actual parking demand infer a very high existing parking ratio for hospital employees (verging on roughly 0.92 spaces per peak shift employee, calculated as 1 space/1.09 employees). This characteristic suggests significant opportunities for ride share improvements in the future, which in turn could serve to reduce the parking needs of the site for hospital employees. It should be noted, however, that the future demand calculations of this study do not presume such success, and instead, reflect a continuation of current employee travel mode and parking characteristics.

3.6 Adjusted Parking Demand "Design Values" for Existing Conditions

Parking facilities with occupancy levels of 90% to 95% or more are typically considered "nearly full" or "full". Therefore, it is common practice to increase actual parking demand values like those of *Table 3-2* by a contingency factor to account for day-to-day variations as well as convenience/circulation for parkers. The latter consideration avoids the circumstance where the "last parker" must search most of the site to find the "last space". A supply of 5% to 10% in excess of expected peak demand contributes to parking convenience and an overall parking equilibrium.

In the case of the HMNMH Master Plan site, a calculated "design value" resulting from this analysis of actual existing peak conditions can yield a preferred sizing for the existing parking supply at the site that may vary from the actual provisions. In essence, such a calculation answers the question, if the existing site were being designed today, how much parking should be provided?

It should be noted that there are two potential "existing" scenarios to be considered. The first of these is based on development conditions concurrent with LLG's November field studies. The second of these reflects the pending addition of four beds in the Nursing Pavilion plus remodel/construction activities in conjunction with Radiology Outpatient and Facilities Building as asterisked in *Tables 2-1 and 2-2*. As developed in a subsequent section of this report, these adjustments carry an additional combined code requirement of 20 spaces. That 20-space requirement has been added to the November 2007 design value, developed below, as part of a May 2008 existing conditions assessment.

TABLE 3-7
PARK AND RIDE / COMMUTER BUS SCHEDULE
McBean Parkway / Avenida Navarre Transit Schedule

Route 796	**To Warner Ctr Pick-ups**	**From Warner Ctr Drop-offs**
	5:17AM	4:40 PM
	5:47AM	5:10 PM
	6:17AM	5:35 PM
	6:47AM	6:05 PM
	7:17AM	7:13 PM
Route 797	**To Century Cty Pick-ups**	**From Century Cty Drop-offs**
	5:40 AM	5:35 PM
	6:23 AM	6:05 PM
	6:53 AM	6:39 PM
	7:23 AM	7:09 PM
	No Stop	7:43 PM
	No Stop	8:49 PM
Route 798	**To Van Nuys Pick-ups**	**From Van Nuys Drop-offs**
	5:23 AM	4:26 PM
	6:03 AM	5:00 PM
	6:23 AM	6:05 PM
	7:03 AM	6:35 PM
	8:13 AM	7:23 PM
	No Stop	7:43 PM
Route 799	**To Downtown LA Pick-ups**	**From Downtown LA Drop-offs**
	5:12 AM	4:37 PM
	5:23 AM	4:57 PM
	5:38 AM	5:17 PM
	5:53 AM	5:32 PM
	6:08 AM	5:47 PM
	6:23 AM	6:02 PM
	6:38 AM	6:17 PM
	6:53 AM	6:37 PM
	7:13 AM	7:12 PM
	No Stop	7:47 PM
Total Trips	**23 Morning**	**27 Evening**

Source: City of Santa Clarita

Besides the contingency factor described above, the actual demand data are subject to other adjustments based on site conditions at the time of the survey. As such, the space components of the "design value" demand associated with current site buildings and development, using a more aggressive contingency of 10%, are as follows:

November 2007	
Actual peak demand:	1,051 spaces
Less construction vehicles:	30
Less Park and Ride vehicles:	0
Less ACC/Valencia MOB parking intrusion:	15
Net actual peak demand:	1,006
Add 10% contingency:	101
Existing site parking "design value":	1,107
Variation from inventoried existing @ 1,114 (supply exceeds "design value" by 75 spaces)	- 7
May 2008	
Add space requirements for recent construction	+20
Adjusted "design value"	1,127
Variation from inventoried existing @ 1,114 ("design value" exceeds supply by 13 spaces)	13

Given the above, if the existing site were to be constructed based on November 2007 conditions, a suggested parking supply recommendation would total 1,107 spaces. Such a supply is consistent with actual observed demands at the site, the presence of construction parkers (30 vehicles) at the time of the survey that will eventually be removed from the site, and the presence of parking "poachers" from the ACC/Valencia MOB site. While the latter may be problematic for their total exclusion, if the poaching continued to occur, their effects would be easily accounted for by the site contingency factor.

Based on the May 2008 "existing" condition, the "design value" equals 1,127 spaces. The actual supply is 13 spaces less than "design value", noting that the latter incorporates a 10% contingency factor over the November field study values. With a net actual demand of 1,026 spaces for the projected May 2008 condition, the resulting contingency is approximately 8.6% (calculated as {1,114 – [1,006 + 20]}/ 1,026). Given the attendant assisted parking operations on the site, the variation between 8.6% and a suggested target of 10% is not considered significant.

4.0 "CODE" PARKING INVESTIGATION

4.1 Code Parking Ratios

Tables 2-1 and 2-2 presented a development summary for existing and Master Plan conditions expressed in a format suitable for input to a "code" parking calculation using parking ratios specified by the city. MOB and Hospital-required parking ratios are as follows:

> Medical Services (MOB): 1 space per 200 square feet (equivalent to 5 spaces/1,000 sf)
>
> Hospital Services: 2 spaces per each licensed bed; plus 1 space per 400 sf (equivalent to 2.5 spaces/1,000 sf) of outpatient clinic, laboratories, pharmacies and similar uses established in conjunction with the hospital. A minimum of 25 percent of parking should be designated for employees.

4.2 Code Parking Requirements in Other Jurisdictions

MOB and hospital "code" parking requirements were compiled for other jurisdictions to compare with the requirements of the City of Santa Clarita. ***Table 4-1*** presents the results for the city and 39 other jurisdictions. Values are expressed as a decimal, rather than a fraction, for ease of understanding.

Medical Office ratios range from a low of 2.86 to a high of 6.67 spaces/1,000 sf. Santa Clarita's value for MOB of 5.0 spaces/1,000 sf is the most common requirement (22 out of 39 sampled cities). Only three cities have a greater requirement.

For hospitals, most in the sample use a "composite factor" to express the requirements in terms of spaces/bed (with "patient" or "licensed" being a common clarifier). Eleven out of 40 have an additive element beyond the basic "per bed" ratio, including Santa Clarita. But most of those eleven start with a lesser "per bed" ratio than the 2.0 spaces/bed required by Santa Clarita.

At 2.0 spaces/bed, Santa Clarita is among eight cities with that requirement. Only three cities have a greater requirement, and all three of those (Downey, Monterey Park and Pasadena) require 3.0 spaces/bed, but do not have a further additive requirement. Twenty-eight cities require less than 2.0 spaces/bed.

From the *Table 4-1* summary, it can be concluded that the City of Santa Clarita "code" parking requirements for projects like HMNMH are among the most conservative of this broad sample, with the city's requirements ranking in the top 10%.

TABLE 4-1
SAMPLE "CODE" PARKING REQUIREMENTS
From Other Jurisdictions

Jurisdictions	Code Parking Requirements		
	Medical Office	Hospital	
	sp/1,000 sf or other	sp/bed [1]	+ other addititive requirements (sp/___)
Santa Clarita	5.0	2.0*	2.5/1,000 sf for outpatient clinic lab, pharmacies and similar uses
Cerritos	5.0 sp/working doctor plus 1.0 space for each vehicle used in connection with the use	2.0	1.0 space for each vehicle used in connection with the use
Culver City	2.86	1.50	accessory uses as determined by the Director
Diamond Bar	4.0	1.0 *	4.0/1,000 sf of office area
Downey	4.0	3.0	ns [2]
Duarte	5.0	0.5	0.20/paid employee
Gardena	5.0	2.0	ns
Glendale	5.0 (2.7) [3]	0.5	ns
Glendora	ns or 4.0	1.0	ns
Huntington Park	3.33	1.5	ns
Inglewood	5.0 [4]	ns	ns
Irwindale	5.0	2.0	ns
La Canada Flintridge	ns	1.5	ns
Lakewood	5.71	1.5	ns
La Mirada	4.0	1.5	ns
La Palma	ns	0.5	ancillary uses as determined by Planning Director
Lawndale	5.0	1.0	0.5/employee on largest shift
Lomita	4.44	1.5	ns
Los Angeles	5.0	2.0*	ns
Lynwood	5.0	0.5	1.0/ employee on largest shift
Malibu	6.67	0.5	1.0/emp
Manhattan Beach	5.0	0.67	ns
Monrovia	5.0	1.0/room	ns
Montebello	5.5	2.0	ns
Monterey Park	5.0	3.0	ns
Palmdale	5.0	1.0	ns
Pasadena	4.0	3.0*	ns
Pico Rivera	5.0	0.5	ns
Palmdale	ns	1.0	ns
Pomona	5.0	2.0	ns
Rancho Palos Verdes	4.0	0.5	ns
San Gabriel	5.0	0.5	1.0/employee or staff on largest shift
San Fernando	ns	1.5*	ns
Santa Fe Springs	5.0 or 5.0/doctor + 1/ peak shift employee	1.7	ns
Sierra Madre	ns	1.5	ns
Signal Hill	5.0	1.5	5.0/1,000 sf office area
Simi Valley	5.0	1.0	ns
Temple City	5.0	2.0	ns
Thousand Oaks	5.0	1.85	ns
Torrance	5.0	1.0	ns

[1] typically referred to as "patient" bed; table notes where "licensed" bed is specified with *

[2] ns = none specified

[3] 2.7sp/1,000 sf applies if medical office is on a lot that is located within 500 feet of a lot containing a hospital.
2.7 sp/1,000 sf also applies to medical labs without patient visitation and dental labs.

[4] except for kidney dialysis treatment, which requires 3.33 sp/1,000 sf

4.3 Other Parking Ratio Sources

Parking Generation, published by the Institute of Transportation Engineers (ITE) [1] as well as articles published in *ITE Journal* provide additional sources for parking ratio information.

"Land Use 610: Hospital" of *Parking Generation* was reviewed for hospital spaces/bed parking ratio information but was concluded to be unreliable/imprecise for application in this study. At 440 beds, the average size of the studied suburban facilities was double the existing size of HMNMH, the minimum study site was 200 beds, and only four of 20 sites appeared to have less than 300 beds. Additionally, the database included four hospitals located on university campuses, and it was suspected that the indicated "per bed" ratio might be "blended" to also include the parking demand of other uses, including MOB and/or supporting educational components at the university locations.

"Land Use 720: Medical-Dental Office Building" of *Parking Generation* was also reviewed as a potential source for MOB parking ratio information applicable to HMNMH. This ITE compilation covered 18 sites that resulted in an average parking demand ratio of 3.53 spaces/1,000 sf, with an 85th percentile value of 4.30 spaces/1,000 sf. Further, an *ITE Journal* article on medical office buildings[2] concluded that 4.5 parking spaces per 1,000 sf should be provided for MOBs. Because the city's own code value of 5.0 spaces/1,000 sf exceeds this recommendation, the code ratio was concluded to govern in this instance.

4.4 Application of City Code to HMNMH Site and Master Plan

Table 4-2 carries out a city code calculation for existing and Master Plan conditions at the site. The latter is further evaluated for the accumulating increments of Master Plan implementation.

From *Table 4-2*, existing development as carried over from *Tables 2-1 and 2-2* requires 950 spaces for a 164-space surplus when compared to the LLG field-inventoried supply of 1,114 spaces (*Section 5.0* compares this requirement to actual existing demand, and notes that existing peak demands actually exceed the existing code requirement). Due to the recent/pending addition of four beds in the Nursing Pavilion, plus remodel in Radiology Outpatient and construction of the Facilities Building, this represents a 20-space increase over the 930 spaces that would have been required based on the existing development totals at the time of LLG's November field studies.

In total, all added elements of the Master Plan will increase the code requirement to 2,190 spaces, versus a planned supply of 2,231 spaces. On that basis, the total Master Plan parking provisions will exceed the city's requirements by 41 spaces.

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[1] 3rd Edition, Washington, DC, 2004

[2] "Parking Requirements for Medical Office Buildings", John W. Dorsett and Mark J. Lukasik, *ITE Journal*, August 2007

TABLE 4-2
CODE PARKING CALCULATION SUMMARY
(per SWA Calculations dated 2/21/2008 and 2/26/2008)

		Existing		Total Master Plan		Master Plan Requirements Accumulated Through:				
Description	Parking Ratio	Basis	Requirement (spaces)	Basis	Requirement (spaces)	+MOB 1	+MOB 2 or Bldg A		+MOB 2 and Bldg A	MOB 3
Medical Buildings										
MOB A-F	5.0 sp/1,000 sf	87,316 sf	438	NC	438	438	438	438	438	438
Foundation	4.0 sp/1,000 sf	8,000 sf	32	-8,000 sf	-	32	32	32	32	-
MOB 1	5.0 sp/1,000 sf	-	-	+77,600 sf	388	388	388	388	388	388
MOB 2	5.0 sp/1,000 sf	-	-	+58,000 sf	290	-	290	-	290	290
MOB 3	5.0 sp/1,000 sf	-	-	+58,000 sf	290	-	-	-	-	290
Subtotal		95,316 sf	470	+185,600 sf	1,406	858	1,148	858	1,148	1,406
Hospital Buildings										
Main Hospital	2.0 sp/bed	121 beds	242	+18 beds	278	278	278	278	278	278
Nursing Pavillion	2.0 sp/bed	100 beds	200	+9 beds	218	218	218	218	218	218
Emergency	2.5 sp/1,000 sf	5,518 sf	18	NC	18	18	18	18	18	18
Radiology Outpatient	2.5 sp/1,000 sf	5,857 sf	15	NC	15	15	15	15	15	15
Facility Building	See footnote 1	3,118 sf	5	NC	5	5	5	5	5	5
Bldg. A Inpatient	2.0 sp/bed	-	-	+120 beds	240	-	-	240	240	240
Bldg. A Outpatient	2.5 sp/1,000 sf	-	-	+4,000 sf	10	-	-	10	10	10
Subtotal			480		784	534	534	784	784	784
Total Requirement			**950**		**2,190**	**1,392**	**1,682**	**1,642**	**1,932**	**2,190**
Anticipated Supply [2]			1,114[2]		2,231	1,433	1,837	1,644	2,040	2,231
Surplus (+)/Shortfall (-)			+164		+41	+41	+155	+2	+108	+41

NC = no change

[1] 4.0 sp/1,000 sp for office use + 1.0 sp/1,000 sf for warehouse use

[2] Existing supply per LLG field inventory, November 2007. Future parking provisions per SWA Summary of February 21 and 26, 2008.

5.0 PARKING ANALYSIS

Section 4.0 of this report made a peer review and comparison of the city's code requirements to other jurisdictions, determined Santa Clarita's requirements to be conservative among that sample, applied the city code requirements to all elements of the project, and further concluded that the planned parking supply at each stage of Master Plan development will exceed those code requirements. This section investigates the validity of the code in predicting actual future parking demands at the site.

5.1 Analysis Overview

Given the presence of hospital as well as MOB parking components on the site, the application of code parking requirements to each component constitutes a "model", or "formula", for determining the city-required parking supply of the site for each increment of Master Plan development. The results of that calculation further represent a benchmark, particularly for the full Master Plan of development, against which the parking demand field study results can be compared for validation of code-required parking. This constitutes the approach taken in this analysis.

City code ratios most commonly use physical attributes of the project description that are discernable from a review of project plans, in this case primarily hospital bed totals and MOB square footage, as the basis of projecting parking space needs. The peer review compilation of *Table 4-1* reveals these parameters to be a common basis for projection, noting further that some jurisdictions also use employee totals when making code parking calculations for hospitals. It is worth noting that none of the code requirements of *Table 4-1* rely on employee/staff or visitor surveys, a disaggregation of employees/staff by type (i.e. to groupings of physicians, other staff, and volunteers), outpatient activity totals/profiles, emergency room patient visits, inpatient visitors, and/or demographics/activity of any other user subgroup to make the code calculation.

In some instances, interview techniques may supplement the field study process, particularly when fine tuning and/or retrofitting an existing condition to enhance its overall existing performance. These techniques may also be helpful in investigations of future conditions when some reduction in code-required parking is being sought due to the possible parking overlap between uses, and/or when mode shift factors (where a significant travel component might arrive by other than conventional private vehicle) are prevalent or expected. While these survey techniques may provide a valuable retrospective based on existing conditions for a fine-grained list of user groups whose aggregate needs might be reflected in future demand projections, the typically limited ability to reliably project future activity (for input to parking calculations) undermines the desirability of this approach.

On that basis, the analysis that follows uses the extensive demand data and observations to conservatively validate the requirements of code, and develops a parallel "crosscheck"

parking calculation based on MOB square footage plus future staffing profiles of the expanded hospital facilities.

5.2 Field Study Parking Demand Versus Code Existing Conditions

Table 5-1 sorts observed peak parking demand at the site to the two basic categories of MOB and hospital buildings. This "sort" was carried out by detailed review of the *Appendix B* field study summaries on both a temporal and locational basis.

While actual parking demands were compiled by zone, it was not automatically assumed that parking in a given zone was exclusively related to the adjoining use. Rather, the profile of the build-up and wind down of demand in each zone through all survey periods was considered, as was input from parking field personnel as to their impressions of the on-foot destination of parkers.

From *Table 5-1*, existing peak parking demands on the site for the MOB (including the Foundation Building) uses was isolated to total 442 spaces, versus a code requirement for those existing uses of 470 spaces (from *Table 4-2*). Actual demand at the peak was therefore 94% of the predicted needed supply as calculated by code. The code ratio thus provides for essentially a 6% contingency factor (equivalent to an operational surplus), even at peak demand times. The city's code ratio for MOB would result in greater operational surpluses, to varying degrees, for MOB components during other times of the peak day and other days of the week.

Also from *Table 5-1*, actual peak parking demands for the hospital buildings equate to about 126% of their theoretical code requirement based on the November 2007 development description of the site. Because all administrative, service and support elements of the hospital will not grow proportionately with the bed increases brought on line by the addition of Building A, this is illustrated in the next subsection of this report to be only a near term condition.

5.3 Future Hospital Parking Needs

Even though the current hospital parking demand has been concluded to peak at about 126% of its theoretical need as determined by code, other factors and analysis suggest that the site's planned parking supply of 2,231 spaces, a value that exceeds code by 41 spaces, will result in a balanced parking provision in support of the total Master Plan.

For an existing hospital campus, future parking needs are often over-stated by a "straight line" extrapolation of field study peak observed demand by the ratio of total future beds divided by existing beds. Such an approach overlooks the characteristic that existing administrative, service and support functions do not grow in proportion to bed count increases. A more realistic predictor of future parking demands is the relationship of future peak shift employees (in all categories, and incorporating volunteers) to those determined to be on-site at the time of the field surveys.

TABLE 5-1
SUMMARY: FIELD STUDY PARKING DEMAND VERSUS CODE
Existing Development
Based on Wednesday, November 7, 2007 (peak survey day)
11:00 AM observed peak demand

Descripton	Site Wide (spaces)	Allocation	
		MOB	Hospital Buildings
1. Actual Peak Demand (spaces)	1,051	442 sp [1]	609 sp [2]
2. less construction vehicles	30		30
3. less Park and Ride vehicles	-	0	0
4. less ACC/Valencia MOB instrusion	15	0	15
5. Net Actual Peak Demand (including HC)	1,006	442 sp	564sp
6. November 2007 "Existing" Facilities		95,316 sf	217 beds
7. Code requirements for November 2007 existing[3]	930	470	460
8. Existing peak demand as a % of code	108%	94%	126%

[1] Zone 1 @ 300 spaces + Zone 2 @ 159 spaces less one-half of the 34 spaces at regular curb in Zone 1 at 7:00 AM

[2] Balance of site-wide demand (1,051 - 442 = 609 vehicles)

[3] From Table 4-2 using City code ratios and adjusting to the November 2007 existing facilities description

Hospital operators and administrators are uniquely in the position to make those staffing forecasts and determinations based on their patient day projections, patient census patterns, and state-mandated staffing requirements by patient care type (acute medical/surgical, critical care, women's unit, behavioral health, neonatal, normal newborn, etc). Moreover, those projections illustrate that added bed capacity is not immediately absorbed, and instead, patient census characteristics will cause the "use" of those beds to "ramp up" and mature over time.

This approach has been undertaken in the assessment of the future parking demand/supply relationships for the hospital components of the site, as presented in ***Table 5-2***, based on the following steps:

- Peak staffing additions are determined from hospital-supplied calculations for a series of horizon years. These are directly tied to and derived from patient census projections.
- A multiplier based on the ratio of future/existing peak staffing requirements is developed as a composite basis to expand existing actual demand to reflect future peak conditions.
- Those future demands are calculated on a year-by-year basis.
- Accumulating demand levels are compared to total site supply of 2,231 spaces, less the code-required basis (1,406 spaces) for MOBs. This isolates a "parking differential", that being the number of surplus spaces in each horizon based on the continued maturing of the added hospital facilities.
- This differential can also be expressed as a percent contingency, much like the 6% contingency determined to be inherent in the city's code requirement of 5.0 spaces/ 1,000 sf for medical office buildings.

From *Table 5-2*, it is evident that parking surpluses, for the hospital buildings alone, well in excess of 100 spaces can be expected in the initial years following the addition of Building A and its related parking enhancements. The staffing projection (as derived from the projected patient census) in the maximum condition (illustrated by Year 2025) also results in a balanced parking condition.

Based on the Year 2025+ hospital demand projection, a 24-space surplus/contingency is forecast for the hospital alone. At Master Plan buildout, the MOB components will have a code requirement of 1,406 spaces, which based on a *Table 5-1* results, essentially incorporates a 6% surplus/contingency (1,322-space peak demand, with 84-space surplus/contingency). Taken together for both hospital and MOB components, the overall site surplus/contingency based on full implementation of the Master Plan and absorption of the hospital bed additions equates to 108 spaces (calculated as 24 for hospital plus 84 for MOB). This translates to an overall surplus/contingency at full Master Plan development of 5.0%, calculated as 108/(2,231-108).

TABLE 5-2
FORECAST PARKING DEMAND VERSUS SUPPLY, BY ESTIMATED HORIZON YEAR
Hospital Buildings Alone

Estimated Year[1]	Peak Staffing Additions (added headcount)[2]	Parking Demand Multiplier[3]	Hospital Buildings Peak Demand[4]	Parking Differential[5] (Hospital Buildings Parking Supply[6] - Forecast Demand)	Contingency[7]
2007	N/A	1.00	564	N/A	N/A
2015	55	1.16	654	171	26%
2016	63	1.18	666	159	24%
2017	72	1.20	677	148	22%
2018	81	1.23	694	131	19%
2019	92	1.26	711	114	16%
2020	102	1.29	728	97	13%
2021	113	1.32	744	81	11%
2022	123	1.35	761	64	8%
2023	133	1.38	778	47	6%
2024	144	1.41	795	30	4%
2025+	149	1.42	801	24	3%

N/A = not applicable

[1] Years are illustrative for indentifying growth in hospital buildings' staffing needs, from 2007 field study baseline through estimated opening of 120 beds of Building A in +/- 2014, to year 2025 (maximum condition).

[2] Based on mandated staffing ratios plus 10% to account for both care-related staffing and administrative/support components, as calculated by hospital.

[3] Based on actual peak staffing of 352 persons, at 11:00 AM on 11/7/2007, in hospital buildings.

[4] Based on 564 spaces of peak hospital buildings parking demand at 11:00 AM (see Table 5-1).

[5] Isolates differences between 825-space supply component to support hospital buildings (after meeting code requirements for MOBs) and forecast demand by indicated year. Translates to "working surplus" for indicated horizon.

[6] Equals 825 spaces based on hospital buildings maximum code requirement of 784 spaces (see Table 4-2), plus site-wide provision of 41 spaces (2,231-2,190=41) in excess of total code requirements.

[7] Expresses "working surplus" of footnote 5 as a % of peak hospital buildings demand for indicated year.

5.4 Parking Calculation Crosscheck

The prior section concluded that the 2,231 parking space provisions of the Master Plan will result in a 5.0% overall site surplus/parking contingency. This provision exceeds the city code requirement by 41 spaces. Because these 41 spaces are important to ensuring a long term parking balance on the site, an alternative parking "formula", which integrates these 41 spaces in addition to the code requirements, has been developed as a "crosscheck" of the city code calculation.

This "crosscheck" is intended to be applied to the buildout condition, as well as intervening stages of Master Plan implementation, with the greater of the code calculation or this "crosscheck" formula used to determine the minimum site parking supply.

The "crosscheck" formula is as follows:

Site parking needs = 5.0 spaces/1,000sf of MOB floor area
as defined by the code, plus
1.647 spaces/hospital peak shift employee/staff member

This formula may be modified as a result of future site-specific field studies performed in conjunction with intervening stages of site development. Successes in parking demand management and/or travel demand management may serve to reduce the ratios of this formula.

As an illustration, application of the formula to the total Master Plan condition results in a crosscheck requirement as follows:

MOB @ 5.0 sp/1,000 sf x 280,916 sf = 1406 spaces
Hospital et al @ 1.647 spaces/peak employee x 501 peak employees = 825 spaces
Total requirement = 2,231 spaces, exactly confirming the Master Plan proposed parking

Applying this crosscheck formula to the November 2007 existing condition results in a crosscheck requirement as follows:

MOB et al @ 5.0 spaces/1,000sf x 95,316 sf = 477 spaces
Hospital et al @ 1.647 spaces/peak employee x 352 peak employees = 580 spaces
Total requirement = 1,057 spaces

Note that the code requirement for the November 2007 condition was previously calculated to be 930 spaces. The crosscheck calculation calls for 1,057 spaces, and aligns with the field study net actual peak of 1,006 spaces (from *Table 5-1*), plus a contingency of approximately 5.0%.

6.0 PARKING AND ON-SITE CIRCULATION IMPLEMENTATION STRATEGIES

The following actions and measures are suggested to accompany the modification of existing site facilities and implementation of the Master Plan elements:

6.1 Ensure that each stage of Master Plan development is accompanied by the parking supply provisions called out in *Tables 2-1 and 2-2* as well as supporting site plan information. Determine the minimum parking supply for each increment of development using the greater result of a) application of the city's code parking ratios and methodology, or b) application of the "crosscheck" formula derived in *Section 5.4*.

6.2 Monitor actual peak parking demands following each stage of Master Plan development. This monitoring could include a repeat of the two-day parking demand field studies of this analysis, surveys and sample interviews of site parkers and correlation to site user characteristics as to employee/staff populations, MOB and Hospital patient/visitor patterns, etc. Confirm that those actual usage patterns are "on track" with the findings and recommendations of this study, including the "crosscheck" formula. Make adjustments as necessary.

6.3 Prepare construction-related parking management practices and operational plans in support of the actual construction periods on the site. Consider locating parking for construction personnel and site employees in off-site parking facilities supported by a shuttle program. Give priority for use of residual on-site project parking during those periods to site visitors (as distinct from employees, in view of the shorter visitor parking duration and greater turnover) and other strategic users. Ensure that code-required and "crosscheck" formula parking space counts are provided throughout the construction period.

6.4 Consider ongoing application of operational measures that encourage increases in average vehicle occupancy and reduced parking demand (transit and other mode promotion, rideshare participation) as well as enhance available supply (assisted and/or valet parking).

6.5 Monitor and control parking demand patterns to discourage "poaching" of site parking by other than site employees and visitors.

6.6 Standardize the nomenclature and signage for site parking and building identification. Prepare and install a "static"/fixed signage plan for vehicular and on-foot wayfinding. Consider implementation of electronic wayfinding displays at strategic locations tied to parking availability monitoring and "real time" reporting.

6.7 Consider installation of differential parking counters in new structured parking. These count systems are capable of providing "real time" parking space availability

information to arriving traffic, and also providing summary reports for analysis of parking characteristics and trends. Data from those reports support the monitoring of actual peak demands of item 6.2 above.

6.8 Develop and disseminate parking information by pamphlets, print advertising, and/or website to align the selection and use of site parking facilities with the intended on-foot destination of site visitors. Encourage transfer of that information to new patients/visitors when they schedule appointments for hospital visits, doctor visits, and outpatient services.

7.0 ON-SITE CIRCULATION REVIEW

7.1 Circulation Provisions

Review of site plan details in *Figure 2-3* reveals that implementation of the Master Plan components will leave the overall on-site circulation system and connectivity intact, including basic project access provisions and the presence of the "ring road". The Avenida Navarre (extended) access will remain unchanged, the outbound roadbed opposite Orchard Village will be enlarged in conjunction will planned intersection improvements at its intersection with McBean Parkway, and the southwestern-most project driveway along McBean will be relocated closer to the site's southern property line.

The "ring road" itself will remain the basic link from the external street system to on-site parking provisions. Its configuration will be simplified to provide for parallel parking spaces on only the outside curb of its loop. This is seen as a positive feature in that it alleviates congestion potential and enhances travel by emergency vehicles. This elimination of parallel parking on the inside edge of the roadway will also enhance sight distances along the roadway for intersecting access points serving adjoining parking facilities.

The nature and provision of primarily structured parking to serve the site's existing and future needs will consolidate multiple access intersections along the "ring road" to fewer locations. This is also a positive feature in reducing turning movement conflicts along the site's internal circulation system. It will also reduce the need for recirculation of parking vehicles by typically increasing the number of parking spaces to be served by each of these consolidated parking access locations.

The Master Plan illustration of *Figure 2-3* also identifies the location of pedestrian walkways (including sidewalks adjoining the ring road) as well as on-site roadway crossing locations (denoted by conceptual crosswalk markings) throughout the plan. It is important to note that PS-1 is linked to other elements of the campus via these provisions, as is PS-4. Both of these parking sites are located outboard of the ring road, and the delineation of logical and convenient crossing points to those elements within the loop of the ring road is an important safety provision. MOB 2 is also positioned outboard of the ring road, and the indicated crossing at the building entry, like that which now exists at MOB F, further reinforces on-site pedestrian circulation connectivity.

PS-2 and PS-3 are positioned inboard of the ring road, essentially serving vehicles at the ring road connection, but routing pedestrian connectivity to their opposite face; where other pedestrian linkages to MOBs A through E, MOB 3 and the main hospital itself can occur.

7.2 Internal Traffic Forecasting and Analysis

The incremental traffic generation characteristics of the Master Plan were developed as part of the Traffic Impact Analysis for the project as prepared by Austin-Foust Associates

(AFA)[3]. *Tables 3-1 and 3-2* of that study identified the Master Plan Buildout project trip generation summary, and Existing Traffic volume summary (based on site driveway counts), respectively. *Figures 5-4 and 5-5* of that study focus to project driveway volumes following completion of the Master Plan. All of these referenced materials are excerpted from the AFA report and included in ***Appendix D*** of this study.

Figure 7-1 of this study identifies internal site "intersections" identified for internal traffic forecasting and Level of Service (LOS) analysis. These "intersections" typically correspond to the junction of internal circulation roadways, and/or key parking lot/structure entrance/exit locations along those roadways. Intersection 4 of the figure corresponds to the main entrance internal intersection, to which the Hospital entrance road from McBean Parkway is being realigned as part of the Master Plan project.

Figure 7-2 presents buildout daily volumes along select links of the on-site circulation system. These were developed from the daily traffic volume forecasts of the AFA study, allocated to project access points, in keeping with the distribution and assignment patterns of the AFA study for project traffic. The figure extends the AFA-based forecasts of project traffic inward to the site in proportion to the trip generation characteristic of existing and added elements of the plan, and further considers the relative "spread" of parking throughout the site to serve individual development components.

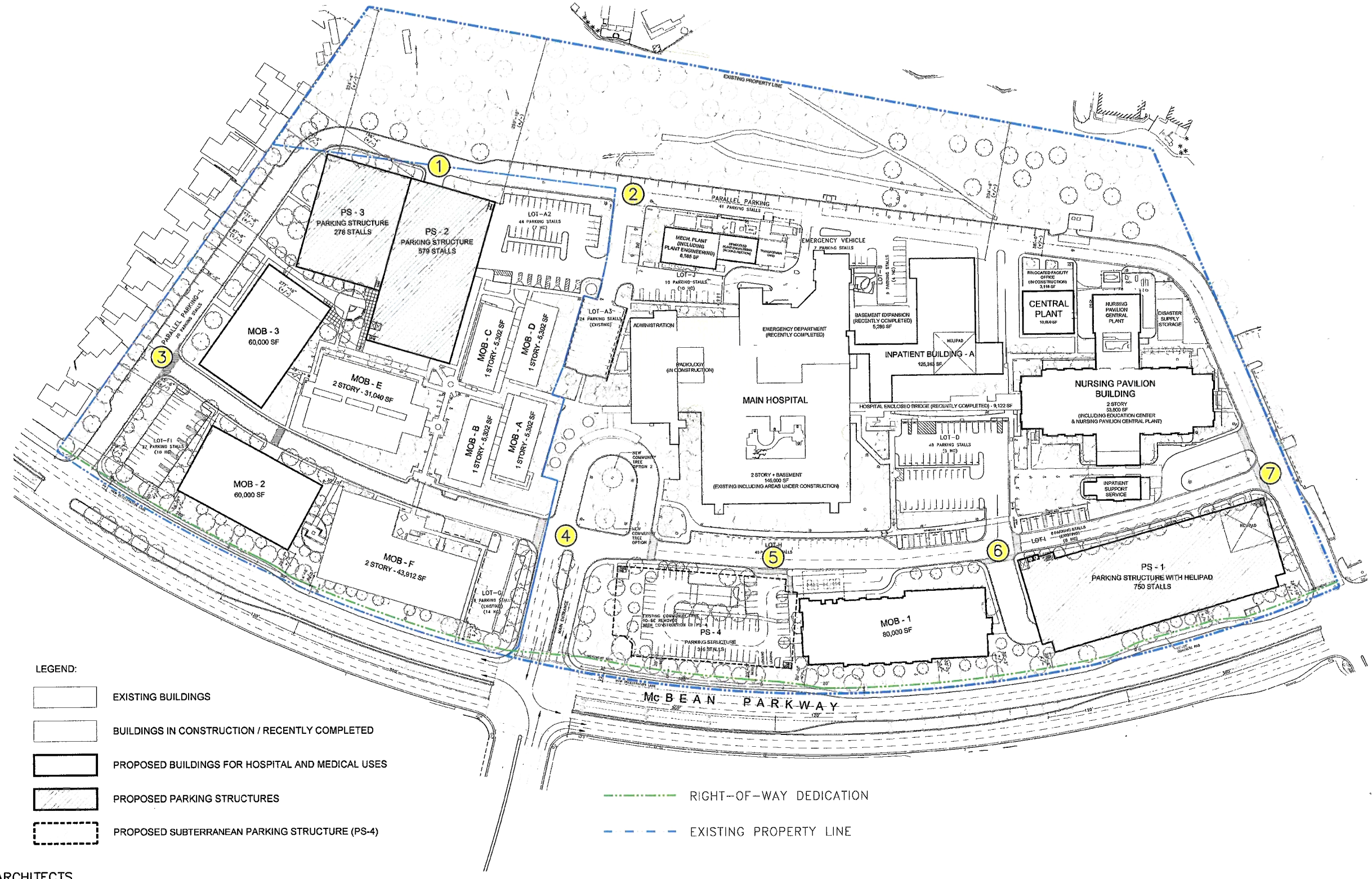
As noted from the figure, the volumes on the main entry road will be the greatest (two-way volume of 3,900 vehicles per day), with volumes on other segments less to varying degrees. These volumes are in keeping with the basic lane geometries along the links that make up the internal circulation system.

Figures 7-3 and 7-4 present AM and PM peak hour traffic forecasts, respectively, at the key internal intersections of *Figure 7-1* as developed from the AFA study forecasts for site access points along McBean Parkway, and extended into the site consistent with the methodologies described above.

Figure 7-5 identifies expected basic lane geometries and traffic control (stop postings) at the key internal intersections of *Figure 7-1*. These geometries, and the volume forecasts of *Figures 7-3 and 7-4*, are the basis of Level of Service (LOS) calculations as summarized in ***Table 7-1***. The LOS worksheets that support this table are in ***Appendix E*** of this study.

The *Table 7-1* results include a description of the traffic control at each location. "Side Approach Stops" are described as being either "one-way" (in the case of a "T" intersection where the stop controlled portion is the stem of the "T") or "two-way" (where both side approaches are stop posted). Additionally, Location 4 is tested as an "all-way" stop, with alternative presumption of an uncontrolled arriving movement from McBean for which the values are indicated parenthetically. At this location, the all-way stop configuration is preferred, especially in view of the LOS results.

[3] *Henry Mayo Newhall Memorial Hospital Master Plan, Traffic Impact Analysis*, Austin-Foust Associates, October 2007 et al



BASE SOURCE: SWA ARCHITECTS

LINSCOTT LAW & GREENSPAN engineers

NO SCALE

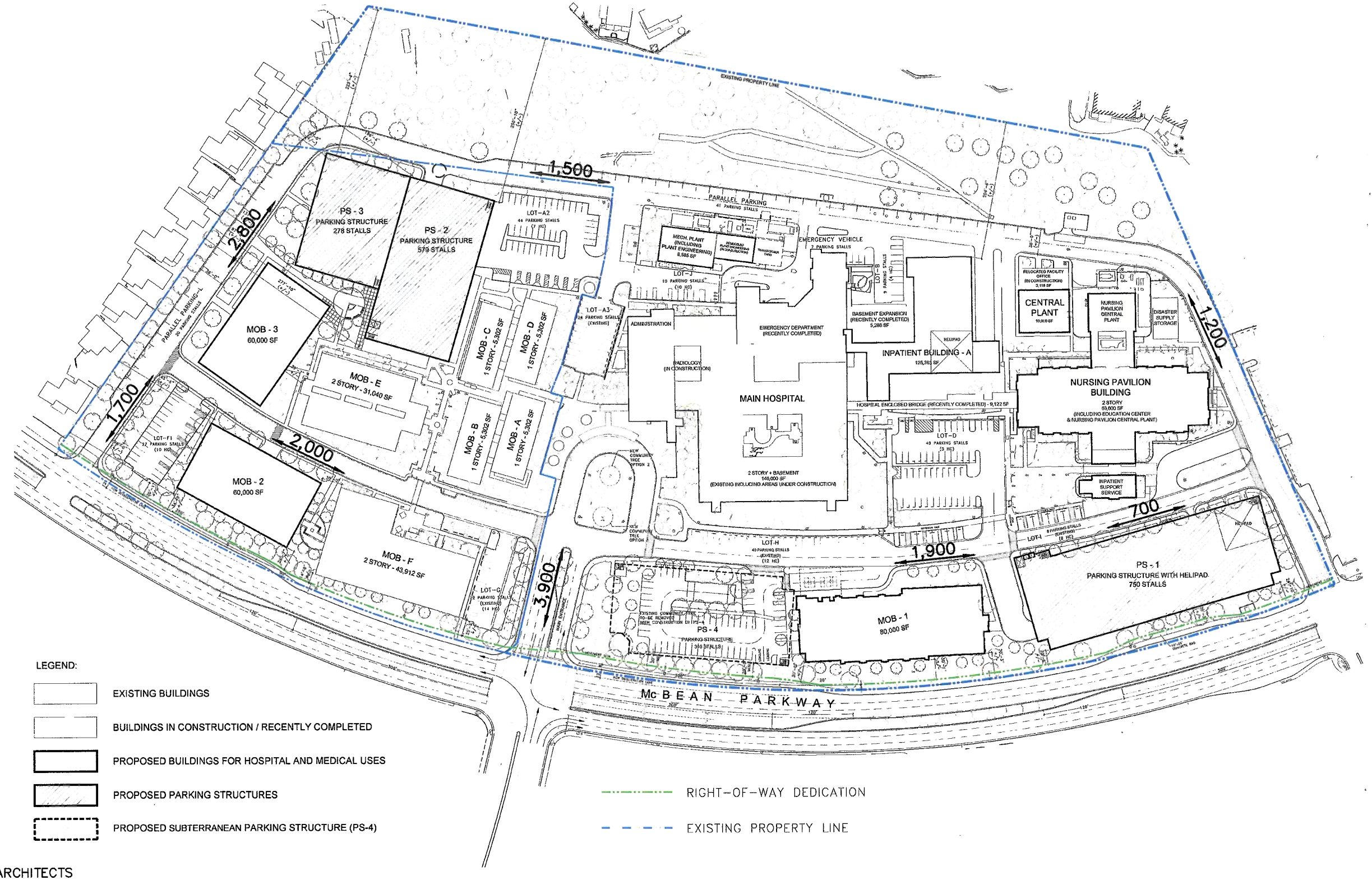
KEY

(#) = STUDY INTERSECTION

FIGURE 7-1

INTERNAL STUDY INTERSECTIONS
HMNMH, SANTA CLARITA

n:\2900\2072943\dwg\2943f-7-1.dwg LDP 17:46:56 04-21-2008 green



BASE SOURCE: SWA ARCHITECTS

LINSCOTT LAW & GREENSPAN engineers

NO SCALE

KEY

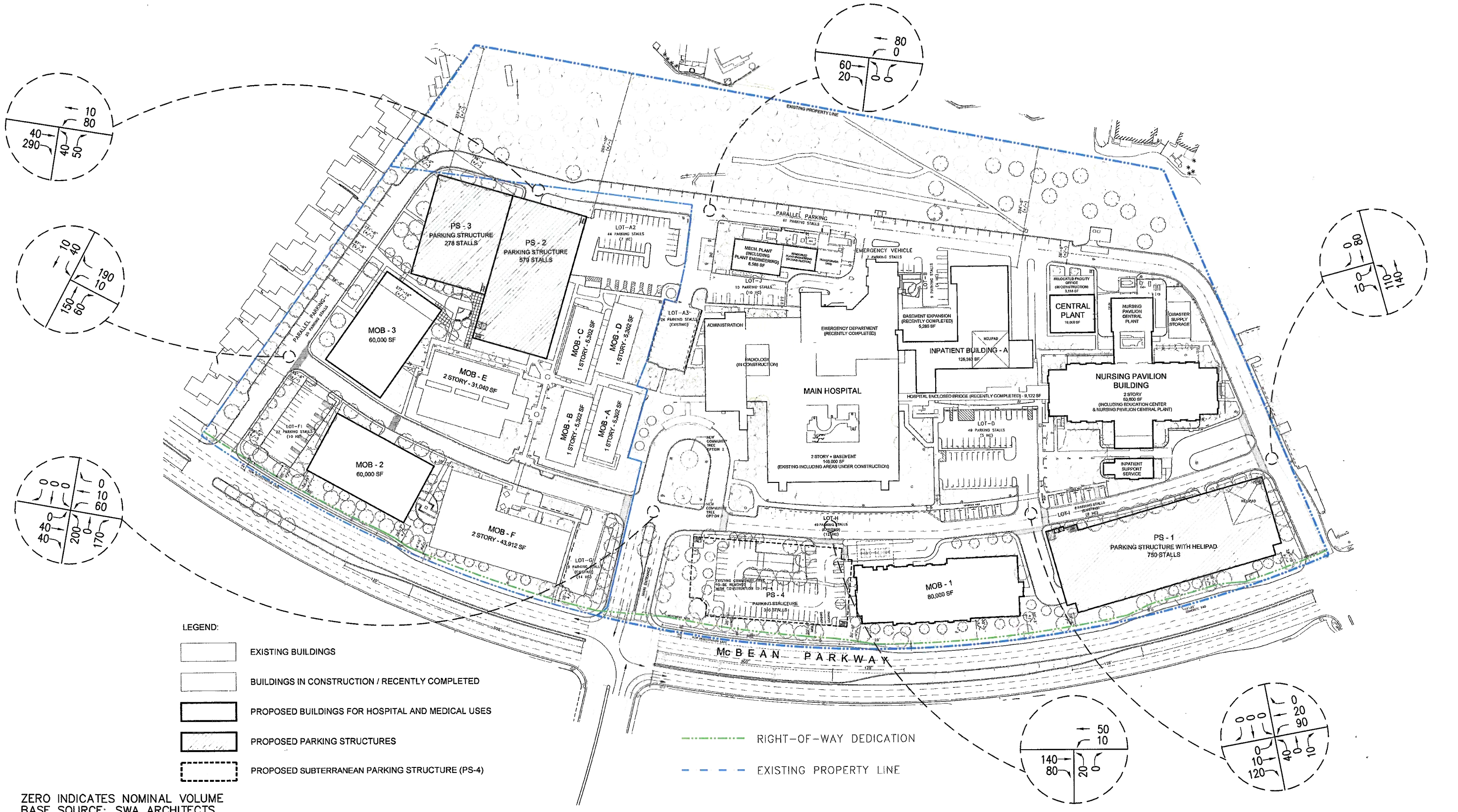
XX,XXX = AVERAGE DAILY TRAFFIC VOLUME

FIGURE 7-2

DAILY INTERNAL TRAFFIC VOLUMES

HMNMH, SANTA CLARITA

n:\2900\2072943\dwg\2943f-7-2.dwg LDP 17:45:50 04-21-2008 green



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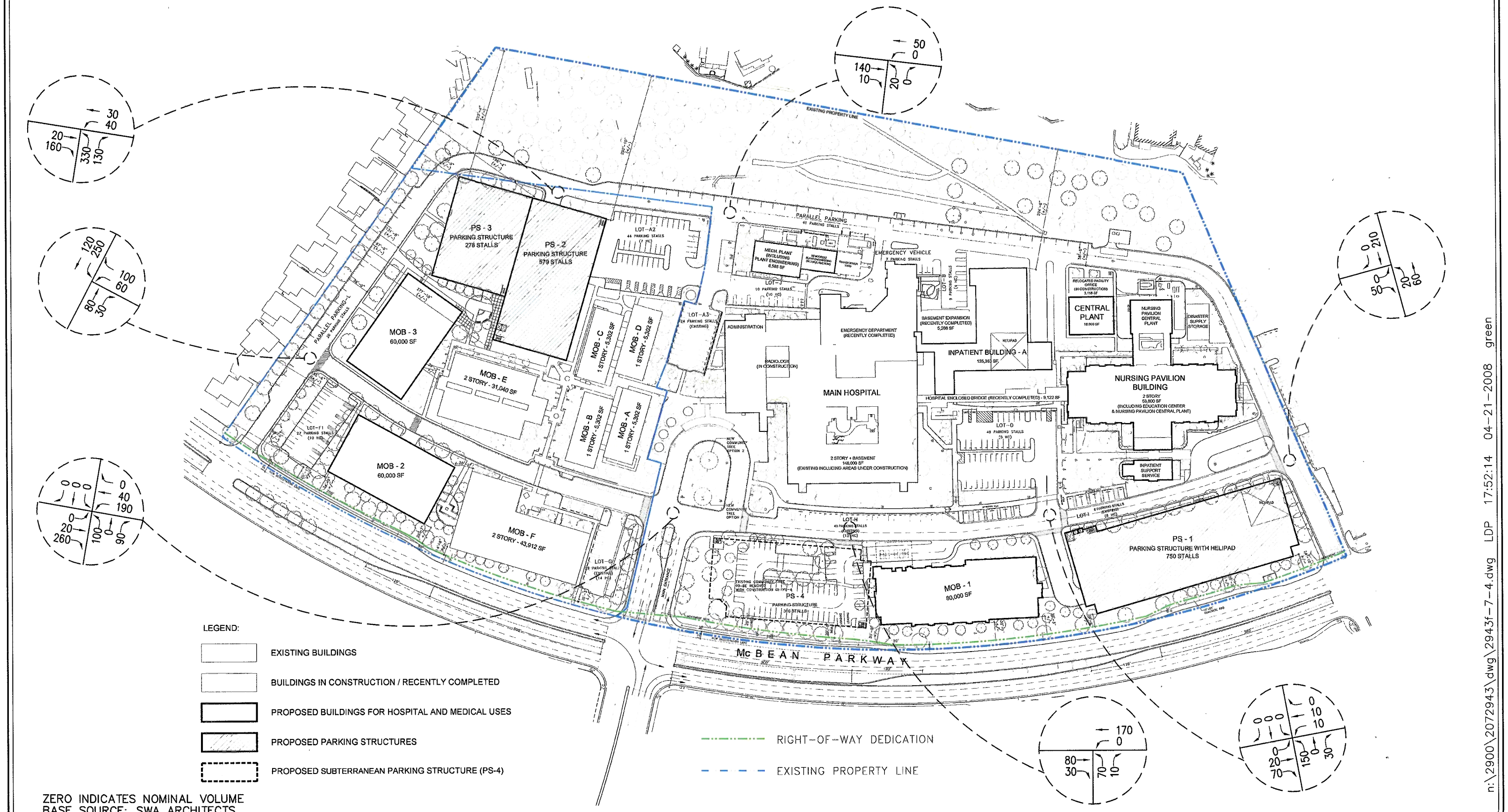
NO SCALE

FIGURE 7-3

AM PEAK HOUR INTERNAL VOLUMES
HMNMH, SANTA CLARITA

n:\2900\2072943\dwg\2943f-7-3.dwg LDP 17:50:36 04-21-2008 green



ZERO INDICATES NOMINAL VOLUME
BASE SOURCE: SWA ARCHITECTS

n:\2900\2072943\dwg\2943f-7-4.dwg LDP 17:52:14 04-21-2008 green

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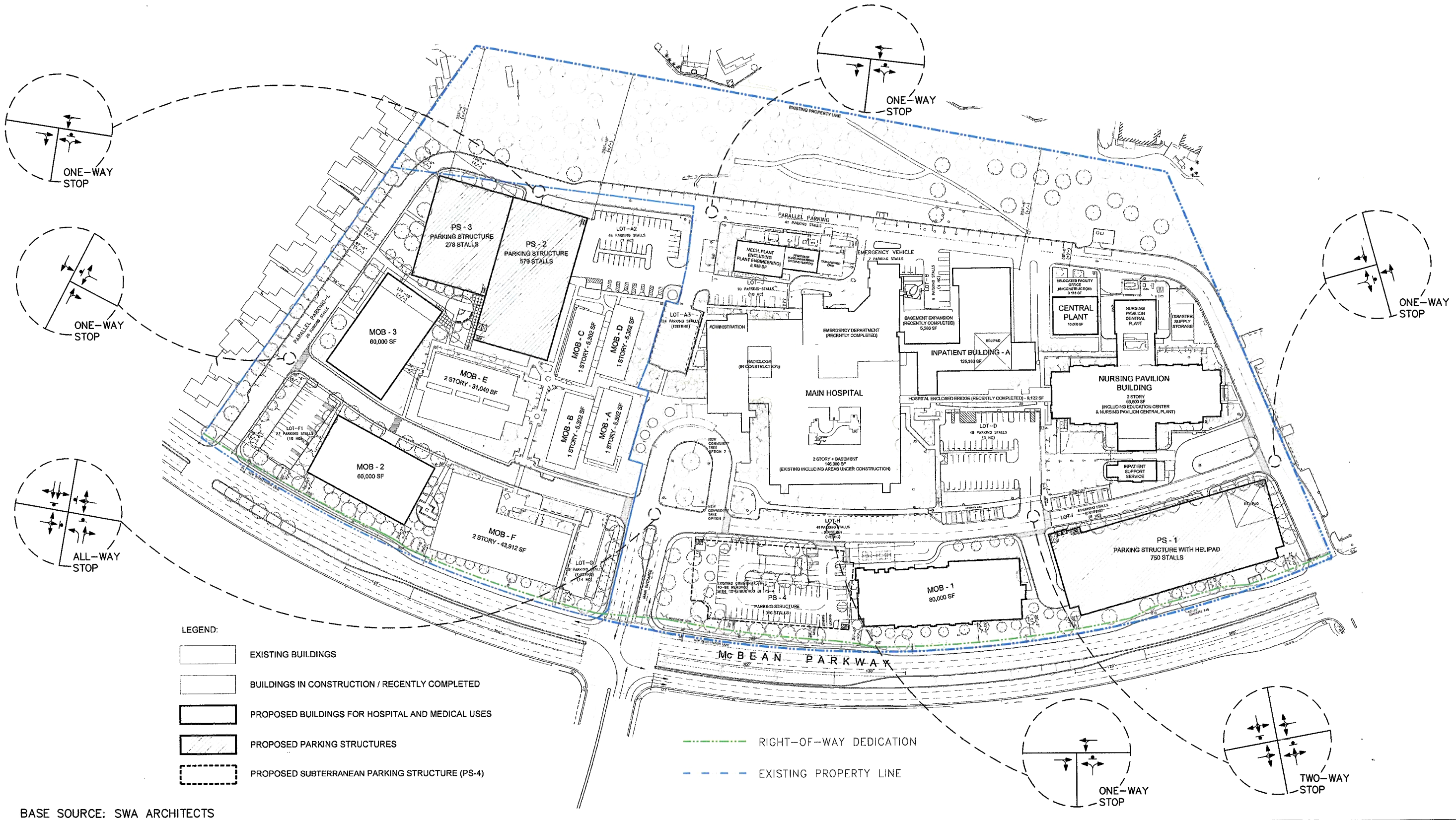
NO SCALE

FIGURE 7-4

PM PEAK HOUR INTERNAL VOLUMES
HMNMH, SANTA CLARITA



BASE SOURCE: SWA ARCHITECTS

n:\2900\2072943\dwg\2943f-7-5.dwg LDP 17:49:20 04-21-2008 green

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NO SCALE

KEY
← = APPROACH LANE ASSIGNMENT
● = STOP SIGN

FIGURE 7-5

LANE GEOMETRICS AND TRAFFIC CONTROLS
HMNMH, SANTA CLARITA

TABLE 7-1
INTERNAL INTERSECTION LEVEL OF SERVICE ANALYSIS

Key Intersection	Time Period	Intersection Control	(1) Master Plan Buildout Traffic Conditions		(2) Significant Impact
			Delay (sec/veh)	LOS	Yes/No
1. Location 1	AM	One-Way	10.6	B	No
	PM	Stop	15.1	C	No
2. Location 2	AM	One-Way	0.0	A	No
	PM	Stop	9.6	A	No
3. Location 3	AM	One-Way	10.5	B	No
	PM	Stop	13.7	B	No
4. Location 4	AM	All-Way	8.9 (17.8)	A (C)	No
	PM	Stop	9.4 (20.1)	A (C)	No
5. Location 5	AM	One-Way	10.0	A	No
	PM	Stop	10.4	B	No
6. Location 6	AM	Two-Way	10.3	B	No
	PM	Stop	9.8	A	No
7. Location 7	AM	One-Way	8.7	A	No
	PM	Stop	9.6	A	No

Note:

Values in parentheses are for side street stop, with entrance road from McBean Parkway not controlled